THE CORPORATION OF THE CITY OF MARKHAM
101 Town Centre Boulevard
Anthony Roman Centre
Markham, Ontario
L3R 9W3

REQUEST FOR PROPOSAL

220-R-21

CONSULTING SERVICES FOR COMMUNITY CENTRES CARBON NEUTRAL ROADMAPS

CLOSING TIME: **October 13, 2021 @ 3:00:00 p.m. local time**

MANDATORY SITE MEETING: N/A

DOCUMENT PICK-UP

This document is available for purchase at https://markham.bidsandtenders.ca for the non-refundable sum of $50.00 (including H.S.T.).

If you require assistance, please contact 1-800-594-4798 (8:00 a.m. - 5:00 p.m. EST) or support@bidsandtenders.ca.

BID SUBMISSION:

The Corporation of the City of Markham shall **ONLY** accept **ELECTRONIC BID SUBMISSIONS** submitted through the City's Bidding System Website. Bid submissions submitted and/or received by any other method shall be rejected, unless the City has instructed otherwise by published Addendum.

All Bids must be submitted electronically only via the Bidding System, no later than the specified Closing Time. Late Bids will not be accepted by the City's Bidding System.

Bidders are cautioned that the timing of Bid Submission is based on when the Bid is RECEIVED by the Bidding System, not when a Bid is submitted by a Bidder, as Bid transmission can be delayed in an "Internet Traffic Jam" due to file transfer size, transmission speed, etc.

PROCUREMENT REPRESENTATIVE

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NOTE: Bid questions and submissions are to be submitted through the Bidding System.

TABLE OF CONTENT

ATTACHMENTS:

	# of Pages
A. City's General Terms and Conditions	20
B. City's Health and Safety (H&S) Documents	18
C. Contractor's Guide During COVID-19 Pandemic Recovery	38
D. City of Markham Community Centre Building Profiles	1
E. FCM's GHG Reduction Pathway Feasibility Study Guidance Document	32
F. Infrastructure Canada's Green and Inclusive Community Building Applicant Guide	47
G. Related Reference Reports, Programs, and Documents	2

SCHEDULE A – BID FORMS

The following sections of the Bid Form are required to be completed by the Bidder:

Schedule of Prices
- **Credit Card Acceptance**
- **Payment Terms**
- **Bid Price (Excluding Taxes)**
- **Summary Table**

Specifications
- **Bidder Profile**
- **Key Personnel List**

References
- **Bidder Past Experience & Reference**
- **Unresolved Litigation**

Sub-Consultant
- **Relevant Sub-Consultant List**

Declarations

Note: Schedule A above is an electronic section that needs to be inputted on https://markham.bidsandtenders.ca in order to create a Bid Submission. The inclusion of this section in this Bid Document is for preview purposes only.

1. PROJECT DESCRIPTION / SPECIFICATIONS & SCOPE OF WORK

1.1. Overview

The Corporation of the City of Markham (hereinafter referred to as the "City" or the "City of Markham") is soliciting Bids for services of a multi-disciplinary Consulting Team with proven feasibility study and design experience related to net-zero carbon retrofits. The purpose of this project is to study, research, and design an actionable retrofit framework that will create roadmaps for the City's facilities to achieve Net-Zero Energy Emissions ("NZEE") well in advance of the year 2050. NZEE buildings are highly energy efficient with all remaining energy generated from on-site and/or off-site renewable energy sources.

The City set ambitious targets via Markham's Municipal Energy Plan (MEP) to achieve NZEE for the entire community by the year 2050 across all sectors. The goal is for the City to lead the community by example, through the City's assets, towards a sustainable future.

The project goal is to holistically assess existing buildings, and building systems, to identify and provide quantitative and qualitative solutions for the anticipated remediation/retrofit efforts needed to realistically achieve the City's energy and greenhouse gas emission reductions targets.

The project results will include developing an implementation strategy and customized solutions to cost-effectively achieve NZEE via retrofit options such as energy conservation, energy efficiency (including heat recovery), fuel-switching (electrification), on-site renewable energy, and purchasing local renewable energy credits (RECs) for any remaining outstanding energy balance.

1.2. Project Objectives

The primary project objectives are:

- **Retrofit buildings to NZEE** primarily through significant energy and GHG emission reductions (environmental)
- **Reduce utility bills and mitigate capital costs** by identifying and implementing cost-effective GHG reduction solutions and leveraging normal capital renewal timelines (economic)
- **Improve building quality, comfort, health and resilience** (social)
- **Increase internal communication, awareness, and capacity** that will enable the City to better plan, build, retrofit, operate and maintain NZEE buildings

1.3. Approach

Two (2) government funding programs were launched in April 2021 to support the transition of constructing and retrofitting community buildings to net-zero by 2050.

1. Federation of Canadian Municipalities (FCM)'s GHG Reduction Pathway Feasibility Study program through their Community Building Retrofit (CBR) Initiative provides grants for a maximum of $200,000 to cover up to 80% of eligible costs for a portfolio of buildings.
    a. Minimum requirements include (among others) identifying a series of GHG reduction measures and long-term plans to achieve 50% GHG reductions within 10 years and 80% GHG reductions with 20 years.
2. Infrastructure Canada's (INFC) Green and Inclusive Community Building (GICB) program

provides a contribution up to 80% of maximum $2,999,999 eligible project costs.

a. Minimum requirements include (among others) reducing whole-building energy consumption by at least 25% relative to Baseline.

The proposals submitted for this scope of work must meet the minimum eligibility criteria as set forth in FCM's CBR program and INFC's GICB program. The City aims to leverage those two funding programs to accelerate the research and delivery of deep energy and GHG retrofits at the participating pilot facilities.

The intent is to apply for the maximum INFC eligible grant amount for each location to implement deep energy and GHG reduction solutions immediately. The remainder of GHG reduction solutions identified through these studies - that cannot be implemented within INFC's funding envelope - will subsequently leverage funding through the City's Lifecycle asset renewal planning cycles over a longer-term time horizon (zero-over-time approach). This approach helps portfolio managers and facility staff right-time deep energy efficiency and renewable energy projects by spreading them out over the life of the building based on "trigger points" in the building's lifecycle. The approach focuses on long-term planning to deliver a series of cost-effective projects over time that, together, can amount to zero energy emissions for the entire building.

Studies will include a recommended suite of solutions to achieve four (4) Reduction Scenarios relative to a Base Building/"Business-As-Usual" Scenario that are, where possible, in close alignment with Lifecycle asset renewal planning cycles:

- **>25% energy & GHG reductions** within 2 years (minimum requirement for INFC's GICB funding)
- **>50% GHG reductions** within 10 years (minimum requirement for FCM's study funding)
- **>80% GHG reductions** within 20 years (minimum requirement for FCM's study funding)
- **100% GHG reductions (or Net-Zero Energy Emissions)** before the year 2050

Three (3) facilities to participate in the pilot study are:

1) Centennial Community Centre. 8600 McCowan Rd, Unionville, ON L3P 3M2. 142,000 sqft.
2) Thornhill Community Centre. 7755 Bayview Ave, Thornhill, ON L3T 4P1. 180,000 sqft.
3) Clatworthy Arena. 2400 John St, Thornhill, ON L3T 6G7. 33,284 sqft.

