



**CONSTRUCTION SPECIFICATION FOR
FLEXIBLE DELINEATOR POSTS**

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705.01 SCOPE

This specification covers the requirements for the installation of permanent and temporary flexible delineator posts and relocation of temporary flexible delineator posts.

705.01.01 Specification Significance and Use

This specification is written as a municipal-oriented specification. Municipal-oriented specifications are developed to reflect the administration, testing, and payment policies, procedures, and practices of many municipalities in Ontario.

Use of this specification or any other specification shall be according to the Contract Documents.

705.01.02 Appendices Significance and Use

Appendices are not for use in provincial contracts as they are developed for municipal use, and then, only when invoked by the Owner.

Appendices are developed for the Owner's use only.

Inclusion of an appendix as part of the Contract Documents is solely at the discretion of the Owner. Appendices are not a mandatory part of this specification and only become part of the Contract Documents as the Owner invokes them.

Invoking a particular appendix does not obligate an Owner to use all available appendices. Only invoked appendices form part of the Contract Documents.

The decision to use any appendix is determined by an Owner after considering their contract requirements and their administrative, payment, and testing procedures, policies, and practices. Depending on these considerations, an Owner may not wish to invoke some or any of the available appendices.

705.02 REFERENCES

When the Contract Documents indicate that municipal-oriented specifications are to be used and there is a municipal-oriented specification of the same number as those listed below, references within this specification to an OPSS shall be deemed to mean OPSS.MUNI, unless use of a provincial-oriented specification is specified in the Contract Documents. When there is not a corresponding municipal-oriented specification, the references below shall be considered to be the OPSS listed, unless use of a provincial-oriented specification is specified in the Contract Documents.

This specification refers to the following standards, specifications, or publications:

Ontario Provincial Standards Specifications, Material

OPSS 1212 Hot Poured Rubberized Asphalt Joint Sealing Compound

Ontario Ministry of Transportation Publications

Designated Sources for Material (DSM)

Ontario Traffic Manual (OTM):

Book 7 - Temporary Conditions

Book 11 - Pavement, Hazard and Delineation Markings

ASTM International

D4956-19 Retroreflective Sheeting for Traffic Control

705.03 DEFINITIONS

For the purpose of this specification, the following definition applies:

Flexible Delineator Post means a tubular plastic marker installed vertically for the purpose of channelizing traffic or delineating roadside features in temporary or permanent applications. The tubular post is securely fixed to the ground surface by hinged (flexible) connection to a solid base. When impacted by a vehicle, the post has the ability to bend 90° from vertical and self-restore following impacts.

705.04 DESIGN AND SUBMISSION REQUIREMENTS

705.04.01 Submission Requirements

One copy of the manufacturer's installation instructions shall be submitted to the Contract Administrator.

Installation of the flexible delineator posts shall not commence until the Contract Administrator has received the copy of the instructions.

705.05 MATERIALS

705.05.01 Flexible Delineator Posts

Flexible delineator posts shall be supplied from a source named on the ministry's DSM.

All supplied system components shall be according to the manufacturer's specifications.

The height of the post shall be as specified in the Contract Documents.

The post colour shall match the colour of the reflective sheeting.

To maintain a visually consistent installation, only one product shall be used on the Contract.

705.05.02 Anchor and Support Hardware

Anchor and support hardware used to fix the flexible delineator post to the ground surface shall be supplied by the manufacturer.

705.05.03 Reflective Sheeting

Flexible delineator posts shall be outfitted with high intensity retroreflective sheeting according to ASTM D4956, Type III or IV. For permanent conditions, the colour shall be according to OTM Book 11. For temporary conditions, the colour shall be according to OTM Book 7. Dimensions, spacing, and quantity shall be as specified in the Contract Documents.

705.05.04 Temporary Flexible Delineator Posts

Temporary flexible delineator posts may be reused provided each post meets each of the following criteria:

- a) The ability to bend 90° from vertical and self-restore to a vertical position after impacts.
- b) The base is intact and permits anchorage to the ground surface that is equivalent to a new post.
- c) The post is intact without any cracks or fissures.

