



# COUNTY OF LOS ANGELES

## DEPARTMENT OF PUBLIC WORKS

*"To Enrich Lives Through Effective and Caring Service"*

DONALD L. WOLFE, Director

900 SOUTH FREMONT AVENUE  
ALHAMBRA, CALIFORNIA 91803-1331  
Telephone: (626) 458-5100  
<http://dpw.lacounty.gov>

ADDRESS ALL CORRESPONDENCE TO:  
P.O. BOX 1460  
ALHAMBRA, CALIFORNIA 91802-1460

January 17, 2008

IN REPLY PLEASE

REFER TO FILE: **AS-0**

### **REQUEST FOR PROPOSALS – ADDENDUM 1 VIDEO DISTRIBUTION SYSTEM FOR THE TRAFFIC MANAGEMENT SYSTEM (2007-IT033)**

Thank you for attending our mandatory Proposers' Conference for the Video Distribution System for the Traffic Management System (2007-IT033) held on Monday, January 7, 2008. The following are revisions to the Request for Proposals (RFP) as well as clarifications and responses to questions raised.

The deadline to submit proposals has been extended to **Thursday, February 7, 2008, by 11 a.m.**

(Please note that **bold** text has been added and text that has a ~~strikethrough~~ has been deleted from the RFP.)

### **REVISIONS**

1. Form PW-2, Schedule of Prices; Form PW-14, Specifications Questionnaire; and Exhibit C, Schedule of Deliverables and Payments, have been revised.

Please refer to the revised Form PW-2.1, Schedule of Prices (Enclosure A); Form PW-14.1, Specifications Questionnaire (Enclosure B); and Exhibit C.1, Schedule of Deliverables and Payments (Enclosure C); which are enclosed. It is to your benefit to fully review and understand the revisions that have been made to the above-listed forms. Please use the revised forms when submitting your proposal.

2. Form PW-14, Specifications Questionnaire, in the Technical section, Item 19 (page 10) and Exhibit F, Functional Specifications, in the Technical section, Item 19 (page 7 of 8) contain the same content and have both been revised to read:

19. ~~The system shall be initially configured to support at least 300 cameras, at least 30 concurrent users, at least 50 cameras being viewed simultaneously, at least 50 camera feeds (from any number of cameras involving multiple viewers of the same camera) being viewed simultaneously, and at least six simultaneous feeds to users of the same camera. (The simultaneous feeds to users for a particular camera may be~~

~~any mix of the available different bandwidth and quality feeds for that camera, including all being replications of one feed from the camera. Assume the necessary bandwidth is available.)~~

**Each server shall be initially configured to support at least 300 cameras and at least 30 concurrent users. It shall support at least 50 cameras being viewed simultaneously regardless of the location of camera. It shall support six simultaneous views to users of the same camera. Each user shall have unlimited viewing subject to individual workstation and bandwidth limits only.**

3. Part I, Section 4.D.6, Optional Interview (page 1.25) has been revised to read:

6. Optional Interview

The County may, at its option, invite one or more Proposers to make a presentation and/or participate in an interview before a final selection is made, **this may include a demonstration of the system to test the proposed solution to ensure that it meets the functional requirements.** Evaluation criteria for presentations and interviews are the same as those for written Proposals. A separate score will not be given for a presentation or interview, but the Proposer's performance may be considered as part of the overall evaluation. The evaluators may, in their sole discretion, limit the offer to give a presentation or interview, if any, to the two or more Proposers who receive the highest scores in a preliminary scoring of Proposals in accordance with the evaluation criteria set forth in Section 4.D (Evaluation Criteria) of Part I of this RFP.

4. Exhibit B, Statement of Work, Item 2, Infrastructure (page B-10) has been revised to read:

Downey currently uses MPEG-2 quad video encoders for their video detection camera locations. All such cameras have a 100 Mbps Ethernet-via-fiber link to the Downey LCC. New encoders will be installed (one input per camera – not quad) as part of this project. The existing MPEG-2 encoders may or may not be retained as well, at the City's discretion, for use with the Cameleon system. If they are retained, coaxial cables carrying the camera feeds will be split using a passive BNC tee connector in the cabinet to feed both encoders. ~~If the split video signal for a camera is insufficient and does not meet the functional requirements set forth in Exhibit F (Functional Specifications), an optional contract item allows for installation of an amplifier prior to, or integral with, the tee connector.~~ **If the split video signal for a camera is insufficient and does not meet the functional requirements set forth in Exhibit F (Functional**

**Specifications), an optional contract item to be funded under Additional Services, will allow for installation of an amplifier prior to, or integral with, the tee connector.**

## **CLARIFICATIONS**

1. Enclosed is a colored copy of Figure 1 – The Planned Video Distribution Architecture (Enclosure D).
2. Form PW-14, Specifications Questionnaire, Technical Specifications section, Item 6; and Exhibit F, Functional Specifications, Technical Specifications section, Item 6:

"The system shall allow users to configure and use the system via a popular web browser including, the Microsoft Internet Explorer web browser, Netscape Navigator and Mozilla Firefox."

Although the language in the RFP uses the word "shall", it is to be interpreted that all web browsers should work. However, if any solution doesn't support all of the above-mentioned web browsers, then this will be considered a factor in the proposal evaluation.

