Request for Proposals (RFP)

GIS-Based Asset Management Software

Submittals Due:
Thursday, 10/6/2022

9-8-2022

CITY OF MOORHEAD
REQUEST FOR
PROPOSALS

GIS-Based Asset Management Software

PROJECT DESCRIPTION: The City of Moorhead (City) and Moorhead Public Service (MPS) are requesting proposals for acquisition and implementation of asset management software for physical infrastructure and mobile assets. The City and MPS require easy to use, mobile-based software that is highly compatible with the existing ArcGIS Enterprise and hardware. Proposals shall include mobile-based software, implementation, staff training, and maintenance support for the selected system.

Proposals must be submitted by **Thursday, 10/6/2022 at 4:00pm CDT to**:

Maria Amundson, Environmental Engineer
maria.amundson@cityofmoorhead.com

Contact information:

Maria Amundson, Environmental Engineer
maria.amundson@cityofmoorhead.com
(218) 299-5490

An electronic copy of the complete request for proposal is available by clicking the "RFP for Asset Management Software and Implementation" link on the City's RFPS & Bids website: City of Moorhead : RFPs & Bids

Proposals must be submitted no later than the date and time noted above. Proposals submitted after that deadline may be rejected and not considered. All proposals must be submitted electronically to the contact provided above. Hard copy will not be accepted.

The City and MPS reserve the right to reject any or all proposals or accept what is, in its judgement, the proposal which is in the City's and MPS's best interest. The City and MPS further reserve the right, in the best interests of the City and MPS, to waive any technical defects or irregularities in any/all proposals.

The criteria set forth in this RFP will be considered to evaluate which proposal is in the best interest of the City and MPS. Proposals will be reviewed by an evaluation committee. An interview in a question and answer format may be required at the discretion of the evaluation committee.

I. Purpose

a. The purpose of this RFP is to solicit proposals from vendors for the selection of a GIS-based Asset Management Software for the City of Moorhead (City), Minnesota and Moorhead Public Service (MPS). The City and MPS require a "user friendly" software that is highly compatible with the existing ArcGIS Enterprise, is mobile-based, and allows for unlimited users.

b. Most departments within the City and MPS are currently responsible for tracking and managing infrastructure and assets independently. Assets are being managed with a variety of tools without consistency between departments. The City and MPS intend to implement a single solution for managing assets that includes centralized and consistent data management of assets across and between departments.

c. The asset management software system must be capable of tracking asset inventory, location (via GIS link), condition, preventive/corrective maintenance performed, expected life, and provide tools to allow risk analyses to be performed to inform planning for infrastructure renewal and repair costs, as provided in the *Scope of Work*.

d. The City and MPS are seeking to go to the next level with a software solution that will provide the ability to track and manage infrastructure service requests and customer reported concerns, inventory, preventive/corrective work orders, asset inspections, asset condition, risk analyses, and infrastructure lifecycles.

e. The proposed asset management software is intended to allow the City to manage infrastructure associated with a variety of services provided to its residents, including, but not limited to:
   - Sanitary sewer including manholes, sewers, pump stations and other related devices
   - Wastewater Treatment Facility
   - Stormwater infrastructure including catch basins, manholes, sewers, pump stations, ditches, culverts, ponds, and other treatment and related devices
   - Irrigation lines
   - Flood mitigation infrastructure including levees, floodwalls, pump stations, stormwater gates, and related infrastructure
   - Streets including curb and gutter, pavement, base, and subbase
   - Sidewalks and shared-use paths, including curb (ADA) ramps
   - Traffic signs, signals, and other traffic control devices, including fiber interconnect
   - Bridges
   - Street lights
   - City buildings and facilities, including parking lots and parking ramps
   - Park buildings, facilities, and equipment
   - Fencing
   - Landscaping
   - Trees
   - Fleet, including all mobile assets

f. The proposed asset management software is intended to allow MPS to manage infrastructure associated with a variety of services provided to its residents, including, but not limited to:
   i. Water:
      - Watermains (Supply, Transmission, Distribution, Service), and related infrastructure.)
      - Water Infrastructure (Fire hydrants, Curb Boxes, Valves, and related infrastructure.)
      - Water meters/backflow preventers

