Publications Catalog

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This 2015 update supplements the CTS Publications Catalog published in 2004 and subsequent annual updates. A listing of all publications available from CTS along with ordering information are online at www.cts.umn.edu.

Research Reports

Transportation-related research reports by University of Minnesota researchers, published by CTS, MnDOT, the Minnesota Local Road Research Board, and other sponsors in 2014. These reports are available in PDF format at www.cts.umn.edu/Publications/ResearchReports/.

Transportation Planning and the Economy

Access Across America: Transit 2014
Andrew Owen, David M Levinson
Report no. CTS 14-11
www.cts.umn.edu/Publications/ResearchReports/
reportdetail.html?id=2380

Access Across America: Transit 2014 Methodology

Andrew Owen, David M Levinson Report no. CTS 14-12 www.cts.umn.edu/Publications/ResearchReports/ reportdetail.html?id=2382

Building Local Agency Capacity for Public Engagement in Local Road Systems Planning and Decision Making

Kathryn S Quick, Guillermo Narvaez, Emily Saunoi-Sandgren, Zhirong Zhao Report no. MnDOT 2014-17 www.cts.umn.edu/Publications/ResearchReports/ reportdetail.html?id=2358

Innovative Parking Pricing Demonstration in the Twin Cities: Introducing Flexibility and Incentives to Parking Contracts

Adeel Lari, Frank Douma, Kate Lang Yang, Kathryn Caskey, Colin Cureton
Report no. CTS 14-02

www.cts.umn.edu/Publications/ResearchReports/reportdetail.html?id=2342

Nice Stations: An Exploration of Nice Ride Bike Share Accessibility and Station Choice

Jessica Schoner, David M Levinson Report no. CTS 14-03

www.cts.umn.edu/Publications/ResearchReports/reportdetail.html?id=2344

Statistical Analysis of Fare Compliance

Diwakar Gupta, Yibin Chen Report no. CTS 14-08

 $www.cts.umn.edu/Publications/ResearchReports/\\ reportdetail.html?id=2370$

Value Increase and Value Capture: The Case of TH-610 in Maple Grove, Minnesota

Zhirong Zhao

Report no. MnDOT 2014-03

www.cts.umn.edu/Publications/ResearchReports/reportdetail.html?id=2332

Report no. MnDOT 2013-30

www.cts.umn.edu/Publications/ResearchReports/reportdetail.html?id=2336

Transportation Infrastructure

Acoustic Emission Monitoring of a Fracture-Critical Bridge

Arturo E Schultz, Daniel L Morton, Anton S Tillmann, Javier E Campos, David Thompson, Alexandria J Lee-Norris, Ryan M Ballard Report no. MnDOT 2014-15

www.cts.umn.edu/Publications/ResearchReports/reportdetail.html?id=2352

Anchorage of Shear Reinforcement in Prestressed Concrete Bridge Girders

Brian Mathys, Catherine E French, Carol K Shield Report no. MnDOT 2014-36 www.cts.umn.edu/Publications/ResearchReports/ reportdetail.html?id=2390

Development and Evaluation of Effective Turbidity Monitoring Methods for Construction Projects Rebekah Perkins, Brad Hansen, Bruce Wilson, John S Gulliver

Report no. MnDOT 2014-24

www.cts.umn.edu/Publications/ResearchReports/reportdetail.html?id=2374

Evaluation of Concrete and Mortars for Partial Depth Repairs

Eshan V Dave, Jay Dailey, Eric Musselman Report no. MnDOT 2014-41

www.cts.umn.edu/Publications/ResearchReports/reportdetail.html?id=2394

Modeling and Monitoring the Long-Term Behavior of Post-Tensioned Concrete Bridges

