

# AASHTO's NTPEP Program

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- NTPEP's Current Status
- New Technical Committees/Task Forces
- Reliance and Interaction with testing laboratories
- How YOU can help continue NTPEP to be successful
- DataMine
- NTPEP Business Plan
- A look inside a few NTPEP Programs
- AASHTO APEL Program



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# NTPEP's Current Status

- 23 Technical Committees
  - 21 different products are evaluated
  - 8 different products are audited and evaluated
- To date, 350 products have been submitted in DataMine since Jan. 1, 2014
- 143 Audits are scheduled to be completed in 2014
- AASHTO has received the annual NTPEP contribution for FY14 from 42 states



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# New Technical Committees/Task Forces

- New Technical Committees
  - Epoxy and Resin Based Adhesive Bonding Systems
  - Guardrail/Guiderail
  - Elastomeric Bridge Bearing Pads
  - Warm Mix Additives
- Task Force
  - Precast Concrete Products



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# Relationship between NTPEP and State Members

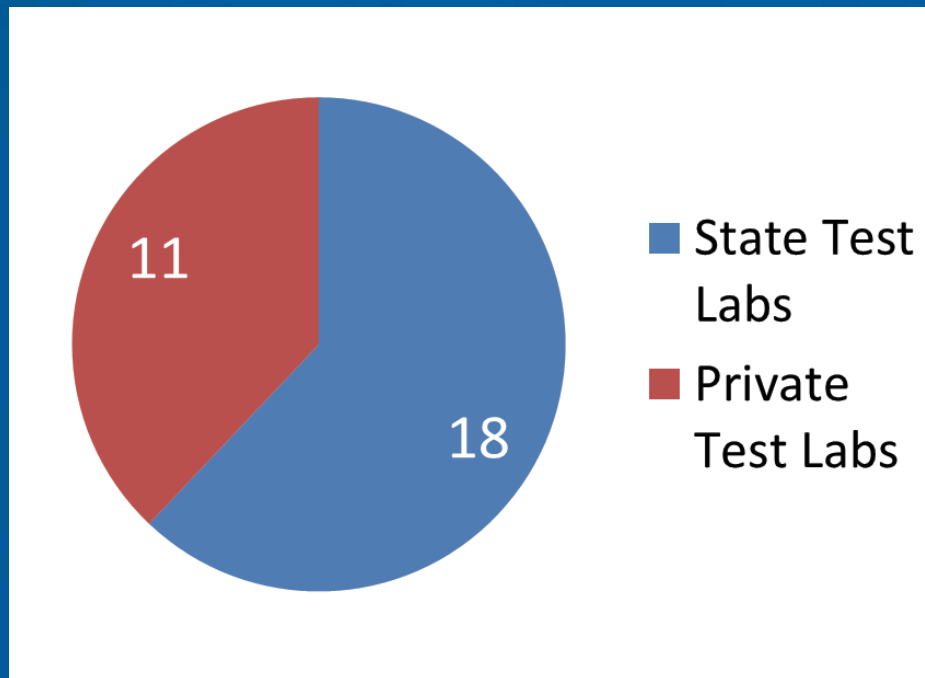
- NTPEP includes one voting member from each state (usually the Product Evaluation Coordinator)
- Each technical committee within NTPEP includes interested state DOT members (does not have to be the voting member for that state) and up to two industry members.
- The NTPEP audits and evaluations serve as a tool each state DOT can utilize. AASHTO's NTPEP staff can not dictate to a state what data they need to use. This is the state's choice.



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# Reliance and Interaction with testing laboratories



- NTPEP needs commitment from **EVERY** state!
- Each state has a limited number of resources
- NTPEP relies on the technical experts!



