ABSTRACT

Although it is understood that public participation is fundamental to the planning process, practitioners struggle with low levels of participation, in particular within marginalized communities; thereby creating difficulty in selecting appropriate tools and strategies for their Public Involvement Plans (PIPs) and/or outreach programs. This paper takes an investigative look into Tennessee Department of Transportation (TDOT)’s Public Involvement Plan (PIP) and public involvement efforts. The study identified methods for disseminating information that effectively communicate the decision-making process to ensure relegated communities understand the importance of their role in the process. To address such complex issues, a cooperative action plan, appropriate for such communities, was developed in the research study. This collaborative experience ensured that input from traditionally underrepresented populations was obtained, the value of their engagement was effectively communicated, and the public involvement process reflected their concerns. From these findings, TDOT identified two primary concerns related to public involvement: public awareness and two-way dialogue. As a result, a
strength-based approach was implemented thereby introducing fresh ideas for identifying innovative strategies for public involvement.

Keywords: Public Participation, Transportation, Social Media, Innovative Strategies, Underrepresented Populations.

INTRODUCTION

Public participation in Tennessee Department of Transportation (TDOT) planning efforts in recent years has been limited. Too often the few individuals in attendance at TDOT’s public meetings are strong opponents of proposed transportation projects, and these individuals generally do not represent prevailing public opinions about future projects.

Thus, the agency needs to involve a wider cross-section of people in public meetings to ensure balanced input in the transportation decision-making processes. Such broad and balanced public involvement will help ensure that TDOT’s transportation decision-making efforts are sound and offer the greatest benefit to as many stakeholders as possible. Future efforts to secure significant and balanced public involvement must use innovative techniques to meet the needs of a given transportation plan, program, and/or project.

This paper expands the research on public participation by taking an investigative look into TDOT’s Public Involvement Plan (PIP) and their public involvement efforts. Securing significant and balanced public involvement in TDOT’s short-term and long-term planning efforts must involve strategies that fit the needs of each individual region within the state of Tennessee (TN).

For the sake of this research, it is imperative to identify how the term “balanced engagement” is interpreted by our research collaborators; thereby establishing a perimeter in which our methodology, results, conclusions, and recommendations will be best interpreted with
proper context. To ensure a balanced response, TDOT should employ proactive strategies to ensure a wider audience is reached and the attendees are empowered to participate through the employment of appropriate tactics, emphasizing the prevention of domination of the input process by individuals and/or organizations.

The goal of the project presented in this paper was to identify innovative strategies to gain greater public participation in transportation decision-making and to improve accessibility for stakeholders through an in-depth study of practice and stakeholder perceptions within Tennessee. Furthermore, the methods of disseminating information that most effectively communicate the transportation decision-making process in a way that help citizens understand the importance of their role in the process were also of interest.

To achieve project goals, the research team initially conducted face-to-face interviews with TDOT’s Headquarters and Regional staff and launched an online survey. After the interview and survey effort, a review of past public involvement practices at TDOT’s headquarters and regional level was conducted. Followed by a review of the United States (U.S.) state Department of Transportations (DOTs) efforts in public involvement, a Geographic Information System (GIS) database of potential community partners was developed, focus groups were held with key organizations, and an engagement workshop was held with TDOT staff.

This paper highlights key project methodology, findings, and lessons learned which, although focused on improving the public involvement process within Tennessee, provides insight that is broadly transferrable to other communities and states.
LITERATURE REVIEW

Understanding the importance of public participation and the potential value of involving the public in decision-making is imperative. Authors Halachmi and Holzer (2010) argue that “with citizen participation it is possible not only to expand on the 1960’s slogan ‘maximum feasible participation’ for a more democratic governance process, but to affect government productivity, citizen’s satisfaction, transparency and trust in government” (Halachmi & Holzer, p380, 2010). Scholar Brody et al. (2003) along with other planning scholars (Burby, 2003; Innes, 1996; Innes et al., 1994) have argued that “citizen participation can generate trust, credibility, and commitment regarding the implementation of policies and can build social capital” (Brody et al., p.246, 2003). Authors Wang and Wart (2007) explain that ‘public trust’ is not the only desired outcome of public participation, but “public participation also leads to legitimacy, a better-informed public, improved decision-making…participation is likely to enhance the public’s understanding of issues through attention and involvement.” (Wang & Wart, p. 266, 2007).

Authors Juarez and Brown (2008) explain the importance of public participation in planning. They argue that “as a result of developments within the planning and design fields over the past 40 years, the question is no longer if citizen participation should be part of the planning and design process in public works, but rather who should participate, which methods should be employed, what type of knowledge will be produced, and how will that knowledge be integrated into the process” (Juarez & Brown, p.190, 2008).

Low Participation in the Transportation Decision-Making Process

One reason for low participation in the transportation decision-making process may be that transportation officials are not successful in engaging citizens, communicating planning goals and opportunities for involvement (inform), and not educating the public on the entire
transportation planning process. Burby (2003) argues that “planners can induce greater participation by ensuring that participation is meaningful by providing citizens with information about problems and alternative ways of solving them and by providing opportunities for dialogue among citizens and between citizens and planners…the key for planners to work hard to both educate and learn from citizens” (Burby, p. 44, 2003).

