

## Tennessee Section ITE 2020 Annual Report



The Tennessee Section of ITE is pleased to submit our Annual Section Report outlining activities in 2020 that supported professional development, growth of the traffic and transportation industry, promoting safe and efficient flow of people, goods, and other services that support our mission.

### 2020 Officers

President	Nathan Vatter	615-741-0995	<a href="mailto:nathan.vatter@tn.gov">nathan.vatter@tn.gov</a>
Vice President	Stephen Edwards	901-636-6710	<a href="mailto:stephen.edwards@memphistn.gov">stephen.edwards@memphistn.gov</a>
Secretary	Luke Dixon	615-423-0993	<a href="mailto:luke.dixon@arcadis.com">luke.dixon@arcadis.com</a>
Section Administrator	Brandon Baxter	615-244-8591	<a href="mailto:bbaxter@ragansmith.com">bbaxter@ragansmith.com</a>
Section Rep. (20-21)	Zane Pannell	615-350-4332	<a href="mailto:zane.pannell@tn.gov">zane.pannell@tn.gov</a>
Section Rep. (19-20)	Steve Bryan	615-741-2152	<a href="mailto:steve.bryan@tn.gov">steve.bryan@tn.gov</a>
Immediate Past President	Amy Burch	615-258-8551	<a href="mailto:amyburch@burchtransportation.com">amyburch@burchtransportation.com</a>

### Regular Meetings

#### Local Section Meetings in 2020

Meeting #1	Chattanooga Section Luncheon Meeting	Date: January 10, 2020 Attendees: 13 members
Meeting #2	Chattanooga Section Luncheon Meeting	Date: January 10, 2020 Attendees: 8 members
Meeting #3	Chattanooga Section Virtual Teams Meeting	Date: July 9th, 2020 Attendees: 8 members
Meeting #4	Nashville Section Luncheon at TN DOT with Guest Speaker Brandon Baxter	Date: January 17, 2020 Attendees: N/A
Meeting #5	Nashville Section Webinar for Chattanooga, Memphis, Knoxville, Nashville, and Tri-Cities	Date: March 10, 2020 Attendees: N/A

#### TSITE Quarterly Section Meetings in 2020

In 2020 due to COVID-19 we had 1 in person meeting and 3 virtual meetings. Two of the virtual meetings were jointly held with AASHTO, TDOT, FHWA, and ITS TN.

Meeting #1	<b>Winter Meeting</b> Memphis, Tennessee at The University of Memphis	Date: February 12, 2020 Attendance: 52
------------	--	---

Meeting included 3 Presentations, STEM Academy Poster Session, Traffic Bowl, and Business Meeting

- "Complete Streets: Promises and Proof" / Sam Jordan, University of Memphis
- "Memphis Traffic Calming Program" / Wain Gaskins, Cannon & Cannon
- Innovation and Advanced Technologies in Transportation and Logistics / Suman Kharbanda, FedEx Corp

**Tennessee Section ITE  
2020 Annual Report**



- East High T-STEM Academy “Poster Session and Networking”
- Student Traffic Bowl

Meeting #2      **Spring Meeting**      Date: May 19, 2020  
Virtual Microsoft Teams      Attendance: 126

- Joint Virtual Meeting with AASHTO included 3 Presentations and Business Meeting
- "Chattanooga’s Data Analytics Work during Disruptive Events" / Kevin Comstock – Smart City Director, City of Chattanooga
  - "An update from TDOT's Bureau of Environment and Planning" / Preston Elliott – Deputy Commissioner, Tennessee Department of Transportation
  - "Kirby Whitten (Shelby Farms) Parkway: A Holistic Transportation Solution for One of America’s Largest Urban Parks" / Stephen Edwards – Transportation Planning Program Manager, City of Memphis

Meeting #3      **Summer Meeting**      Date: July 22-24, 2020  
Virtual Microsoft Teams      Attendance:  
Day 1 – 139  
Day 2 – 92  
Day 3 - 85

