Statement of Work

For

Rapid City

Council Chamber Broadcast/Presentation AV Updates 2009

Presented By

7711 Computer Avenue, Edina, MN 55435
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http://www.alphavideo.com/

Introduction

Alpha Video and Audio Inc. is pleased to present this conceptual proposal for update of audio, video and presentation systems in the Rapid City council room. This statement outlines the audio, video and control system hardware, system capabilities and services that Alpha Video proposes for the successful update of this system.

These updates will modify the existing equipment to create a superior audio and video product for use in broadcasting, recording and presentation.

Broadcast and Production

Alpha Video will replacement all of the existing cameras with new Sony 16x9 HD cameras with integrated robotics. These new cameras have integrated pan-tilt-zoom functionality which, in addition to a much improved video image, offers a lower profile design then the existing camera systems. These HD cameras and supporting infrastructure will leave the City well positioned to deal with the rapidly changing television and presentation technologies. We also propose to upgrade the switching system with a Broadcast Pix, computer based video production switcher. This system has a single screen multi-viewer, internal graphic character generator and integrated camera control that will provide dependable switching and camera control along with a streamlined work flow.

Audio Production

For the audio system, Alpha Video will replace the existing equipment with the exception of the Crown amplifier. First, all existing microphones would be replaced with new Shure tabletop 18" gooseneck microphones with programmable mute switch. The programmable mute switch can be set for "push-to-talk", "push-to-mute" or "on-off", allowing each station to be customized as needed. Alpha also proposes to replace the existing Polycom Vortex systems with a new Biamp Audia DSP system. This will allow far more flexibility in audio configuration, system control and audio processing. Biamp also provides the DaVinci interface software. This will (through a computer interface) allow the user to have an easy to use, customizable interface to the audio system. While the core of the system will be automatic, it will have some manual control to allow for easy adjustment of recorded and broadcast audio. Alpha Video will re-use the existing Bose ceiling speakers. Independent control zones of these speakers will be created to eliminate feed back issues.

A new Marantz Digital flash recorder with Ethernet capability will be installed for independent audio recording.

Presentation System

With the presentation system, Alpha proposes replacing the projector for the main drop down screen to a Christie digital high output 16:10 aspect projector. The main screen projection screen surface would be replaced with a 16:10 aspect ratio surface. Alpha Video will replace the surface, motor and roller but re-use the existing case. This method will greatly increase the speed and ease of installation and the labor savings should pay for the new motor and roller. The front projection screen would be 15' wide which we believe is a more suitable size for the room. Two 52" LCD flat panel displays will be mounted to the left and right of the audience area to allow better viewing of the presentation material.

An OFE 65" LCD panel will be mounted in the front of the Council chamber for viewing by the City Council members. It has been advised by Alpha Video that a larger panel is required for adequate viewing

To clean up the work surface of the presenters podium, Alpha proposes the installation of a pop-up hideaway input panel. This panel, when closed, will be flush with the podium surface and can then be opened to reveal an input connection for a laptop or other VGA type video.

One last additional piece of functionality Alpha proposes is the use of a USB extender. This extender would allow a "house" PC or laptop to reside in the control room but would bring the USB connectivity of it to the podium surface, allowing a user to plug in a USB thumb drive to access presentation files on that drive. Video from this PC would be connected into the existing portions of the presentation system for display on the new projectors and flat panels.

Alpha Video will install two LG 42" LCD's (provided by City of Rapid City) into two adjacent offices. A VGA input plate will be installed into each office for a local connection to the display. These displays will be controlled manually with the IR remote provided with the panels.

Crestron Control System Components

Alpha proposes reusing the existing Crestron control system. It would be reconnected to the existing and new equipment and reprogrammed to accommodate the control of the new equipment. Alpha will reprogram the system.

The Crestron system will include request to speak capabilities using the existing hardware.

Control Room

All equipment will be racked in the control room area. All cabling will be tested and re-terminated for proper functionality and reliability. Three Middle Atlantic dual fan assemblies will be installed in the back of the rack to assist in moving warm air out of the room. Audio and video feeds will be provided for a Granicus System to be installed by another contractor. The City will provide the appropriate network connectivity.

Execution of Integration

General

- System shall be installed in a neat and professional manner.
- Job site and equipment shall remain free of marks, blemishes or debris.
- Any above ceiling components shall be installed with trim rings and/or grommets when necessary.
- Rack equipment shall be installed neatly, with cabling neatly bundled along rack sides.
- Blank spaces in equipment racks shall be filled with rack blanks.
- Proper ventilation practices shall be followed in equipment racks.