Another reason may be that transportation planners ignore public input and do a poor job implementing comments into their plans (Berry et al., 1993; King et al., 1998; Lowry et al., 1997). Transportation planners have struggled with how to reach out and involve underrepresented (low income, minority, English as a Second Language [ESL], elderly, and youth) citizens. Author Burby (2003) states that “the single most effective step planners can take to secure broader involvement by stakeholders is simply to invite a variety of groups to take part in the planning process” (Burby, p.44, 2003). Innes and Booher (2004) state that “traditional methods and/or strategies do not achieve genuine participation in planning or other decisions” (Innes & Booher, p. 419, 2004). They further posit that the traditional methods and/or strategies “do not satisfy members of the public that they are being heard; they also seldom improve the decisions that agencies and public officials make; and they do not incorporate a broad spectrum of the public” (Innes & Booher, p.419, 2004).

**Improve Public Participation**

One way to improve public participation outreach is to incorporate better public participation strategies and/or techniques that will best fit the community. Innes and Booher (2004) state that much of the planning literature on participation has been devoted to discussing “how to improve participation through better techniques” (Innes & Booher, p. 420, 2004). Triplett (2014) explains that agencies or organizations with transportation related decision-making responsibilities are
taking the necessary steps to incorporate various outreach strategies to enhance public participation understanding in order to enhance participation decision-making across the board (Triplett, 2014). (Stephenson) Triplett (2010) posed the question, “How does a transportation agency grab and hold peoples’ interest in a project or plan, convince them that active involvement is worthwhile, and provide the means for them to have direct and meaningful impact on its decisions?” ((Stephenson) Triplett, p. 128, 2010). We argue that it is through implementing better public participation techniques.

One way to improve participation through better techniques is to first assess the community where the project and/or program will be located. O’Conner et al (2000) explain “a key challenge for the practitioner is to assess the needs and audience for each project and strategically choose the most appropriate tools. Every public involvement effort should begin with a project assessment by the study team” (O’Conner et al., p. 4, 2000). Once the assessment has taken place, decide which tools and/or strategies should be implemented in the community within the project and/or program area.

In efforts to identify best practices for increasing public involvement, three categories of public involvement tools were investigated: Traditional, Non-Traditional, and Innovative. These categories are defined in the following sections.

*Traditional: “One-way Communication”*

Traditional outreach techniques usually include a combination of public meetings, public hearings, project advisory committees, press releases, newsletters, advertisements, and electronic communications like e-mail updates and project websites (Bregman & Watkins, 2014). Traditional modes of information provide more of a ‘User’ involvement dominated approach (Bickerstaff, Tolley, and Walker, 2002). (Stephenson) Triplett (2010) explains that “Before the
21st century, state DOTs used traditional methods of public participation, such as, but not limited to, public hearings, review, and comment procedures” (Stephenson Triplett, p. 125, 2010).

**Non-Traditional: “Two-way Dialogue”**

Non-Traditional outreach strategies go beyond the traditional route of tools (techniques) to get citizens to participate, which involves more of a “two way dialogue” on transportation policy options or planning issues collaboratively. Scholars Innes and Booher (2004) posit that “Public participation should be seen as a “multi-way interaction in which citizens and other players work and talk in formal and informal ways to influence action in the public arena before it is virtually a foregone conclusion” (Innes & Booher, p. 429, 2004). A few examples of non-traditional strategies would be, but not limited to, advisory council, brainstorming and/or listening sessions, and charrettes.

**Innovative: “Interactive Engagement”**

Innovative outreach techniques are non-traditional in nature, but provide a more “interactive” approach and more innovative deliberative techniques to facilitate public debate in the transportation decision-making process (Bickerstaff et al., 2002). A few examples of innovative strategies would be, but not limited to, utilization of Faith Based Organizations (FBOs), Neighborhood Outreach Specialists (NOSs), and Community Representative; Information Boards and Kiosks; GovDelivery, a digital communications platform for government to inform and engage their audience of choice (GovDelivery, 2015).

**Case Study Description**

This study was conducted using the Tennessee Department of Transportation as a case study. TDOT is made up of a Commissioner’s office and three (3) Bureaus: Administration,
Engineering, and Environmental & Planning. TDOT’s headquarters is located in downtown Nashville, TN, and maintains four regional offices [Knoxville (Region 1), Chattanooga (Region 2), Nashville (Region 3), and Jackson-Memphis (Region 4)].

METHODOLOGY

This research effort includes an in-depth case study of TDOT to identify innovative strategies to gain greater public participation in transportation decision-making and to improve accessibility for stakeholders throughout Tennessee. The study was designed to review current practices, identify strategies to achieve more balanced public involvement, develop a community profile tool identifying key stakeholder organizations for TDOT regions, and to test the effectiveness of public involvement strategies in diverse settings across Tennessee. The study began in February 2014 and concluded in April 2015. Furthermore, the research identified methods of disseminating information that most effectively communicate the transportation decision-making process to help citizens understand the importance of their role in the process.

