RFP SCHEDULE 3, PART 2

TECHNICAL SUBMISSION REQUIREMENTS

A1. TECHNICAL SUBMISSION

A1.1 The Proponent's Technical Submission must provide sufficient information to reasonably demonstrate to the City that the Proponent can meet the responsibilities and obligations of Design Builder as set out in the Design Build Agreement.

A1.2 Proponents will have their Technical Submission evaluated in accordance with the evaluation process described in Section A3 and the evaluation criteria in Section A4.

A1.3 The Proponent's Technical Submission should be organized in accordance with the sequence and numbering of subjects and sub-headings described in Section A4.

A2. TECHNICAL SUBMISSION GUIDELINES

A2.1 The Proponent's Technical Submission shall be prepared on the basis of the version of the Final Draft Design Build Agreement most recently issued by addendum prior to the Technical Submission Deadline.

A2.2 Where drawings are to be provided, the Proponent may provide combined drawings to provide the information for more than one requirement with the appropriate references in each section. Proponents should provide a drawing index clearly identifying which Proposal requirement is met on which drawing.

A2.3 Drawings should be prepared utilizing the standards included in and referenced by the Technical Requirements.

A2.4 The Proponent's Technical Submission should include a table of contents for all parts of the Technical Submission.

A3. TECHNICAL EVALUATION PROCESS

A3.1 For the Technical Submission, the maximum points available, and their evaluation criteria for each separate submission requirement are given in the tables in Section A4.

A3.2 Evaluation scoring: Generally, scoring against the evaluation criteria will be done a 0 to 5 scale. The scoring criteria is as follows:

Score*	Scoring Criteria
0	Not Submitted.
1	Incomplete submission or inadequate submission not allowing for full evaluation. When evaluated against the Evaluation Criteria, the submission does not meet the Technical Requirements. Material deficiencies noted.

Score*	Scoring Criteria
2	Submission is complete. When evaluated against the Evaluation Criteria, the submission does not meet, or can only partially meet, the Technical Requirements. Material deficiencies noted.
3	Submission is complete. When evaluated against the Evaluation Criteria, the submission can mostly meet the Technical Requirements. Only non-material deficiencies noted.
4	Submission is complete. When evaluated against the Evaluation Criteria, the submission fully meets the Technical Requirements. No deficiencies noted.
5	Submission is complete. When evaluated against the Evaluation Criteria, the submission exceeds the Technical Requirements and provides additional benefit to the City. No deficiencies or only non-material deficiencies noted. Any of the noted deficiencies are mitigated by innovations or enhancements in the submission.

**Quarter-points can be scored (e.g. 3.25, 3.5, 3.75)*

A3.3 The scoring for the Evaluation Categories will be as follows:

(a) for the Design Report and Drawings Evaluation Categories (except for the General section) each separate section, a score of 0 to 5 will be given for each of the evaluation criteria listed in the table in Section A4.3 with how well it meets those evaluation criteria. Each section can have up to 7 separate criteria. The score ratio (e.g. if 7 criteria apply, then score ratio is out of 35) is multiplied by the maximum possible points to calculate the points contribution for that section (rounded to one decimal place). These are summed for each section to determine the points contribution for the Design Report and Drawings:

(i) For example: Civil has a maximum value of 147.0 points. The evaluation determined that the submitted section for Civil scored as follows:

Evaluation Criteria (As in Table in A4.3)

Long-term operability and maintainability:	*3 / 5*
Minimization of life-cycle costs:	*3.75 / 5*
Plant staff health and safety:	*4.25 / 5*
Plant reliability and redundancy:	*3.5 / 5*
Constructability of the Works:	*3.5 / 5*
Continuing operability of the existing NEWPCC facilities during construction:	*4 / 5*
General conformance with Technical Requirements	*3.5 / 5*
Total Score:	*25.5 / 35*

Therefore, the points contribution would be:

25.5 / 35 x 147.0 = 107.1 Points;

(b) for all other Evaluation Categories (Management Systems and Plans, Project Schedule, and the General section in Design Report and Drawings): A score of 0 to 5 will be given for each separate submission in accordance with how well it compares against the evaluation criteria listed in the table in Section A4.1. The score ratio out of 5 is multiplied by the maximum possible points to calculate the points contribution for that submission (rounded to one decimal place). These are summed for each submission to determine the total points contribution for the Evaluation Category.

