

Iowa County Engineers Research Focus Group 2/13/2014

IOWA HIGHWAY RESEACH BOARD UPDATE

Iowa Highway Research Board Completed Projects in 2012 –

To obtain a copy of the report or technical brief summary visit: <http://www.iowadot.gov/research/reports.html>

- TR-568, Modified Sheet Pile Abutments for Low Volume Bridges, Dave White, CEER/InTrans
- TR-579, Low Cost Strategies to Reduce Speed and Crashes on Curves, Shauna Hallmark, InTrans
- TR-584, Development of LRFD Procedures for Bridge Piles in Iowa – Volume IV: Design Guide and Track Examples, Sri Sritharan, INTRANS
- TR-604, Field Testing and Evaluation of a Demonstration Timber Bridge, Brent Phares, Iowa State University/InTrans
- TR-605, Evaluation of the Buena Vista IBRD Bridge: A Furthering of Accelerated Bridge Construction in Iowa, Brent Phares, INTRANS/ISU
- TR-609, Examination of Curing Criteria for Cold-in-Place Recycling III, David Lee, U of I
- TR-608, Financial Needs of Iowa’s County Roads, Steve DeVries, ICEA Service Bureau
- TR-616, Timber Abutment Piling and Back Wall Rehabilitation and Repair, Brent Phares, Iowa State University/InTrans
- TR-618, Parallel Wing Headwalls for Single RCB’s (LRFD)
- TR-620, Update of RCB Culvert Standards to LRFD Specifications, Foth Engineering/Mike Nop, Iowa DOT Office of Bridges and Structures (Culvert rating addition to software is in progress)
 - Standards Available: <http://www.iowadot.gov/bridge/v8elrfdculstd.html>
 - CulvertCalc Software Available: <http://www.iowadot.gov/bridge/finalprog.htm>
- TR-621, Roadway Geosynthetic Reinforced Soil for Low Volume Bridge Abutments, Dave White, CEER/InTrans
- TR-623, Quality Control/Quality Assurance Testing for Joint Density and Segregation of Asphalt Mixtures
- TR-624, Development of Quality Standards for Inclusion of High Recycled Asphalt Pavement Content in Asphalt Mixtures, David Lee, U of I
- TR-627, Risk Mitigation Strategies for Operations and Maintenance Activities
- TR-629, Revision to the SUDAS Traffic signal Standards Phase II, Neal Hawkins, InTrans

Projects Completed in 2013

- TR-630, Evaluation and Guidance on Effective Traffic Calming for Small Communities, Shauna Hallmark, InTrans
- TR-632, Low Cost Rural Road Surface Alternatives, David White, InTrans

- TR-633, Investigation into Shrinkage of High Performance Concrete Used for Iowa Bridge Decks and Overlays, Kejin Wang, InTrans
- Tr-634, Pilot Construction for Granular Shoulder Stabilization, Charles Jahren, InTrans
- TR-635, Warm Mix Asphalt Phase II: Evaluation of WMA Quality Assurance Testing Protocols, Chris Williams, InTrans
- TR-636, Bridge Damage Detection: Integration of Structural Health Monitoring System Concepts and Components, Brent Phares, InTrans
- TR-638, Western Iowa Missouri River Flooding – Geo-Infrastructure Damage Assessment, Repair and Mitigation Strategies, David White, InTrans
- TR-643, Evaluating Roadway Subsurface Drainage Practices, Halil Ceylan, InTrans
- TR-646, Development of Bridge Inspection, Load Rating & Maintenance Manuals, HDR Engineering
- TR-649, Workshops on Application of Load and Resistance Design of Driven Piles in Iowa, Sri Sritharan, InTrans

Projects Awarded in 2012

- TR-642, Pilot Project for a Hybrid Road-Flooding Forecasting System on Squaw Creek
- TR-644, Development of Cost-Effective Timber Bridge Repair Techniques (MN LRRB)
- TR-645, Development and Integration of Advanced Timber Bridge Inspection Techniques for NBIS (MN LRRB)
- TR-647, Methods for Removing Concrete Decks from Bridge Girders
- TR-648, Evaluation and Testing of a Light-Weight Fine Aggregate Concrete Bridge Deck in Buchanan County, Iowa
- TR-650, Development of Non-Petroleum Based Binders for Use in Flexible Pavements- Phase 2

Projects Awarded in 2013

- TR-651, Iowa Pavement Asset Management Framework
- TR-652, Durable Pavement Marking and Grooving
- TR-653, Assessment of Non-Destructive Testing Technologies for Quality Control/Quality Assurance of Asphalt Mixtures
- TR-654, Development of a Subgrade Drainage Model for Unpaved Roads
- TR-655, Updating the Iowa Culvert Hydraulics and Iowa Bridge Backwater Software
- TR-656, BIOFUEL CO-PRODUCT USES FOR PAVEMENT GEO-MATERIALS STABILIZATION: Extensive Lab Characterization and Field Demonstration

- TR-657, Evaluation of Low-Cost Signalized Intersection Red Light Running Countermeasures in Medium to Large Communities in Iowa
- TR-658, Development of Quality Standards for Inclusion of High Recycled Asphalt Pavement Content in Asphalt Mixtures - Phase 2
- TR-659, Development of Asphalt Dynamic Modulus Master Curve Using Falling Weight Deflectometer (FWD) Measurements
- TR-660, Investigation of Negative Moment Reinforcing in Bridge Decks
- TR-661, Evaluate the Need for Longitudinal Median Joints in Bridge Decks on Dual Structures
- TR-662, Evaluating Roadway Subsurface Drainage Practices – Phase II
- TR-663, Short Span County Bridge Standards
- TR-664, Low Cost Rural Surface Alternatives: Demonstration Project in Hamilton County
- TR-665, Mitigation of Sedimentation at Multi-Box Culverts
- TR-666, Investigation of Field Corrosion Performance and Bond/Development Length of Galvanized Reinforcing Steel
- TR-667, Validation of Gyratory Mix Design in Iowa
- TR-668, Impact of Curling and Warping on Concrete Pavement
- TR-669, Statistical Summary of Selected Iowa Streamflow Data
- TR-670, Iowa DOT Library Services, Collection, & Technology Assessment
- TR-671, Performance Monitoring of Boone County Expo Pavement Sections: (Phase III)
- TR-672, Autonomous Sensing Skin for Detection and Localization of Fatigue Cracks

Projects Currently Awaiting Proposals:

- Design and Performance Verification of a Bridge Column/Footing/Pile System for Accelerated Bridge Construction
- Evaluation of Otta Seal Surfacing for Low-Volume Roads in Iowa
- Assessment of PCC Concrete Setting Time and Joint Sawing
- Impacts of Internally Cured Concrete Paving on Contraction Joint Spacing
- Performance based Evaluation of Cost Effective Aggregate Options for Granular Roadways

Questions or Comments please contact:

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