

City of Pullman
Request for Proposal
Safety Camera Initiative

I. Introduction

The City of Pullman is seeking the services of a contractor to design, install, and optionally provide ongoing maintenance services for a digital safety camera system located within the city limits of Pullman, Washington. The project has been funded by a federal grant, Project Number 2011-DB-BX-0015.

The successful proposal will include a minimum of 5 cameras, an archive server, connectivity between those devices, and other optional cameras and functionality as described herein. The budget for this project including, but not necessarily limited to, design, installation, 7.8% sales tax on contract items, project management, overhead and profit, and any change orders is \$110,000. Solution plan pricing as offered in the proposal will be a criteria for proposal evaluation, but the actual contract amount will be negotiated with the selected preferred proposer and become a part of the construction contract.

This project will be awarded to a successful contractor who will be responsible for the purchase, installation and optionally ongoing support of the camera system described within this request for proposal. A successful contractor will demonstrate system support and maintenance capabilities with an office and permanent technical support staff capable of responding to the City of Pullman, Washington within 24-hours.

Respondents to this request for proposals should demonstrate knowledge and expertise in microwave communications and camera system design that will allow the City of Pullman to:

1. Gain a high performance, scalable enterprise safety camera system to provide reliable communication between up to 10 cameras, 8 patrol vehicles, an archive server, and other Internet-based clients.
2. Provide a high quality installation of all system components and associated infrastructure using industry best practices and standards in conformance to applicable codes and ordinances.
3. Optionally provide ongoing support and maintenance.

All costs incurred by the contractor to complete this project must be included in the bid price. Prices provided in the response to this request for proposals will take into consideration all costs, including installation labor, materials, equipment, tools, delivery, transportation, insurance, shop drawings, project scheduling, and all other labor, materials and activities required to provide the camera system and associated services including permits and Federal Communications Commission licensing where applicable.

II. Background

The City of Pullman Police Department has identified an area of College Hill which appears to statistically demonstrate a high level of crime associated with alcohol abuse. The Pullman Police Department has received a grant to install cameras in the vicinity of Adams Mall (600 NE Colorado). The City intends to connect the safety camera system into the City network via a

microwave link to Webster Hall at WSU, and to link them to a storage server, and to police vehicles using 3g or 4g cellular service. This project will optionally provide a licensed radio system that will provide the primary communications between the safety camera system and patrol vehicles, other than the existing cellular network. The microwave radio link between the camera system and the existing microwave backbone will be the subject of a separate RFP. The network connection for the camera system will be available in the Police Department Office at Adams Mall.

The cameras should communicate with their demarcation point at Adams Mall, in the Police Office. The City will provide network connection from the Police Office to the remainder of the City network and the Internet. It is anticipated that contractors will use licensed microwave radios to communicate between cameras and antennas on the roof of Adams Mall.

There are many camera systems available that would provide beneficial service. The technical specifications for the system have been kept intentionally broad, to allow vendors to propose their best solution, with limited restriction.

The proposed system will include:

1. A core group of Cameras, installed in the vicinity of Adams Mall
2. An Archive or Storage Server
3. Design and Installation of all the above
4. Optional components and additional cameras, with pricing for each

A. Potential Camera Sites Identified

Adams Mall Area

NE Colorado Street at NE Ruby Street, SW corner
NE Colorado Street at NE Monroe Street, SW corner
NE Monroe Street at NE California Street, NE Corner
NE Ruby Street between Colorado and Monroe
Adams Mall, Roof, Facing South
Adams Mall, Roof, Facing West
Adams Mall, Rear Parking Lot, Facing South

Other areas near Adams Mall for consideration of camera installations

NE Colorado Street at NE B Street
NE California Street at NE Ruby Street
NE A Street between Colorado and California Streets
NE Campus Street at NE Monroe Street
NE Campus Street at NE Opal Street
NE California at NE A Street
NE California at NE B Street
NE Colorado Street at NE Opal Street

This list is not intended to be a complete list of mandatory sites and applicants are not required to support cameras in all these locations. The area of camera coverage we have so far identified is 600 NE Colorado Street, Pullman, WA 99163, and potentially up to a 2 block radius nearby. The specific areas of interest at 600 NE Colorado would be the front and rear entrances, the area on the Ruby Street side (West), and the parking lot (North). Research is ongoing to identify additional sites of interest.

