

Scope of Work:

County of San Mateo Regional Operations Center

Prepared by:

Spinitar

5066 Commercial Cir.
Concord CA 94520



June 22, 2018



June 22, 2018

Chris Flatmoe

County of San Mateo
555 County Center,
CA 94063

Subject: **Audio Visual Systems Scope of Work - County of San Mateo Regional
Operations Center – Revision 1**

Dear Chris,

Based on our meeting we have prepared this proposal to help you implement the presentation technologies for the new Regional Operations Center. It includes a summary of our recommendations and the scope of our design/build services for the project.

We have prepared an overview of the functional approach to meet the audiovisual capabilities recommended for the facility. Included in this proposal is a scope of work, summary of system investment, AV support services and payment terms.

This proposal represents our understanding of how the system will perform based on our review of the initial equipment recommendations. The intention of this package is to capture the design intent of your room(s). Please review the documentation to confirm all details are captured.

Spinitar is committed to providing you with multimedia systems that will serve as models for innovative environments. We are confident that our participation on the Regional Operations Center will contribute to its success. Please feel free to contact me to discuss this proposal further. We look forward to working with you and your team on this venture.

Sincerely,

Greg Goddard
Systems Account Manager
gregg@spinitar.com

The complexities of Maple St. and the new ROC are quite different and necessitate several design considerations for redundancy and scalability. Because of the nature of the ROC, we have to utilize equipment that is more specialized and a design approach that allows for redundancies in control and equipment failure. The design of the EOC has several points of control, along with redundancy and ease of serviceability in the case of display and/or equipment failure. Typical audiovisual design for more generic spaces would not have this approach. Another unique feature of the ROC is the ability to “broadcast” video remotely or locally throughout the facility. This requires specific processing equipment and routing that is catered to these demands – simply not found in traditional presentation environments. Furthermore, this space requires scalability – the ability to add sources and destinations as necessary, without requiring a complete forklift overhaul to do so. For these reasons, the complexity of the design within the ROC facility is on a scale three or four times as complex as a traditional space – Maple St., or other training room/conferencing environment.

Based on our discussions with you, Spinitar recommends the following approach to meet the functional needs and basic requirements defined for the project.

The following locations are included in this Scope of Work.

HOT EOC - 133

EOC - 134

Flex Space - 135

Cable TV Head-End System

911 Call Center - 240

Surge/Training Room - 241

Large Conference Rooms

Room: 128, 130, 136, 137, 140, 233

Communication Room & JIC: 132, 141

Offices, & Open Areas

Room: 117, 120, 121, 122, 123, 124,
125A, 126, 127, 211, 212, 223, 224, 225,
226, 227, 228, 229, 230, 231, 246, 247, 248,
249, 250, 251, 252

Lobby - 100

Room Scheduling System

1st Floor

Room: EOC, 127, 128, 136, 140, 141/JIC

2nd Floor

Room: 241, 231

Equipment Racks & Accessories – 131, 209, 208

- **HOT EOC, EOC & Flex Space:**

- **Display System:**

The HOT EOC shall feature a 3x5 flat panel display ultra-narrow bezel video wall (3 units high by 5 units across) to be mounted on pull-out style mounts for servicing. The video wall shall have capability of displaying up to twelve (12) independent video sources from multi-window display processors connected to a central matrix video router. Sources include: ten (10) PC's (applications and output to be determined), five (5) Comcast and/or DirecTV receivers, one (1) local wired input for presentation purposes, and one (1) wireless presentation system input. The HOT EOC shall include three (3) floor boxes with HDMI & VGA with mini audio for wired connectivity to the system. One (1) of the floor boxes shall include network termination for the wired control panel.

The EOC and Flex Space rooms shall have one (1) each ceiling mounted projector with ceiling recessed screen. The EOC shall have four (4) 75" flat panel displays to be ceiling mounted from static drop mounts. The Flex Space shall have two 75" flat panel displays to be ceiling mounted from static drop mounts. The flat panel displays in each room shall mirror the local presentation content either within each room (divided) or a source from the matrix router when the room is combined. Each room shall have the capability of presenting independently, or as one when the rooms are combined. The EOC and Flex Space shall have two (2) each floor boxes flanking the projection screen in each room to include wired input from an owner furnished podium for presentations.

A mobile 70" interactive touch display with on-board PC for collaboration shall be provided as additional input to the HOT EOC, EOC and Flex Space via wired input from floor box. The output of the on-board PC shall be connected to the HOT EOC router so that its image may be mirrored to the video wall or any other display(s).