(i) For example: The Construction Quality Management Plan in Management Systems and Plans has a maximum value of 24.5 points. The evaluation determined that the submitted Construction Quality Management Plan scored 3.5 out of 5. Therefore, the points contribution would be:

3.5 / 5 x 24.5 = 17.2 Points.

A3.4 Once the evaluation scoring is complete, the points for each Evaluation Category are summed. Proposals which achieve the passing threshold for the evaluation of the Technical Submission as indicated in Section A7.4 of Part 1 of this Schedule 3 will continue to the Financial Evaluation.

A4. TECHNICAL SUBMISSION REQUIREMENTS AND EVALUATION CRITERIA

A4.1 Management Systems and Plans:

(a) Proponents are required to submit their proposed summary approach for each plan as indicated herein for evaluation with regard to Technical Requirements. As a minimum, Proponents should include the purpose and objectives, organizational roles and responsibilities, and key components in their summary approach to each plan in their Technical Proposal. The summary approach for each plan, which may include a chart or table, as applicable should not exceed the designated page limit. These summary approaches for the selected Design Builder will be extracted from the Technical Submission and will be included in DBA Schedule 4 – Management Systems and Plans.

(b) Each submission item provided in the Technical Submission within this section should be a separate document.

(c) The combined page count for the Management System and Plans should not exceed 50 pages. Cover pages, indexes, organizational charts, schedules and drawings do not count in the page limit.

Submission Requirements	Evaluation Criteria	Maximum Points
1.0 Management System and Plans		**70.0**
1.1 Project Management Plan		
Proponents should provide a Project Management Plan that includes: A. description of the overarching integration management methodology including the process for measuring and improving the overall performance of implementation; and B. description of how the Project will be executed, monitored and controlled and closed.	1. Demonstrates a strong understanding of the Project's requirements as reflected in the Proponent's team structure, organization and processes; and 2. Demonstrates the proposed Project Management Plan meets or exceeds the requirements set out in Schedule 18 of the Design Build Agreement.	7.0
1.2 Construction Quality Management Plan		
The Construction Quality Management Plan should include the following requirements: A. sets out procedures to ensure the entire project	1. Demonstrates a clear and complete understanding of the scope of the Quality Management System for construction as set	24.5

Submission Requirements	Evaluation Criteria	Maximum Points
scope of work is completed; B. sets out a methodology to verify compliance of the construction, including all materials, equipment, products and workmanship, with the IFC Documents and Final Design including verification of buried or hidden infrastructure prior to cover up; C. sets out a methodology to track, audit and verify changes to the design during construction to ensure that all design changes are reviewed and accepted by designers and have been communicated with the City; D. sets out a methodology to ensure received equipment and materials matches approved shop drawings and is stored according to manufacturer's or supplier's recommendations; E. sets out methodology to ensure that installed infrastructure, survey information, and construction information is tracked, audited and verified and incorporated into the As-Built Construction Drawings and Record Drawings; F. provides the Inspection and Testing Plan that: i. defines types and frequency of quality control inspections and testing to be performed during the execution of the work, to verify compliance with design documents; ii. defines types and frequency of quality assurance inspection and testing to be performed during the execution of the work to verify the performance of the quality control program; and iii. defines the role of the designers to perform	out in Schedule 18 of the Design Build Agreement; 2. Demonstrates that the Proponent has an effective Quality Management System for construction in place; 3. Demonstrates that the Proponent has the tools and capability to deliver compliance monitoring results to the City; 4. Demonstrates a clear process for issue identification and resolution; 5. Demonstrates that the Proponent has the necessary inspection tools, techniques and protocols to perform construction inspections; 6. Demonstrates the proposed Construction Quality Management Plan meets or exceeds the requirements set out in Schedule 18 of the Design Build Agreement; and 7. Demonstrates that the Proponent has the tools and capability to manage the documentation for the Project.	

