

WSDOT Materials Laboratory Library

Selected New Publications & Online Resources – August 2016

AWPA Standards

2016 AWPA Book of Standards / American Wood Protection Association.
Mats Lab Library STD AWPA 2016

Transportation Research Board Publications

Geological, geoenvironmental, and geotechnical engineering, volume 3. TRR no2580.
Mats Lab Library 625 HRR 2016 no2580 <http://trjournalonline.trb.org/toc/trr/2580>

Integrating asphalt mixture design, structural design, and construction quality control. E-Circular no209.
<http://onlinepubs.trb.org/onlinepubs/circulars/ec209.pdf>

A long-term view of sustainability. NCHRP Impacts on Practice [newsletter].
<http://onlinepubs.trb.org/onlinepubs/nchrp/impacts/034.pdf>

Knowledge and information – critical DOT assets / NCHRP Impacts on Practice.
<http://onlinepubs.trb.org/onlinepubs/nchrp/impacts/035.pdf>

Maintenance and preservation, 2016. TRR no2550. <http://trjournalonline.trb.org/toc/trr/2550/>
Mats Lab Library 625 HRR 2016 no2550

Navigating multi-agency NEPA processes to advance multimodal transportation projects. NCHRP Report 827.
Mats Lab Library 625.7 N2131r 2016 no827 http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_rpt_827.pdf

Partner involvement speeds new specifications. NCHRP Paths to Practice [newsletter].
<http://onlinepubs.trb.org/onlinepubs/nchrp/paths/LRFDSigns.pdf>

Pavement management, 2016, Volume 1. TRR no2589. <http://trjournalonline.trb.org/toc/trr/2589>
Mats Lab Library 625 HRR 2016 no2589

TRB security, emergency management, and infrastructure protection research status report. August 2016.
<http://onlinepubs.trb.org/Onlinepubs/dva/CRP-SecurityResearch.pdf>

Federal Highway Administration/U.S.DOT Publications

Analysis of construction quality assurance procedures on federally funded local public agency projects / Konrath, McCarthy & Scott. FHWA-HRT-15-008. July 2016.
www.fhwa.dot.gov/publications/research/infrastructure/pavements/15008/15008.pdf

EDC News [newsletter] July 21, 2016 www.fhwa.dot.gov/innovation/everydaycounts/edcnews/20160721.cfm
July 28, 2016 www.fhwa.dot.gov/innovation/everydaycounts/edcnews/20160728.cfm
August 11, 2016 www.fhwa.dot.gov/innovation/everydaycounts/edcnews/20160811.cfm

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- HY-8 Culvert Hydraulic Analysis Program** www.fhwa.dot.gov/engineering/hydraulics/software/hy8/
- Innovator** [journal] July/August 2016, vol. 10 issue 55. www.fhwa.dot.gov/innovation/innovator/issue55/3dIssue/
- LTBP program's literature review on weigh-in motion systems.** FHWA-HRT-16-024. June 2016.
www.fhwa.dot.gov/publications/research/infrastructure/structures/ltbp/16024/16024.pdf
- FHWA R&T Now** [newsletter]. July/August 2016. www.fhwa.dot.gov/publications/rtnow/16jul_aug_rtnow.pdf
- Universal simple aging test** [TechBrief] FHWA-HRT-15-054. May 2016.
www.fhwa.dot.gov/publications/research/infrastructure/pavements/15054/15054.pdf
- UTC Spotlight :PacTrans develops a practical data analytics tool for network performance measures.** July 2016.
www.rita.dot.gov/utc/sites/rita.dot.gov.utc/files/utc_spotlights/pdf/spotlight_0716.pdf

WSDOT & DNR.WA Publications

- Design Manual – M 22-01.13.** July 2016. www.wsdot.wa.gov/Publications/Manuals/M22-01.htm
- Safety Procedures and Guidelines Manual – M 75-01.31.** July 2016.
www.wsdot.wa.gov/publications/manuals/fulltext/M75-01/M75-01.31Revision.pdf
- Two-lane rural highways safety performance functions** / Shankar, Hong, Venkataraman, Hariharan, Kheziyur, Huang & Kwon. WA-RD 856.1. May 2016.
www.wsdot.wa.gov/research/reports/fullreports/856.1.pdf
- Vehicle operator's handbook and VOH & Fuel Station Locations.** August 2016.
M 3032.19 - www.wsdot.wa.gov/Publications/Manuals/M3032.htm
M 53-55.21 - www.wsdot.wa.gov/Publications/Manuals/M53-55.htm

