

City of Coquitlam

Request for Proposals
RFP No. 17-01-11

Asset Replacement Modelling System

Issue Date: March 6, 2017

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DEFINITIONS

“Agreement” or “Contract” means the contract for services or City Purchase Order that will be issued to formalize with the successful Proponent through negotiation process with the City based on the proposal submitted and will incorporate by reference the Request for Proposals, Specifications, Drawings, any additional subsequent information, any addenda issued, the Proponent’s response and acceptance by the City.

“City” means City of Coquitlam.

“Consultant” means the person(s) firm(s) or corporation(s) appointed by the City to carry out all duties, obligations, work and services outlined in the Request for Proposal and all associated documentation, which may also include mutually agreed revisions subsequent to submission of a Proposal. Both “Consultant” and “Proponent” are complementary in terms of duties, obligations and responsibilities contemplated at the Request for Proposals stage, through evaluation process, execution and performance of the services and Works.

“Proponent” means responder to this Request for Proposals.

“Proposal” means the submission by the Proponent.

“RFP” or “Request for Proposals” shall mean and include the complete set of documents, specifications, drawings and addenda incorporated herein, and included in this document.

“Services” means and includes the provision by the successful Proponent of all services, duties and expectations as further described in this RFP.

1. REQUEST FOR PROPOSALS

1.1 Request

The City of Coquitlam requests proposals from professional qualified experienced companies to provide an **Asset Replacement Modelling System (ARMS)** software and services.

1.2 Obtaining RFP Documents

RFP documents are available for downloading from the City's website:
www.coquitlam.ca/BidOpportunities

1.3 System Requirements

The **ARMS** should provide the following high-level features:

- Meet the Business needs described in Section 1.5; and
- Hosted or Software-as-a-Service (SaaS) models will be considered under the following additional criteria:

Must comply with British Columbia Freedom of Information and Protection of Privacy Act (FOIPPA) requirements. Refer to <https://www.oipc.bc.ca> for more information.

1.4 Budget

Budget information will not be provided.

1.5 Scope of Services

The scope of services for the **ARMS** implementation includes but is not limited to:

- Initial software license for either a City-hosted or SaaS solution;
- Professional services for design, implementation, configuration and project management (if applicable) working in conjunction with the City's technical and functional teams, and its agents;
- End-user and administrator training, including training materials and documentation;
- On-going software support, maintenance and/or subscription costs for the next 5 years; and

- Integration with the City's existing Maintenance Management System (IBM Maximo) and Geographic Information System (ESRI GIS) and other applicable systems.

1.6 Project Background and Business needs

1.6.1. Introduction

The City of Coquitlam has a population of about 145,000. It's Engineering and Public Works (E&PW) department is in possession of tangible infrastructure and related assets worth \$2.5 billion (replacement value). To plan and effectively utilize these assets the City has embarked on an Asset Management Initiative since 2014.

The efforts under the Asset Management Initiative were carried out in general conformance with best practices and guidelines such as,

- International Infrastructure Management Manual (IIMM);
- InfraGuide;
- BC Asset Management Roadmap; and
- PASS55.

While adopting the concepts and guidelines, the City has formed them to align with City's Strategic Goals and accepted practices.

Over the past two years several studies and works were completed as described below.

- a) Asset Management Gap Analysis and Strategic Direction study
- b) Asset Management Condition Assessment Framework study
- c) Asset Management Condition Assessment Program Development study
- d) Asset Management Information System – Maximo Review
- e) Risk Assessment Framework and Modelling
- f) Information system Framework Development and Implementation plan

The City has carried out studies and developed works based on inputs from City staff that practice concepts in planning to execute at field. Based on these works E&PW has developed an Asset Management Program (AMP) that will help adopt strategic asset management towards sustainably managing its assets.

Sustainable asset replacement is an important strategy in E&PW's AMP and it requires implementing an optimized asset replacement modelling software system. The following sections describe the business requirements of this optimized asset replacement modelling software system (ARMS).

1.6.2. City's current corporate software systems applicable to AMP

The City is aware of the data requirements and gaps for effective asset management, and is currently working to bridge identified data gaps. To effectively utilize the vast amount of available data for strategic decision making, structured data analysis is required. Implementing ARMS aims meeting this objective. The City's asset management related data processing requirements are currently met by several systems as discussed below.

(a) Maintenance Management System – Maximo (IBM)

All operational planning and maintenance management are carried out in Maximo (version 7.6) and this will remain as is in the future. Maximo is set to handle work order management, work scheduling, inspections, condition assessment data handling, asset registry data handling, and report generation. This will continue in the future.

While Maximo will be the prime asset registry, data for some assets are retained in a GIS database, and may continue in future due to data management efficiency. These are data of non-linear assets, generally for assets in large numbers such as street lights. This means asset inventory data, condition, risk, etc. may be stored in Maximo and GIS on a shared basis.

(b) Geographic Information System – ESRI ArcGIS

ESRI ArcGIS (version 10.2) software platform with Oracle backend database contains the City's spatial asset data. This includes all known linear assets such as pipes, pavements and associated assets like hydrants and valves. Further it has non-linear assets like pump stations, streetlights, etc. Assets like pump stations, bridges, and other similar structures are represented through notations spatially but the associated data are only available in hardcopy / digital pictorial file formats and to a limited scale in Maximo.

The City expects GIS (ESRI) to remain as the base spatial asset platform. Supplementary asset data that are not practical to hold in the GIS database or in Maximo are to be retained in ARMS.

Currently viewing of the assets is enabled through a browser based GIS application, *QtheMap*. For general users this will remain the same.

(c) Financial Management System – Oracle E-Business Suite (EBS)

The City's financial system is Oracle EBS (Financials version 12.1.3).