Wiring and Cables

- Joints and connections shall be made with rosin-core solder or mechanical connectors.
- Video, mic level audio, line and speaker level audio, and AC power cabling shall be bundled separately to avoid crosstalk or electromagnetic hum. Low voltage power or control cabling may be bundled with video cabling when necessary.
- All balanced audio wiring shall be wired with pin 2 hot as per the IEC-268 standard.
- Wiring shall be neatly bundled with cable ties. Care shall be taken to not compress the cable insulation with the cable tie.
- Sufficient service loops shall be provided for all above ceiling elements, above racks or in cable trays so that components may be minimally moved or serviced without cable strain.
- Connectors shall be installed in compliance with manufacturer specifications.
- Wiring and connections shall be visible and logically marked with permanent, self-laminating labels.

Installer Testing and Adjustments

- Devices shall be tested for proper grounding.
- Video displays shall be properly aligned and free from distortion.
- In systems where video over CAT5/6 is utilized, displays shall be tested to confirm that images are free of cable skew and in proper alignment.
- Cabling and loudspeakers shall be tested for proper polarity.
- Audio shall be free of distortion, hums, buzzes or pops.
- High impedance loudspeakers lines shall be measured for proper impedance. Impedance levels shall be documented on as-built drawings.
- Loudspeaker systems shall be tested and equalized to provide uniform frequency response. SMAART Live 5.0, one of the most widely recognized audio spectrum analysis software packages available, will be used when necessary.
- Control system program shall be tested for proper system operation and shall be free of glitches. Any issues will be brought to the attention of the programmer for correction.

Training

Alpha Video will provide up to 16 hours of system training to no more than six key users on basic system operation and troubleshooting. We recommend that training be split into two sessions, allowing system users to become familiar with the system and develop additional questions that can be covered at the second training session.

Documentation

Alpha Video will provide shop drawings that reflect the final system design. Upon project completion, a full set of "D" size as-built drawings will be provided, which will include components of the video, audio and control systems and any architectural documentation used during the installation. Those drawings will become property of City of Rapid City upon receipt of final payment for this project.

Project Management

Alpha Video will appoint a project manger that will be the main point of contact regarding this project. The project manager will manage the installation timeline, schedule installers and/or subcontractors, assist in coordination of conduit and/or mount locations and coordinate work with any additional trades involved in this installation.

Installation can only begin when the project manager has been notified that construction progress has reached a point that electronic equipment can be installed in a secure and clean job site.

Change Requests

When the scope of work is agreed upon, any changes to that scope must be requested as a change order. Change requests shall be submitted in written form so that both parties fully understand the request. Any costs resulting from change orders shall be the responsibility of City of Rapid City.

System Warranty and Support

Alpha Video offers a standard one year warranty on all systems installations. During the first year, Alpha Video will facilitate system service, phone support or repair at no charge for labor, travel, and/or shipping on any Alpha Video installed system or component. All system hardware is covered under the terms and conditions of each manufacturer's warranty. Alpha Video, at its option, may repair or replace any product or part of the products, which proves defective because of failure, under normal use, for the length of the 90-day warranty period.

Phone support is available Monday through Friday during regular business hours of 8:00 a.m. to 5:00 p.m. Alpha Video's office number is 952-896-9898. Calls will be returned within a four-hour period. If the issue cannot be rectified over the phone a technician will be on site within 24 – 48 hours. Alpha Video will not be open on various holidays that occur during a Monday - Friday work week. The City of Rapid City agrees that prompt and full access to the system will be granted to Alpha Video at any time Alpha Video is on-site to service the system.

Products not provided by Alpha Video but included in this installation will not be covered by this warranty. Alpha Video is not responsible for any failure of equipment that is connected to or caused by Client furnished equipment. The warranty coverage will commence on date the Certificate of Completion form is signed by both Alpha Video and The City of Rapid City. Service issues after the 90-day period will be handled as time, materials and travel, plus fees associated with such work unless a warranty extension has been purchased. This warranty does not cover system misuse, reconfiguration or negligence on the part of The City of Rapid City.