The intent is to include all three (3) facilities in the contract award, subject to City's budget restrictions, limitations and approvals. For budgeting and RFP evaluation purposes, Bidders shall include the full scope of work in their proposal and as broken down in the Bid Form based on Anticipated Project Schedule in Section 2.

1.4. Summary of Project Deliverables

1) **Complete energy audits and NZEE studies at each facility.** The on-site energy audits will target identifying capital and operational opportunities to achieve desired NZEE energy and GHG reductions.
2) **Create present-day Baseline and NZEE models** using energy, GHG, and cost profiles from a year representative of typical operation (2019). Identify variances between facilities and common energy & GHG drivers for local conditions.
3) **Set performance metrics** using evidence-based data and global best practices

4) **Identify cost-effective solutions** to reduce GHG emissions and energy consumption using readily available products and technologies.
5) **Create customized net-zero retrofit roadmaps** including lifecycle financial analysis for the pilot facilities. The final report will showcase four (4) modelled retrofit roadmap options, and Business-As-Usual option, with estimated costs, savings, and ROI separately and bundled to achieve NZEE.
6) **Facilitate stakeholder engagement and capacity building** (information, workshops, communication materials, resources) to obtain consensus, and increase awareness, replicability, the City's ability to better plan, build, operate and maintain low-carbon facilities.

1.5. Specific Project Deliverables

Scope 1: Complete energy audits and NZEE studies at each facility

Purpose

Complete on-site energy audits and net-zero studies at each pilot facility. The energy audit will target identifying capital and operational opportunities to achieve desired energy and GHG reductions.

ASHRAE Level 2 energy and GHG audits will target identifying capital and operational opportunities to achieve the (4) GHG Reduction Scenarios and the agreed upon performance metrics from Scope 3 (ex. at least a 40% energy and GHG reduction to achieve 20 EUI).

Energy and GHG Audit Process

1.0) **Review existing documentation** including (but not limited to):
- 1.1) Utility and energy data
- 1.2) Lifecycle planning and equipment details
- 1.3) As-built drawings
- 1.4) Automation trend data (BAS, CIMCO refrigeration)
- 1.5) Other relevant studies and reports:
  - Building Condition Reports
  - Solar Thermal Studies
  - Mount Joy CC Roadmap to Net Zero Ice Rinks Pilot Study

2.0) **Perform site surveys**
- 2.1) Conduct comprehensive ASHRAE Level 2 site audits of existing building condition, systems, processes and equipment.
- 2.2) Recommend and install permanent meters as required to implement diagnostic monitoring, trending, and testing.
- 2.3) Interview building operators and tenants to identify areas for improvement.
- 2.4) Assess, measure, and document the current operating strategies such as schedules, set points, seasonal control variances, ventilation and fresh-air strategies, and sequences of operation.
- 2.5) Assess opportunities for heat recovery and propose which systems/processes could benefit from the waste heat. Include system size, location, connection points, configurations, and sequence of controls.
- 2.6) Complete building envelope analysis and testing including air-tightness testing and non-intrusive visual assessments (thermal imaging).

3.0) **Ground Source and Air Source feasibility assessment**

3.1) The consultant shall review drawings, design parameters, BAS capabilities, proposed HVAC systems and proposed borefield location to verify that ground source (GSHP) and/or air source heat pump system (ASHP) is appropriate for the site.

3.2) Consultant shall work with a local driller and review the Ontario Geological Survey (OGS) data to estimate the ground thermal conductivity. A test borehole is not required at the feasibility stage, however Thermal Conductivity Test is mandatory during detailed design if the decision has been made to move forward with the system.

3.3) Consultant shall make a reasonable effort to identify any issues with drilling at the proposed location.

3.4) Consultant shall describe the proposed system, including the system size, location and sizing of vertical/horizontal geoexchange field, building connection point, heat pump configuration, and sequence of controls.

The deliverables for this section include:

1.0) **Produce Audit Report** (to be included in Final Report). Using data collected from above steps, as well as best practices and professional judgement, produce a report containing the following information (at minimum):

- Executive summary, scope of the project, overview of activities
- Description of building systems (mechanical, architectural, hydronic, electrical, renewable)
- Building conditions, remaining useful life, and operational characteristics
- Breakdown of energy and GHG data by facility including:
    - Benchmark facilities against similar facilities in national databases (ex. EnergySTAR PM)
    - Identify base loads, seasonal variation, and major energy & GHG drivers
    - Total energy by end use
    - Electricity consumption by end use
    - Natural gas consumption by end use
    - GHG emissions by end use
    - Demand profiles during peak periods
    - Utility cost by end use
- Air-tightness testing results
- Thermal imaging results
- All other requirements to meet ASHRAE Level 2 audit criteria
- Any other relevant audit findings

2.0) Submit draft reports with supporting documentation for the City to review and provide comments on. Address questions and comments, and revise reports as necessary.

3.0) Chair meeting with City's broader key stakeholder team to review key audit findings and results.

4.0) Submit revised draft reports with supporting documentation for the City to review and provide comments on. Address questions and comments, revise as necessary, and include in Final Reports.

Scope 2: Create Baseline and NZEE Models

Purpose

Create whole-building present-day Baseline and NZEE target models using energy, GHG, and cost profiles from a year representative of typical operation (2019). Identify variances between facilities and common energy & GHG drivers for local conditions.

The deliverables for this section include:

1) Development of "present-day" Baseline and NZEE models, using local conditions that are calibrated as per the methodology outlined in ASHRAE 211 or ASHRAE Guideline 14 against actual utility data.
    1.1) The Baseline models shall be developed using actual weather-normalized historic energy & GHG utility data, building characteristics, energy end-uses, etc.
    1.2) The NZEE Target models shall be developed based on recommended solution outputs from completing the other scope sections in this RFP, and shall be customized and specific to the three (3) pilot facilities. A sensitivity analysis using future weather files to account for changes due to climate change shall also be completed.
2) Chair meeting with City's energy team to review the assumptions, design, and results for each complete model.
3) Submit draft models for the City to review and provide comments on. Address questions and comments, revise as necessary, and then submit final models. Include relevant modelling simulation results in Final Reports.
4) Prepare standard operating procedure for City staff to update the models.
5) Models shall be developed using accessible and industry-standard software.
    a. Suitable modelling software must evaluate performance on an annual hourly basis and take into account interactive effects of building systems and zones (eQuest, EnergyPlus, IES<VE>, or similar equivalent software). Modelling software must include ability to export results to RETScreen Expert to meet minimum eligibility requirements for Infrastructure Canada's Green and Inclusive Community Building (GICB) program. Supplemental software may be required in addition to the whole building energy modelling software for certain systems (ex. Solar PV, geothermal).
    b. Geothermal Analysis
        i. Consultant shall use the building energy model and geothermal model to directly inform design and consider all relevant opportunities that may promote system balancing. This may include incorporating DHW load, ventilation loads, fluid cooler, snow melting, other building exterior or interior changes, hybrid system, etc. The report shall clearly indicate which options were considered and the corresponding results.
        ii. Consultant shall indicate a preferred system configuration and discuss the relative energy balance and efforts made to optimize the design through adjustments to the HVAC design.
        iii. System sizing shall not be based on rules of thumb. System sizing shall be done with GLD, Earth Energy Designer (EED), GHLE Pro or Looplink.
        iv. Consultant shall include a plot illustrating 20-year fluid temperature projection.
        v. Consultant shall explicitly state annual heat flows to and from the ground.
        vi. Consultants shall provide a layout for the proposed borefield.
        vii. Relevant screen shots illustrating results from geothermal model shall be included in the report.