Catherine E French, Carol K Shield, Brock D Hedegaard Report no. MnDOT 2014-39

www.cts.umn.edu/Publications/ResearchReports/reportdetail.html?id=2396

Quantifying Moisture Effects in DCP and LWD Tests Using Unsaturated Mechanics

Danielle Tan, Kimberly Hill, Lev Khazanovich Report no. MnDOT 2014-13

www.cts.umn.edu/Publications/ResearchReports/reportdetail.html?id=2350

Scour Monitoring Technology Implementation

Matthew Lueker, Jeff Marr Report no. MnDOT 2014-37

www.cts.umn.edu/Publications/ResearchReports/reportdetail.html?id=2386

Simplified Design Table For Minnesota Concrete Pavements

Derek Tompkins, Lev Khazanovich Report no. MnDOT 2014-27

www.cts.umn.edu/Publications/ResearchReports/reportdetail.html?id=2372

Environment and Energy in Transportation

Assessing and Improving Pollution Prevention by Swales

Farzana Ahmed, Poornima Natarajan, John S Gulliver, John S. Weiss, John L Nieber Report no. MnDOT 2014-30 www.cts.umn.edu/Publications/ResearchReports/

reportdetail.html?id=2378

Developing Salt-Tolerant Sod Mixtures for Use as

Roadside Turf in Minnesota
Joshua Friell, Eric Watkins, Brian Horgan
Report no. MnDOT 2014-46

www.cts.umn.edu/Publications/ResearchReports/reportdetail.html?id=2398

Reconciling the Public Land Surveying Records in Minnesota

Rod Squires

Report no. CTS 14-01

www.cts.umn.edu/Publications/ResearchReports/reportdetail.html?id=2340

Transportation Safety and Traffic Flow

Advanced LED Warning System for Rural Intersections: Phase 2 (ALERT-2)

Taek Mu Kwon, Husam Ismail Report no. MnDOT 2014-10

www.cts.umn.edu/Publications/ResearchReports/reportdetail.html?id=2348

Automatic Generation of Traffic Signal Timing Plan

Henry Liu, Jianfeng Zheng Report no. MnDOT 2014-38

www.cts.umn.edu/Publications/ResearchReports/reportdetail.html?id=2388

Development of a Navigation System Using Smartphone and Bluetooth Technologies to Help the Visually Impaired Navigate Work Zones Safely

Chen-Fu Liao

Report no. MnDOT 2014-12

www.cts.umn.edu/Publications/ResearchReports/reportdetail.html?id=2346

Development of a Sensor Platform for Roadway Mapping: Part A - Road Centerline and Asset Management

Brian Davis, Max Donath Report no. CTS 14-09

www.cts.umn.edu/Publications/ResearchReports/reportdetail.html?id=2376

Effect of Signing and Lane Markings on the Safety of a Two-Lane Roundabout

John Hourdos, Veronica Richfield

Report no. 2014-04

www.cts.umn.edu/Publications/ResearchReports/reportdetail.html?id=2338

Estimating the Crash Reduction and Vehicle Dynamics Effects of Flashing LED Stop Signs Gary A Davis, John Hourdos, Hui Xiong

Report no. MnDOT 2014-02

www.cts.umn.edu/Publications/ResearchReports/reportdetail.html?id=2330

Expanding and Streamlining of RTMC Freeway Network Performance Reporting Methodologies and Tools

John Hourdos, Stephen Zitzow Report no. MnDOT 2014-05

www.cts.umn.edu/Publications/ResearchReports/reportdetail.html?id=2334

Implementation of High Accuracy Radar Detectors for Traffic Safety Countermeasure Evaluation

Gordon Parikh, John Hourdos Report no. CTS 14-05

www.cts.umn.edu/Publications/ResearchReports/reportdetail.html?id=2362

Minnesota Department of Transportation Rural Intersection Conflict Warning System (RICWS) Reliability Evaluation

Arvind Menon, Max Donath Report no. CTS 14-07

www.cts.umn.edu/Publications/ResearchReports/reportdetail.html?id=2364

Options for Automated Speed Enforcement Pilot Projects in Minnesota Work and School Zones

Frank Douma, Lee Munnich, Thomas Garry Report no. CTS 14-06

www.cts.umn.edu/Publications/ResearchReports/reportdetail.html?id=2360

A Next Generation Non-Distracting In-Vehicle 511 Traveler Information Service

Nichole Morris, Alice Ton, Jennifer Cooper, Christopher Edwards, Max Donath

Report no. CTS 14-13

www.cts.umn.edu/Publications/ResearchReports/reportdetail.html?id=2384

Rural and Small Urban Multimodal Alternatives for Minnesota

Carol Becker

Report no. MnDOT 2014-42

...www.cts.umn.edu/Publications/ResearchReports/reportdetail.html?id=2392

Uncontrolled Pedestrian Crossing Evaluation Incorporating Highway Capacity Manual Unsignalized Pedestrian Crossing Analysis Methodology