- Water towers
- Ground tanks/reservoirs
- Water Plant Facilities
- Finished water pump stations
- Raw water pump stations/wells

ii. Electric
- Electric Lines (Transmission, Distribution, Service)
- Substations
- Electric Infrastructure (Transformers, Breakers, Switches, Junction Boxes, Poles, etc.)
- Electric meters
- Street Lights
- Electric Operations Facilities

iii. Fiber
- Fiber Lines
- Splice Cases
- Vaults

g. Additional information about the City can be found at the City's website: www.cityofmoorhead.com.

II. RFP Process

a. Receipt of proposals will be handled by the City contact listed above. Proposals, modifications, or corrections received after the closing time on the proposal due date will be considered late and will be considered at the City's and MPS' discretion.

b. If only one proposal is received in response to the RFP, the City and MPS may either make an award or re-solicit for the purpose of obtaining additional proposals.

c. Questions and Answers
   i. All questions related to this RFP must be submitted in writing by e-mail to the designated contact noted above.

d. Evaluation Process
   i. All proposals will be reviewed and screened based upon the requirements outlined in this request. The City and MPS reserve the right to complete the selection process without proceeding to an interview or demonstration process, and may choose to select based on information provided within the proposal. The evaluation process shall be based solely on the evaluation factors (and their relative importance) as listed below:
      - Experience, References, and Qualifications (20%)
      - Software Capability and Flexibility (20%)
      - Implementation Plan and Proposed Schedule (15%)
      - Customer Service Plan (15%)
      - Hardware and Software Requirements and Compatibility (15%)
      - Cost, both initial acquisition and ongoing support and maintenance (15%)
   ii. The evaluation committee will consider how well the vendor's proposed solution meets the needs of the City and MPS as described in the vendor's response to each requirement in *Exhibit A,* and will select the qualified vendor whose proposal is most advantageous to the City and MPS. It is important that responses be clear, concise, and complete so that the evaluation committee can adequately understand all aspects of the proposal.
   iii. This RFP provides general and technical information as well as the required format for

responses. All required and appropriate information must be included in the proposal. No other source of information submitted, written, or verbal will be considered part of your proposal.

e. Withdrawal of Proposal
   i. Proposals may be withdrawn at any time prior to the submission time specified in this RFP, provided notification is received in writing. Proposals cannot be changed or withdrawn after the time designated for receipt.

f. Proposal Validity Period
   i. Submission of the proposal will signify the vendor's agreement that its proposal and the content thereof are valid for at least 180 days following the submission deadline and will become part of the contract that is negotiated between the City, MPS, and the awarded vendor.

g. RFP Revisions
   i. The City and MPS reserve the right to change the schedule or issue amendments to this RFP at any time. The City and MPS also reserve the right to cancel or reissue the RFP at any time. Amendments or a notice of cancellation will be posted to the City's website. It is the sole responsibility of the Vendor to monitor the City's website for the posting of such information.

h. Statement of Confidentiality
   i. Under Minnesota State Law, the documents (including but not limited to written, printed, graphic, electronic, photographic, or voicemail materials and/or transcriptions, recordings or reproductions thereof) submitted in response to this RFP (the "documents") become public record upon submission to the City and MPS, subject to mandatory disclosure upon request by any person, unless the documents are exempted from public disclosure by a specific provision of law.

i. Equal Opportunity Compliance
   i. The City and MPS are an equal opportunity employer and require all Vendors to comply with policies and regulations concerning equal opportunity.

j. Other Compliance Requirements
   i. In addition to nondiscrimination and affirmative action compliance requirements, the Vendor awarded a contract shall comply with federal, state, and local laws, statutes, and ordinances relative to the execution of the work. This requirement includes, but is not limited to, protection of public and employee health and safety; environmental protection; waste reduction and recycling; the protection of natural resources; permits; fees; taxes; and similar subjects.

k. Compensation
   i. No payment of any kind will be provided to the submitting vendor, or parties they represent, for obtaining any of the information solicited. Procurement of all equipment and services will be in accordance with subsequent contractual action.