B. Desired Camera Capabilities

The camera system should allow an operator to identify these conditions we expect during the day:

weather conditions

traffic problems or accidents

The camera system should allow an operator to identify these conditions more likely during hours of darkness, in addition to the above:

formation of unruly crowds

injured or immobile pedestrians on street or sidewalk

malicious mischief in-progress

assaults in-progress

When used in real-time, the system should allow the operator to:

remotely PTZ by a single operator and possess the ability to resolve contention between PTZ operators

to view multiple cameras in a thumbnail/scaled view, possibly at lower frame rate

use password protected access to system by users and group membership

use secure encrypted login

to assign rights on a per-camera basis, to include rights for PTZ and frame rate

When viewing video from an archive, the system should possess:

quality sufficient to identify criminal offenders by view of their faces

- ability to search archives by time, and/or camera
- ability to optionally export video to a common format
- ability to export video to a dedicated player which assures integrity
- ability to log all playing and exporting of video
- ability to assign rights on a per-camera basis
- ability to span DVD's or split files when a large export is requested
- ability to assign specific video to one or more retention schedules

The system should be capable of:

- quality to exceed 1280 x 1024 pixels, 30 fps for up to 10 simultaneous users
- ability to stream video at different rates for different purposes and security groups
- H.264 compression
- Color capability during the day
- B&W capability during darkness
- Operation in local weather with extremes of temperature

C. Additional desirable system features

- 'Preset' capability for PTZ cameras to return to a designated start location
- ability to establish programmed 'tours' for PTZ cameras
- motion detection as search mechanism for archive data
- analytics to trigger email notifications and alarms to monitoring stations
- analytics capable of 'learning' and differentiating crowd behaviors
- offsite backup capability for DVR
- minimally visible installations on Adams Mall
- components should be damage/vandal resistant as installed

D. Optional Semi-Mobile Camera with Cellular Communication

A single PTZ camera in weatherproof enclosure, that could be easily relocated as needed for transient responses. This camera would use a cellular data path to the Internet, but still store its' data on the archive server, as with all the other cameras. Its data rate and frame rate could be adjustable to accommodate bandwidth available and application need. Its output would be visible in client software as the other networked cameras.

E. Constraints on the project

Building cannot be 'remodeled' as a possible historic building

High density of mature, seasonal foliage in the area.

High density of consumer 802.11 equipment in the area.

Existing Avista 'Smart Grid' project in the area using 2.4Gz.

All data is to be retained for at least two weeks.

Data indentified as involved in an Incident should be retained for 90 days.

Extensive loading on poles may require upgrade or addition of new poles at vendors expense

Access to roof requires an external ladder; no stairs or ladders lead there from inside.

F. Resources available to project

Cameras may be mounted on utility poles and powered by power from utility poles, with approval from Avista.

City has existing PC's in cars with Sprint 3g connection, anticipating 4g by Spring 2012.

The City will have Netmotion XE installation completed during Spring 2012.

The City will have a 23Gz link between Adams Mall and Webster Hall completed during Spring 2012.

G. Items specifically excluded from project

License Plate Recognition

H. Proposed Network Connections

The Adams Mall area is has dense, mature foliage, and large trees. Applicants will need to consider obstructions to microwave paths in their communications designs.

I. Mobile Components

The video from the cameras should be available to police officers in their vehicles. The vehicles are equipped with a laptop PC (or equivalent) with a Windows Operating System (XP Professional or Windows 7). The computers will have a secure VPN connection to the City network via Netmotion, and a cellular connection to the Internet; currently 3g although 4g connectivity is expected during 2012.

Applicants are encouraged to include additional vehicle connectivity in their proposals, where it will increase reliability and performance.

J. Archive Server Characteristics

The Camera System shall store all image data on a server, referred to here as the 'archive server'.

The archive server shall be comprised of rack mounted components, containing one or more Intel CPU, and run a Windows operating system.

Archive and storage systems based on Microsoft SQL, are preferred to other databases.

Preference shall be given to archive servers that support vendor-agnostic storage, accessible via UNC paths or open standards.