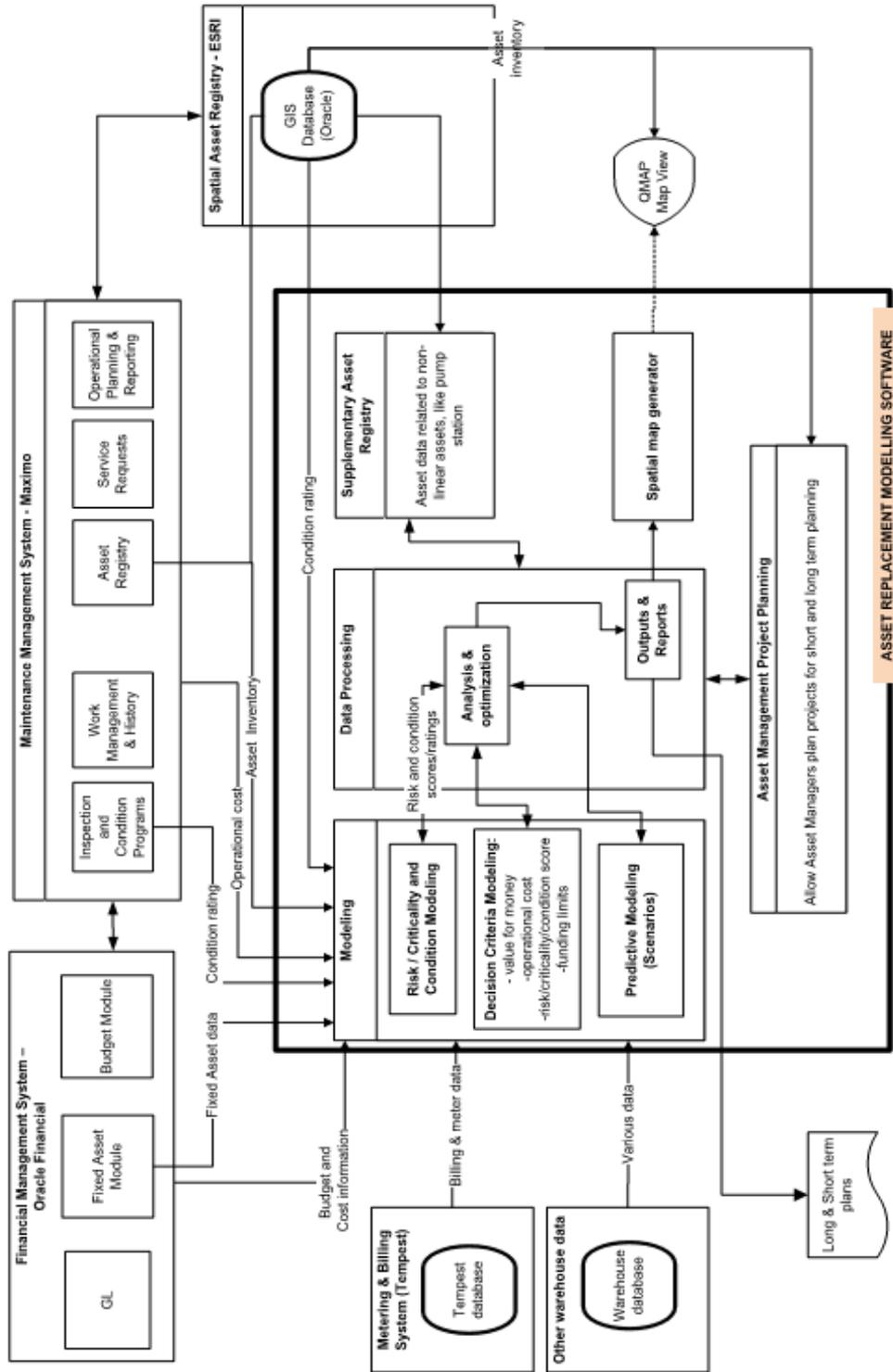
(d) Cognos (IBM) Reporting

Currently report generation is carried out through Cognos (version 10.2.2) and this is to remain. In addition, further efforts will be made to develop a Dashboard reporting system to bring all reports in to a single location and provide improved and effective user interaction and experience. The ARMS reports may be linked to dashboard(s) on a need basis directly or indirectly.

While a few dashboards will be created in ARMS, the City may choose to bring in data from other systems to create dashboards in ARMS where feasible.

The conceptual relationship between the City's relevant corporate information systems and the ARMS is described in Figure 1.

Figure 1 – Conceptual relationship between City’s data systems and ARMS



1.6.3. Functions ARMS to perform

The ARMS, preferably browser based, can be all-in-composite software or be a software and/or middleware combination that can perform the following functions including, but not limited to:

- Model replacement criteria and scenarios for optimized asset replacement decision making;
- Analyse asset data based on modelled multi-criteria and scenario with optimization algorithms, and report;
- Allow to register supplementary asset data for non-linear assets. This is to cater for assets like pump stations and bridges where the assets are currently registered as location only in GIS asset registry;
- Has ability to carry out cross asset optimization, meaning prioritizing between many asset categories such as water main, sewer main, road pavements, etc., to develop synergy in replacement planning and reduce cost via optimization analysis; and
- Allow to set business rules to input prioritization rules – like tree diagrams, formulae, etc.

(a) Model criteria and scenarios for decision optimization

Modelling includes using condition ranking, risk ranking, value-for-money, and other criteria for prioritization/optimization; setting up asset performance indicator; etc. for multiple years and scenarios. These models will then be used by the software's analysis and optimization engine to develop optimized asset replacement decision outputs.

The software should be capable of handling multi-period, multi-criteria / multi-objective, and performing multi-constraint analysis and optimization.

The optimization should result in informed decisions with regard to asset investments, maintenance, rehabilitation, and renewal/replacement based on decision making criteria such as:

- (i) Value for money;
- (ii) Risk based condition ranking (that may also reflects level of service commitments);
- (iii) Operational maintenance and rehabilitation treatment cost; and
- (iv) Funding constraints.

Best practice frameworks and life-cycle-cost concept will be fundamental to asset management and the software should be able to adequately accommodate such concepts.

The software must have advanced analytical tools for predictive modelling with built-in and user-defined algorithms, deterioration curves, etc., that

can be applied to existing condition data to predict how assets will degrade over time. Having the ability to set rules on intervention levels and appropriate treatments for ultimate optimized selection is necessary.

(b) Data Processing: Analyse the asset data based on modelled criteria and scenario and report

The proposed software should contain analysis engine to utilize modelled criteria and data to analyse and provide optimized outputs that could be considered informed decision-support data. Also required is the ability to report in various formats including data export features in standard file formats: MS Excel, XML, etc. In addition to tabular reporting, the outputs must be capable of reported spatially in a browser of its own or through the City's ESRI based QtheMap / Portal browsers.

