Annual Report of Committee Activities

Committee Name and Number: Transportation-Related Noise and Vibration, ADC40

Committee Chair: Hugh Saurenman, PE, PhD, ATS Consulting

Year: 2013-2016

1. Current Committee Scope: To look at transportation-related noise and vibration and to evaluate alternative strategies and control techniques for reducing noise and vibration levels and for evaluating their environmental impact.

2. **Committee Membership *(See member distribution chart attached.)***

A. Number of members at current time.

1. Total: 32
2. Young: 3
3. Emeritus: 5
4. International: 4
5. State DOT: 6

Diversity report is attached.

3. Paper Review:

A. Number of papers reviewed during the last year: 16
B. Number of papers recommended for publication: 2

4. **Annual Meeting Sessions Sponsored *(Lists of sessions for the last three years are attached.)***

A. Number of paper or conference sessions at the last annual meeting: 2
B. Number of workshop sessions at the last annual meeting: 1
C. Number of poster sessions at the last annual meeting: 1
D. Number of co-sponsored sessions at the last annual meeting: 2
E. Number of published meetings at the last annual meeting: 4
F. Number of unpublished meetings at the last annual meeting: 0

5. Research Problem Statements

A. Number of problem statements submitted last year:

ACRP Problem Statements:	12
ACRP Synthesis Problem Statements:	0
NCHRP Problem Statements:	2
NCHRP Synthesis Problem Statements	2
TCRP Problem Statements:	0
TCRP Synthesis Problem Statements:	0

None of the problem statements submitted to NCHRP were selected last year. No problem statements were submitted to TCRP. Of the 12 problem statements submitted

by the joint AV033 and ADC40 aviation noise subcommittee, two were accepted. The two were:

- Project 02-79, AEDT Noise Model Improvements to Account for Terrain and Man-made Structures
- Project 02-81, Commercial Space Transportation Noise Measurements

B. On-going ACRP, NCHRP, and TCRP research projects related to noise and vibration

ACRP Projects

Assessing Community Annoyance of Helicopter Noise

Assessing Aircraft Noise Conditions Affecting Student Achievement--Case Studies

Enhanced AEDT Modeling of Aircraft Arrival and Departure Profiles

Commercial Space Operations Noise and Sonic Boom Modeling and Analysis

Improving AEDT Noise Modeling of Hard, Soft, and Mixed Ground Surfaces.

NCHRP Projects

NCHRP 10-88 – Developing Precision and Bias Statements for AASHTO Standard Methods of Test TP 98 and TP 99

NCHRP 25-44 – Field Evaluation of Reflected Noise from a Single Noise Barrier

NCHRP 25-45 – Mapping Heavy Vehicle Noise Source Heights for Highway Noise Analysis

NCHRP 25-49 – Enhancement of Construction Noise Prediction Tool (RCNM Version 2)

NCHRP 25-52 – Guidelines for the Consideration of Atmospheric Effects for Improved Noise Modeling

TCRP Projects

None

6. List of Critical and Cross-Cutting Issues

The ADC40 committee includes discussion of research needs at each of its full committee and subcommittee meets. Full committee meetings are held at the TRB Annual Meeting in January and the ADC40 summer meeting that is usually in July. The Committee has identified the following key ongoing and emerging issues related to transportation noise and vibration. This list will be reviewed and prioritized as part of the annual meeting on January 11, 2016 and volunteers requested to prepare problem statements for submittal to NCHRP, TCRP, ACRP or another appropriate agency.

Potential Adverse Effects of Noise and Vibration

a) Cost-benefit analysis of transportation noise abatement and mitigation.
b) Transportation noise health effects and the costs associated with those health effects.
c) Adverse effects on wildlife of transportation noise and vibration.
d) Relation of noise and vibration to preservation of historic resources.

Highway Noise Issues and Mitigation Approaches

e) Quieter pavements and their potential as a viable noise abatement approach.
f) Experience with implementation of quieter pavements.
g) Experience with reducing noise from rumble strips/stripes.
h) Improved methods for highway noise analysis.
i) Streamlining the highway noise analysis process.

Rail Noise and Vibration Issues and Mitigation Approaches

j) Special trackwork designs and to reduce rail noise and vibration.
k) Relationship of maintenance procedures such as rail grinding and wheel truing to noise and vibration.
l) Alternative approaches to controlling airborne noise, vibration, and groundborne noise.
m) Developing improved approaches to predicting groundborne vibration.
n) Relationship of noise to track condition and the need for maintenance.
o) Refining relationship between measured rail roughness and noise and vibration.
p) Guidelines on use of the Finite Element Method to predict performance of track vibration mitigation approaches and to predict vibration and groundborne noise from a proposed rail transit project.

Construction Noise and Vibration Issues and Mitigation Approaches

q) Developing accurate predictions of construction noise and vibration during design phase of a project.
r) Use of noise and vibration limits and specifications for monitoring to control construction noise and vibration impacts.

Best Designs for Alert Sounds

s) Balance of safety and noise with highway rumble strips and approaches to reducing noise of rumble strips.
t) Human factors and safety issues of electric and hybrid vehicles.
u) Human factors and safety issues of autonomous vehicles.

General

v) Ongoing evolution of and improvements to transportation noise and vibration prediction models and software.

7. Other Activities Sponsored During the Last Year:
Summer meeting in Missoula, Montana, July 23-27, 2016. The agenda included 29 presentations on a variety of transportation noise and vibration topics and an ADC40 committee meeting.

8. Appendix – Annual Meeting Sessions: Attached

TRB ADC40 Diversity Report

Demographic Committee Profile as of 8/30/2016

This report does not include Emeritus Members.
Total Members: 32
International: 4
State DOT: 5
Young: 3

Describe the membership gender and racial diversity.

White	26
Black	0
Hispanic	2
Asian or Pacific Islander	1
American Indian	0
Unknown	3
Female	10
Male	22

How is membership distributed geographically?

North West US	3
South West US	3
Central US	6
North East US	9
South East US	7
International	4

How is membership distributed across professional affiliation?

State	6
Federal Government	2
Local	0
Education	3
Private Sector	18
Nonprofit/Other	1

Annual Meeting Sessions, 2014-2016

2016 Annual Meeting

ADC40 - Transportation-Related Noise and Vibration
2 Paper/Conference Sessions
1 Poster Session
1 Workshop
4 Published Meetings

Lectern Session838
Recent Developments in Understanding of Highway Noise and Implementation of Quieter Pavements
Wednesday, Jan 13, 2016, 2:30PM-4:00PM

Lectern Session341
Approaches to Understanding and Controlling Rail-Generated Noise and Vibration
Monday, Jan 11, 2016, 1:30PM-3:15PM

Published Meeting - Committee
Transportation-Related Noise and Vibration Committee
Tuesday, Jan 12, 2016, 8:00AM-12:00PM

Published Meeting - Committee
Aviation Noise and Vibration Joint Subcommittee of ADC40, AV030
Tuesday, Jan 12, 2016, 1:30PM-3:15PM

Published Meeting - Committee
Rail Noise and Vibration Joint Subcommittee of ADC40, AR055
Tuesday, Jan 12, 2016, 3:45PM-5:30PM

Published Meeting - Committee
Highway Noise and Vibration Subcommittee, ADC40(3)
Wednesday, Jan 13, 2016, 10:15AM-12:00PM

Poster Session 440
Current Issues in Transportation-Related Noise and Vibration
Monday, Jan 11, 2016, 4:15PM-6:00PM

Workshop 873
Health Effects of Transportation Noise and Air Quality and Mitigation Strategies
Thursday, Jan 14, 2016, 8:00AM-12:00PM