3. Simple Network Management Protocol (SNMP) Form PW-14, Specifications Questionnaire, Technical Specifications, Item 21; and Exhibit F, Functional Specifications, Technical Specifications, Item 21:

SNMP is required for all encoders and any other vendor supplied equipment that will be used for remote maintenance.

4. Proposer is to define Cisco router specifications/requirements in their proposal. Public Works will accommodate said requirements by configuring the existing routers or purchase new routers to ensure that they meet the winning Proposer's requirements.

## **QUESTIONS**

1. **Question:** What type of user authorization will be required for security purposes?

**Response:** Please refer to Exhibit F, Functional Specifications, Functional section, items 8, 12, and 27. There are no set requirements. It is the Proposer's responsibility to describe their approach for how users will be authenticated.

2. **Question:** What resolution and frame rates should be considered low (352x240) and high (740x480 at 10 FPS)?

**Response:** Please refer to Exhibit F, Functional Specifications, Technical section, items 16, 17, and 18. The low resolution requirement is outlined in item 16. The high resolution should be 640x480.

3. **Question:** What are the current kilobits per second (kbps)?

**Response:** Currently, other network traffic is very low. Proposers should identify in their proposals what kbps they require and we will size the switch accordingly. Additionally, Proposers should also identify the bandwidth that they will require.

4. **Question:** Please provide an inventory of the existing 108 video detection cameras (Autoscope, Vantage, etc.).

**Response:** Downey's cameras are Econolite Autoscope cameras.

5. **Question:** For the remaining 28 Closed Circuit Television (CCTV) and Pan Tilt Zoom (PTZ) cameras, can Proposers assume that the cameras will provide digital output and further assume that they are a particular "brand" (Cohu, Pelco, etc.)?

**Response:** Public Works is currently in the process of procuring these cameras. Since it has not yet gone out to bid, we cannot provide the vendor information. However, while we cannot provide the vendor information, it can be assumed that these cameras will provide digital output and will come from one vendor.

6. **Question:** Are there any existing IP cameras or encoders that need to be integrated?

**Response:** There are no existing IP cameras. As indicated on page B-10, the City of Downey currently uses MPEG-2 quad video encoders for their video detection camera locations.

7. **Question:** What format is the mapping information from the County mapping applications?

**Response:** Our mapping is in Geographic Information System (GIS) format and our GIS files are in ArcView shapefile format. The program that we use to

maintain our GIS is Environmental Systems Research Institute (ESRI) ArcView 9.2.

8. **Question:** How will the Proposer awarded this contract get access to the County's mapping application?

**Response:** Public Works will provide the necessary access to the mapping application to the awarded contractor as needed.

9. **Question:** What type of existing network infrastructure is being utilized?

**Response:** It should be assumed that the bandwidth specifications as noted in Figure 1 - The Planned Video Distribution Architecture diagram are existing or will be accommodated.

10. **Question:** Are Cisco routers being used?

**Response:** Yes, Cisco routers and switches will be configured for the existing system or will be installed to support the data lines as detailed in the Figure 1 – The Planned Video Distribution Architecture diagram.

11. **Question:** The requirements of Nos. 4 and 7 under Functional Specifications Questions are in potential conflict. The requirement in No. 7 for a single download per session cannot be satisfied, if the user changes to different cameras using encoders from multiple manufactures. There will be by definition the potential for multiple plug-in download during a single session. Will these specifications be modified to allow the potential for multiple plug-in downloads?

**Response:** An ideal system would use a single downloaded client/viewer for all supported encoders. If this cannot be achieved, Proposer is to state what functionality they can provide and it will be considered.

12. **Question:** Is there a central access control database or any other separate user access control system? Or, will the access control database be entirely within the camera distribution and control system?

**Response:** The system architecture relative to access control database is not specified and any solution is acceptable as long as the required access control functionality is provided.

13. **Question:** Do you need to do administration functions through a web-based client, or would an installed "heavy" client be acceptable?

**Response:** We strongly desire a web-based client. If a heavy client is the only option, that will be considered while evaluating the submitted proposals.

14. **Question:** Is there a formal award date for the contract?

**Response:** At this time, there is no formal award date. A contract will be awarded in due course based on the time it takes to receive, effectively evaluate, and recommend the award of a contract to the Board.

It is to your benefit to fully review and understand the revisions that have been made to the RFP. Sealed proposals must be submitted to the Public Works Cashier by the below-mentioned deadline.

If you have questions concerning the above information, please contact Ms. Jeanette Arismendez at (626) 458-4050, Monday through Thursday, 7 a.m. to 5:45 p.m.

Please note that if it is discovered that a Proposer contacted and received material from any County personnel other than Ms. Arismendez, regarding this solicitation, the County, in its sole determination, may disqualify their proposal from further consideration.

Very truly yours,

DONALD L. WOLFE  
Director of Public Works



GHAYANE ZAKARIAN, Chief  
Administrative Services Division

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**SCHEDULE OF PRICES  
FOR  
VIDEO DISTRIBUTION SYSTEM FOR TRANSIT MANAGEMENT SYSTEM (2007-IT033)**

The undersigned Proposer offers to perform the work described in the Request for Proposals (RFP) for the following price(s). The Proposer rate(s) (hourly, monthly, etc.) shall include all administrative costs, labor, supervision, materials, transportation, taxes, equipment, and supplies unless stated otherwise in the RFP. It is understood and agreed that where quantities, if any, are set forth in the Schedule of Prices, they are only estimates, and the unit prices quoted, if any, will apply to the actual quantities, whatever they may be.