Reporting may include smart reports such as dynamic charts that show how asset replacement are trending with specific set parameters, levels of service, KPI, etc.

(c) Supplementary Asset Registry

The software should be an asset registry to hold additional asset specific attributes that are not available in or cannot be held in the GIS database or Maximo. This includes the ability to link the data in the software to spatial points so that the data can be used from spatial reference.

(d) Planning platform

The ARMS to have a planning module where asset owning managers, who are primarily engineering asset planning staff, can plan their works related to new assets, asset rehabilitation/replacements and asset retirements. Such planning environment could preferably be a spatially enabled platform where existing assets can be reviewed / removed and new assets can be added to develop / plan scenarios.

In addition, multiple assets view will be needed when cross optimization is planned / reviewed. For example, when planning a sewer main in a sector of the street, other assets currently in and works planned in the same sector such as water / drainage upgrades, road works, etc. should be made visible to utilize in proper cross optimization.

Purposely the functional requirements discussed above are kept broad and open-ended as optimized modelling for asset replacement can be achieved in various ways based on different software architecture.

Functional Requirements Specifications are detailed in the Appendix A.

1.6.4. Data Availability and Adequacy

The available data for ARMS modelling may be limited in some cases while complete in most others.

- i) Asset inventory data: location (spatial), install date, size, length, etc. are available to almost all assets.
- ii) Asset condition data: standardized condition data are available for pavements, sidewalks, some sewer and drainage mains, bridges, streetlights, and signals. For assets like pressure reducing valves and pump stations, maintenance inspection reports are available but condition data are not available in standard format. Further, for assets like water mains no condition data are available but condition rating is carried out through indirect data such as main break data.

The City is working on implementing a comprehensive condition assessment program that will systematically collect structured condition data. Therefore, in the interim some assets will be modelled without condition data but using available data such as age, break history, etc. However, ability to incorporate condition data as and when collected must be considered in system setup.

- iii) Asset Risk data: Risk modelling for specific assets is conceptualized and available for modelling to get risk / criticality rating.
- iv) Asset Cost data: Capital cost, replacement cost, and operations cost data are available from Maximo, Oracle Financial system and other ancillary databases.

1.6.5. Data Transfer / Integration

The City anticipates that the data transfer between City's data systems and ARMS will occur via time-specified file transfers. This will eliminate expensive data field to field integration between systems that is unnecessary because ARMS does not require real time data accuracy for its modelling and analysis. However, some commercially available software systems may have been developed pre-integrated with major software like ESRI GIS and Maximo, and this will be considered preferable as effective integration is possible with minimal effort.

The data transfer between ARMS and GIS database is required to access some base asset data from the GIS database and to transfer the output data from ARMS to the GIS environment. The ability to handle spatial reference in ARMS will be a preferred feature. Optionally ARMS may even have its own spatial /GIS map display window to facilitate spatial display of its output.

1.6.6. Data and Process Mapping, Business Rules and Data Development

The data and process mapping, and business rule development required for the implementation of the ARMS will be documented and provided to the successful Proponent, during the software implementation period, to facilitate implementation. This facilitation will be provided by the City's 3rd party consultant (through separate contract). Providing direction on preparation of the data, and implementation facilitation may be carried out by this consultant.

The Data and Process Mapping, and Business Rules document may cover the following, but the City does not assure to these contents in the document:

1. Concept and terminology definition
2. Event / action / solution options definition
3. Asset inventory summaries including network asset hierarchy/grouping, valuation, quantity/length, material, size, estimated service life, deterioration selection/ suggestion, criteria for modelling, asset network shape files
4. Segmentation and intersection polygonization methodology and rules
5. Organization chart
6. Capital asset planning process diagram
7. Asset renewal/ rehabilitation logic/flow chart and decision criteria
8. Asset maintenance activity logic / flow chart
9. Data source diagram / map / table
10. Conceptual risk model, criteria, weights and scores
11. Asset consolidation logic / rules / polygon definition
12. Data flow / data attribute diagram
13. Renewal, replacement costs and cost calculation methodology and formulae
14. Report requirements (strategic, tactical and operational, and administrative)
15. Other formats and templates as determined by the City

2. INSTRUCTIONS TO PROPONENTS

2.1 Prices

All Prices shall be stated in Canadian Funds and shall remain **FIRM** for the supply, service, installation and maintenance for the initial five (5) year term. GST is not to be included.

2.2 Closing Date & Time

Proposals will be received on or before 2:00 pm local time on

Tuesday, April 4, 2017

2.3 Instructions for Proposal Submission

Proposal submissions are to be consolidated into one (1) PDF file and uploaded through QFile, the City's file transfer service accessed at [website: qfile.coquitlam.ca/bid](http://qfile.coquitlam.ca/bid)

1. In the "Subject Field" enter: RFP Number and Name

2. Add files in PDF format and "Send"

(Ensure your web browser remains open until you receive 2 emails from Qfile to confirm upload is complete.)

Proposal submitted shall be deemed to be successfully received when displayed as new email at the City's email address. The City will not be responsible for any delay or for any Proposals not received for any reason, including technological delays or issues by either party's network or email program and the City will not be liable for any damages associated with Proposals not received.

The City at its sole discretion, reserves the right to accept Proposals received after the Closing date and time but is under no obligation to evaluate. The City also reserves the right to accept proposals received by fax or hard copy.

Proposals will not be opened in public.

Proponents are responsible to allow ample time to complete the Proposal Submission process. If assistance is required phone 604-927-3060.

2.4 Inquiries

Questions are to be submitted in writing 3 business days prior to the closing date and sent to email: bid@coquitlam.ca quoting the RFP name and number.

If a change or additional information is warranted, the City's response will be communicated to all Proponents by means of written Addenda prior to the closing date.

The City shall, determine at its sole discretion, whether the query requires response, and such responses will be made available to all Proponents by issue of Addenda posted on the City's website that will be incorporated into and become part of the RFP. No oral conversation will affect or modify the terms of this RFP or may be relied upon by any Proponent.

2.5 Addenda

Proponents are required to check the City's website for any updated information and addenda issued, before the Closing Date at the following website address:
www.coquitlam.ca/BidOpportunities

Upon submitting a proposal, Proponents will be deemed to have received notice of all addenda that are posted on the City website, and deemed to have considered the information for inclusion in the Proposal submitted.

Should there be any discrepancy in the information provided, the City's original file copy shall prevail.