2015 Annual Meeting

ADC40 - Transportation-Related Noise and Vibration
3 Paper/Conference Sessions
1 Poster Session
1 Workshop
4 Published Meetings
2 Cosponsored Sessions/Meetings

Paper or Conference Session (S)s

765 (CGS15-022)
Wednesday, January 14, 2015, 8:00am- 9:45am, Convention Center, 140A
Meeting Environmental Commitments in Design-Build Projects
Karel Cubick, MS Consultants, Inc., presiding
Sponsored by Committee on Transportation-Related Noise and Vibration; Committee on Waste

Management and Resource Efficiency in Transportation; Committee on Environmental Analysis in Transportation

Interstate 15-Interstate 215 Improvement Design-Build Project (Devore Interchange) (P15-5975)
Brian Calvert, ICF International
Presidio Parkway Project, South Approach to Golden Gate Bridge: Public-Private Partnership (P15-5976)
Josh Channell, HNTB Corporation
Making Environmental Compliance Work for Design-Build Highway Projects: California Perspective (P15-5981)
Stephanie Blanco, Parsons Transportation Group Inc.
Due Diligence and Contamination Management in Design-Build Projects (P15-5983)
Cyrus F. Parker, North Carolina Department of Transportation
Maintaining Final Environmental Impact Statement Noise Mitigation Commitments Through Design-Build Process (P15-5978)
Kevin J. Keller, PB Americas, Inc.
Design-Build Noise Wall Contract Terms in Virginia (P15-5985)
Paul Kohler, Virginia Department of Transportation

739 (CGS15-028)
Tuesday, January 13, 2015, 7:30pm- 9:30pm, Convention Center, 140A
Rail-Related Noise and Vibration Issues
Hugh Saurenman, ATS Consulting, presiding
Sponsored by Committee on Transportation-Related Noise and Vibration; Committee on Rail Transit Infrastructure

Considerations to Establish Ground-Borne Noise Criteria to Define Mitigation for Noise-Sensitive Spaces (15-4887)
Deborah Jue, Wilson, Ihrig & Associates
Richard Carman, Wilson, Ihrig & Associates
Acoustical Design of an Enclosure to Mitigate Wheel Squeal Noise at the WMATA West Falls Church Yard (P15-7098)
Timothy M. Johnson, Harris Miller Miller & Hanson Inc.
Measurement of Long-Wavelength Irregularities on Rails (P15-5854)
Stuart L. Grassie, RailMeasurement Ltd., Germany
Evaluation of Force Density Levels of Light-Rail Vehicles (15-1045)
Shankar Rajaram, Sound Transit
Hugh Saurenman, ATS Consulting
Approaches to Applying FTA Guidance to Assess Noise and Vibration Impacts from Modernizations of Legacy Transit Systems (P15-7061)
Shannon McKenna, ATS Consulting

400 (CGS15-041)
Monday, January 12, 2015, 3:45pm- 5:30pm, Convention Center, 140A
Highway-Related Noise Issues
Judith L. Rochat, ATS Consulting, presiding
Sponsored by Committee on Transportation-Related Noise and Vibration; Committee on Surface Properties - Vehicle Interaction; Committee on Characteristics of Asphalt-Aggregate Combinations to Meet Surface Requirements; Committee on Flexible Pavement Design; Committee on Pavement Maintenance

IMPLICATIONS of TIRE-PAVEMENT NOISE & TEXTURE MEASUREMENTS (15-1868)
Michael A. Staiano, Staiano Engineering, Inc.

Statistical Model of Tyre - Road Noise for Thin Layer Surfacing (15-5544)
Mingliang Li, Research Institute of Highway Ministry of Transport, China
Wim van Keulen, VANKEULEN advies bv
Halil Ceylan, Iowa State University
Martin F. C. van de Ven, Delft University of Technology, Netherlands
André Molenaar, Delft University of Technology, Netherlands
Modeling Tire-Pavement Noise Using MnROAD Data (15-2297)
Tyler Dare, Applied Research Laboratory
Rebecca S. McDaniel, Purdue University
Ayesha Shah, Purdue University
Correlation Of Noise Measurement Types In The Arizona Quiet Pavement Pilot Program (15-5014)
Paul Donavan, Illingworth & Rodkin, Inc.
Evaluating Pavement and Barriers for Noise Mitigation: Applying NCHRP Project 10-76 Methodology to State Project-Based Examples (15-4208)
Dana M. Lodico, Lodico Acoustics LLC
Paul Donavan, Illingworth & Rodkin, Inc.
Judith L. Rochat, ATS Consulting

Poster Session (P)s

533 (CGP15-004)

Tuesday, January 13, 2015, 8:30am-10:15am, Convention Center, Hall E
Current Issues in Transportation-Related Noise and Vibration
John Robert Hencken, Rutgers University, presiding
Sponsored by Committee on Transportation-Related Noise and Vibration

Modeling Pavement Noise with Different Tire Configurations Using Coupled FEM-BEM Analysis (15-3668)
Hao Wang, Rutgers University
Yangmin Ding, Rutgers University
Investigating Effect of Asphalt Pavement Texture on Tire-Road Noise: Finite Element Method-Boundary Element Method Based Approach (15-3754)
Lei Zhang, National University of Singapore
Ghim Ping Ong, National University of Singapore
Tien Fang Fwa, National University of Singapore
Effect of Pavement Surface Temperature Correction on Pavement-Tire Noise (15-1381)
Songsu Son, University of Illinois, Urbana-Champaign
Imad L. Al-Qadi, University of Illinois, Urbana-Champaign
Temperature and Aging Effects on Tire-Pavement Noise Generation in Ontarian Road Pavements (15-3877)
Federico Irali, University of Bologna, Italy
Marcelo Gonzalez, Pontificia Universidad CatÃ³lica de Chile
Susan Louise Tighe, University of Waterloo, Canada
Andrea Simone, University of Bologna, Italy

Workshop (W)s

119 (CGW15-011)

Sunday, January 11, 2015, 9:00am-12:00pm, Convention Center, 140A
FTA Noise and Vibration: Updates to Guidance and Requirements for Environmental Documentation
Antoinette Quagliata, Federal Transit Administration, presiding
Sponsored by Committee on Transportation-Related Noise and Vibration

The Federal Transit Administration of the U.S. Department of Transportation is updating and revising its manual, Transit Noise and Vibration Impact Assessment, 2006, which is scheduled for completion by the end of 2014. The manual provides guidance to all grant recipients on assessing noise and vibration impacts from proposed projects as part of the process of the National Environmental Policy Act. The update is more user-friendly and guides grantees through the process from start to finish.