Customer Responsibilities

This statement of work indicates the responsibilities of Alpha Video and Audio Inc. As in any system installation, this project contains a number of customer responsibilities. They include, but are not limited to:

- Any High Voltage AC necessary
- Any necessary conduits or back boxes
- Any necessary LAN connectivity at rack location

- Any necessary static IP addresses
- One key point of contact for control system design verification
- Owner furnished equipment listed above (PC, PC monitor, laptops, etc.).

Payment Terms

Payment terms are Net 30. Project invoiced at completion.

Client Sign-Off

I hereby approve the above statement of work. A purchase order for this project, in verbal or written form indicates acceptance of this statement of work.

Date:　　　　　_____

Company:　　　_____

Name:　　　　　_____

Signature:　　　_____

ALPHAVIDEO
the visual communications experts

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Prepared For:		Sales Representative:
Russ Tiensvold City of Rapid City, SD 300 Sixth Street Rapid City, SD 57701	**Phone:** (605)394-6018 **Fax:** (605)394-6621 **Terms:** NET 30 **Ship via:** Best Way	**Bob Follestad** Sales Executive 952-841-3302

ID #	Item	Description	Qty	Unit Price	Ext. Price
		CAMERAS			
1	**BRCH700**	SONY HD 3-CCD ROBOTIC CAMERA	4	$7,680.00	$30,720.00
2	**HFBKHD1**	SONY HD SDI OUTPUT BOARD	4	$1,775.00	$7,100.00
3	**MISC**	CUSTOM MOUNTING BRACKETS	4	$188.00	$752.00
4	**880767**	TRIPP LITE PR4.5 CAMERA POWER SUPPLY	4	$45.00	$180.00
5	**U2**	M A 2 SPACE SHELF	2	$43.00	$86.00
		SubTotal			**$38,838.00**
		SWITCHING, GRAPHICS AND CAMERA CONTROL			
6	**1000GHA**	BROADCAST PIX HD SWITCHER	1	$22,135.00	$22,135.00
7	**50**	BROADCAST PIX DVI I/O	1	$1,200.00	$1,200.00
8	**800**	BROADCAST PIX SONY CAMERA CONTROL	1	$950.00	$950.00
9	**SG-3**	BURST ELECTRONICS SYNC GENERATOR	1	$516.00	$516.00
10	**U1**	MID AT 1 SPACE RACKSHELF	1	$33.00	$33.00
11	**60-692-01**	EXTRON DA 6V EQ COMP VIDEO DA	1	$213.00	$213.00
12	**60-190-01**	EXTRON 1U RACK SHELF (GRAY) RSU 129	1	$82.00	$82.00
13	**VA2626wm**	VIEWSONIC 26" LCD DISPLAY 1920 X 1200	2	$438.00	$876.00
14	**60-476-01**	EXTRON VCS500 SCAN CONVERTER	1	$915.00	$915.00
15	**60-190-01**	EXTRON 1U RACK SHELF (GRAY) RSU 129	1	$80.00	$80.00
16	**C2ENET-2**	CRESTRON 2- SERIES ETHERNET CARD	1	$875.00	$875.00
17	**ST-COM**	CRESTRON RS232/RS422 INTERFACE	1	$415.00	$415.00
18	**IRP2**	CRESTRON IR PROBE	2	$35.00	$70.00
		SubTotal			**$28,360.00**
		AUDIO			
19	**AUDIAFLEX CM**	BIAMP AUDIAFLEX CM CHASIS W/COBRA NET	2	$3,115.00	$6,230.00
20	**AUDIAEXPI**	BIAMP MIC/LINE ANALOG INPUT EXPANSION MODULE	1	$940.00	$940.00
21	**IP2**	BIAMP 2 CHANNEL LINE/MIC INPUT CARD	2	$161.00	$322.00
22	**OP2E**	BIAMP 2 CH MIC/LINE OUTPUT CARD	3	$98.00	$294.00