Submission Requirements	Evaluation Criteria	Maximum Points
inspections during construction to confirm design conformance; and G. details the testing and acceptance program for all construction materials, products, equipment and systems, including the following: i. importance of construction quality, including material and equipment testing and inspections, testing and inspection frequencies, quality reference standards, product acceptance and rejection criteria; ii. procedures for corrective action when quality control or acceptance criteria are not met; iii. procedures for conducting inspections and, where required, obtaining relevant Permits, Licences and Approvals; iv. procedures for inspection during fabrication, factory acceptance testing, release to Design Builder, and site acceptance testing; v. procedures for other inspections and, where required, receipt of the relevant permits; vi. roles and responsibilities of Design Builder's staff and the Independent Quality Certifier in the quality control and quality assurance processes; and vii. identifies outstanding deficiencies and non-conformances and tracks, audits and verifies closure of each.		

Submission Requirements	Evaluation Criteria	Maximum Points
1.3 Document Management Plan		
Proponents should provide a Document Management Plan that includes: A. a description of Design Builder's DMS software and its processes to access, view, organize, store, track, communicate and submit Documents and Project documentation; B. the strategy for ensuring that all Documents are submitted in accordance with DBA Schedule 13 – Document Management System, including acknowledgement that the City has no responsibilities or obligations for Documents that do not follow this submission protocol; C. DMS Team requirements as set out in DBA Schedule 18 - Technical Requirements; D. the processes for Design Builder's DMS operations within Design Builder Parties; E. the processes for Design Builder's DMS operations with the City, including: i. a communication protocol with the City DMS Team and City Representative; ii. set up and ongoing provision of access for City DMS Team and City Party users; iii. procedure for submission of Documents; and iv. procedure for notification of Documents; F. the strategy to ensure data backups and DMS operations are maintained during Design Builder system outages; and	1. Demonstrates efficient practices that are supportive of the City's document control system; 2. Demonstrates a high level of clarity with respect to the defined roles and responsibilities for the DMS Team; 3. Demonstrates a strong understanding of the required processes for an effective DMS to ensure timely submission of Documents; and 4. Demonstrates the proposed Document Management Plan meets or exceeds the requirements set out in Schedule 18 of the Design Build Agreement.	10.5

Submission Requirements	Evaluation Criteria	Maximum Points
G. delivery of City DMS Team and City Party user training as set out in DBA Schedule 13 – Document Management System.		
1.4 Design Management Plan		
Proponents should provide a Design Management Plan that includes: A. an organization chart, including identification of all Design Team members, key discipline design leads on the Project and the Professional of Record for each discipline; B. a definition and explanation of the roles and responsibilities within Design Builder's team for performing the design work including members of the core Design Team and locally based staff and other Design Builder Parties involved in carrying out the Design; and C. a description of the progressive phases of the design, including the Design Phases.	1. Demonstrates a strong understanding of the requirements for the design; and 2. Demonstrates the proposed Design Management Plan meets or exceeds the requirements set out in Schedule 18 of the Design Build Agreement.	7.0
1.5 Construction Management Plan		
Proponents should provide a Construction Management Plan that includes: A. communication protocols and procedures for the integration of the design and construction processes; B. plans and procedures to manage construction access routes for construction traffic and equipment and material deliveries during construction; C. plans and procedures to manage the stockpiling	1. Demonstrates effective practices for managing the construction of the Infrastructure; 2. Demonstrates effective communication coordination during construction between Proponent Team Members and with the City; 3. Demonstrates strong understanding of seasonal construction constraints; 4. Demonstrates of the physical constraints of the	14.0