Introductions (P15-6409)
Antoinette Quagliata, Federal Transit Administration

Why is Noise and Vibration Important to Address in Transit Projects? (P15-6412)
James Tuman Nelson, Wilson, Ihrig & Associates
Kathryn O'Brien, Metro Transit
James Phillips, Wilson, Ihrig & Associates
Jason C. Ross, Harris Miller Miller & Hanson Inc.
Hugh Saurenman, ATS Consulting

FTA's Noise and Vibration Manual Update (P15-6414)
Meghan Ahearn, US DOT / RITA / Volpe Center

Demonstration of FTA's Noise and Vibration Manual (P15-6415)
Lance Meister, Cross-Spectrum Acoustics LLC

Facilitated Group Scenario Discussions (P15-6416)
Hugh Saurenman, ATS Consulting

Discussion of What Should be Documented in the Noise and Vibration Section of the Environmental Document (P15-6417)

Wrap-Up (P15-6418)
Antoinette Quagliata, Federal Transit Administration

Published Meeting - Committee (M)s

CGM15-016
Monday, January 12, 2015, 8:00am-12:00pm, Marriott Marquis, Independence E (M4)
Transportation-Related Noise and Vibration Committee
Hugh Saurenman, ATS Consulting, presiding
Sponsored by Committee on Transportation-Related Noise and Vibration

Analysis Of Urban Noise In Dublin Using Long-term Data From A Publically Accessible Permanent Monitoring Network (15-3943)
Dermot Geraghty, Trinity College Dublin
Paul McDonald, Trinity College Dublin, Ireland
Ivor Humphreys, Trinity College Dublin
Margaret O'Mahony, Trinity College Dublin, Ireland

Noise costs of road traffic (15-0888)
Helene Le Maitre, Service d'Etudes Techniques des Routes et Autoroutes, France

CGM15-043
Tuesday, January 13, 2015, 3:45pm- 5:30pm, Marriott Marquis, Independence B (M4)
Aviation Noise and Vibration Subcommittee, ADC40(1)
Natalia Sizov, Federal Aviation Administration, presiding
Sponsored by Committee on Transportation-Related Noise and Vibration; Committee on Environmental Impacts of Aviation

ACRP 02-31: Assessment of Sound Insulation Treatments - Less Deterioration in Performance than Expected (P15-7135)
Yuriy Gurovich, Wyle Laboratories, Inc.

ACRP 02-37: Integrated Noise Model Accuracy for General Aviation Aircraft (P15-7136)
Sean M. Doyle, HMMH, Inc.
Mary Ellen Eagan, Harris Miller Miller & Hanson Inc.

Findings from ACRP 02-44: Assessing Aircraft Noise Conditions Affecting Student Learning (P15-

7137)
Juliet Page, Wyle Laboratories, Inc.

CGM15-044
Tuesday, January 13, 2015, 1:30pm- 3:15pm, Marriott Marquis, Independence B (M4)
Rail Noise and Vibration Subcommittee, ADC40(2)
Jason C. Ross, Harris Miller Miller & Hanson Inc., presiding
Sponsored by Committee on Transportation-Related Noise and Vibration

CGM15-045
Wednesday, January 14, 2015, 10:15am-12:00pm, Marriott Marquis, Independence E (M4)
Highway Noise and Vibration Subcommittee, ADC40(3)
Adam Alexander, Federal Highway Administration, presiding
Sponsored by Committee on Transportation-Related Noise and Vibration

ADC40 Cosponsored Sessions (only editable by the primary committee sponsor)

CGW15-008

Sunday, January 11, 2015, 1:30pm- 4:30pm, Convention Center, 145B
Beyond the Barrier: Consideration of Transportation-Related Noise Mitigation for Historic Properties and Native American Cultural Sites
Stephanie M. Stoermer, Federal Highway Administration, presiding

The options for mitigating transportation-related noise effects to historic properties is a growing concern. This workshop reviews current strategies to abate transportation-related noise and its suitability for historic properties and Native American cultural sites. An opportunity is also provided to present examples of best practices in designing context-sensitive abatement measures for individual historic properties, historic districts, and sensitive sites on tribal lands.

Reduce the Noise/Save the View: Traffic Noise Mitigation for the National Register-listed Shiloh Baptist Church in Columbus, Ohio (P15-5945)
Karel Cubick, MS Consultants, Inc.
Erica L Schneider, Ohio Department of Transportation

Addressing Noise and Vibration Concerns for the Central Corridor LRT project (P15-5946)
Kathryn O'Brien, Metro Transit

Noise Barrier Aesthetics in Historic Yorktown and Current Aesthetic Practices (P15-5947)
Antony F. Opperman, Virginia Department of Transportation

Changing Perceptions: Transportation-Related Noise Concerns and Native Cultural Sites (P15-5948)
Stephanie M. Stoermer, Federal Highway Administration

Mitigation Monitoring Plan for a Historic Building adjoining the Subsurface Construction of a Light Rail Transit Project (P15-5949)
Steven Wolf, ATS Consulting

Noise & Vibration Mitigation Practices at Sites of Traditional/Cultural Importance (P15-6093)
Randy Stanley, National Park Service

The I-95/Lawyers Hill Noise Wall and Impacts to Historic Properties (P15-6312)
William Tardy, Maryland State Highway Administration
Jon Schmidt, Maryland State Highway Administration

SMW15-003

Sunday, January 11, 2015, 9:00am-12:00pm, Convention Center, 207B

International Experience and Perspective of Pavement Texture Measurements and Evaluation
Brian L. Schleppi, Ohio Department of Transportation; Magdy Mikhail, Texas Department of Transportation, presiding

Adequate macro- and micro-texture of a pavement surface is essential for providing skid resistance and for preventing wet weather accidents. As with mega-texture, macro-texture is an essential parameter influencing tire–pavement noise emission, rolling resistance, and splash and spray. Work is underway in ISO to revise and improve the present standards for measurement of texture. This workshop covers a variety of topics related to texture measurements and evaluations in the world.

Fundamentals of Pavement Texture Measurement and Interpretation (P15-5056)
Robert Otto Rasmussen, Transtec Group, Inc.

UK's Experiences on Pavement Texture Measurement and Interpretation (P15-5057)
Brian Walter Ferne, Transport Research Laboratory, United Kingdom

US' Experiences on Pavement Texture Measurement and Interpretation (P15-5058)
Edgar David de León Izeppi, Virginia Tech Transportation Institute

New and Improved ISO Standards for Texture Measurements (P15-5059)
Ulf Sandberg, Swedish National Road and Transport Research Institute

EU project ROSANNE — ROlling resistance, Skid resistance, ANd Noise Emission measurement standards for road surfaces (P15-5060)
Luc Goubert, Belgian Road Research Centre

Q&As and Panel Discussion on Pavement Texture Measurement and Interpretation (P15-5061)
Robert Otto Rasmussen, Transtec Group, Inc.
Brian Walter Ferne, Transport Research Laboratory, United Kingdom
Edgar David de León Izeppi, Virginia Tech Transportation Institute
Ulf Sandberg, Swedish National Road and Transport Research Institute
Luc Goubert, Belgian Road Research Centre

2014 Annual Meeting

ADC40 - Transportation-Related Noise and Vibration
3 Paper/Conference Sessions
1 Poster Session
1 Workshop
4 Published Meetings
1 Cosponsored Session/Meeting

Paper or Conference Session (S)s

830 (CGS14-035)

Wednesday, January 15, 2014, 2:30pm- 4:00pm, Shoreham, Blue Room
Tire-Pavement Noise and Quieter Pavements
John R. Jaeckel, HNTB Corporation, presiding
Sponsored by Committee on Transportation-Related Noise and Vibration; Committee on Surface Properties - Vehicle Interaction; Committee on Characteristics of Asphalt-Aggregate Combinations to Meet Surface Requirements; Committee on Flexible Pavement Design; Committee on Pavement Maintenance

Tire-Pavement Noise Evaluation and Equipment Comparison Using Onboard Sound Intensity Methodology over Several Pavement Surfaces in Virginia (14-5210)
Daniel E. Mogrovejo, Virginia Polytechnic Institute and State University
Gerardo W. Flintsch, Virginia Polytechnic Institute and State University
Edgar de León Izeppi, Virginia Tech Transportation Institute
Kevin Kenneth McGhee, Virginia Center for Transportation Innovation and Research

Short-Term Effect of Pavement Surface Aging on Tire-Pavement Noise Measured with Onboard Sound Intensity Methodology (14-3902)
Daniel E. Mogrovejo, Virginia Polytechnic Institute and State University

Gerardo W. Flintsch, Virginia Polytechnic Institute and State University
Edgar de León Izeppi, Virginia Tech Transportation Institute
Kevin Kenneth McGhee, Virginia Center for Transportation Innovation and Research
Ricardo A. Burdisso, Virginia Polytechnic Institute and State University

Effect of Porous Pavement on Wayside Traffic Noise Levels (14-5598)
Paul Donavan, Illingworth & Rodkin, Inc.

