

Record of Professional Development Hours

Please enter the amount of PDH credits earned for each session in the **PDH Earned** column. The total PDH credits earned for the 2016 Annual Conference & Exposition will be shown at bottom.

FORM SUBMITTAL DEADLINE – SEPTEMBER 30, 2016

PLEASE NOTE FORMS MUST BE RECEIVED BY THE DEADLINE OR IT WILL NOT BE PROCESSED. THANK YOU.

Time	Session Description	PDH Credit	PDH Earned
Monday August 29, 2016			
10:00 am	Communications & Signals Presentation Advancing a Fast Tracked SEPTA-CSX Separation Project		
10:30 am	Structures Presentation CSX National Gateway 2		
11:00 am	Track Presentation The Development and Evaluation of Special Trackwork Foundations		
11:30 am	Passenger & Transit Presentation Utilizing Unmanned Aerial Vehicles on Rail Projects		
12:00 pm	Engineering Services Presentation Rutherford Intermodal Facility Expansion		
12:30 pm	Maintenance Presentation Article on the New Handbook of Conventional Maintenance Practices		
TOTAL for Monday General Session		3.0	
Tuesday August 30, 2016			
Technical Sessions: Communications & Signals			
8:00 am	The Connected Locomotive: Leading IT Technology		
8:30 am	Development of an Internal Hump Process Control System		
9:00 am	Compatibility of HVDC Transmission Lines with Signal Systems		
9:30 am	Lightning 101 – Railroads vs. Mother Nature		
10:30 am	Approaches, Challenges, and Solutions for PTC Systems Management		
11:00 am	Obsolescence Engineering Risk		
11:30 am	PCB "No-Clean" - The Misnomer		
TOTAL for Communications & Signals Technical Session		3.5	

Tuesday | August 30, 2016 (Continued)

Technical Sessions: Engineering Services

- 8:00 am Implementation of Rail Temperature Predictions on Amtrak
- 8:30 am Successful Design and Construction of Industrial Sidetracks
- 9:00 am Detection of Concrete Tie Rail Seat Deterioration
- 9:30 am "DC2RVA": Engineering Collaboration and Decision Support through ArcGIS Online
- 10:30 am Over the Marsh and Through the Golf Course, BNSF Railway, La Crosse, Wisconsin
- 11:00 am Rail Lifecycle Improvement through the Application of Dynamic Grind Pattern Generation on a Heavy Haul Railroad in Brazil
- 11:30 am Harnessing Undergraduate Students as Rail Industry Technology Developers/Problem-Solvers
- 2:00 pm Restoration of the Lake State Railway Huron Subdivision
- 2:30 pm Relieving a Bottleneck in the Twin Cities
- 3:00 pm Go-Transit's Comprehensive Hi-Rail Track Inspection Vehicles

TOTAL for Engineering Services Technical Session 5.0

Technical Sessions: Maintenance

- 8:00 am Amtrak's Oakington Road Case Study: Constraints, Analysis, and Solution
- 8:30 am New Inspection Criteria for Rapid Structural Condition Assessment of Culverts
- 9:00 am Assessment of Manufactured Rail Seat Deterioration Detection Using FRA DOTX 218
- 9:30 am Conformal Frog Evolution at CSX
- 10:30 am Next Generation Tie Program and Tie Gang Efficiencies with Automated Inspection
- 11:00 am Development and Execution of a Comprehensive Second Hand Rail Removal and Sale Program at BNSF
- 11:30 am Laboratory Investigation of Geogrid Reinforced Railroad Ballast Performance on Particle Movement by "SmartRock"
- 2:00 pm Various Cost Effective Maintenance Practices for Conventional Track Structure
- 2:30 pm Effects of Superelevation & Speed on Vehicle Curving in Heavy Axle Load Service
- 3:00 pm Development of High Performance Pearlitic Rail(SP4) for Heavy Haul Railways
- 3:30 pm How Track Geometry Defects Affect the Development of Rail Defects
- 4:00 pm Snapshot Proposed Revision to RWP Rule
Presentation is One Hour