Interdisciplinary Interest

- Annual survey of state winter maintenance data, 2014-2015.** <http://clearroads.org/winter-maintenance-survey/>
- Bridge decks: mitigation of cracking and increased durability** / Ardeshirilajimi, Wu, Chaunsali, Mondal, Chen, Rahman, Ibrahim, Lindquist & Hindi. Illinois DOT. FHWA-ICT-16-016. June 2016.
<https://apps.ict.illinois.edu/projects/getfile.asp?id=4980>
- Commercial pavement marking management systems.** Caltrans Division of Research.
www.dot.ca.gov/newtech/researchreports/preliminary_investigations/docs/commercial_pavement_marking_management_systems_pi.pdf

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Cost of roadway construction, operations and maintenance in New Jersey. Phase 1, Final Report / Jon Carnegie. New Jersey DOT. May 2016. www.state.nj.us/transportation/refdata/research/reports/NJ-2016-003.pdf

Development and evaluation of a dual purpose bridge health monitoring and weigh-in-motion system for a steel girder bridge – Phase II / Christenson, Kovel, Moraref & Jang. Connecticut DOT. CT-2271-F-15-10. June 2016. www.ct.gov/dot/lib/dot/documents/dresearch/BridgeHealthMonitoringandWeigh-in-Motion-PhaseII.pdf

Dual purpose bridge health monitoring and weigh-in-motion (BWIM) – Phase 1 / Christenson & Motaref. Connecticut DOT. CT-2265-F-15-7. July 2016. www.ct.gov/dot/lib/dot/documents/dresearch/BridgeHealthMonitoringandWeigh-in-Motion-PhaseI.pdf

Evaluation of erosion control blanket properties and test criteria for specification and design / Sommer, Cox & Luna. Missouri DOT. cmr 16-016. July 2016. <https://library.modot.mo.gov/RDT/reports/TR201509/cmr16-016.pdf>

Guidance on median and centerline treatments to reduce head-on casualties. Austroads Pub no. AP-R519-16 www.onlinepublications.austroads.com.au/items/AP-R519-16
* Free access after logging into Austroads web site. You can use **login:** ml_library@wsdot.wa.gov **password:** library *

Highway Safety: More robust DOT oversight of guardrails and other roadside hardware could further enhance safety / Report to Congressional Requesters. June 2016. www.gao.gov/assets/680/677735.pdf

Implementation of the 2013 AASHTO Manual for Bridge Element Inspection / Sobanjo & Thompson. Florida DOT. May 2016. www.dot.state.fl.us/research-center/Completed_Proj/Summary_MNT/FDOT-BDV30-977-07-rpt.pdf

Improving striping operations through system optimization – Phase 2 / McGarvey, Matisziw, Noble, Nemmers, Karakose, Krause. Iowa DOT. July 2016. http://lib.dr.iastate.edu/intrans_reports/212/

Integral abutment bridges under thermal loading: numerical simulations and parametric study / LaFave, Fahnestock, Wright, Riddle, Jarrett, Svatora, An & Brambila. Illinois DOT. FHWA-ICT-16-014. June 2016. <https://apps.ict.illinois.edu/projects/getfile.asp?id=4972>

No boundaries: Roadway maintenance practices [newsletter]. June 2016. <http://noboundaries-roadmaintenance.org/roadway-maintenance-news-june-2016.html>

Partnerships for promoting pollinator habitat / Minnesota DOT. June 2016. www.dot.state.mn.us/research/TRS/2016/TRS1601.pdf

Proceedings of Geo-China 2016. 25-27 July 2016, Shandong, China. **12 sections, some are listed below.**
Available online to WSDOT staff at <http://ascelibrary.org/doi/book/10.1061/geochina2016>

[Geo-China : Advances in Pavement Engineering and Ground Improvement](#)

[Geo-China : In Situ and Laboratory Test Methods for Site Characterization, Design, and Quality Control](#)

[Geo-China : Innovative and Sustainable Solutions in Asphalt Pavements](#)

[Geo-China : Innovative and Sustainable Use of Geomaterials and Geosystems](#)

[Geo-China : Material, Design, Construction, Maintenance, and Testing of Pavement](#)

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Proceedings of the 16th COTA International Conference of Transportation Professionals (CICTP) : Green and multimodal transportation and logistics. 6-9 July 2016, Shanghai, China.