Frequency-Domain Temperature Correction of Tire-Pavement Noise (14-4831)
W. James Wilde, Minnesota State University, Mankato
Riley P Dvorak, Minnesota State University, Mankato
Bernard Igbafen Izevbekhai, Minnesota Department of Transportation

851 (CGS14-036)

Wednesday, January 15, 2014, 4:30pm- 6:00pm, Shoreham, Blue Room
Programs for Quieter Pavement in the United States
Dana M. Lodico, Lodico Acoustics LLC, presiding
Sponsored by Committee on Transportation-Related Noise and Vibration; Committee on Surface Properties - Vehicle Interaction; Committee on Characteristics of Asphalt-Aggregate Combinations to Meet Surface Requirements; Committee on Flexible Pavement Design; Committee on Pavement Maintenance

Quieter Pavement Program in California (P14-6316)
Bruce C. Rymer, California Department of Transportation
Linus K. Motumah, California Department of Transportation

Quieter Pavement Program in Washington State (P14-6317)
Tim Sexton, Minnesota Department of Transportation
Jeffrey S. Uhlmeyer, Washington State Department of Transportation

Quieter Pavement Program in Florida (P14-6318)
Mariano Berrios, Florida Department of Transportation
Charles R. Holzschuher, Florida Department of Transportation

Quieter Pavement Program in Virginia (P14-6319)
Paul Kohler, Virginia Department of Transportation
Kevin Kenneth McGhee, Virginia Center for Transportation Innovation and Research

Quieter Pavement Program in Ohio (P14-6320)
Noel Alcala, Ohio Department of Transportation
Brian L. Schleppi, Ohio Department of Transportation

Quieter Pavement Program in Colorado (P14-6476)
Jill Schlaefer, Colorado Department of Transportation
Bob Mero, Colorado Department of Transportation
Amanullah Mommandi, Colorado Department of Transportation

Quieter Pavement Program in North Carolina (P14-6321)
Gregory A. Smith, North Carolina Department of Transportation

409 (CGS14-041)

Monday, January 13, 2014, 3:45pm- 5:30pm, Hilton, Jefferson East
Challenges in Maintaining Quiet Streetcar and Light-Rail Systems
Shankar Rajaram, Sound Transit, presiding
Sponsored by Committee on Transportation-Related Noise and Vibration; Committee on Light Rail Circulator Systems; Committee on Rail Transit Infrastructure

How to Reduce Corrugation Impacts in Embedded Tracks (P14-6539)
William H. Moorhead, TRAMMCO LLC

Challenges for Track and Vehicle Maintenance on Streetcar Systems (P14-6540)
Gordon Bachinsky, Advanced Rail Management

Rail Grinding and Maintenance Practices for Streetcar Trackwork (P14-6541)
Robert Harris, Loram Maintenance of Way Inc.
Charles Rudeen, Loram Maintenance of Way Inc.
Low Noise and Vibration Streetcar Vehicle Design (P14-6555)
John Smatlak, Interfleet Technology Inc.
Design Constraints for Mitigating Noise and Vibration from Streetcar Operations (P14-6542)
Steven Wolf, ATS Consulting

Poster Session (P)s

577 (CGP14-010)

Tuesday, January 14, 2014, 10:45am-12:30pm, Hilton, International Center
Transportation-Related Noise and Vibration
John Robert Hencken, Rutgers University, presiding
Sponsored by Committee on Transportation-Related Noise and Vibration

Residents' Perceptions and Attitudes Toward Line-of-Sight Wall and Conventional Concrete Noise Wall for Traffic Noise Abatement (14-3049)
Shuo Li, Indiana Department of Transportation
Bowen Guan, Chang'an University, China
Eliza Yingzi Du, Indiana University-Purdue University Indianapolis
A. Samy Noureldin, Indiana Department of Transportation
Development of Tire-Pavement Noise Evaluation Methodology in India (14-3935)
Mohammed Ali Boodihal, Indian Institute of Science
abhishek chethan, Indian Institute of Science
Rudraradhya Swamy, Indian Institute of Science
Rakesh Sahu, Indian Institute of Science
Krishna Prapoorna Biligiri, Indian Institute of Technology, Kharagpur
Where Are We Out? Analysis of Noise Pollution in Bogota, Columbia (14-5388)
Daniel Paez, Universidad de Los Andes, Colombia
Maïté Thirouin, Universidad de Los Andes, Colombia
Eduardo Behrentz, Universidad de Los Andes, Colombia
Jose Pacheco, Universidad de Los Andes, Colombia
Anthony Perry, Universidad de Los Andes, Colombia

Workshop (W)s

195 (CGW14-006)

Sunday, January 12, 2014, 1:30pm- 4:30pm, Hilton, Monroe
Noise Impact Assessment: Case Studies of FTA- and FHWA-Approved Projects
Jason C. Ross, Harris Miller Miller & Hanson Inc., presiding
Sponsored by Committee on Transportation-Related Noise and Vibration

This workshop is intended to provide the opportunity for practitioners and transportation agency representatives to present case studies demonstrating different approaches to assessment of noise impacts and prescription of mitigation for transit and highway projects.
Noise Assessment Methodologies for Highway and Transit Projects: Overview and Case Studies (P14-6556)
Ruth Anne Mazur, Harris Miller Miller & Hanson Inc.
Jason C. Ross, Harris Miller Miller & Hanson Inc.
Experiences Evaluating Multiple Projects with Both Road and Rail Noise Sources (P14-6560)
Shannon McKenna, ATS Consulting

Judith L. Rochat, ATS Consulting
Rumble Strip Noise Assessment (P14-6561)
Tim Casey, HDR Engineering, Inc.
Atmospheric Effects on Sound Propagation from Ground Transportation Sources (P14-6562)
Timothy M. Johnson, Harris Miller Miller & Hanson Inc.
Christopher W. Menge, Harris Miller Miller & Hanson Inc.
Construction Noise Issues at Sound Transit (P14-6563)
Tracy Reed, Sound Transit
Derek Watry, Wilson, Ihrig & Associates
Thom Bergen, Wilson, Ihrig & Associates
Building Noise Reduction Testing for Light Rail Projects (P14-6886)
Martin R Meyer, Parsons Transportation Group Inc.
Considerations Regarding Force Density Levels (P14-6564)
James Tuman Nelson, Wilson, Ihrig & Associates
Derek Watry, Wilson, Ihrig & Associates

Published Meeting - Committee (M)s

CGM14-016
Wednesday, January 15, 2014, 8:00am-12:00pm, Hilton, Columbia Hall 11 & 12
Transportation-Related Noise and Vibration Committee
Judith L. Rochat, ATS Consulting, presiding
Sponsored by Committee on Transportation-Related Noise and Vibration

Noise from Multimodal Transportation and Petroleum Development in the Arctic Soundscape (14-4318)
Tim Casey, HDR Engineering, Inc.

