CSA GROUP™

CSA S505:20
National Standard of Canada

Techniques for considering high winds and snow drifting and their impact on northern infrastructure

Standards Council of Canada
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CSA S505:20
February 2020

Title: *Techniques for considering high winds and snow drifting and their impact on northern infrastructure*

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Cette Norme Nationale du Canada est disponible en versions française et anglaise.

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Published in February 2020 by CSA Group
A not-for-profit private sector organization
178 Rexdale Boulevard, Toronto, Ontario, Canada M9W 1R3

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ICS 93.010
ISBN 978-1-4883-2607-3

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Preface

This is the first edition of CSA S505, *Techniques for considering high winds and snow drifting and their impact on northern infrastructure*.

CSA Group received funding for the development of this Standard from the Standards Council of Canada, as part of the Northern Infrastructure Standardization Initiative with input from the Northern Advisory Committee (NAC).

This Standard was prepared by the Subcommittee on High Winds and Snow Drifting for Northern Infrastructure and Climate Change, under the jurisdiction of the Technical Committee on Northern Built Infrastructure and the Strategic Steering Committee on Construction and Civil Infrastructure, and has been formally approved by the Technical Committee.

This Standard has been developed in compliance with Standards Council of Canada requirements for National Standards of Canada. It has been published as a National Standard of Canada by CSA Group.

Notes:

1) *Use of the singular does not exclude the plural (and vice versa) when the sense allows.*
2) *Although the intended primary application of this Standard is stated in its Scope, it is important to note that it remains the responsibility of the users of the Standard to judge its suitability for their particular purpose.*
3) *This Standard was developed by consensus, which is defined by* CSA Policy governing standardization — Code of good practice for standardization *as "substantial agreement. Consensus implies much more than a simple majority, but not necessarily unanimity". It is consistent with this definition that a member may be included in the Technical Committee list and yet not be in full agreement with all clauses of this Standard.*
4) *To submit a request for interpretation of this Standard, please send the following information to* ***inquiries@csagroup.org*** *and include "Request for interpretation" in the subject line:*
   a) *define the problem, making reference to the specific clause, and, where appropriate, include an illustrative sketch;*
   b) *provide an explanation of circumstances surrounding the actual field condition; and*
   c) *where possible, phrase the request in such a way that a specific "yes" or "no" answer will address the issue.*

   Committee interpretations are processed in accordance with the CSA Directives and guidelines governing standardization *and are available on the* Current Standards Activities *page at* ***standardsactivities.csa.ca****.*
5) *This Standard is subject to review within five years from the date of publication. Suggestions for its improvement will be referred to the appropriate committee. To submit a proposal for change, please send the following information to* ***inquiries@csagroup.org*** *and include "Proposal for change" in the subject line:*
   a) *Standard designation (number);*
   b) *relevant clause, table, and/or figure number;*
   c) *wording of the proposed change; and*
   d) *rationale for the change.*

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1 Scope

1.1

1.1.1
This Standard addresses risks to northern infrastructure due to wind, snow, and snow drifting. It incorporates the following themes, all in the context of Canada's North and climate change:

a) weather data, climate variables, and relevant projections and forecasts;
b) reducing risk of damage;
c) climate adaptation strategies;
d) improving function and accessibility; and
e) design construction techniques.

1.1.2
This Standard provides guidance to northern infrastructure designers, builders, operators, and owners to address the increased risk of damage to the built environment, including the potential effects of climate change (specifically, risks from higher and more frequent wind loads and from associated snow drifting).

1.2
This Standard does not apply to

a) uniform snow load on existing roofs (which is covered in CAN/CSA-S502);
b) decommissioning of buildings subjected to snow or wind overload; or
c) detailed design of infrastructure.

1.3
In this Standard, "shall" is used to express a requirement, i.e., a provision that the user is obliged to satisfy in order to comply with the standard; "should" is used to express a recommendation or that which is advised but not required; and "may" is used to express an option or that which is permissible within the limits of the Standard.

Notes accompanying clauses do not include requirements or alternative requirements; the purpose of a note accompanying a clause is to separate from the text explanatory or informative material.

Notes to tables and figures are considered part of the table or figure and may be written as requirements.

Annexes are designated normative (mandatory) or informative (non-mandatory) to define their application.