Submission Requirements	Evaluation Criteria	Maximum Points
and hauling off-site of excavated material; D. plans and procedures for construction in physically congested areas; and E. plans and procedures to ensure proper workmanship and maintain quality for construction activities performed during winter months.	construction site; and 5. Demonstrates the proposed Construction Management Plan meets or exceeds the requirements set out in Schedule 18 of the Design Build Agreement.	
1.6 Community Impact Mitigation Management Plan		
Proponents should provide a Community Impact Mitigation Management Plan that includes: A. clearly identifying activities that may impact the public, including a description of the nature, timing and extent of the effect, and the steps Design Builder intends to take to minimize the extents and impacts of such effects; and B. approach for street cleaning.	1. Demonstrates the Proponent has a clear understanding of the issues the Project raises with the surrounding community; and 2. Demonstrates the proposed Community Impact Mitigation Management Plan meets or exceeds the requirements set out in Schedule 18 of the Design Build Agreement.	7.0

A4.2 Project Schedule:

(a) Project schedule as described below and in accordance with DBA Schedule 18, Section B.4.2;

(b) each submission item provided in the Technical Proposal within this section should be a separate document; and

(c) the combined page count for the Project Schedule narrative should not exceed 30 pages. Cover pages, indexes, organizational charts, schedules and drawings do not count in the page limit.

Submission Requirements	Evaluation Criteria	Maximum Points
2.0 Project Schedule		**140.0**
2.1 Project Schedule and Narrative		
Proponents shall provide both a Project Schedule in Gantt chart format along with a detailed narrative. The narrative should provide commentaries explaining the appropriateness of the Project Schedule and supporting the rationale of the Project Schedule. Proponents should provide a Project Schedule that shows a detailed schedule to include, as a minimum, start and completion dates for the following: A. commencement date; B. Milestones dates; C. Scheduled Substantial Completion date; D. Scheduled Final Completion date; E. site studies and investigation activities; F. major design activities; G. Permits, Licences and Approvals dates; H. submission and review dates for Design Builder's Management Systems and Plans;	1. Demonstrates that the Project Schedule has a complete detailed scope including all key tasks and milestones related to the major components identified in Schedule 18 of the Design Build Agreement; 2. Demonstrates a strong understanding of the required design services, construction activities, commissioning activities and close-out activities; 3. Demonstrates sufficient time is allotted for design reviews by the City in its Submittal schedule; 4. Demonstrates a strong understanding of the range of Permits, Licences and Approvals required and their impact on sequencing; 5. Demonstrates a strong understanding of sequencing, phasing and timing of major activities and key milestones;	140.0

I. submission of Design Submittal packages for City review, in accordance with Schedule 5 – Review Procedure; J. HAZOP workshops; K. asset criticality workshop; L. computer and physical modeling activities; M. mobilization activities; N. procurement activities for major equipment and materials, including key dates for purchase and delivery of major equipment and material items; O. construction activities sequencing as well as start and completion dates; P. interfaces and tie-ins with existing plant facilities together with planned plant shutdowns; and Q. Functional, Systems Operational, and Performance Testing including start and completion dates for each major system, process, and Infrastructure. The Project Schedule shall be prepared in critical path method format and clearly indicate the anticipated critical path(s) for the Project. The Work Breakdown Structure, or WBS, provided in the Project Schedule shall clearly identify major and minor work activities required to complete the Works. The WBS shall include all activities required for the Works and, at a minimum, include the Scheduled Substantial Completion Date, Scheduled Final Completion Date, and all defined Milestones. Project Schedule shall be in provided in native electronic format and in legible hard copy format printed on suitable size paper (multiple sheets are acceptable).	6. Demonstrates a strong understanding of seasonal construction constraints; 7. Demonstrates a strong understanding of a realistic critical path; and 8. Demonstrates the proposed Project Schedule meets or exceeds the requirements set out in Schedule 18 of the Design Build Agreement.	

A4.3 Design Report and Drawings Submission:

(a) a written narrative and any supporting graphics to clearly indicate the Proponent's approach to develop the Project design and demonstrate that the design meets or exceeds Schedule 18 of the Design Build Agreement. Individual process systems, components/ facilities and Project -wide systems shall be addressed as set out below.

(b) where appropriate, the Design Report should reference the Proponent's Technical Proposal Drawings.

(c) the Design Report should not exceed 300 pages (including any appendices). Cover pages, indexes, and Drawings do not count in the page limit.