Bryan Nemeth, Ross Tillman, Jeremy Melquist, Ashley Hudson

Report no. MnDOT 2014-21

www.cts.umn.edu/Publications/ResearchReports/reportdetail.html?id=2368

Using Truck GPS Data for Freight Performance Analysis in the Twin Cities Metro Area

Chen-Fu Liao

Report no. MnDOT 2014-14

www.cts.umn.edu/Publications/ResearchReports/reportdetail.html?id=2354

Research Summaries

Access Across America: Transit 2014

CTS Research Brief

www.cts.umn.edu/sites/default/files/files/brief_2014.pdf

Safety and Risk in Modern Urban Roundabouts CTS Research Brief

www.cts.umn.edu/sites/default/files/files/ publications/researchsummaries/roundabouts.pdf

Annual Reports

2014 CTS Annual Report

www.cts.umn.edu/sites/default/files/files/publications/annual/CTS_Annual_Report_2014.pdf

Newsletters

CTS publishes print and electronic newsletters covering many facets of transportation. Subscribe online at www.cts.umn.edu/Publications/subscribe/.

CTS Catalyst

A monthly publication on the latest transportation innovations at the University of Minnesota. Available in both print and electronic formats.

Minnesota LTAP Exchange

A newsletter of the Minnesota Local Technical Assistance Program (LTAP) (quarterly)

AirTAP Briefings

News and how-to information for personnel operating, maintaining, and administering Minnesota's public-use airports (periodic) Available in print and e-mail.

CTS Freight & Logistics E-News

News and events from the community of freight and logistics professionals (periodic).

Roadway Safety Institute News

E-mail news update about research and educational activities at the Roadway Safety Institute (quarterly).

Minnesota LTAP Exchange Express

New publications and resources from various sources, plus other items of interest to local agencies (periodic).

TERRA E-News

A newsletter for the Transportation Engineering and Road Research Alliance (quarterly).

Journals

Journal of Transport and Land Use

An open-access, peer-reviewed online journal publishing original interdisciplinary papers on the interaction of transport and land use. www.jtlu.org

Videos

These and other videos are available at www.cts.umn. edu/Publications/videos/ and on the CTS YouTube channel: www.youtube.com/ctsumn.

2014-15 CTS Research Highlights Video

This year's video highlights a dozen University of Minnesota researchers and their recent work.

2014-15 Seminars

Available for viewing online at www.cts.umn.edu/events/seminars/

February 20, 2015

"Determining Creep Compliance and Strength of Asphalt Mixtures at Low Temperatures"

CTS Research Seminar

Mihai Marasteanu. professor of civil, environmental, and geo- engineering.

www.cts.umn.edu/events/seminars/2015/022015

February 25, 2015

"Experiments on Culvert Design for Fish and Aquatic Organism Passage in Minnesota"

CTS Research Seminar

Jessica Kozarek, research associate and research manager of the Outdoor Stream Lab at the University of Minnesota's St. Anthony Falls Laboratory. www.cts.umn.edu/events/seminars/2015/022515

February 27, 2015

"Statistical Analysis of Fare Compliance"

CTS Research Seminar

Diwakar Gupta, professor in the Department of Industrial and Systems Engineering at the University of Minnesota.

www.cts.umn.edu/events/seminars/2015/022715

December 17, 2014

"Promising Alternative Fuels for Improving Emissions from Future Vehicles"

CTS Research Seminar

William Northrop, assistant professor in the Department of Mechanical Engineering at the University of Minnesota.

www.cts.umn.edu/events/seminars/2014/121714

December 4, 2014

"Improving Traffic Safety and Mobility Using DSRC-Based V2V Communication"

Roadway Safety Institute Seminar

M. Imran Hayee, professor of electrical engineering at the University of Minnesota Duluth.

www.roadwaysafety.umn.edu/events/ seminars/2014/120414/index.html

November 20, 2014

"The Evolution of Hot Spot Mapping of Crashes: Past, Present, and Future"