2.6 Withdrawal of Proposals

Proposals may be withdrawn by written notice only sent to email: bid@coquitlam.ca prior to time set as closing time for receiving Proposals.

2.7 Freedom of Information and Protection of Privacy

Proposals submitted become the property of the City and are subject to the Freedom of Information and Protection of Privacy Legislation of British Columbia and contents may be disclosed if required to do so, pursuant to the Act.

To request documentation confidentiality, Proponents must submit a covering letter with their Proposal, detailed the specifics of their confidentiality request.

2.8 Proponent Expenses

Proponents are solely responsible for their own expenses in preparing proposals, for any meetings, demonstrations, negotiations or discussions with City relating to, or arising from this RFP.

2.9 Irrevocability

The City requests that proposals remain open for acceptance for a period of not less than one hundred and twenty (120) days from the closing date and time.

2.10 Acceptance of Proposals

The City of Coquitlam reserves the right to waive formalities in, accept or reject any or all Proposals, cancel this RFP, or accept the Proposal deemed most favourable in the interest of the City.

The City will be under no obligation to proceed further with any submitted proposal and should it decide to abandon same, it may, at any time, invite further proposals for the supply of the described services or enter into any discussions or negotiations with any party for the provision of the services. No alterations, amendments or additional information will be accepted after the closing date and time unless invited by the City.

Should a Proposal be accepted, a City purchase order (PO) will be placed for the provision of these services that will incorporate all related documents and correspondence.

2.11 No Claim

Except as expressly and specifically permitted in these Instructions to Proponents, no Proponent shall have any claim for any compensation of any kind whatsoever, relating to this RFP, including accepting a non-compliant bid, and by submitting a proposal, each Proponent shall be deemed to have agreed that it has no claim.

2.12 No Contract

This is not a tender process. No contractual, tort, or other legal obligations are created or imposed on the City, or any other individual, officer or employee of the City with respect to the RFP documentation or by submission or consideration by the City of any Proposal.

2.13 Non-Solicitation

Proponents and their agents will not contact any member of the City Council with respect to this RFP at any time prior to the award of a Contract or the termination of the RFP, and the City may reject the Proposal of any Proponent that makes any such contact.

2.14 Conflict of Interest

Proponents shall disclose in its Proposal any actual or potential conflicts of interest and existing business relationships it may have with the City's elected or appointed officials or employees.

2.15 Liability for Errors

While the City has used considerable efforts to ensure an accurate representation of information in this RFP, the information contained is supplied solely as a guideline for Proponents. The information is not guaranteed or warranted to be accurate by the City, nor is it necessarily comprehensive or exhaustive. Nothing in this RFP is intended to relieve the Proponents from forming their own opinions and conclusions with respect to the work in this RFP.

2.16 Extension of Offer

Proponents agree to allow other local public agencies with similar needs within British Columbia to participate in this contract.

Additional participating agencies may opt to enter into a contract with the successful Consultant for the purchase of the products and services described in this RFP based on the terms, conditions, prices, and percentages offered by the Consultant to the City of Coquitlam with possibly minor changes negotiated.

This is intended to be means of promoting cooperative purchasing efforts with the public sector, and to provide additional value to the Consultant.

2.17 Evaluation Criteria

The criteria for evaluation of the Proposals are listed in no particular order or precedence and may include but are not limited to, the following:

Corporate

- Recent demonstrated successful municipal experience with implementation(s) of ARMS systems of similar size, scope and complexity
- Qualified and Experienced Project Team

Technical

- Technical Architecture that has agility to accommodate changes in data structure.
- Functionality and suitability of proposed solution that has reference to best practices like ISO 55000, International Infrastructure Management Manual (IIMM), etc.
- Proven Implementation methodology, plan and schedule, key deliverables and success factors
- Proven Training strategy
- Support, maintenance and upgrades plans

Financial

- Total price should include purchase cost, implementation costs, training costs, on-going software support, maintenance and/or subscription costs for 5 years

Value Added Benefits

- Sustainability value, i.e. environmental, financial/economic, social/ethical
- Value Added Services or Product Features

Demonstration

Short-listed Proponents will be required to provide a demonstration of their proposed ARMS solution.

The demonstration will be evaluated and the results will be included in the overall scoring.

The Evaluation Committee may, at its discretion, request clarifications or additional information from a Proponent with respect to any Proposal, and the Evaluation Committee may make such requests to only selected Proponents. The Evaluation Committee may consider such clarifications or additional information in evaluating a Proposal.

The City may compare bids to select one that is most advantageous.

The evaluation will be confidential and no totals, scores or prices will be provided to any Proponent. However, upon submission of a Proposal, Proponents agree that the City may disclose the name of their company.

2.18 Negotiation

The City reserves the right, prior to contract award, to negotiate changes to the scope of the services or to the contract documents (including pricing) with the proponent or any one or more proponents, proposing the “best value” without having any duty to advise any other proponent or to allow them to vary their proposal as a result of changes to the scope of the services or to the contract documents; and the City may enter into a changed or different contract with the proponent(s) proposing the “best value”, without liability to proponents who are not awarded the contract.

2.19 Law

The RFP and any resultant award shall be governed by and construed in accordance with the laws of the Province of British Columbia, which shall be deemed the proper law thereof.

3. AWARD OF CONTRACT

3.1 Notification of Award

The City will notify the successful Proponent (“Consultant”) in writing of its decision to award the project by issue of a City Purchase Order (PO).

3.2 Indemnity

The Consultant shall indemnify and save harmless the City from and against all losses and all claims, demands, payments, suits, actions, recoveries, and judgements of every nature and description brought or recovered against him and/or the City, by reason of any act or omission of the Consultant, its agents, Sub-Consultants or employees in the execution of the work.

3.3 Insurance Requirements

The Consultant shall submit a Certificate of Insurance signed by the Insurance Company certifying that the required insurance policies are in force and that:

- The City of Coquitlam shall be named as additional insured;
- The policy shall not be cancelled, lapsed, transferred, assigned or materially altered without at least thirty (30) days written notice to the City of Coquitlam and the City’s written approval of the cancellation, transfer, assignment or alteration;
- The policy shall be in effect for a period of at least one calendar year from the completion of implementation of the ARMS.
- Such certificate to be as shown on the City’s form:
[Certificate of Insurance - Consultant Form](#)

The Consultant shall carry Comprehensive General Liability (CGL) Insurance satisfactory to the City in the amount of Two Million Dollars (\$2,000,000) inclusive per occurrence.

