



Ontario Provincial Standards Unit
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REVISION INFORMATION SHEET

ONTARIO PROVINCIAL STANDARDS FOR ROADS AND PUBLIC WORKS

VOLUME 8 MUNICIPAL-ORIENTED MATERIAL SPECIFICATIONS

MANUAL REVISION #11

NOVEMBER 2017

UPDATING ONTARIO PROVINCIAL STANDARDS FOR YOUR USE

Each roads and public works owner (Owner) is responsible for determining implementation dates and directions for use of Ontario Provincial Standards; therefore, manual holders are cautioned about immediately discarding superseded and cancelled standards.

ACCESSING AND OBTAINING ONTARIO PROVINCIAL STANDARDS

The Ontario Provincial Standards for Roads and Public Works (OPS) manuals and the latest published updates for each of the eight OPS manuals are available as follows:

- Available electronically on the OPS/MTO website. Online access to the current, updated, and archived standards; indexes; OPS User Notes; and publication Revision Information Sheets are available free of charge at the site.
(<http://www.rags.mto.gov.on.ca/techpubs/ops/nsf/OPSHomepage>)
- The eight OPS manuals of standards are also available for free as well in a single PDF format on the website.

A link to the Ontario Provincial Standards on the MTO Library website is available on the OPS website (www.ops.on.ca). Also on this site under News and Activities are notices for updates and changes in OPS.

Questions should be directed by email to Ontario.Prov.Standards@ontario.ca

WAITING TO HEAR FROM YOU

If you have a suggestion to revise a standard or you have a standard that works in your ministry, municipality, or area, send it to the Head, OPS Administration, for review and possible inclusion into the Ontario Provincial Standards.

THIS MANUAL IS REVISED AS FOLLOWS:

Index Pages Volume 8

Remove the entire index and replace with the attached revised index.

Standard Specifications Volume 8

Superseded/Cancelled (Remove)		Revised/New (Insert)		Remarks
OPSS.MUNI	Dated	OPSS.MUNI	Dated	
1151	Nov 2006	1151	Nov 2017	“MATERIAL SPECIFICATION FOR SUPERPAVE AND STONE MASTIC ASPHALT MIXTURES” See Summary of Revisions.
1350	Nov 2014	1350	Nov 2017	“MATERIAL SPECIFICATION FOR CONCRETE - MATERIALS AND PRODUCTION” See Summary of Revisions.
		1430	Nov 2017	“MATERIAL SPECIFICATION FOR GABION BASKETS AND MATS” See Summary of Revisions.
		1441	Nov 2017	“MATERIAL SPECIFICATION FOR LOAD TRANSFER ASSEMBLIES” See Summary of Revisions.
		1541	Nov 2017	“MATERIAL SPECIFICATION FOR CHAIN-LINK FENCE COMPONENTS” The PROV published in November 2017 replaces OPSS 1541 COMMON, November 2012 with no technical content changes.
1820	Nov 2014	1820	Nov 2017	“MATERIAL SPECIFICATION FOR CIRCULAR AND ELLIPTICAL CONCRETE PIPE” See Summary of Revisions.
		2410	Nov 2017	“MATERIAL SPECIFICATION FOR EXTRA LOW-VOLTAGE CABLE” See Summary of Revisions.

Superseded/Cancelled (Remove)		Revised/New (Insert)		Remarks
OPSS.MUNI	Dated	OPSS.MUNI	Dated	
		2421	Nov 2017	“MATERIAL SPECIFICATION FOR SPUN CONCRETE POLES” The PROV published in November 2017 replaces OPSS 2421 COMMON, November 2012 with no technical content changes.
		2426	Nov 2017	“MATERIAL SPECIFICATION FOR STEEL TRUSS BRACKETS” See Summary of Revisions.
		2428	Nov 2017	“MATERIAL SPECIFICATION FOR ALUMINUM TAPERED ELLIPTICAL BRACKETS” See Summary of Revisions.
		2432	Nov 2017	“MATERIAL SPECIFICATION FOR HIGH PRESSURE SODIUM LUMINAIRES FOR HIGHWAY LIGHTING” The MUNI implemented in Nov 2017 replaces OPSS 2432 COMMON, November 2015 with no technical content changes.
2461	Apr 2017	2461	Nov 2017	“MATERIAL SPECIFICATION FOR SIGNAL HEADS” See Summary of Revisions.
		2479	Nov 2017	“MATERIAL SPECIFICATION FOR FLOODLIGHT LUMINAIRES USED IN HIGH MAST LIGHTING” The MUNI implemented in Nov 2017 replaces OPSS 2479 COMMON, November 2015 with no technical content changes.