CGM14-043
Tuesday, January 14, 2014, 8:00am- 9:45am, Hilton, Oak Lawn
Aviation Noise and Vibration Subcommittee, ADC40(1)
Natalia Sizov, Federal Aviation Administration, presiding
Sponsored by Committee on Transportation-Related Noise and Vibration; Committee on Environmental Impacts of Aviation

FAA Airports GIS Programs: Environmental Feature Classes for Airport Noise (P14-7165)
Michael T. McNerney, Federal Aviation Administration
ACRP 02-27 Taxi Noise Modeling Results (P14-7166)
Juliet Page, Wyle Laboratories, Inc.
Ben Sharp, Wyle Laboratories, Inc.
An Overview of ACRP Report 89: Guidelines for Airport Sound Insulation Programs (P14-7167)
Michael Payne, The Jones Payne Group

CGM14-044
Monday, January 13, 2014, 1:30pm- 3:15pm, Hilton, Piscataway
Rail Noise and Vibration Subcommittee, ADC40(2)
Hugh Saurenman, ATS Consulting, presiding
Sponsored by Committee on Transportation-Related Noise and Vibration

CGM14-045
Tuesday, January 14, 2014, 7:30pm- 9:30pm, Hilton, Monroe

Highway Noise and Vibration Subcommittee, ADC40(3)
Robert Otto Rasmussen, Transtec Group, Inc., presiding
Sponsored by Committee on Transportation-Related Noise and Vibration

ADC40 Cosponsored Sessions (only editable by the primary committee sponsor)

CGW14-004

Sunday, January 12, 2014, 9:00am-12:00pm, Hilton, Columbia Hall 9
Transportation Noise and Historic Properties
Antony F. Opperman, Virginia Department of Transportation; Karel Cubick, MS Consultants, Inc., presiding

The potential effects of transportation projects on historic properties are well understood with regard to direct impacts from construction and indirect ones through changes to settings and views. Auditory impacts from transportation noise, however, are less understood from the perspectives of both noise analysis and historic preservation. This workshop explores the nature and analysis of transportation noise, how historic properties are defined, and how noise may affect historic properties.

Introduction to Transportation Noise Analysis and Abatement: State Department of Transportation Perspective (P14-5703)
Paul Kohler, Virginia Department of Transportation

Introduction to Transportation Noise Analysis and Abatement: Federal Perspective (P14-5721)
Adam Alexander, Federal Highway Administration

Historic Properties in Transportation Project Development (P14-5706)
MaryAnn D. Naber, Federal Highway Administration

Transportation Noise and Historic Properties: Section 106 and 4(f) Issues at the Free Methodist Church Campground, Montgomery County, Maryland (P14-5705)
Anne E. Bruder, Maryland State Highway Administration

Historic Properties and Transportation Noise: State Department of Transportation Perspective (P14-5734)
Antony F. Opperman, Virginia Department of Transportation

Transportation Noise and Historic Properties: Section 106 and Highway Noise: Case Study (P14-5766)
Karel Cubick, MS Consultants, Inc.

2013 Annual Meeting

ADC40 - Transportation-Related Noise and Vibration
6 Paper/Conference Sessions
1 Workshop
4 Published Meetings
2 Cosponsored Sessions/Meetings

Paper or Conference Session (S)s

229 (CGS13-025)

Monday, January 14, 2013, 8:00am- 9:45am, Hilton, Jefferson West
Incredibly Loud and Extremely Close: Effects of Noise on Wildlife, Part 1 (Part 2, Session 276)
Dayna Sherwood, Paul Carpenter Associates, Inc.; Kristin Fusco Rowe, Wallace Montgomery & Associates, LLP, presiding
Sponsored by Committee on Transportation-Related Noise and Vibration; Committee on Construction Management; Committee on Ecology and Transportation; Committee on Marine Environment; Planning and Environment - Group; Committee on Project Delivery Methods; Committee on Environmental Analysis in Transportation; Committee on Environmental Issues in Transportation Law

Conceptual and Computational Models of the Effects of Anthropogenic Noise on Birds (P13-5782)
Robert Dooling, University of Maryland
Assessing Impacts on Wildlife from Noise: Review of National Park Service Metrics (P13-5783)
Frank Turina, National Park Service
Approach to Addressing Impacts on Peregrine Falcons from High-Intensity Construction (P13-5785)
Dayna Sherwood, Paul Carpenter Associates, Inc.
Tim Burns, Paul Carpenter Associates, Inc.

276 (CGS13-026)

Monday, January 14, 2013, 10:15am-12:00pm, Hilton, Jefferson West
Incredibly Loud and Extremely Close: Effects of Noise on Wildlife, Part 2 (Part 1, Session 229)
Dayna Sherwood, Paul Carpenter Associates, Inc., presiding
Sponsored by Committee on Transportation-Related Noise and Vibration; Committee on Construction Management; Committee on Ecology and Transportation; Committee on Marine Environment; Planning and Environment - Group; Committee on Project Delivery Methods; Committee on Environmental Analysis in Transportation; Committee on Environmental Issues in Transportation Law

Perspective of National Marine Fisheries Service on Underwater Sound and Protected Marine Species Issues (P13-5786)
Amy R. Scholik-Schlomer, National Oceanic and Atmospheric Administration
Experimental Assessment of Data Gaps Related to Understanding Pile-Driving Exposure in Fishes (P13-5788)
Brandon M. Casper, University of Maryland
Arthur Popper, University of Maryland
Experience in Permitting Construction Projects with Respect on Acoustic Impacts to Wildlife (P13-5793)
James A. Reyff, Illingworth & Rodkin, Inc.

323 (CGS13-027)

Monday, January 14, 2013, 1:30pm- 3:15pm, Hilton, Jefferson West
Achieving Low Noise and Vibration Levels on Rail Transit Systems Through Maintenance Procedures
Hugh Saurenman, ATS Consulting, presiding
Sponsored by Committee on Transportation-Related Noise and Vibration; Committee on Rail Transit Infrastructure

Rail Irregularities, Corrugation, and Acoustic Roughness: Characteristics, Significance, and Effects of Reprofiling (P13-5669)
Stuart L. Grassie, RailMeasurement Ltd., Germany
Correlating Rail and Wheel Roughness to Wayside Noise Levels Using Lambda_CA (P13-5670)
Helmut Venghaus, ACCON GmbH
Overview of Literature on Rail Corrugation and Recent Experience with Rail Grinding to Reduce Noise from Corrugation (P13-5814)
Andrew Wong, ATS Consulting
Hugh Saurenman, ATS Consulting
Rail Profile Grinding Effectiveness at Sound Transit Beacon Hill Tunnel (P13-5671)
James Tuman Nelson, Wilson, Ihrig & Associates
Derek Watry, Wilson, Ihrig & Associates
Updates to FRA High-Speed Ground Transportation Noise and Vibration Impact Assessment Guidance Manual (P13-5672)
Jason C. Ross, Harris Miller Miller & Hanson Inc.
David Allan Towers, Harris Miller Miller & Hanson Inc.
Cameron Stuart, Federal Railroad Administration

785 (CGS13-028)
Wednesday, January 16, 2013, 2:30pm- 4:00pm, Shoreham, Hampton
Tire-Pavement Noise and Quieter Pavements, Part 1 (Part 2, Session 814)
John R. Jaeckel, HNTB Corporation, presiding
Sponsored by Committee on Transportation-Related Noise and Vibration; Committee on Characteristics of Asphalt-Aggregate Combinations to Meet Surface Requirements; Committee on Surface Properties - Vehicle Interaction; Committee on Pavement Maintenance; Committee on Flexible Pavement Design

Mix Design Factors to Reduce Noise in Hot-Mix Asphalt (13-3983)
Ling Cong, Southeast University, China
Daniel Swiertz, Bitumix Solutions
Hussain U. Bahia, University of Wisconsin, Madison
Mixture Design Optimization of Low-Noise Pavements (13-4240)
Massimo Losa, University of Pisa, Italy
Pietro Leandri, University of Pisa, Italy
Gaetano Licitra, ARPAT, Italy
Influence of Quieter Pavement and Absorptive Barriers on US-101 in Marin County, California (13-4640)
Paul Donavan, Illingworth & Rodkin, Inc.
Dana M. Lodico, Lodico Acoustics LLC
Investigation of Effects of Porous Pavement on Traffic Noise and Traffic Noise Prediction (13-5069)
Judith L. Rochat, ATS Consulting
Paul Donavan, Illingworth & Rodkin, Inc.

