
SECTION Q
COLD WEATHER CONSTRUCTION

Q-1 GRANULAR WORKS

Q-1.1 General

Per OPSS 314, winter grading of granular dictates all ice and snow shall be removed from all portions of the work area. Frozen material shall not be incorporated into the work. Materials shall not be placed over frozen ground, except at the Contractor's option and reviewed by the Geotechnical Engineer, Consultant Engineer and City. Should this scenario be accepted, a single lift may be placed over frozen ground; in which case final grading and compaction shall be done after the underlying material has thawed.

Q-2 CONCRETE WORKS

Q-2.1 General

Per OPSS 350 and City of Markham standards, concrete shall not be placed when the ambient air temperature is below 0°C and shall not be placed against any materials whose temperature is below 5°C. The concrete temperature at the time of discharge from the truck shall be between 10°C and 28°C as per OPSS MUNI 1350. The Contractor shall provide protection to ensure the minimum in-place temperature of the concrete pavement or concrete base is 15°C for the first three days of curing, and at 10°C for the subsequent 4 days.

Q-3 SITE SERVICING

Q-3.1 General

During site servicing construction, all work shall be protected from freezing. Pipes and bedding materials shall not be installed on frozen ground.

Q-4 ASPHALT

Q.4.1 Asphalt Placement

The City does not recommend placing HL8/base asphalt later in the year than December 1 (or below ambient air temperatures of 2°C) and HL3/top asphalt past November 14 (or below ambient air temperatures of 7°C).

Placement of asphalt scheduling is to be reviewed and approved with the City of Markham and the Geotechnical Consultant where asphalt is planned to be laid later in the year than the dates specified or at temperatures below those outlined. To minimize the potential negative impacts on the life of the cold weather placed asphalt, specific guidelines should be followed as recommended by the City and Geotechnical Consultant. The following is a list of recommendations to be considered while undertaking these works:

- Snow and ice on the proposed surfaces to be removed prior to the placement of asphalt.

Municipal Inspection and Construction Guidelines

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- Asphalt delivery and wait times should be considered to minimize heat loss.
- Joints are to be heated to ensure proper asphalt blending and reduce potential problems with cold weather joints.

The City reserves the right to reject all concrete and asphalt works placed at temperatures and conditions not in compliance with the OPSS and City requirement. The City may require additional testing of the cold weather works and/or extended maintenance periods and securities to guarantee the works.