



RESEARCH PROJECT CAPSULE [16-3SA]

April 2016

TECHNOLOGY TRANSFER PROGRAM

Evaluating Cell Phone Data for AADT Estimation

JUST THE FACTS:

Start Date:
May 1, 2016

Duration:
15 months

End Date:
July 31, 2017

Funding:
SPR: TT-Fed/TT-Reg

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Sponsored jointly by the Louisiana
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POINTS OF INTEREST:

*Problem Addressed / Objective of
Research / Methodology Used
Implementation Potential*

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PROBLEM

Annual average daily traffic (AADT) is a key input in a transportation agency's roadway planning, design, operation, and maintenance activities, including air quality and safety assessments. AADT is required to be reported annually by a state's Department of Transportation (DOT) to the Federal Highway Administration (FHWA).

The Louisiana Department of Transportation and Development (DOTD) presently performs traffic counts on approximately 16,000 miles of state roadways on a three-year cycle at about 4,800 locations. Traffic counting on non-state roadways is the responsibility of local governments. Major cities (e.g., New Orleans, Baton Rouge, Lafayette, and Lake Charles) have traffic counts collected or estimated by their respective Metropolitan Planning Organizations (MPO). Non-state roadways in smaller urban areas or in rural areas do not have systematic traffic count or traffic estimation programs.

A potential alternative for having AADT systematically collected for all state and non-state roadways is currently available from Streetlytics, the product of a partnership combining transportation analytics with location data derived from more than 100 million cellular and GPS devices across more than 15 billion mobile device locations daily. For any road segment in the United States, Streetlytics provides insights to traffic volumes, origin and destinations, speeds, and driver demographics.

The purpose of this research is to validate AADT reported by Streetlytics, by using Baton Rouge Metropolitan Area (BRMA) as a test case. For select BRMA roadways with available AADT (from either DOTD or local authority), an analysis will be conducted to verify whether corresponding Streetlytics AADT is valid.

OBJECTIVE

The primary objective is to evaluate the accuracy of Streetlytics' traffic volume information and to make a recommendation as to whether DOTD can adopt this tool to provide accurate AADT for Louisiana roadways.

METHODOLOGY

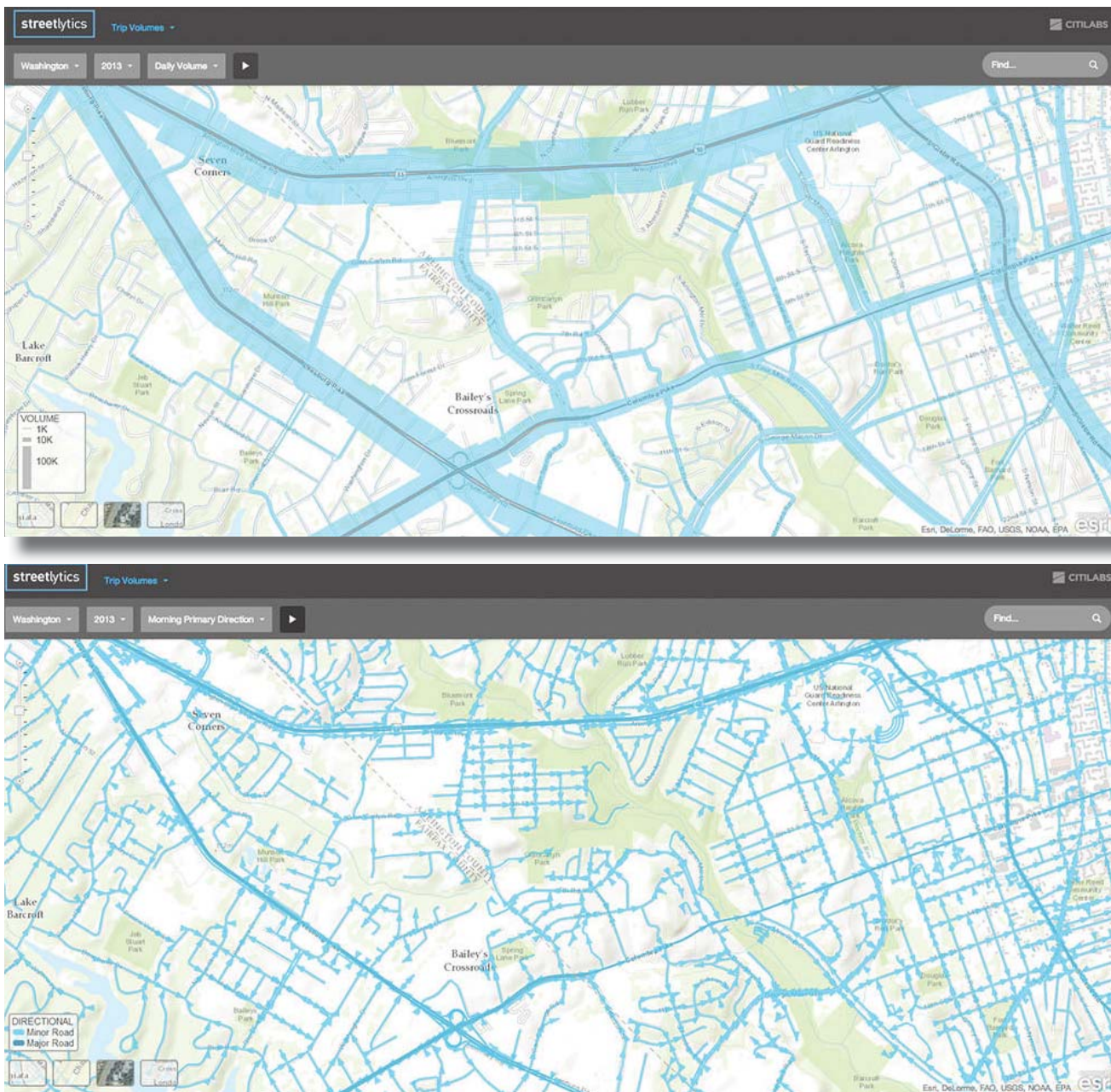
Initially, the research team will compile an inventory of BRMA roadways that currently have traditional traffic count information. A representative sample of roadways will be selected from that inventory, and corresponding traditional traffic count information will be obtained.

The research team will then access the Streetlytics' platform to query and retrieve volume counts for the sample list of roadways. The capability of Streetlytics to provide accurate information will be assessed by comparing its volume counts to the traditional counts.

A recommendation will be made on whether DOTD should adopt Streetlytics as a tool to provide AADT for Louisiana roads and whether it offers more value than traditional manual counts.

IMPLEMENTATION POTENTIAL

If this study validates the accuracy of Streetlytics' AADT, it will result in the instant availability of accurate AADT for all streets within the study area, and possibly throughout Louisiana. This information is considered critical for roadway planning, safety assessments, and maintenance.



Sample representation of Streetlytics' trip volumes

For more information about LTRC's research program, please visit our Web site at www.ltrc.lsu.edu.