Description	Proposed Price
<b>Implementation Costs:</b>	\$
<b>Equipment Costs:</b>	
<b>Encoders</b>	\$
<b>Servers</b>	\$
<b>Firewalls</b>	\$
<b>Total Equipment Costs:</b>	\$
<b>Total Proposed Price</b> (Implementation Costs + Total Equipment Costs)	\$

LEGAL NAME OF PROPOSER		
SIGNATURE OF PERSON AUTHORIZED TO SUBMIT PROPOSAL		
TITLE OF AUTHORIZED PERSON		
DATE	STATE CONTRACTOR'S LICENSE NUMBER	LICENSE TYPE
PROPOSER'S ADDRESS:		
PHONE	FACSIMILE	E-MAIL

**SPECIFICATIONS QUESTIONNAIRE**  
**Vendor to complete the most appropriate response:**

Vendors wishing to contract with Public Works for this system must complete this questionnaire. A contract may be awarded to the lowest bidder who offers to fully comply with the specifications or who offers a substantially equivalent item or performance that is acceptable to Public Works (in the sole discretion of the Director or designee).

“FULL COMPLIANCE” INDICATES THAT VENDOR ACCEPTS AND CAN PERFORM THE SPECIFICATION AS SET FORTH IN ITS ENTIRETY IN THE REQUEST FOR PROPOSALS DOCUMENT, WHETHER ITEMIZED IN THIS QUESTIONNAIRE OR NOT. PARAPHRASE, ABBREVIATION, OR OMISSION OF SPECIFICATIONS IN THIS QUESTIONNAIRE DOES NOT LIMIT THE CONTRACTOR’S OBLIGATION TO FULLY PERFORM EACH SPECIFICATION SET FORTH IN EXHIBIT B.

Specification	Full Compliance	Substantial Performance (Justification Required)
<b>FUNCTIONAL</b>		
1. The system shall distribute streaming digital video over the Internet and Los Angeles County and affected Cities’ agency-owned wide area networks using the Internet Protocol, and Ethernet interfaces to user computers.	<input type="checkbox"/> Vendor can fully comply with all requirements.	<input type="checkbox"/> Vendor cannot meet the specifications as written. (Explain equivalent performance).
2. The system shall be capable of digitizing and compressing (collectively referred to as encoding) National Television Standards Committee (NTSC) camera output.	<input type="checkbox"/> Vendor can fully comply with all requirements.	<input type="checkbox"/> Vendor cannot meet the specifications as written. (Explain equivalent performance).
3. Video encoding of camera images shall take place close to the camera, using video encoder units that are physically separate from the camera. (The intent is to install standalone video encoders in the roadside cabinet adjacent to a camera. Future cameras may have integrated encoders.)	<input type="checkbox"/> Vendor can fully comply with all requirements.	<input type="checkbox"/> Vendor cannot meet the specifications as written. (Explain equivalent performance).
4. The system shall support use of video encoders from at least three different manufacturers. (The intent is to allow for competitive procurement of encoders and protection from obsolescence or loss of manufacturer support for a particular encoder.)	<input type="checkbox"/> Vendor can fully comply with all requirements.	<input type="checkbox"/> Vendor cannot meet the specifications as written. (Explain equivalent performance).

**SPECIFICATIONS QUESTIONNAIRE  
Vendor to complete the most appropriate response:**

<p>5. Where the feed from up to four fixed cameras are available in the same roadside cabinet, the encoder used for such a group of cameras shall be a single physical unit capable of encoding all four cameras simultaneously with the same video output quality as if only one camera were being encoded.</p>	<p><input type="checkbox"/> Vendor can fully comply with all requirements.</p>	<p><input type="checkbox"/> Vendor cannot meet the specifications as written. (Explain equivalent performance).</p>
<p>6. The system shall avoid trans-coding, or decoding and re-encoding, of video if that will noticeably degrade the quality of the video otherwise available to users, or if that will noticeably increase latency.</p>	<p><input type="checkbox"/> Vendor can fully comply with all requirements.</p>	<p><input type="checkbox"/> Vendor cannot meet the specifications as written. (Explain equivalent performance).</p>
<p>7. The system shall not require manual downloading of any plug-in or other software. (If any plug-in or other software is required, it shall be automatically downloaded without the user needing administrator's privilege or having to initiate or manage such download or subsequent installation on startup. This requirement does not require overriding normal security warnings prior to automatic downloads that a user or their system administrator may require via configuration of their web browser, operating system, network connection, or other component of their computing environment beyond the control of the video distribution system. However, only one download that initiates such a third-party user warning shall occur per user session, regardless of how many different cameras are viewed during that session.)</p>	<p><input type="checkbox"/> Vendor can fully comply with all requirements.</p>	<p><input type="checkbox"/> Vendor cannot meet the specifications as written. (Explain equivalent performance).</p>
<p>8. The system shall enable a user with appropriate privileges to add cameras and users, and enter configuration data for each.</p>	<p><input type="checkbox"/> Vendor can fully comply with all requirements.</p>	<p><input type="checkbox"/> Vendor cannot meet the specifications as written. (Explain equivalent performance).</p>
<p>9. For each camera, the system shall be configurable to allow all or any subset of users to <i>view</i> that camera.</p>	<p><input type="checkbox"/> Vendor can fully comply with all requirements.</p>	<p><input type="checkbox"/> Vendor cannot meet the specifications as written. (Explain equivalent performance).</p>
<p>10. For each controllable camera, the system shall be configurable to allow all or any subset of users to <i>control</i> that camera (e.g., activate presets, pan, tilt, and zoom) in addition to being able to view it.</p>	<p><input type="checkbox"/> Vendor can fully comply with all requirements.</p>	<p><input type="checkbox"/> Vendor cannot meet the specifications as written. (Explain equivalent performance).</p>