The Consultant’s Equipment Insurance covering all equipment owned or rented by the Consultant and its servants, Managers or employees against all risks of loss or damage with coverage sufficient to allow for immediate replacement and shall contain a Waiver of Subrogation against the City.

The Consultant shall carry automobile liability insurance in an amount of no less than Two Million Dollars (\$2,000,000).

The Consultant shall ensure that all approved Sub-Consultants carry insurance in the form and limits specified in this clause.

3.4 Business Licence Requirement

City of Coquitlam By-law No. 49 requires that the Consultant have a current business license. For more information, please contact the City's License Department (Tel: 604-927-3085).

3.5 WorkSafeBC Coverage

The Consultant shall be in good standing with WorkSafeBC and provide a WorkSafeBC registration number.

3.6 Permits

The Consultant will provide and pay for all licenses and permits required to carry out the work.

3.7 Operations and Coordination of the Services

The Consultant agrees to coordinate the execution of the Works and Services with the City such that disruption of the work of all involved is minimized.

3.8 Advertisement

The Consultant will not advertise its relationship with the City without prior written authorization.

3.9 Warranty

The Consultant warrants that the Services and any products supplied with the services are free of all defects, deficiencies, and problems arising from workmanship for a period of one (1) year from the date of approved final completion.

3.10 Software & Information/Intellectual Property

The Consultant warrants clear title to materials supplied by them and warrants them free from defects and/or imperfections, and will indemnify, defend and hold the City including its employees and agents harmless against any and all suits, claim demands and/or expenses, patent litigation, infringement, material, builders', labour's liens, or any claims by third parties in or to the services/supplies mentioned and supplied.

It is also the Consultant's responsibility to ensure that the City has all licenses required to use any software that may be supplied by the Consultant pursuant to the Contract.

Any and all information, reports, documents, data, computer software, or other items or any nature whatsoever, in any form, developed by the Consultant pursuant to this Contract whether completed or not, together with all designs or materials capable of intellectual property protection, prepared, developed or created by the Consultant, its employees or agents during the performance of and/or pursuant to this Agreement shall automatically become the exclusive property of the City.

The Consultant will execute any assignments of copyright required by the City to this provision effect. The Consultant will deliver all such property to the City forthwith upon demand by the City.

3.11 Sub Letting

The Consultant will not, without the written consent of the City of Coquitlam, assign, sublet or transfer any subsequent contract or any part thereof.

3.12 Payment Schedule

Upon award, a City Purchase Order will be issued to the Consultant based on the proposal submitted, and as finally negotiated to complete the Services.

Invoice amounts in excess of the Purchase Order will not be accepted. In case of extenuating circumstances, the City may approve additional costs for additional Services which will require written City approval before any additional Services are provided.

Invoices are to be submitted in .pdf format sent to the City's Finance Division, email: apinvoices@coquitlam.ca Attention: Accounts Payable, and must indicate the Project Name, the City Purchase Order Number and the City's Project Manager's name. GST and PST are to be shown separately on the invoice.

Payment is made to the Consultant net 30 days after the invoice is received by the City and subject to approval of deliverables provided and successful implementation acceptable to the City.

Please be advised that, at any time, the City may request justification and supporting documentation for the hours of work or level of effort in the provision of the Services shown on an invoice.

3.13 Default

The City reserves the right, at its sole discretion, to immediately terminate the contract, in whole or in part, and purchase the software and services of any other Consultant, if the successful Consultant:

- Fails to make delivery of the services
- Fails to perform any provision of the contract within the time specified, or within a reasonable amount of time if no time is specified, as determined by the City
- Fails to meet the City's standard of expected and agreed level of service and performance
- Be adjudged bankrupt or makes general assignment for the benefit of creditors

3.14 Cancellation

The contract may be cancelled by either party, without cause or penalty upon 30 days written notice.

The Consultant would be compensated for software and services that have been provided to the City at the time that cancellation notification is provided.

Within 10 days, the Consultant agrees to provide the City with all City data and intellectual property created as a result of the contract.

3.15 Dispute Resolution

The parties will make reasonable efforts to resolve any dispute, claim or controversy arising out of this contract using the following dispute resolution procedures:

- a) Negotiation – the parties will make reasonable efforts to resolve any dispute by amicable negotiations and will provide frank, candid and timely disclosure of all relevant facts, information and documents to facilitate negotiations.
- b) Mediation – If all or any of a Dispute cannot be resolved by good faith negotiations within 30 days, either party may refer the matter to mediation. Within 10 days of delivery of notice, the parties will mutually appoint a mediator. If the parties fail to agree on the appointment of the mediator, then either party may apply to the BC International Commercial Arbitration Centre for appointment of a mediator. The parties will continue to negotiate in good faith to resolve the Dispute with the assistance of the mediator. The place of mediation will be within Metro Vancouver area, British Columbia. Each party will bear its own costs of participating in the mediation.
- c) Litigation – If within 90 days of the request of the mediation, the Dispute is not settled, or if the mediator advises that there is no reasonable possibility of the parties reaching a negotiated resolution, then either party may without further notice, commence litigation within Metro Vancouver area, British Columbia.