814 (CGS13-029)
Wednesday, January 16, 2013, 4:30pm- 6:00pm, Shoreham, Hampton
Tire-Pavement Noise and Quieter Pavements, Part 2 (Part 1, Session 785)
Michael A. Staiano, Staiano Engineering, Inc., presiding
Sponsored by Committee on Transportation-Related Noise and Vibration; Committee on Characteristics of Asphalt-Aggregate Combinations to Meet Surface Requirements; Committee on Surface Properties - Vehicle Interaction; Committee on Pavement Maintenance; Committee on Flexible Pavement Design

Methodology for Evaluating Life-Cycle Cost and Acoustic Performance of Barriers and Pavement for Highway Noise Reduction (13-4670)
Paul Donavan, Illingworth & Rodkin, Inc.
Virginia Quieter Pavement Demonstration Projects: Initial Functional Assessment (13-3150)
Kevin Kenneth McGhee, Virginia Center for Transportation Innovation and Research
Edgar David de León Izeppi, Virginia Tech Transportation Institute
Gerardo W. Flintsch, Virginia Polytechnic Institute and State University
Daniel E. Mogrovejo, Virginia Polytechnic Institute and State University
Using Onboard Sound Intensity Measurements to Interpret Results of Traffic Noise Modeling (13-3058)
Dana M. Lodico, Lodico Acoustics LLC
Paul Donavan, Illingworth & Rodkin, Inc.
Relationship Between Tire-Pavement Interaction Noise and Surface Characteristics in 2009 Pavement Test Track Cycle (13-0328)
Maryam Sakhaeifar, Texas A&M University
Gong-yun Liao, Southeast University, China
Brian Waller, National Center for Asphalt Technology

683 (CGS13-030)

Tuesday, January 15, 2013, 7:30pm- 9:30pm, Hilton, Columbia Hall 6
Environmental Modeling: Noise, Emissions, Costs, and Acceptability
Karel Cubick, MS Consultants, Inc., presiding
Sponsored by Committee on Transportation-Related Noise and Vibration; Committee on Environmental Impacts of Aviation

Comparison of Estimation of Emissions Based on Static and Dynamic Traffic Assignment Models (13-0546)
Luc J.J. Wismans, University of Twente, Netherlands
Robert Van den Brink, Goudappel Coffeng BV, Netherlands
Luuk Brederode, Goudappel Coffeng BV, Netherlands
Jacobus Zantema, Goudappel Coffeng BV, Netherlands
Eric van Berkum, University of Twente, Netherlands

Assessment of Traffic Noise Level Before and After Freeway Widening Using Traffic Microsimulation and a Refined Classic Noise Prediction Method (13-2016)
Jie He, Southeast University, China
Chen Zhang, School of Transportation, Southeast University

Application and Sensitivity of Airport Noise-Damage Costs (13-5336)
Ryan Tam, University of Hawaii, Manoa

Analysis of Acceptable Flight Frequency in Presence of Effects of Other People's Noise Situations (13-3407)
Veng Kheang Phun, Tokyo Institute of Technology, Japan
Terumitsu Hirata, Tokyo Institute of Technology, Japan
Tetsuo Yai, Tokyo Institute of Technology, Japan

Workshop (W)s

140 (CGW13-005)

Sunday, January 13, 2013, 9:00am-12:00pm, Hilton, Columbia Hall 2
Traffic Noise on Bridges and Structures: Challenges and Solutions
Robert Otto Rasmussen, Transtec Group, Inc., presiding
Sponsored by Committee on Transportation-Related Noise and Vibration; Committee on Construction of Bridges and Structures; Committee on General Structures; Committee on Surface Properties - Vehicle Interaction

Numerous challenges exist when traffic noise along bridges and structures is measured and controlled. Specific issues include noise generation at bridge joints, structural design considerations from noise barriers and abatement, noise sources beneath the structure, unique propagation conditions, and challenges for standardized measurements. This workshop explores these and other considerations via numerous case studies that highlight practical solutions.

Fundamentals of Traffic, Vehicle, and Tire Noise (P13-5661)
Robert Otto Rasmussen, Transtec Group, Inc.

Applications of the Caltrans Bridge Deck OBSI Database for Reducing Noise Impacts (P13-5662)
Paul Donavan, Illingworth & Rodkin, Inc.

Modular Expansion Joint Noise in British Columbia (P13-5663)
Duane Marriner, Wakefield Acoustics Ltd.

Bridge Deck Texturing in the State of Iowa (P13-5664)
Michael David LaViolette, HDR Inc.

Low-Noise Bridge Expansion Joints (P13-5665)
Mark Kaczinski, DS Brown Company

Noise Assessment of Expansion Joints in San Francisco Bay Region (P13-5666)
Paul Donavan, Illingworth & Rodkin, Inc.

Reducing Bridge Expansion Joint Noise in Washington State (P13-5667)
Tim Sexton, Minnesota Department of Transportation
Bridge Joint Croaking Noise Analysis and Control (P13-5668)
Duane Marriner, Wakefield Acoustics Ltd.

Published Meeting - Committee (M)s

CGM13-016
Wednesday, January 16, 2013, 8:00am-12:00pm, Hilton, Columbia Hall 1
Transportation-Related Noise and Vibration Committee
Judith L. Rochat, ATS Consulting, presiding
Sponsored by Committee on Transportation-Related Noise and Vibration

Dynamic Simulation of Traffic Noise by Applying Ray Tracing Method based on Indoor Space Partitioning (13-0959)
Zhi-bin Chen, Research Center of ITS, Sun Yat-sen University
Ming Cai, Sun Yat-sen University, China
Feng Li, Transportation Research Center of Zhongshan
Wei-jia Ye, Research Center of ITS, Sun Yat-sen University
Past Experience with Green Noise Barriers (13-2154)
Ala Rebhi Abbas, University of Akron
Andrew Frankhouser, University of Akron
Karel Cubick, MS Consultants, Inc.
Robert Liang, University of Akron
John Cardina, Ohio State University
Modelling the Tyre/Road Noise from Thin Layer Surfacings (13-2847)
Mingliang Li, Research Institute of Highway Ministry of Transport, China
Wim van Keulen, VANKEULEN advies bv
Halil Ceylan, Iowa State University
Martin F. C. van de Ven, Delft University of Technology, Netherlands
André Molenaar, Delft University of Technology, Netherlands

CGM13-019
Tuesday, January 15, 2013, 3:45pm- 5:30pm, Hilton, Northwest
Aircraft Noise Subcommittee, ADC40(1)
Natalia Sizov, Federal Aviation Administration, presiding
Sponsored by Committee on Transportation-Related Noise and Vibration; Committee on Environmental Impacts of Aviation

CGM13-020
Tuesday, January 15, 2013, 1:30pm- 3:15pm, Hilton, Oak Lawn
Guided Rail and Transit Noise Subcommittee, ADC40(2)
Hugh Saurenman, ATS Consulting, presiding
Sponsored by Committee on Transportation-Related Noise and Vibration; Committee on Rail Transit Infrastructure

CGM13-032
Tuesday, January 15, 2013, 10:15am-12:00pm, Hilton, Fairchild
Highway Noise and Vibration Subcommittee, ADC40(3)

Robert Otto Rasmussen, Transtec Group, Inc., presiding
Sponsored by Committee on Transportation-Related Noise and Vibration