**SPECIFICATIONS QUESTIONNAIRE**  
**Vendor to complete the most appropriate response:**

11. The system configuration mechanism shall enable different users and different cameras to be associated by different sets of privileges.	<input type="checkbox"/> Vendor can fully comply with all requirements.	<input type="checkbox"/> Vendor cannot meet the specifications as written. (Explain equivalent performance).
12. The system shall have the option to require a user to enter a name and password to prevent unauthorized use. Please note that the user security data will be stored in the database.	<input type="checkbox"/> Vendor can fully comply with all requirements.	<input type="checkbox"/> Vendor cannot meet the specifications as written. (Explain equivalent performance).
13. The system shall have the option to allow view-only access without the user having to enter a user name and password. (This enables future use by the public.)	<input type="checkbox"/> Vendor can fully comply with all requirements.	<input type="checkbox"/> Vendor cannot meet the specifications as written. (Explain equivalent performance).
14. The system shall include an on-screen street map with a clickable icon for each camera. The vendors shall consider the use of County mapping applications.	<input type="checkbox"/> Vendor can fully comply with all requirements.	<input type="checkbox"/> Vendor cannot meet the specifications as written. (Explain equivalent performance).
15. The system shall allow a camera to be selected for viewing, and control if available, by clicking on an icon for that camera.	<input type="checkbox"/> Vendor can fully comply with all requirements.	<input type="checkbox"/> Vendor cannot meet the specifications as written. (Explain equivalent performance).
16. The system shall enable a user to access an on-screen list of clickable text strings each being associated with a camera and showing the street names and/or any other information needed to uniquely identify the camera location. A web page containing the list will be automatically updated when cameras are added or removed from the system.	<input type="checkbox"/> Vendor can fully comply with all requirements.	<input type="checkbox"/> Vendor cannot meet the specifications as written. (Explain equivalent performance).
17. The system shall provide on-screen controls for cameras with remote control capabilities, enabling the user to easily select a preset camera position or to interactively apply pan, tilt and zoom actions.	<input type="checkbox"/> Vendor can fully comply with all requirements.	<input type="checkbox"/> Vendor cannot meet the specifications as written. (Explain equivalent performance).
18. The system shall enable the user to select a camera preset from a list of preset names.	<input type="checkbox"/> Vendor can fully comply with all requirements.	<input type="checkbox"/> Vendor cannot meet the specifications as written. (Explain equivalent performance).
19. The system shall provide view-only capabilities for users who do not have control privileges for the selected camera or the selected camera has no remote control capabilities.	<input type="checkbox"/> Vendor can fully comply with all requirements.	<input type="checkbox"/> Vendor cannot meet the specifications as written. (Explain equivalent performance).

**SPECIFICATIONS QUESTIONNAIRE  
Vendor to complete the most appropriate response:**

20. The system shall enable authorized users to set and name camera presets.	<input type="checkbox"/> Vendor can fully comply with all requirements.	<input type="checkbox"/> Vendor cannot meet the specifications as written. (Explain equivalent performance).
21. The system shall provide a convenient means for the user to terminate any currently displayed camera feed without interruption of other camera feeds.	<input type="checkbox"/> Vendor can fully comply with all requirements.	<input type="checkbox"/> Vendor cannot meet the specifications as written. (Explain equivalent performance).
22. The system shall have the option for each user (or user group) to be assigned a maximum viewing time, after which the feed from any camera is automatically terminated. (The intent is to avoid wasted bandwidth consumption by cameras no longer in use but inadvertently not terminated by the user.)	<input type="checkbox"/> Vendor can fully comply with all requirements.	<input type="checkbox"/> Vendor cannot meet the specifications as written. (Explain equivalent performance).
23. The system shall notify the user of impending timeout of viewing time to enable the user to refresh the timer without interruption to the feed.)	<input type="checkbox"/> Vendor can fully comply with all requirements.	<input type="checkbox"/> Vendor cannot meet the specifications as written. (Explain equivalent performance).
24. Prior to viewing images, the system shall allow users to choose between high and low quality feeds, if available.	<input type="checkbox"/> Vendor can fully comply with all requirements.	<input type="checkbox"/> Vendor cannot meet the specifications as written. (Explain equivalent performance).
25. The system shall gracefully handle a request for a feed that requires a bandwidth greater than that available, such as by displaying a message to the user indicating the reason for the feed being unavailable.	<input type="checkbox"/> Vendor can fully comply with all requirements.	<input type="checkbox"/> Vendor cannot meet the specifications as written. (Explain equivalent performance).
26. The system shall allow an authorized user, as part of system configuration, to determine the quality and approximate bandwidth requirement of each alternative feed to be made available for each camera, with such parameters potentially being different for different cameras.	<input type="checkbox"/> Vendor can fully comply with all requirements.	<input type="checkbox"/> Vendor cannot meet the specifications as written. (Explain equivalent performance).
27. The system shall be configured to provide security from unauthorized access.	<input type="checkbox"/> Vendor can fully comply with all requirements.	<input type="checkbox"/> Vendor cannot meet the specifications as written. (Explain equivalent performance).
28. The system shall allow a user to capture and electronically store individual video frames as snapshot still images.	<input type="checkbox"/> Vendor can fully comply with all requirements.	<input type="checkbox"/> Vendor cannot meet the specifications as written. (Explain equivalent performance.)