Superseded/Cancelled (Remove)		Revised/New (Insert)		Remarks
OPSS.MUNI	Dated	OPSS.MUNI	Dated	
		2485	Nov 2017	“MATERIAL SPECIFICATION FOR PHOTOELECTRIC CONTROLLERS” The MUNI implemented in Nov 2017 replaces OPSS 2485 COMMON, November 2015 with no technical content changes.
		2501	Nov 2017	“MATERIAL SPECIFICATION FOR CALCIUM CHLORIDE” The MUNI implemented in Nov 2017 replaces OPSS 2501 COMMON, April 2015 with no technical content changes.
		2503	Nov 2017	“MATERIAL SPECIFICATION FOR MAGNESIUM CHLORIDE SOLID AND MAGNESIUM CHLORIDE SOLUTION ” The MUNI implemented in Nov 2017 replaces OPSS 2503 COMMON, November 2011 with no technical content changes.
		2510	Nov 2017	“MATERIAL SPECIFICATION FOR TALL PITCH EMULSION” The MUNI implemented in Nov 2017 replaces OPSS 2510 COMMON, November 2015 with no technical content changes.

SUMMARY OF REVISIONS TO OPSS.MUNI 1151

MATERIAL SPECIFICATION FOR SUPERPAVE AND STONE MASTIC ASPHALT MIXTURES

- APPENDICES, Added 1151-B to cover use of over 15% RAP by Binder Replacement.
- Section 1151.01, Scope, Now includes Warm Mix and SMA. Section 1151.02, References, Updated with the following:
 - o MTO's DSM added
 - o MTO's Laboratory Testing Manual items LS 309, 311, 313, 316, 318, and 602 added
 - o AASHTO's T 305-14 added
 - o AASHTO's MP 8-05, PP 28-03, PP 41-02, R 35-04, T 84-00, T-85-91, T 209-05, T 275-91 and T 304-96 removed.
 - o ASTM specifications updated to current.
 - o Asphalt Institute Publication NAPA QIS-122 added.
- Section 1151.03, Definitions:
 - o New definitions added for Anti Stripping Treatment (AST), Aggregate AST-AC (AST-AGG), Asphalt Cement AST-AS (AST-AC), Binder Replacement, Deleterious Material, Fine Aggregate, RAP, and Warm Mix Asphalt (WMA).
 - o Definition updated for Coarse Material to better reflect industry requirements.
- Section 1151.04, Submission and Design Requirements, Section title updated to match current OPS standard format of "Design and Submission Requirements".
- Section 1151.04.01, Mix Requirements for Design Purposes, Reference to AASHTO MP-8 replaced with LS-311.
- Section 1151.04.01.01, RAP Proportions, Rewritten.
 - o UPDATE of 2017-10-23: New wording added after SMC review, to explicitly state that, "Up to 15% of RAP is allowed in other surface course mixes. Up to 30% of RAP is allowed in binder course mixes. [New Paragraph] If the composition of the mix is modified by including RAP to exceed 15% by Binder Replacement, but less than 30%, the low grade of the PGAC shall be lowered by 6 °C."
- Section 1151.04.02.02.02, Superpave Mix Design Method, Details of superpave mixes removed, and instead now references LS-309.
- Section 1151.04.02.02.03, Stone Mastic Asphalt Mix Design Method, References to AASHTO MP 8 and PP 41 replaced with LS-311.
- NEW Section 1151.04.02.02.04, Warm Mix Asphalt Design Method, Added to be in line with PROV.
- Section 1151.04.03, Samples for Monitoring Purposes, Clarified the representative samples request, and Table # references updated from 11 to 9.
- Section 1151.04.05, Documents, Reference to AASHTO replaced with LS.
- Section 1151.04.06, Title updated to "AST-AC Treatment" and all instances updated as well.
- NEW Section 1151.04.06.02, Moisture Sensitivity, Added to match PROV.
- NEW Section 1151.04.06.03, Aggregate Anti Stripping Treatment, Added to match PROV.
- NEW Section 1151.04.07, Submission Requirements, Added to match PROV.