- Virtual Meeting included 7 Presentations, Awards & Business Meeting
- "Walking and Biking in Memphis" / Nicholas Oylar, City of Memphis
  - "An update from TDOT's Bureau of Environment and Planning" / Jessica Rich, Federal Highway Administration
  - "Mayor John Cooper’s Metro Nashville Transportation Initiatives" / Faye DiMassimo, Metro Nashville
  - "Evaluation of Crowdsourced Event Reports for Real Time Implementation – Spatial and Temporal Accuracy Analysis" / Yuandong Liu, University of Tennessee – Knoxville
  - "Estimating Geographically and Temporally Weighted Regression Models to Develop Safety Functions for Multilane Rural Highways in Tennessee" / Amin Mohammadnazar, University of Tennessee – Knoxville
  - "The Evolving Nature of Transportation for People with Disabilities in Tennessee" / James Brown, Special Projects Office, TDOT
  - "I-440 Reconstruction, From Preparation to Execution”/ Clayton Markham TDOT

Meeting #4      **Fall Meeting**      Date: Oct 27-29, 2020  
Virtual Microsoft Teams      Attendance:  
Day 1 – 291  
Day 2 – 268  
Day 3 - 256

- Joint Virtual Meeting with TDOT, FHWA and ITSTN with 14 presentations and Business Meeting
- “Impacts of COVID-19 – Traffic Analysis, Safety Impacts, TMC/HELP Operations” / Ben Price, Adam Moncivaez, Nathan Vatter, TDOT
  - Traffic Operations Division – Research Project Showcase
    - "Work Zone Alert Systems” – Dr. Sabya Mishra
    - “Traffic Queue Prediction and Warning Systems” – Dr. Lee Han
    - “Coordinating Stat from the CRASH Predictive Analytics Program” Dr. Abhishek Dubey

- “Local Road Safety Plan” / Ken Kochevar, FHWA California Division Office
- “Memphis Innovation Corridor”/ James Collins, Kimley Horn and Associates
- “Preview of TDOT’s Highway System Access Manual”/ Jon Storey, PE, PTOE – Gresham Smith
- “Predicting Safety at the Design Stage: HSM and IHSDM”/ Peter Kauffman, Barge Design Solutions
- Street Smarts Panel - "Engineering Transportation Systems that Provide Safety, Mobility, and Prosperity "/>Panelist: Matt Meservy, PE – TDOT Long Range Planning Division, Jason Ivey – Tennessee Highway Safety Office, Bob Murphy, PE, PTOE, RLS – KCI Technologies
- “Adaptive Ramp Meter – A Probabilistic Approach”/ Himanshu Wad – Q-Free America, Robert Everman – WSDOT, Jason Lefler – WSDOT
- “Unlocking the Power of Big Data to Keep Drivers and Roadways Safe”/ Terri Johnson – INRIX Public Sector Services
- “Utilizing Crowd Sourced Data to Gain Insights on the State of Your Roads”/ Patrick Law – Blynscy
- “TMC Operations: Smarter. Faster. Better”/ Carla W. Holmes, PE, PTOE – Gresham Smith  
Brett Sellers, PE – ALDOT
- “Memphis Innovation Corridor – ITS Elements of a Bus Rapid Transit System” / Doug Swett, and Zhiyong Guo, PE, PTOE – Kimley Horn and Associates
- “Connected Autonomous Vehicle: Tennessee State of the Practice”/ Lee Smith, TDOT
- “Work Zone Initiatives”/ Jay Norris, TDOT

**Students and Younger Members Support (Scholarships, Student Leadership Summit and Mentoring)**

In 2020 TSITE Board added the Bill Hart Scholarship and raised the scholarship funding levels for other student scholarships and delivered all 6 awards in 2020 for \$10,500. Following the awards ceremony at our Virtual Summer Meeting, the Board received numerous correspondences of appreciation from all the students who were awarded scholarships messages of thanks from their faculty advisors and professors. The TSITE Board shared the appreciation with our membership who made contributions in 2020 to support our next generation of Transportation Professionals.