**SPECIFICATIONS QUESTIONNAIRE  
Vendor to complete the most appropriate response:**

29. The system shall allow the latitude and longitude of a camera to be manually entered as part of camera configuration data to support automatic placement of camera icons.	<input type="checkbox"/> Vendor can fully comply with all requirements.	<input type="checkbox"/> Vendor cannot meet the specifications as written. (Explain equivalent performance).
30. The system shall provide a means to export configuration data for use in manual or automatic generation of third party web pages that provide a clickable icon for each camera.	<input type="checkbox"/> Vendor can fully comply with all requirements.	<input type="checkbox"/> Vendor cannot meet the specifications as written. (Explain equivalent performance).
31. The system shall enable a user to lock a camera while in use, to prevent other users moving that camera.	<input type="checkbox"/> Vendor can fully comply with all requirements.	<input type="checkbox"/> Vendor cannot meet the specifications as written. (Explain equivalent performance).
32. If camera locking is supported, users viewing a locked camera shall be informed of the ID of the user that has the camera locked.	<input type="checkbox"/> Vendor can fully comply with all requirements.	<input type="checkbox"/> Vendor cannot meet the specifications as written. (Explain equivalent performance).
33. If camera locking is supported, the system shall provide a timeout feature to automatically unlock a camera after a configurable period of inactivity.	<input type="checkbox"/> Vendor can fully comply with all requirements.	<input type="checkbox"/> Vendor cannot meet the specifications as written. (Explain equivalent performance).
34. If camera locking is supported, the system shall allow camera control locks to be overridden by authorized users, where different users can be given this privilege for different cameras. (A scheme involving different priority levels for different users is also acceptable.)	<input type="checkbox"/> Vendor can fully comply with all requirements.	<input type="checkbox"/> Vendor cannot meet the specifications as written. (Explain equivalent performance).
35. The system shall allow remote control of the camera iris and focus, including turning automatic control on and off.	<input type="checkbox"/> Vendor can fully comply with all requirements.	<input type="checkbox"/> Vendor cannot meet the specifications as written. (Explain equivalent performance)
36. The system shall monitor the health of video sources (encoders) and when needed, inform a user attempting to view the associated camera that the source has failed, and if feasible, the nature of the failure. (As a minimum, the source will be monitored for absence of a video feed.)	<input type="checkbox"/> Vendor can fully comply with all requirements.	<input type="checkbox"/> Vendor cannot meet the specifications as written. (Explain equivalent performance).
37. The system shall monitor the connectivity (accessibility) of video sources (encoders) on the network and when needed, inform a user attempting to view the associated camera that the source is not accessible on the network.	<input type="checkbox"/> Vendor can fully comply with all requirements.	<input type="checkbox"/> Vendor cannot meet the specifications as written. (Explain equivalent performance).

**SPECIFICATIONS QUESTIONNAIRE  
Vendor to complete the most appropriate response:**

TECHNICAL		
1. Video encoders shall have an operating temperature range of at least zero to 60 degrees Celsius. (It is desirable that encoders adhere to the National Electrical Manufacturer's Association TS2 Specification's upper temperature range limit of 74 degrees Celsius.)	<input type="checkbox"/> Vendor can fully comply with all requirements.	<input type="checkbox"/> Vendor cannot meet the specifications as written. (Explain equivalent performance).
2. The system shall use a popular, well-supported video compression standard such as Motion JPEG, MPEG-4, or H.264.	<input type="checkbox"/> Vendor can fully comply with all requirements.	<input type="checkbox"/> Vendor cannot meet the specifications as written. (Explain equivalent performance).
3. The system shall use a normal web browser on users' computers and shall not require users' computers to have other software pre-installed. (One or more small software modules may be dynamically and automatically loaded on a user's computer as part of the video feed retrieval process.)	<input type="checkbox"/> Vendor can fully comply with all requirements.	<input type="checkbox"/> Vendor cannot meet the specifications as written. (Explain equivalent performance).
4. The system shall not perform any automatic download of a plug-in or similar enabling software that requires more than ten seconds to download over a 384 kbps link. (In order to meet other requirements, such automatic download may need to be restricted to occurring only the first time a camera is accessed after the user's web browser is started.)	<input type="checkbox"/> Vendor can fully comply with all requirements.	<input type="checkbox"/> Vendor cannot meet the specifications as written. (Explain equivalent performance).
5. The system shall start displaying video within 5 seconds of a user selecting a camera for viewing, except for the first camera selected after the user's web browser is started, which may take up to 15 seconds. (This requirement assumes a network link supporting at least 384 kbps and a typical modern computer not significantly loaded with other applications, so that any delay is primarily in the video distribution system.)	<input type="checkbox"/> Vendor can fully comply with all requirements.	<input type="checkbox"/> Vendor cannot meet the specifications as written. (Explain equivalent performance).
6. The system shall allow users to configure and use the system via popular web browsers including, the Microsoft Internet Explorer web browser, Netscape Navigator and Mozilla Firefox.	<input type="checkbox"/> Vendor can fully comply with all requirements.	<input type="checkbox"/> Vendor cannot meet the specifications as written. (Explain equivalent performance).

