**Domestic Scan Proposal Form**

AASHTO is now soliciting proposals for a **Calendar Year 2017 US Domestic Scan Program** (NCHRP Panel 20-68A).

Selected scan topics will be investigated by one of three ways: (type 1) site visits to three to six locations for approximately a two week period or less, by webinar; (type 2) peer exchange; or (type 3) conducted by a group of eight to 12 transportation professionals with expertise in the selected topic area. Proposed topics should meet the following criteria:

* Address an important and timely need for information by transportation agencies;
* Are of interest to a broad national spectrum of people and agencies;
* Are complex and also “hands-on,” meaning they lend themselves particularly well to exploration through on-site visits; and
* Are sufficiently focused that the tour participants are able to investigate and understand key issues in the limited time available on the tour.

Before submitting your proposal it is highly recommended that you read [**What Makes a Good Scan Topic Proposal**](http://www.domesticscan.org/what-makes-a-good-scan-topic-proposal)[**http://www.domesticscan.org/what-makes-a-good-scan-topic-proposal**](http://www.domesticscan.org/what-makes-a-good-scan-topic-proposal)

This form is designed to collect the full length of your proposal. Sections requiring essays have unlimited space for you to use. Contact information has some limited text. ***Use your TAB🡪 key to advance to the area where you need to complete information.***

**Proposals should be returned no later than OCTOBER 15, 2016.**

**IMPORTANT NOTE on How to save your document**: ***LastNameFirst Initial, underscore\_Organization Acronym \_CY2017.***

***Saved Document Name Example: VitaleM\_AASHTO\_CY2017***

***If you have more than one, add a number after first initial: VitaleM1\_AASHTO\_CY2017***

**Domestic Scan Proposal Contact Information**

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| AASHTO Committee | Maintenance | Date of submission | 10/1/2016 |

**Title of Proposed Scan****: *Best Practices In Maintenance Support Facility Site Layout And Design Features To Promote Safe, Efficient, And Effective Operation, And Environmental Stewardship.***

**Problem Statement** (What topic is to be examined? What drives the need for the scan? Why now?)

The vast majority of maintenance support facilities are aging and were constructed to support operations and equipment that have undergone significant changes over the years. Equipment to support maintenance operations, specifically winter maintenance operations, has evolved in response to the development of new technologies and equipment advances leading to increased size and configurations. Best practices have evolved in maintenance facility site layout to accommodate both solid and liquid deicing chemical storage and blending, retrofitting equipment garages to accommodate larger equipment, facilities to remove and store multi-function equipment attachments, and site layout to facilitate safe and efficient movement around the facility as deliveries are made and maintenance crews perform necessary tasks.

Environmental stewardship has become increasingly important particularly with older facilities that may not have the necessary design features for compliance. The Clean Water Act, National Pollutant Discharge Elimination System (NPDES) program and requirements associated with Municipal Separate Storm Sewer System (MS4) permits must be an integral element of any site layout, architectural design, or operational plan for maintenance support facility.

As agencies are moving to modify and remodel maintenance support facilities to accommodate new technologies, larger equipment, and to address deficiencies in environmental stewardship, best practices are needed to maximize benefits, operational efficiencies, and promote employee safety.

**Scan Scope** (What specific subject areas are to be examined? Which cities and states might be visited? Which agencies/organizations (including specific departments or types of staff if applicable)?

This scan would look at maintenance support facilities from three perspectives: policy, operations, and storm water. Maintenance support facilities are constructed in a variety of configurations from large regional facilities to smaller satellite yards serving multiple or single agencies. What traditional and innovative best practices exist that define the best configuration and utilization of support facilities?

Older support facilities are being asked to accommodate larger and different types of equipment than were originally contemplated. What traditional and innovative best practices have been utilized to accommodate new mission objectives?

Older support facilities were often designed and constructed without the necessary infrastructure to protect the environment, particularly with respect to recent storm water requirements. What traditional and innovative best practices have been utilized to retrofit existing support facilities to bring them into compliance with NPDES and MS4 requirements?

To answer these questions the scan team should visit a variety of DOTs and municipalities who have demonstrated commitments to efficient maintenance support facility design and layout and storm water prevention encompassing maintenance support facilities. For the scan team to fully grasp the best practices employed they should interact with the maintenance personnel who have to utilize the facility, architects who have developed best practices in facility retrofits, and environmental specialists who have developed best practices in storm water management for maintenance support facilities.

• Nevada DOT

• Virginia DOT

• Massachusetts DOT: facilities at Braintree and Andover, MA

• Johnson County Secondary Roads - Main Facility/Shop, Iowa City, Iowa.

• Others (total of 4-5 states covering all AASHTO regions and 1 or 2 municipalities)?

**Anticipated Scan Results** (What key information is to be gained? What information is to be shared after the scan? Who would the audience be for this information?)

NCHRP Project 20-68A Scan 08-03 “Best Practices in Addressing NPDES and Other Water Quality Issues in Highway System Management”, December 2009, focused on the highway right of way. This report, however, was silent regarding the water quality and discharge best practices when it comes to maintenance support facilities. The 2013 National Winter Maintenance Peer Exchange produced a needs statement regarding the requirements of the NPDES and MS4 permits. This scan will show traditional and innovative best practices of storm water treatment on maintenance support facilities including truck washing and other preventative maintenance activities, and the management of winter deicing chemicals.

Clear Roads project 06742/CR14-10 “Development of a Handbook of Best Management Practices for Road Salt in Winter Maintenance Operations” pointed out several elements of material storage including yard layout and innovative multi-governmental storage facilities. This scan will build on this work to show best practices for brine production and storage of both liquid and solid deicing chemicals.

This scan will tie various pieces of work together into a cohesive document that agencies can use to plan the layout and architectural design of building remodels to address concerns, improve operation of the facility in total, and enhance worker safety as they work around the facility.

**Benefits Expected** (Including potential impacts on current technology or procedures)

Traditionally agencies struggle to find resources to improve their support facilities yet these very facilities greatly influence their ability to perform mission critical work. Identifying best practices will show innovative solutions to problems common to all agencies with outdated facilities to improve their safety, effectiveness, and efficiency, in addition to opportunities to address the environmental stewardship required.