Research Instruments/Tools

Interviews/Surveys

The research team wanted to understand opinions of TDOT staff pertaining to past public involvement efforts, specifically within each region. The research team identified the appropriate agency’s staff, at the headquarters and regional level, and conducted a series of interviews and an online survey. Also, face-to-face interviews were conducted with personnel in all regions and State’s headquarters. The interview content provided information about the groups of individuals that attended public meetings, their primary motivation for attending, and quality of input received from the public meetings. The online survey was administrated to TDOT’s headquarters
and regional staff to help evaluate existing practices. A questionnaire and online survey were created for headquarters and regional planning personnel to capture their opinions on past public involvement efforts as it pertains to headquarters and their individual regions. The information that was gathered through the face-to-face interviews and the online survey was used to develop various “attendee profiles” and “public meeting profiles” for the purpose of characterizing each region. This would eventually aid the research team in providing the agency with recommendations relevant to their needs.

A 13-item questionnaire was developed for the interviews of staff members in each region and contained items related to:

- Reasons for creating the current public involvement strategies;
- Basic elements of current public involvement strategies;
- Examples of public involvement that impacted transportation planning decisions;
- How well current strategies are working;
- Strategies and results when reaching out to minorities and low-income persons;
- Critical elements of TDOT’s public involvement process;
- Use of social media to enhance public involvement;
- Identifying key factors that increase citizen participation;
- Challenges in implementing public involvement efforts.

The remaining phases of the project are described in the following sections.

Content Analysis

A review of past efforts (including Customer Satisfaction Surveys, Case Studies, Progress Reports and the current PIP) related to public involvement at TDOT’s headquarters and regional levels was conducted following the interview and survey effort. This review revealed that all
regions have either experienced similar challenges (such as limited success of public involvement strategies or a lack of public input/support) or have implemented similar strategies (such as the use of social media or the utilization of dynamic message boards).

Upon understanding TDOT’s past practices, a review of past and current efforts related to public involvement in other U.S. state DOTs was conducted to identify effective practices. The review included public involvement documents obtained via Internet searches and contacting 51 U.S. state DOTs, excluding TDOT. The review resulted in an inventory, by state, of public involvement practices and outcomes reported by state DOTs.

GIS data

The next phase of the project included a review of community partners who have demonstrated the ability to provide effective communication and engagement of participants in TDOT’s outreach efforts in the past and identified potential new partners who may enhance and attract an improved balance of attendees at future meetings. GIS was utilized to identify the location of these partners and to overlay critical information about each partner, including contact information, type of organization, and demographics of constituents served. A GIS and Toolbox Instruction document was prepared to accompany the GIS database and Toolbox to provide guidance to TDOT staff on using these tools. To better explain various methods by which TDOT can disseminate the GIS data, including the advantages and disadvantages of each method, a Going Forward document was also developed. Lastly, a Public Involvement Rubric was created, as shown in the following figure, to help identify the appropriateness of each tool for increasing accessibility, promoting interaction/feedback and engaging diverse groups when using tools to share ideas and concerns. These tools were utilized to identify participants for Focus Groups as
well as determining proper methods for ensuring that a successful Public Involvement Marketing Plan was in place for the Focus Group meetings.

**FIGURE 1: SAMPLE OF PUBLIC INVOLVEMENT RUBRIC**

<table>
<thead>
<tr>
<th>Tool</th>
<th>Easily Accessible</th>
<th>Promotes Interaction/Feedback</th>
<th>Increases Minority Engagement</th>
<th>Increases Youth Engagement</th>
<th>Increases Elderly Engagement</th>
<th>Increases Engagement for Disabled</th>
<th>Increases Engagement for Economically Disadvantaged</th>
<th>Increases Engagement for Low English Efficiency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Visual Aids</td>
<td>-</td>
<td>NE, RI</td>
<td>NE, RI</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Visualization Techniques</td>
<td>GA, MS, RI</td>
<td>GA, MS, RI</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Webcasting</td>
<td>CA, PA</td>
<td>CA, PA</td>
<td>CA, PA</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>CA, PA</td>
</tr>
<tr>
<td>Webinars and On-Line Meetings</td>
<td>CO, NM</td>
<td>CO, NM</td>
<td>CO, NM</td>
<td>-</td>
<td>CO, NM</td>
<td>CO, NM</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Website (Ex. Project, Plan, Transportation Agency/MPO Website etc.)</td>
<td>KY, MD, SD</td>
<td>KY, MD, SD</td>
<td>KY, MD, SD</td>
<td>KY, MD, SD</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>KY, MD, SD</td>
</tr>
<tr>
<td>Workshops, Open Houses, and Public Meetings</td>
<td>MN, PR</td>
<td>MN, PR</td>
<td>MN, PR</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>MN, PR</td>
</tr>
<tr>
<td>Written Testimony</td>
<td>RI</td>
<td>RI</td>
<td>RI</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>RI</td>
</tr>
<tr>
<td>Yearly Training for Planning Staff</td>
<td>-</td>
<td>UT</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>YouTube Press Releases</td>
<td>NM</td>
<td>NM</td>
<td>NM</td>
<td>NM</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>NM</td>
</tr>
</tbody>
</table>