**SPECIFICATIONS QUESTIONNAIRE**  
**Vendor to complete the most appropriate response:**

7. The system shall have the capability to establish a minimum of 10 presets for each camera location.	<input type="checkbox"/> Vendor can fully comply with all requirements.	<input type="checkbox"/> Vendor cannot meet the specifications as written. (Explain equivalent performance).
8. The system shall exhibit a camera control latency of no greater than one second, and desirably well less than one second. (Control latency is measured from the time a camera movement action is initiated (e.g., a mouse click) to the time that the field of view of the on-screen video image is seen to start changing accordingly.)	<input type="checkbox"/> Vendor can fully comply with all requirements.	<input type="checkbox"/> Vendor cannot meet the specifications as written. (Explain equivalent performance)
9. The system shall allow a user to view any number of cameras simultaneously, subject only to overall system sizing limits and bandwidth constraints. (It is assumed a user will control only one camera at a time, and a single set of on-screen controls may be provided for all cameras currently being viewed if the user is provided a suitable means of selecting and identifying the camera being controlled.)	<input type="checkbox"/> Vendor can fully comply with all requirements.	<input type="checkbox"/> Vendor cannot meet the specifications as written. (Explain equivalent performance).
10. The system shall impose no inherent limitation on the number of configured cameras. (However, implementation of support for a particular number of cameras may require the owner to add expansion options such as more licenses, more bandwidth, more server computers, etc.)	<input type="checkbox"/> Vendor can fully comply with all requirements.	<input type="checkbox"/> Vendor cannot meet the specifications as written. (Explain equivalent performance).
11. The system shall impose no inherent limitation on the number of configured users. (However, implementation of support for a particular number of users may require the owner to add expansion options such as more licenses, more bandwidth, more server computers, etc.)	<input type="checkbox"/> Vendor can fully comply with all requirements.	<input type="checkbox"/> Vendor cannot meet the specifications as written. (Explain equivalent performance).
12. The system shall impose no inherent limitation on the number of cameras that can be viewed simultaneously. (However, implementation of support for a particular number of simultaneous viewed cameras may require the owner to add expansion options such as more licenses, more bandwidth, more server computers, etc.)	<input type="checkbox"/> Vendor can fully comply with all requirements.	<input type="checkbox"/> Vendor cannot meet the specifications as written. (Explain equivalent performance).

**SPECIFICATIONS QUESTIONNAIRE  
Vendor to complete the most appropriate response:**

<p>13. The system shall impose no inherent limitation on the number of users that can view the same camera simultaneously. (However, implementation of support for a particular number of simultaneous feeds-to-users for the same camera may require the owner to add expansion options such as more licenses, more bandwidth, more server computers, etc.)</p>	<p><input type="checkbox"/> Vendor can fully comply with all requirements.</p>	<p><input type="checkbox"/> Vendor cannot meet the specifications as written. (Explain equivalent performance).</p>
<p>14. The system shall avoid licensing schemes that limit the number of authorized viewers or number of simultaneous viewers. (To the extent that an unlimited site license is not feasible, licensing per camera, or per stream from a camera, to a video distribution server (from where it is multicast) is preferred to one that depends on the number of streams from a video distribution server to viewers).</p>	<p><input type="checkbox"/> Vendor can fully comply with all requirements.</p>	<p><input type="checkbox"/> Vendor cannot meet the specifications as written. (Explain equivalent performance).</p>
<p>15. The system shall use techniques where feasible to minimize the bandwidth required for serving the same camera feed to multiple users, including Internet users, simultaneously. (The objective is to avoid unnecessary duplicate video feeds, especially on low bandwidth links such as leased links to cameras, and to allow use of video encoders that have limited support for multiple simultaneous streams of the same camera. User Datagram Protocol/Internet Protocol (UDP/IP) multicasting using the RFC1054 (Host Extensions for IP Multicasting) standard might not be supported in the network infrastructure, and alternative techniques are therefore desired, such as repeated unicasts from a central server, in addition to or instead of a UDP/IP multicasting option.)</p>	<p><input type="checkbox"/> Vendor can fully comply with all requirements.</p>	<p><input type="checkbox"/> Vendor cannot meet the specifications as written. (Explain equivalent performance).</p>
<p>16. The system shall provide a minimum quality video display of at least two frames per second to users on communications links with bandwidth as low as 300 kbps. Such display shall occur under all conditions including full-speed panning, with a display resolution of at least 352 x 240 pixels, and no obvious image breakup or other artifacts under any conditions.</p>	<p><input type="checkbox"/> Vendor can fully comply with all requirements.</p>	<p><input type="checkbox"/> Vendor cannot meet the specifications as written. (Explain equivalent performance).</p>

