

The following changes to the tender documents are effective immediately and will form part of the contract documents:

Specification 03 30 00

Delete: 1.10.2 At temperatures below 5°C, or when there is a probability that the temperature will fall below 5°C within 24 hours of concrete placement, heating and hoarding shall be implemented in accordance with COLD WEATHER REQUIREMENTS of PART 3 –EXECUTION.

Replace with: 1.10.2 At temperatures below 5°C, or when there is a probability that the temperature will fall below 5°C and/or there is a possibility of night frost within 7 days of concrete placement, heating and hoarding shall be implemented in accordance with COLD WEATHER REQUIREMENTS of PART 3 –EXECUTION.

Delete: 3.7.1 The Contractor shall provide a moveable deck enclosure for all deck and deck overlay concrete pours during cold weather conditions when heating of the deck and deck overlay concrete is required in accordance with this Specification.

Replace with: 3.7.1 The Contractor shall provide a moveable deck enclosure for all deck and deck overlay concrete pours during cold weather conditions as defined in 1.10.2. A moveable deck enclosure shall also be required in order to pour deck and deck overlay concrete outside the hours defined in 1.10.3 during hot weather conditions.

Add: 3.7.2.9 The enclosure shall be constructed to withstand wind and snow loads and shall be reasonably airtight.

Delete: 3.7.3 The enclosure shall not be removed from over top of a newly completed deck slab without the wet curing blankets in place and without obtaining permission from the Departmental Representative.

Replace With: 3.7.3 The enclosure shall not be removed from over top of a newly completed deck slab and heat shall be supplied for the full duration of the curing period during cold weather conditions. During hot weather conditions the enclosure can be removed once wet curing blankets are in place.

Delete: 3.7.4 In cases when cold weather concrete procedures are not called for, and the Departmental Representative permits the placing of deck concrete during the periods of spring or fall when there is a possibility of night frost, the Contractor shall provide sufficient heat inside of the moveable deck hoarding in order to keep the air temperatures above all concrete surfaces at a minimum of 5 degrees Celsius for seven (7) days following the concrete pour. The heating equipment used for this purpose shall be in accordance with the requirements of this Specification.

Replace With: 3.7.4 When the ambient temperature is below -15°C , the enclosure shall be constructed to allow the concrete to be placed without the housing having to be opened. If the mixing is done outside of the housing, the concrete shall be placed by means of hoppers installed through the enclosure. The hoppers are to be plugged when not in use. When the ambient temperature is equal to or above -15°C , the Contractor will be permitted to open small portions of the enclosure for a limited time to facilitate the placing of the concrete. The enclosure shall provide sufficient clearance to permit the placing of concrete to proceed unhindered. Where required, an enclosure shall also provide sufficient clearance to allow for the removal of forms in order that the finishing of the exposed concrete surfaces can be completed 3 days before the heating of the inside of the housing is discontinued.

Delete: 3.12.4 Take cold weather precautions whenever the ambient temperature is, or is expected to be before concrete has cured, at or below 5°C .

Replace With: 3.12.4 Take cold weather precautions whenever there is a probability that the ambient temperature is, or is expected to fall below 5°C and/or there is a possibility of night frost as defined in 1.10.2 for the full duration of the curing period.

Delete: 3.12.10 Where the work is enclosed and heaters are used to provide heat:

1. Provide an access strip at least 1 m wide between the work and the nearest heater.
2. Do not discharge heater outlets directly toward the work. Duck heater exhausts outside enclosure.
3. Install minimum-maximum thermometers inside the enclosure at the locations reviewed by the Departmental Representative.
4. Maintain the humidity within the enclosure at or above 40%.
5. Removal of forms, shores and protection to conform to Section 03 10 00 – Concrete Forming and Accessories.
6. At the termination of the protection period, do not allow the concrete temperature to drop more than 10°C in the first 24 hours.

Replace With: 3.12.10 Where the work is enclosed and heaters are used to provide heat:

1. The Contractor shall supply all required heating apparatus and the necessary fuel. Sufficient stand-by heating equipment must be available to allow for any sudden drop in outside temperatures and any breakdowns that may occur in the equipment.
2. Heating apparatus used to heat the enclosure shall be of a type that meets Provincial Acts and Regulations. Heating apparatus used in an enclosure that discharges or releases smoke or gas fumes, shall be adequately ventilated in such a manner as to carry away all such smoke or gas fumes from the enclosure. Do not discharge heater outlets directly toward the work. Duck heater exhausts outside enclosure.

3. Before depositing any of the concrete, the Contractor shall demonstrate that enough heating apparatus is available to keep the air temperature surrounding the forms within the specified range. This shall be accomplished by bringing the temperature inside of the enclosure at or above the minimum required temperature at least 24 h prior to the start of the concrete placing. The temperature of formwork, reinforcement, previously placed concrete and/or soil shall be at least 10°C prior to the start of concrete placing.
4. The enclosure shall provide sufficient space between the concrete and the enclosure to permit free circulation of warmed air.
5. Provide an access strip at least 1 m wide between the work and the nearest heater.
6. The heating apparatus and housing shall be sufficient to enclose and protect the structure in such a way that the air surrounding the fresh concrete is kept at a temperature of not less than 15°C and not more than 25°C for duration of the curing period. At the termination of the curing period, do not allow the concrete temperature to drop more than 10°C in the first 24 hours.
7. Install minimum-maximum thermometers inside the enclosure at the locations reviewed by the Departmental Representative.
8. Maintain the humidity within the enclosure at or above 65%. When dry heat is used, a means of maintaining atmospheric moisture shall be provided.
9. Removal of forms, shores and protection to conform to Section 03 10 00 – Concrete Forming and Accessories.

Enquiries received during the Solicitation Period:

1. Could you confirm if a moveable bridge deck hoarding is required when pouring the deck in summer conditions? Clause 3.7.1 of Spec Section 03 30 00 Cast-In-Place Concrete states that a moveable deck enclosure is only required during cold weather conditions. The balance of this section is a little ambiguous if required otherwise.
 - Response: A moveable bridge deck hoarding is required during all cold weather conditions as well as during summer conditions if the deck pour is conducted outside of the time stated in Clause 1.10.3. The definition of cold weather concrete as well as the requirements for the enclosure, including heating requirements has been refined to remove any ambiguity. See revisions above.

END OF ADDENDUM NO. 8