

Transportation Research Synthesis

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EXPEDITED PROCESS FOR DEVELOPING SPECIFICATIONS ON NEW PRODUCTS

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It is common practice for transportation agencies to assert a degree of authority over the products and materials that are used to perform work on public property in an effort to ensure the state's standards for quality, performance, efficiency or other criteria are met. The process by which products achieve sanctioned use varies, with some states creating formal policies to help regulate the process.

To inform possible enhancements to its own product approval process, MnDOT is seeking information regarding the specific policies, processes and requirements that govern other states' product approval programs. This effort will also provide input into the internal review being conducted by MnDOT's Office of Materials and Road Research. To gather this information, researchers surveyed departments of transportation from all 50 states and the District of Columbia about their approval policies and practices.



Intelligent compaction technologies improve road and subgrade densities.

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The purpose of this TRS is to serve as a synthesis of pertinent completed research to be used for further study and evaluation by MnDOT. This TRS does not represent the conclusions of either the authors or MnDOT.

Expedited Process for Developing Specifications on New Products

Introduction

MnDOT maintains an [Approved/Qualified Products List](#) (APL/QPL) that prescribes the materials, products and engineered systems that can be used on MnDOT-owned properties. Use of this list ensures products comply with federal and state regulations, and meet MnDOT's standards for quality, efficiency and performance. The process of approving new and innovative products is managed by subject matter experts, who are assigned the responsibilities for certification, decertification and recertification according to their area of expertise.

To inform possible enhancements to its approval process, MnDOT sought information about the specific policies, processes and requirements that govern other states' product approval programs. Specifically, MnDOT hoped to learn:

- What processes other state departments of transportation (DOTs) use to procure new technologies, processes, materials and products; create specifications; and determine performance requirements.
- What role external organizations in industry and academia play in these processes.
- What role research implementation plays in this process.

This Transportation Research Synthesis presents the findings of a survey sent to all 50 states and the District of Columbia. Also presented are the results of follow-up consultations with a selected group of these agencies.

Summary of Findings

Survey of Practice

An online survey was distributed to 51 DOTs. Of the 18 that responded, 16 state DOTs provided insight into their product approval process and two (Rhode Island and Delaware DOTs) reported that they do not have formal approval processes in place. Below is an overview of survey results in the following topic areas:

- Number and types of requests.
- Role of research and development (R&D) office.
- Environmental and health review.
- Influence of external data.
- Confidentiality of proprietary information.

Number and Types of Requests

Of the 16 agencies that completed the survey, all but one answered that they evaluate an average of 11 or more products in a typical year. (Maryland DOT State Highway Administration did not respond to this question.)

New materials and new products are the most common types of approval requests.

Role of Research and Development Office

Whether an R&D office plays a role in the specifications process is split, with seven states (Alabama, Arizona, Indiana, Maine, Maryland, Montana and South Carolina) including the office in their procedures and nine states

(Alaska, Arkansas, California, Florida, Idaho, Illinois, Massachusetts, Minnesota and Mississippi) reporting that the research office is not involved.

Environmental and Health Review

There is similar disparity on the issue of environmental and health assessments in the approval process. Seven states (Arizona, California, Florida, Illinois, Maine, Maryland and Minnesota) require an environmental and/or health review as a part of their process, and nine states (Alabama, Alaska, Arkansas, Idaho, Indiana, Massachusetts, Mississippi, Montana and South Carolina) do not.

Influence of External Data

Nearly all states surveyed consider at least some product evaluations or test results from an outside source. The survey specifically inquired about the American Association of State Highway and Transportation Officials' (AASHTO's) National Transportation Product Evaluation Program (NTPEP), the AASHTO Product Evaluation List (APEL) and multi-state pooled funds, and whether these programs influence agency decisions. The states that consult these resources are:

- NTPEP: Alabama, Alaska, Arizona, Arkansas, Florida, Idaho, Illinois, Indiana, Maine, Maryland, Minnesota, Mississippi, Montana and South Carolina.
- APEL: Alabama, Arizona, Florida, Illinois, Indiana, Maine, Maryland and South Carolina.
- Pooled funds: Alaska, Arizona, Florida, Idaho, Illinois, Maine, Maryland and South Carolina.

Additionally, nine states (Alaska, Arizona, Arkansas, Florida, Idaho, Indiana, Maine, Maryland and Mississippi) consider results from independent third-party testing facilities. Alabama uses test results from other state agencies, and Illinois considers data submitted by a producer, vendor or product champion. Montana requires certain products to have industry certification: reinforced concrete pipe must come from plants certified by the American Concrete Pipe Association (ACPA) or the National Precast Concrete Association (NPCA), and rebar epoxy coatders must come from a plant certified by the Concrete Reinforcing Steel Institute (CRSI).

Confidentiality of Proprietary Information

As DOTs are government agencies subject to sunshine laws, proprietary or trade secret information included in public records may be discoverable. As such, Maine and Massachusetts DOTs caution against any expectation of privacy, and Florida DOT even discourages the inclusion of confidential information unless specifically requested. Two states (Arkansas and South Carolina) have no formal policy in place to address these issues.

Approved Product Implementation

After product approval, four states (Florida, Idaho, Massachusetts and Montana) require that the product be used and three states (Alabama, Maryland and South Carolina) recommend the product's use. In six states (Alaska, Arizona, Arkansas, Indiana, Maine and Mississippi), use of the product becomes optional, and two states (California and Illinois) have procedures that fall outside of these practices.

Supplementary Interviews

Based on the results of this survey and additional input from the Technical Advisory Panel, several states with programs, policies or technologies that appeared to offer promising opportunities were contacted for more in-depth interviews. Summaries of these interviews are presented in four categories:

- *Use of university expertise and third-party testing.* Maine, Massachusetts and Pennsylvania DOTs all rely on external organizations such as universities, third-party laboratories or databases to some degree in their product approval programs.
- *Varied roles of the R&D office.* R&D is part of the product approval programs at Arizona and South Carolina DOTs.
- *Use of developmental specifications.* Florida DOT's Innovative Products List permits limited use of products that don't yet have a standard specification.
- *Technology.* Three platforms are described that agencies use to track and manage products in the product application process: AZPEP (Arizona DOT), PATH (Florida DOT) and eCAMMS (Pennsylvania DOT).

Following these summaries is an overview of the Federal Highway Administration's (FHWA's) Experimental Features Program, which encourages DOTs to evaluate new or innovative technologies.

Next Steps

Going forward, MnDOT may wish to consider:

- Consulting with other state DOTs individually to learn more about intellectual property practices and legal language to avoid liability.
- Further exploring other states' research and implementation group involvement in product approval processes through implementation and into the operational environment.
- Reviewing product evaluations from NTPEP, APEL, multi-state pooled funds and other external resources identified in the survey.
- Exploring possibilities for using FHWA's Experimental Features Program.
- Exploring how local agencies are collaborating with the state through its product approval program.

Detailed Findings

Expedited Process for Developing Specifications on New Products

MnDOT's [Approved/Qualified Products List](#) (APL/QPL) governs what products, materials and engineered systems can be used on MnDOT property. The process for approving products and maintaining the APL/QPL is codified in MnDOT policy OP005. Since enhancements to this policy could accelerate the approval process and encourage the adoption of innovative products, MnDOT sought information regarding other states' product approval processes. Below is a summary of information gathered through an online survey of state transportation agencies. The results of follow-up interviews with a selected group of these agencies begin on page 26.

Survey of Practice

Survey Approach

A survey of state departments of transportation (DOTs) was conducted to learn about other states' product approval programs and identify innovative approaches that could inform enhancements to MnDOT's program. The survey was distributed to members of the American Association of State Highway and Transportation Officials (AASHTO) Research Advisory Committee. Survey questions are provided in [Appendix A](#). The full text of survey responses is provided in a supplement to this report. [Appendix B](#) provides the contact information for survey respondents.