Effect of Air Temperature and Vehicle Speed on Tire/Pavement Noise Measured with On-Board Sound Intensity Methodology (13-3765)
Daniel E. Mogrovejo, Virginia Polytechnic Institute and State University
Gerardo W. Flintsch, Virginia Polytechnic Institute and State University
Edgar David de León Izeppi, Virginia Tech Transportation Institute
Kevin Kenneth McGhee, Virginia Center for Transportation Innovation and Research

ADC40 Cosponsored Sessions (only editable by the primary committee sponsor)

APW13-003

Sunday, January 13, 2013, 1:30pm- 4:30pm, Hilton, Columbia Hall 2
Current Practices in Rail, Frog, and Switch Point Grinding on Transit Systems
William H. Moorhead, TRAMMCO LLC, presiding
Sponsored by Committee on Rail Transit Infrastructure; Committee on Transportation-Related Noise and Vibration

This workshop shares knowledge on grinding in the following three areas: (a) existing and new equipment and techniques used for rail profile control, including new experimental methods; (b) the theory behind proper rail and wheel profiling and interaction and the relationship to noise–vibration reduction, better ride, and improved asset life; and (c) detailed examples of successful applications in the real world of tight budgets and limited track time.
Transit Rail Grinding Takes "Shape" (P13-5086)
Donald R. Holfeld, ZETA-TECH Associates, Inc.
Noise Control and Asset Preservation: Two Sides of the Transit Rail Grinding Picture (P13-5066)
Michael McGinley, Southern California Regional Rail Authority
Fred Byle, San Diego Trolley Inc
Rail Life Management Systems (P13-5067)
Ron Martin, Vossloh
Proper and Effective Use of Racine Railroad Products Hand-Grinding Equipment (P13-5084)
Stephen Birkholz, Racine Railroad Products, Inc.
New Truck-Mounted Precision Grinding System (P13-5085)
David Randolph, Orgo-Thermit, Inc.
Current and Future State of Switch and Crossing Grinding Techniques (P13-5087)
Joseph W. Palese, ZETA-TECH Associates, Inc.
Loram Advancements in Mainline and Specialty Grinding Throughout the World (P13-5088)
Joseph Ashley, Loram Maintenance of Way Inc.
Robert Harris, Loram Maintenance of Way Inc.
Maintenance Grinding to Extend Switch Life (P13-5089)
Alan Reynolds, Modern Track Machinery, Inc.
Rail Milling: New Tool in Rail Engineer's Toolbox (P13-5090)
Paul Baker, Baker Rail Services, Ltd.
Overall Benefits of Rail Grinding on the MBTA (P13-5091)
Ray Martin, Massachusetts Bay Transportation Authority

CGW13-004

Sunday, January 13, 2013, 9:00am-12:00pm, Hilton, Lincoln West
Effective Practices to Develop Environmental Research Needs Statements and Funding Opportunities
Robert O'Loughlin, Federal Highway Administration, presiding

This workshop focuses on writing effective environmental and energy research needs statements and details the funding opportunities available for such research. Participants will hear from experts who have successfully developed effective research needs statements leading to funded and implemented research projects. The workshop also will highlight the available research funding programs and provide tips on success in applying for research funds.

Writing Effective Research Statements (P13-5104)
Sue Sillick, Montana Department of Transportation

Research Funding Opportunities (P13-5105)
Shari M. Schaftlein, Federal Highway Administration
Nanda N. Srinivasan, Energy Information Administration

Advancing Research: How It Works and How to Make It Happen (P13-5106)
Kate Kurgan, American Association of State Highway and Transportation Officials

Facilitated Development of Research Problem Statements (P13-5107)
Carissa Schively Slotterback, University of Minnesota

Facilitated Committee Collaboration on Partnership Opportunities (P13-5108)
Carissa Schively Slotterback, University of Minnesota

Wrap-up and Next Steps (P13-5109)
Robert O'Loughlin, Federal Highway Administration

2016 Annual Meeting

ADC40 - Transportation-Related Noise and Vibration
2 Paper/Conference Sessions
1 Poster Session
1 Workshop
4 Published Meetings
Lectern Session838
Recent Developments in Understanding of Highway Noise and Implementation of Quieter Pavements
Wednesday, Jan 13, 2016, 2:30PM-4:00PM
Lectern Session341
Approaches to Understanding and Controlling Rail-Generated Noise and Vibration
Monday, Jan 11, 2016, 1:30PM-3:15PM
Published Meeting - Committee
Transportation-Related Noise and Vibration Committee
Tuesday, Jan 12, 2016, 8:00AM-12:00PM
Published Meeting - Committee
Aviation Noise and Vibration Joint Subcommittee of ADC40, AV030
Tuesday, Jan 12, 2016, 1:30PM-3:15PM
Published Meeting - Committee
Rail Noise and Vibration Joint Subcommittee of ADC40, AR055
Tuesday, Jan 12, 2016, 3:45PM-5:30PM
Published Meeting - Committee
Highway Noise and Vibration Subcommittee, ADC40(3)
Wednesday, Jan 13, 2016, 10:15AM-12:00PM
Poster Session 440
Current Issues in Transportation-Related Noise and Vibration
Monday, Jan 11, 2016, 4:15PM-6:00PM
Workshop 873
Health Effects of Transportation Noise and Air Quality and Mitigation Strategies
Thursday, Jan 14, 2016, 8:00AM-12:00PM

2015 Annual Meeting

ADC40 - Transportation-Related Noise and Vibration
3 Paper/Conference Sessions
1 Poster Session
1 Workshop
4 Published Meetings
2 Cosponsored Sessions/Meetings
Paper or Conference Session (S)s

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765 (CGS15-022)
Wednesday, January 14, 2015, 8:00am- 9:45am, Convention Center, 140A
Meeting Environmental Commitments in Design-Build Projects
Karel Cubick, MS Consultants, Inc., presiding
Sponsored by Committee on Transportation-Related Noise and Vibration; Committee on Waste Management and Resource Efficiency in Transportation; Committee on Environmental Analysis in Transportation

Interstate 15-Interstate 215 Improvement Design-Build Project (Devore Interchange) (P15-5975)
Brian Calvert, ICF International
Presidio Parkway Project, South Approach to Golden Gate Bridge: Public-Private Partnership (P15-5976)
Josh Channell, HNTB Corporation
Making Environmental Compliance Work for Design-Build Highway Projects: California Perspective (P15-5981)

Stephanie Blanco, Parsons Transportation Group Inc.

Due Diligence and Contamination Management in Design-Build Projects (P15-5983)
Cyrus F. Parker, North Carolina Department of Transportation

Maintaining Final Environmental Impact Statement Noise Mitigation Commitments Through Design-Build Process (P15-5978)
Kevin J. Keller, PB Americas, Inc.

Design-Build Noise Wall Contract Terms in Virginia (P15-5985)
Paul Kohler, Virginia Department of Transportation

739 (CGS15-028)

Tuesday, January 13, 2015, 7:30pm- 9:30pm, Convention Center, 140A
Rail-Related Noise and Vibration Issues
Hugh Saurenman, ATS Consulting, presiding
Sponsored by Committee on Transportation-Related Noise and Vibration; Committee on Rail Transit Infrastructure

Considerations to Establish Ground-Borne Noise Criteria to Define Mitigation for Noise-Sensitive Spaces (15-4887)
Deborah Jue, Wilson, Ihrig & Associates
Richard Carman, Wilson, Ihrig & Associates

Acoustical Design of an Enclosure to Mitigate Wheel Squeal Noise at the WMATA West Falls Church Yard (P15-7098)
Timothy M. Johnson, Harris Miller Miller & Hanson Inc.

