
NTPEP Committee Work Plan for

Evaluation of Temporary Traffic Control Devices: Plastic Work Zone Drums

NTPEP Designation: [TTCD-17-02]

NTPEP

AASHTO
THE SOCIETY OF TRANSPORTATION ENGINEERS

NATIONAL TRANSPORTATION
PRODUCT EVALUATION PROGRAM

National Transportation Product Evaluation Program

444 North Capitol Street N. W., Suite 249

Washington, DC 20001

NTPEP Committee Work Plan for Evaluation of Temporary Traffic Control Devices

Plastic Work Zone Drums

NTPEP Designation: [TTCD 17-02]

1. SCOPE

1.1 This standard practice covers the requirements and testing criteria for the National Transportation Product Evaluation Program (NTPEP) evaluation of temporary traffic control devices under the category of Plastic Work Zone Drums . NTPEP serves the member departments of the American Association of State Highway and Transportation Officials (AASHTO).

1.2 The results of this program may be used for product quality verification by individual member Departments. If used for quality verification, a letter of certification from the temporary traffic control devices (TTCD) manufacturer may be required by member Departments indicating testing was conducted by NTPEP that supports published values.

1.3 *This standard practice may involve hazardous materials, operations, and equipment. It does not purport to address all safety problems associated with its use. It is the responsibility of the user of this standard practice to establish the appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

2. PRODUCT REQUIREMENTS

2.1 The manufacturer shall submit to the NTPEP Manager the electronic product evaluation form through DATAMINE. The form shall include product literature, technical literature, MSDS information, and program payment for each product submitted for testing.

2.2 Manufacturer's Documentation

2.2.1 **Submittal of Plastic Work Zone Drums to NTPEP** - the manufacturer shall supply manufacturer documentation showing physical characteristics, identification of type of polyethylene (high or low density) and non- ballasted weight of the plastic drum and base.

2.2.2 The manufacturer shall certify that as long as a device is furnished under the submitted brand name and designation, the device will be of the same composition and formulation as originally evaluated by the NTPEP. If any change in composition or formulation is made to a product under the submitted brand name and designation, the manufacturer will notify NTPEP and additional testing may be required.

2.2.3 The manufacturer shall certify that the Plastic Work Zone Drums meet all requirements as set forth in the latest edition of the Manual on Uniform Traffic Control Devices (MUTCD) as pertaining to such device.

3. SAMPLING

3.1 Plastic Work Zone Drums

3.1.1 Drums shall be randomly sampled by the testing agency or their appointed authority.

3.1.2 The manufacturer shall furnish, at no cost to the lead testing state, four (4) Plastic Work Zone Drums with the appropriate retroreflective sheeting attached and recommended ballast if required.

3.1.3 Two Plastic Work Zone Drums shall be striped with 6" retroreflective sheeting as illustrated in Configuration A and two Plastic Work Zone Drums shall be striped as illustrated in Configuration B.

Configuration A	Configuration B
ORANGE	WHITE
WHITE	ORANGE
ORANGE	WHITE
WHITE	ORANGE
NONE	NONE

3.1.4 The model number shall be permanently attached to and/or molded on the Plastic Work Zone Drums. The model number shall be capable of identifying the Plastic Work Zone Drums as high or low density.

4. FIELD EVALUATIONS

4.1 Plastic Work Zone Drums

4.1.1 Expose the **Plastic Work Zone Drums** to ambient air temperature a minimum of thirty minutes prior to testing.

4.1.2 Impact the four **Plastic Work Zone Drums** with the manufacturer recommended ballast five times (two direct impacts near the center of vehicle and three direct wheel impacts) with a standard sedan having a bumper height of approximately 18" while traveling at a speed of 55 ± 2 mph. Perform the impacts at an ambient temperature of $85 \pm 5^\circ\text{F}$ and again at an ambient temperature of $32 \pm 5^\circ\text{F}$ for a total of ten impacts.

4.1.3 The **Plastic Work Zone Drums** shall be reshaped ^{Note 1} after each impact and re-attached to the bases if applicable. Replacement of the original test bases will not be allowed.