**SPECIFICATIONS QUESTIONNAIRE  
Vendor to complete the most appropriate response:**

<p>17. If higher bandwidth communications is available, the system shall take advantage of higher bandwidth communication links to provide better quality video, and full television-quality video.</p>	<p><input type="checkbox"/> Vendor can fully comply with all requirements.</p>	<p><input type="checkbox"/> Vendor cannot meet the specifications as written. (Explain equivalent performance).</p>
<p>18. The system shall allow simultaneous distribution of at least two different quality feeds for each camera. (One feed will be a high-quality feed (up to the quality of the feed available from the camera) available to users with a high-bandwidth connection. The other feed will be a lower-quality feed available to users with only a low-bandwidth connection, or who wish to conserve available bandwidth. The high-quality feed may consume 2 Mbps or more. The low-quality feed may consume 300 Kbps, or less.)</p>	<p><input type="checkbox"/> Vendor can fully comply with all requirements.</p>	<p><input type="checkbox"/> Vendor cannot meet the specifications as written. (Explain equivalent performance).</p>
<p>19. Each server shall be initially configured to support at least 300 cameras and at least 30 concurrent users. It shall support at least 50 cameras being viewed simultaneously regardless of the location of camera. It shall support six simultaneous</p> <p>20. s views to users of the same camera. Each user shall have unlimited viewing subject to individual workstation and bandwidth limits only.</p>	<p><input type="checkbox"/> Vendor can fully comply with all requirements.</p>	<p><input type="checkbox"/> Vendor cannot meet the specifications as written. (Explain equivalent performance).</p>
<p>21. The system shall be configured so that when agency-owned fiber optic cable interconnection between video distribution servers is lost or a video distribution server is not operational, users at any location with network connectivity (including Internet) to a functional video distribution server can continue to access at least those cameras directly connected to an Ethernet switch at the local control center containing that functional server. (The intent is to minimize the impact of component or communication failures, by allowing remote users to directly connect to any of the video servers rather than relying only on interconnection of the servers. Interconnection between servers will be used for high quality feeds to users directly on the fiber network and may be used for other purposes such as load balancing for remote users.)</p>	<p><input type="checkbox"/> Vendor can fully comply with all requirements.</p>	<p><input type="checkbox"/> Vendor cannot meet the specifications as written. (Explain equivalent performance).</p>

**SPECIFICATIONS QUESTIONNAIRE  
Vendor to complete the most appropriate response:**

<p>22. Where feasible, system components connected to the communications network shall support SNMP (Simple Network Management Protocol) and RMON (Remote Monitoring) remote fault monitoring, and the system shall include an appropriate fault management station.</p>	<p><input type="checkbox"/> Vendor can fully comply with all requirements.</p>	<p><input type="checkbox"/> Vendor cannot meet the specifications as written. (Explain equivalent performance).</p>
<p>23. The system shall provide automatic and dynamic load balancing between servers to allow the maximum number of cameras to be viewed simultaneously with the minimum number of servers.</p>	<p><input type="checkbox"/> Vendor can fully comply with all requirements.</p>	<p><input type="checkbox"/> Vendor cannot meet the specifications as written. (Explain equivalent performance).</p>

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**SCHEDULE OF DELIVERABLES AND PAYMENTS**

County will withhold 10% of each payment and release these retention funds as the final project payment upon acceptance of all deliverables. No progress payment will be made until acceptance of each deliverable scheduled for that date. The aggregate payment distribution of Tasks 2-7 shall equal 100% (total contract amount). Task 8 is an Optional Task. If included, it shall also be integrated within the distribution of the total contract amount.

Task	Deliverable	Completion Date (months from NTP)	Payment (not to exceed percent of total contract amount)
1	Project Management	Monthly	N/A
2	2.a Draft Detailed Design (including Bill of Quantities and Materials Specifications)	3 months	5 - 10
	2.b Final Detailed Design (including Bill of Quantities and Materials Specifications)	4 months	
3	Work Plan		
	3.a Draft Work Plan with schedule	3 months	5
	3.b Final Work Plan with schedule	4 months	
4	4.a Draft Acceptance Test Plan	4 months	10
	4.b Final Acceptance Test Plan	5 months	
5	5.a Installed Video Distribution System per Project requirements <sup>1</sup>	8 months	30
	5.b Video encoders to construction contractor and the County per Statement of Work		
6	6.a Initial Acceptance Test Report	9 months	10 - 15
	6.b Final Acceptance Test Report- Final Acceptance/ System Acceptance <sup>2</sup>	11 months	10 - 15
7	7.a Draft Users Manual	8 months	10
	7.b Draft Administrators Manual		
	7.c Draft System Configuration		
	7.d Draft System Expansion Guide (if not included in Administrators Manual)		
	7.e Final Users Manual	9 months	
	7.f Final Administrators Manual		
	7.g Final System Configuration		
	7.h Final System Expansion Guide (if not included in Administrators Manual)		