viii. The Consultant shall evaluate the energy, cost, and GHG savings of a GSHP and compare them against an ASHP and a reasonable conventional system.

c. Solar PV and Solar Thermal Analysis
   i. On buildings where solar PV systems are currently installed and supplying electricity to the grid through a FIT contract, assess the building modification requirements to convert the system to supply energy to the building.
   ii. Assess the feasibility of new solar system installation (both PV and thermal) on the roof and walls of the building, and the grounds, for example solar carport over the parking lot/garage.
   iii. Conduct a long-term shading study incorporating existing and permitted building heights and other obstructions to the south-east, south and south-west of the site
   iv. Provide an estimate of the maximum PV system size, and system production using accepted industry solar PV design software (PVSyst and Helioscope are preferred) and provide that software report as an attachment to the study.
   v. Provide preliminary layout of the potential system taking into account the set-back from the property edge and shading (for ground systems) and roof edges, and mechanical equipment.
   vi. Incorporate "solar ready" principles including:
      1. structural review;
      2. placing HVAC or other rooftop equipment on the north side of the roof, to prevent future shading;
      3. conduit from the roof to the rough in for the location of the external disconnect and then to closest electrical panel that the solar system is able to connect to. Size of conduit to be determined based on maximum potential PV system size;
      4. one inch conduit for communications from the roof to building electrical connection point or to the network hub.

6) Models shall contain all relevant key building characteristics and building components that impact energy and GHG end-uses including (but not limited to):
   - Hydronic systems *(domestic hot water, boiler plant, water conservation strategies)*
   - HVAC *(Heating, Ventilation, and Air-Conditioning)* & dehumidification systems
   - Building envelope/enclosure *(roof, walls, windows, doors, thermal bridging, air infiltration)*
   - Electrical systems *(ie. plug loads, lighting (interior/exterior))*
   - Refrigeration plant (including refrigerant options) and associated systems/equipment
   - Automation & control systems
   - Pool systems
   - Heat recovery systems *(air and water)*
   - Renewable energy generation
   - Local Renewable Energy Credits (RECs)

Scope 3: Set performance metrics using evidence-based data

Purpose

Set performance metrics using evidence-based data and global best practices (ex. TEDI, EUI, GHGi).

The City is particularly interested in passive design principles with less reliance on complex mechanical and controls systems to achieve optimum building performance. Passive designs include:

- Passive building envelope – an airtight building envelope with high-performance insulation, windows, and doors ensures that unwanted heat gains, losses, and moisture are minimized. Building envelope improvements will reduce the building's heating and cooling loads (and improve occupant comfort), which will also reduce mechanical equipment sizing and capital costs.
- Passive heating – improving a building's ability to harness incoming solar radiation will reduce the need for active mechanical systems that use energy to heat the building.
- Passive cooling – passively prevent unwanted heat gains during cooling season through measures such as window dressings, external features (deciduous trees, vegetation).

Low-maintenance designs and retrofits that improve building envelope and ventilation strategies can not only significantly reduce energy demand, but also enable smaller, lower carbon heating and cooling systems to be installed while increasing building comfort and resilience. A well-insulated and passively designed building can maintain habitable interior temperatures for several days, even in freezing weather without power, and thus provide optimal shelter in emergency situations where other buildings would fail.

With that in mind, the City is seeking recommendations to establish NZEE energy and GHG performance metrics and targets that ensure facilities are as energy-efficient as possible prior to offsetting the remaining energy and GHG emissions. Please review and reference Attachment G throughout the project to ensure alignment and enhancements to related reference reports, programs, and documents.

Energy and GHG Performance Metrics

The deliverables for this section include:

5.0) Using evidence-based data and global best practices, recommend energy and GHG performance metrics that will encourage best-in-class building performance to meet net-zero energy emissions well in advance of of 2050. The metrics should symbiotically encourage energy and emission reductions as well as quality building design. Consider including the following metrics:

1.1) Energy-Use-Intensity (EUI). To ensure buildings are operating at lowest overall energy-use and utility costs.

1.2) Thermal Energy Demand Intensity (TEDI). To ensure resilient buildings that improve both occupant comfort and thermal energy performance.

1.3) Greenhouse Gas Emissions Intensity (GHGi) and Percent GHG Reductions. To encourage low-carbon energy sources and reduced building GHG emissions.

1.4) Airtightness (ex. maximum air-leakage rate of 2 ACH @ 75 pascals). To minimize the amount of unwanted heat gains, losses and moisture entering and leaving the building.

1.5) Maximum amount of renewable energy and/or local RECs to offset on-site GHG emissions. To ensure facilities are as energy and GHG-efficient as possible prior to offsetting the remaining GHGs with renewables and/or RECs.

6.0) Submit draft report with supporting documentation for the City's energy team to review and provide comments on. Address questions and comments, and revise as necessary.
7.0) Chair presentation to City's energy team summarizing draft performance metrics findings and recommendations.
8.0) Address questions and comments, revise as necessary, and incorporate modelled vs target results in Final Reports and/or Scope 5 presentations.

Scope 4: Identify cost-effective solutions to reduce GHG emissions and energy consumption

Purpose

Identify cost-effective solutions to reduce GHG emissions and energy consumption for each facility using readily available products and technologies.

The deliverables for this section include:

Using findings from your research, professional judgement, and scope completed in other sections of this RFP, identify and recommend cost-effective solutions to reduce GHG emissions and energy consumption that will achieve the four (4) Reduction Scenarios and the energy and GHG performance targets established in Scope 3 for each facility. The recommended solutions should be commercially available and have a reasonable expectation of continued cost declines.

Produce a list of ranked and bundled generic retrofit solutions using readily available products and technologies that would be applicable to "typical" archetype sections of a multi-purpose community centre (ex. Ice rink, pool, library) to encourage replication, as well as customized ranked and bundled retrofit recommendations for each of the facilities participating in this pilot. Include net zero solutions for each major equipment, system, and building component within the facility. Preferentially evaluate and recommend solutions that will mitigate disruptions and impacts to service (ex. Energisprong/Quantum Passivhaus) and minimize embodied carbon emissions.

