

Part 1 General

1.1 REFERENCES

- .1 Ministry of Transportation, Ontario (MTO)
 - .1 Ontario Traffic Manual, Book 7: Temporary Conditions
 - .2 Ontario Traffic Manual, Book 12: Traffic Signals
- .2 Transportation Association of Canada (TAC)
 - .1 Manual of Uniform Traffic Control Devices for Canada, Fourth Edition (MUTCD) - 1998.
- .3 Ministère des Transports du Québec (MTQ)
 - .1 Tome V – Signalisation routière, de la collection Normes – Ouvrages routiers;
 - .2 Cahier des charges et devis généraux (CCDG), Chapitre 10 – Organisation de chantier, locaux de chantier, maintien de la circulation et signalisation et protection de l'environnement

1.2 REGULATIONS

- .1 At the north approach of the bridge (on the Gatineau side), all work associated to traffic control must be in accordance with the requirements of Tome V – Signalisation routière, de la collection Normes – Ouvrages routiers du Ministère des Transports du Québec.
- .2 At the south approach of the bridge (on the Ottawa side), traffic control must be in accordance with the Ontario Traffic Manual of the Ministry of Transportation of Ontario.

1.3 SUBMITTALS

- .1 Submittals in accordance with Section 01 33 00 – Submittal Procedures.
- .2 Prior to the first project meeting:
 - .1 Appoint the person responsible for traffic control and provide his name to the Departmental Representative. This person thereby becomes the only authorized representative to install and modify traffic control;
 - .2 Appoint the site manager and provide his name to the Departmental Representative. This manager is a person responsible for determining the methods of execution and work planning;
 - .3 Appoint its subcontractor or its own specialized staff in traffic control, which thereby becomes the only entity assigned to traffic control;
 - .4 Provide a list of all personnel assigned to the traffic control and traffic maintenance and a copy of the certificates of completion of the required training.
- .3 Prepare and submit a Traffic Control Plan (TCP), signed and sealed by a Professional Engineer, registered or licensed in the Provinces of Ontario and Quebec. The Traffic Control Plan must be approved by the Departmental Representative before the Contractor can mobilise on site.

- .4 Detail the specific traffic control layout necessary for the completion of the works in the TCP including vehicular, pedestrian and cyclist movement, required to allow the Contractor to fulfill all conditions of the Contract taking into account the organized, systematic safe conduct of the project and to meet the requirements of the Contract. This includes, as applicable, detours, staging sequences, work, public and emergency vehicles access and egress, public access and separation from hazardous areas, temporary concrete barriers and fences, removal of existing pavement markings and the selection of the appropriate typical layouts and devices necessary for traffic control.
- .5 The TCP to include, and not necessarily be limited to:
 - .1 Monitoring and repair;
 - .2 Traffic control signs (regulatory, warning and temporary);
 - .3 Traffic control delineation;
 - .4 Traffic control vehicles and devices including two Portable Variable Message Signs (PVMS);
 - .5 Flag persons;
 - .6 Contract specific work restrictions including operational constraints;
 - .7 Lanes closures and detours;
 - .8 Night time requirements;
 - .9 Traffic staging and scheduling;
 - .10 Construction vehicle access and egress;
 - .11 Public access and egress;
 - .12 Pedestrian, cyclist and vehicular safety including barriers, temporary concrete barriers and barricades;
 - .13 Emergency Vehicle Access; and
 - .14 Any other traffic control measures
- .6 The TCP must include a clear and detailed procedure for implementing, managing and maintaining the operation, opening and closing of the pedestrian and vehicular traffic lanes on the bridge within the constraints specified in the contract documents. All required traffic control phases must be included in the TCP including all appropriate signage and public notices with the use of two portable variable message signs (one at each approach).
- .7 The Departmental Representative will receive the submission of the TCP and review it to identify any errors, omissions, or improvements as it relates to maintaining public safety and mobility.
- .8 The review of the TCP by the Departmental Representative will make no representation that the document is accurate, complete or compliant with all applicable legislation. Any errors, omissions or deficiencies within the TCP will remain the sole responsibility of the Contractor. Do not commence the contract until the Departmental Representative has reviewed the TCP to the satisfaction of the Departmental Representative and the Contractor has satisfactorily addressed all the comments.