City of Coquitlam
RFP 17-01-11 - Asset Replacement Modelling System

Appendix A

ARMS Functional Requirements Specifications

Appendix A: ARMS Functional Requirements Specifications

Ref	Requirement Submitted by: (insert company name)	Must Have	Indicate whether your software meets this functionality. 'Yes' or 'No' only. Any related comments provide in the next column.	Comments
1.0	GENERAL			
	The software should allow optimization modelling, analysis and reporting of infrastructure asset replacements			
1.1	System must be a multi-user environment either in local server or on a web browser/cloud environment (in compliance with City's legal requirements and BC regulations related to data management and privacy)	Must have		
1.2	System must be able to access via various platforms, other than desktop, such as handheld computer devices	Prefer to have		
1.3	System will communicate to 'other systems' through data file transfer; the 'other systems' include, but not limited to, ESRI GIS, Maximo Maintenance Management System (by IBM), Oracle Financial, Tempest, and other database systems.	Must have		
1.4	System should allow input and output of data through digital files, such as XML or otherwise	Must have		
1.5	System should have complete referential integrity	Must have		
1.6	System will allow creating additional user defined windows (flexi-windows) and associated user-defined fields / attributes (flexi-fields) in post implementation stage; access to this will be allowed through advanced user access defined by role (e.g. system administrator)	Prefer to have		
1.7	System will allow user defined fields	Prefer to have		
1.8	System will allow defining character length and data type for user defined field/attributes in post implementation	Prefer to have		
1.9	System should allow to set data fields to populate data from asset inventory and other databases	Must have		
1.10	System should allow to set data fields capture value based on look-up data sets	Must have		
1.11	System will allow Systems Administrator to setup security for different user classes with different access levels such as read, write, modify, close.	Must have		
1.12	System will allow Systems Administrator to assign users to security classes individually or in user defined groups	Prefer to have		
1.13	System will log automatic audit trails on user activity to the point of a user's last edited record/field	Prefer to have		
1.14	System will retain deleted records / scenarios / etc. in archived status for a system administrator specified period	Prefer to have		
1.15	System will allow setting time periods applicable for various system related business rules to define business rule expiry	Prefer to have		
1.16	System should be able to set up business processes related rules (e.g. to prevent including a record (asset) in analysis based on attributes (status of asset: retired)	Prefer to have		
1.17	System should allow setting up duration of an attribute status	Prefer to have		
1.18	System should allow deleted records be archived based on business rules	Prefer to have		
1.19	System will have 'Help' facility for user reference or have knowledge support files accessible for users	Must have		
1.20	System should have out-of-box standard reports related to Infrastructure Asset Management	Prefer to have		
1.21	System should be able to interact with City's Document Management System	Prefer to have		
1.22	System should allow pushing output data to City's ESRI based GIS environment (Portal preset map or otherwise) in the absence of its own spatial display	Prefer to have		
1.23	System should allow transferring outputs to MS Excel spreadsheet or MS Access database or other relational databases.	Prefer to have		
1.24	System will allow data be viewed in datasheet view (similar to excel) to process multiple sets of data in a single window.	Prefer to have		
1.25	System may optionally have Work Breakdown Structure ability and to assign City employees/staff to elements of WBS manually or based on pre-set rules.	Prefer to have		
2.0	ASSETS AND DEFINITIONS			
	<i>Assets are tangible infrastructure identified in City's corporate information systems such as Maximo (IBM), ESRI GIS, Oracle Financial, Tempest, and other databases</i>			
2.1	System will have a unique identifier for individual assets	Must have		
2.2	System will allow add or delete assets as unique records one at a time or in a batch	Must have		
2.3	System will allow unlimited groups/categories or hierarchy to assign to assets such as asset, class, category, section, department, etc.	Must have		
2.4	System will allow add/edit/delete assets through system screen/window interfaces	Must have		
2.5	System will allow grouping of assets at many (preferably unlimited) levels (like grand-parent, parent and child)	Prefer to have		
2.6	System will allow assets moved from one group to another without losing its links to other attributes such as costs, references, etc.	Must have		
2.7	System will allow different templates to carry different attributes/data fields for different asset categories/groups	Must have		
2.8	System will create references to unique identifiers from other systems for an asset or otherwise to ensure that no duplicate instances of an asset within the system	Must have		
2.9	System will allow Linear assets defined in other systems (e.g. GIS) broken into sub-assets (e.g. pipe sections) in ARMS	Must have		
2.10	System will allow appurtenances of an asset defined as unique assets either by hierarchy relationship or otherwise	Must have		
2.11	System will allow assets to be assigned to an owner	Must have		
2.12	System will allow assets to have defined status: proposed, in use, retired	Must have		
3.0	ASSET DATA & MODELLING			
	Asset data means various data attributed to assets used in prioritization/optimization modelling of assets for replacement			
	Modelling means the ability to plan for the capital renewal of assets over the short to long term horizons as assets approach the end of their useful life (based on condition, risk etc.).			
3.1	System will allow developing multiple scenarios for asset replacement analysis and compare them as below, but not limited to:	Must have		
	- budget dependent scenario	Must have		
	- renewal dependent scenario	Must have		
	- compare asset renewal cost against budget	Must have		
	- calculate and compare net present values (between scenarios)	Must have		
	- calculate and compare backlog work quantity/value (gaps) between scenarios	Must have		
	- compare and identify replacement opportunities (synergies - e.g.: Two groups of assets to be replaced at the same location at the same year) amongst various categories of assets (asset cross optimization) based on predefined business rules	Must have		
3.2	System should be able to adjust cost of replacement works for assets identified with synergies. This means a sewer main replacement carried out in the same location with water main replacement will have lower replacement (unit rate) and/or cost.	Must have		
3.3	System will allow defining unlimited number of 'global' data parameters such as interest rate, etc. that are common for all asset records.	Must have		
3.4	System will accept asset data as records from GIS with unique asset ID and several other descriptor/classification and linked to subsequent user defined attributes that will be utilized in prioritization modelling	Must have		
3.5	System will provide/allow for planning / modelling for longer periods (e.g.: up to 100 years)	Must have		
3.6	System will accommodate scenario setup for modelling multiple scenarios using predefined templates, that comprise of several fields.	Must have		
3.7	System will allow modelling criteria for replacement optimization such as condition, risk, and other parameters.	Must have		
3.8	System will allow to input prioritization logic through facilities such as tree diagram or other means	Must have		
3.9	System will allow several financial numbers such as unit cost, total costs (for several years), discount rates, capital cost, operations cost, etc.	Must have		