*Focus Group and Workshop Sessions*

In January 2015, the research team conducted Focus Group discussions and obtained questionnaire results across Tennessee to provide critical input about potential strategies that were developed in earlier findings. Upon completion of the Focus Group sessions, the team analyzed the focus group results to identify commonalities as well as differences across regions, demographics, and settings (urban/rural). These findings were used to prepare a suggested list of best practices and strategies, which included tools to inform and/or engage the public, likely to be most effective for increasing balanced engagement. These best practices and strategies served as best candidates for the pilot tests that were conducted in March 2015 within the TDOT regions. A focus group was also held with Jackson Housing Authority and Lincoln Court Community members to share their input. Lastly, the research team conducted an engagement workshop at TDOT's Headquarters for TDOT’s headquarters and regional staff. The research
team presented the research findings for the purpose of helping staff understand how the use of project tools can improve public involvement across the state. Feedback was also solicited from workshop participants to determine key elements of the project of greatest interest and areas of concern for project tool/strategy implementation.

RESULTS

Interviews

According to the face-to-face interviews and online survey, the TDOT staff understands the significance of public involvement; they believe they are actively working to achieve public participation in the planning process, but recognize the potential for improving this process and outcomes through new resources (including guidance documents and expanded web and social media presence), better internal communications, and use of a diverse set of approaches for engaging citizens. Significant barriers to public involvement exist in both the time constraints faced by stakeholders, as well as language, economic, and cultural differences.

Surveys

The following sections contain a brief summary collection of online survey responses that were completed by TDOT staff. The summary highlights responses from key topics of interest (including Use, Importance, and Effectiveness of Current Public Involvement Strategies and Venues for Engagement). A Likert-scale was used for most items on this section of the survey to determine relative importance or effectiveness. Respondents were asked to provide ratings on a scale of 1 to 5 (with 5 being very important/effective, 3 somewhat important/effective, and 1 not important/effective) for choices within each question.
Use, Importance, and Effectiveness of Current Public Involvement Strategies:

Survey participants indicated engaging a variety of stakeholders is important to successful public involvement. Community organizations (4.64), local elected officials (4.64), and business owners (4.45) were rated as the most influential, closely followed by neighborhood associations (4.32) and local media representatives (4.29) for enhancing public involvement. In terms of the methods for disseminating information, press releases and public service announcements received highest ratings (4.64); however, all items rated by participants were considered at least somewhat important (minimum average rating for all items was 3.0). Participants also rated strategies for obtaining feedback from the public. The top-rated responses were methods for visualization (4.67) including physical models/maps and computer simulation or other GIS based scenario-planning tools. Small group activities, including role-playing, games and contests, and brainstorming were rated least effective (2.62).

When asked how strongly they agreed (1-strongly disagree; 3-neither agree nor disagree; 5-strongly agree) with a series of statements regarding TDOT’s current practices, respondents indicated TDOT actively engages stakeholders in the planning process (4.05), is effective in disseminating transportation-related information to the public (3.9), routinely sends out briefings on major projects to stakeholders (3.6) and is good at identifying the potentially most active stakeholders (3.5).

In addition, open-ended responses indicated a need to improve internal communication so that employees understand the importance of maintaining communication and public involvement, the importance of using a diverse set of strategies (including varying time, place, and type of presentation), and the potential for generating more interest from communities by increasing awareness of smaller scale safety projects. With regard to the TDOT website,
respondents agreed that it needs to be substantially revised to better inform the public of the transportation planning process (3.9) but that the website is an excellent tool for keeping the public aware of the planning process (3.75). Respondents disagreed that the website is readily accessible to users that are not English language speakers.

Venues for Engagement:

Eighty-six percent (86%) of survey participants identified schools as the best venue for public meetings. Participants could select more than one option, and community centers (81%), public buildings (71%), and churches (67%) were also favored. The best day/time for holding public meetings was overwhelmingly indicated to be weekday evenings (95%) by respondents. Only 5% indicated weekday breakfast meetings, and no participants selected mid-day or weekend timeframes.

Importance of Public Involvement:

TDOT staff that responded to the online survey recognized the importance of public involvement from a diverse group of stakeholders to the planning process. The average agreement for the statement, ‘It is very important to engage citizens in the planning process,’ was (4.75) and for the statement, ‘It is very important to ensure that a diverse group of citizens participate in the planning process, was (4.65).