Available online to WSDOT staff at <http://ascelibrary.org/doi/book/10.1061/9780784479896>

Research Showcase [newsletter] Spring 2016. Florida DOT.
www.dot.state.fl.us/research-center/docs/showcase/spring16.pdf

Self-consolidating concrete (SCC) and high-volume fly ash concrete (HVFAC) for infrastructure elements: Implementation. Summary Report / Myers, Hernandez, Alghazali, Griffin & Smith. Cmr 16-011. June 2016.
<https://library.modot.mo.gov/RDT/reports/TR201236/cmr16-011.pdf>

Sinusoidal rumble strip design optimization study / Terhaar, Braslau & Fleming. Minnesota DOT. MN/RC 2016-23. June 2016.
www.dot.state.mn.us/research/TS/2016/201623.pdf

Summary and status of concession agreements (CDA/DB) in Texas, Final Report / Glover, Steadmen & Dell. Texas A&M. PRC 16-54 F. June 2016.
<http://d2dtl5nnlpr0r.cloudfront.net/tti.tamu.edu/documents/PRC-16-54-F.pdf>

Upgrading bridge rails on low-volume roads in Iowa / Hans, Bektas, Nketah & Phares. Iowa Highway Research Board. IHRB Project TR-679. June 2016.
<http://publications.iowa.gov/22592/>

Water World [journal] http://digital.waterworld.com/waterworld/201607?sub_id=MOYcIIQBop5f&pg=2#pg2

Geotechnical Engineering, Engineering Geology

AGHP 2016 Geohazards Photo Contest Winners / August 3, 2016. *2nd Place – Snoqualmie Pass*
www.geosynthetica.net/aghp-2016-geohazards-photo-contest/

Calibration of region specific gates pile driving formula for LRFD / Tavera, Rix, Burnworth & Jung. Louisiana DOT. FHWA/LA.16/561. May 2016.
www.ltrc.lsu.edu/pdf/2016/FR_561.pdf

Destructive mass movements in high mountains: Hazard and management / Eisbacher & Clague. Geological Survey of Canada. 1984.
Mats Lab Library 551.3 EISBACH 1984

Drilled shaft resistance based on diameter, torque and crowd (drilling resistance vs. rock strength) Phase II / McVay & Rodgers. Florida DOT. June 2016.
www.dot.state.fl.us/research-center/Completed_Proj/Summary_GT/FDOT-BDV31-977-20-rpt.pdf

Field device to measure viscosity, density, and other slurry properties in drilled shafts / Mullins & Mullins. Florida DOT. April 2016.
www.dot.state.fl.us/research-center/Completed_Proj/Summary_SMO/FDOT-BDV25-977-08-rpt.pdf

Field instrumentation and testing to study set-up phenomenon of piles driven into Louisiana clayey soils / Abu-Farsakh, Haque & Chen. Louisiana Transportation Research Center. FHWA/LA.15/562. July 2016.
www.ltrc.lsu.edu/pdf/2016/FR_562.pdf

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Proceedings of Geo-Chicago 2016. 14-18 August 2016. **7 sections, listed below.**

Available online to WSDOT staff at <http://ascelibrary.org/doi/book/10.1061/geochicago2016>

[Geo-Chicago : Geotechnics for Sustainable Energy](#)

[Geo-Chicago : Sustainability and Resiliency in Geotechnical Engineering](#)

[Geo-Chicago : Sustainable Geoenvironmental Systems](#)

[Geo-Chicago : Sustainable Materials and Resource Conservation](#)

[Geo-Chicago : Sustainable Waste Management and Remediation](#)

[Geoenvironmental Engineering : Honoring David E. Daniel](#)

[Geosynthetics, Forging a Path to Bona Fide Engineering Materials : Honoring Robert M. Koerner](#)

GeoEngineer Newsletter #135.

July 2016 - <http://campaign.r20.constantcontact.com/render?m=1101304736672&ca=7b23ab22-d8e0-484e-805e-8b0ce31d0d49>

Landsliding in Great Britain / Department of the Environment. 1994

Mats Lab Library 551.307 GREAT B 1994

Optimizing the use of the thermal integrity system for evaluating auger-cast piles / Mullins & Johnson.