- d) The retroreflective sheeting is fully intact with only minor tears or scratches that do not affect the reflectivity of the sheeting.

705.07 CONSTRUCTION

705.07.01 General

Permanent and temporary flexible delineator posts shall be installed and securely fixed to the ground surface according to the manufacturer's instructions at locations specified in the Contract Documents.

705.07.02 Relocation of Temporary Flexible Delineator Posts

Flexible delineator posts shall be relocated as specified in the Contract Documents, including the removal of existing and installation of new anchorage hardware and adhesives.

All holes resulting from the relocation of the delineator post assemblies shall be filled with a hot poured rubberized asphalt joint sealing compound according to OPSS 1212 when they are located in areas not to be resurfaced as part of the Work. At the time of filling, the holes shall be dry and free of dust and debris.

705.07.03 Maintenance of Temporary Flexible Delineator Posts

Flexible delineator posts shall be maintained for the duration of the construction period for which they are required.

Flexible delineator posts shall be monitored on a daily basis. Missing or broken flexible delineator posts shall be replaced within 48 hours.

Posts that do not have a uniform or satisfactory appearance to the satisfaction of the Contract Administrator shall be replaced or corrected within 48 hours of notification.

705.07.04 Removal of Temporary Flexible Delineator Posts

Flexible delineator posts and associated hardware and adhesives shall be removed at the completion of the construction period for which they were required.

All holes resulting from the removal of the delineator post assemblies shall be filled with a hot poured rubberized asphalt joint sealing compound according to OPSS 1212 when they are located in areas not to be resurfaced as part of the Work. At the time of filling, the holes shall be dry and free of dust and debris.

705.07.05 Management of Excess Material

Management of excess material shall be according to the Contract Documents.

705.09 MEASUREMENT FOR PAYMENT

705.09.01 Actual Measurement

705.09.01.01 Flexible Delineator Post - Permanent

For measurement purposes, a count shall be made of the number of complete flexible delineator posts installed.

705.09.01.02 Flexible Delineator Post - Temporary

For measurement purposes, a count shall be made of the number of complete flexible delineator posts installed and removed, up to the maximum number of flexible delineator posts required to be in place at any one time during the Contract.

705.09.01.03 Flexible Delineator Post - Relocation

For measurement purposes, a count shall be made of the number of complete flexible delineator posts relocated. Flexible delineator posts that are temporarily surplus and are required for future stages shall be paid for as one relocation for the combined moves into and out of storage, including any off-site storage required due to on-site restrictions.

705.09.02 Plan Quantity Measurement

When measurement is by Plan Quantity, such measurement shall be based on the units shown in the clauses under Actual Measurement.

705.10 BASIS OF PAYMENT

**705.10.01 Flexible Delineator Post - Permanent - Item
Flexible Delineator Post - Temporary - Item
Flexible Delineator Post - Relocation - Item**

Payment at the Contract price for the above tender items shall be full compensation for all labour, Equipment, and Material to do the work.

When the Contract contains separate items for the work required by this specification, payment shall be at the Contract price and according to the specification for such work.

Costs associated with any required removals and replacement or repairs of defective work and materials shall be the Contractor's responsibility at no additional cost to the Owner.

**Appendix 705-A, April 2021
FOR USE WHILE DESIGNING MUNICIPAL CONTRACTS**

Note: This is a non-mandatory Commentary Appendix intended to provide information to a designer, during the design stage of a contract, on the use of the OPS specification in a municipal contract. This appendix does not form part of the standard specification. Actions and considerations discussed in this appendix are for information purposes only and do not supersede an Owner's design decisions and methodology.

Designer Action/Considerations

The designer should specify the following in the Contract Documents:

- A list of approved manufacturers. (705.05.01)
- Post height. (705.05.01)
- Dimensions, spacing, and quantity of retroreflective sheeting. (705.05.03)
- Flexible delineator post locations. (705.07.01)
- Relocation of flexible delineator posts. (705.07.02)

The designer should ensure that the General Conditions of Contract and the 100 Series General Specifications are included in the Contract Documents.

Related Ontario Provincial Standard Drawings

OPSD 984.105 Flexible Delineator Post, Installation – Temporary and Permanent