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# How YOU can help continue NTPEP to be successful

- Support
- Promote
- Contribute
- Share



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# DataMine

- The “nucleus” of NTPEP
- Task Force Responsibilities and Goals
- If you are not satisfied with how DataMine operates, let AASHTO know



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# NTPEP Business Plan

- Benefits of States Using NTPEP
- Features of DataMine 3.0
- Growth Highlights
- NTPEP Business Opportunities: 2014-2019
- Implementation Strategy
- Marketing Strategy
- Responsibilities of AASHTO NTPEP Liaisons
- Financial Status of NTPEP
- How APEL feeds into NTPEP



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# NTPEP Audit Program for Reinforcing Steel- Rebar and WWR

- **Chair:** Merrill Zwanka – SC DOT
- **Vice Chair:** Ed Hughes- IL DOT
- **NTPEP Liaison:** Robert Sarcinella
- **Testing Facility:** IL DOT



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# Understanding the Audit Process for Reinforcing Steel- Rebar and WWR

1<sup>st</sup>

- Desktop Review is performed- Manufacturer submits Pre-Audit Application to AASHTO for review of Quality Management System

2<sup>nd</sup>

- On-Site Audit is conducted

3<sup>rd</sup>

- Final Audit Report- accessible through NTPEP Audit Program website



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# Desktop Review

- Review in detail the following documents/procedures
  - Testing Personnel
  - Standard Specifications
  - Size and Type of Material Produced by facility
  - Product Information
  - Identification Markings
  - Test Reports
  - Quality Management System
    - ❖ Review 15 over 15 aspects of the Quality Management System



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# On-Site Audit

- The following are items which are reviewed, observed, verified, and identified during an on-site audit:
  - Testing Personnel
  - Identification Markings
  - Standard Specifications
  - Size and Type Produced by Facility
  - Product Information
  - Test Reports
  - \*\*Chemical Analysis (melt shop only)\*\*
  - Demonstration of Testing
  - \*\*Split Sample Testing\*\*
  - Quality Management System Requirements
  - Equipment Calibration, Standardization, and Checking
  - Record Test Results
    - ❖ Determine pass/fail



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# Final Audit Report

- Summary of findings from on-site audit
- Delivers a final product to both the Manufacturer and AASHTO member departments
- Outlines strengths and deficiencies found while conducting the audit
  - All deficiencies must be adequately addressed in order to be compliant



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# NTPEP Evaluation Program for Rapid Set Concrete Patching Materials

- **Chair:** Bill Real – NHDOT
- **Vice Chair:** Vacant
- **NTPEP Liaison:** Brian Korschgen (Next Conference call is scheduled for October 27<sup>th</sup>)
- **Testing Facilities:** Nelson Testing – Elmhurst, IL (Lab), Ohio DOT (Field)



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- **Product Categories:** Cementitious, Polymer, Polymer-Modified (both neat and extended for all)
- **Product Use:** Horizontal, Vertical/Overhead (lab testing only)
- **Resubmittal:** 5 years from date of lab testing (only lab testing needs to be performed for resubmittals)



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- Recent changes to the program:
  - Starting in 2014, NY Freeze/Thaw test is no longer an option for manufacturers. Manufacturers can choose which Freeze/Thaw test (T161/C666) is performed on their products (A, B, or both).
  - Vertical/Overhead products are now part of the program and NTPEP is testing several of them this year (lab testing only). The committee did not feel they could create a very uniform vertical/overhead field condition so they chose only to do lab testing.



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<b>PROPERTY</b>	<b>TEST METHOD</b>		
	<b>CEMENTITIOUS</b>	<b>POLYMER</b>	<b>POLYMER-MODIFIED</b>
<b>Bond Strength</b>	ASTM C 1583-04	ASTM C 1583-04	ASTM C1583-04
<b>Bond Strength Using Slant Shear (wet cure)</b>	ASTM C 882-05 <sup>1</sup>	ASTM C 882-05 <sup>1</sup>	--
<b>Chloride Ion Penetration</b>	AASHTO T 277-07	AASHTO T 277-07	AASHTO T 277-07
<b>Compressive Strength<sup>2</sup></b>	AASHTO T 22-10 <sup>1</sup>	ASTM C 579-06	AASHTO T 22-10 <sup>1</sup>
<b>Gel Time (Pot Life)</b>	--	ASTM C 881-02	--
<b>Length Change</b>	AASHTO T 160-09 <sup>1</sup>	--	AASHTO T 160-09 <sup>1</sup>
<b>Linear Shrinkage &amp; Coefficient of Thermal Expansion<sup>3</sup></b>	--	ASTM C 531-05	--
<b>Resistance to Freeze/Thaw</b>	AASHTO T 161-08	--	AASHTO T 161-08
<b>Tensile Strength</b>	AASHTO T 198-09	--	--
<b>Thermal Compatibility</b>	--	ASTM C 884-05	ASTM C 884-05
<b>Freeze/Thaw New York Method (50 cycles) (optional)</b>	NY502-3P	NY502-3P	NY502-3P