- Section 1151.05.02, Aggregates, Now references MTO's DSM.
- Section 1151.05.05, Fibres, Reworded for clarity.
- Section 1151.07.03.02.02, Batch and Continuous Mixing Plants, Removed redundant wording.
- Section 1151.07.03.03, Anti-Stripping Additives, Title updated to read "Asphalt Cement AST-ACs (AST-AC)" to match with PROV.
- Section 1151.07.03.03.02, Hydrated Lime, Title updated to "Aggregate Anti Stripping Treatments" and content rewritten to match PROV.
- Section 1151.07.04, Preparation of the Mix, Title updated to "Preparation of the Mixture", and maximum temperature details added to be in line with PROV.
- TABLE 5, New column added for "Minimum Tensile Strength Ratio %"
- TABLE 6, New column added for "Minimum Tensile Strength Ratio %"
- TABLE 7, Removed.
- TABLE 8, Removed.
- TABLE 9, Renumbered to Table 7.
- TABLE 10, Renumbered to Table 8.
- TABLE 11, Renumbered to Table 9.
- NEW TABLE 10, Added to match with PROV.
- COMMENTARY, Updated to provide guidance to 1151.04.01.01.
- Appendix 1151-B, Added to match with PROV.
- UPDATE of 2017-10-23: Wording for Level II, under the Recommended New PGAC Grade reworded since SMC review, with the final wording stating that, "Reduce the low temperature by one grade (e.g. if a PG 58-28 would normally be used, select a PG 58-34)".

SUMMARY OF REVISIONS TO OPSS.MUNI 1350

MATERIAL SPECIFICATION FOR CONCRETE - MATERIALS AND PRODUCTION

- Section 1350.02, References, addition of Designated Sources for Materials (DSM), CSA Standards versions updated.
- Section 1350.03, Definitions, addition of Limestone Filler and Portland Limestone Cement. Deletion of Self-Consolidating Concrete (SCC).
- Clause 1350.04.02.01, Performance Specification Alternative, 1st and 3rd paragraph modified.
- Clause 1350.04.02.04, Concrete Delivery Ticket, 10th paragraph modified.
- Clause 1350.05.01.01, Cementing Materials, addition of 6th and 7th paragraph.
- Clause 1350.05.01.02, Aggregates, addition of 3rd and 4th paragraph.
- Clause 1350.05.02.05, Slump, deletion of “or Slump Flow” from title. Deletion of 6th paragraph and 1st and 7th paragraph modified.
- Clause 1350.07.05.01.03, Delivery by Agitator or Mixer Trucks, 2nd paragraph rewritten and 3rd paragraph modified.
- Clause 1350.07.05.01.03.01, Site Addition of Materials, 3rd paragraph modified.
- Clause 1350.08.02.01.02, Quality Assurance Test Reporting, 1st sentence modified.
- Clause 1350.08.02.04.01, Compressive Strength, addition of 6th paragraph.
- Appendix 1350-A, addition 4th and 13th paragraph.

