Research Project Statement 16-6
FY16 Annual Program

Title:	Fracking Effects on Texas Rural and Urban Transit Districts **(Deliverable Base)**
The Problem:	(What is the problem you want to address? Define the problem or opportunity in terms of the end customer. Provide a brief description of the problem or opportunity). Texas has more than one-fifth of the world's drilling rigs in operation and five major areas of oil and gas production including in the Permian Basin, Granite Wash Formation, Barnett Shale, Haynesville/Bossier Shale and the Eagle Ford Shale. The fracking boom has led to congestion, crumbling pavement and potholes, and fatal crashes in counties where drilling is most active. Specifically, TxDOT has estimated that maintaining infrastructure impacted by the drilling boom will cost $4 billion dollars a year. Furthermore, in October 2014, NPR produced a story on traffic deaths climbing in Texas amid the fracking boom. There are 37 rural transit districts in Texas that operate in multiple counties across the state and offer mostly demand-response service. All rural counties, except Newton and Chambers Counties in southeast Texas, are served by a rural transit district. Of the 37 districts, 27 districts operate in counties with major oil and gas production. In addition, there are 30 urban transit districts in Texas, many of which are in or near these same counties. The oil and gas business has a significant impact on these public transportation operations. The trucking industry demand for drivers with a Commercial Driver's License (CDL), and for experienced vehicle mechanics makes it difficult for impacted transit districts to recruit and retain drivers and mechanics. Poor road conditions make operations difficult by causing damage to vehicles, requiring more vehicle maintenance, posing safety hazards, and by forcing drivers to decrease vehicle operating speeds to help minimize damage, effectively reducing productivity. Additionally, trucking creates congestion, which causes service delays, lower quality of service delivery, and wasted labor and fuel resources. The list below shows rural and urban transit districts that operate in the five major areas of oil and gas production in Texas: Permian Basin • El Paso County • West Texas Opportunities, Inc. • Concho Valley Transit District (rural operations)/San Angelo (urban operations) – TRANSA • South Plains Community Action Association, Inc. • Rolling Plains Management Corporation • Aspermont Small Business Development Center, Inc. • Midland-Odessa Urban Transit District (EZ Rider) • City of Lubbock (Citibus) • Wichita Falls Transit Eagle Ford Shale • Southwest Area Regional Transit District • Webb County Community Action Agency • Lower Rio Grande Valley Development Council (rural and urban) • City of McAllen (Metro) • Alamo Area Council of Governments • Rural Economic Assistance League, Inc. • Golden Crescent Regional Planning Commission (rural)/Victoria (urban) • Capital Area Rural Transportation System (rural)/San Marcos (urban) • Brazos Transit District (rural and urban (Bryan-College Station]) • City of Laredo (El Metro)

	Barnett Shale • Rolling Plains Management Corporation • Texoma Area Paratransit System, Inc. (rural) /McKinney/Sherman-Denison (both urban) • SPAN, Inc. • Public Transit Services • The Transit System, Inc. • Central Texas Rural Transit District • City/County Transportation (City of Cleburne) • Community Services, Inc. • Heart of Texas Council of Governments • Hill Country Transit District • McLennan County Rural Transit District • Wichita Falls Transit • City of Waco • City of Killeen / City of Temple Granite Walsh Formation • Panhandle Community Services, Inc. • Amarillo Transit System Haynesville/Bossier Shale • East Texas Council of Governments • Tyler Transit • City of Longview Transit (COLT) • Brazos Transit District (rural and urban [Bryan-College Station]) TxDOT Public Transportation Division (PTN) needs to understand the financial, safety, and environmental impacts (among others) to the numerous public transportation providers that operate in counties where fracking is prevalent.
Technical Objectives:	The researchers will conduct case study research with a selection of affected transit agencies operating in each of the five major areas of oil and gas production in Texas. Through data collection, site visits, and survey research, researchers will gather and analyze information related to the following seven topic areas: • Labor resources and costs • Vehicle maintenance • Cost of fuel and time due to delay • On-time performance • Crashes • Emissions • Insurance costs The researchers will compare data from before the fracking boom to the most available data in each of the topic areas. The researchers will investigate other states with major oil and gas production, and document lessons learned and best practices as applicable. The final research product will be documented effects and suggested recommendations in a final report. Focus on: • Rural transit districts and urban transit districts receiving state formula funds, in areas with the highest level of energy-sector activities impacting transit. • Impact of greater demand for skilled staff such as drivers with CDL and experienced mechanics; e.g., skilled staff leave transit agencies for energy sector jobs, and transit agencies must increase wages or benefits to retain staff. • Impact of rough pavement condition on: (1) providing transit service, e.g., slower speed, passenger discomfort, reduced productivity; and (2) transit vehicle condition, e.g., shorter useful life for vehicles.

	• Impact of greater-than-usual truck VMT in transit operating areas, e.g., increased congestion, slower operating speed, more frequent collisions or near collisions. Goal: Quantify operating and capital cost impacts on transit, and have recommendations that can be implemented by TxDOT and impacted transit districts to reduce cost of addressing impacts. Recommendations are for both rural and urban transit districts.
Desired Deliverables:	The proposed research will include the following: • Value of Research (VoR) • Product containing no more than six case studies in total documenting effects of fracking on Texas transit agencies (as long as more than one would be for urban transit and more than one would be for rural transit) in agreed upon topic areas; supplemented by survey research as necessary. • Technical report documenting effects and recommendations to both rural and urban transit agencies and TxDOT • Project Summary Report
Proposal Requirements:	1. Proposals will be considered non-responsive and will not be accepted for technical evaluation if they are not received by the deadline or do not meet the requirements stated in RTI's University Handbook. 2. Proposals should be submitted in PDF format, 1 PDF file per proposal. File name should include project name and university abbreviation. 3. Utilize the deliverable based templates (see the appendices in the University Handbook)
Pre-Proposal Meeting Information:	Wednesday, February 3, 2016, 1:00 - 2:00PM Austin Riverside Campus 118 E. Riverside Dr. RTI Conference Room, 1st Floor WebEx Information: Join WebEx meeting Meeting number: 735 712 526 Meeting password 1234 Call-in toll-free number: 1-866-637-1408 Call-in number: 1-660-422-5173 Conference code: 199 125 9183
Notifying RTI of Intent to Propose:	In order to be notified if additional project information is distributed by TxDOT, you must contact **RTI,** at **(512) 416-4730** or rtimain@txdot.gov by February 1, 2016 if you plan to propose.
Proposal Deadline:	Proposals are due to RTI by **4:00 p.m. Central Time**, **March 10, 2016**. Email submissions should be sent to rtimain@txdot.gov.