The list of potential solutions should be labelled as one or more of the following categories:

- **Energy conservation and low-cost/no-cost ECMs** (ex. repair, maintenance, behavioural and operational improvements, re-commissioning, demand (kW)/cost management)
- **Capital energy-efficiency ECMs** (ex. higher-efficiency equipment, heat recovery)
- **Fuel-switching ECMs** (ex. electrification to reduce GHG emissions)
- **Renewable energy generation**
- **Carbon offsets** (Include in analysis the price of carbon offsets vs price increase of fuel-switching and/or above ECMs)

Each solution should include the following information for both the Base Building/"Business-As-Usual" (like-for-like replacement per Building Code requirements) and the Low-Carbon/NZEE Building options:

- **Description of building systems** (mechanical, architectural, hydronic, electrical, renewable) and brief scope of work
- **Procurement timeline** and key milestone dates per Lifecycle capital renewal analysis
- **Capital cost estimation** (absolute and incremental upfront renewal/retrofit costs)

- **Modelled simulations result summary.** Annual energy consumption, GHG emissions, and operating costs by fuel source. Include maintenance and peak demand considerations. Consultant shall use emission factors for Ontario as reported in the National Inventory Report.
- **Financial and Lifecycle costing analysis**. Determine cost-effectiveness and Total Cost of Ownership of each solution over the useful life of equipment using accepted financial decision support tools such net-present value (NPV). Cost comparisons should be sufficiently detailed and assume typical equipment lifespans, capital costs (including inflation), utility costs, carbon pricing (including escalation of $170/tonne by 2030), maintenance and service contract costs, engineering design costs, and any other additional costs deemed appropriate.

1.0) Submit draft summary report with supporting documentation for the City's energy team to review and provide comments on. Address questions and comments, and revise as necessary.
2.0) Chair presentation to City's energy team to review and discuss Base Building and Low-Carbon/NZEE Building solutions. City to provide additional feedback, as required.
3.0) Chair presentation with City's broader key stakeholder team to review and discuss summary of results for Base Building and Low-Carbon/NZEE Building solutions.
4.0) Submit revised draft summary report with supporting documentation for the City to review and provide comments on. City will select which solutions to advance to roadmap sequencing and Final Report review. Address questions and comments, and revise as necessary.

Scope 5: Create customized Net-Zero Retrofit Roadmaps and Final Reports

Purpose

Sequence preferred solutions from Scope 4 to create customized Net-Zero Retrofit Roadmaps and Final Reports for each of the participating pilot facilities. The Final Reports will showcase base building data and modelled retrofit roadmap options with estimated costs, savings, and ROI for separately and bundled solutions to achieve reduction targets.

This section is intended to deliver customized net-zero retrofit roadmaps for the facilities participating in the pilot. The design, model, and retrofit framework should achieve the energy & GHG performance targets (at minimum) as established in Scope 3, and four (4) Reduction Scenarios that will set the pilot facilities on a course to achieve net-zero carbon by 2050.

The Final Reports for each building will be used as a roadmap to guide the City in terms of budgeting, forecasting, and planning the building energy retrofits according to optimized timelines and cost.

Sequence the suite of selected solutions from Scope 4 to achieve four (4) Reduction Scenarios relative to a Base Building/"Business-As-Usual" Scenario that are, where possible, in close alignment with Lifecycle asset renewal planning cycles:

- **>25% energy & GHG reductions** within 2 years (minimum requirement for INFC's GICB funding)
- **>50% GHG reductions** within 10 years (minimum requirement for FCM's study funding)
- **>80% GHG reductions** within 20 years (minimum requirement for FCM's study funding)
- **100% GHG reductions (or Net-Zero Energy Emissions)** before the year 2050

Ensure all minimum eligibility criteria is met as set forth in FCM's CBR program and Infrastructure Canada's (INFC's) GICB program.

The City seeks to leverage the maximum grant amount through INFC's GICB program (and/or other grants) to rapidly accelerate delivery of deep carbon neutral retrofit projects per Final Report findings. If practical, the City will aim to achieve the above target reductions within even shorter timeframes (ex. INFC's GICB program allows the City to fast-track delivery of a suite of solutions that result in 75% GHG reductions within 3 years).

The remainder of GHG reduction solutions identified through these studies - that cannot be implemented within INFC's (and/or other grant) funding envelope - will subsequently leverage funding through the City's Lifecycle asset renewal planning cycles over a longer-term time horizon (zero-over-time approach), in accordance with the targets established per GHG Reduction Scenarios.

The deliverables for this section include:

5.0) Using the inputs from other sections of this scope, as well as your past experience and professional judgement, develop a visual representation (ex. Waterfall chart) and roadmaps that demonstrates how each of the pilot facilities can gradually implement single and/or bundled ECMs to achieve the energy & GHG performance targets and a zero-carbon balance (aka. NZEE).

6.0) Produce supporting methodology, assumptions, calculations, modelling, and data illustrating how facilities can achieve the reduction targets. The summary for each facility should incorporate all relevant outputs from other Scope sections including:

- **Description of building systems** and brief scope of work
- **Procurement timeline** and key milestone dates per Lifecycle capital renewal analysis
- **Modelled simulation results summary** (per Scope 4) for whole-buildings as well as individual and related solution bundles.
    - Include conceptual designs from model simulations, as necessary, to visually describe system and equipment configuration changes
- **Optimized lists of recommendations** that maximize GHG and energy reductions while offering the most favourable financial returns
- **Implementation/capital cost estimation** with and without grant impact
    - Class C cost estimates (minimum)
    - Estimated costs should be sufficiently detailed and include capital costs (including inflation), utility costs, carbon pricing (including escalation of $170/tonne by 2030 and projections of increasing by $15/tonne/yr up to $300/tonne), maintenance and service contract costs, engineering design costs, and any other additional costs deemed appropriate.
    - Review and recommend available incentives/grants
- **Financial and Lifecycle costing analysis** (per Scope 4) with and without grant impact
    - Include M&V and Green Building certification costs, if applicable
    - Use utility rates provided by the City and also complete escalation rate sensitivity analysis, which may include most probable, low, and high utility escalation rates
- Any relevant outputs from other Scope sections

7.0) **Implementation and logistics strategy.** Impacts to facility staff, and forecasted overall timeline to complete such as breakdown between pre-construction (design, bidding process, contractor

selection, finalization of contracts) and construction (equipment/material lead time, implementation).

7.1) Recommend which solutions should be bundled for cost-efficiency and reduced service disruptions.

8.0) **Measurement and verification strategy.** Recommend performance guarantee options to include in construction tender packages.

9.0) **Identify key project risks, complete preliminary assessments, determine probable impacts, and develop mitigation strategies**. Ex. Electrical service upgrades, retrofits triggering Building Code permits, connection impact assessments and agreements with local utility companies for renewable energy generation, disruptions to service, grant timelines, potential structural reinforcement from increased weight/size of energy-efficient AHUs etc.

10.0) **Create specifications/RFP language** (ex. energy-efficiency/net-zero minimum requirements, testing requirements) for each asset/system within the facility that can be included in future procurements scopes to ensure all major facility assets and systems, as outlined in Scope 2, are replaced with NZEE-compliant assets in alignment with Lifecycle asset renewal planning cycles and NZEE roadmaps.