Florida DOT. July 2016. www.dot.state.fl.us/research-center/Completed_Proj/Summary_SMO/FDOT-BDV25-977-09-rpt.pdf

Proceedings of the Pipelines 2016 Conference: Out of sight, out of mind, not out of risk. 17-20 July 2016,

Kansas City, MO. Available online to WSDOT staff at <http://dx.doi.org/10.1061/9780784479957>

Pavements

Accelerated slab replacement using temporary precast panels and self-consolidating concrete / Tawfiq & Armaghani. Florida DOT. June 2016.

www.dot.state.fl.us/research-center/Completed_Proj/Summary_SMO/FDOT-BDV30-977-02-rpt.pdf

Alternative aggregates and materials for high friction surface treatments / Wilson & Mukhopadhyay. Florida DOT. Project BDR74-977-05. May 2016.

www.dot.state.fl.us/research-center/Completed_Proj/Summary_SMO/FDOT-BDR74-977-05-rpt.pdf

Analysis of open graded pavement performance through microstructure and hydraulic simulation / Umiliaco & Benedetto. Roma Tre University.

<http://dspace-roma3.caspur.it/bitstream/2307/5050/1/Analysis%20of%20open%20graded%20pavement%20performance%20through%20microstructure%20and%20hydraulic%20simulation.pdf;jsessionid=4914952837A0BB6AEA1A1316A4636587>

Appropriate implementation of pavement preservation treatments / Vitillo, Boxer, Rascoe, Roberts, Tobin & Wang. NJ DOT. FHWA-NJ-2015-011. April 2015.

Mats Lab Library Report 9C/22 VITI 2015.

Concrete pavement preservation guide, 2nd ed. / Smith, Pierce, Ram, Smith, and Harrington. National Concrete Pavement Technology Center. FHWA-HIF-14-014. September 2014.

Mats Lab Library 625.84 SMITH 2014. www.cptechcenter.org/technical-library/documents/preservation_guide_2nd_ed_508_final.pdf

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CP2 Center News [newsletter] California Pavement Preservation Center. no. 38.
www.csuchico.edu/cp2c/documents/Newsletters/NL38JUN2016-web.pdf

Developing green, highly flowable, rapid set, high-performance concrete for pavement patch repair / Wang & Lomboy. National Concrete Pavement Technology Center. July 2016.
http://lib.dr.iastate.edu/intrans_reports/214/

Effect of heavy vehicle traffic in sprayed seal design. Austroads Pub no. AP-T307-16
www.onlinepublications.austrroads.com.au/items/AP-T307-16
* Free access after logging into Austroads web site. You can use **login:** ml_library@wsdot.wa.gov **password:** library *

Impact of curling and warping on concrete pavement / Ceylan, Yang, Gopalakrishnan, Kim, Taylor & Alhasan. Iowa Highway Research Board. IHRB Project TR-668. July 2016. <http://publications.iowa.gov/22611/>

Implementation of centrifuge technology for pavement design on expansive clays / Texas DOT, July 13, 2016.
www.youtube.com/watch?v=Mo6JUNk1bj4&feature=youtu.be

Implementation of geosynthetic-reinforced unbound base courses / Texas DOT. July 13, 2016.
www.youtube.com/watch?v=Q_ONiywDxGI&feature=youtu.be

Performance of partial-depth concrete pavement repairs at the MnROAD facility / Burnham, Johnson & Worel. Minnesota DOT. MN/RC 2016-16. May 2016. www.dot.state.mn.us/research/TS/2016/201616.pdf

Polymer concrete overlay evaluation / Dahlberg & Phares. Iowa DOT. InTrans Project 13-463. June 2016.
<http://publications.iowa.gov/22416/>

Selection and design of initial treatments for sprayed seal surfacings. Austroads Pub no. AP-T310-16
www.onlinepublications.austrroads.com.au/items/AP-T310-16
* Free access after logging into Austroads web site. You can use **login:** ml_library@wsdot.wa.gov **password:** library *

SPG specification for seal coat binders / Martin & Hazlett. Texas DOT. July 1, 2016.
www.youtube.com/watch?v=2d7_9cqoEk&feature=youtu.be

Validation of gyratory mix design in Iowa / Williams, Buss, Mercado, Lee & Bozorgzad. Iowa Highway Research Board. IHRB Project TR-667. July 2016. <http://publications.iowa.gov/22605/>

Validation of uniform compaction of hot-mix asphalt pavements in Connecticut / Zinke & Mahoney. Connecticut DOT. CT-2288-F-16-1. June 2016.
www.ct.gov/dot/lib/dot/documents/dresearch/CT-2288-F-16-1.pdf

Materials, Testing, Inspection

Development of a binder test to rank the low temperature cracking resistance of polymer modified binders stage 2: Hard Binders. Austroads Pub no. AP-T312-16. August 2016.
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* Free access after logging into Austroads web site. You can use **login:** ml_library@wsdot.wa.gov **password:** library *

