

(To be included in all projects requiring painted roadway lines)

1.1 Quality Control and Acceptance for Painted Roadway Lines

1.1.1 General

In addition to the requirements of Specification 7.2 Painted Roadway lines, and Specification 5.20 Supply of Line Painting and Message Marking Materials, the following additional requirements shall apply.

1.1.2 Contractor Quality Control Inspection Program

As part of the Contractor Quality Control Inspection Program (QCIP), the Contractor shall include Wet Film Thickness Field Measurements in accordance with ASTM D4414-95(2020) - Standard Practice for Measurement of Wet Film Thickness By Notch Gages, as a confirmation of the digitally tracked paint application thickness. The Contractor will develop and submit in writing to the Consultant, the method, complete with photographs and the frequency of random field wet film thickness measurements. The Contractor shall maintain records and photographs of the wet film thickness measurements and submit these along with other records of QCIP data and shall provide these records to the Consultant daily.

1.1.3 Digital Pavement Marking Measurement Instrument (DPMMI) or equivalent

Each paint vehicle must have mounted on it a Digital Pavement Marking Measurement Instrument (DPMMI) or equivalent, that will be used to track data at an interval of no greater than 15 seconds at all times during the paint application. Calibration of each DPMMI shall be conducted annually prior to any paint applications for the respective year. Proof of calibration for each DPMMI shall be submitted to the Consultant.

The data to be tracked shall include but not be limited to the following information:

- Date
- Time
- Location (Hwy #, control section, travel direction, and GPS coordinates)
- Speed of Vehicle
- Paint application thickness (wet mils) and rate (liters/line km)
- Glass bead application rate (kgs/litre)
- Distance painted
- Road temperature
- Air temperature
- Paint temperature

The Contractor is responsible to accurately track the road and the exact location on the road, that all recorded data applies to. Data shall be provided to the Consultant at the end of each day of paint application.

If for any reason the DPMMI becomes inoperable, the Contractor shall immediately advise the Consultant. The Contractor shall advise the Consultant of the area painted without the DPMMI and a date when the instrument will be back in operation. All tracked data noted above shall continue to be collected. If the DPMMI is to be inoperable for 5 days or more, the Consultant may instruct the Contractor to cease work until it is back in operation. Such an instruction will not absolve the Contractor of the requirement to complete the Work by the End-of-Season date.

Documentation of the Contractor's processes for using and calibrating the DPMMI and tracking the required data from the unit shall be recorded and made available to the Consultant.

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1.1.4 Acceptance

1.1.4.1 Paint Application Rate

The Paint Application Rate, provided from the DPMMI data, that is marginally outside of the specified paint application rate of 38 L/Km, will be assessed a payment reduction of the unit bid price for Roadway Lines - Supplying Paint and Painting for the type of line painted. The payment reduction for the marginal application rates is:

i) Paint Application Rate

Paint Application Rate ¹ (L/km)	Wet Film Thickness (mils)	Payment Reduction ³ (%)
38.0 ²	15	No Payment Reduction
37.9 to 36.1	< 15 to ≥ 14.2	No Payment Reduction
36.0 to 33.0	<14.2 to ≥ 13	10
32.9 to 30.5	< 13 to > 12	20
≤ 30.4	≤ 12	Re-stripe

¹ Paint application rate with the specified glass bead application rate of not less than 600 grams per litre of paint.

² Specified paint application rate of a minimum of not less than 38.0 L/km of a solid 100 mm wide line.

³ Payment reduction is percent of unit bid price for Roadway Lines - Supplying Paint and Painting for type of line painted.

1.1.4.2 Workmanship

Marginal workmanship or “Conditionally Conforming” painted roadway lines are:

- Marginal deviations from the acceptance criteria specified in Section 7.2.5.4.
- Marginal deviations from:
 - Locations at tangents, curves, and transitions as per the Drawings and/or,
 - Visible uniform straightness or uniform curvature.

Acceptance of “Conditionally Conforming” Painted Roadway Lines:

- i) “Conditionally Conforming” painted roadway lines that are a safety hazard:
Remove and Replace “Conditionally Conforming” painted roadway lines, as described in Subsection 7.2.5.5, Removal, Repair, or Replacement of Unacceptable Painted Lines, at the Contractor’s expense, rounded to the nearest 0.1 km.
- ii) “Conditionally Conforming” painted roadway lines that are not a safety hazard:
At the discretion of the Department, non-payment for “Conditionally Conforming” painted roadway lines, rounded to the nearest 0.1 km.



Special Provision

SP_S311

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Notes to the Consultant (Do not insert into tender).

Example Calculation for Payment Reduction for Paint Application Rate

Paint Application Rate – 33.8 L/Km

Unit bid price – Supplying Paint and Painting (Lane Dividing and 2 Edge Lines) - \$850/km

Payment Reduction = $\$850 \times 10\% = \85

Unit bid price with payment reduction = $\$850 - \$85 = \$765$