11.0) **Highlight social, economic and environmental benefits** of achieving NZEE, and include benefits that also increase INFC's point-based project evaluations. Include "Other benefits", which are benefits above and beyond status quo such as green procurement, building reliability and resilience, job creation, accessibility, climate change improvements, health and indoor air-quality improvements.

12.0) Submit draft Final Reports with all supporting documentation for the City's energy team to review and provide comments on. Address questions and comments, then revise as necessary.

13.0) Chair presentation to City's energy team to review and discuss summary of results for Base Buildings and Low-Carbon/NZEE Buildings for each of the (4) Reduction Scenarios. Include all other relevant data developed through other Scope sections. City to provide additional feedback, as required.

14.0) Chair presentation with City's broader key stakeholder team to review and discuss summary of results for Base Building and Low-Carbon/NZEE Building for each of the (4) Reduction Scenarios. Include all other relevant data developed through other Scope sections.

15.0) Submit revised draft Final Reports with supporting documentation for the City to review and provide comments on. City will select which solutions and timelines to adjust or keep in Final Report. Address questions and comments, revise report as necessary, and finalize Final Reports.

Scope 6: Facilitate stakeholder engagement and capacity building

Purpose

Facilitate stakeholder engagement and capacity building (information, workshops, communication materials, resources) to obtain consensus, and increase awareness, replicability, the City's ability to better plan, build, operate and maintain low-carbon facilities.

The deliverables for this section include:

1.0) Meet with the City to understand the project requirements and communicate the design concepts and deliverables throughout the project.

2.0) Collaborate with the team to produce educational material such as infographics, visualizations, social media, and webpage content, as required.

3.0) Review existing staffing resources; their capacity, awareness, skills, and capabilities. Recommend staffing requirements and/or training to increase awareness/education that will enable staff to effectively implement zero carbon initiatives.

4.0) Facilitate stakeholder engagement meetings, initial kick-off meeting, design decision meetings (as outlined in Scopes 1 through 5), bi-weekly project status updates, and final project retrospective. Include materials to support stakeholder engagement (ex. presentations, meeting minutes, lessons learned).

5.0) Recommend training plans and preventative maintenance best practices to include in construction tender packages.

6.0) Per Scope 4, produce a list of ranked and bundled generic retrofit solutions that would be applicable to "typical" archetype sections of a multi-purpose community centre (ex. Ice rink, pool, library). The solutions should be sufficiently detailed where they can be broadly applied to other related facilities, and are capable of generally being integrated in the City's Lifecycle asset renewal planning, to encourage replication.

7.0) Prepare an executive summary of the Final Report & presentation to Council for endorsement of the NZEE strategy, recommendations, financial impact, and implementation plan.

1.6. Consulting Team Resources

1.0) Required Skills and Expertise of the Consulting Team (Project Resources)

The Successful Bidder must be able to commit staff resources such that the project goals are met within the timeline described. The Successful Bidder shall not reassign or replace members of the proposed project team without prior consent in writing from the City. The City should have the right to request a project team member replacement and be involved in the Successful Bidders selection process of the new team member.

The Successful Bidder shall have extensive experience in Project Management, Auditing, Design, Modelling, and Engineering related to net-zero projects. The Successful Bidder is expected to be familiar with the latest methods, trends and advances in the area of net-zero retrofits.

2.0) Lead Project Manager

The Proposal must clearly indicate one Project Manager from the consulting team who will be the spokesperson at the meetings mentioned in throughout this RFP. In addition, the proposal should name a substitute who will serve as Project Manager in the absence of the selected Project Manager. The Project Manager should be a Professional Engineer (P.Eng) and have at least ten (10) years of extensive professional experience managing similar projects on budget and within schedule. Additional qualifications such as Project Management Professional (PMP) will be considered an asset.

3.0) Project Team

The Proposal should include a Key Personnel List and Organization Chart showing the names, firms and responsibilities in the hierarchy of the various members of the consulting team.

The Proposal shall demonstrate the Bidder's ability, qualifications, and experience in the areas of engineering (mechanical, electrical, structural), energy auditing, modelling, procurement, construction, environment, and commissioning of net-zero carbon systems and buildings. The

Bidder shall provide examples of similar projects and the specific scope performed by each Key Personnel relevant to their associated scope for this project. Each member of the Project Team should have at least five (5) years of professional experience and members of the team should demonstrate the following minimum industry-recognized qualifications for their respective Scope areas:

- Building Energy Modeller (ex. Building Energy Modelling Professional (BEMP))
- Energy Auditing and Management Professional (ex. Certified Energy Manager (CEM), Certified Measurement & Verification Professional (CMVP), Certified Energy Auditor (CEA))
- Low-carbon designer (Certified Passive House Designer/Consultant, LEED)

By submitting a Bid in response to this RFP, the Bidder represents and warrants that it has the necessary skill, ability, experience, personnel and other resources to perform the Work and that, if selected as the Successful Bidder, the Bidder will perform the Work:

- With the degree of care, skill and diligence normally applied in the performance of services of a similar nature and magnitude;
- In accordance with sound current professional practices;
- In conformity with the latest standards and codes prescribed by professional and regulatory bodies in the applicable profession, field or discipline; and
- In accordance with the requirements of the Contract, and any requests or instructions of the City's Project Manager made/given pursuant hereto.

2. ANTICIPATED PROJECT SCHEDULE

The Proposal process will be governed according to the following schedule. Although every attempt will be made to meet all dates, the City reserves the right to modify or alter any or all dates at its sole discretion by notifying all Bidders in writing at the address indicated in the completed Proposal submitted to the City. The following is the proposed schedule:

Description	**Date**
Release of RFP	Wednesday, September 22, 2021
Deadline for Submitting Questions	Wednesday, October 6, 2021 4:00 p.m.
Deadline for Responding to Questions	Friday, October 8, 2021 4:00 p.m.
RFP Closing time	Wednesday, October 13, 2021 @ 3:00 p.m. local
Anticipated Award Time Frame	November 2021
Estimated Project Initiation	End of November, 2021
Work Completion	May 2022

3. PRICING

3.1. General

1.0) All quoted fees via SCHEDULE A – BID FORMS (Schedule of Prices) shall be firm and fixed and considered the maximum upset limit fee for providing all Work and services as detailed

herein. Additional costs, over and beyond what is outlined in the Bid Price via SCHEDULE A – BID FORMS (Schedule of Prices) shall be absorbed by the Successful Bidder;

2.0) It is the responsibility of the Bidders to ensure the accuracy of their Bid. The Bid shall include ALL applicable costs associated with the Work and all requirements described within this RFP (including but not limited to all disbursements, compensation, travel expenses / mileage / accommodation, administration, handling, reports, overhead, profit and all other costs). Further, the Bidder agrees to provide all necessary labour, material and equipment necessary to complete the Work described in this RFP for the quoted Bid Price via SCHEDULE A – BID FORMS (Schedule of Prices), and agrees to carry out the provisions of this RFP in accordance with the terms hereof.