SUMMARY OF REVISIONS TO OPSS.MUNI 1430

MATERIAL SPECIFICATION FOR GABION BASKETS AND MATS

- Section 1430.01.01, Specification Significance and Use, Updated to typical MUNI wording.
- Section 1430.02, REFERENCES, Updated to typical MUNI wording.
- Section 1430.07.01, General (PRODUCTION), Word “maximum” added to spacing.
- TABLE 4, Gabion Baskets and Gabion Mats, Updated based on industry feedback.

SUMMARY OF REVISIONS TO OPSS.MUNI 1441

MATERIAL SPECIFICATION FOR LOAD TRANSFER ASSEMBLIES

- Converted the specification from COMMON to MUNI.
- Section 1441.02, References, Replaced OPSS 1442 with 1443 as per the direction of OPS Grading. We were advised by Grading that OPSS 1442 is going to be cancelled very soon and therefore all such references should now either be within this spec 1441, or be referencing 1443, or both.
- Section 1441.05, Materials, Removed reference to OPSS 1442.
- Section 1441.07.02, Patching, Replaced 1442 with 1443 and carried over important text from 1442.

SUMMARY OF REVISIONS TO OPSS.MUNI 1820

MATERIAL SPECIFICATION FOR CIRCULAR AND ELLIPTICAL CONCRETE PIPE

- Section 1820.02, REFERENCES, Updated all references as per industry feedback.
- No other technical updates made.

SUMMARY OF REVISIONS TO OPSS.MUNI 2410

MATERIAL SPECIFICATION FOR EXTRA LOW-VOLTAGE CABLE

- Clauses 2410.07.01.01 and 2410.07.02.01, c) "Temperature rating" revised to "Year of manufacture", and d) "Type of insulation" revised to "IMSA specification number".

SUMMARY OF REVISIONS TO OPSS.MUNI 2426

MATERIAL SPECIFICATION FOR STEEL TRUSS BRACKETS

- Section 2426.01 Scope, length of brackets deleted.
- Section 2426.02 References; CSA G40.21, CSA W59, and ASTM A53/A53M updated.
- Subsection 2426.05.02 Steel Bracket Clamp Plates, grade of steel revised from 38T to 38WT.
- Subsection 2426.07.02 Marking, revised.
- New subsection 2423.07.03 Packaging and Shipment, added
- Subsection 2426.08.01 Inspection, 1st and 2nd paragraphs deleted.
- Subsection 2426.09.01 Packaging and Shipment, a), revised.

SUMMARY OF REVISIONS TO OPSS.MUNI 2428

MATERIAL SPECIFICATION FOR ALUMINUM TAPERED ELLIPTICAL BRACKETS

- Section 2428.02 References; CSA W59.2 and ASTM B 221 updated, and CSA G40.21 deleted.
- Existing subsection 2428.05.02 Steel Clamp Plates, deleted.
- Subsection 2428.07.01 General, revised.
- Subsection 2428.07.02 Marking, revised.
- Subsection 2428.09.01 Packaging and Shipment, a) revised and new 3rd paragraph added.

SUMMARY OF REVISIONS TO OPSS.MUNI 2461

MATERIAL SPECIFICATION FOR SIGNAL HEADS

- Section 2461.02 References; ASTM D 4956 added; CSA C22.2 No. 43 and CSA C22.2 No. 84 deleted; and CSA C22.2 No. 0.4, CSA C22.2 No. 127, CSA S157, and ITE ST-054 updated.
- Subsection 2461.05.03 Visors, revised.
- Existing subsection 2461.05.04 Lampholders, deleted.
- Subsection 2461.05.05 Ground Terminals, revised.
- Subsection 2461.05.06 Backboards, revised.
- Existing subsection 2461.05.08 Reflectors, deleted.
- Existing subsection 2461.05.09 Lenses, deleted.
- Existing subsection 2461.05.11 Lamps, deleted.
- Subsection 2461.08.01 Inspection, existing 1st and 2nd paragraphs deleted.
- Subsection 2461.09.01 Packaging and Shipment, shop Drawings revised to Working Drawings.
- Existing Table 1, deleted.