Barriers to Public Involvement:

Survey participants reported youth (85%) and low-income populations (55%) as the citizen groups that are most difficult to engage in public participation efforts. Participants were also asked to rate the significance of a list of barriers to public involvement efforts, with 5 indicating a very significant barrier, 3 a somewhat significant barrier, and 1 indicating the barrier is not
significant. The highest rated response was time constraints and other personal demands of citizens (4.4) followed by language differences (3.9), economic differences (3.75), lack of trust of public officials (3.6), and cultural differences (3.5). Respondents were also able to enter additional barriers that were not identified within the provided list of choices, and indicated that citizens lack of internet access, smart phone, or newspaper subscriptions (particularly in rural areas) and also lack of understanding about the planning process and the length of time required for a project.

Methods for Enhancing Public Involvement:

Likert-scale ratings were also used for questions within this section, with 5 indicating strong agreement, 3 neither agree nor disagree, and 1 indicating strong disagreement with statements contained within each item. Participants agreed that TDOT should explore the use of mobile apps (4.05) and add a ‘Get Involved’ component to the website (4.0), but only somewhat supported other suggestions for enhancing public involvement. Participants disagreed (2.59) that TDOT should offer funding to community organizations to conduct outreach to citizens not typically involved in the planning process. In addition, survey respondents selected strategies (all that applied) that TDOT should consider for increasing information dissemination and public involvement, with the following results for the top three most frequently selected:

- Release press advisories to electronic and print media outlets on a regular basis. (70%)
- Publish a special brochure entitled, “A Citizen’s Guide to the Regional Planning Process.” (65%)

This interview and survey process allowed the research team to begin evaluation of TDOT’s public involvement activities. Further analysis of the detailed interviews with
headquarters and regional staff as well as analysis of regional differences and perspectives across the state were used to examine effectiveness of current practices, barriers encountered in public involvement efforts, and to identify best practices for enhancing the public involvement process.

To conclude, all regions have either experienced similar challenges (lack of implementation of public involvement strategies or a lack of public input/support) or have implemented similar strategies (from the use of social media to the utilization of dynamic message boards). Also, reported was the differences between what the regions have accomplished in their public outreach (Community Center or working with local media stations) as well as their varied successes with public input (deficiency in minority involvement). Altogether, the regions have a good grasp on their successes and failures with past practices in public involvement, and recognize the need for additional strategies to increase meaningful engagement of community stakeholders in the planning process.

Content Analysis

Upon review of TDOT’s past practices at the headquarters and regional level, it may be concluded that TDOT has had a history of mixed success concerning overall public involvement. The responses provided to the University of Tennessee-Knoxville research team in 2003 generally indicated that TDOT had been failing to adequately address the public’s concerns at the time. It must be noted, however, that the 2003 research stemmed from the request of Governor Phil Bredesen’s administration specifically to identify and address areas of inadequacy concerning TDOT’s planning and business practices due to public dissatisfaction (Bredesen, 2002). Despite generally receiving favorable reviews in the subsequent 2006 TDOT Statewide Customer Satisfaction Survey regarding communication and involvement in communities,
Governor Bill Haslam cited failure to adequately listen to local government officials and communities during the planning process when conducting an overhaul of executive-level TDOT officials in 2011 (Schelzig, 2011). The positive customer satisfaction survey responses yet negative state-level review reflects an apparent disconnect between internal and external perceptions of TDOT’s public engagement process.

The research team also reviewed past and current efforts related to public involvement in other state DOTs in order to identify effective practices. Innovative strategies are needed to reach out to populations who have historically played little to no role in the transportation decision-making process. Scholars Bregman and Watkins (2014) explain that “Social media provides agencies with an unparalleled opportunity to share information with their customers – often in real time (Bregman & Watkins, p. 139, 2014)…Social media has also proven effective in communications with citizens during planned disruptions” (Bregman & Watkins, p. 143, 2014).

Colorado Department of Transportation (CDOT) explains that innovative technology-based tools are being used to supplement traditional public outreach methods; the traditional outreach efforts have not been reduced or changed (Colorado Department of Transportation [CDOT] Division of Transportation Development, p.8, 2010).

It is also important to keep in mind that technology-based tools may work well with the general public, but they may not work well with underrepresented populations such as Environmental Justice (EJ). The New Jersey Department of Transportation (NJDOT) found that Internet-based tools only have the potential to reach half of the population and are unable to directly impact lower income and traditionally underserved populations (CDOT Division of Transportation Development, p.8, 2010). Scholars Bregman and Watkins (2014) explain that “Planners in Los Angeles and Austin used social media to connect with citizens during long-
range planning projects. For Los Angeles County Metropolitan Transportation Authority (Metro), two key lessons emerged from the efforts. First, using social media can expand outreach but cannot fully replace traditional media methods. Second, social media strategies must be well thought out and fully integrated into the communications effort for a project” (Bregman & Watkins, p. 138, 2014).

GIS Data

The research team identified key partners within each TDOT region who have demonstrated the ability to provide effective communication and who may enhance and attract an improved balance of attendees at future meetings. It is important to note that partners were also chosen based on their potential for enhancing attendance at future public meetings and their potential to attract a balanced group of attendees. Partners were chosen from a wide variety of groups representing diverse religious, civic, social, educational, and ethnic backgrounds.