4.1.4 The testing agent shall inspect each **Plastic Work Zone Drum** after each impact and document the following:

- Any splits, cracks, breaks or other forms of deformation or distress.
- The approximate percentage of the reflective area that is damaged after each impact to an extent it no longer performs as intended.
- Any problems associated with restacking of the **Plastic Work Zone Drums** after 10 impacts.
- Any problems or comments associated with reshaping or reattaching two (2) piece **Plastic Work Zone Drums** if applicable.
- Any other problems or observations associated with the performance of each **Plastic Work Zone Drums** which would be of interest to the member states.

4.1.5 The testing agent shall also document the type and weight of manufacturer's recommended weight and ballast.

Note 1: - The testing state will attempt to reshape the plastic workzone drums after each impact if needed. Reshaping of the plastic workzone drums may consists of the use of a rubber mallet, hands, feet and weight of the evaluator. The attempt to reshape the drums is to prepare the drum for the next impact test or to show that the drums are restackable after the winter and or summer cycle.

5. EVALUATION FACILITY REQUIREMENTS

5.1 The testing state facility must participate in the (AASHTO) Accreditation Program through the American Association of State Highway Transportation Officials and obtain a Certificate of Accreditation.

5.1.1 The scope can be obtained by viewing the AAP directories of accredited laboratories at www.nist.gov/amrl or by contacting AMRL.

6. REPORT

The report shall include manufacturer's name, location, product information and description. The report will also include the initial and final data collected for the Laboratory and Field evaluations for **Plastic Work Zone Drums**.

6.1 Test results will be reported to the NTPEP Manager in the web-based data base – DataMine as follows. Once the data is reported to the manager, The NTPEP Manager will forward each manufacturer's data to them for their review. When the manufacturer reviews and accepts the data, the NTPEP manager will release the data to the public.

6.2 Evaluation data will be compiled and made available to all participating states and testing companies through the AASHTO/NTPEP DataMine. This report will include data only. No judgment as to a product's acceptability will be made in this report. End user participants will establish individual criteria for product acceptability.

6.3 *DataMine* – This web-based data base can be accessed through the AASHTO-NTPEP web site link at www.data.ntpep.org.

7. EVALUATION FREQUENCY

7.1 If the TTCD does not perform adequately during the initial testing, the manufacturer may, at his option, withdraw the product from the current evaluation process. The report will show only the data of the evaluation process completed before withdrawal. The manufacturer may submit the device for retesting during the next, or any subsequent, testing cycle.

8. TIMELINE

8.1 The Intent of the timeline is to give the manufacturer and or supplier a reasonably time frame for the completion of the evaluation process. See table 1

Table 1---Timeline of submittal to completion of the evaluation process

			Time Line (months)														
			Duration (Months)	-	1	2	3	4	5	6	7	8	9	10	11	12	13
April May	Submission Administration	Testing Cycle is Posted	0														
		Submissions are due	0		2												
		Assignment letters	1.5														
June	Product Sampling	Coordination Sampling	1		1												
July	Product Application	Installation	1			1											
August Dec / Feb	Product Testing	Testing Cycle 1	1				1	2	3								
		Testing Cycle 2	6							1	2	3	4	5			
March	Product Reporting	Results	0														
		Final Results	1												1	2	
March / April	Manu Review	Final Results	1														1
May	Report/Data Release	Final Results	1														

9. KEYWORDS

9.1 NTPEP; **Plastic Work Zone Drums**; DataMine.

APPENDIXES

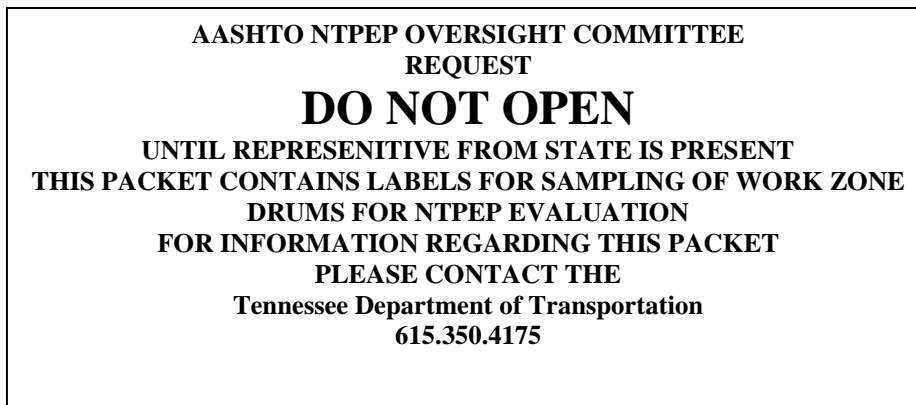
APPENDIX A

Temporary Traffic Control Sampling Protocol

The **NTPEP Manager** will send to the **testing state** (Tennessee) the Product Evaluation Forms (PEFs) for all products in the testing cycle.