1.4 PROTECTION OF PUBLIC TRAFFIC

- .1 Comply with requirements of Acts, Regulations and By-Laws in force for regulation of traffic or use of roadways upon or over which it is necessary to carry out Work or haul materials or equipment.
- .2 When working on travelled way:
 - .1 Place equipment in position to minimize interference and hazard to travelling public.
 - .2 Keep equipment units as close together as working conditions permit and preferably on same side of travelled way.
 - .3 Do not leave equipment on travelled way overnight.
- .3 Do not close any traffic lanes without the written approval of the Departmental Representative.
 - .1 Before re-routing traffic erect suitable signs and devices in accordance with the Traffic Control Plan and references of Paragraph 1.2.
- .4 Keep roads graded, free of pot holes and of sufficient width for required number of lanes of traffic.
 - .1 Provide minimum 3.2 m wide lanes for traffic in two-way sections through Work and on detours.
 - .2 Provide minimum 3.2 m wide lane for traffic in one-way sections through Work and on detours.
- .5 Provide and maintain road access and egress to property fronting along Work under Contract and in other areas as indicated, except where other means of road access exist that meet approval of Departmental Representative.
- .6 At the end of construction, re-establish the right-of-way to its previous state.
- .7 Refer to Section 01 14 00 – Work Restrictions for additional obligations regarding protection of traffic and pedestrians.

1.5 INFORMATIONAL AND WARNING DEVICES

- .1 Supply, install and maintain signs and other devices required to indicate construction activities or other temporary and unusual conditions resulting from Project Work which requires road user response as per the Traffic Control Plan and in accordance with the references mentioned in Paragraph 1.2.
- .2 Supply and erect signs, delineators, barricades and miscellaneous warning devices as per the Traffic Control Plan and in accordance with the references mentioned in Paragraph 1.2.
- .3 Supply, install and maintain two portable variable message signs (PVMS) as indicated.
- .4 Meet with Departmental Representative prior to commencement of Work to prepare list of signs and other devices required for project. If situation on site changes, revise list to approval of Departmental Representative.
- .5 Continually maintain traffic control devices in use:

- .1 Check signs daily for legibility, damage, suitability and location. Clean, repair or replace to ensure clarity and reflectance.
- .2 Remove or cover signs which do not apply to conditions existing from day to day.
- .6 According to the Traffic Control Plan, provide and install complementary road signs for detours, roadwork pre-signalisation, optional routes, etc.
- .7 In Quebec, all signs must be on steel posts.

1.6 CONTROL OF PUBLIC TRAFFIC

- .1 Provide competent flag personnel, trained in accordance with, and properly equipped to the references mentioned in Paragraph 1.2, for situations as follows:
 - .1 When public traffic is required to pass working vehicles or equipment that block all or part of travelled roadway.
 - .2 When it is necessary to institute one-way traffic system through construction area or other blockage where traffic volumes are heavy, approach speeds are high and traffic signal system is not in use.
 - .3 When workmen or equipment are employed on travelled way over brow of hills, around sharp curves or at other locations where oncoming traffic would not otherwise have adequate warning.
 - .4 Where temporary protection is required while other traffic control devices are being erected or taken down.
 - .5 For emergency protection when other traffic control devices are not readily available.
 - .6 In situations where complete protection for workers, working equipment and public traffic is not provided by other traffic control devices.
 - .7 Public traffic must not be interrupted because of work outside of the time constraints specified in the contract documents.

1.7 OPERATIONAL REQUIREMENTS

- .1 Maintain vehicular, pedestrian and cyclist traffic in accordance with the Contract Drawings and Documents. Maintain existing conditions for traffic throughout period of contract except that, when required for construction under contract and when measures have been taken in accordance with the Traffic Control Plan and as approved by Departmental Representative to protect and control public traffic.
- .2 Refer to Section 01 14 00 Work Restrictions, for restrictions associated to the required closures/partial closures of the center lane and east lane on the bridge.
- .3 Refer to Section 01 14 00 Work Restrictions, for restrictions associated to partial closures of the pedestrian and cycling.

Part 2 Products

2.1 PORTABLE VARIABLE MESSAGE SIGNS (PVMS)

- .1 The portable variable message signs provided by the Contractor must comply with the following requirements:
 - .1 Can be moved easily;
 - .2 Permit the display of three lines with a minimum of twelve characters;
 - .3 Have a telecommunication system permitting a distance modification of display messages from the same software for all the variable message signs provided in the contract;
 - .4 Have a communication protocol compatible with NTCIP standards; and
 - .5 Be solar-powered.

Part 3 Execution

3.1 TRAFFIC CONTROL

- .1 Ensure that all workers, including sub- contractors, in the work area are aware of the importance of the Traffic Control Plan measures.
- .2 The condition of all traffic control devices must be maintained for the duration of the contract.
- .3 Immediately repair, replace or otherwise make good the practice deemed unsafe or non-compliant when the Departmental Representative identifies any violation of the Traffic Control Plan (or applicable regulations).
- .4 Review and modify the Traffic Control Plan for errors, omissions, deficiencies, or because of any new hazards that are identified and have not been previously addressed in the Plan.
- .5 It is the responsibility of the Contractor to ensure that all necessary training has been provided prior to commencement of the work.

END OF SECTION