3.0) The City shall NOT be responsible for any additional costs that are not specified in the SCHEDULE A – BID FORMS (Schedule of Prices)

4.0) Prices shall be in Canadian dollars ONLY;

5.0) COVID 19 – Specific Bid Price Addition: When completing the Bid Form, the City requires that all Bidders incorporate the following into the Bid Price:

i any COVID-19 related health and safety measures;

ii. anticipated impacts on productivity and overhead costs; and,

iii. any other costs related to COVID-19, that can be reasonably anticipated at the time of Bid Submission

6.0) All quoted fees via SCHEDULE A – BID FORMS (Schedule of Prices) shall include the Bidders obligations, whether stated or otherwise to ensure their satisfactory performance with the delivery of all Work and services, including (but not limited to):

3.2. Disbursement Fees

1.0) Disbursements fees shall be included with the submitted Bid Price via SCHEDULE A – BID FORMS (Schedule of Prices) and shall be considered the maximum upset limit fee permitted under this contract

2.0) Without exception, the City will not pay for any disbursements whatsoever, including, but not limited to compensation for: reports, travel expenses / mileage/ accommodations, postage, fax, courier, long distance telephone calls, mobile phone charges, that exceed the amount(s) quoted by the Bidder via SCHEDULE A – BID FORMS (Schedule of Prices), unless expressly agreed to in writing.

3.3. Change in Work

Any changes to the Work shall be mutually agreed to between the City and the Successful Bidder, in writing:

1.0) Prior to commencing the work the Successful Bidder shall provide to the City a written estimate for the work and identify that section of work to which the increase or reduction in fees payable shall apply; and,

2.0) The Successful Bidder shall not be paid for any work performed by the Successful Bidder outside the Scope of Work identified herein, unless such work has been previously agreed to, in writing, by the City.

3.0) The Successful Bidder shall make no changes to the Work without written permission of the City representative.

3.4. Additional Cost & Expense

1.0) All fees, costs and expenses as submitted by the Successful Bidder's submitted Bid Price via the SCHEDULE A – BID FORMS (Schedule of Prices) shall constitute the total cost to complete the scope of work identified under this RFP, or as amended by addenda, and fulfilling its obligations under the Contract.

2.0) Under no circumstances will the City accept costs or charges for extras or additional work performed outside of the scope of work unless such additional work or charges have been agreed to by the City, in writing, before the work is performed.

4. CONTRACT TERM & WARRANTY

All the Work must be completed by May 31, 2022 ("Contract Time") unless otherwise specified in the Contract.

Note: It is the successful bidder's responsibility to maintain insurance documentation until the end of the warranty period and forward updates to the Procurement Division prior to the expiry date.

5. CONTRACT

By submitting a completed Bid Form, the Bidder agrees to be bound by the terms and conditions of this RFP and the following: The City's General Terms and Conditions (attached hereto) and the City's Purchasing By-law # 2017-18, which can be found on the City's website:

https://www.markham.ca/wps/portal/home/business/bids-tenders/bylaw-terms-and-conditions/05-by-law-terms-and-conditions

All capitalized terms used herein and not otherwise defined shall have the meanings assigned in the City's *General Terms and Conditions*.

The Bidder agrees that this RFP, the City's *General Terms and Conditions (Parts I and III)*, the Successful Bidder's submission, the Purchase Order, and any other written agreement between the City and the Successful Bidder regarding the Work shall form the Contract between the City and the Successful Bidder.

6. INFORMATION TO BE PROVIDED BY THE CITY

The City will provide the following information to the successful Bidder upon contract award:

- Historic energy consumption and cost data (3 years)
- Capital renewal schedule and Lifecycle Plan
- As-built drawings
- Building Condition Reports
- Mount Joy CC Roadmap to Net Zero Ice Rinks Pilot Study

7. VENDOR PERFORMANCE EVALUATION

The performance of the Successful Bidder will be evaluated at the completion of the Work based on the criteria and metrics outlined in the City of Markham's "Vendor Performance Management" procedures. The City's Project Manager will use a pre-determined scorecard to ensure an objective assessment of a Vendor's or Service Provider's performance, by applying established evaluation

criteria such as: Quality, Project Management (Health and Safety, Schedule Management, Communications), cost control (budget management) and performance of product during warranty period.

Performance evaluation may be used to provide feedback to the Vendor/Service Provider; to provide the Vendor/Service Provider with the opportunity to implement performance improvements during the Contract; and to justify an award or non-award of future Contracts by the City in accordance with the terms of the City of Markham's "Vendor Performance Management" procedures. Continued incidence of non-compliance can be reflected in the Vendor/Service Provider's performance evaluation and may affect the ability to work for the City in the future.

8. EVALUATION CRITERIA AND SELECTION PROCESS

Bids will be assessed on the basis of information provided by the Bidder at the time of submission as well as any additional information provided during subsequent communications with the Bidder.

The evaluation of Bids will be conducted by an Evaluation Team comprised of staff members from the City's Sustainability & Asset Management Department, facilitated by staff from the City's Procurement Department. The Evaluation Team shall review all Bids received and score the Bids based on a "consensus" approach. The City reserves the right to engage professional external or internal consultants to assist with the evaluation process.

By submitting a Bid, the Bidder agrees to be bound by the process set out in this RFP regarding the conduct of this RFP and the evaluation process.

Bids meeting the MANDATORY requirements will be assessed against the following evaluation criteria:

Evaluation Criteria			**Weight**
STAGE I	**Qualifications and Technical Proposal**	**Qualifications and Experience of the Consulting Firm** The Bidder will be evaluated based on the responses provided by the Bidder to **Section 9.1 and 9.2** of this RFP.	15 points
		Qualifications and Experience of the Project Manager and Project Team (including sub-consultants) The Bidder will be evaluated based on the responses provided by the Bidder to **Section 9.3** of this RFP.	15 points
		Project Understanding, Methodology & Delivery Management The Bidder will be evaluated based on the responses provided by the Bidder to **Section 9.4 and 9.5** of this RFP.	40 points
	Total – STAGE I		**/70 points**

STAGE II	**Financial Proposal**	**(Bid Form)** The evaluation of the **Bid Price**, as submitted via the Bid Form	30 points
	Total – STAGE II		**/30 points**
	Total Score – (STAGE I + STAGE II)		**/100 points**

STAGE III	**Presentation**	*Note: Stage III is not a mandatory requirement of the evaluation process and will be conducted at the sole discretion of the City.*	10 points
	Total – STAGE III		**/10 points**

	Grand Total	**110 points**

THREE STAGE PROCESS

Submissions will be evaluated using a **THREE STAGE PROCESS.** Evaluation of Bids will be based on all the above evaluation criteria and any other relevant information provided by the Bidder(s). Bids will be scored based on meeting or exceeding the expectations and requirements of the City with respect to the evaluation criteria.

STAGE I: Technical Proposal

Submissions will be evaluated against the technical criteria set out herein. The total evaluation for Stage I will be scored out of 100 points and those Bidders who score a minimum of 75 points out of 100 will be qualified to continue to Stage II (Financials).

Note: This score will be prorated out of seventy (70) points.