Transportation agencies from 18 states responded to the survey:

- Alabama.
- Alaska.
- Arizona.
- Arkansas.
- California.
- Delaware.
- Florida.
- Idaho.
- Illinois.
- Indiana.
- Maine.
- Maryland.
- Massachusetts.
- Minnesota.
- Mississippi.
- Montana.
- Rhode Island.
- South Carolina.

Two agencies — Rhode Island and Delaware DOTs — do not have a formal program or policies in place for approving new products. Findings from the remaining 16 agencies are summarized below.

Summary of Survey Results

Below is a discussion of survey results in the following topic areas:

- Number and types of requests.
- Role of the research and development (R&D) office.
- Environmental and health review.
- Influence of external data.
- Confidentiality of proprietary information.
- Approved product implementation.

Following this discussion is a summary of survey results by state.

Number and Types of Requests

Fifteen of the 16 agencies that completed the survey evaluate an average of 11 or more products in a typical year. (Maryland DOT State Highway Administration did not respond to this question.)

The types of requests most frequently cited by respondents were new products (15 agencies) and new materials (13 agencies). New equipment and engineered processes were least frequently cited (four and five agencies each, respectively). Alaska Department of Transportation and Public Facilities also receives requests for existing products that meet the agency’s standards specifications. Table 1 identifies the types of requests each DOT receives.

Table 1. Types of Requests Received

State	New Materials	New Products	New Equipment	Engineered Processes	Other	Description
Alabama	X	X	X	X		
Alaska					X	Existing products
Arizona		X				
Arkansas	X	X		X		
California	X	X				
Florida	X	X	X	X		
Idaho		X				
Illinois	X	X				
Indiana	X	X				
Maine	X	X				
Maryland	X	X	X			
Massachusetts	X	X				
Minnesota	X	X		X		
Mississippi	X	X				
Montana	X	X				
South Carolina	X	X	X	X		
Total	13	15	4	5	1	

Role of the Research and Development Office

Seven of the responding agencies (Alabama, Arizona, Indiana, Maine, Maryland, Montana and South Carolina) include the R&D office in their approvals process in some way. In Alabama, the R&D bureau chief is also the co-chair of the Product Evaluation Board, which oversees the approval process. In Maine, the Transportation

Research Division director is involved with all committees that evaluate and approve products. Table 2 reflects the responses given.

Table 2. R&D Staff Involvement

State	Description
Alabama	<ul style="list-style-type: none"> • The R&D bureau chief is the co-chair of the approval board. • The product evaluation engineer, who works in R&D, is the administrator of the board and produces a book that includes the meeting agenda, new product submittals, product recommendations from subject matter experts (SMEs) and the testing status of pending products. The product evaluation engineer’s section: <ul style="list-style-type: none"> ○ Processes applications, distributes information for review to the appropriate SME and acts as a liaison between vendors and SMEs. ○ Submits recommendations by SME to the board for review. ○ Writes correspondences to vendors on the status of review and/or testing. ○ Administers testing/review on certain processes received from vendors for review.
Arizona	Currently, the APL approval process is based solely on evaluating product testing results against criteria in the agency’s standard specifications.
Indiana	The R&D office works with Purdue University.
Maine	The product approval program is part of the Transportation Research Division. The division director sits on all of the committees that evaluate and decide on which products to approve.
Maryland	One team manages both new and qualified products submissions and research. Research projects are used to provide field evaluations or studies on products of interest to the agency.
Montana	Research was conducted once or twice to help gather data to write specifications.
South Carolina	The department’s research unit oversees the new products committee.

Environmental and Health Review

Seven states (Arizona, California, Florida, Illinois, Maine, Maryland and Minnesota) require an environmental and/or health review as a part of their process. Table 3 provides detail about these reviews.

Table 3. Environmental and Health Assessment Requirements

State	Description
Arizona	<ul style="list-style-type: none"> • Product safety data sheets (SDS) are required for products with a chemical formulation. • The Safety and Risk Management section completes the SDS review early in the review process before requesting independent laboratory testing data.
California	As part of the initial assessment, the Office of Employee Health and Safety ensures that the conditions of use for new products are in compliance with applicable health and safety regulations.

State	Description
Florida	<ul style="list-style-type: none"> • The Environmental office determines the requirements for each type of product. • Most environmental/health documentation must be submitted with the application. • Recyclable products are not required at this time.
Illinois	An environmental and/or health review is part of the technical review process.
Maine	The product evaluation coordinator conducts a preliminary review and discusses any concerns or issues at the committee level before moving forward with the evaluation.
Maryland	Chemical products that are submitted require an SDS, which is reviewed by a chemical hygienist to determine if the product is safe for use by agency staff.
Minnesota	List in each individual product.

Influence of External Data

Of the 16 responding DOTs, 14 consult AASHTO’s National Transportation Product Evaluation Program (NTPEP), eight use the AASHTO Product Evaluation List (APEL), and eight factor data from multi-state pooled funds into their product approval decisions. Nine agencies use results from independent testing. Table 4 identifies the sources of external data that each state DOT considers.

Table 4. Outside Sources of Information Considered in the Approval Process

State	NTPEP	APEL	Pooled Funds	Other	Description
Alabama	X	X		X	Other state agencies’ testing results and approved letters
Alaska	X		X	X	Independent testing from accredited laboratories
Arizona	X	X	X	X	Independent testing
Arkansas	X			X	Independent testing from accredited state lab or state agency
California				X	DOT technical committee evaluations
Florida	X	X	X	X	Independent testing
Idaho	X		X	X	Certified Independent testing
Illinois	X	X	X	X	Producer/vendor materials
Indiana	X	X		X	Independent testing
Maine	X	X	X	X	Independent testing
Maryland	X	X	X	X	Independent testing
Massachusetts				X	Any public record
Minnesota	X				

State	NTPEP	APEL	Pooled Funds	Other	Description
Mississippi	X			X	Independent testing from AASHTO-accredited laboratories
Montana	X			X	Depending on product, must come from a plant certified by the American Concrete Pipe Association (ACPA), National Precast Concrete Association (NPCA) or Concrete Reinforcing Steel Institute (CRSI)
South Carolina	X	X	X		
Total	14	8	8	14	

Confidentiality of Proprietary Information

While acknowledging that open records laws may require state DOTs to disclose documentation, many states still take steps to avoid accepting — and thereby divulging — confidential information. For instance, Alabama DOT does not publicize its meeting minutes in order to limit what vendors can learn about each other. When the Alaska Department of Transportation and Public Facilities receives a Freedom of Information Act (FOIA) request, it reviews all documentation for confidential information prior to responding and has denied FOIA requests on this basis. Florida DOT provides the following explicit disclaimer on its product evaluation web page:

NOTICE: Florida has a broad public records law. Most written communications to or from state officials are public records that will be disclosed upon request. Do not provide Proprietary Product information or Trade Secrets to our office unless specifically requested.

Approved Product Implementation

Once products are approved, there are several routes to implementation. In six states (Alaska, Arizona, Arkansas, Indiana, Maine and Mississippi), the product’s use becomes optional. Three states (Alabama, Maryland and South Carolina) recommend the product’s use. Four states (Florida, Idaho, Massachusetts and Montana) require that the product be used, and two states (California and Illinois) have procedures that fall outside of these practices. Table 5 shows the strategies used by the 15 states that responded to this portion of the survey.