Roadway Safety Institute Seminar William Schneider, assistant professor of civil engineering at the University of Akron. www.roadwaysafety.umn.edu/events/ seminars/2014/112014/index.html

November 18, 2014

"Planning and Implementation of Complete Streets at Multiple Scales"

CTS Research Seminar

Carissa Schively Slotterback, associate professor and director of the Urban and Regional Planning program at the Humphrey School of Public Affairs.

www.cts.umn.edu/events/seminars/planning-and-implementation-complete-streets-multiple-scales

November 6, 2014

"Investigating the Impact of the I-94 Active Traffic Management System on Safety"

Roadway Safety Institute Seminar John Hourdos, director of the Minnesota Traffic Observatory at the University of Minnesota. www.roadwaysafety.umn.edu/events/ seminars/2014/110614/index.html

October 30, 2014

"Obesity and Crash Risk in a Population of Tractor-Trailer Drivers"

Roadway Safety Institute Seminar Stephen Burks, professor of economics and management at the University of Minnesota Morris. www.roadwaysafety.umn.edu/events/ seminars/2014/103014/index.html

October 23, 2014

"Model Criticism and Validation in Crash Reconstruction"

Roadway Safety Institute Seminar Gary Davis, professor of civil, environmental, and geoengineering at the University of Minnesota. www.roadwaysafety.umn.edu/events/ seminars/2014/102314/index.html

October 16, 2014

"Computerized Crash Reports Usability and Design Investigation"

Roadway Safety Institute Seminar Nichole Morris, research associate at the HumanFIRST Laboratory at the University of Minnesota. www.roadwaysafety.umn.edu/events/ seminars/2014/101614/index.html

October 9, 2014

"Big Brother is My Co-Pilot: Impacts of and Attitudes Towards Driver Behavior Regulations"

Roadway Safety Institute Seminar

Frank Douma, research fellow and associate director of the State and Local Policy Program at the Humphrey School of Public Affairs. Nichole Morris, research associate at the HumanFIRST Laboratory at the University of Minnesota.

www.roadwaysafety.umn.edu/events/ seminars/2014/100914/index.html

October 2, 2014

"Micro and Macro Analysis of Railroad Grade Crossing Safety"

Roadway Safety Institute Seminar Rahim Benekohal, professor in the Department of Civil and Environmental Engineering at the University of Illinois at Urbana-Champaign.

www.roadwaysafety.umn.edu/events/seminars/2014/100214/index.html

September 29, 2014

"Examining the Time-Dependent Behavior of the I-35W St. Anthony Falls Bridge for Long-Term Monitoring"

CTS Research Seminar

Cathy French, CSE Distinguished Professor with the Department of Civil, Environmental, and Geo-Engineering. Carol Shield, professor with the Department of Civil, Environmental, and Geo-Engineering.

www.cts.umn.edu/events/seminars/examining-time-dependent-behavior-i-35w-st-anthony-falls-bridge-long-term-monitoring

September 25, 2014

"Performance Measures for Bicycle and Pedestrian Safety: Challenges in Monitoring Traffic and Assessing Exposure to Risk"

Roadway Safety Institute Seminar Greg Lindsey specializes in environmental planning, policy, and management.

www.roadwaysafety.umn.edu/events/ seminars/2014/092514/

September 18, 2014

"Emerging Safety Countermeasures for Wrong-Way Driving Crashes"

Roadway Safety Institute Seminar Huaguo Hugo Zhou, associate professor in the Department of Civil Engineering at Auburn University. www.roadwaysafety.umn.edu/events/ seminars/2014/091814/index.html

September 11, 2014

"Supporting New Teen Drivers During Independent Driving"

Roadway Safety Institute Seminar Janet Creaser, former research fellow in the HumanFIRST Laboratory. www.roadwaysafety.umn.edu/events/ seminars/2014/091114/index.html

How to Obtain These Publications

Titles of publications are listed in alphabetical order under subject area. Most publications, where noted, are available in electronic format online at no charge. Publications also may be requested from CTS. A complete listing of all publications available from CTS and ordering information may be found online at:

www.cts.umn.edu/publications

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