**TSITE Scholarships for the 2020-2021**

William L. Moore, Jr. TSITE Scholarship	Caroline Janssen	Vanderbilt University	\$2,000
John R. Harper Memorial Scholarship	Mojdeh Azad	University of Tennessee	\$2,000
Bill M. Hart Memorial Scholarship	Yi Wen	University of Tennessee	\$2,000
T. Darcy Sullivan Scholarship	Nitesh Shah	University of Tennessee	\$1,500
Bill D. Kervin, Jr. TSITE Scholarship	Nima Hoseinzadeh	University of Tennessee	\$1,500
TN Section Undergraduate Scholarship	Kailey Newcome	Vanderbilt University	\$1,500

**Total Awarded \$10,500**

TSITE also awarded \$500 for 1<sup>st</sup> Place, \$250 for 2<sup>nd</sup> Place and \$100 for 3<sup>rd</sup> place in the student paper competition. All recipients of student scholarships and paper competition were invited to attend the Summer Meeting at no charge. The summer meeting offers networking and technical knowledge opportunities for students.

## Tennessee Section ITE 2020 Annual Report

In 2020, TSITE sponsored a Senior Design Project Award for the University of Tennessee's Senior Day for Spring and Fall semesters. TSITE members reviewed the senior design projects and selected a team to receive the TSITE Award. Also, a TSITE representative attended the events and awarded the winning team members.

The Career Development Committee provided outreach and support for each of the student chapters throughout the year and TSITE supported the Student Leadership Summit held at Georgia Tech from February 28-March 1 by sending 4 members along with Students in 2020.

**Application of Technical Knowledge** – Several technical sessions were given at our meetings included applications of cutting-edge transportation elements. One great example was Suman Kharbanda, Director of Operations Planning & Technology, for FedEx Corp discussing "Innovation and Advanced Technologies in Transportation and Logistics".

**Networking Events** – Events for networking in 2020 included Sponsoring awards for UTK Senior Design Project, Chat rooms for importance of joining a professional organization, and hosting 3 quarterly meeting that were jointly held with AASHTO, TDOT, FHWA and ITS TN.

**K-12 STEM Outreach** – Several TSITE members, particularly in the Memphis area, regularly engage with high school students at the T-Stem Academy ("T" for Transportation). Other 2020 events included hosting East High T-STEM Academy "Poster Session and Networking" at our 2020 Winter Meeting in Memphis. TSITE members serve on advisory board for the T-STEM Academy and for the Southeast Transportation Workforce Center. In this capacity, TSITE members created the Distracted Driving Challenge and deployed it at the annual Choosing Transportation Summit held in Memphis on March 4-5, 2020. The competition included more than 50 students from T-STEM, Crosstown, and Hardeman County high schools. TSITE members served as competition developers and judges. The event was such a success that it was selected to become ITE's official event for Innov8 Day 2020 (<https://www.ite.org/technical-resources/councils/transportation-education-council/science-technology-engineering-and-math-stem-resources/#STEMDay>). TSITE members also took part in the speed networking event for students to share information about their career paths as well as a career fair.

**New Member Recruitment** - TSITE added 38 new members after hosting several joint virtual meetings with AASHTO, TDOT, FHWA and ITS TN in 2020. This brings our membership total to 360 members. In December TSITE hosted a chat room for the UT students to emphasize the importance of joining a professional organization.

**Diversity and Inclusion** – TSITE embraces diversity and inclusion in all aspects of our organization including valuing a balanced and diverse Executive Board to serve our members and by providing inclusion for STEM activities in diverse areas of our State. TSITE members were also active participants in the 2020 Choosing Transportation Summit's Women in Transportation Working Group on March 4, 2020. The group developed an action plan for increasing the number of women pursuing transportation professions and for providing networking and other support to retain women currently in transportation careers.