Table 5. Post-Approval Implementation

Implementation Strategy	State	Description
Use Becomes Optional	Alaska, Arizona, Arkansas, Indiana, Maine, Mississippi	<i>Arizona. From the agency’s APL:</i> The APL is a list of categorized products that have been determined to meet ADOT’s Standard and Stored Specifications, and have been approved for potential use on roadway construction projects. The APL is a resource for ADOT staff, local public agencies and private industry. ADOT is not obligated to use any products listed on the APL.
Use Becomes Recommended	Alabama, Maryland, South Carolina	N/R

Implementation Strategy	State	Description
Use Becomes Required	Florida, Idaho, Massachusetts, Montana	<p><i>Idaho:</i></p> <ul style="list-style-type: none"> • QPL approved products are to be used on projects as previously stated. • Contractors can use any QPL product approved for the application. They may never choose some approved products if other approved products are available.
Other	California, Illinois	<p><i>California.</i> Vendors are required to provide proposed specification language when submitting a product for evaluation. If the respective technical committee finds a need for the new product, it may:</p> <ul style="list-style-type: none"> • Perform a field trial or incorporate it into a pilot project for further study. • Approve the product based on submitted documentation and provided test results. <p><i>Illinois:</i></p> <ul style="list-style-type: none"> • A specification is developed for a product. • The producer is responsible for marketing its product.

Summary of Practices by State

Alabama

Number of Requests Per Year	11 or more.
Types of Requests	<ul style="list-style-type: none"> • New materials. • New products. • New equipment. • Engineered processes.
Process Owner	Responsibility varies by product's application or purpose.
Role of R&D	Manages product approvals with oversight by Product Evaluation Board.
Role of SMEs	<ul style="list-style-type: none"> • Ensure accurate product testing. • Contact vendor for additional testing material/fees. • Submit recommendation to bureau chief, who sends to board for review.
Origin of New Proposals	<ul style="list-style-type: none"> • 60% manufacturers and vendors. • 20% contractors. • 10% local agencies. • 10% agency staff.

Prioritization or Rejection Prior to Review	Yes.
Required Environmental/Health Review	No.
Provisional Use	Yes, provided it meets project specifications.
External Information Sources	<ul style="list-style-type: none"> • NTPEP. • APEL. • Other state agencies' testing results/approval letters for specific products.
Confidentiality	Vendor details are omitted from meeting minutes and not publicized.
Incorporation Into Standard Specification/Operational Environment	SMEs work with standard specification groups.
Implementation Strategy	Becomes recommended.
Post-Process Performance Tracking	No.
How Local Agencies Notified	Published on the DOT website.

Related Resource

Product Evaluation: Research and Development Information, Alabama Department of Transportation, undated.
<https://www.dot.state.al.us/rdweb/ProductEvaluation.html>

This page offers contact information and links that direct users to key resources such as a procedural flowchart and product application.

Alaska

Number of Requests Per Year	11 or more.
Types of Requests	Existing products that meet standard specification.
Process Owner	Headquarters materials (Design and Engineering Services, Statewide Materials Section).
Role of R&D	None.
Role of SMEs	Yes.
Origin of New Proposals	100% manufacturers and vendors.
Prioritization or Rejection Prior to Review	Yes.

Required Environmental/Health Review	No.
Provisional Use	No.
External Information Sources	<ul style="list-style-type: none"> • NTPEP. • Pooled funds. • Independent test results from accredited laboratories/product testing facilities or organizations.
Confidentiality	Once submitted electronically, information is protected by site firewall. Trade secret information is considered when responding to FOIA requests.
Incorporation Into Standard Specification/Operational Environment	Added to QPL (with the exception of steel products).
Implementation Strategy	Becomes optional.
Post-Process Performance Tracking	Yes.
How Local Agencies Notified	No notification.
Additional Information	Alaska Department of Transportation and Public Facilities does not require contractors to use products listed on the QPL. Any product meeting the state’s standard specifications can be approved provided it is backed up with supporting documentation and independent test results.

Related Resource

Qualified Products List (QPL), Statewide Materials, Design and Engineering Services, Alaska Department of Transportation and Public Facilities, undated.
http://dot.alaska.gov/stwddes/desmaterials/qpl_intro.shtml
 This page provides an overview of the QPL and a link to the QPL database.

Arizona

Number of Requests Per Year	11 or more.
Types of Requests	New products.
Process Owner	Arizona DOT Research Center – Product Evaluation Program has ownership of the APL approval policies.
Role of R&D	Yes. APL approval process is based solely on evaluating testing results against criteria in Arizona DOT’s standard specifications.
Role of SMEs	Involved at the committee voting level. Others can be brought in

during the evaluation process to assist.

Origin of New Proposals

100% manufacturers and vendors.

Prioritization or Rejection Prior to Review

Yes. Applications are withdrawn if the product does not fit a category on the APL.

Required Environmental/Health Review

Yes.

Provisional Use

No.

External Information Sources

- NTPEP.
- APEL.
- Pooled funds.
- Independent test results.

Confidentiality

Typically resolved at the specification level. During review, Safety and Risk Management Section may contact the applicant to verify specific safety aspects.

Incorporation Into Standard Specification/Operational Environment

A standard specification is the precursor to being listed on the APL.

Implementation Strategy

The APL is a resource for Arizona DOT staff, local public agencies and private industry. Arizona DOT is not obligated to use any products listed on the APL.

Post-Process Performance Tracking

Yes.

How Local Agencies Notified

Publication of monthly APL, which includes new products.

Additional Information

Arizona DOT does have mechanisms that allow for the use of new products or materials. First, performance-based item specifications can be developed that are geared toward new products that multiple vendors can achieve. Also, during the pursuit phase for review and approval in a design-build project, alternatives can be proposed and approved, which include new products or materials. After obtaining results from either of those approaches, more standardized specifications could be developed and subsequently, a category could be added to the APL for a product type. Those standard specifications would then be used to evaluate incoming product applications for the category.

Related Resource

Product Evaluation Program, Engineering and Construction, Arizona Department of Transportation, undated. <https://azdot.gov/business/engineering-and-construction/product-evaluation-program>
This page links to Arizona DOT's APL, as well as an application for evaluation and guidelines.

Arkansas

Number of Requests Per Year	11 or more.
Types of Requests	<ul style="list-style-type: none">• New materials.• New products.• Engineered processes.
Process Owner	Typically the Materials Division handles approvals. The concrete and steel fabrication engineer in the Bridge Division reviews products and/or facilities in that area.
Role of R&D	None.
Role of SMEs	These experts are given the primary role in the review process.
Origin of New Proposals	90% manufacturers and vendors. 10% contractors.
Prioritization or Rejection Prior to Review	No.
Required Environmental/Health Review	No.
Provisional Use	No.
External Information Sources	<ul style="list-style-type: none">• NTPEP.• Independent test results from accredited laboratories or other state agency.
Confidentiality	No policy in place.
Incorporation Into Standard Specification/Operational Environment	QPL only includes products that meet standard specifications. Products that do not are submitted and reviewed by the New Products Committee. If the committee decides this new product could be beneficial to the department, a trial may be set up on a current or future project. If accepted, a new or supplemental specification will be drafted for review and approval by the Specification Committee.
Implementation Strategy	Becomes optional.
Post-Process Performance Tracking	Yes. Field engineers and inspectors are encouraged to provide feedback.
How Local Agencies Notified	No notification; only added to QPL.

Related Resource

Materials Division, Arkansas Department of Transportation, undated.

http://arkansashighways.com/materials_division/materials.aspx

This page links to Arkansas DOT's QPL, as well as frequently asked questions to help manufacturers and vendors submit their products for inclusion on the QPL.