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# NTPEP Audit Program for Guardrail/Guiderail

- **Chair:** Randy Pace – NCDOT
- **Vice Chair:** Joseph Kerstetter - TNDOT
- **NTPEP Liaison:** Brian Korschgen
- Next Conference call is scheduled for October 14<sup>th</sup>



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- **Testing Facilities:** Not yet determined. NTPEP will send out RFPs to state facilities once the scope of testing is finalized.
- **Cycle information:** Looking to begin audit program sometime mid to late 2015
- **Testing:** This program will be using verification testing. Samples will be selected during the audit and sent to a third party lab for testing. In-house tests results will not be required for samples as many components are not produced or tested on-site.



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- **Product Categories:** Guardrail, guiderail, and all associated components will be included in the program.
- **Resubmittal:** Yearly audit with a 5 year pre-audit interval



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- **Details on the program:**

- Anticipating several changes in the work plan based on the comments from industry as well as states.
- Both the states and manufacturers are unhappy with the amount of traceability paperwork that is required for highway projects.
- The main goal of this audit program should be to reduce this paperwork by focusing the audits on this topic.
- Since the guardrail/guiderail manufacturers don't produce all the components, this audit program will function differently than other NTPEP audit programs. This Program will focus on traceability of all these components and how this information is transferred to states, and not focus as much on the manufacturing process.



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Product	Specifications		Tests	
	AASHTO	ASTM	AASHTO	ASTM
<b>Steel Beam Guardrail</b>	M 180; M 111M/M 111; M 232M/M 232; M 298;	A653/A653M; B6	T 65	A370; A751; E8; E350;
<b>Cable Guardrail</b>	M 30; M 111M/M 111; M 120; M 232M/M 232;	A741	T 244; T 65	A 902 Rev B
<b>Bolts</b>		A307; B696; F1470 F1554; F2329		A751;F606
<b>Nuts</b>		A563		
<b>Washers/Backup Plates</b>	No Specification			
<b>High Strength Bolts</b>		A194/A194M; A325/A325M; A449; B695; F788/F788M; F959; F1470; F2329		A751;F606
<b>High Strength Nuts</b>		A563		
<b>High Strength Washers</b>		F436		
<b>Posts – Steel</b>		A6; A36; A1011		
<b>Posts – Wood</b>	(Varies by State)			
<b>Offset Block – Steel</b>	See “Posts – Steel”			
<b>Offset Block - Wood</b>	(Varies by State)			
<b>Offset Block – Plastic</b>	Manufactures Certification Letter and FHWA Approval Letter			
<b>Zinc</b>	M 111M/M 111; M232M/M232;	B6; B852; B949;		E536
<b>Hardware</b>				A153; A123



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# NTPEP Audit Program for Elastomeric Bridge Bearings

- **Chair:** Jerry Peterson- TX DOT
- **Vice Chair:** Aaron Bon- WI DOT
- **NTPEP Liaison:** Russell Dabbs
- Development of this program has also included industry representatives from Cosmec, Inc., D.S. Brown Company, Scougal Rubber Corporation, and Seismic Energy Products, Inc.



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- The program will include:
  - A desktop Review (performed initially, and then once every five years)
  - An annual On-Site Audit, which will include a review of:
    - ❖ manufacturing process
    - ❖ relevant test methods (The test methods that will be reviewed during the audit will be the same as what is performed for split-sample testing)
    - ❖ detailed paperwork review of (but not limited to) the following documents: quality manual, training and competency evaluation records, equipment calibration records, internal audit records, raw material certifications and traceability.