l. Commitments
   i. All proposals should be submitted initially on the most complete basis and with the most favorable financial terms available. The selected vendor's proposal may, at the City's and MPS' option, be made part of the final purchase contract and all representations in the vendor's proposal may be considered commitments to supply the system as described.

m. Selection Process and Contract Award
   i. All proposals will be reviewed and screened based upon the requirements outlined in this request. The City and MPS reserve the right to complete the selection process without proceeding to an interview process, and may choose to select based on information provided within the proposal.

ii. It is the intention of the City and MPS to negotiate and enter into a contract with the vendor whose proposal is deemed to be the best fit and in the best interest of the City and MPS; however, the City and MPS do not guarantee to award based on this RFP. The City and MPS reserve the right to reject or cancel any and all proposals. Proposals lacking required information will not be considered. The award of the contract is subject to approval by the City Council and MPS Commission.

iii. The selection process will proceed on the following schedule (dates may be subject to change):
- 10/6/2022 – Proposals Due
- 11/4/2022– Staff proposal review complete
- 11/10/2022 - Notification of selection for interviews
- 11/30/2022 – 12/1/2022 – Interviews
- 12/30/2022 – Contract negotiations complete
- 1/9/2023 – Contract to City Council for approval

iv. The City and MPS, at its discretion, may develop a short-list of Vendors for interviews. If conducted, a list of specific questions will be provided to each Vendor invited to participate in an interview. This list of questions developed for each Vendor will be based on the evaluation committee's review of the written proposal and will be specific to that Vendor.

v. The vendor selected will be expected to enter into a contract with the City and MPS. If the selected vendor fails to sign and return the contract within ten (10) business days of delivery of the final contract, the City and MPS may elect to cancel the award and negotiate a contract to the next-highest-ranked vendor.

vi. The selected vendor will be expected to meet the City's and MPS' insurance and bonding requirements, as may be applicable and enumerated in a purchase agreement.

vii. No costs chargeable to the proposed contract may be incurred before the vendor has received a fully executed contract.

III. Content of Proposal

a. Proposals should include the major elements and information outlined below. Information requirements should be considered the minimum necessary to support the proposal. Additional detail may be provided.

i. Experience, References, and Qualifications
- A brief summary of the vendor's expertise, experience, and qualifications
- A complete list of past and current contracts within the Upper Midwest, particularly Minnesota
- At least three (3) and no more than five (5) references from cities and/or utilities.
- Summary of all litigation actions within the State of Minnesota involving the vendor within the last five (5) years or an affirmative statement of no litigation actions

ii. Software Capability and Flexibility
- Software capability as it relates to the proposed scope of work (Exhibit A)
- Software flexibility as it relates to the proposed scope of work (Exhibit A)
- Itemized list of proposed deliverables

iii. Implementation Plan
- Proposed approach to implementation
- Typical schedule for implementation

iv. Customer Service Plan
- Detailed proposal for on-going customer service beyond implementation including help documentation, Standard Operating Procedures (SOPs), and vendor response to requests for service in a timely manner

v. Hardware and Software Requirements and Compatibility
    - Minimum hardware and software requirements
    - Minimum requirements for desktop and mobile applications
    - Compatibility and integration with existing City and MPS ArcGIS Enterprises, business systems, and applications
    - Unlimited user licenses

vi. Costs, including specific line items for:
    - System acquisition
    - Implementation and training
    - Integration and migration with each existing business systems
    - Annual fees
    - Annual professional services and/or customer support
    - Equipment (if needed)
    - Warranties

Exhibit A

SCOPE OF WORK

The vendor selected shall be responsible for delivering commercial off the shelf software to the City and MPS, installing and configuring it, and training staff to use it. Further, the vendor will provide ongoing support, updates as required to maintain compatibility with existing GIS databases and applications, and future training opportunities for City and MPS Staff (if required). The City and MPS will retain ownership of all data.