Measurement of Long-Wavelength Irregularities on Rails (P15-5854)
Stuart L. Grassie, RailMeasurement Ltd., Germany

Evaluation of Force Density Levels of Light-Rail Vehicles (15-1045)
Shankar Rajaram, Sound Transit
Hugh Saurenman, ATS Consulting

Approaches to Applying FTA Guidance to Assess Noise and Vibration Impacts from Modernizations of Legacy Transit Systems (P15-7061)
Shannon McKenna, ATS Consulting

400 (CGS15-041)

Monday, January 12, 2015, 3:45pm- 5:30pm, Convention Center, 140A
Highway-Related Noise Issues
Judith L. Rochat, ATS Consulting, presiding
Sponsored by Committee on Transportation-Related Noise and Vibration; Committee on Surface Properties - Vehicle Interaction; Committee on Characteristics of Asphalt-Aggregate Combinations to Meet Surface Requirements; Committee on Flexible Pavement Design; Committee on Pavement Maintenance

IMPLICATIONS of TIRE-PAVEMENT NOISE & TEXTURE MEASUREMENTS (15-1868)
Michael A. Staiano, Staiano Engineering, Inc.

Statistical Model of Tyre - Road Noise for Thin Layer Surfacing (15-5544)
Mingliang Li, Research Institute of Highway Ministry of Transport, China
Wim van Keulen, VANKEULEN advies bv
Halil Ceylan, Iowa State University
Martin F. C. van de Ven, Delft University of Technology, Netherlands
André Molenaar, Delft University of Technology, Netherlands

Modeling Tire-Pavement Noise Using MnROAD Data (15-2297)
Tyler Dare, Applied Research Laboratory
Rebecca S. McDaniel, Purdue University
Ayesha Shah, Purdue University

Correlation Of Noise Measurement Types In The Arizona Quiet Pavement Pilot Program (15-5014)
Paul Donavan, Illingworth & Rodkin, Inc.
Evaluating Pavement and Barriers for Noise Mitigation: Applying NCHRP Project 10-76 Methodology to State Project-Based Examples (15-4208)
Dana M. Lodico, Lodico Acoustics LLC
Paul Donavan, Illingworth & Rodkin, Inc.
Judith L. Rochat, ATS Consulting

Poster Session (P)s

533 (CGP15-004)

Tuesday, January 13, 2015, 8:30am-10:15am, Convention Center, Hall E
Current Issues in Transportation-Related Noise and Vibration
John Robert Hencken, Rutgers University, presiding
Sponsored by Committee on Transportation-Related Noise and Vibration

Modeling Pavement Noise with Different Tire Configurations Using Coupled FEM-BEM Analysis (15-3668)
Hao Wang, Rutgers University
Yangmin Ding, Rutgers University
Investigating Effect of Asphalt Pavement Texture on Tire-Road Noise: Finite Element Method-Boundary Element Method Based Approach (15-3754)
Lei Zhang, National University of Singapore
Ghim Ping Ong, National University of Singapore
Tien Fang Fwa, National University of Singapore
Effect of Pavement Surface Temperature Correction on Pavement-Tire Noise (15-1381)
Songsu Son, University of Illinois, Urbana-Champaign
Imad L. Al-Qadi, University of Illinois, Urbana-Champaign
Temperature and Aging Effects on Tire-Pavement Noise Generation in Ontarian Road Pavements (15-3877)
Federico Irali, University of Bologna, Italy
Marcelo Gonzalez, Pontificia Universidad CatÃ³lica de Chile
Susan Louise Tighe, University of Waterloo, Canada
Andrea Simone, University of Bologna, Italy

Workshop (W)s

119 (CGW15-011)

Sunday, January 11, 2015, 9:00am-12:00pm, Convention Center, 140A
FTA Noise and Vibration: Updates to Guidance and Requirements for Environmental Documentation
Antoinette Quagliata, Federal Transit Administration, presiding
Sponsored by Committee on Transportation-Related Noise and Vibration

The Federal Transit Administration of the U.S. Department of Transportation is updating and revising its manual, Transit Noise and Vibration Impact Assessment, 2006, which is scheduled for completion by the end of 2014. The manual provides guidance to all grant recipients on assessing noise and vibration impacts from proposed projects as part of the process of the National Environmental Policy Act. The update is more user-friendly and guides grantees through the process from start to finish.
Introductions (P15-6409)
Antoinette Quagliata, Federal Transit Administration
Why is Noise and Vibration Important to Address in Transit Projects? (P15-6412)
James Tuman Nelson, Wilson, Ihrig & Associates

Kathryn O'Brien, Metro Transit
James Phillips, Wilson, Ihrig & Associates
Jason C. Ross, Harris Miller Miller & Hanson Inc.
Hugh Saurenman, ATS Consulting

FTA's Noise and Vibration Manual Update (P15-6414)
Meghan Ahearn, US DOT / RITA / Volpe Center

Demonstration of FTA's Noise and Vibration Manual (P15-6415)
Lance Meister, Cross-Spectrum Acoustics LLC

Facilitated Group Scenario Discussions (P15-6416)
Hugh Saurenman, ATS Consulting

Discussion of What Should be Documented in the Noise and Vibration Section of the Environmental Document (P15-6417)

Wrap-Up (P15-6418)
Antoinette Quagliata, Federal Transit Administration

Published Meeting - Committee (M)s

CGM15-016
Monday, January 12, 2015, 8:00am-12:00pm, Marriott Marquis, Independence E (M4)
Transportation-Related Noise and Vibration Committee
Hugh Saurenman, ATS Consulting, presiding
Sponsored by Committee on Transportation-Related Noise and Vibration

Analysis Of Urban Noise In Dublin Using Long-term Data From A Publically Accessible Permanent Monitoring Network (15-3943)
Dermot Geraghty, Trinity College Dublin
Paul McDonald, Trinity College Dublin, Ireland
Ivor Humphreys, Trinity College Dublin
Margaret O'Mahony, Trinity College Dublin, Ireland

Noise costs of road traffic (15-0888)
Helene Le Maitre, Service d'Etudes Techniques des Routes et Autoroutes, France

CGM15-043
Tuesday, January 13, 2015, 3:45pm- 5:30pm, Marriott Marquis, Independence B (M4)
Aviation Noise and Vibration Subcommittee, ADC40(1)
Natalia Sizov, Federal Aviation Administration, presiding
Sponsored by Committee on Transportation-Related Noise and Vibration; Committee on Environmental Impacts of Aviation

ACRP 02-31: Assessment of Sound Insulation Treatments - Less Deterioration in Performance than Expected (P15-7135)
Yuriy Gurovich, Wyle Laboratories, Inc.

ACRP 02-37: Integrated Noise Model Accuracy for General Aviation Aircraft (P15-7136)
Sean M. Doyle, HMMH, Inc.
Mary Ellen Eagan, Harris Miller Miller & Hanson Inc.

Findings from ACRP 02-44: Assessing Aircraft Noise Conditions Affecting Student Learning (P15-7137)
Juliet Page, Wyle Laboratories, Inc.

CGM15-044
Tuesday, January 13, 2015, 1:30pm- 3:15pm, Marriott Marquis, Independence B (M4)
Rail Noise and Vibration Subcommittee, ADC40(2)
Jason C. Ross, Harris Miller Miller & Hanson Inc., presiding

Sponsored by Committee on Transportation-Related Noise and Vibration

CGM15-045
Wednesday, January 14, 2015, 10:15am-12:00pm, Marriott Marquis, Independence E (M4)
Highway Noise and Vibration Subcommittee, ADC40(3)
Adam Alexander, Federal Highway Administration, presiding
Sponsored by Committee on Transportation-Related Noise and Vibration