(d) drawings should illustrate the design approach of the Works. All drawings should be in native A1 size and reduced to true half-scale 11x17 format. Drawings shall be submitted with a complete drawing index in a roll on a ring so they can be detached individually.

Submission Requirements	Evaluation Criteria	Maximum Points
3.0 Design Report and Drawings		**490**
3.1 General		
Design Report A. Project background, description and objectives B. Summary of anticipated Permits, Licenses and Approvals C. Summary of wastewater flows D. Preliminary design for safety requirements E. Preliminary design for operations and maintenance requirements F. Preliminary design for reuse of existing infrastructure and decommissioning **Design Drawings** A. Cover sheet B. Drawing Index (including sortable and searchable spreadsheet file) C. Legends, abbreviations, general notes for each discipline	1. Demonstrates a clear understanding of the project scope through report narrative; 2. Demonstrates a strong understanding of the range of Permits, Licences and Approvals required; and 3. Demonstrates a strong understanding of the major project risks.	24.5
3.2 Architectural		
Design Report A. Preliminary space requirements for buildings and rooms	1. Long-term operability and maintainability. 2. Minimization of life-cycle costs. 3. Plant staff health and safety.	24.5

Submission Requirements	Evaluation Criteria	Maximum Points
B. Preliminary overview of building design including overall look and aesthetics C. Preliminary list of proposed building materials D. Preliminary building envelope analysis **Design Drawings** A. Preliminary 3D renderings of building exteriors B. Preliminary floor plans C. Preliminary building elevations	4. Constructability of the Works. 5. General conformance with Technical Requirements.	
3.3 Geotechnical and Hydrogeological		
Design Report A. Scope of any additional site investigations that will be conducted (if required) B. Preliminary design for pile foundations and raft foundations C. Preliminary design for excavation, shoring and dewatering **Design Drawings** A. Preliminary piling plans B. Preliminary excavation and shoring plans	1. Constructability of the Works. 2. Continuing operability of the existing NEWPCC facilities during construction. 3. General conformance with Technical Requirements.	49.0
3.4 Civil		
Design Report A. Preliminary site layout description B. Preliminary design for roads and parking area	1. Long-term operability and maintainability. 2. Minimization of life-cycle costs. 3. Plant staff health and safety.	147.0

Submission Requirements	Evaluation Criteria	Maximum Points
C. Preliminary land drainage design D. Preliminary underground utility design (water, wastewater and natural gas) E. Preliminary yard piping design including method of pipeline installation (open cut, trenchless techniques); F. Draft Tie-Ins Plan which includes: i. Identification of the tie-ins for yard piping including: (a) interceptors to junction chamber and raw sewage pump station; (b) headworks to primary influent channel; and (c) headworks overflow to outfall; ii. the schedule for the tie-in; iii. the procedure for completing the tie-in, and how it minimizes disruptions to plant operations and ensures conformance with the Environment Act Licence 2684; iv. the duration of plant shutdown required to perform the tie-in; v. an emergency back-up plan in the event that the tie-in procedure is delayed and plant shutdown would have to be extended to complete the tie-in; vi. construction, process upset or operational risks that may result in delaying the tie-in procedure and how these risks will be mitigated or controlled; and	4. Plant reliability and redundancy. 5. Constructability of the Works. 6. Continuing operability of the existing NEWPCC facilities during construction. 7. General conformance with Technical Requirements.	

Submission Requirements	Evaluation Criteria	Maximum Points
vii. safety risks associated with each tie-in procedure and how they will be mitigated or controlled. G. Description of the temporary works including temporary utilities and site offices **Design Drawings** A. Preliminary site layout plan including areas for future expansion and decommissioning areas B. Preliminary site grading plans C. Preliminary roadway and parking lot plans D. Preliminary utility piping plans E. Preliminary overall yard piping plan (major pipes) F. Preliminary temporary works plans (staging areas, site offices and temporary utilities)		
3.5 Structural		
Design Report A. Preliminary design load analysis B. Preliminary design for substructures C. Preliminary design for superstructures D. Preliminary design for water-retaining structures **Design Drawings** A. Preliminary foundation plans B. Preliminary floor plans C. Preliminary roof plans	1. Long-term operability and maintainability. 2. Minimization of life-cycle costs. 3. Plant staff health and safety. 4. Plant reliability and redundancy. 5. Constructability of the Works. 6. General conformance with Technical Requirements.	24.5