STAGE II: Financial Proposal (Bid Form)

Upon completion of Stage I, the Financial Proposal (Bid Form) provided by those Bidders who are qualified from Stage I, meeting a minimum score of 75 points out of 100 points, will be evaluated. Stage II will consist of a scoring of the submitted financial proposal.

The lowest **Bid Price** will receive the maximum score of 30 points.

The score for the remaining Bids will be calculated as follows:

$= (1 – [(A – B)/B]) \times 30$, where A= Bid Price, and B=Lowest Bid Price

Upon completion of Stage I and Stage II, the highest ranked Bidders will be selected by the City (in its sole discretion) to continue to Stage III of the evaluation.

The City reserves the right, in its sole discretion, to shortlist highest ranked Bidders under Stage I for further evaluation via Stage III - Presentation. If Stage III is not conducted by the City, an award decision will be made by the City after Stage II.

STAGE III – Presentation:

Stage III is not a mandatory requirement of the evaluation process and will be conducted at the sole discretion of the City. An agenda will be provided to those Bidders participating in Stage III of the evaluation process.

Stage III will consist of a scoring by the Evaluation Team of a presentation and/or demonstration to further evaluate the Bidder's Bid submission against the requirements of this RFP, the results of which may alter the final scoring.

The cumulative score of Total score and Presentation will be the Grand Total score.

The "Grand Total" score will be based on the cumulative score of Stage I, Stage II and Stage III.

RIGHT TO NEGOTIATE

The City reserves the right (in its sole discretion) to negotiate with one or more of the highest ranked Bidder(s).

Negotiations will be on a consecutive basis commencing with the highest ranked Bidder. If an acceptable contract cannot be concluded with the highest ranked Bidder, the City reserves the right to negotiate a contract acceptable to the City with the next highest ranked Bidder(s) in succession

All Bids shall be submitted on the understanding that the selection of a Bid for discussion by the Evaluation Committee shall not thereby result in the formation of a Contract, nor shall it create any obligation on the City to enter into further discussions.

The City reserves the right to conduct reference checks on the Bidders, the results of which may affect the award decision. Reference checks may not be limited to those supplied by the Bidder.

Upon conclusion of the evaluation process described above, the City reserves the right (in its sole discretion):

- to cancel this RFP process;
- to accept proposals in whole or in part;
- to award one or more contracts to a single or multiple Proponents.

9. BID SUBMISSION CONTENT AND DELIVERABLES

To facilitate a more uniform and consistent review of all submissions, Bidders are requested to complete the online Bid Form in the Bidding System and upload the documents as detailed below.

The Technical Proposal shall contain the following sections:

9.1. Bidder's Profile

Bidders should have the personnel, organization culture and financial resources to ensure their ongoing ability to deliver and support the proposed project within the stated time period of the Contract. To permit the Bidder to be evaluated fully as a viable and sound enterprise, include the following information with respect to the Bidder.

- Year Established;
- No. of Years in Business;
- Legal Structure of Contractor: Corporation/ Sole Proprietor / Partnership / Other
- Names and Titles of Officers, Partners, Principal:
- Total number of employees;
- Major clients;
- Business partners and the products/services they offer;
- Core Work: Describe the degree to which the scope of work of this RFP represents the core work of your firm. Include evidence that your firm has the corporate infrastructure, suitability and resources to fulfill the City's requirements and expectations of the project. Include key aspects that distinguishes your firm from others in the marketplace;

- *Complete online form "Bidder Profile"*

Sub-Consultants: The City will only consider Bids submitted by a single Consultant who would act as a prime consultant and then supplies any required specialist expertise via Sub-contractors or Sub-Consultants, as the case may be. If sub-consultants are to be used, provide evidence of their experience in the areas detailed in this RFP.

- *Complete online form "Sub-Consultant List" (if applicable)*

9.2. Relevant Project Experience & References

It is important the Work be undertaken by a Bidder who can demonstrate specific knowledge of and experience in performing similar work for projects of comparable nature, size and scope.

In particular, the Bidder should demonstrate the following in its Bid:

1.0) Past Experience

- Include project portfolio and experience of previous work indicating the competence and track record of your firm in the marketplace with regard to services required by the City.
- Describe your company's experience with blending technologies and approaches to optimize systems in a way that promotes the most GHG and energy efficient systems through innovative and/or unique methods.
- Describe relevant experience related to whole building energy modelling, energy efficiency, and greenhouse gas reduction projects.

- Describe relevant experience related to guiding and evaluating building energy options and decisions based on energy, carbon, and cost metrics,
- Please indicate firm's experience on a minimum of three (3) completed projects within last Five (5) years of a similar nature / complexity as identified in this RFP, with details of size, location, owner and the name of the staff that managed the projects.

2.0) References

- Bidder shall select at least three (3) of the submitted past projects identified above (via Past Experience) as references.
- The references cited must be willing to discuss all the services that were (or are being) provided, and their experience with the service and staff.

o *Complete online form "Bidder Experiences & Reference List"*

9.3. Experience and Qualification of the Proposed Project Team (Key Personnel)

1.0) Project Team – Key Personnel

Bidder shall identify the Lead Project Manager and all key personnel to be involved in the project, including their name, title, project role, summary of experience in similar role and technology, including any sub-consultants (if any).

o *Complete online form "Key Personnel List"*

Note:

- Qualification of any proposed sub-Consultant shall be evaluated based on similar criteria.
- Any changes to Key Personnel will require the prior written approval from the City
- Only team members directly involved in the project will be evaluated and scored based on the criteria.

2.0) Lead Project Manager

Identify who will be assigned as the Lead Project Manager, including credentials, qualifications, achievements, years of experience, roles/responsibilities in past similar projects; highlight years of experience in performing similar work for projects of comparable nature, size and scope to the City's Work as identified via Section 1 of this RFP. In addition, the proposal should name a substitute who will serve as Project Manager in the absence of the selected Project Manager. Please refer to Section 1.6 for requirements.

o *Upload document ("Resumes") online*

3.0) Project Team

List and identify the roles and responsibilities of each Key Personnel, including sub-consultants (if any) that would be assigned to this project; including responsibilities related to this project, credentials, qualifications, achievements, years of experience, roles/responsibilities in past similar projects; highlight years of experience in performing similar work for projects of comparable nature, size and scope to the City's Work as identified via Section 1 of this RFP in a resume format. Please refer to Section 1.6 for requirements.

o *Upload document ("Resumes") online*

4.0) Organizational Chart

Organizational Chart shall identify the Project Manager and all of the personnel to be involved in the project and how each team member will interact with others. Provide evidence of sufficient staff structure to ensure dedication to this project. The primary working location of each project member should be included in the Organization Chart.

- *Upload document ("Organization Chart") online*

9.4. Project Understanding, Methodology, Delivery Management

The purpose of this section is to demonstrate that the Bidder has a thorough understanding of the Work and any potential barriers in the path of completion. The Bidder will provide their methodology and approach for each phase to provide evidence that will assist the City in assessing the best qualified team and project plan to complete the work.