The **testing state** will contact by phone and email the **sampling state(s)** with instructions and location information on where to sample within their state (manufacturer information, location and the product(s) name). **Attached Form 1.0 and Form 1.1**

The testing state will supply labels (**Attached Form 1.2**) to be placed on the products as they are sampled. The labels are sent to the manufacturers or suppliers' marked with a label on the outside stating **DO NOT OPEN** until sampling state representative is present (**shown below**).



The **sampling state representative** sets a scheduled date and time to sample the product(s).

The **sampling state representative** will randomly select samples from a randomly selected lot of a manufactures or suppliers' inventory.

The **sampling state representative** will initial and place the labels on the selected samples.

The **Manufacturer or supplier** will then ship the sampled products to the testing state.

FORM 1.0
THIS FORM IS SENT TO THE STATE
MATERIALS OFFICE OR THE NTPEP
CONTACT FOR THE SAMPLING
STATE



STATE OF TENNESSEE
Department of Transportation
6601 CENTENNIAL BOULEVARD
NASHVILLE, TENNESSEE 37243-0360
Division of Materials and Tests

November 1, 2016

State Materials Engineer
Washington State DOT
P O Box 47365
Olympia, WA 98504-7365

RE: AASHTO NTPEP Oversight Committees request for sampling of Plastic Work Zone Drums for NTPEP evaluation

Dear. State Materials Engineer

This letter is to ask for your assistance in the matter of the sampling of Plastic Work Zone Drums for NTPEP evaluation.

Attached along with this letter is a sheet containing the request and contact information for the manufacturer located within your state.

In addition, a packet containing labels to be placed on the samples of the products to be evaluated is sent to the manufacturer within your state. Along with the instructions not to open until a representative from your Department is present. The representative from your Department then shall randomly select samples from a randomly selected lot. The labels are then placed on each sample selected and initialed by the representative from your Department. After the labels are placed, the manufacturer sends the samples to the lead state (Tennessee Department of Transportation) for evaluation.

Your assistance in this matter will be greatly appreciated. If you have any questions please call 615.350.4175.

Sincerely,

Danny L. Lane
Division of Materials and Tests
Transportation Manager
Research and Product Evaluation

FORM 2*
THIS FORM IS SENT TO THE STATE MATERIALS OFFICE OR THE NTPEP CONTACT FOR THAT STATE
 *This Form is also included in the packet along with the labels sent to the Manufacturer and/or Supplier.

AASHTO NTPEP OVERSIGHT COMMITTEE

REQUEST FOR SAMPLING OF PLASTIC WORK ZONE DRUMS FOR NTPEP EVALUATION

LEAD STATE: **TENNESSEE**

SAMPLING STATE: **WASHINGTON**

MANUFACTURER: **ACME Drums**

CONTACT: **MR. JOHN HIGHWAY**

PHONE: 555.284.9000 FAX: 555.284.8000

SAMPLING OF DRUMS

TTCD-2015 W-S Channelizer Drum LDPE

The sampling state will take 4 random samples (at state discretion) of each product. Place a label (Lead State provided) on each drum or delineator, and then the manufacturer will ship the samples to the Lead State.

A sample of the label is shown below. Note that if label is lost or destroyed sampling state inspector may initial or place another label at their discretion.

Thanks for your cooperation in this matter; if you have any questions please call Joseph Kerstetter at 615.350.4193.

AASHTO NTPEP OVERSIGHT COMMITTEE REQUEST FOR SAMPLING OF PLASTIC WORK ZONE DRUMS FOR NTPEP EVALUATION	
State of WASHINGTON	
TTCD-2015-01-007	
LOT NO: _____	SAMPLE NO: ____1____
INSPECTOR: _____	DATE: _____