Five deliverables resulted from these findings. First, GIS was used to identify the location of these partners and a geodatabase was developed that includes partner characteristics, such as demographic information, media, public interest groups, public housing, economic and public facilities. Secondly, a complementary document containing a Best Practices Toolbox was developed to identify specific target audiences, tools, advantages and disadvantages of each tool as well as what is needed (or required) in order to implement a successful tool within the Public Involvement/Engagement process. Thirdly, a GIS and Toolbox Instruction document accompanied the GIS and Toolbox to provide guidance on how the user can utilize these tools. Fourthly, a Going Forward document was provided to explain various methods by which TDOT can disseminate the GIS data, including the advantages and disadvantages of each method.
Lastly, a Public Involvement Rubric was created to help identify the accessibility, promotion of interaction/feedback and engagement among population groups when using tools to share ideas and concerns.

Focus Group Sessions

An analysis was performed by identifying the most prominent responses among the Focus Group session meeting responses from three of the four regions (Region 1: Knoxville, Region 3: Nashville and Region 4: Jackson-Memphis) and the student focus groups. The sections below summarize findings related to these responses associated with the public involvement process including reasons for involvement, barriers to participation, factors that are likely to yield more successful efforts, and perceptions of previous public engagement activities conducted by TDOT.

Region 1

Respondents indicated that accessibility is a major issue for allowing them to be involved in the public meetings; they believe that if TDOT established a level playing field by doing public outreach before plans are announced to business and local governments it would be a solution to addressing these challenges. Also, they believe that TDOT should rely more upon social media as it is considered a more convenient, accessible and encouraging way for the public to become more engaged in the public involvement process. The respondents indicated that past efforts that have not been as effective to the public are attributed to one-on-one meetings, whereas the suggested population group meetings would yield more success. The participants believe that their input is not valued and is treated with no true obligation for consideration in the plan. When asked what strategies have and would work best in their region, respondents suggested “Meeting
in a Box” with support of NOSs/Community Facilitators, the use of social media, hosting public meetings where the people are, and the implementation of Guerrilla input methods, a low-cost approach to user testing (United Kingdom Governmental Service Design Manual, 2015).

Region 3

Participants indicated that their voices are not being heard and they will not participate as long as they are not directly impacted. A couple of challenges for the public to be involved include lack of time and the accessibility to meetings. The respondents indicated that offering meetings at convenient times for senior citizens and working class, offering online meetings, and advertising the meetings using common public locations such as stores would be helpful. The participants indicated that using incentives and public service announcements for promotion of future meetings would yield a more convenient and accessible experience for citizens. The respondents indicated that approaching the public earlier in the planning process and treating public involvement as a conversation, showing sensitivity in selecting meeting locations, and the promotion of future meetings are techniques that could increase engagement by the public. They believe that participants’ experiences that have worked well include reaching out to a wide range of constituents while utilizing broad-based methods, adopting multiple modes of communication to the public, and ensuring that the meeting is well-organized. Ways in which it has not worked well include measuring success based upon attendance, the use of advisory committees as it can lack the full range of representation of all population groups, and failure to be sensitive to the main focus of discussion based upon the interest group(s) in attendance. A variety of responses resulted from the focus group sessions when asked what they believe TDOT does with the feedback from the public; many indicated that it is not considered; the public is not aware if they use it or not because they do not see their feedback results made available for future viewing;
and some participants believe that TDOT will utilize the feedback to help them identify priorities and which projects to focus upon. When asked what strategies have and would work best in their region, respondents indicated that the utilization of Billboards/ITS boards, implementing a variety of outreach methods including public meetings, “Meeting in a Box” and small groups, providing transportation and childcare, drop-in public meetings, social media as well as meeting them where they are, text messages and informing colleges classes, especially in engineering and social science courses, would work well.

Region 4

There were mixed feelings regarding the importance of being involved in Region 4. Some believe that the general public does not care about being involved because most people are used to the way things are now and do not feel a strong desire to start being involved. However, others believe that involvement is very important because participants should have a say because public safety is involved. Some also believe that it is important because the public can provide input that produces new ideas for TDOT. The final comment was that it is important for TDOT to know what is important to people who will be directly impacted by the given project. Most agree that the primary issue with getting involved was the lack of communication to the public about meetings. Participants indicated that they believe the use of social media would help to increase involvement in Region 4. Another suggestion was to ask social service agencies or organizations that serve the targeted population to alert their clients and consumers of upcoming meetings. The primary suggestion to make the public meetings more convenient/accessible was to hold the meetings in locations where people already are. A few of the suggested locations are schools, libraries, and major employment centers. The participants believe that integrating planning and
transportation education as part of high school curriculum would be an effective way of increasing engagement during the public involvement process. Participants indicated that some past attempts that were unsuccessful include mass emails and location selection. There were mixed responses regarding perceived value of public input. Some believe public input is valued because it can help with the given project while others are simply unsure of whether the input is used.