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Effects of chemical and mineral admixtures on performance of Florida structural concrete / Zayed, Shanahan, Tran, Markandeya, Williams & Elnihum. Florida DOT. Project No. BDV25-977-02. June 21, 2016.
www.dot.state.fl.us/research-center/Completed_Proj/Summary_SMO/FDOT-BDV25-977-02-rpt.pdf

Evaluation of bio-fog sealants for pavement preservation / Ghosh, Turos & Marasteanu. Minnesota DOT. MN/RC 2016-20. June 2016.
www.dot.state.mn.us/research/TS/2016/201620.pdf

Guide specifications for concrete overlays / Harrington & Fick. NCAT, February 2016.
http://www.cptechcenter.org/technical-library/documents/overlay_guide_specifications.pdf
Mats Lab Library 625.84 GUIDE 2016

Improvements to highway guardrail assemblies / Todd Shupe. Louisiana DOT. FHWA/LA.15/14-1TIRE. May 2016.
www.ltrc.lsu.edu/pdf/2016/14-1TIRE.pdf

Optimizing cold in-place recycling (CIR) applications through fracture energy performance testing / Wegman & Sabouri. Minnesota DOT. MN/RC 2016-21. June 2016.
www.dot.state.mn.us/research/TS/2016/201621.pdf

Performance evaluation and specification of trackless tack / Texax A&M Project Summary. O-6814.
<http://d2dtl5nnlpr0r.cloudfront.net/tti.tamu.edu/documents/O-6814-S.pdf>

Review of Australasian and overseas specifications and performance tests for bitumen. Austroads Pub no. AP-T308-16
www.onlinepublications.austroads.com.au/items/AP-T308-16
* Free access after logging into Austroads web site. You can use login: ml_library@wsdot.wa.gov password: library *

Review of hydraulically bound materials for use in Scotland / Bateman & Nicholls. Transportation Research Laboratory Report PPR 792. July 2016.
*Use free login ml_library@wsdot.wa.gov and password **matslab** *
<http://trl.co.uk/reports-publications/trl-reports/report/?reportid=7048>

Using small sample sizes in full depth reclamation (FDR) laboratory mix designs / Texas DOT, July 13, 2016.
www.youtube.com/watch?v=6pn6tCpxZFA&feature=youtu.be

SELECTED NEW E-BOOKS IN CivilENGINEERINGnetBASE

Available online to WSDOT staff (http://www.crcnetbase.com/page/civil_engineering_ebooks)

[Advances in Energy, Environment and Materials Science. Proceedings \(EEMS 2015\).](#)

Guanghzou, China, 25-26 August 2016. Fields covered include energy science, energy technology, environmental science, environmental engineering, motivation, automation and electrical engineering, material science and engineering, the discovery or development of energy, and environment and materials science.

[Advances in River Sediment Research. Proceedings \(ISRS 2013\).](#)

Kyoto, Japan, 2-5 September 2013. View [Table of Contents](#).

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[Computer Methods and Recent Advances in Geomechanics. Proceedings.](#)

Kyoto, Japan, 22-25 September 2014. View [Table of Contents.](#)

[Geotechnical Engineering for the Preservation of Monuments and Historical Sites. Proceedings.](#)

Napoli, Italy, 30-31 May 2013. View [Table of Contents.](#)

[Geotechnics and Heritage: Case Histories.](#)

View [Table of Contents.](#)

[Land Tenure, Boundary Surveys, and Cadastral Systems.](#)

View [Table of Contents.](#)

[Maintenance and Safety of Aging Infrastructure.](#)

View [Table of Contents.](#)

[New Developments in Mining Engineering, 2015.](#)

[Piles and Pile Foundations.](#)

[Structural Health Monitoring and Integrity Management. Proceedings \(ICSHMIM 2014\).](#)

Nanjing, China, 24-26 September 2014. [View Table of Contents](#)

[Transit Development in Rock Mechanics. Proceedings \(ISRM 2014\).](#)

Xi'an, China, 8-10 November 2014. 150+ papers. [View Table of Contents](#)

[Underground Infrastructure of Urban Areas 3.](#)

View [Table of Contents.](#)

[Urban Forests: Ecosystem Services and Management.](#)

View [Table of Contents.](#)

[Urban Horticulture: Ecology, Landscape and Agriculture.](#)

Examines types of public and private communities as well as state and federal programs to promote urban horticulture, including their history, management and administration, programming, evaluation, funding, and the benefits they provide to individuals and communities. It also reviews past and current research on school, community, public, and prison gardens.