The archive server shall allow for automated data management, so that older recordings can expire and be automatically deleted based on a retention schedule.

III. Scope of Work

A. Turnkey

The contractor will furnish all materials, equipment, tools, engineering, and labor necessary to fully complete, in a professional and timely manner, the requirements of this request for proposals.

B. Design

The contractor will be responsible for the design and construction of the Safety Camera System. In submitting a proposal for consideration the contractor acknowledges a full understanding of the scope of work and the system requirements.

The contractor guarantees that the system will be furnished, designed, installed, and tested by the contractor to meet or exceed the City of Pullman's current and projected requirements as described in this request for proposals.

The contractor will provide any changes to the system that are required to meet the performance criteria. Any changes in system components not included in the contractor's response to this request for proposals required to correct deficiencies because the contractor has failed to satisfy performance requirements stated in this request for proposals will be provided at the contractor's expense.

C. Integration

The contractor will be responsible for the proper installation and interfacing of all of the equipment provided pursuant to this request for proposals. City approved network routers and switches shall be provided by the contractor at each site that they are required to facilitate communications.

D. Sites and Inspection

The contractor will complete a thorough site inspection of each of the proposed sites. The contractor will provide, in writing, a list of improvements or alterations that are required at each site. Details provided in this request for proposals pertaining to sites must be verified by the contractor.

Should it become necessary that alternative sites and facilities be substituted for one or more of the proposed sites, the contractor, in addition to providing a narrative explaining the unsatisfactory condition(s) that exist(s), will inspect the proposed alternative sites and provide, in writing, a summary of the existing conditions at the proposed alternative site and a list of improvements or alterations that are required at each of the proposed alternative sites.

The contractor shall, prior to installation of the camera or radio system at each site, re-inspect the site, including structures located thereon and identify any changes in sites and facilities since the initial inspection that may affect performance of the camera or radio system. If the contractor fails to inspect the sites prior to installation of components of the camera system, the contractor shall thereafter be liable for any failure of the camera system to perform in conformance with this request for proposals.

The contractor shall conduct a load analysis study, if required, on existing structures proposed for camera equipment to be installed to ensure that the integrity of the structure is not compromised. Avista Utilities will have final say regarding suitability of proposed

installations on utility poles. The contractor will be required to provide drawings in support of each utility pole installation.

E. Installation and Alterations

The contractor's work shall comply with applicable federal, state, and local codes and ordinances. Prior to installing any components of the camera system, at any site, the contractor shall determine and ensure that the construction and alterations required for the system to be properly installed are present, sufficient, and appropriate at each site.

F. Permits

The contractor shall obtain any City of Pullman building permit that may be required prior to beginning work. The City shall pay all building permit fees. The contractor is responsible to coordinate all required building inspections with the City of Pullman Protective Inspections Division.

The contractor shall acquire any FCC licenses required for the camera system and those licensees shall be acquired with the 'City of Pullman' as licensee.

The contractor shall obtain the necessary electrical permit for this work and shall pay all related fees. The contractor is responsible to coordinate all required electrical inspections with the State of Washington electrical inspector.

G. Prevailing Wages

For the on-site installation work on this project, laborers, workmen, or mechanics shall not be paid less than the hourly minimum rate of wage determined to be the prevailing rate by Washington State Department of Labor and Industries. The contractor will be required to obtain "Statement of Intent to Pay Prevailing Wage" and "Affidavit of Wages Paid" forms from the Washington State Department of Labor and Industries for his company and for all subcontractors. All fees for L & I forms are the contractor's responsibility and no separate reimbursement to the contractor by the City will be made.

H. Microwave Paths

The contractor shall engineer, design, and implement high-availability microwave paths that have path reliabilities of not less than 99.995% and a fade margin of not less than 30 dB for all microwave paths. The contractor shall apply for, coordinate and obtain FCC licenses for all microwave paths requiring licensing.

I. Staging

The contractor shall stage the camera system prior to installation. All cabling, wiring, programming, and equipment configurations will be completely integrated in final configurations prior to delivery. It is understood that additional optimization (level setting, power adjustment, etc.) will be required on site.

J. Training

The contractor shall conduct a comprehensive training course with supporting training documentation to instruct personnel of the City in the proper operation, use, upgrade and maintenance of the system.