- **AV System:**

A matrix routing video switcher and distribution system shall be installed within the HOT EOC Equipment Closet. Signals from the switcher shall be via Cat6 with extenders to each display and projector location on the first and second floors, including separate feed to the matrix router on the second floor (for 911 Call Center). The matrix routing switcher shall be comprised of 64x64 chassis with redundant power supply and accommodate individual 8-channel cards for inputs and outputs. This configuration allows expansion and flexibility for future inputs and/or outputs to be added as necessary, eliminating the need for an overhaul of the entire routing chassis.

For video conferencing, recording and/or streaming purposes of training events, an automated tracking pan/tilt/zoom camera shall be installed in the EOC. The camera shall connect to an AV-Bridge for USB connection to local PC for soft-conferencing from third party application (WebEx, Skype, Zoom etc...). A streaming recorder with inputs for both presentation content as well as camera input shall be installed for capturing and streaming trainings or events.

- **Audio System:**

The HOT EOC, EOC, and Flex Space shall include ceiling speakers configured in zones for proper room audio reinforcement. Amplifiers and DSP (digital signal processor) shall be included for proper zone assignment and equalization. Each room shall

have audioconferencing capability via VoIP interface within the DSP. A ceiling mounted microphone array shall be installed within T-Bar ceiling tile and provide audio voice lift for audioconferencing. Wireless microphones shall be provided for each room for both audio reinforcement and lecture capture to the streaming recording system. A gooseneck microphone shall be installed on the owner furnished podium.

- **Control System:**

The audiovisual system shall be controlled via Crestron. A master wired touch panel shall be installed within the HOT EOC for control of the entire system. In addition, a wireless iPad docking wall station shall be included in each room for mirrored control of the HOT EOC, plus separate room controls when divided. Controls include master power on/off, projector on/off, screen up/down, source video input and destination select, presets for video wall blended images select, audio zone assignments, volume up, down and mute. The iPad's shall be locked with administrator password for Crestron control only within the rooms.

In addition to touch panel control, an X-Panel interface shall be provided. The X-Panel is a web portal to the control system and provides visibility of room(s) status, monitoring, and remote control capability.

- **Equipment Rack & Accessories:**

All non-touch equipment shall be rack mounted within new equipment racks to be located within HOT EOC Equipment Closet.

- **Cable TV Head-End System:**

A head-end cable TV distribution system shall be installed to provide Comcast cable channels to all displays within the building. Encoders shall be provided to allow for the County's computer applications to be broadcast via the TV distribution system so that users may tune into a channel to view encoded content. The head-end system shall include emergency messaging capability so that the HOT EOC may trigger a message to scroll across the lower-third video of all channels to be broadcasted on any display in the building.

- **911 Call Center, Surge/Training Room:**

- **Video Wall:**

The 2nd Floor Operations Center shall feature a 15x2 flat panel display ultra-narrow bezel video wall (2 units high by 15 units across) to be mounted on pull-out style mounts for servicing. The wall shall include an angled section at corner of wall and be supported by a custom mounted floor standing system. The video wall shall have capability of displaying up to twelve (12) independent video sources from multi-window display processors connected to a central matrix video router. Sources include: six (6) PC's, (applications and output to be determined) two (2) Comcast receivers, one (1) local wired input for presentation purposes, and one (1) wireless presentation system input.

- **Display System**

The Surge/Training Room shall feature one (1) 75" flat panel displays to be wall mounted and one (1) 70" interactive flat panel display on a mobile cart. The displays

shall be wired to the matrix video routing switcher for mirrored presentation content when room is combined, or independent presentation content when room is divided. A local wired input and wireless presentation system shall be made available for presentations when the room is divided.

Each workstation within the Operations Center and Surge/Training (27 total) shall include one (1) 22" monitor to be mounted on owner furnished workstation monitor arms. The additional monitor shall be capable of displaying television from the Cable TV distribution system.

- **AV System:**

A matrix routing video switcher and distribution system shall be installed within the 2nd Floor Server Room. Signals from the switcher shall be via Cat6 with extenders to each display within the Call Center & Surge/Training Room. The routing switcher shall accommodate all current sources and destinations while allowing expansion for future additions as necessary. The matrix routing switcher shall be comprised of 32x32 chassis with redundant power supply and accommodate individual cards for inputs and outputs. This configuration allows expansion and flexibility for future inputs and/or outputs added as necessary, eliminating the need for an overhaul of the entire routing chassis.