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Quotation

Date	Quote #	Cust #
08/26/09	AAAQ9165-02	

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ID #	Item	Description	Qty	Unit Price	Ext. Price
23	**AEC2W**	BIAMP 2 CH ACOUSTIC CARD	11	$449.00	$4,939.00
24	**TI-2**	BIAMP TELEPHONE INTERFACE CARD	1	$499.00	$499.00
25	**MISC**	BIAMP DAVINCI SOFTWARE	1	$0.00	$0.00
26	**MX418D/C**	SHURE 18 INCH GOOSENECK W/DESKTOP BASE	21	$238.00	$4,998.00
27	**LOGIC BOX**	BIAMP LOGIC BOX	3	$249.00	$747.00
28	**ULXP124/BETA87C**	SHURE DUAL CHANNEL WIRELESS MIC SYSTEM	1	$1,587.00	$1,587.00
		WIRELESS SYSTEM INCLUDES: BETA87C WIRELESS TX/HH MICROPHONE, BODY PACK TX FOR LAPEL MIC, (2) DIVERSITY RECEIVERS, (4) WAVE ANTENNAS AND DUAL RACK KIT.			
29	**WL184**	SHURE SUPER CARDIOID LAPEL MIC	1	$110.00	$110.00
30	**PMD580**	MARANTZ DIGITAL COMPACT FLASH RECORDER	1	$1,125.00	$1,125.00
31	**DN-V500BD**	MARANTZ PRO BLU-RAY PLAYER W/RS232	1	$725.00	$725.00
32	**30010**	START-STOP UNIVERSAL TRANSCRIPTION SYS	1	$237.00	$237.00
		SubTotal			**$22,753.00**
		PROJECTION SYSTEMS			
33	**LW650**	CHRISTIE DIGITAL 16:9 6500 ANSI LUMEN PROJECTOR	1	$8,915.00	$8,915.00
34	**121-106108-XX**	CHRISTIE DIGITAL 1.5-2.2: ZOOM LENS	1	$4,029.00	$4,029.00
35	**MISC**	DRAPER 220" DIA 16:9 SCREEN MATERIAL	1	$4,141.00	$4,141.00
		COST ALSO INCLUDES NEW MOTOR AND ROLLER.			
		SubTotal			**$17,085.00**
		PODIUM EQUIPMENT			
36	**60-415-01**	EXTRON HSA400 BLACK VGA POP-UP	1	$619.00	$619.00
37	**MISC**	EXTRON AAP INPUT MODULE	4	$75.00	$300.00
38	**MISC**	USB HUB	1	$38.00	$38.00
39	**MISC**	USB EXTENSION KIT	1	$75.00	$75.00
40	**MISC**	WIRELESS KEYBOARD AND MOUSE	1	$225.00	$225.00
41	**60-758-01**	EXTRON VSW-2VGA AUTO 1X2 VGA SWITCHER	1	$150.00	$150.00
		SubTotal			**$1,407.00**
		ADDITIONAL DISPLAYS FOR OFFICES			
42	**42LG500H**	LG 42" LCD DISPLAY - OFE	0	$1,275.00	$0.00
43	**PCM2241**	CHIEF FLAT PANEL CEILING MOUNT	2	$299.00	$598.00
		SubTotal			**$598.00**
		CONTROL ROOM COOLING			
44	**QFP-2**	MID AT RACK VENTILATION/QUIET FAN PANEL	3	$115.00	$345.00

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08/26/09	AAAQ9165-02	

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ID #	Item	Description	Qty	Unit Price	Ext. Price
45	**FC-2-215-1C**	MAP PORPORTIONAL SPEED ELECTRONIC FAN CONTROLLER	3	$161.00	$483.00
		SubTotal			**$828.00**
		INSTALLATION			
46	**MISC**	INSTALL MATERIALS	1	$9,549.00	$9,549.00
47	**MISC**	INSTALL LABOR	1	$24,775.00	$24,775.00
48	**MISC**	ON-SITE TRAINING	1	$1,920.00	$1,920.00
		SubTotal			**$36,244.00**
		FREIGHT AND EXPENSES ARE BILLED AT ACTUAL. SET COSTS ARE TRAVEL, $50.00/HOUR PER TECHNICIAN (TWO TECHS WOULD BE REQUIRED) AND PER DIEM, $40.00 /DAY PER TECH.			
		SMA EXTENTION OPTION			
49	**SMA**	YEAR TWO	0	$8,223.00	$0.00
50	**SMA**	YEAR THREE	0	$8,223.00	$0.00
		SubTotal			**$0.00**

Sub Total	$146,113.00
Sales Tax	$0.00
Shipping	$0.00
Total	**$146,113.00**

Accepted by: _____ Date: _____ PO: _____

All information contained within this quote is valid for the next 30 days. Thereafter, all prices and applicable charges are subject to change. MINIMUM 15% RESTOCKING FEE WITH ORIGINAL PACKAGING.