

SCHEDULE 3

OF BYLAW 7900

CITY OF KELOWNA

QUALITY CONTROL AND ASSURANCE

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BL12066 amended:

This Schedule sets out the City's minimum standards for quality in design, quality in construction and quality in record-keeping for the Works and Services to be designed and constructed in accordance with this bylaw. Professional Engineers shall fulfill their obligations under the Engineers and Geoscientists Act and the Engineers and Geoscientists of British Columbia's Quality Management Guidelines.

Minimum design standards are set out in the City of Kelowna Design Standards, attached as Schedule 4 of this Bylaw. Schedule 6, the Master Municipal Construction Specifications together with the Kelowna Supplement to those Specifications, Schedule 5, the City of Kelowna Construction Standards, set out the standards under which the quality of the Works and Services shall be measured and tested.

ENGINEERING REQUIREMENTS

1. The Owner shall demonstrate to the satisfaction of the City Engineer that the Owner has or shall retain the services of one Consulting Engineer to undertake the design, inspection, testing and record-keeping for the Works and Services.
2. The Owner shall complete and provide the City Engineer with the following information in the Owner/Consulting Engineering confirmation letter to demonstrate that its Consulting Engineer is qualified to undertake the Works and Services and more particularly, that it has successfully undertaken projects similar in scope, nature and value to the Works and Services:
 - (a) the name and address of its Consulting Engineer and a summary of the projects that the Consulting Engineer has undertaken that are similar in scope, nature and value to the Works and Services.
 - (b) the names of the individuals assigned to various aspects of the project by the Consulting Engineer together with a summary of the projects that the individual engineers have undertaken that are similar in scope, nature and value to the Works and Services.
 - (c) the names and the curriculum vitae for the person(s) that the Consulting Engineer proposes/has retained to undertake the inspections and testing on its behalf during the construction of the Works and Services together with a summary of the projects that the person(s) has Completed that are similar in scope, nature and value to the Works and Services.
 - (d) the names and addresses of all sub-consultants that the Consulting Engineer has/proposes to retain and a summary of the projects that the sub-consultants have Completed that are similar in scope, nature and value to the Works and Services.
3. The Owner shall ensure that its Consulting Engineer designs all Works and Services in accordance with this bylaw.
4. The Owner shall also confirm that the Consulting Engineer will provide the Design, Construction and Record-keeping Quality Control and Assurance Plans described herein. A copy of the agreement shall be filed with the City Engineer.

CONSTRUCTION REQUIREMENTS

1. The Owner shall demonstrate that to the satisfaction of the City Engineer that the Owner has or shall retain the services of one or more qualified Contractors to undertake the construction of the Works and Services. The Owner shall provide the City with the name and address of its Contractor(s) together with a summary of the projects that the Contractor(s) has undertaken that are similar in scope, nature and value to the Works prior to awarding the contract(s) to the Contractor.

In the case where the Contractor has not performed similar Works and Services in the City of Kelowna, the City may require that the Owner to provide a list of projects and references from other municipalities that demonstrates that the Contractor(s) is qualified to undertake the Works and Services.

2. The Owner shall ensure that its Contractor(s) constructs the Works and Services in accordance with the design, drawings, plans and specifications approved for construction by the City Engineer.

QUALITY CONTROL AND ASSURANCE PLANS

Design Quality Control and Assurance Plan

1. The Owner shall submit or cause its Consulting Engineer to submit a Design Quality Control and Assurance Plan to the City Engineer for approval at the time of submitting the first design drawing to the City.
2. The Owner's proposed Design Quality Control and Assurance Plan must detail the procedures that will be used to ensure and verify that the design for the Works and Services, including all plans, drawings and specifications, shall be Completed in accordance with the minimum design standards set out in this bylaw.
3. In the case of design items related to pump stations, structures, structural fills, geotechnical or hydro-geotechnical items or any item not described in Schedule 4, the Design Quality Control and Assurance Plan shall show such specialist and/or sub-consultants with suitable experience in these works.

Construction Quality Control and Assurance Plan

1. The Owner shall submit or cause its Consulting Engineer to submit a Construction Quality Control and Assurance Plan to the City Engineer at the time of submitting the first design drawing to the City.
2. The Owner's proposed Construction Quality Control and Assurance Plan must detail the procedures that will be used to ensure and verify that the Works and Services shall be constructed in accordance with the Consulting Engineer's design, plans, drawings and specifications. The Construction Quality Control and Assurance Plan must include:
 - (a) A proposed Construction Schedule showing milestone dates and the dates of Substantial and Total Performance of the Works and Services.

- (b) The nature and frequency (periodic or full-time resident) of the proposed site inspections during construction to ensure that all Works and Services constructed satisfy the intent of the design and conform with the drawings, plans and specifications.
- (c) The nature and frequency of the proposed field and laboratory testing requirements for the Works and Services including what materials and equipment are to be tested, what types of tests will be performed and when these tests are to take place.
- (d) Such information as the City Engineer may stipulate from time to time.

Record-keeping Quality Control and Assurance Plan

1. The Owner shall submit or cause its Consulting Engineer to submit a Record-keeping Quality Control and Assurance Plan to the City Engineer for approval at the time of submitting the first design drawing to the City.
2. The Owner's proposed Record-keeping Quality Control and Assurance Plan must detail the procedures that will be used to ensure and verify that proper records will be kept and maintained throughout the design, construction and warranty phases of the Development. The Record-keeping Quality and Assurance Control Plan must ensure that the following records are kept as a minimum:
 - (a) Quality Manual and Standards.
 - (b) Details of any field design or construction changes to the drawings, plans and specifications to which changes are approved in writing by the City Engineer.
 - (c) Deficiency Identification Forms (Items of the Works that are either not supplied or constructed in accordance with the design (drawings, plans and specifications) or that require remedial or corrective action).
 - (d) Deficiency Disposition/Verification Forms (List of the foregoing Items of the Works that have been corrected).
 - (e) Inspection and Test Records.
 - (f) Field measurement records of Works and Services Completed that have been used by the Consulting Engineer to accurately prepare reproducible as-built drawings that are filed with the City.
3. Notwithstanding the generality of the foregoing, the Owner shall ensure that its Consulting Engineer provides the City Engineer with the following at the times and in the manner set out below:
 - (a) Certification prior to paving that it has inspected those items of the Works and Services that are below areas to be paved such as roads, walkways, driveways and parking lots, and that same comply with the design (drawings, plans and specifications). Such certification shall be accompanied by all test and inspection reports and by video tapes and reports on pipe lines.

- (b) Certification prior to acceptance by the City that surface works including paving, drainage, curbs and gutters, sidewalks, Street lights, etc. have been constructed in accordance with the design (drawings, plans and specifications).