California

Number of Requests Per Year	11 or more.
Types of Requests	<ul style="list-style-type: none">• New materials.• New products.
Process Owner	Division of Engineering Services
Role of R&D	None.
Role of SMEs	Technical committees, composed of a group of technical experts within the agency, are responsible for the evaluation of new products within their area of expertise. SMEs are members of this team.
Origin of New Proposals	100% manufacturers and vendors.
Prioritization or Rejection Prior to Review	No.
Required Environmental/Health Review	Yes.
Provisional Use	No.
External Information Sources	Respective agency technical committees are tasked with evaluating and approving new product submittals. Each committee determines if and/or which outside sources of information are used.
Confidentiality	Not defined.
Incorporation Into Standard Specification/Operational Environment	Vendors are required to provide proposed specification language when submitting a product for evaluation. If the respective technical committee finds a need for the new product, it may: <ul style="list-style-type: none">• Perform a field trial or incorporate the product into a pilot project for further study.• Approve based on submitted documentation and provided test results.
Implementation Strategy	The use of a product is determined by the specification requirements and not the actual product.

Post-Process Performance Tracking	Yes.
How Local Agencies Notified	Approval letter issued to vendor, which can be used for marketing.

Related Resource

Product Evaluation Program (PEP), Engineering Services, California Department of Transportation, undated.
<https://dot.ca.gov/programs/engineering-services/product-evaluation-program>
 This page provides a submission flowchart and frequently asked questions.

Florida

Number of Requests Per Year	11 or more.
Types of Requests	<ul style="list-style-type: none"> • New materials. • New products. • New equipment. • Engineered processes.
Process Owner	Office of Program Management, Product Evaluation Section.
Role of R&D	None.
Role of SMEs	Each subject is assigned to at least one engineer, usually in the Office of Design, Traffic Operations or State Materials. Subjects are defined by the specifications. When a product/material does not fit into the specifications, the best-fit engineer is assigned. This may be someone from the Office of Maintenance, Construction or other office, as needed.
Origin of New Proposals	95% manufacturers and vendors. 1% contractors. 4% agency staff.
Prioritization or Rejection Prior to Review	Yes.
Required Environmental/Health Review	Yes.
Provisional Use	Yes.
External Information Sources	<ul style="list-style-type: none"> • NTPEP. • APEL. • Pooled funds. • Independent testing.
Confidentiality	When submitting information to the department, the applicant has waived any applicable trade secret exemption about any document that is not clearly marked as a trade secret or confidential.

Incorporation Into Standard Specification/Operational Environment	Specifications contain this statement: Use only products listed on the Approved Product List (APL), meeting the requirements of this specification. Products are listed on the APL by specification number and product type as identified in the specification.
Implementation Strategy	Use becomes required.
Post-Process Performance Tracking	Yes.
How Local Agencies Notified	Listed on APL. Local agencies are educated on the APL, its processes and limitations.
Additional Information	Florida DOT receives more than 2,300 applications per year, and the process is completely automated.

Related Resource

Product Evaluation, Program Management, Florida Department of Transportation, undated.
<https://www.fdot.gov/programmanagement/ProductEvaluation/Default.shtm>
 This page provides the APL as well as application forms, resource links and frequently asked questions.

Idaho

Number of Requests Per Year	11 or more.
Types of Requests	New products.
Process Owner	Approval is made by SME, not division or group.
Role of R&D	None.
Role of SMEs	The evaluation request goes to selected SMEs. They evaluate the product and respond to the QPL administrator.
Origin of New Proposals	98% manufacturers and vendors. 1% contractors. 1% agency staff.
Prioritization or Rejection Prior to Review	Yes.
Required Environmental/Health Review	No.
Provisional Use	Yes.
External Information Sources	<ul style="list-style-type: none"> • NTPEP. • Pooled funds.

- Certified independent laboratory testing.

Confidentiality The public has limited access to information on exterior website.

Incorporation Into Standard Specification/Operational Environment The use of QPL approved products is required by the agency’s standard specifications. Products are not incorporated into specifications. Specifications list the product requirements, not specific products.

Implementation Strategy Use becomes required.

Post-Process Performance Tracking No.

How Local Agencies Notified Local agencies have access to external website.

Additional Information None.

Related Resource

Qualified Products List, Materials, Idaho Transportation Department, undated.

<https://apps.itd.idaho.gov/Apps/Materials/QPL.aspx>

This page provides a menu for product searching as well as an application form, process details and frequently asked questions.

Illinois

Number of Requests Per Year 11 or more.

Types of Requests

- New materials.
- New products.

Process Owner Illinois Highway Development Council via Products Evaluation unit.

Role of R&D None.

Role of SMEs Review of technical materials, specifications, lab or field tests.

Origin of New Proposals 50% manufacturers and vendors.
20% contractors.
15% local agencies.
15% agency staff.

Prioritization or Rejection Prior to Review Yes.

Required Environmental/Health Review Yes.

Provisional Use Yes.

External Information Sources	<ul style="list-style-type: none"> • NTPEP. • APEL. • Pooled funds. • Material submitted by producer/vendor product champion.
Confidentiality	Must be commercially available.
Incorporation Into Standard Specification/Operational Environment	Product is screened by the Products Evaluation unit and taken to the Illinois Highway Development Council. If results are favorable, the council will work with Bureau of Design and Environment to produce specifications. On average, the approval process may take 2 to 2.5 years.
Implementation Strategy	Product has a specification developed and it is up to the producer to market its product.
Post-Process Performance Tracking	No.
How Local Agencies Notified	Through Product Evaluation Circular and Illinois Highway Development Council.
Additional Information	PDF documentation.

Related Resource

Material Approvals, Illinois Department of Transportation, undated.

<http://idot.illinois.gov/doing-business/material-approvals/index>

This program overview provides links to information for producers and suppliers, testing and specific materials.

Indiana

Number of Requests Per Year	11 or more.
Types of Requests	<ul style="list-style-type: none"> • New materials. • New products.
Process Owner	Office of Materials Management.
Role of R&D	R&D offices work with Purdue University.
Role of SMEs	New Products Evaluation Committee meets twice a year, typically in April and October.
Origin of New Proposals	100% manufacturers and vendors.
Prioritization or Rejection Prior to Review	No.
Required Environmental/Health Review	No.

Provisional Use	Yes.
External Information Sources	<ul style="list-style-type: none"> • NTPEP. • APEL. • Outside testing such as test decks and TTI.
Confidentiality	Typically not evaluated.
Incorporation Into Standard Specification/Operational Environment	A new standard specification is created using information from the vendor.
Implementation Strategy	<ul style="list-style-type: none"> • Use becomes optional. • Use becomes recommended.
Post-Process Performance Tracking	Yes.
How Local Agencies Notified	Performed on as-needed basis.

Related Resource

New Products Directive No. 110, Office of Materials Management, Indiana Department of Transportation, March 23, 2016.

<https://www.in.gov/indot/div/mt/directives/pubs/dir110.pdf>

This document outlines the process for products evaluation. If a submitted product is not included in Indiana DOT's Standard Specifications or Special Provisions it is designated as a new product. These are reviewed in accordance with Indiana DOT's mission. If accepted, a specification will be prepared for the product's use.

Maine

Number of Requests Per Year	11 or more.
Types of Requests	<ul style="list-style-type: none"> • New materials. • New products.
Process Owner	Research and Innovation Office.
Role of R&D	The product approval program is part of the Transportation Research Division. The division director sits on all the committees that evaluate and decide on which products to approve.
Role of SMEs	Experts serve on subject matter committees, which make decisions regarding related products.
Origin of New Proposals	75% manufacturers and vendors. 10% contractors. 5% local agencies. 10% agency staff.