**Student Focus Group Summary**

The focus group sessions with the two student groups (average age of participants between 18-24) revealed that students reported at a high frequency that they were unaware of public meetings or opportunities for involvement with TDOT. This appears to be the most significant barrier to participation, other than the belief that input provided by citizens may not be important to the TDOT planning process. Student participants reported that the use of technology (particularly online meeting formats and social media) would likely enhance TDOT efforts to raise awareness and achieve greater participation from college students. Participants also suggested that TDOT set up booths at student centers for local universities and communicate through specific classes where students are likely to be interested in public involvement with TDOT because of their majors (such as planning, engineering, and social science courses). However, students also recommended some traditional practices, such as use of local media (through outlets that students typically use such as popular radio stations), to increase public awareness of opportunities to be involved. Advertisements in student newspapers and university radio stations were also discussed in one session. Students also reported opportunities to provide anonymous input, through suggestion boxes or online surveys, which may appeal to people who
uncomfortable contributing their ideas in a public setting. Finally, both student groups recommended some type of incentive be provided for participation (such as food) to attract attendees to meetings.

**Online Survey**

Regional focus group sessions participants, indicated they would like an opportunity to provide additional feedback and encourage others from their organizations to do so as well. There were also numerous representatives that expressed interest in attending focus group sessions, but were unable to do so because of scheduling conflicts. This led to the development of a follow-up survey to further investigate best practices, challenges, and barriers to public involvement activities across the state. A 12-item survey instrument was developed using Survey Monkey, and was distributed to contacts developed through the GIS Community Profile database and focus groups. A survey invitation was sent via email on March 6, 2015 with reminders sent the following two weeks to a database of 160 representatives of community organizations across the state. The survey remained open until April 17, 2015. This resulted in 46 responses from all four TDOT regions, although the majority of participants were from Region 3, as shown in the table below (one respondent elected not to provide region details).

<table>
<thead>
<tr>
<th>TABLE 1 ONLINE SURVEY RESPONSES PER REGION</th>
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<tbody>
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<td>Region 1</td>
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<td><strong>Total</strong></td>
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Participants were asked to indicate whether or not they were a member of any of the following populations (or were responding as a representative of an organization serving these populations), as shown in the following figure. Senior citizens made up the largest percentage of participants (37% or 16 respondents).

**FIGURE 2: REPRESENTATION OF PARTICIPANTS**

Of the 46 respondents, 74% (34) had never participated in public involvement meetings or activities with TDOT. However, 96% (44) believe it is important to do so, with the most frequent comments indicating ensuring the public has a voice and that tax dollars are spent appropriately were good reasons to participate. The most significant barriers to participation for respondents include:
1. Lack of awareness of opportunities for involvement;
2. Meetings held in inconvenient locations;
3. Meetings held at inconvenient times;
4. Lack of understanding about how citizens can contribute; and
5. Lack of time to attend meetings.

When these factors were analyzed for senior citizens (n=16) and disabled citizens (n=9), similar trends were seen, although ‘lack of confidence that opinions will be taken seriously’ was cited more frequently by these groups than the overall population. As this was a very small sample, analysis for statistical significance was not conducted. Respondents were also asked to indicate factors that would facilitate participation in public involvement efforts. Seventy-five percent (75%) of respondents indicated that opportunities to participate online through surveys and web conferences would increase public involvement, 73% indicated ‘meetings held in my community’ would increase attendance, 73% indicated more communication from TDOT on how input would be used would encourage participation, and 53% indicated greater use of social media would better achieve public involvement goals.

Again, similar trends were identified for senior citizens and disabled citizens; although senior citizens responded more frequently that more communication about how input is used and holding meetings in their community were of importance for facilitating public involvement (87% of respondents chose these factors in the survey). Disabled citizens also ranked communication from TDOT more highly than the general survey respondent population (89% selected this factor), and also indicated greater use of social media with higher frequency (67%).

Finally, survey participants were asked to provide additional insight for increasing public engagement. The following are a sample of responses obtained from this survey:
• “…have neighborhood leaders distribute information in their newsletters, churches, etc. and hold mini meetings in the neighborhoods because it is hard to get residents to participate if they don't find out about it from someone they know and that it's not held near their home or work.”

• “Don't require people to show up to meetings. Post the plans and exhibits online. Allow for comments and input to be provided via email or online.”

• “Meetings held by people of color, facilitated in a way that is accessible to regular people who do not speak policy language.”

• “Use radio stations to encourage participation, in the PSAs talk about why it's important, connect to faith community and civic clubs, use social media in an effective way - make sure all hashtags and tags are linked to Twitter and Facebook.”

• “Develop a representative panel of the Tennessee population and conduct on-line surveys around topics of interest, with the panel being asked to respond four or five times a year using incentives.”

• “Use text messaging for voting. Use places people shop like Walmart, Kmart, shopping centers for outreach instead of government buildings. Use public school and private schools to reach students and parents.”