- **Audio System:**

The speakers within each monitor at the workstations shall be used for program audio and be controlled independently.

- **Control System:**

The audiovisual system shall be controlled via Crestron. A master wired touch panel shall be installed within the 911 Call Center for control of the entire system. In addition, a wireless iPad docking wall station shall be included for both rooms.

Controls include master power on/off, projector on/off, screen up/down, source video input and destination select, presets for video wall blended images select, audio zone assignments, volume up, down and mute. The iPad shall be locked with administrator password for Crestron control only within the room.

In addition to touch panel control, an X-Panel interface shall be provided. The X-Panel is a web portal to the control system and provides visibility of room(s) status, monitoring, and remote control capability.

- **Equipment Rack & Accessories:**

All non-touch equipment shall be rack mounted within new equipment racks to be located within 2nd Floor Server Room.

- **Large Conference Rooms: 128, 130, 136, 137, 140, 233**

- **Display System:**

The Large Conference Rooms shall feature a single 80" interactive touch flat panel display per room. The interactive touch panel has an on-board PC with software for annotation and collaboration. The flat panel shall have capability of displaying the following video sources: one (1) local wired input for presentations, one (1) wireless presentation system input, one (1) local PC, and Cable TV input.

- **AV System:**

A separate routing video switcher and distribution system shall be installed within new equipment racks to be located in the 1st Floor HOT EOC and 2nd Floor IDF Closet for each room. Signals from the switcher shall be via Cat6 with extender to the display. For video conferencing, a pan/tilt/zoom camera shall be wall mounted under the display in each room. The camera shall connect to an AV-Bridge for USB connection to local PC for soft-conferencing from third party application (WebEx, Skype, Zoom etc...).

- **Audio System:**

The rooms shall include ceiling speakers for proper room audio reinforcement. Amplifiers and DSP (digital signal processor) with VoIP interface shall be included for audioconferencing. A ceiling mounted microphone array shall be installed within T-Bar ceiling tile and provide audio voice lift for audioconferencing. The DSP shall be connected to the AV-Bridge via USB for soft video conferencing.

- **Control System:**

The audiovisual system shall be controlled via Crestron. A wireless iPad docking wall station shall be included for each room. Controls include master power on/off, display on/off, source video input select, presets for channel favorites, audioconferencing dialing page, pan/tilt/zoom camera controls, volume up, down and mute. The iPad shall be locked with administrator password for Crestron control only within the room.

- **Equipment Rack & Accessories:**

All non-touch equipment shall be rack mounted within new equipment rack to be located in either HOT EOC Equipment Closet or IDF Closet on the 2nd Floor depending upon room location.

- **Communication Room & JIC: 132 & 141**

- **Display System:**

The Communication Room shall feature two (2) 55" flat panel displays wall mounted on static mounts. The flat panels shall have capability of displaying the following video sources: one (1) local PC, and Cable TV input.

The JIC shall be as Large Conference Room design, with addition of two (2) 55" flat panel displays wall mounted on static mounts. The flat panels shall have capability of displaying the following video sources: one (1) local PC, and Cable TV input.

- **Offices & Open Space Areas:**

- **Display System:**

Each Office shall feature a single flat panel display to be wall or ceiling mounted on static mount. The flat panels shall have capability of displaying Cable TV input.

- **Audio System:**

The flat panel display speakers shall be used for audio reinforcement within the room.

- **Control System:**

The display shall be controlled via manufacturers supplied remote control.

- **Lobby:**
 - **Display System:**
The Lobby shall feature a single 80" flat panel display to be wall mounted on a static mount. The flat panel shall be able to display the following sources; one (1) digital signage player for calendar of events and/or general information to be administered by ROC staff, and one (1) video input from the HOT EOC for overflow of events.
 - **Audio System:**
A pair of vertically mounted soundbar speakers shall be installed on the display to provide audio reinforcement of program material to the room.
 - **Control System:**
The display shall be controlled via digital signage player for scheduling of power on/off and generic signage content. The master controller within the HOT EOC shall be capable of toggling the display to present mirrored content from the HOT EOC.
- **Room Scheduling System:**
 - **Display System:**
The Large Conference Rooms and Surge Training within Operations shall feature a 7" room scheduling touch panel to be mounted on the outside wall. The touch panels shall be scheduled via Exchange Server and notify users of room availability.
- **Equipment Racks & Accessories:**
All non-touch equipment shall be rack mounted in vertical equipment racks properly secured to floor within the 1st Floor Hot EOC and 2nd Floor IDF Closet. A local video monitor and 10" touch panel shall be provided within the HOT EOC and 2nd Floor Server Room equipment racks for viewing of router signals and system control.