3.10	System will allow various asset attributes / data fields compared amongst various assets	Must have		
3.11	System will allow to model limiting dependencies such as ceiling-budget and/or floor-budget	Must have		
3.12	System will have analysis engine (pre-defined and in addition preferably user-defined) to analyze various scenarios created through prioritization logic (tree diagram or otherwise)	Must have		
3.13	System will allow to calculate various financial indicators such as Net Present Value, Future value, etc.	Must have		
3.14	System will allow to calculate differences between expected/budgeted value and actual value and show as gap in individual year and cumulatively over years; also graph the numbers	Must have		
3.15	System will display modelled assets as records in tabular format as well as on GIS environment either through its own GIS window or by pushing out data to GIS-enabled data formats	Must have		
3.16	System will identify multiple asset records in proximity (location) or other criteria to select them for modelling using logic provided through decision tree or otherwise	Prefer to have		
3.17	System will report prioritized assets based on prioritization logic, in tabular format	Must have		
3.18	System will report prioritized assets based on prioritization logic, in spatial formats	Must have		
3.19	System will allow to select assets in a geographic boundary from a spatial environment by polygon to select and perform actions such as addition of costs or listing assets, etc.	Prefer to have		
3.20	System will allow reporting through filters and/ or other report generating facilities available as part of the software	Must have		
3.21	System will generate graph based on user defined data fields and may have out-of-the-box standard graphs	Prefer to have		
3.22	System will allow setting up user-defined graphs based on defined data fields on post implementation	Prefer to have		
3.23	System should allow defining life-cycle-cost (LCC) and develop analysis scenarios based on LCC and report	Must have		
3.24	System should allow storing and utilizing in optimization analysis asset condition data; one (asset) to many (condition values) relationship	Must have		
3.25	System should allow storing and utilizing in optimization analysis asset risk data; one (asset) to many (risk values) relationship	Must have		
3.26	System should allow storing and utilizing in optimization analysis asset value-for-money (VFM) data; one (asset) to many (VFM values) relationship	Must have		
3.27	System should allow storing and utilizing in optimization analysis many other data such as Levels of service (LOS), etc. ; one (asset) to many (values) relationship	Must have		
3.28	System should allow defining relationship between analysis criteria such as risk, condition, VFM, and other attributes such as remaining service life, etc.	Prefer to have		
3.29	System should have the optimization engine to optimize / prioritize assets based on multi-criteria such as Risk, Condition, Value-for-money etc. (criteria definition should be allowed separately)	Must have		
3.30	System should be able to graph replacement profiles by asset quantity, by total cost or other defined basis	Prefer to have		
3.31	System should schedule/list prioritized replacement based on conditions such as whole list without limits, limited by upper budget limit, limited by the no of projects	Must have		
3.32	System should schedule/list prioritized replacement based on selected area on spatial window	Prefer to have		
3.33	System should schedule/list prioritized replacement with proposed timeline (e.g.: date) of replacement	Must have		
3.34	System should allow to select renewal list based on relationship hierarchy such as asset category, department, etc.	Must have		
3.35	System should allow assigning values to attributes based on another attribute attached to the asset record	Prefer to have		
3.36	System should be capable of defining 'Asset deterioration curves' for assets via formula or tabular coordinates and utilizing in optimizing/prioritizing analysis.	Must have		
3.37	System should be capable of graphing 'Asset deterioration curves' for assets.	Prefer to have		
3.38	System to deduce remaining service life based on predefined formula or otherwise	Must have		
3.39	System to have what-if-analysis capabilities	Prefer to have		
3.40	System will provide ability to specify project, process, and task dependencies from asset records.	Must have		
3.41	System will provide ability to track asset life cycle through various user defined phases (e.g., planning, design phase, construction phase, commissioning).	Must have		
4.0	COSTS			
4.1	System will maintain direct relationship between asset and cost data fields	Must have		
4.2	System should have ability to have several rates associated to an asset record	Must have		
4.3	System should have ability to have several costs associated to an asset record	Must have		
4.4	System should accept various cost data through digital file transfer from other corporate systems such as Maximo, Oracle Financials, Tempest, GIS, etc.	Must have		
5.0	REPORTS			
5.1	System should have a set of standard reports	Prefer to have		
5.2	System should allow to set up user defined reports	Prefer to have		
5.3	System should allow to create custom graphs	Prefer to have		
5.4	System should allow to transfer/export graphs as picture files (e.g.: jpeg format)	Prefer to have		
5.5	System will have query/filters to get reports on screen	Prefer to have		
5.6	System should allow user developing queries, filter reports, for report outputs.	Prefer to have		
5.7	System will provide information in dashboard and drillable format to reach detailed information	Prefer to have		

City of Coquitlam
RFP 17-01-11 - Asset Replacement Modelling System (ARMS)

Appendix B - Current Technology

Desktop PCs	Windows 7 Professional
Servers	Windows 2012 R2, VMWare vSphere 5.5
Database	Oracle 12.1, Oracle VM
LDAP	Microsoft Active Directory 2008 R2
Applications	IBM Maximo 7.6 ESRI ArcGIS 10.2 Oracle E-Business Suite (Financials) 12.1.3 Cognos Business Intelligence and Reporting 10.2.2 OpenText eDOCS DM 5.3.1 SP3 (upgrading to DM 10) Microsoft Office 2010 (Word, Excel, etc.) Adobe Acrobat X Adobe Reader XI Autodesk AutoCAD 2016 (LT, base AutoCAD, Map 3D, Civil 3D)



City of Coquitlam

**REQUEST FOR PROPOSALS
RFP No. 17-01-11**

Asset Replacement Modelling System

Proposal will be received on or before 2:00 pm local time on

Tuesday, April 4, 2017

INSTRUCTIONS FOR PROPOSAL SUBMISSION

Proposal submissions are to be consolidated into one (1) .pdf file and uploaded through QFile, the City's file transfer service accessed at website: qfile.coquitlam.ca/bid

- 1. In the "Subject Field" enter:** RFP Number and Name
- 2. Add files in PDF format and "Send"**
(Ensure your web browser remains open until you receive 2 emails from Qfile to confirm upload is complete.)

Proponents are responsible to allow ample time to complete the Proposal Submission process. If assistance is required phone 604-927-3060.

PROPOSAL SUBMISSION FORM

(Complete and return this section including Appendix A)

Submitted By: _____
Company Name

Submit separate proposal submission forms for each Option presented and clearly identify each Option number.

1. Price

Price for Supply & Implementation of ARMS		
Provide price for an implementation using the following example: <ul style="list-style-type: none"> • 10 named users with read/write access • 25 named users with read-only access • Unlimited assets and asset categories/hierarchies Amounts stated above are estimates provided for evaluation purpose.		
Item	Description	Price (exclude PST & GST)
1-1.	Initial Software License Cost	\$
1-2.	Implementation & Configuration Services (incl. travel expenses if applicable)	\$
1-3.	Integration Services (incl. travel expenses if applicable)	\$
1-4.	Administrator and End-User Training	\$
1-5.	Software Support, Maintenance and/or Subscription for initial one (1) year term	\$
	Total (exclude PST & GST)	\$
1-6.	Years 2 through 5 – Software Upgrades, Support, Maintenance and/or Subscription – Price per year Year 2 Year 3 Year 4 Year 5	\$ \$ \$ \$
1-7.	Price for adding additional licenses in future years (specify license metric)	\$
1-8.	Hourly rate for additional professional consulting services	\$
1-9.	Advise if there would be any additional costs associated with the software or services (describe below)	\$

Award is subject to budget funds available and best overall value to the City.