TDOT Workshop

An exit survey was distributed to TDOT Staff participating in the project workshop to determine elements of the project that were of greatest interest/value to staff and to gauge effectiveness of the workshop itself. Seven (7) participants completed and submitted the survey. When asked which of the recommended best practices staff were most interested in trying to incorporate in future public involvement efforts, the top five responses included:

• Enhanced social media activities

• Use of a community facilitator/liaison
• Meetings with new stakeholder groups identified in the GIS Community Profile Database
• Webinar format for community meetings and
• Meetings at alternate times (recommended for specific stakeholder groups).

In order for TDOT to better identify its strengths, they also had to recognize the challenges and barriers that limit TDOT in its ability to address transportation issues that impact marginalized communities to an even greater degree. Challenges TDOT staff believe they will face in implementing new strategies include the cost of recommended strategies, aligning new practices with TDOT requirements/regulations, reluctance of staff to try new strategies, and lack of time to devote to developing new approaches or meeting formats. In order to meet these challenges, respondents of the survey indicated that guidance from TDOT on the most important areas of focus for public involvement (such as increasing underrepresented population engagement, etc., and training on the use of social media scheduling platforms or new technology are important.

CONCLUSION/RECOMMENDATIONS

The key findings that emerged from the analysis of all the research study data (interviews, literature review, focus groups, and surveys) include: improvements in awareness and two-way dialogue are important to increasing effectiveness of TDOT’s public participation activities. Together, this research data provided valuable insight for understanding what specific solutions should be considered in order to address the two underlying issues that have been recognized in the research study: awareness and two-way dialogue. For the sake of capturing the complex issues shared through the multiple avenues as listed above, our research team’s approach capitalized upon the use of focus groups ranging from local residents, business men and women
and college students, ensuring a rich collaborative experience and input is consistent to those attendees’ testimony that reflects concern.

Awareness

Awareness is a significant barrier to participation in the public involvement process for citizens from all demographics and regions of the state. The research team identified this as a prevailing concern across all communities during their research study. Participants had no idea that they could contribute their voices to the decisions determining transportation planning in their neighborhoods and surrounding areas. Focus group participants within the research study were just not aware there was such a thing [as participating]. In particular, one focus group participant revealed, “I never knew that I could say anything” (Focus Group Participant, 2015). Increased engagement with community organizations, such as those profiled in the GIS database developed for this project is strongly recommended to increase awareness with citizens across the state, and specifically for those from groups traditionally underrepresented in the public involvement process.

Two-way dialogue

For meaningful engagement to develop, TDOT should emphasize two-way dialogue rather than just an ‘input’ process. Feedback is very important to continued citizen involvement. Two major approaches were identified by the research team as an outcome of the Best Practice Tools Engagement Workshop, which captured input from 19 TDOT headquarter and region staff. These include Technology-Based Approaches and Community-Based Approaches. By addressing concerns associated with public awareness and two-way dialogue (and not just the
presence of the “input” process), these two approaches will better ensure social equity and public participation. Such existence will be evidenced by quality input in the transportation decision-making process, thereby positively influencing TDOT projects as well as programs and plans within the agency.

A variety of suggestions were brought to the table by the workshop attendees. In regards to technology-based approaches, many believe that the use of scientific surveys, such as Survey Monkey, would be beneficial in capturing public input. Implementing a diversity of webinar platforms can be complemented through the use of cellular phone technology. Such software carriers that encourage two-way communication include, but not limited to, Google Voice (free worldwide PC-to-PC voice calls, free PC-to-phone calls, and video-enabled calls) and Textizen (a service to receive feedback from the public and dispense feedback to the public via SMS). When identifying community-based approaches, the attendees suggested the use of public facilities, such as local libraries, but in a more frequent manner. This facility type ensures a “safe place” that is welcoming towards all diverse populations, regardless of religious affiliation, income, or race; thereby creating an atmosphere that is more conducive to TDOT staff receiving honest feedback and input within the engagement efforts.

Complementary to the above TDOT staff feedback, Wellman (2015) explains scholars Fox and Miller (1995) and O’Connor et al. (2000) perspective on communication between agency administrators and citizens “true dialogue is bidirectional” (Wellman, p. 2, 2015). Halvorsen (2003) states “a history of participation with no visible impact on agency decisions can be worse than no participation at all” (Halvorsen, p. 540, 2003).

These findings are relevant to all transportation agencies as they address public involvement initiatives. State DOTs must ensure that the process is as inclusive as possible,
which can be challenging. Community leaders (including public officials, neighborhood organizations, non-profit organizations, businesses, and religious leaders) can be helpful in encouraging involvement of residents in the planning process and identifying the best means for disseminating information at the local level. State DOTs should work with local agencies and governments to ensure that projects are in alignment with their needs, as this has not always been the case.

Ultimately, state DOTs must align the best tools and/or approaches with the community. It is important to remember that each community is different; so transportation planners cannot take a one-size fits all approach. There is no “cookie cutter” approach to public participation. What works for one community may not work for the next. Therefore, it is important for TDOT and other state DOTs to be fluid and flexible when implementing their public outreach strategies.
REFERENCES


Bredesen commercial zaps TDOT. The City Paper, 2002.  