TOTAL for Maintenance Technical Session 6.5

Tuesday | August 30, 2016 (Continued)**Technical Sessions: Passenger & Transit**

- 8:00 am TEX Rail: 27.2-miles of Commuter Rail
- 8:30 am A Technology-based Approach to Assessing the Feasibility of Bi-level Trains
- 9:00 am The Return of Passenger Service to Roanoke, Virginia
- 9:30 am Long Bridge - Present & Future: A Multimodal Analysis
- 10:30 am Successful Delivery of a Passenger Rail Construction Program - Lessons Learned
- 11:00 am Level Boarding in Mixed Fleets & Service
- 11:30 am Vibration Mitigation for the Regional Connector Transit Corridor
- 2:00 pm RTD's North Metro Rail Line – Carving Out a New Corridor in Denver's Landscape
- 2:30 pm North Carolina's Piedmont Improvement Program
- 3:00 pm Information Technology - Help Point (Passenger Assistance) Phone System

TOTAL for Passenger & Transit Technical Session 5.0

Technical Sessions: Structures

- 8:00 am Innovative Foundations Reduce Cost and Track Time
- 8:30 am Targeted Field Monitoring to Determine Live Load Levels of 127-yr-old Pin-Connected Truss
- 9:00 am UPRR Bridge 183.67 Springfield Sub over 9th Street (Springfield, IL)
- 9:30 am Design Challenges of Galveston Causeway Railroad Bridge Replacement
- 10:30 am Bridge 9.6 - U1 Pinned Truss Joint Repair
- 11:00 am Application of Large-Diameter Circular Reinforced Concrete Filled Tube (RCFT) Shaft Foundation for Seismic Design of Railroad Bridges
- 11:30 pm Emergency Repair of Flood-damaged Bridge Pier Foundations with Pressed-in Piles
- 2:00 pm Specialty Precast Solutions
- 2:30 pm A New Way to Detect, Monitor and Manage Scour Critical Railway Bridges
- 3:00 pm Replacement of BNSF Bridges 106.58 near Princeton, IL & 110.26 near Wyanet, IL
- 3:30 pm After 100 Years, Is It Time to Use Lightweight Concrete on Railroad Bridges?
- 4:00 pm Fundamental Evaluation of Knee Brace Behavior for Rail Traffic on Through Plate Girders
- 4:30 pm Effects of Short Cars on Track and Bridges

TOTAL for Structures Technical Session 6.5

Tuesday | August 30, 2016 (Continued)**Technical Sessions: Track**

- 8:00 am Rail Post Weld Heat Treatment to Improve the Softened Heat Affected Zones of Electric Flash Butt Welds
- 8:30 am Soft Soil Embankment Stabilization in a Railway Environment
- 9:00 am Field Imaging Based Assessment of In-Service Ballast Condition
- 9:30 am Integrating Technology into Shortline Maintenance Planning
- 10:30 am Joint Rail Grinding Operations
- 11:00 am Design and Performance of Three Remediated Bridge Approaches
- 11:30 am Field Measurements and Proposed Analysis of Concrete Crosstie Bending Moments
- 2:00 pm Quantification and Comparison of Lateral Forces in Concrete Crosstie Fastening Systems Under Heavy Haul Loading Conditions

TOTAL for Track Technical Session 4.0

Wednesday | August 31, 2016

- 8:45 am **Passenger & Transit Presentation**
The Gateway Program
- 9:15 am **Maintenance Presentation**
Understanding Broken Rails and Derailments at Switches and Crossings
- 9:45 am **Communications & Signals Presentation**
Driver Behavior at Highway-Rail Grade Crossings Using Naturalistic Driving Study
- 10:45 am **Engineering Services Presentation**
CREATE Update
- 11:15 am **Structures Presentation**
OCCI-UPRR Br 24.75 Emergency Replacement Sioux City Sub-Total Bridge Replacement
- 11:45 am **Track Presentation**
Superelevation Optimization for Mixed Freight and Higher-Speed Passenger Trains

TOTAL for Wednesday General Session 3.0

TOTAL PDH Credits Earned

PLEASE NOTE: COMPLETED FORMS MUST BE RETURNED TO AREMA BY SEPTEMBER 30, 2016.

Return this form to AREMA via fax or e-mail. Your PDF Certificate will be mailed to you after the September 30, 2016 deadline.

For questions regarding this form, please contact Desirée Knight at dknight@arema.org.

Full Name			Member ID
Title			
Organization			
Address			
City	State/Province	Country	Postal Code
Phone	Fax	E-Mail Address	
I certify that I attended the sessions indicated above.			
Signature			Date

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