Proposals are to state if any additional work is required to be provided by the City.

2. ARMS System Software and Support

Item	Description	Provide Details
2-1	Software Name and Version	
2-2	How is the software licensed? (Named-user, concurrent-user, server-based, etc.)	
2-3	How do we access support? (email, phone, web)	
2-4	What are the hours of availability and response time for support?	
2-5	What support services are chargeable during the support period?	
2-6	What support services are non-chargeable during the support period?	
2-7	Describe the process and frequency for providing upgrades and patches for the software.	
2-8	How are annual support, maintenance and/or subscription price increases determined? (Locked in at purchase, capped at a percentage, tied to an index such as CPI, etc.)	

3. Functional and Technical Requirements

Appendix A - ARMS functional requirements is to be completed and submitted with the proposal submission form.

4. Software-as-a-Service (SaaS) Model

If a hosted or SaaS model is being proposed, please provide the following information.

Item	Description	Provide Details
4-1	Where is the solution and platform hosted (e.g. by proponent or 3rd party)? Note, solutions hosted outside Canada are subject to additional privacy regulations than Canada based solutions.	
4-2	How is the data protected?	
4-3	How is the data backed up?	
4-4	What controls are in place for intrusion detection, perimeter security, physical security and security patching?	
4-5	Who has access to the data?	
4-6	What policies are in place to detect, prevent and mitigate identity theft with respect to storing personal information?	
4-7	Have there been any instances of identity theft in the last two years? Please describe.	
4-8	How are security incidents and breaches reported internally and to clients?	
4-9	What is your high-level disaster recovery plan and how is client information protected in such as event?	

4. Software-as-a-Service (SaaS) Model (cont'd)

Item	Description	Provide Details
4-10	Who owns the data collected during and after the services have been terminated, or if the firm goes out of business?	
4-11	How will the City get its data back in the event the Consultant goes out of business?	
4-12	How are routine reviews of your security and disaster recovery environments undertaken?	
4-13	How is third-party verification of your security and disaster recovery environments undertaken?	
4-14	What is your Service Level Agreement (SLA) and associated terms, including performance and latency targets? (Please attach) If applicable, provide information on recommended infrastructure to reach these targets.	

5. Project Implementation Methodology

Describe the implementation of the proposed solution, including but not limited to:

- the technical architecture of the proposed solution (attach diagrams where possible);
- the technical components of the proposed solution, including programming languages, 3rd party components, application programming interfaces, etc.;
- narrative of the roles and responsibilities of project and implementation consultants, by major tasks, to be used on the project;
- key deliverables, success factors and acceptance criteria

6. Training Plan

Provide a description and duration of the training courses that will be provided as part of the ARMS software implementation.

The City would prefer that all courses be conducted on-site at City Hall, 3000 Guildford Way, Coquitlam, B.C., Canada. This may include virtual classroom or “eLearning” technologies.

Training Course Title, Description and Location	Intended Audience (Reviewer, super-user, administrator, etc.)	Duration (hours/days)

7. Project Schedule

Summarize the major deliverables and high-level milestones for the ARMS implementation project. The Proponent is to state when they will be available and ready to start this project in consideration of other commitments.

The City anticipates the project will begin in **September 2017** and completed by **August 2018**.

The implementation schedule will be considered in the evaluation.

Major Deliverables and Milestones	Start Date	Completion Date

8. Key Personnel and Sub-Consultants

The following personnel and Sub-Consultants will be utilized in this project:

Name of Person and Company name	Role and Responsibility	Experience and Qualifications
	Project Manager	

The Consultant is responsible for ensuring successful completion of the project and that personnel and Sub-Consultants comply with all terms and conditions described in this RFP.

9. Experience and References

Describe recent projects of similar size, scope and complexity that the Proponent has successfully completed within the last 5 years. By submission of the proposal, the Proponent agrees that the City may contact the references provided. Information obtained from the references will not be disclosed or discussed with any proponents.

Customer/Company Name:	
Contact Name and Title:	
Contact Telephone / Email:	
Project Name and Description:	
Completion Date:	
Approximate Value:	

Customer/Company Name:	
Contact Name and Title:	
Contact Telephone / Email:	
Project Name and Description:	
Completion Date:	
Approximate Value:	

Customer/Company Name:	
Contact Name and Title:	
Contact Telephone / Email:	
Project Name and Description:	
Completion Date:	
Approximate Value:	

10. Conflict of Interest Declaration

Proponents must disclose information regarding relationships that may be perceived to be a conflict of interest in doing business with the City.

11. Sustainability

Provide information on any initiatives, programs and product choices that the Proponent has implemented that could be considered an environmental, financial/economic, social/ethically sustainable value that would be of benefit to the City.

12. Value Added

Provide information on what makes your firm innovative, what is your competitive advantage, and what other services your firm provides that would assist or be of benefit to the City:

13. Acceptance

The City requests that proposals remain open for acceptance for a period of not less than one hundred and twenty (120) days from the closing date.

We confirm that this proposal is open for acceptance by the City for a period of:

_____ days.

14. Addenda

We acknowledge receipt of the following Addenda related to this RFP and have incorporated the information in preparing this Proposal:

Addendum No.	Date Issued

15. Authorization

We hereby submit our Proposal for the software and services as specified and undertake to carry out the services in accordance with all referenced Terms & Conditions of this RFP, and all Regulations applicable to this project.

Company Name:	
Address:	
Phone:	
GST Registration No.:	
Project Contact: Name and Title of Individual <i>for communication related to this RFP</i> (please print)	
Contact Email:	
Name & Title of Authorized Signatory: (please print)	
	Signature:
Date:	

The signature is an authorized person of the organization and declares the statements made in their submission are true and accurate.

For the purpose of this RFP, electronic signatures will be accepted.