Task	Deliverable	Completion Date (months from NTP)	Payment (not to exceed percent of total contract amount)
	7.i Training Session 1 7.j Training Session 2 <sup>3</sup>	9 months 12 months	5
8	Map-based Web Page <sup>4</sup>		
	8.a Draft Conceptual design and mock-ups 8.b Final Conceptual design and mock-ups 8.c Draft Web-pages (up to 4 drafts) 8.d Final Web-pages	3 months 4 months 6 months 8 months	5 - 10
9	Additional Components <sup>4</sup>	TBD	TBD
	Additional Services	TBD	

<sup>1</sup>Go-Live

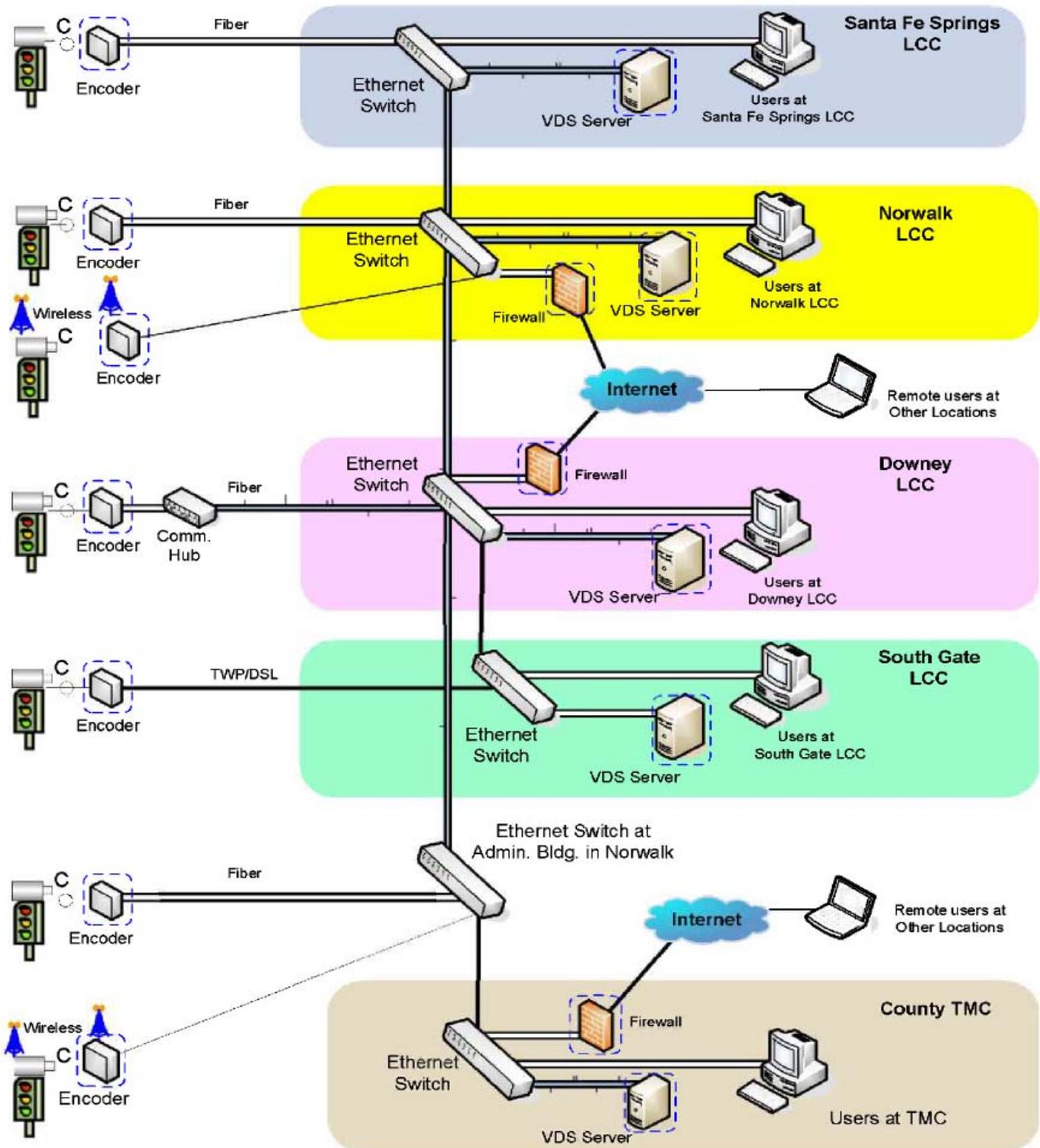
<sup>2</sup>Final Acceptance and Commencement of twenty-four month Warranty Period

<sup>3</sup>Release of the 10% accumulated retention

<sup>4</sup>Denotes optional task. Task 8 shall not exceed 10% of the total contract amount.

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Figure 1 - The Planned Video Distribution System Architecture



LEGEND			
300 Kbps		100 Mbps	
1.5 Mbps		1 Gbps	
Coaxial Cable		Project Scope	