K. Maintenance

The contractor shall provide all labor, parts, and tools required for the maintenance of the system through the warranty period.

The contractor shall provide a maintenance program for one year, with extension options for a second and third year, including, but not limited to, detail describing response time, personnel training, number of technical staff available to perform maintenance, equipment required for analysis and troubleshooting, optimization, and schedules for preventive maintenance.

L. Operations and Maintenance (O&M) Documentation

The contractor shall furnish three (3) hardcopies and one (1) electronic copy, in Adobe pdf format, of the systems O&M manuals including microwave system drawings for the project. The O&M manuals should have sufficient detail to allow a system technician or engineer, having basic electronic knowledge and experience, to understand the systems operations and perform corrective and preventive maintenance. The manuals should highlight any special circuitry, wiring, interfacing, and custom or non-standard procedures required to operate, maintain, and install any of the equipment furnished under this request for proposals and resulting contract. The electronic O&M manual should contain original, reproducible manufacturer supplied documents organized identical to the hardcopy O&M manuals. Drawings and/or schematics should be produced using a computerized CAD program. Scanned copies of facsimile documents should not be used.

M. Project Management

The contractor shall assign a project manager who will provide technical direction for the duration of this project.

IV. Design Standards

A. Solution Requirements

The camera system should be designed and constructed to meet the following minimum specifications:

1. Wind speeds of up to 90 mph.
2. Power requirements not to exceed 90–120 VAC, 50–60 Hz, 10 amps.
3. Ethernet IEEE 802.3.

B.

Applicable Standards

The applicable sections or portions of the standards, regulations, and codes of the entities listed below shall apply for site preparation and for the installation, operation, maintenance, and service of the microwave system proposed. In the event that the requirements of the standards, regulations, or codes differ, the more stringent will apply.

Federal Communications Commission (FCC)
National Fire Protection Association (NFPA)
National Electric Code (NEC)
Occupational Safety and Health Act (OSHA)
Institute of Electrical and Electronics Engineers (IEEE)
Underwriters Laboratories (UL)
American Institute of Steel Construction (AISC)
State or local ordinances and building, fire, and zoning codes
American Welding Society (AWS)

C. Installation Guidelines

The following installation guidelines represent minimum installation, cabling, and grounding guidelines:

1. Transmission line must be secured using stainless steel hangers and shall be grounded within five feet of the antenna.
2. All mounting and outdoor equipment is to be grounded using #6 AWG copper stranded wire.
3. Neither ladders nor ladder connection systems shall be used for a cable pathway, and walkways must remain clear of cable runs.
4. All cables are to be secured every four feet.
5. Cables shall be labeled.
6. Weather-proofing will consist of Butyl, 2" vinyl tape, 3/4" vinyl tape and must be applied using shingle method.
7. Outdoor rated cable is to be used exterior of cabinets and shelters.
8. Cables subject to damage such as fiber-optic cables shall be protected in conduit or similar approved.
9. Grade level and tower top ground bars are to be bonded together using #2 AWG stranded insulated wire.
10. Shielded data cables shall be grounded to tower top ground bar as well as grade level if lengths are in excess of 50 feet.
11. All outdoor radio units must be properly grounded with #6 AWG wire using two-hole lugs (exceptions are only admitted if radio unit only allows for single-hole termination).
12. All ground lugs shall have heat shrink.

13. All exposed solid ground wires at grade level are to be protected with liquid tight and to be sealed with silicone and shall expose no more than two inches of wire at termination point.
14. All grounding and battery terminations are to have NO-OX applied.
15. All equipment including trays, conduit and ice bridges are to be grounded using #6 AWG stranded green ground wire, except ice bridges where a #2 AWG solid is to be used with two-hole lugs.
16. All conduits or pipes at grade level are to be capped.

V. Project Timing

Proposals will be accepted until 5:00 PM on February 13, 2012. In order to consolidate inquiries from contractors City staff will be available to answer questions on January 31, 2012 at 10:00 am in the Large Conference Room in Pullman City Hall. Access to the roof at Adams Mall will be available to the selected vendor only, due to safety concerns. Images of the roof will be made available on request. Questions should be directed to Jerry Cork, Information Systems Specialist, at (509) 338-3365 or by email at jerry.cork@pullman-wa.gov. Other contact with City staff is discouraged.