Crestron Certified Design:

This scope of work and system design has been certified by Crestron which includes the following features:

- An end-point to end-point Crestron validated design, engineered to ensure premium performance using Crestron products from the below categories wherever possible:
 - Control System and related accessories
 - AV-Distribution/Switching
 - Remote/endpoint transmitters and receivers
 - Audio control and sound reinforcement
 - Enterprise building scheduling system software including associated touch screens and accessories
 - Cables and wiring
- Extended 5-year warranty
- 3-Year DM-MD64x64 Extended Service Plan Option
 - Expedited and extended service plan which covers the DM switcher for a period of three years (with extensions available as well)
 - In the event of malfunction, Crestron will ship a replacement frame within two (2) business days of notification. Crestron may dispatch technical staff to location for diagnosis and/or repair as necessary.

The Crestron Certified Design ensures a complete system that offers the above incentives. Considerations for system redundancies, expansion flexibility, warranty and service have been carefully planned by Spinitar and Crestron for a complete turnkey package.

Exclusions:

The following work is not included in our scope of work:

- All conduit, high voltage, wiring panels, breakers, relays, boxes, receptacles, etc.
- Concrete saw cutting and /or core drilling.
- Fire wall, ceiling, roof and floor penetration.
- Necessary sheet rock replacement and/or repair.
- Necessary ceiling tile or T-bar modifications, replacements and/or repair.
- Millwork (table cuts, moldings, trim, etc.)
- Painting and patching
- Permits (unless specifically provided for and identified within the contract).
- Data drops
- Crestron App is required for iPad control and is to be provided by client.
- A server is required for running Crestron Fusion scheduling system and is to be provided by client.

NOTICE: This Scope of Work is delivered on the basis of the following Assumptions:

- The room(s) match the drawings provided
- Site preparation by the Customer and their contractors includes electrical and data placement per general contractor specification.
- Site preparation will be verified by general contractor project manager or representative before scheduling of the installation. All work areas should be clean and dust free prior to the beginning of on-site integration of electronic equipment.
- Customer communication of readiness will be considered accurate and executable by general contractor project manager.
- There is ready access to the building / facility and the room(s) for equipment and materials.
- There is secure storage for equipment during a multiple-day integration.
- Cable or Satellite drops must be in place with converter boxes operational before the completion of integration. Any delay resulting in extra work caused by late arrival of these items will result in a change order for time and materials.
- Document review / feedback on drawings / correspondence will be completed by the Customer within two business days {unless otherwise noted}
- In developing a comprehensive proposal for equipment and integration services Spinitar's Sales Representatives and Engineering teams must make some assumptions regarding the physical construction of your facility, the availability of technical infrastructure and site conditions for installation. If any of the conditions we have indicated in the site survey form are incorrect or have changed for your particular project or project site, please let your Sales representative know as soon as possible. Conditions of the site found during integration effort which are different from those documented may have an effect on the price of the system solution, integration or services. To ensure that you have an accurate proposal based on your facility and specific to the conditions of your project, please review all project documentation carefully.

Integration Project Management Processes

Spinitar will follow a foundational project management process which may include the following actions/deliverables (based on the size/complexity/duration of the integration project):

- Site Survey – performed prior to Scope of Work and attached
- Project Welcome Notice – emailed upon receipt of Purchase Order
- Project Kick-Off meeting with Customer Representative(s) – either by phone or in-person
- Project Status reviews – informal or formal – either by phone or in-person (based on the size/complexity/duration of the project)
- Project Change Control – comprised of Field Directed Change Order and/or Contract Change Order submittals (see Appendix)
- Project Punch List / Substantial Completion (see Appendix) – at Customer walk-through – prior to Service transition (if purchased)

Knowledge Transfer (Training)

This is geared specifically towards the end-user / operator. The purpose of this knowledge transfer is to provide operators with the necessary knowledge to confidently and comfortably operate all aspects of the integrated system. Areas covered include the following:

- Equipment and system overview
- Equipment operation and function
- Equipment start up, stop, and shut Down
- Equipment automatic and manual operation
- Discussion and documentation relating to control system operation
- Discussion and documentation relating to system processor and its control applications
- Powering up, powering down AV system via control system
- Manual operation of display systems, audio system and all other related components
- Use/operation of patch panels, when and where to be used
- Who to call when help is required

ACCEPTANCE OF SCOPE OF WORK:

Name (Please Print): _____

Authorized Signature: _____

Date: _____

Spinitar provides a turnkey audiovisual system included but not limited to the following services:

- **Design Engineering:**

- Preparation of system functional interconnection diagrams, circuit details, equipment rack elevations and testing/commissioning of the system for optimal performance.