Prioritization or Rejection Prior to Review	Yes.
Required Environmental/Health Review	Yes.
Provisional Use	Yes.
External Information Sources	<ul style="list-style-type: none"> • NTPEP. • APEL. • Pooled funds. • Testing from independent third parties.
Confidentiality	All information is considered public. If a trade secret needs to be divulged for safety and environmental reasons, it is handled on a case-by-case basis.
Incorporation Into Standard Specification/Operational Environment	Generally, the specification is based on the properties of the product type that the state feels are essential to the performance of the product (such as compressive strength).
Implementation Strategy	Use becomes optional.
Post-Process Performance Tracking	Yes.
How Local Agencies Notified	All products are entered into a database managed by the Product Evaluation coordinator. If approved, products are added to the associated QPL; if no QPL exists, agencies can contact staff directly to ask about products that might fit agencies' needs.
Related Resource	<p>Qualified Products List, Maine Department of Transportation, undated. https://www.maine.gov/mdot/research/products/ Approved products are arranged by topic. A menu at left offers information about product submission and other details.</p>

Maryland

Number of Requests Per Year	[No response]
Types of Requests	<ul style="list-style-type: none"> • New materials. • New products. • New equipment.
Process Owner	New Products and Research team.
Role of R&D	One team manages both new and qualified products submission and research. Research projects are used to provide field evaluations or studies on products of interest to the agency.

Role of SMEs	SMEs are product officers who are assigned products to evaluate that apply to their area of expertise. After an evaluation is performed, the product officer provides a recommendation to be approved by the officer's division chief for final recommendation for approval, nonapproval or field/lab evaluation.
Origin of New Proposals	90% manufacturers and vendors. 5% contractors. 1% local agencies. 2% agency staff. 2% other.
Prioritization or Rejection Prior to Review	Yes.
Required Environmental/Health Review	Yes.
Provisional Use	Yes.
External Information Sources	<ul style="list-style-type: none"> • NTPEP. • APEL. • Pooled funds. • All products considered for Manual for Assessing Safety Hardware (MASH) approval require test data by a certified lab as well as a Federal Eligibility Letter from the Federal Highway Administration (FHWA). Several chemical products require test data from a third-party independent lab.
Confidentiality	This is not a common issue.
Incorporation Into Standard Specification/Operational Environment	Approved products are used to help develop specifications, but are not incorporated.
Implementation Strategy	Use becomes recommended.
Post-Process Performance Tracking	Not formally, although feedback is welcome and may be used to reevaluate negatively reviewed products.
How Local Agencies Notified	Listed publicly on QPL on website.

Related Resource

New Products Committee Policy and Procedure, Maryland State Highway Administration, April 2016.
<https://apps.roads.maryland.gov/MPEL/Content/TempFiles/PolicyandProcedures.pdf>

A program manager presides over the New Products Committee and determines which submissions are appropriate for evaluation. If a product is forwarded for evaluation, it is reviewed by a product officer who makes a recommendation. Manufacturers and vendors are allowed only two open product evaluations at any time.

Massachusetts

Number of Requests Per Year	11 or more.
Types of Requests	<ul style="list-style-type: none">• New materials.• New products.
Process Owner	Research and Materials.
Role of R&D	None.
Role of SMEs	Responsible for reviewing and approving submission.
Origin of New Proposals	100% manufacturers and vendors.
Prioritization or Rejection Prior to Review	No.
Required Environmental/Health Review	No.
Provisional Use	Yes.
External Information Sources	Academic.
Confidentiality	It is public record.
Incorporation Into Standard Specification/Operational Environment	It goes into a contract special specification.
Implementation Strategy	Use becomes required.
Post-Process Performance Tracking	No.
How Local Agencies Notified	Listed publicly on Qualified Construction Materials List on website.

Related Resource

Qualified Construction Materials List, Highway Division, Massachusetts Department of Transportation, undated.

<https://www.mass.gov/qualified-construction-materials-list-qcml>

This page offers options to submit products or view the Qualified Construction Materials List.

Minnesota

Number of Requests Per Year	11 or more.
Types of Requests	<ul style="list-style-type: none">• New materials.• New products.• Engineered processes.

Process Owner	Office of Materials and Road Research controls the policy only. SME is responsible for individual products.
Role of R&D	None.
Role of SMEs	They control products.
Origin of New Proposals	95% manufacturers and vendors. 5% contractors.
Prioritization or Rejection Prior to Review	No.
Required Environmental/Health Review	Yes.
Provisional Use	Yes.
External Information Sources	NTPEP.
Confidentiality	[No response.]
Incorporation Into Standard Specification/Operational Environment	[No response.]
Implementation Strategy	Added to APL.
Post-Process Performance Tracking	Depends on the individual.
How Local Agencies Notified	Listed publicly on APL on website.
Additional Information	Varies widely; not controlled by one group.

Related Resource

Approved/Qualified Products Process, MnDOT Policies, Minnesota Department of Transportation, undated.
<http://www.dot.state.mn.us/policy/operations/op005.html>

This page presents the policy and process governing the product approvals program. An environmental evaluation is only performed at the recommendation of the MnDOT Office of Environmental Stewardship. Pending the environmental evaluation, members of the MnDOT engineering evaluation team conduct an evaluation of the material, product or engineered system. Approved products are added to the APL/QPL.

Mississippi

Number of Requests Per Year	11 or more.
Types of Requests	<ul style="list-style-type: none"> • New materials. • New products.

Process Owner	Materials Division
Role of R&D	None.
Role of SMEs	Email requests to review and provide recommendations.
Origin of New Proposals	75% manufacturers and vendors. 5% contractors. 5% local agencies. 5% agency staff. 10% other.
Prioritization or Rejection Prior to Review	No.
Required Environmental/Health Review	No.
Provisional Use	Yes.
External Information Sources	<ul style="list-style-type: none"> • NTPEP. • Third-party AASHTO-approved laboratories.
Confidentiality	Information is not disclosed outside of the agency.
Incorporation Into Standard Specification/Operational Environment	Specifications are updated to either be added to the department's APLs or written into the specification.
Implementation Strategy	Use becomes optional.
Post-Process Performance Tracking	No.
How Local Agencies Notified	The product manufacturer is responsible for marketing the product.

Related Resource

Approved Products/Producers/Suppliers, Mississippi Department of Transportation, undated.

https://mdot.ms.gov/portal/approved_lists

This page lists forms, approved lists and other documents related to the product approval process.

Montana

Number of Requests Per Year	11 or more.
Types of Requests	<ul style="list-style-type: none"> • New materials. • New products.
Process Owner	Materials Bureau

Role of R&D	Once or twice research was done to help gather data to write specifications.
Role of SMEs	SMEs assist with developing the approval process and perform the required test when required.
Origin of New Proposals	94% manufacturers and vendors. 5% contractors. 1% agency staff.
Prioritization or Rejection Prior to Review	Yes.
Required Environmental/Health Review	No.
Provisional Use	No.
External Information Sources	<ul style="list-style-type: none"> • NTPEP. • Reinforced concrete pipe plants need to be ACPA or NPCA certified, and rebar epoxy coaters need to have the CRSI epoxy coating plant certification.
Confidentiality	[No response.]
Incorporation Into Standard Specification/Operational Environment	[No response.]
Implementation Strategy	Use becomes required.
Post-Process Performance Tracking	Yes.
How Local Agencies Notified	Montana DOT has a QPL web page that lists all of the material codes and products that are under the material code.

Related Resource

Qualified Products, Contracting and Bidding, Montana Department of Transportation, undated.

<https://www.mdt.mt.gov/business/contracting/qpl-construction-products.shtml>

This page links to the agency's QPL, as well as producer requirements, specifications and other resources.

South Carolina

Number of Requests Per Year	11 or more.
Types of Requests	<ul style="list-style-type: none"> • New materials. • New products. • New equipment. • Engineered processes.