Objectives

1. The City's and MPS' main objective is to capture and analyze infrastructure, building, and mobile asset-related data including inventory, field inspections, work order management, condition assessment, risk assessment, asset criticality, lifecycle management, and replacement planning and reporting in a manner that is easy to use, allows for field mobility, and that minimizes staff time and resources.
2. Maintain an inventory of City and MPS assets which includes detailed information about location, condition, useful life, and overall value.
3. Integrate with GIS and use GIS-based attributes and related tables to system functions, calculations, and reporting.
4. Data documentation for mapped and unmapped facilities (such as pump hours, pavement condition index, ADA compliance, other)
5. Interactive maps of physical infrastructure available in the field for inspection and maintenance.
6. Work Order development, scheduling, tracking, notification, and ancillary documentation (capability to attach photos, documents, etc.).
7. Schedule periodic maintenance by material, condition, maintenance history, time, equipment runtime, or other parameters.
8. Resource management capabilities; ability to inventory parts and materials according to need.
9. Ability to track labor and time management.
10. Searchable database with real time, configurable dashboard.
11. Minimum four (4) year operation and maintenance contract which may include negotiated, fixed cost adjustments.
12. Compatibility with multiple device types (i.e. tablets, phones, laptops, desktops, etc.) and operating systems (i.e. Apple, PC, IOS, Android, etc.)
13. Include updates, upgrades, patches, and bug fixes without significant operational impacts to the City and MPS.
14. Ability to integrate with other business systems for tracking inventory, materials management, customer information, and other related systems of record.
15. Ability to provide updates to GIS and existing business systems through the use of web services.

Requirements

1	**General Requirements**
1.1	System must enable field operations via a mobile application related to GIS-based assets to perform and schedule preventive and corrective maintenance or inspection tasks.
1.2	System must have a dashboard style page configurable by any number of search parameters defined by each user for viewing assigned or monitored work activities including capability for displaying cost summaries, to do lists, charts, graphs, maps, reports, etc.
1.3	System must support exposed application programming interface (API) or web services to integrate with other City systems.
1.4	System must be compatible with multiple device types (i.e. tablets, phones, laptops, desktops, etc.) and operating systems (i.e. Apple, PC, IOS, Android, etc.).
1.5	Software testing must be provided to ensure that all configuration requirements are properly functioning as defined.
1.6	The software licensing costs shall allow for a “site” or “enterprise” license that provides full access to the software for an unlimited number of “users” comprised of City and MPS employees.
1.7	Single Sign On integration with Azure Active Directory (Microsoft 365) and Microsoft Active Directory.
2	**GIS and Asset Data Requirements**
2.1	System must support the most current version of ESRI ArcGIS Server and maintain compatibility with all applicable future versions of ESRI GIS software either before or shortly after an ESRI version release.
2.2	GIS integration including the use of versioned SQL Server feature classes and related tables via ArcGIS Server feature and map services. Allows users to log on to System using ArcGIS portal credentials.
2.3	System should be designed to work primarily with GIS data, where geographic features represent assets, and must integrate with the City’s and MPS’ existing GIS Enterprises. The software must not require converting to a different format.
2.4	Core system must be configurable for unlimited asset types (layers) and asset groups without additional licensed modules or licensing cost.
2.5	System must not set limits on the number of assets or the size or complexity of the asset data other than those imposed by the underlying ESRI software.

2.6	System must provide a map interface allowing users to view assets, search, pan, zoom, locate, edit (as applicable), and measure distances and include the capability to view information about asset attributes from the GIS database.
2.7	Ability to select assets in the GIS map and create work orders and inspections for multiple selected assets.
2.8	All work activities, (requests, work orders, inspections, etc.) must be displayed live on the map interface based on status. User must be able to open work orders/requests from the map.
3	**Public Records Management /Citizen Complaints/Future Expansion**
3.1	Software must provide functionality for logging, mapping, and tracking calls for service/citizen complaints.
3.2	Ability to define service request types with user-defined caller questions, instructions and comments.
3.3	Ability to track multiple callers per request.
3.4	Ability to track calling/reporting customer's address and/or name from a list generated from a database.
3.5	Customer database which auto populates according to phone number or other customer information, with ability to exclude private information.
3.6	Track status and resolutions to complaints.
4	**Work Management**
4.1	Software must generate, map, and track preventive and corrective work orders against assets.
4.2	Ability to define unlimited work order activity types for any asset/equipment type.
4.3	Ability to generate unlimited work orders from service/work requests, create relationships between work orders, and attach multiple work orders to any number of assets or to locations without assets.
4.4	The work order system must track parts, labor, equipment, and other costs/resources associated with the work activity.

