

Toolkit for Small Urban and Rural Areas to Mitigate Congestion

(STRIDE Project H)

PROJECT OVERVIEW

Contrary to popular perception, traffic congestion is not only an issue in large urban areas. Small urban and rural areas with populations under 50,000 often experience congestion, but lack the resources necessary to address it. This project focused on understanding the key issues faced by these areas and identifying potential resources and strategies to reduce congestion.

A survey was developed for distribution to transportation agencies in ten states across the southeast: Georgia, Florida, South Carolina, Alabama, Mississippi, Arkansas, Kentucky, Louisiana, North Carolina, and Tennessee. Using the 2017 American Community Survey five-year estimates, a list of cities with a population under 50,000 was compiled. In total, the survey was sent to 445 candidate respondents. Sixty-six complete responses were received, from which 51 responses self-reported populations of 50,000 or below.

The survey results were used to develop questions to solicit additional information from the responding agencies. A subset of the agencies that opted in for a follow-up call were approached for further discussions via phone calls.

GOALS

The goals of this project were to

- Broaden the basic understanding of key congestion issues faced by rural and small urban areas and the resources available to agencies in these areas,
- Identify potential congestion mitigation strategies which are achievable given agency resources, and
- Provide rural and small urban agencies with practical advice and/or tools for everyday use in reducing congestion.

PRODUCT

Small Urban & Rural Areas Congestion Toolkit

A web-based repository provides resources on strategies to reduce congestion in small urban and rural areas.

IMPACT

Agencies using the toolkit can learn about best management practices that when implemented, could reduce congestion leading to fewer travel delays and improved travel conditions.

WHO BENEFITS?

Professionals in agencies in areas with population of 50,000 and below that face congestion problems.

RESEARCHERS

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About STRIDE

The Southeastern Transportation Research, Innovation, Development & Education Center (STRIDE) is the 2016 Region 4 (Southeast) U.S. Department of Transportation University Transportation Center headquartered at the University of Florida Transportation Institute (UFTI). STRIDE Partners include Auburn University, The Citadel, Florida International University, Georgia Institute of Technology, Jackson State University, Tennessee Tech University, North Carolina State University, the University of Alabama at Birmingham, and the University of North Carolina at Chapel Hill.

FINDINGS & RECOMMENDATIONS

An analysis of the results from the quantitative surveys and follow-up calls revealed the following key findings.

- There is no systematic data collection related to monitoring and measuring traffic congestion.
- Traveler phone calls were the primary source for identifying congestion.
- Day-to-day peak hour traffic is the biggest contributor to traffic congestion.
- Special events and tourism were the next highest traffic congestion contributors.
- Work zones, traffic crashes, and freight are not significant contributors to congestion.
- Limited tools are used to mitigate congestion due to work zones.
- Interagency interaction is needed to alleviate congestion, but it was acknowledged that such interaction is sometimes limited.
- Additional funding would help relieve congestion.
- Limited training related to congestion mitigation was reported.

Based on these findings, a set of recommendations was created. The first recommendation is a systematic program for collecting traffic data to measure traffic congestion. Regarding special events, efforts should be taken to enhance coordination among various agencies such as State DOT, local DOT, the police, public works, and local government to develop strategic plans for congestion mitigation. Training sessions can also be introduced at inter-agency strategic planning meetings to inform the participants about alternate congestion management techniques. Finally, state and federal agencies should explore mechanisms to expedite infrastructure improvement projects (especially minor) so that the benefits of congestion alleviation are realized sooner.

PRODUCT

Small Urban & Rural Areas Congestion Toolkit

The research team developed a web-based repository of basic information on congestion management as a “toolkit” that may be accessed by these agencies on demand. The toolkit includes resources on a wide range of topics such as access management, land use planning, signal timing, and speed management. Agency resources are provided from AASHTO, NCHRP, FHWA, the Institute of Transportation Engineers (ITE), the National Association of Counties and others.

The toolkit may be found at <https://techtransfer.ce.ufl.edu/tech-transfer/ufti-t2-projects/stride-projectH>.

For more information on STRIDE Project H: Strategies for Mitigation Congestion in Small Urban and Rural Areas, visit the [STRIDE Project page](#).