Process Owner	Office of Materials and Research.
Role of R&D	The department's Research unit oversees the New Products Committee.
Role of SMEs	The New Products Committee is composed of members from different sections of the department with sufficient expertise in their areas of responsibility to properly evaluate the merits of products proposed for use.
Origin of New Proposals	100% manufacturers and vendors.
Prioritization or Rejection Prior to Review	Yes.
Required Environmental/Health Review	Yes.
Provisional Use	No.
External Information Sources	<ul style="list-style-type: none"> • NTPEP. • APEL. • Pooled funds.
Confidentiality	No formal process.
Incorporation Into Standard Specification/Operational Environment	The assigned committee member would be responsible.
Implementation Strategy	Use becomes recommended.
Post-Process Performance Tracking	No.
How Local Agencies Notified	No formal process.

Related Resource

Qualified Products Listings and Policies for Construction and Maintenance Materials, South Carolina Department of Transportation, undated.

<http://info2.scdot.org/Materials/Pages/QualifiedProd.aspx>

This page lists product types, accompanying policies and approved products.

Supplementary Interviews

The information below has been collected from interviews conducted with the representatives from state DOTs with product approval processes or programs that appeared to offer promising opportunities. Findings are organized according to the following topics:

- Use of university expertise and third-party testing.
- Varied roles of the R&D office.
- Use of developmental specifications.
- Technology.

Following these summaries is an overview of FHWA’s Experimental Features Program, which encourages DOTs to evaluate new or innovative technologies.

Use of University Expertise and Third-Party Testing

The following state DOTs provided additional information regarding their reliance on external organizations such as universities, third-party laboratories or databases in their product approval programs:

- Maine.
- Massachusetts.
- Pennsylvania.

Maine

Contact: Dawn Bickford, 207-624-3268, Dawn.Bickford@maine.gov

Maine DOT’s [product approval process](#) relies on the work of three committees, which are organized based on general product classes: concrete and bridge; highway, safety and traffic; and environmental and geotextiles (Figure 1). Committee members represent corresponding areas within Maine DOT and meet quarterly to review and decide on products within its purview. Applications for new products should include relevant data from APEL or independent labs, which is reviewed during the committee’s meeting. If the new product is approved by the committee without the need for additional questions or testing, notification can be given within a few days. NTPEP data is also required for some product categories, and the results can be used as part of the committees’ decision-making process.

Massachusetts

Contact: Nick Antoniadis, 857-368-3418, Nick.Antoniadis@dot.state.ma.us

Massachusetts DOT occasionally contracts with the University of Massachusetts when the agency needs to develop criteria for a new product or material.

Pennsylvania

Contact: Tom Welker, 717-783-3721, TWelker@pa.gov

Pennsylvania DOT publishes [Bulletin 15](#), which identifies approved products for use on state-owned roads. Testing for these products is conducted by an internal laboratory at Pennsylvania DOT.

Separately, Pennsylvania DOT also maintains a list of [approved products for lower volume local roads \(Publication 447\)](#). Testing for products used on municipal roads is contracted to The Pennsylvania State University and paid for by Pennsylvania DOT.

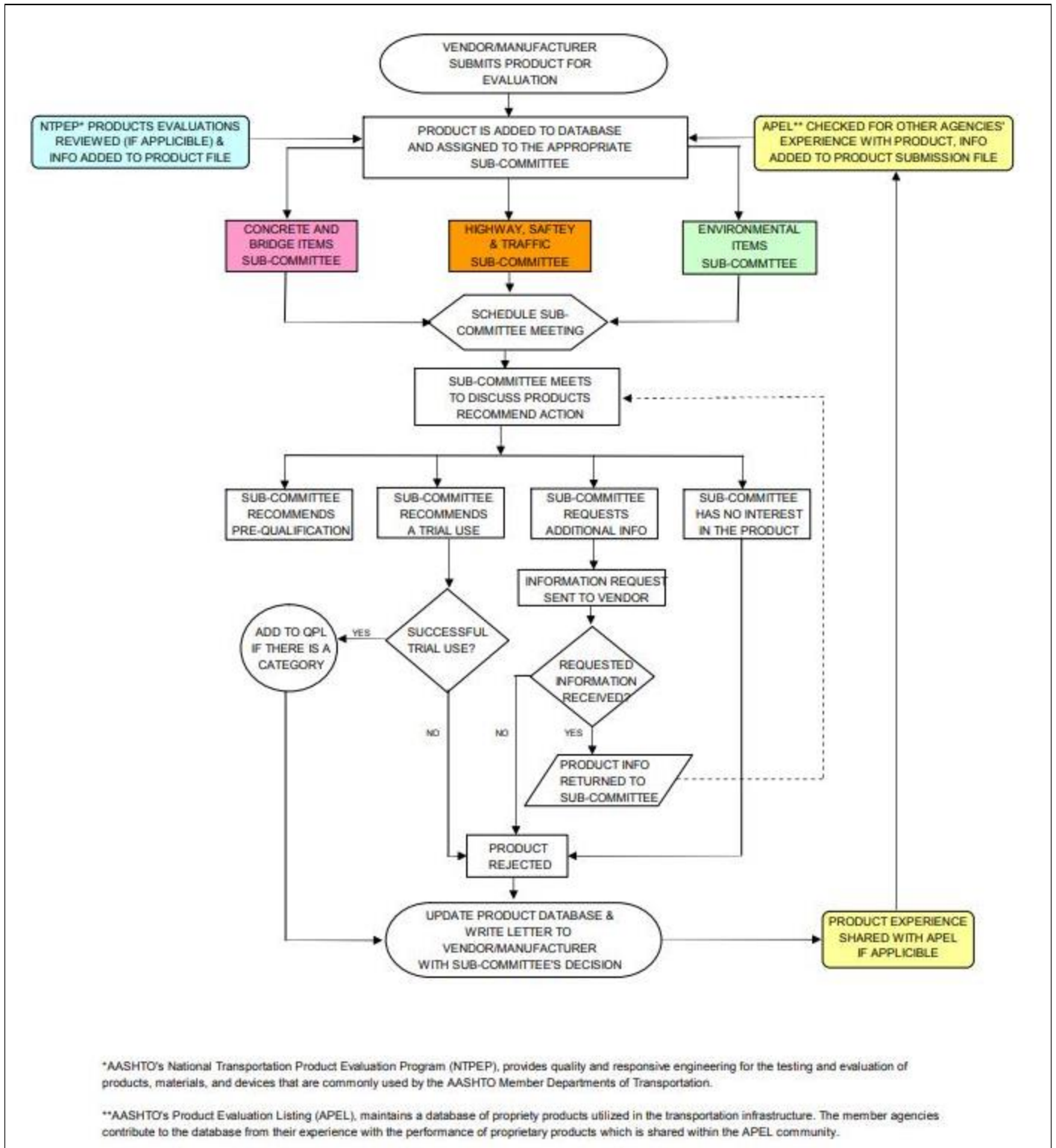


Figure 1. Maine DOT Product Evaluation Flowchart

Municipalities are incentivized to use products listed in Publication 447. Local governments can use Liquid Fuels funds, which are provided by Pennsylvania DOT through the [Municipal Liquid Fuels Program](#), to purchase these products to build and maintain public roads.

Varied Roles of the Research and Development Office

The following state DOTs provided supplemental information regarding the role of R&D in their product approval programs:

- Arizona.
- South Carolina.