**Training/Professional Development** - In 2020 TSITE held both in person and virtual meetings due to COVID-19. Two of the virtual meetings were jointly held with AASHTO, TDOT, FHWA, and ITS TN. These meetings provided a total of 29 sessions and 21.5 professional development credit hours. Traditionally

## Tennessee Section ITE 2020 Annual Report

our summer meeting is the largest attended meeting and while the summer meeting was well attended with 139 attendees on Day 1, our joint sessions in the Fall had over twice as many attendees with 291 persons on Day 1.

**Field Trips/Technical Tours** – 2020 Opportunities for Field Trips were limited after March due to COVID-19. Following the Winter Meeting in Memphis a group including the Section President, former Section Representative and three other TSITE members attended a Memphis Grizzlies NBA game, see group photo.

**Service Projects** – In 2020 TSITE lead a Service Project for a distracted driving PSA student contest. The PSA winners were recognized at our July 23<sup>rd</sup> Virtual Summer Meeting where 1<sup>st</sup> and 2<sup>nd</sup> place winners won cash prizes totaling \$800 for their efforts and creativity. The Section then shared these PSAs on the TSITE website, Socials, email blast and at the summer meeting.

**Funding Support** - TSITE instituted a Tiered Annual Sponsorship program, which is now included in an updated Operations Manual. Previously, TSITE would make various requests for sponsorship of meetings and events throughout the year. Now a call for sponsorship occurs in January and sponsorship is received and recognized according to specified tiers. The 2020 Annual Sponsorship Total was \$9,750, which went towards supporting the activities of ITE student chapters including the traffic bowl and leadership summit travel. TSITE members also contributed to the student scholarship fund in 2020. In past years, we held golf tournaments and auctions and while that was not possible in 2020 due to COVID-19, our members still made voluntary donations at the Summer Meeting supporting our efforts.

2020 TSITE Sponsorship of Registration for SDITE Student Leadership Summit

Recipient	School & Student Chapter	Amount
Sameer Aryal	University of Tennessee ITE Student Chapter	\$315
Nitesh Shah	University of Tennessee ITE Student Chapter	\$315
<b>TOTAL:</b>		<b>\$630</b>

2020 TSITE Scholarship Recipients

Recipient	School	Scholarship	Amount
Caroline Janssen	Vanderbilt University	Bill Moore	\$2,000
Mojdeh Azad	University of Tennessee	John Harper	\$2,000
Yi Wen	University of Tennessee	Billy Hart	\$2,000
Nitesh Shah	University of Tennessee	T. Darcy Sullivan	\$1,500
Nima Hoseinzadeh	University of Tennessee	Bill Kerwin	\$1,500
Kailey Newcome	Vanderbilt University	TSITE Undergraduate	\$1,500
<b>TOTAL:</b>			<b>\$10,500</b>

2020 TSITE Student Paper Competition

Recipient	School	Paper Competition	Amount
Yuandong Liu	University of Tennessee	1 <sup>st</sup> Place	\$500
Zhihua Zhang	University of Tennessee	2 <sup>nd</sup> Place	\$250
Amin Mohammadnazar	University of Tennessee	3 <sup>rd</sup> Place	\$100
<b>TOTAL:</b>			<b>\$850</b>

2020 TSITE PSA Competition

Recipient	School	PSA Competition	Amount
Caroline Janssen	Vanderbilt University	1 <sup>st</sup> Place	\$125
Alexander Stephens	Vanderbilt University	1 <sup>st</sup> Place	\$125
Swapnil Pande	Vanderbilt University	1 <sup>st</sup> Place	\$125
Jesse Liu	Vanderbilt University	1 <sup>st</sup> Place	\$125
Zhihua Zhang	University of Tennessee	2 <sup>nd</sup> Place	\$75
Yi Wen	University of Tennessee	2 <sup>nd</sup> Place	\$75
Nitesh Shah	University of Tennessee	2 <sup>nd</sup> Place	\$75
Jing Guo	University of Tennessee	2 <sup>nd</sup> Place	\$75
<b>TOTAL:</b>			<b>\$800</b>

Total 2020 Student Member Financial Support: \$12,780

**LeadershipITE** - Nearly all TSITE's LeadershipITE alumni currently hold a committee chair position or officer position for TSITE or SDITE. This year Mr. Terrance Hill from TSITE was nominated and accepted to participate in the 2021 class. While TSITE does not currently offer financial support for LeadershipITE tuition, our board is reviewing future grants or sponsorships to support this effort.