4.5	Ability to create work requests from inside the map interface.
4.6	Ability for users to select and review work requests and work orders using multiple selection and sorting criteria that include all work request and work order fields.
4.7	Ability to view work activities on a calendar.
4.8	Ability to assign and edit priorities to work orders.
4.9	Assign tasks to specific City and MPS staff.
5	**Inspection and Scheduling Requirements**
5.1	Captures and stores the results of various inspections such as condition assessment, flow monitoring, I/I investigations, smoke testing, pump efficiency testing, dye tests, etc.
5.2	Inspections must provide flexibility for user-defined fields and forms.
5.3	Ability to set periodic maintenance inspections based on materials, date, elapsed time, equipment runtime or other user-defined parameters.
6	**Asset Management and Risk Analysis**
6.1	Flexible user-defined tools to characterize asset condition, probability of failure, consequence of failure, remaining service life, and risk of failure.
6.2	Ability to develop risk analyses through user-defined parameters and computations.
6.3	Ability to capture, analyze, and develop risk analyses for all infrastructure, facilities, and mobile asset.
6.4	Ability to perform analyses for replacement planning and reporting.
6.5	Provide standard report capabilities including configurable presentation quality graphs, charts and GIS mapping and the ability to develop customized reports within the application.

6.6	Ability to generate budget analysis reports and scenarios.
6.7	Provide ability to export data to Microsoft Excel or Access for City and MPS use in other applications.
7	**Pavement Management System Modeling**
7.1	Ability to transfer existing project and street data from current pavement management database.
7.2	Ability to input user-defined pavement condition distress survey data manually by individual segment per ASTM D6433 – 20 or by batch distress database provided by a third party.
7.3	Ability to measure, review, and enter distress data from high resolution GPS-referenced digital imaging surveys provided by a third party.
7.4	Ability to calculate segment condition index based on ASTM D6433 – 20.
7.5	Ability to select segments to edit pavement distress and project history via text filtering or GIS selection.
7.6	Ability to input and maintain historical distress survey and construction history that allows for storage of all construction projects. Ability to configure to meet user-defined functionality. When construction activities are entered, the software must be able to automatically update all individual pavement condition indices based on construction history data.
7.7	Ability to organize and create multiple street networks for running multiple analysis scenarios.
7.8	Ability to assign user-defined functional class, pavement performance curves, maintenance/rehabilitation strategies to specific street sections for both historic (project history) and future (proposed) capital improvement projects.
7.9	Ability to create detailed pavement deterioration curves (up to 4^{th} order polynomial functions) based on surveyed data and calculated PCIs for all network permutations of functional class, pavement type, and last rehab/maintenance strategy.
7.10	Ability to run optimized scenarios with user defined constraints for individual network permutations of functional class, pavement type, and last strategy. Constraints shall limit or allow rehabilitation/maintenance strategies, overall budget, budgets for repair type, PCI, and optimum strategies for a designated time period.

7.11	The optimization scenario functionality must have goal setting capabilities to determine the specific set of projects that would need to be completed annually to meet any user-defined goal or set of goals in the most cost-effective manner possible.
7.12	Ability to run scenarios to determine short-term and long-term impact of pre-determined and/or designated capital improvement projects in conjunction with recommended projects based on optimized analysis.
7.13	Provide unique multi-year work plans that identify the type of repair and associated cost for all pavement segments for each year of the analysis period for any funding or performance-goal setting scenario.
7.14	Allow for analysis to consider any planned utility projects so as to ensure that streets are not selected for repairs if utility work is planned.
8	**Fleet Management**
8.1	Integrate Fleet planning and maintenance execution through the use of work orders and purchase orders, or external maintenance imports.
8.2	Real-time fleet tracking including vehicle tracking, driver detail, asset details, and replacement values.
8.3	Automation of fleet reports.
8.4	Management of fleet/vehicle maintenance.
8.5	Communication with the City's fuel pump system (Gas Boy) to accurately track mileage for preventive and routine maintenance.
9	**Facilities Management**
9.1	Track scheduled & preventive maintenance on facilities and assets.
9.2	Inventory management and control to include photo & file upload capabilities.
9.3	Environmental & energy performance analysis.