Arizona

Contact: Chris LaVoie, 602-712-8181, CLaVoie@azdot.gov

Arizona DOT's Research Center manages the agency's [Product Evaluation Program](#) (PEP). The center's organizational chart is shown in Figure 2. Product evaluation is typically a two-step process: first to determine whether there is a category, need or desire for the submitted application, and then to assign the product to an evaluator who researches the applicable standards and reviews the submission for eligibility. If the criteria for the requested category are met, the evaluator then creates an evaluation report and submits the product's evaluation report to the appropriate committee for a vote. If approved, the product will be included in the next publication of the APL. The target timeline for approval of products is 45 days.

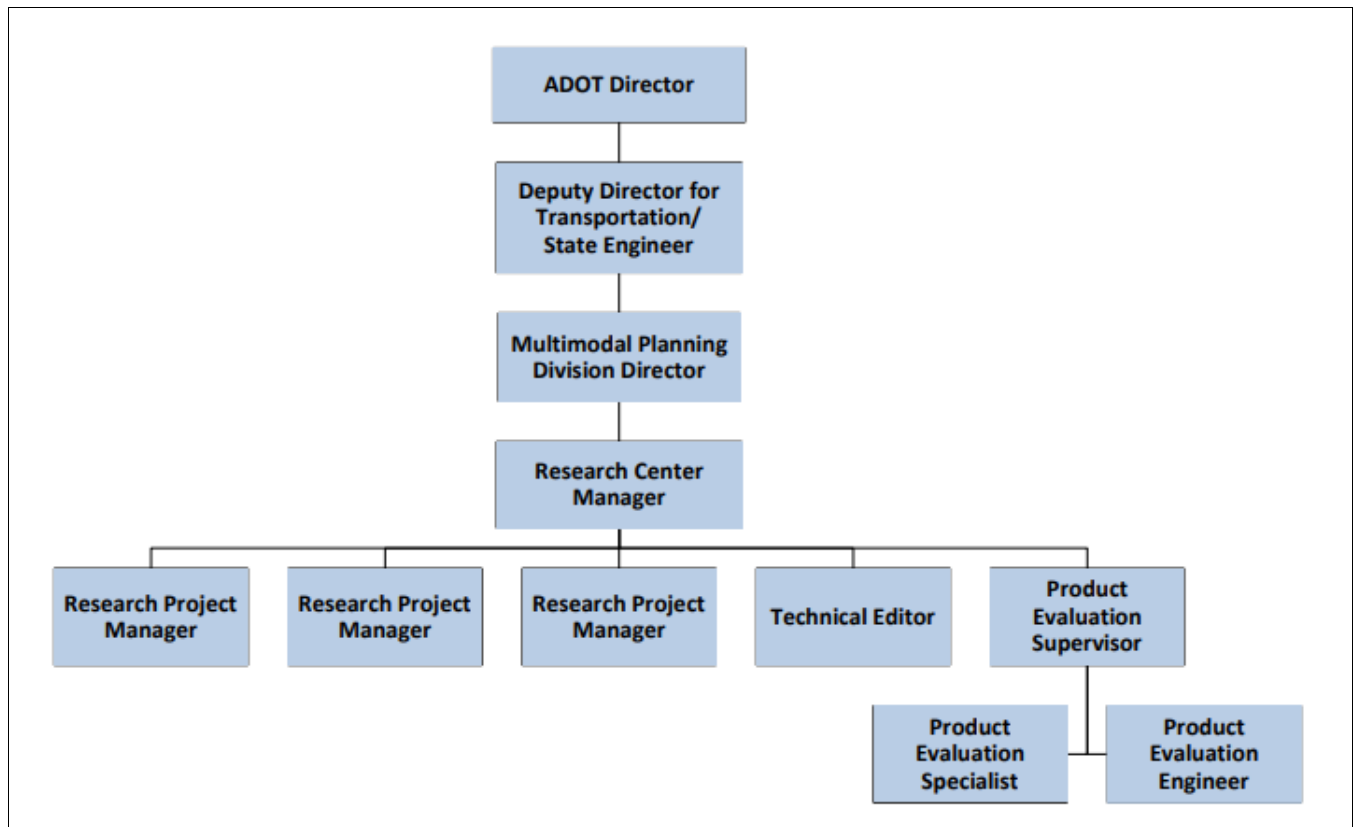


Figure 2. Arizona DOT Research Center Organizational Chart

South Carolina

Contact: Terry Swygert, 803-737-6691, SwygertTL@scdot.org

South Carolina DOT's Research Unit oversees the New Products Committee, which is made up of engineers who serve as representatives and experts in their field. Meeting twice per year, the committee evaluates new

product proposals and can reject a new product if it is not applicable or recommend more testing. If the product generates interest among committee members but does not fit a standard specification, the DOT can conduct a small in-house study that is not SPR-funded. The results of this study can inform recommendations and may lead to updated specifications and a listing on the DOT's [QPL](#).

Use of Developmental Specifications

Florida

Contact: Karen Byram, 850-414-4353, Karen.Byram@dot.state.fl.us

Florida DOT manages the Innovative Products List (IPL) of developmental specifications, which includes new processes, procedures or materials approved for limited use by the Program Management Office. Products on this list are assigned a monitor, or professional engineer, who is responsible for authorizing their use and monitoring their performance in the field. The initial application review can be completed in 30 days, and the time frame for adding a product to the APL ranges from one to five years. Once the product is approved and the specification is developed, the new product is transferred from the IPL to the DOT's APL.

Technology

The following state DOTs provided supplemental information regarding their technology:

- Arizona.
- Florida.
- Pennsylvania.

Arizona

Contact: Chris LaVoie, 602-712-8181, CLaVoie@azdot.gov

Since May 2020, Arizona DOT has been using [AZPEP](#), a program that tracks and manages products as part of PEP. AZPEP is run on a [Zengine](#) platform. To apply to add a product to the APL, the applicant first creates a user profile that includes the user's contact information. Once the required information has been entered, the applicant submits an application for each product. Notably, the application asks the applicant to determine the APL category that best suits the product and also allows the applicant to attach supplemental material such as a product brochure and SDS. After the applicant submits the application, the system assigns the product an identifying number and emails that information to the applicant.

Some of the benefits of AZPEP that Arizona DOT has realized include:

- *Efficiency.* AZPEP automatically sends an email to applicants for each product submitted, eliminating the need for staff to do this manually. Emails are also automatically sent when a product is determined to be non-APL, that is, a product that does not have a category on the APL or that has a specification under revision.
- *Time savings.* The system generates the updated APL, meaning staff no longer has to maintain a Word document version.

The only negative aspect of AZPEP, according to Arizona DOT, is with the reports generated by the system. The reports are created in Google Sheets from CSV data exported from AZPEP. Arizona DOT is currently working with the developer to find a solution.

Related Resource

ADOT Research Center 2020 Program Manual, Arizona Department of Transportation, September 2020.

<https://azdot.gov/sites/default/files/media/2020/09/adot-research-program-manual-2020.pdf>

Additional information on applying to the APL using AZPEP is available beginning on page 29 of the report (page 38 of the PDF).

Florida

Contact: Karen Byram, 850-414-4353, Karen.Byram@dot.state.fl.us

Florida DOT receives more than 2,500 product applications each year and has approximately 400 applications open at any given time. To help manage this volume, Florida DOT developed the [PATH](#) (Product Application Tracking and History) system in-house using FHWA funds (an initial investment of approximately \$600,000). The DOT owns the program and makes it publicly available for copy and use by other states. The PATH system allows manufacturers to maintain their own information and triggers emails automatically at each stage in the approval process. Given the number of notifications issued when a product application is received and other courtesy emails, the PATH system accomplishes the work required of 1.5 full-time equivalent (FTE) positions, much of which was not previously performed due to a lack of resources.

The system was designed with manufacturer “power users” in mind. Manufacturers that manage numerous applications and product updates each month can log in and view their list of products and the history and progress for each.