**Advocacy** - TSITE's Legislative Committee tracks and provides updates about national and local issues, legislation, and regulations that may be of interest or impact the transportation industry. Typically, these updates are provided during the business meetings at the quarterly meetings.




# Tennessee Section ITE 2020 Annual Report

## Photos from 2020



### Walking & Biking in Memphis

NICHOLAS OYLER  
Bikeway & Pedestrian Program Manager



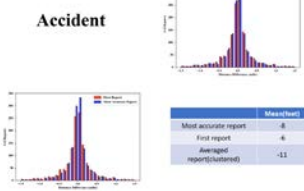

### TENNESSEE STRATEGIC HIGHWAY SAFETY PLAN

Jessica Rich, Safety Engineer  
Federal Highway Administration  
Tennessee Division

- Intersection Safety Program
- Roadway Departure Program
- Local Road Safety Initiative
- Alternative Intersections

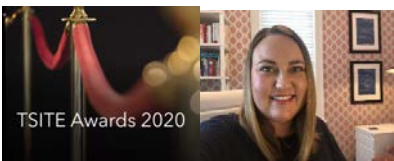


### Accident



Category	Mean/Std
Most accurate report	4
Average report (customer)	-11

### TSITE Awards 2020



### Student Paper Competition 1<sup>st</sup> Place

"Evaluation of Crowdsourced Event Reports for Real Time Implementation - Spatial and Temporal Accuracy Analysis"

**Yuandong Liu**  
University of Tennessee - Knoxville

### GO-KART-STYLE RACING GAME TOURNAMENT

SDITE Distracted Driving Public Service Announcement Competition

\*\*GAME NAME REDACTED FOR LICENSING PURPOSES

### 2020 Robert Stammer TSITE Student Chapter Award

### Jack B. Humphreys Award

For Service as a Young Member

**Kenneth Perkins**

### Tennessee Section Award

For Outstanding Individual Service

**Terrance Hill**

### Edward E. Watt Volunteer Award

For Distinguished Service

**Nermine Nashed**


### Clayton Markham, P.E.

CE Manager 2,  
R3 Innovative Delivery

### Project Overview

**I-440 Project Goals**

- Address Pavement: Concrete is 30 years old. Severe deterioration. Recent paving won't last.
- Improve Safety: Crash rates on I-440 are nearly double (1.84) the statewide average. Since 2008, there have been 14 fatalities on I-440.
- Address Congestion: Millage Plan / 21st Avenue West End Avenue Bridge over I-440.



### EVOLUTION OF DISABILITY TRANSPORTATION IN TENNESSEE

James Brown  
Transportation Program Supervisor  
Strategic Transportation Investments

### Stay Focused For Us, Never Drive DISTRACED



### What's the big problem?

People with Disabilities Have Over a 30% Unemployment Rate

### Mission Statement ITE

To provide the global community of transportation professionals with the knowledge, practices, skills and connections to serve the needs of their communities and help shape the future of the profession and transportation in the societal context.

### Estimating Geographically and Temporally Weighted Regression Models to Develop Safety Performance Functions (SPFs) for Multilane Rural Highways in Tennessee

### Introduction

- Studies have used and produced models to estimate Safety Performance Functions (SPFs) based on the Highway Safety Manual (HSM) model.
- These models usually use "average flow" to estimate "average" safety levels.
- However, the effect of specific variables on road frequency may be different in different locations and over different periods of time.
- This study explores the effects of flow levels on road frequency while incorporating geographical and temporal regression.
- The model will be geographically and temporally weighted regression (GTWR) models to account for spatial-temporal heterogeneity in road data.

### 2020 Sponsors