Submission Requirements	Evaluation Criteria	Maximum Points
3.6 Process Mechanical		
Design Report A. Overview of process design concept B. Preliminary design for all major processes including equipment sizing C. Preliminary hydraulic analysis for the Infrastructure D. Preliminary design of odour control system E. Statement of Process Performance Guarantee as required by DBA Schedule 18 – Appendix 18R – Process Performance Guarantee for the following parameters: i. Screenings Dry Solids; ii. Grit Dry Solids; and iii. Grit Volatile Solids Content. F. Draft Equipment Lifting and Replacement Plan which includes: i. a summary of the equipment lift and replacement requirements set out in the Technical Requirements ii. a summary of lifting equipment in the Infrastructure (permanent and portable), including location, type, capacity and equipment to be removed/installed iii. locations of removable louvres and panels that will be used to remove (and replace) equipment and a description of procedures and location of cranes and any temporary	1. Long-term operability and maintainability. 2. Minimization of life-cycle costs. 3. Plant staff health and safety. 4. Plant reliability and redundancy. 5. Constructability of the Works. 6. Continuing operability of the existing NEWPCC facilities during construction. 7. General conformance with Technical Requirements.	122.5

Submission Requirements	Evaluation Criteria	Maximum Points
structures that will be required to be erected to facilitate removal and replacement of equipment (in the future) iv. access corridors for equipment lifting and replacement **Design Drawings** A. Preliminary process flow diagram (PFD) B. Preliminary hydraulic profile C. Preliminary piping and instrumentation diagrams (P&IDs) D. Preliminary equipment and piping plans E. Preliminary equipment and piping sections F. Preliminary equipment and piping details		
3.7 Building Mechanical		
Design Report A. Preliminary sizing for major equipment B. Preliminary design for HVAC control C. Preliminary design for building fire protection D. Preliminary design for domestic plumbing **Design Drawings** A. Preliminary Heating flow diagram B. Preliminary Ventilation flow diagram C. Preliminary Plumbing flow diagram	1. Long-term operability and maintainability. 2. Minimization of life-cycle costs. 3. Plant staff health and safety. 4. Plant reliability and redundancy. 5. Constructability of the Works. 6. General conformance with Technical Requirements.	49.0

Submission Requirements	Evaluation Criteria	Maximum Points
D. Preliminary P&IDs E. Preliminary equipment and piping plans F. Preliminary equipment and piping sections G. Preliminary equipment and piping details		
3.8 Electrical		
Design Report A. Preliminary equipment sizing B. Preliminary electrical room sizing C. Preliminary design for Standby Power Generation Facility D. Preliminary design for site lighting E. Preliminary design for grounding and lightning protection system **Design Drawings** A. Preliminary area classification drawings B. Preliminary electrical distribution plan C. Preliminary Grounding and lightning protection system layout D. Preliminary overall single line diagram E. Preliminary site lighting plan	1. Long-term operability and maintainability. 2. Minimization of life-cycle costs. 3. Plant staff health and safety. 4. Plant reliability and redundancy. 5. Constructability of the Works. 6. Continuing operability of the existing NEWPCC facilities during construction. 7. General conformance with Technical Requirements.	24.5
3.9 Automation		
Design Report	1. Long-term operability and maintainability. 2. Minimization of life-cycle costs.	24.5

Submission Requirements	Evaluation Criteria	Maximum Points
A. Preliminary automation requirements for major equipment including datasheet with level of automation and mode of control B. Preliminary design for ancillary systems C. Preliminary design for Main Control Suite **Design Drawings** A. Preliminary network architecture, including fieldbus network; and B. Preliminary automation floor plans	3. Plant staff health and safety. 4. Plant reliability and redundancy. 5. Constructability of the Works. 6. Continuing operability of the existing NEWPCC facilities during construction. 7. General conformance with Technical Requirements.	