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## ❖ Split Sampling

- The manufacturer will be notified of their audit date 4-6 weeks prior to the audit. During the time between notification and the audit, the manufacturer will produce two extra laminated pads (manufactured in accordance with AASHTO M251) from a lot that has been ordered. The auditor will select two pads from the lot, one for the manufacturer to test on-site and the other to be sent for third party testing. The testing will include the following test methods:
  - ASTM D395 – Compression Set, Method B
  - ASTM D412 – Tensile Strength and Ultimate Elongation
  - ASTM D429 – Adhesion Strength, Method B
  - ASTM D746 – Low Temperature Brittleness, Procedure B
  - ASTM D2240 – Durometer Hardness
  - ASTM D4014 – Shear Modulus (at room temperature)



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- The results of the split sample testing will be posted along with the final audit report. Due to the relatively high precision and bias results inherent in elastomer testing, the criteria for determining whether a split sample passes or fails will not be determined by comparing the in-house testing results to the third-party results. A pad will be considered “passing” as long as it meets the minimum criteria for which it was designed.
- The third party testing will likely be done at Phoenix National Laboratories.
- This work plan will be balloted this fall.
- The timetable for manufacturers to be able to submit applications for audits through this program is spring 2015.



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- State DOTs interested in Program
  - Kansas, New Hampshire; New Jersey, Montana, Nebraska, Wisconsin, Massachusetts, Minnesota, Nevada, New Hampshire, Idaho, Washington, Oregon, Texas, Louisiana, Alabama, Washington, D.C., North Carolina, Missouri, Iowa, New York, Arkansas, Indiana, Rhode Island, Hawaii, Kentucky, Colorado, Wyoming, and Pennsylvania



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**APEL**

AASHTO's Product Evaluation Listing

# AASHTO Product Evaluation List (APEL) Program



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# What is APEL?

The screenshot shows the AASHTO Product Evaluation List (APEL) website. At the top left is the AASHTO logo with the tagline "THE VOICE OF TRANSPORTATION". To its right is the text "PRODUCT EVALUATION LIST". The date "Wednesday, April 09, 2014" is displayed in the top right corner. Below the header is a navigation bar with "AASHTO: The Voice of Transportation" on the left and a search box on the right. The main content area is divided into two columns. The left column contains a "MY APEL LOGIN" section with fields for "E-Mail Address:" and "Password:", a "Login" button, and a link for "- Get Password". Below this is a vertical menu titled "APEL" with links for "HOME", "MY APEL", "COMPLETED EVALUATIONS", "CERTIFIED PRODUCTS", "REGISTER", "FAQ", and "CONTACT US". The right column features the heading "AASHTO Product Evaluation List Management System" and a welcome message: "Welcome to the AASHTO Product Evaluation List (APEL) web site. This site provides a repository consisting of findings from the evaluation and testing of new and/or proprietary, engineered transportation products." Below the welcome message are three main sections, each with an icon and a description: 1. "My APEL" with a circular icon containing "My APEL" text, describing a place for account-specific information and request status. 2. "Completed Evaluations" with a box icon, describing a list of product evaluations handled by APEL. 3. "Certified Products" with a box icon, describing a list of certified products handled by APEL.



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# APEL Council

**CHAIR**  
*Recently Vacated*

**APEL Coordinator**  
**Evan Rothblatt**  
**(AASHTO)**

**Region 1**  
**Doug Gayne**  
**(ME DOT)**

**Region 2**  
**Terry Swygert**  
**(SC DOT)**

**Region 3**  
**Brad Young**  
**(OH DOT)**

**Region 4**  
**Ross "Oak" Metcalfe**  
**(MT DOT)**



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# Benefits to the states

- Evaluations for new/innovative products
- Accelerate the review of products
- Evaluations paid for by manufacturers



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# Current Challenges

- State participation
- Outreach to manufacturers



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# Improvements

- Streamlining process
- New Module Development
- Broader Outreach
- Increased participation



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# 2015 Annual NTPEP Meeting

- Begins on Sunday, May 17<sup>th</sup> and concludes on Thursday, May 21<sup>st</sup>, 2015 in Scottsdale, Arizona
- Registration opens on Monday, December 1<sup>st</sup>, 2014. A link will be available on the NTPEP website.
- Please submit any items/topics you would like to discuss during the technical committee sessions to *Katheryn Malusky by Wednesday, April 1, 2015*



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# Questions?

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[www.ntpep.org](http://www.ntpep.org)

<http://data.ntpep.org>

[apel.transportation.org](http://apel.transportation.org)



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