

Certificate Form

Certificate Ref. No 285380-03-129-0009 Rev 0

INDEPENDENT STRUCTURAL DESIGN CHECK CERTIFICATE

Defined terms and expressions used in this Certificate have the same meanings given in the agreement between HMQ and Project Co dated December 15, 2010 ("the Project Agreement") relating to the Project.

Form of certificate to be used by the Checking Team for certifying the design of structures incorporated in the Parkway, in accordance with Part 2 of the Design and Construction Specifications to the Project Agreement.

- 1) We certify that we have the requisite professional qualifications, skill and experience to perform an independent check of the Design Data referred to herein in accordance with the requirements of the Project Agreement.
- 2) We certify that we have performed an independent check (as required by the Project Agreement for significant and complex Structures) of the Design Data for **Hwy 3 Underpass Near Montgomery (Bridge B11) Substructure** listed in the Schedule hereto and utilizing the standards of care, skill and diligence that, in accordance with the standards of our profession, are required of experienced professionals undertaking such an independent check, and that in our professional opinion:
 - i) the said Design Data meets performance expectations outlined in the Project Agreement, [including Technical Appraisal Form] No. **285380-03-127-0010** dated **20 March 2012**, as amended by the following:
 - [List, if any, the changes made and any addenda to the foregoing Technical Appraisal Form]; and
 - ii) the design, methodologies and assumptions are consistent with Good Industry Practice.



SCHEDULE

DOCUMENTS

Document No.	Description	Rev	Date
285380-03-127-0010	Technical Appraisal Form - HWY 3 Underpass Near Montgomery	0	20/03/12
285380-04-119-0027	Geotechnical Investigation and Design Report Bridge B-11 (Hwy 3 Underpass East of Montgomery Drive)	0	03/04/12
285380-03-109-0001	Structural Design Criteria – Seismic Design Guidelines	0	19/07/11
285380-03-109-0002	Structural Design Criteria – Structures Design Criteria	1	10/08/11
285380-03-109-0003	Structural Design Criteria – Structural Design Check Process	0	19/07/11

DRAWINGS

Drawing No.	Description	Rev	Date
S1100	Cover Sheet		23/03/12
S1101	General Arrangement	0	20/03/12
S1102	Borehole Locations and Soil Strata	0	20/03/12
S1103	Soil Stratigraphy	0	20/03/12
S1104	North Side – Foundation Layout I	0	20/03/12
S1105	North Side – Foundation Layout II	0	20/03/12
S1106	South Side – Foundation Layout I	0	20/03/12
S1107	South Side – Foundation Layout II	0	20/03/12
S1108	Abutment Excavation and Backfill Details	0	20/03/12
S1109	NW – Abutment Layout I	0	20/03/12
S1110	NE – Abutment Layout II	0	20/03/12
S1111	SW – Abutment Layout III	0	20/03/12
S1112	SE – Abutment Layout IV	0	20/03/12
S1113	NW – Abutment Reinforcement I	0	20/03/12
S1114	NE – Abutment Reinforcement II	0	20/03/12

Drawing No.	Description	Rev	Date
S1115	SW – Abutment Reinforcement III	0	20/03/12
S1116	SE – Abutment Reinforcement IV	0	20/03/12
S1117	North Side – Wingwall Layout and Reinforcement	0	20/03/12
S1118	South Side – Wingwall Layout and Reinforcement	0	20/03/12
S1119	West Side RSS Walls Layout	0	20/03/12
S1120	East Side RSS Walls Layout	0	20/03/12
S1121	North Side – Pier Reinforcement	0	20/03/12
S1122	South Side – Pier Reinforcement	0	20/03/12
S1123	North Side – Bearings Layout and Details	0	20/03/12
S1124	South Side – Bearings Layout and Details	0	20/03/12
S1150	Modular Expansion Joint with Injection Hose	0	20/03/12
S1151	Modular Expansion Joint I	0	20/03/12
S1152	Modular Expansion Joint II	0	20/03/12
S1153	Barrier Wall Layout	0	20/03/12
S1154	Barrier Wall w/o Railing –PL3 – GFRP Rebar w/ Anchor Head	0	20/03/12
S1155	6000 mm Approach Slab	0	20/03/12
S1156	Details of Concrete Slope Paving	0	20/03/12
S1157	Standard Details	0	20/03/12
S1158	Embedded Electrical Work	0	20/03/12
S1160	Construction Notes – Backfill at Structures	0	20/03/12
S1161	Construction Notes- Lightweight Fill Material	0	20/03/12
S1162	Construction Notes – Not in Use	0	20/03/12

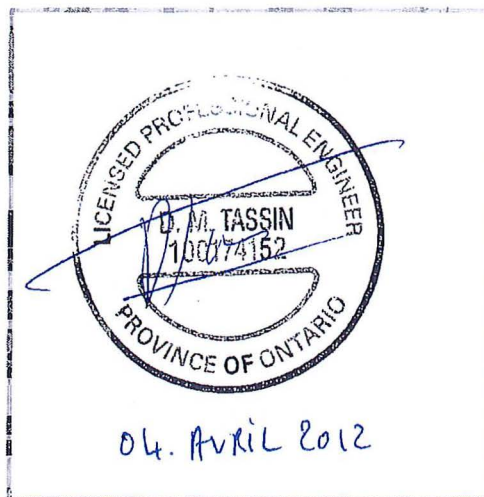
Signed: 

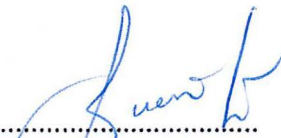
Checking Team (Principal)

Name: Daniel Tassin

Date: 04. April 2012

Professional Registration Number: 100174152



Signed: 

Project Co Representative

Name: 100174152 LASSA

Date: Apr 25, 2012