It is the City's desire to complete this project by July 30, 2012. The previous required phase of the project is scheduled for completion no later than June 1, 2012.

The installation of the camera system is one component of a larger project, which includes surveying local residents, and crime statistics. Because of seasonal variations, the installation must be started no earlier than June 1, 2012, and completed no later than August 15, 2012.

VI. Proposal Requirements

To facilitate the review process, proposals should follow the outline provided below as closely as possible. Proposals should include, as a minimum, the following information:

Chapter 1 – Cover Letter and Proposal Summary

Chapter 2 – Qualifications and References

A. Company

1. An introduction to your company including principals who will be involved with this project
2. The name, title, address, and telephone number of individuals with authority to negotiate and execute contracts and who may be contacted during the evaluation process.

3. A list of projects similar to this project that your company has completed in the recent past. Provide references for this list.
4. Provide the City of Pullman with the company's most recent OSHA 300 report.

B. Key Personnel

1. The names and qualifications of the key personnel who will be assigned to this project. Identify the project manager who will be responsible for this project and who will be your company's primary contact.
2. A list of similar projects the identified project manager has recently completed.

C. Sub-Contractors

1. Provide the business name, description of work to be completed, key personnel, qualifications, and safety program records for all sub-contractors that will work on this project.
2. Provide the City of Pullman with the most recent OSHA 300 report for each of the proposed sub-contractors.

Chapter 3 – Technical Solution

A. Project Understanding

A discussion that demonstrates your understanding of this project, why your company is best qualified to perform this work and why you believe your project solution is the best solution for the City of Pullman. Elaborate on your understanding of the scope of work to be provided, particular challenges that you foresee this project presenting, and your approach for addressing those challenges.

B. System Design

Provide a detailed narrative of your proposed solution in conformance with the conditions provided herein.

Provide a drawing or graphic indicating proposed camera and/or radio locations. For each proposed camera and/or radio location, include a drawing or graphic indicating the approximate installation method for the camera and/or radio. Include a drawing or graphic indicating the approximate view to be expected from the camera during day, and night operation, including maximum effective range for recognizing faces (herein defined as 40 pixels per foot).

Provide a drawing or graphic indicating proposed installations on the roof or structure of Adams Mall. For each proposed equipment location, include two (or more) drawings or graphics. One (or more) indicating the expected appearance of the installation from ground level outside Adams Mall (a drawing or graphic for any of the four sides the installation is visible from). The other

drawing or graphic indicating the expected appearance of a representative side of the installation, from nearby on the roof.

C. Site Inspection Documents

1. Alternative site discussions. (see Section III.D)

D. Network and Site Drawings

E. Infrastructure Inventory

F. Catalog Data Submittal

G. Operations and Maintenance Manuals

Provide a detailed outline and narrative for each section of the O&M manual that will be delivered to the City at the end of the project. Please refer to Section III.L.

H. Manufacturer Warranty Information

Chapter 4 – Implementation Plan

A. Proposed installation plan and schedule

Chapter 5 – Support Plan & Pricing

A. Maintenance program with second and third year options

1. Narrative discussing your ability to provide ongoing support.
2. Narrative describing the process for seeking technical support services, including hours of operation and expected response times.
3. Pricing.

Chapter 6 – Solution Pricing Plan

- A. Proposals shall be limited to 50 pages in length plus resumes and references. Proposals shall be developed from the contractor's understanding of and experience with this type of work, the information provided herein, unaccompanied site visits and the question and answer session at Pullman City Hall on January 31, 2012. Please do not contact City of Pullman staff at other times during this phase of the selection process for more particular information

VII. Selection Criteria

Proposals will be reviewed by an evaluation committee comprised of individuals from various disciplines and experience with microwave radio, camera systems, and law enforcement management. This committee will determine the extent to which each proposal best meets the City of Pullman's system objectives using a set of evaluation criteria.

The City of Pullman will use the following process to evaluate and rate proposals:

- A. Proposals will be evaluated for completeness and best fit to the requirements and objectives of this request for proposals. The City of Pullman reserves the right to waive minor informalities and discrepancies. Proposals will be evaluated to determine if they comply with the administrative, contractual and technical requirements of the request for proposals. If the proposal is unclear, proposers may be asked to provide further written clarification.

- B. The proposals will be evaluated using the points system described below.
 - a. Qualifications and References 15 points maximum.
 - b. Technical Solution 30 points maximum.
 - c. Operation and Maintenance Manual 5 points maximum
 - d. Implementation Plan 10 points maximum.
 - e. Support Plan & Pricing 10 points maximum.
 - f. Solution Plan Pricing 30 points maximum.

- C. A proposer will be selected from the proposals submitted or, at the City's discretion, a short list of proposers may be invited to make a presentation in support of their proposal. These presentations will be made to the evaluation committee.

- D. The findings of the evaluation committee will be summarized and the summary and an award recommendation will be forwarded to the City of Pullman Police Chief who will then attempt to negotiate an agreement with the selected proposer. It is anticipated that a standard City of Pullman construction contract will be the base agreement and that a provision for 5% retainage pending completion of all contract close-out documents will be included.

VIII. Special Conditions

- A. General Terms. This request for proposals does not commit the City to enter into an agreement, to pay any costs incurred in the preparation of a proposal or subsequent negotiations, or to contract for the project. All information furnished in this request for proposals was gathered from sources deemed to be reliable. No representation or warranty is intended as to the accuracy or completeness of the information contained herein and the City reserves the right to alter or cancel this request for proposals.

- B. Reservation of Rights by the City. The issuance of this request for proposals does not constitute an agreement by the City that any agreement will actually be entered into by the City. The City expressly reserves the right to:

Waive any immaterial defect or informality in any proposal or procedure.

Reject any or all proposals.

Reissue the request for proposals.

Invite additional respondents to the request for proposals.

Complete the services contemplated by this request for proposals by any other means.

Request additional information and data from any or all respondents.

Extend the date for submission of the request for proposals.

Supplement, amend, or otherwise modify the request for proposals and cancel this request with or without the substitution of another request for proposal.

- C. Negotiation Rights. The acceptance of a proposal and invitation to negotiate an agreement does not commit the City to accept any or all of the terms of the proposal. Final terms of any agreement will be agreed upon during negotiations. Negotiations may be terminated for failure to reach mutually acceptable terms.
- D. Right to Disqualify. The City reserves the right to disqualify any respondent who fails to provide information or data requested herein or who provides inaccurate or misleading information or data. Further, the City reserves the right to disqualify any respondent on the basis of any real or apparent conflict of interest. By responding to this request for proposals, the respondent agrees that any finding by the City of any fact in dispute related to this request for proposals or the responses thereto shall be final and conclusive except as provided herein.
- E. Preparation Costs. Each respondent will be responsible for all costs incurred in preparing a response to this request for proposals. All materials and documents submitted by the respondents in response to this request for proposals will become the property of the City and will not be returned. As such, they constitute public records which may be delivered to a person making an appropriate request for public records. The selected respondent will be responsible for all costs incurred by it during negotiations.
- F. Affirmative Action Requirements. Respondent, by submission of a response, agrees to not discriminate against any worker, employee, subcontractor, or any member of the public because of race, creed, color, religion, sex, age, marital status, national origin, sensory or physical handicap, or otherwise commit an unfair employment practice and further agrees to comply with all Federal, State, and City equal employment opportunity requirements.
- G. Disadvantaged Business Enterprises. Disadvantaged Business Enterprises (DBE) and other small businesses are strongly encouraged to respond. Respondents should ensure that DBEs and other small businesses have the opportunity to participate in the work

that is subject to this request for proposals. The city utilizes the Directory of Certified Minority, Women and Disadvantaged Business Enterprises produced by the Washington State Office of Minority and Women's Business Enterprises (OMWBE) for certification of DBE firms.

IX. Submission Requirements

To be considered for this project, five copies of the proposal must be received at the office of the Pullman Police Department, Pullman City Hall, 260 SE Kamiaken Street, Pullman, WA 99163, no later than 5:00 PM. on February 13, 2012. The appropriate mailing address is:

City of Pullman

ATTN: Jerry Cork

260 SE Kamiaken Street

Pullman, WA 99163