9.4	Work order creation, tracking, and notifications via user portal and/or mobile app.
9.5	Vendor management.
9.6	Reporting.
9.7	Document management.
9.8	Ability to create workflows and checklists for facilities management.
10	**Electric, Fiber, & Water Management**
10.1	Software must generate, map, track, and send notifications for preventive and corrective work orders, service orders and maintenance activities on facilities and assets via user portal and/or mobile app.
10.2	Software must have the ability to include capturing, uploading, deleting, and managing multiple photo and file capabilities.
10.3	Ability to define unlimited work order, service order, and maintenance activity types for any asset/equipment type.
10.4	Ability to generate unlimited work orders, service orders, and maintenance activities from service/work requests, create relationships between various work orders, service orders, and maintenance activities, and attach multiple work orders, service orders, and maintenance activities to any number of assets or to locations without assets.
10.5	The work order system must track parts, labor, equipment, and other costs/resources associated with the work activity.
10.6	Ability to view, create, and update work requests from inside the map interface.
10.7	Ability for users to select and review work requests and work orders using multiple selection and sorting criteria that include all work request and work order fields.
10.8	Ability to view work activities on a calendar.

10.9	Ability to assign and edit priorities, tasks, and staff of work orders, service orders, and maintenance activities.
10.10	Assign work order, service order, and maintenance activities to multiple MPS staff members.
10.11	Captures, stores, and relates the results of various inspections with associated assets in GIS.
10.12	Inspections must provide flexibility for user-defined fields and forms.
10.13	Ability to set periodic maintenance inspections based on materials, date, elapsed time, equipment runtime or other user-defined parameters.
10.14	Flexible user-defined tools to characterize asset condition, probability of failure, consequence of failure, remaining service life, and risk of failure.
10.15	Ability to develop risk analyses through user-defined parameters and computations.
10.16	Ability to view, capture, analyze, and develop risk analyses for all infrastructure, facilities, and mobile asset.
10.17	Ability to perform analyses for replacement planning and reporting, i.e. based on material and equipment (conductor, XFME, switches, fiber optic cable, vaults, splices, watermains, services, valves, pumps, etc.) age, condition, outages, reliability impact, customers impacted, load impact, water leaks, aesthetics, safety, accessibility, and if area is looped or a radial feed.
10.18	Ability to generate budget analysis reports and scenarios based on replacement planning and reporting and other underlying criteria.
10.19	Provide standard report capabilities including configurable presentation quality graphs, charts and GIS mapping and the ability to develop customized reports within the application.
10.20	Reporting shall have an easy to use interface allowing users to customize, create, and modify reports, and provide the ability to generate ad hoc reports.
10.21	Provide ability to export data to Microsoft Excel or Access for City and MPS use in other applications.
10.22	Ability to create workflows and checklists for facilities management.

10.23	Ability to perform environmental performance analysis.
10.24	Ability to utilize barcode scanning of materials for inventory, work orders, service orders, etc.
10.24	Ability for vendor management and/or integration with business system for managing vendors.
10.25	Ability for document management and/or integration with existing document management system.
11.0	**Integration/Migration – City Systems**
11.1	Migrate all existing data from Builder into the new program/system
11.2	Migrate all existing data from PubWorks into the new program/system
11.3	Migrate all existing data from ICON 7 Pavement Management software by Goodpointe Technology into the new program/system
11.4	Migrate all existing data from MaintenanceView into the new program/system
11.5	Integrate with Tree Plotter
11.6	Integrate with BS&A Software
12.0	**Integration/Migration – MPS Systems**
12.1	Integrate with Harris Infinity Customer Information System
12.2	Integrate with Microsoft Great Plains accounting software