

 <p>Manitoba Infrastructure</p> <p>MATERIALS ENGINEERING BRANCH</p>	Standard No.: MEB- P044
	<p style="text-align: center;"><u>Effective Date</u></p> <p>Current: March 2020 Previous: May 2019</p>
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Standard Practice for: Random Sampling for Acceptance Testing	

1.0 SCOPE

This Standard Practice outlines the procedure for selecting random sampling locations for acceptance testing.

2.0 REFERENCE STANDARDS

ASTM Standards

- D979 Standard Practice for Sampling Bituminous Paving Mixtures
- D3665 Standard Practice for Random Sampling of Construction Materials

MEB Standards

- P039 Sampling and Testing of Hot Mix Bituminous
- P043 Sampling Compacted Bituminous Mixtures for Laboratory Testing

3.0 GENERAL

Random sample locations for Acceptance testing will be determined by the Contract Administrator using the [RANDBETWEEN] function in Microsoft Excel program.

4.0 METHOD

There are two methods of determining random locations for sampling.

4.1 Method A - Random Station, Random Offset

Random sample locations for Acceptance testing will require two numbers to be generated, one for the station and a second for the offset.

4.1.1 Data Required

- Lot and Sub-lot numbers
- Starting and ending chainage for each Lot
- Starting and ending chainage for each Sub-lot
- Lane width

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4.1.2 Procedure

Open an Excel worksheet and select an empty cell, followed by “Insert function” located under “Formulas” and search for the [RANDBETWEEN] function.

4.1.2.1 Random Station

Enter the start and end chainage, enter the smallest number in the bottom integer box and the largest number in the top integer box.

4.1.2.2 Random Offset

Enter pavement width in centimeter (cm). Enter 50 in the bottom integer box and 320 in the top integer box. Fifty (50) represents 0.50 m from the outer lane edge and 320 represents 0.5 m from the inner lane edge for a 3.7 m lane.

4.2 Method B – Random Tonnage

Random sample for Acceptance testing based on tonnage of each Sub-Lot will require one number to be generated.

4.2.1 Data Required

- Lot and Sub-lot numbers
- Sub-lot size

4.2.2 Procedure

Open an Excel worksheet and select an empty cell, followed by “Insert function” located under “Formulas” and search for the [RANDBETWEEN] function.

Enter Sub-Lot size in tonne. Enter 1 in the bottom integer box and 500 in the top integer box. The random number generated represents where within the Sub-Lot the sample should be taken.

Once the truck carrying the selected tonnage is located, the sample shall be taken in accordance with specified sampling procedure.