Bidders are requested to provide the following and are encouraged to include as much detail as possible:

1.0) Demonstrated understanding of the project
This should include an indication of the nature of the work involved, approach to meeting the overall objectives and any anticipated conflicts and problems related to the implementation of the Project. The proposal must demonstrate that the Bidder is familiar with the particular requirements of the assignment, and is conversant with normal engineering and contractual practices in addressing them to the satisfaction of the City staff using all possible technologies to show his/her complete skills and capabilities to undertake the tasks of the project and to handle the proposed work plan of the project.

2.0) Methodology and approach
Methodology and approach to meet the stated objectives and deliverables as outlined in the Section 1 of RFP including detailed work plan, phasing, meetings, consultation process, coordination, budget requirements, deliverables and time-frames. This should include, but is not limited to:

- how the Bidder plans to engage the City and stakeholders to ensure a collaborative effort to complete each phase without delay;
- methodology to be used in identification, analysis of retrofit options, capital cost estimating techniques, evaluation of energy, renewable energy, greenhouse gas, utility cost, and capital cost metrics for comparing building options and comparisons between buildings;
- description of energy modelling process (and energy modelling software to be used), how results will compare and prioritize building options, needs, and return on investments to the City;
- innovative methods that complement the objectives of the Work or result in recommending the most cost-effective energy and GHG efficient systems and improvements;
- description of unique or specialized approach that the Bidder can add that will differentiate the Proponent's proposal from others in a manner that will provide additional value;
- demonstrated familiarity with the project requirements, which include reports, designs and/or other work completed similar in scope (evaluation and design for

zero carbon, examples of building retrofits that met energy and carbon reduction targets, energy auditing and modelling, etc); and,

- extent and timing of involvement required by City Staff in the administration of the Work.

3.0) Project Management & Control Measures

Identify management and control methods during the project life cycle, which will be implemented in order to ensure that the upset limit for the consulting fees will not be exceeded. This should include, but is not limited to: pre-project planning, communication, scope management, time management, risk management, staff planning, cost estimation, cost control measures, dispute prevention and resolution and quality management

4.0) Quality Assurance & Quality Control (QA/QC)

Provide details of the QA/QC Program to be implemented by the Consultant for this assignment. The Consultant is fully responsible for the quality of all services. The prime Consultant is responsible for the quality control of all specialties, including Sub-consultants, and must take the appropriate actions and corrective measures, in order to ensure the quality of all services. This should include, but is not limited to:

- how deficiencies/complaints/requests and follow-up are addressed/rectified and
- how project quality, cost, schedule and risks shall be controlled and managed.

- *Upload document "Project Understanding, Methodology and Delivery Management" online*

9.5. Project Schedule

Bidders are to provide a Project Schedule and a Time/ Task/ Cost Matrix as part of the proposal.

1.0) Project Schedule (i.e. Gantt Chart)

- Indicate the anticipated duration of each task, key milestones, meetings and presentations together with the start and completion date;
- Reporting: clearly identify all scheduled or necessary meetings related to reviews, approval processes, responding to comments and revisions, final approvals, project meetings, team meetings, consultation meetings, progress reviews, presentations, follow-up and all project milestones;
- Indicate consultation with municipal staff, stakeholders and Council outlining specific roles of the Bidder and City Staff.

- *Upload document "Gantt Chart" online*

2.0) Time/ Task/ Cost Matrix

- A project fees spreadsheet showing the estimated time in hours to be spent by each project team member on each task, the respective hourly rates, sub-total for each task, reimbursable expenses and disbursements and the total estimated fees excluding taxes. The tasks must be the same as those presented in the project schedule.

- *Upload document "Time/Task/Cost Matrix" online*

10. AMENDMENTS TO THE CITY'S GENERAL TERMS AND CONDITIONS

The following amendments shall apply to the City's General Terms and Conditions for the purposes of this Request for Proposal:

1.0) Delete Part II, Section 3 - Mandatory Site Meeting

2.0) Delete: Part II Section 7.7 (Bid Submission) and replaced with the following:

COVID 19 – Specific Irrevocability Period
Due to the COVID 19 Pandemic, the City has the sole discretion to take up to ONE HUNDRED AND TWENTY (120) Business Days from the Closing Time to accept the Bid, or as provided in Section 15 the City may, in its sole discretion, cancel this Quotation. Bids shall be irrevocable for a period of ONE HUNDRED AND TWENTY (120) Business Days from the Closing Time (the "Irrevocability Period").

3.0) Delete Part II, Section 8.2 (Bid Price) and replace with the following:

COVID 19 – Specific Bid Price Addition
When completing the Bid Form, the City requires that all Bidders incorporate the following into the Bid Price:

i any COVID-19 related health and safety measures;
ii. anticipated impacts on productivity and overhead costs; and,
iii. any other costs related to COVID-19, that can be reasonably anticipated at the time of Bid Submission

4.0) Delete Part III, Section 20 (Force Majeure) and replace with the following:

20. Force Majeure
Neither the City nor the Contractor shall be liable for default or delay in the performance of obligations under the Contract due to causes beyond the reasonable control of (and not due to the fault or negligence of) the party affected, including, without limitation, natural disasters, plagues, epidemics, war, insurgence, terrorism, and power outages. The Contractor shall give the City prompt written notice when any such cause has or appears likely to prevent or delay deliveries and/or performance of the Work and shall take appropriate action to avoid or minimize such default or delay. For the duration of any default or delay, the Contractor shall keep the City apprised of the effect of the cause on the affected obligation(s) and the actions being taken to avoid or minimize the default or delay.

Written notice under this clause shall include: (i) the obligation(s) that cannot be performed and/or will be delayed because of the cause; (ii) a description of how the cause prevents and/or delays performance of the obligation(s); (iii) a description of the actions the Contractor is taking to avoid or minimize the default or delay; and (iv) an estimate of the time of the delay in performance of the obligations.

If any such default or delay threatens to impair the Contractor's ability to meet delivery requirements for materials, supplies and/or services, the City shall have the right, without any liability to the Contractor, to terminate the portion or portions of the Contract so

affected upon written notice to the Contractor.

COVID-19-Specific Force Majeure Addition

The City and the Contractor acknowledge that in March 2020 the World Health Organization declared a global pandemic of the virus leading to COVID-19. The Governments of Canada and the Province of Ontario responded to the pandemic with legislative amendments, controls, orders, requests of the public, and requests and requirements to the parties to change their activities in various ways (collectively, the "**Governmental Response**"). It is uncertain how long the pandemic, and the related Governmental Response, will continue, and it is unknown whether there may be a resurgence of the virus leading to COVID-19 or any mutation thereof (collectively, the "**Virus**") and resulting or supplementary renewed Government Response. Without limiting the foregoing paragraphs, neither the City nor the Contractor shall be liable to the other or be deemed to be in breach of this Contract for any default or delay in rendering performance arising out of: (i) the continued spread of the Virus; and (ii) the continuation of or renewed Governmental Response to control the spread of the Virus.

Dates or times of performance shall be extended to the extent of delays excused by this clause, provided that the party whose performance is affected notifies the other promptly of the existence and nature of such delay shall, so far as practicable, use appropriate efforts to minimize and mitigate the extent, effect and period of any such delay or non-performance.