To eliminate the need for signed or notarized documents, PATH requires digital acceptance of three legal disclaimers before an application can be submitted:

1. I, [NAME] hereby certify that, in accordance with the Florida Department of Transportation Standard Specifications for Road and Bridge Construction, all the information provided in this application and the supporting data attached is accurate and correct. I certify that I have reviewed the above referenced Florida Statutes sections regarding public records and the exemptions applicable to public records requests that concern trade secrets. I waive any applicable trade secret exemption concerning any document that is not clearly marked as a “trade secret” or “confidential”. I understand that for documents so marked, the Department will notify the business if a request is made so that the business may take steps to protect its asserted trade secret. By signing below, I understand and agree to abide by the restrictions of this paragraph. I further certify that I am authorized to issue this certification on behalf of [APPLICANT].
2. I [NAME] hereby certify that, in accordance with the requirements of Section 6-1.3.1.1, Standard Specification for Road and Bridge Construction, the product [PRODUCT NAME, FDOT APL number], continues to be fabricated using the identical product design, installation instructions, materials, fabrication methods, operational methods, and other applicable fabrication parameters since it was approved by FDOT for APL for the requalification date of [DATE]. I, [NAME], further certify that I am authorized and knowledgeable regarding this issue on behalf of [APPLICANT].
3. By submitting the Application and Documentation, the submitter is certifying that all the information provided is accurate and correct at this date.

Florida DOT estimates that the program paid for itself within the first year of use mostly in time savings. Feedback from manufacturers has been very positive, and future enhancements to PATH include payment acceptance and moving the program to the cloud.

Related Resource

ISA and PATH Step by Step Guides, Product Evaluation, Program Management, Florida Department of Transportation, undated.

<https://www.fdot.gov/programmanagement/productevaluation/training.shtm>

Additional information about PATH and step-by-step guides are available at this web page.

Pennsylvania

Contact: Matthew Briggs, 717-346-1581, MABriggs@pa.gov

Pennsylvania DOT uses a system called eCAMMS, which similarly offers the entire product application process electronically. Applicants log in to submit a product, which is automatically assigned to the technical owner of the specification and a chemical lab, if necessary. The program aims to accept or deny a product within 180 days, although products can be delayed if more detail is required since the program currently lacks triggers that automatically alert DOT staff to such cases. Consequently, DOT staff is investigating project management improvements that can be made to the program.

Related Resources

Process for Submitting a Product Evaluation Application to PennDOT, Pennsylvania Department of Transportation, undated.

http://www.dot.state.pa.us/public/pdf/BOCM_MTD_LAB/eCAMMS/npets.pdf

Instructions for using eCAMMS for a product evaluation are available at this web page.

NPETS Tutorial Video, Pennsylvania Department of Transportation, undated.

http://www.dot.state.pa.us/public/pdf/BOCM_MTD_LAB/eCAMMS/npets_help.mp4

This video provides guidance about using NPETS (New Product Evaluation and Tracking System), completing and submitting an application, and interacting with Pennsylvania DOT during a product's evaluation.

Federal Highway Administration Experimental Features Program

The following resources provide guidance about the FHWA Experimental Features Program:

“How To” Test Deployment Through Experimental Features, American Association of State Highway and Transportation Officials, January 2019.

https://research.transportation.org/wp-content/uploads/sites/31/2019/01/EXPERIMENTAL_FEATURES_PAPER-1-25-19.pdf

FHWA offers the Experimental Features Program to encourage the evaluation of new or innovative technologies. The program, which is described in this two-page white paper, can be used in conjunction with a state's product testing and acceptance process.

NCHRP Report 727: Effective Experiment Design and Data Analysis in Transportation Research, Richard Lyles, M. Abrar Siddiqui, Neeraj Buch, William C. Taylor, Syed Waqar Haider, Dennis C. Gilliland, Bruce W. Pigozzi and Joseph E. Hummer, 2012.

Citation at <http://www.trb.org/Main/Blurbs/167861.aspx>

This report provides detailed information on effective experiment design.

Related Resource:

Design Innovation and the MUTCD Experimentation Process, Federal Highway Administration, September 13, 2017.

http://www.pedbikeinfo.org/pdf/Webinar_FHWA_091317.pdf

Additional information regarding the experimental evaluation process can be found in documents produced in support of this webinar.

Experimental Features, Material Approvals, Illinois Department of Transportation, undated.

<http://www.idot.illinois.gov/doing-business/material-approvals/Experimental-Features/index>

Illinois DOT has incorporated the federal Experimental Features Program as part of its larger material approvals program.

Appendix A

Expedited Process for Developing Specifications on New Products: Survey Questions

The following survey was distributed to state departments of transportation expected to have experience with product approval programs.

Note: Responses to the question below determined how respondents completed the survey:

- Respondents who answered “no” to the question were offered an opportunity to provide additional comments before finishing the survey.
- Respondents who answered “yes” to the question were directed to the remaining questions.

-
1. Does your agency have a formal program or policies for approving new materials, products or engineering systems?
 - Yes.
 - No.

Approval Request Information

1. How many requests to evaluate a material, product or engineering system do you typically receive in a year?
 - 1 to 5.
 - 6 to 10.
 - 11 or more.
2. Please characterize the types of requests you receive. (Check all that apply.)
 - New materials.
 - New products.
 - New equipment.
 - Engineered processes.
 - Other. (Please specify.)

Approval Process

1. Which organizational group in your agency (division, office, etc.) has ownership of your approval processes?
2. Does your agency incorporate its research and development office into the approval process?
 - No.
 - Yes (Please describe this process.)
3. How does your agency involve your subject matter experts in the review and approval process?

4. Who proposes new products for consideration by your agency? (Please indicate the approximate percentage, if known, for each of the submission options below.)
 - Manufacturers and vendors.
 - Contractors.
 - Local agencies.
 - Agency staff.
 - Other.
5. Does your agency prioritize, or possibly reject, submissions before advancing them for review?
 - No.
 - Yes. (Please describe this process.)
6. Do you require an environmental and/or health review as part of your approvals process?
 - No.
 - Yes. (Please elaborate: When in the process do you conduct this review? Do you require that the product be recyclable at a future time?)
7. Does your agency allow for provisional use before formal approval?
 - No.
 - Yes. (Please describe this process.)
8. Does your agency consider product testing information associated with AASHTO's [National Transportation Product Evaluation Program](#) (NTPEP) during the approval process?
 - No.
 - Yes. (Please describe the role NTPEP plays.)
9. Does your agency consult the [AASHTO-approved product listing](#) during the approval process?
 - No.
 - Yes. (Please describe the role the AASHTO listing plays.)
10. Does your agency consider product testing information associated with multi-state pooled funds, such as the [Midwest Roadside Safety Facility](#) or [Clear Roads](#)?
 - No.
 - Yes. (Please identify the pooled fund and describe the role it plays.)
11. Please describe any outside sources of information or testing, including industry or academic partners, that your agency considers during the approval process.
12. Please describe how your agency addresses intellectual property or trade secret issues when evaluating new products.
13. Please describe how an approved product becomes incorporated into a standard specification and operational environment.

Implementation and Performance Tracking

1. Once new products are approved, how are they implemented?
 - Their use becomes optional.
 - Their use becomes recommended.
 - Their use becomes required.
 - Other. (Please explain.)
2. Does your agency track performance of new products after they are approved or rejected?
 - No.
 - Yes. (Please elaborate.)
3. Please describe how your agency shares information on newly approved products with local agencies.

Wrap-Up

Please use this space to provide any comments or additional information about your previous responses.

Appendix B

Expedited Process for Developing Specifications on New Products: Contacts

Below is the contact information for the individuals participating in this project.

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