- **Project Management:**

- Attends construction and client meetings throughout the duration of the project
- Provides status reports
- Develop project schedule and oversight of the Spinitar team
- Oversee the training needs and documentation of the customer
- Supervise end-user training on systems operation
- Facilitate completion of final punch list items and close out package

- **Shop Installation:**

Labor performed in-house.

- Racking of equipment, mounting equipment within rack and wiring interconnects
- Testing components within rack for proper operation and custom wall plates and/or custom electronic devices, etc.

- **Field Installation:**

Labor performed on the job site.

- Pulling, labeling and terminating cable with-in the room(s)
- Mounting and terminating all wall plates
- Installing structural systems for audiovisual equipment
- Mounting equipment in millwork, walls, floors and/or ceilings
- System level testing and de-bugging
- Site cleanup and disposal, etc.

- **Programming:** Labor performed off-site to develop software programmed to specific approved design for human interface control of the audio-visual system.

- Base program from function list
- Base touch panel layout from drawings
- Client-approved layout and functionality
- Loading program and test functions (in-shop)
- Modifying program to reflect field conditions.



Spinitar, founded in 1986, is a leading systems design and integration firm dedicated to providing its clients with custom audio, visual and communication solutions and services. Spinitar integrates custom audiovisual technology solutions across a wide array of market segments, including corporate, education and government.

Spinitar's Service Department

We understand that investing in an audiovisual system for your organization is an important decision. Even more critical is properly and regularly maintaining your system to avoid a potential mishap that could cause personnel downtime and lost revenue opportunities. Spinitar is pleased to have the largest dedicated in-house support team in the western U.S. Our support service professionals are manufacturer trained and industry certified to service your audiovisual and communication technology solution.

Spinitar has a wide variety of service offerings, such as Maintenance and Support Agreements, AV Staffing, Remote Monitoring and Time-and-Materials Services. Allow us to provide a *"quick response from talented folks who care about you"*!



Workmanship

All workmanship is covered for a period of one year. Workmanship is defined by the work product Spinitar stands behind in design and installation services. Within the first 30 days from beneficial use date, any visit to site has unconditional support and no charges will apply. After the 30 days expires, should a technician come to site and the issue is not covered by workmanship, there is a Time & Materials charge for the service call. Standard service calls are scheduled for a minimum of 2 hours. Labor rates are \$125.00/hour and travel is additional depending on distance. Travel is calculated door to door. Any return trips will incur the same charges.

SUMMARY OF SYSTEM INVESTMENT



The following is a summary of costs for each area of the project. The AV Equipment cost reflects all of the major components necessary to meet the project's functional goals. The Technical Services cost includes the Applications Engineering, Project Engineering, CAD, Project Management, Shop Installation and Field Installation Labor required for the project. Materials cost include the cable, connectors, plate, panels and miscellaneous incidental components required to integrated the AV equipment into the final system.

SMC ROC AV System:

Equipment & Materials:	\$1,071,805.47
Freight & E-Waste:	\$ 25,500.00
Technical Services:	\$ 400,900.00
Sales Tax:	\$ 97,055.48
<u>Total:</u>	<u>\$1,595,260.95</u>

PSC Video Wall Option:

Equipment & Materials:	\$ 433,671.36
Freight & E-Waste:	\$ 8,150.00
Technical Services:	\$ 78,710.00
Sales Tax:	\$ 40,169.62
<u>Total:</u>	<u>\$ 560,700.98</u>

PROJECT GRAND TOTAL: \$2,155,961.93

STANDARD PAYMENT TERMS

20% - deposit due upon notice to proceed

30% - due upon delivery of equipment to Spinitar warehouse and initiation of in-shop fabrication

30% - due upon successful completion of installation

20% - due upon successful client sign off

Invoices will be submitted in accordance with standard terms.

Spinitar is committed to improving how our clients present, receive and exchange important information in their communication environments. We have the experience and expertise to provide the County of San Mateo with multimedia systems that will serve as models for innovative presentation environments.

The Spinitar team looks forward to working with you on this project.

Sincerely,

SPINITAR

Greg Goddard

Account Manager

Client Approval

Name/Title (please print)

Date:

