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*To enrich lives through effective and caring service.*

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September 22, 2005

To: Each Supervisor

From: Dave Lambertson
Director

Subject: **REPORT – BOARD MEETING REMOTE TELECONFERENCING**

On July 19, 2005 your Board instructed the Internal Services Department (ISD), with the assistance of the Chief Administrative Officer (CAO), the Executive Officer, and other necessary departments to prepare a plan for providing teleconferencing technology at remote locations in each Supervisorial District, including costs, proposed sites and necessary policies and procedures. A team, consisting of representatives from the CAO, Executive Office, County Counsel, and ISD was assembled to manage this project.

This memorandum is a follow-up to the interim status report provided on August 19th.

A Teleconference Implementation Work Plan (Attachments I and II) delineates the program steps and actions performed by the work group to meet the objective. In summary:

- A technical solution has been identified that will provide high quality teleconferencing of Board meetings to five remote sites.
- The cost to implement teleconferencing is presently estimated to be $1 million for one-time costs, and $750,000 annually.
- Operational, security and legal matters associated with performing teleconferencing have been identified.
- The timeframe for implementation is approximated to be 180 days after receiving authorization to proceed.

ISD will arrange a meeting with your deputies during the next thirty days to discuss the specifics of the attached Teleconferencing Implementation Plan and resolve remaining issues.

## Technical Approach

The teleconference system will be of television broadcast grade at both the remote sites and at the Hall of Administration. To meet Brown Act requirements for teleconferencing, an independent backup audio system will be provided. The best solution also includes the expansion of the existing contract with the County's current broadcast contractor, Network Television Time, Inc. (NTT), to provide the teleconferencing services. This is necessary to seamlessly integrate the current Board Meeting broadcasts with the broadcasts from the remote locations. The Executive Office has received a proposal from NTT in this regard, and ISD has reviewed and validated the proposal from a technical perspective. There will also be a need for site preparation work (e.g., power, lighting, communications lines, etc). These items are detailed in the report.

## Site Selection

Based on site selection criteria, teleconference sites for each District have been proposed and are identified in the attached plan. Exact timelines and costs for deployment cannot be finalized until the proposed sites have been approved.

## Operational Matters

The Executive Office has developed procedures for public assistance, speaker protocol (i.e., the swearing in process and the order of speakers), and document transmission to the remote sites. Other major points include:

- The Executive Office will assign staff at each of the five remote sites to perform the duties of Board Clerk and to operate the equipment.

- Board Agenda and public hearing notice documents will be revised to include information about the teleconferenced sites. The *Rules of the Board* will also be amended to reflect this information.

- Board Motions presented for the first time at the Board meeting should be read into the record by the Supervisor sponsoring the motion so that the public may hear the motion at the remote site.

- The Sheriff's Department will provide security at each remote site. The Executive Office is working with the Sheriff to determine the cost for this service.

**Legal Issues**

Legal matters relating to teleconferencing have been reviewed by County Counsel. They have indicated that, under the Brown Act, the County may use teleconferencing for the benefit of the public and the County in connection with any meeting authorized by law.

If the teleconferenced meeting is intended to be a true extension of the Board meeting, the remote sites must comply with the requirements of the Brown Act. This means that all standard notice and agenda requirements must be followed. The remote sites must be accessible to the public, and the public must be given an opportunity to address the Board. Motions and documents distributed at the central meeting site must also be made available at the remote sites, either at the same time or within a reasonable period of time thereafter. As mentioned previously, motions should be read into the record if copies cannot be simultaneously made available at the remote sites.

The Brown Act requires teleconferenced locations to be connected by audio, video, or both. Therefore, of concern is the possibility that there may be an interruption of the transmission. If this occurs, it is possible that the Board meeting may need to be suspended pending restoration of the connection. For example, if the interruption occurs during sworn testimony during a public hearing, it is likely that the meeting would have to be suspended. Even if a fully redundant system is implemented, interruptions may occur. County Counsel will advise the Board as to the appropriate action to be taken in such circumstances.

If the Board does not intend for the teleconferenced meeting to be a true extension of the Board meeting, then the above requirements would not apply. However, the public must be clearly advised that the Board meeting is being conducted at the Hall of Administration, that it is being teleconferenced at the remote site as a convenience to the public, and that although the public might be able to participate in the Board meeting from the remote site there is the potential that this may not be available. Additionally, unless the Brown Act teleconferencing requirements are complied with, a Board member would be precluded from attending a Board meeting at a remote site.

**Next Steps**

ISD will schedule a meeting with all team members and your deputies within the next thirty days, to discuss the recommendations and the options in the implementation plan. Ultimately, Board approval will be required to implement the plan. Items for approval would include:

- Instructing the CAO to establish funding for the project and to negotiate agreements, as necessary, with the applicable sites selected.
- Instructing ISD to facilitate all building upgrades necessary for implementation including power, lighting, and communications lines.
- Authorizing the Executive Office to negotiate a contract amendment with NTT for the service.
- Instructing the Executive Office to implement the necessary operational procedures.

If you have questions prior to the proposed meeting, please contact me or have your staff contact David Mayer, ISD Telecommunications Branch Manager, at (562) 940-2907.

DL:sg

c: Chief Administrative Officer
Executive Officer, Board of Supervisors
County Counsel
Chief Information Officer

**Teleconferencing Work Plan** **Attachment I**

**Sept. 15, 2005**

| Task # | Major Milestones | Resp. Org. | Schedule/ Status | Comments |
|---|---|---|---|---|
| | **A. Technical Approach** | | | |
| 1. | Complete evaluation of possible technical solutions. | ISD | Done | ISD evaluated several technical approaches with the objectives of (1) creating a broadcast quality transmission at the remote sites (2) seamlessly integrating the remote broadcast function with the regular Board Meeting broadcasts (3) providing for back-up approaches in case of transmission failures. This review is documented in the Teleconferencing Implementation Plan (attached). The best solution is an expansion of the agreement with the current broadcast vendor, Network Television Time, Inc. |
| 2. | Complete validation of cost proposals. | ISD | Partially Done | One time costs are estimated to be $1 million and annual costs are $ 750,000 (see Teleconferencing Implementation Plan for details). These costs may change somewhat depending on site selection issues. |
| 3. | Create initial list of representative sites by District, for cost modeling purposes. | ISD | Done | |
| 4. | Develop options based on the level of redundancy quality of the broadcasts, display (screen/projection) options. Include contingency plans in case of component failure. | ISD | Done | Details included in the Teleconferencing Implementation Plan. |

| Task # | Major Milestones | Resp. Org. | Schedule/ Status | Comments |
|---|---|---|---|---|
| 5. | Prepare final Technical Implementation Plan. (Technical approach, system redundancy, and timelines) | ISD | Done | Details included in the Teleconferencing Implementation Plan. |
| | **B. Site Selection** | | | |
| 6. | Develop Site Selection Criteria (Ability to accommodate project requirements.) | Team | Done | |
| 7. | Develop candidate site list. | Exec. Office | Done | |
| 8. | Validate candidate sites for availability and suitability. | Exec. Office | 30-Sep | Executive Office awaiting various building proprietors responses. |
| 9. | Validate fiber availability and obtain one-time construction cost estimates. | ISD | 30-Sep | Two candidate sites have fiber (Carson, Van Nuys). SBC/Verizon reviewing three candidate sites (Lancaster Library, Lakewood Civic Center, and El Monte Telstar). |
| 10. | Obtain concurrence of site selection. | Exec. Office | 30-Sep | Executive Office to obtain approval of recommended sites. |
| 11. | Perform site surveys to validate candidate sites for technical and operational suitability. | ISD | 20-Oct | |
| | **C. Operational Matters** | | | |
| 12. | Develop remote teleconferencing & security operational procedures. | Exec. Office | Done | Details included in the Teleconferencing Implementation Plan. |
| 13. | Identify all operational cost elements for the final Implementation Plan. | Exec. Office | Sept. 28 | Awaiting security cost from the Sheriff. |

| Task # | Major Milestones | Resp. Org. | Schedule/ Status | Comments |
|---|---|---|---|---|
| | **D. Legal Issues** | | | |
| 14. | Recommend legal guidelines for teleconferencing. | Co. Counsel | Done | County Counsel provided all necessary guidelines on legal issues. A decision still needs to be reached on the nature of the teleconferencing meetings - this is discussed in more detail in the Implementation Plan |
| | **E. Funding** | | | |
| 15. | Develop funding estimates for one-time costs and on-going costs. | ISD | Done | Estimate will be further refined to reflect final site selection and security costs. |
| 16. | Finalize procurement methodology for material acquisition and contract amendment. | Exec. Office & CAO | Done | Recommend contract amendment with selected teleconferencing operator (NTT). |

## Attachment II

# Teleconferencing Implementation Plan

# (TIP)

September 22, 2005

Prepared by Teleconference Work Group
Represented by:

County Counsel
Chief Administrative Office
Executive Office
Internal Service Department

# Teleconferencing Implementation Plan

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## 1.0 Introduction

On July 19, 2005, the Board approved a motion directing ISD, with support from the CAO, and the Board Executive Office to prepare a Plan to provide video teleconferencing technology for Board Meetings at one site located in each Supervisorial District, to enable the public to participate remotely in the County's Board Meetings. To ensure that legal matters were addressed a representative from County Counsel was asked to be a member of the work group.

This document examines the various elements to enable quality teleconference service to and from five locations remotely located from the Kenneth Hahn Hall of Administration Board of Supervisors meeting room. This report will define the technical alternatives examined and recommends an approach that is proven and currently utilized by the County.

Five remote sites from each respective Supervisor's District have been identified as possible locations to enable constituents to observe and participate in Board meetings. Operational requirements from the remote sites have been established and considerations of the legal matters dealing with the Brown Act have been examined and an opinion from County Counsel has been included.

Estimated cost figures have been identified for one time and recurring should the Board decide to proceed with implementation. Final figures will be developed when final remote site selections are made.

ISD served as technical lead to assess design alternatives and implementation options, which included an evaluation of County internal capabilities to perform the video teleconferencing functions. The review included conducting interviews with video vendors to gauge their capabilities to provide video teleconferencing and broadcast television services, and rough order of magnitude pricing. ISD staff also examined a proposal submitted by Network Television Time, Inc./GovTV and interviewed their representatives. Digital System Technologies, Inc., Hoffman Video, and Spinitar were also contacted to evaluate alternative video teleconferencing systems, and SBC to evaluate alternative options for high data rate (fiber optic) network services.

## 2.0 Purpose

In this TIP a proposed strategy is described for the transfer of broadcast quality color television signals (audio and video) from each of five designated remote locations to the Hall of Administration for display on large screen monitors in the Board Hearing Room. In return, the broadcast television signal would be transferred back to each remote location for display on a large screen monitor. The primary goal is to provide the capability for the public to participate in the County's Board Meetings, without having to travel long distances from their homes to the Hall of Administration.

Described in this plan is the framework for the planning, engineering design, integration and test, operation and maintenance of color video cameras, monitors, audio systems, stage lighting, laptop PCs, telecommunications equipment, and high speed data circuits at each of the designated remote locations. Also included are recommended modifications to the Board Hearing Room systems to enable controlled integration of the individual broadcast quality television signals from each remote site, and the return of the broadcast television signal to each remote site.

This TIP also discusses options for providing remote site administration, including registration of public speakers, coordination and timing of speakers (via laptop), facility security, clean up, and the safeguarding of video cameras, monitors, and audio systems.

## 3.0 Scope

The study objective is to provide the public with remote access to the County's Board Meetings from designated meeting locations in each of the five Supervisorial Districts, using cost effective video teleconferencing technologies to provide broadcast quality television.

## 4.0 Teleconferencing Network Technologies

### 4.1 Selected Approach

While the technologies that comprise today's video teleconferencing networks have been available for many years, significant developments contributing to the practical application of broadcast quality color television technologies have occurred during the past few years. There are several approaches to meeting the specified requirement for broadcast quality video teleconferencing that were evaluated (see Exhibit I). The analysis concluded that the best approach was to expand the contract with the vendor providing Board meeting broadcasts to include teleconferencing.

Network Television Time, Inc./GovTV, currently under contract to provide television services associated with the broadcast of County Board Meetings, has submitted a proposal to provide video teleconferencing services to each of five remote sites. Under this approach, SBC TV-1 (fiber) Network Services will be used for the transmission of video and primary audio circuits, and ISDN circuits will provide a backup audio system. The SBC TV-1 Network Services to provide high data rate point-to-point for the transmission of video signals to/from each remote site to the Television Switching Center. Digital audio circuits will be utilized for transmission of audio signals to/from each remote site to the Switching Center. At the Switching Center, video and audio signals are routed over comparable TV-1 and audio circuits to the Board Hearing Room for integration and display, and subsequent television broadcast.

### 4.2 Essential Remote Site Preparation Tasks

Each selected teleconferencing location will require the completion of certain site preparation tasks. They include:

a. Installation of conduit for extension of the fiber optic cable to the conference room. Note that SBC and Verizon will normally extend fiber optic cable circuits to the designated conference room (for a nominal fee), but only if suitable conduit is available. If suitable conduit is not available, then new conduit will need to be installed.
b. Installation of two (2 ea) dedicated 20 amp electrical circuits for the television camera and large screen plasma television monitor, as well as the audio system, laptop PC, and stage lighting. While electrical outlets may be available in the conference area, the existing electrical circuits may not be capable of supporting projected power loads.
c. Installation of one telephone and one data circuit. (Optional if ISDN is used).
d. Reinforce the conference room wall to support a large screen plasma TV monitor.

Estimated Site Preparation Costs for Five Remote Sites is $ 26,000. This may change depending on a detailed review of the sites selected.

## 4.3 Remote Site - Teleconferencing Requirements

Each remote site will require installation and configuration of a color television camera, audio system, television monitor, stage lighting, laptop (Ethernet), and interface with SBC TV-1 Point-to-Point (fiber optic) network services. A total of two TV-1 Point-to-Point circuits will be required at each remote site, as well as two digital voice circuits, for the transmission and receipt of video and audio signals. The laptop will be used to register speakers using E-mail to/from Executive Office staff in the Board Hearing Room.

## 4.4 Television Studio - Teleconferencing Network Services

The proposal prepared by Network Television Time, Inc./GovTV will require several modifications to the studio in the Board Hearing Room. First, five additional TV-1 Point-to-Point circuits will be required to receive video signals from each remote site, as well as five digital voice circuits, for the transmission and receipt of video and audio signals. Received video signals will be integrated for display on monitors in the Board Hearing Room. Additional monitors would be installed to enhance viewing. Audio signals will be incorporated into the audio system. The broadcast television signals will be routed via the existing TV-1 Point-to-Point fiber circuit (along with broadcast digital voice circuit) to the Television Switching Center for subsequent broadcast and distribution to each remote site.

## 4.5 Staffing Requirements

The proposal prepared by Network Television Time, Inc./GovTV does not require any additional staffing to operate the video teleconferencing systems at each remote site.

Staffing requirements for the administration of each remote site, including registration of public speakers, swear-in of speakers, coordination and timing of speakers (via E-mail), facility security, and safeguarding of video cameras, monitors, and audio systems are addressed separately.

## 4.6 Contingency Plans

The Network Television Time, Inc./GovTV video teleconferencing proposal utilizes highly reliable TV-1 Point-to-Point fiber circuits for the transmission of standard, uncompressed NTSC (National Television Standards Committee) video signals. Digital voice circuits are utilized for the transmission of audio signals. Such circuits have proven to be very reliable, and are frequently utilized by commercial broadcast television networks, as well as the televised broadcast of Board Meetings over the past several years.

While the failure of the primary video and audio circuits is unlikely, the proposal provides for ISDN circuits for contingency backup audio. This contingency option would allow speakers (at the remote site) to continue to address the Board via backup voice circuit, without having to wait for restoration of the primary (video and audio) teleconferencing circuits.

## 4.7 ADA Compliance

The proposal prepared by Network Television Time, Inc./GovTV provides for purchase of caption display boards and additional headsets for the hearing impaired, or to receive Spanish audio.

## 4.8 Advance Notice of Special Needs

Citizens with special needs, who wish to participate in remote site video teleconferencing shall be advised to provide advanced notice, if they require assistance for the disabled, language translation, or special handling for documents, site drawings, or project plans.

## 5.0 Teleconferencing – Contingency Plans

This Teleconferencing Implementation Plan (TIP) defines a recommended strategy for transfer of broadcast quality color television signals (audio and video) from each of five designated remote locations to the Hall of Administration for display on large screen monitors in the Board Hearing Room. In return, the broadcast television signal would be transferred back to each remote location for display on a large screen monitor. The primary goal is to provide the capability for the public to participate in the County's Board Meetings, without having to travel long distances from their homes to the Hall of Administration. In order to minimize interruptions to the County's Board Meetings, high quality video teleconferencing systems and networks are essential.

This section describes the quality of teleconferencing services planned, and the strategy for the implementation of contingency plans in the event of the loss of video signals and/or audio signals to/from one or more remote sites.

## 5.1 Network Television Time Proposal (TV-1 Network Services)

The Network Television Time, Inc./GovTV video teleconferencing proposal utilizes highly reliable TV-1 Point-to-Point fiber circuits for the transmission of standard, uncompressed NTSC (National Television Standards Committee) video signals. Digital voice circuits are utilized for the transmission of audio signals. Such circuits have proven to be very reliable, and are frequently utilized by commercial broadcast television networks, as well as the televised broadcast of Board Meetings over the past several years.

## 5.2 Loss of Primary Video and/or Audio Signals from Remote Sites

While the failure of the primary video and audio circuits from a remote site is unlikely, the NTT proposal provides for ISDN circuits for contingency backup audio. This would allow public speakers (at the remote site) to continue to address the Board via backup voice circuit, without having to wait for restoration of primary (video and audio) teleconferencing circuits. The County's Board meeting can continue without interruption, and in compliance with the Brown Act (as verified by County Counsel). This contingency option using ISDN circuits for backup audio is recommended.

## 5.3 Loss of Primary Video and/or Audio Signals to Remote Sites

The failure of the primary video and audio circuits to a remote site is unlikely, however, the proposal provides for ISDN circuits for contingency backup audio. This would allow attendees (at a remote site) to continue to monitor the County's Board Meeting via backup voice circuit, without having to wait for restoration of primary (video and audio) teleconferencing circuits. The County's Board meeting can continue without interruption, and in compliance with the Brown Act (as verified by County Counsel). This contingency using ISDN backup circuits is recommended.

## 5.4 Loss of Primary Video and/or Audio Signals – Back-Up Circuits

Another contingency option considered during this evaluation included full redundancy for the remote sites by providing back-up high speed (fiber optic) network services for both of the primary video and audio circuits. However, this contingency option can only be achieved at substantial cost, and does not significantly improve teleconferencing reliability or availability.

The failure of the primary video or audio circuit would introduce a significant level of complexity to switch to the back-up circuit. This would require a technician to switch the television camera, monitor, and/or audio system to the back-up circuit. This is not feasible unless a technician is located at each remote site, which is not currently planned. Therefore, fully redundant back-up circuits contingency option is not recommended

Another possible contingency option would provide for full redundancy at the remote site by duplicating primary and back-up network services, the remote site equipment (i.e., TV cameras, monitors, laptop PCs, etc.). In addition to the increased complexity at the remote site, additional modifications to the television studio in the Board Hearing Room to accommodate both the primary and back-up network services. Preliminary estimates indicate that implementation of this full redundancy contingency option would increase teleconferencing implementation costs, and monthly recurring costs by over 60 percent. Due to the high degree of complexity and the increase to recurring costs this full redundancy contingency option is not recommended.

## 5.5 Loss of Electrical Power at Remote Sites

Installation of a 30 amp Uninterrupted Power System (UPS) could provide up to five (5) minutes of emergency power for the remote site teleconferencing system. This UPS emergency power contingency option would safeguard against interruptions to County Board Meetings due to loss of electrical power at a remote site. Five minutes of emergency power would allow for implementation of contingency plans if electrical power is not restored, or transition to back-up diesel generator power (if available). This UPS emergency power contingency is recommended.

## 5.6 Administrative Contingency Procedures

In the event that primary video and audio circuits fail, and the ISDN circuits for contingency backup audio at the remote site are also not available, then it may be necessary to implement administrative contingency procedures. Such procedures may require that the Board Meeting be interrupted or suspended pending restoration of the teleconferencing system at remote sites. Another option might include tabling an agenda item, or deferring action until a subsequent meeting, or until teleconferencing system operations at each of the remote sites are restored. The Executive Office would develop administrative contingency procedures.

## 6.0 Remote Site Selection

## 6.1 Remote Site Selection Criteria

Primary considerations for selection of remote sites include: geographical location, willingness of the facility to provide conference rooms (sufficient capacity) to support video teleconferencing of County Board Meetings on a regularly scheduled, long term basis.
Additional considerations include:

a. The prominence of the building, as well as ease of parking and public access.
b. The normal operating hours of the facility.
c. The availability of meeting rooms and suitability for video teleconferencing.
d. The state of the building infrastructure, including: current electrical power loads, conduit for extension of fiber optic cable, network access, etc.
e. The availability of high data rate (fiber optic) network services at the facility.
f. The estimated cost of extending high data rate (fiber optic) network services to the facility, if not currently available.

## 6.2 Suggested Remote Sites

The following sites have been selected or recommended by the either Board Offices, or the Executive Office of the Board of Supervisors:

**FIRST DISTRICT**

| | | |
|---|---|---|
| Pomona City Hall<br>505 South Garvey Ave.<br>Pomona, CA 91766 | Azusa City Hall<br>213 E. Foothill Blvd.<br>Azusa, CA 91702 | Telstar Facility<br>9320 Telstar<br>El Monte, CA 91731 |

**SECOND DISTRICT**

| | |
|---|---|
| Compton City Hall<br>205 S. Willowbrook Ave<br>Compton, CA 90020 | Carson Community Center<br>801 East Carson Street<br>Carson, CA 90745 |

**THIRD DISTRICT**

| | |
|---|---|
| L.A. County Services Bldg<br>Van Nuys District<br>14340 Sylvan Street<br>Van Nuys, CA | Calabasas District Office<br>26600 Agoura Road<br>Calabasas, CA |

**FOURTH DISTRICT**

| | | | |
|---|---|---|---|
| Torrance City Hall<br>3031 Torrance Blvd<br>Torrance | Lakewood City Hall<br>5050 Clark Avenue<br>Lakewood | Lakewood Civic Center<br>5050 Clark Avenue<br>Lakewood | AQMD Headquarters<br>21865 Copley Drive<br>Diamond Bar |

**FIFTH DISTRICT**

| | | | |
|---|---|---|---|
| Palmdale City Hall<br>38300 Sierra Highway<br>Suite B<br>Palmdale, CA | Lancaster City Hall<br>44933 N. Fern Avenue<br>Lancaster, CA 93534 | Fire Department<br>Training Center<br>Fire Station #129<br>42110 6th Street West<br>Lancaster, CA 93534 | Lancaster Reg. Library<br>601 W.Lancaster Blvd.<br>Lancaster, CA 93534 |

## 6.3 Primary Remote Sites - Under Consideration

Selection of the actual five remote sites is subject to Board member approval. Even once approval is obtained further site analyses, negotiation with facility administrators, and evaluation of the over-all costs associated with the implementation of video teleconferencing at the facility. Primary sites currently under consideration include:

**FIRST DISTRICT**
Telstar Facility
9320 Telstar
El Monte, Ca. 91731

**SECOND DISTRICT**
Carson Community Center
801 East Carson Street
Carson, Ca. 90745

**THIRD DISTRICT**
LA County Services Bldg.
Van Nuys District
14340 Sylvan Street
Van Nuys, Ca.

**FOURTH DISTRICT**
AQMD Headquarters
21865 Copley Drive
Diamond Bar, Ca. 91765

**FIFTH DISTRICT**
Lancaster Regional Library
601 West Lancaster Blvd.
Lancaster, Ca. 93534

## 7.0 Teleconferencing – Remote Site Operations

This section describes the framework for providing remote site administration, including compliance with the Brown Act, personnel staffing and training, required hours of operation, equipment and supplies, procedures for the registration of public speakers, coordination and timing of speakers, remote site security, storage needs for equipment and supplies, and the safeguarding of video cameras, monitors, audio systems, laptop computer and printer.

## 7.1 Legal Issues - Compliance with the Brown Act

Legal matters relating to teleconferencing have been reviewed by County Counsel. Under the Brown Act, the County may use teleconferencing for the benefit of the public and the County in connection with any meeting authorized by law. Although technically Government Code section 54953(b)(4) does not require compliance because no Board member will be present at a remote site, County Counsel recommends compliance over a strict and narrow interpretation of the statute.

If teleconferencing at the remote sites is intended to be a true extension of the Board meeting, then the Brown Act requirements must be followed. Operational matters involving compliance with Brown Act requirements and due process relate to issues of public notice and assistance, such as

the posting of agendas, access to facilities, speaker protocol, and document availability. All standard notice and agenda requirements must be followed. The remote sites must be accessible to the public, and the public must be given an opportunity to address the Board. Motions and documents distributed at the central meeting site must also be made available at the remote sites, either at the same time, or within a reasonable period of time thereafter. Motions should be read into the record if copies cannot be simultaneously made available at the remote sites. Operational procedures to address these issues have been developed by the Executive Office.

The Brown Act requires teleconferenced locations to be connected by audio, video, or both. Therefore, of concern is the possibility that there may be an interruption of either the audio or video transmission. If this occurs, it is possible that the meeting may need to be suspended pending restoration of the connection. For example, if the interruption occurs during sworn testimony during a public hearing, it is likely that the meeting would have to be suspended. This is a problem whether or not the Brown Act applies. Options for both an audio system backup (using ISDN circuits), and a fully redundant system are addressed in this plan. It is important to note that either approach will fulfill the legal requirements of the Brown Act.

If teleconferencing were not intended to be a true extension of the Board meeting, then the above-described requirements would not apply. However, the public must be clearly advised that the Board meeting is being conducted at the Hall of Administration, that it is being teleconferenced at the remote site as a convenience to the public, and that although the public might be able to participate in the Board meeting from the remote site, there is the potential that this may not be available. Additionally, unless the Brown Act teleconferencing requirements are complied with, a Board member would be precluded from attending at a remote site.

## 7.2 Staffing & Training

The Executive Office will assign staff members (2 per location) to work at each of the five remote video teleconferencing sites. In order to support the requirement for two staff members at each remote site during video teleconferencing of the County's Board Meetings, it may be necessary to hire five (5) additional clerical personnel.

Staff members will be rotated each meeting to avoid prolonged disruption of division responsibilities. Alternate staff will be selected to ensure that each remote site is covered if the assigned worker takes ill.

Staff will need to be fully trained on the set up and operation of the laptop PC and printer, prior to their assignment to a remote site. Additional training will include meeting governance, video teleconferencing procedures, as well as contingency plans and emergency procedures

## 7.3 Hours of Operation

Regardless of attendance all remote video teleconferencing sites must remain open and accessible to the public for the duration of the Board Meeting. The remote site also must remain open while the Board meets in closed session. Meetings lasting beyond 5:30 P.M. may require staff being compensated for overtime.

## 7.4 Equipment & Supplies

Equipment, materials and supplies, including: laptop computer, printer, telephone, signs to be posted outside the meeting location identifying it as a Board of Supervisors' meeting room, "Request to Speak" forms, public information booklets, pencils, cups, bottled water, first aid supplies, etc., should be stored securely in each remote facility so that the assigned remote site administrator is only required to bring copies of the current Board Meeting Agenda, as well as replenishment supplies each week.

The requirements for secure storage for equipment and supplies at the remote sites will be coordinated with the facility administrator.

## 7.5 Current Board Meeting Agenda

Designated staff at each remote video teleconferencing site will be responsible for posting the Board agenda, and supplemental agenda in accordance with requirements of the Brown Act. The Executive Office may assign its own staff, at the added expense of overtime and mileage, to ensure that this requirement is accomplished in a timely manner. Operational procedures to address these issues have been developed by the Executive Office.

The Board will need to amend the *Rules of the Board* to reflect the additional teleconferencing Board Meeting locations. The *Information Booklet*, as well as various locations on the County's Internet/Intranet sites, will also need to be updated to reflect these teleconferencing Board Meeting locations.

It is important to note that certain public hearing items will not be appropriate for remote video teleconferencing sites. One such example is an auction involving the selling of County owned property. Participants in the auction process will be required to attend the Board Meeting at the Kenneth Hahn Hall of Administration to participate in the bidding process.

The legal notice will clearly state that persons interested in bidding must attend the Board Meeting at the Hall of Administration.

## 7.6 Remote Site - Speaker Sign Ups

Members of the public will complete the current "Request to Speak" form ( the original forms will be returned to the office for filling with the record of the proceedings). The Executive Office staff at the video teleconference site will type a list of the names of the individuals requesting to speak, including the item number and the position of the speaker (favor/opposed). The list will also identify which Supervisorial District video teleconference site the list came from. The speaker list will then be E-mailed to NTT and the Board Operations manager working in the Board Room. The list will be immediately printed by the Board Operations manager and provided to the Executive Officer or Deputy Executive Officer for submittal to the Chair when he/she calls up the item for discussion.

## 7.6 Sergeant at Arms

The Los Angeles County Sheriff's Department will provide one (1) Deputy Sheriff to perform the duties of the Sergeant at Arms at each of the five designated remote teleconferencing sites. The Sergeant at Arms will remain at the site while the Board Meeting is in session.

## 7.7 Storage Requirements

Secure storage will be required at each remote site for equipment and materials utilized for video teleconferencing. Requirements will be coordinated with the facility administrator.

Safeguarding of installed color television cameras, monitors, audio systems, and laptop computers is a concern, however, it may be possible to mount these items in secure areas, or provide appropriate safeguards as needed.

# 8.0 Teleconferencing Implementation Costs - One Time and Recurring

## 8.1 Preliminary Estimate - *One-Time Costs*

| | |
|---|---|
| • Acquire equipment and circuits.<br>• Integrate and test teleconferencing at KHHOA and remote locations. | $650,000 |
| • Site preparation work, including installation of power, conduit, and necessary building alterations. | $ 26,000 |
| • Provide backup power and install UPS systems at remote locations. | $ 40,000 |
| • Acquire laptop PC's and printers for Executive Office staff at remote locations. | $17,500 |
| • Provide for safeguarding of equipment at remote locations | $16,500 |
| • Contingency Fund – extend fiber connectivity to remote sites | $200,000 |
| • Contingency Fund – miscellaneous implementation costs | $ 50,000 |
| Total | $1,000,000 |

## 8.2 Preliminary Estimate - *Recurring Costs*

| | |
|---|---|
| • NTT agreement recurring annual cost to provide technical operations for teleconferencing | $250,000 |
| • Estimated on-going lease cost for the remote sites | $60,000 |
| • Estimated Cost of two (2) administrative staff at five remote sites | $300,000 |
| • One LASD (1) Sergeant at Arms at each remote teleconferencing site | $120,000 |
| • Contingency Fund | $20,000 |
| Total | $750,000 |

Note: Recommend that contingency funds be included in order to support the timely resolution of unforeseen problems or events that could impact the scheduled implementation of this important public service.

## 9.0 Preliminary Video Teleconferencing Implementation Project Schedule

This section defines a proposed strategy for the implementation of video teleconferencing technology at one site located in each Supervisorial District. Under ideal conditions, the plan would provide for concurrent installation of teleconferencing equipment (by NTT), and TV-1 network services (by SBC) at each of the five remote sites. However, negotiation of leases, and the extension of high data rate (fiber) network services to some remote sites will result in delayed implementation. Note also, that extension of fiber to remote sites located outside of the SBC service area will require additional time.

## 9.1 Board Approval – Initiate Video Teleconferencing Project

On agreement of the Teleconferencing Implementation Plan, a Board Letter will be submitted requesting authorization of a contract modification of the current Network Television Time, Inc./GovTV agreement. Additionally, the Chief Administrative Office will negotiate remote site conference room leases agreements (as needed).

## 9.2 Order Teleconferencing Equipment and Circuits

Following modification of the Network Television Time, Inc./GovTV contract they can initiate procurement of teleconferencing equipment, and order the SBC TV-1 Network Services (video and audio), and ISDN (audio backup) circuits. If fiber is not currently available at a remote site, extension of fiber to the site would be ordered. Remote site preparation can also be initiated once site leases have been approved and signed. This activity is expected to require 60 to 90 days.

## 9.3 Board Hearing Room - Install Equipment and Circuits

On receipt of the video teleconferencing equipment, installation of equipment and circuits planned for the Board Hearing Room can be initiated. This would include the planned upgrade of television studio equipment, and the installation of television monitors in the Hearing Room. This activity will be accomplished during off hours and is expected to require 45 days.

## 9.4 Remote Site – Teleconferencing Equipment Integration and Test

Installation of the video teleconferencing equipment at each remote site will be initiated on a phased schedule, following completion of site preparation and extension of fiber to the facility. This activity is expected to require 90 days to complete all five remote sites.

## 9.5 Transition to Operational Teleconferencing

Following integration and test of video teleconferencing equipment and TV-1 network services at all sites, the completion of staff training and amended procedures, the Executive Office will notify the Board, and following their approval, transition to Operational Teleconferencing. Full dress

rehearsals to simulate the video teleconferencing of an actual Board Meeting will be accomplished prior to transition to Operational Teleconferencing. This activity is expected to require 30 to 45 days in order to resolve any problems encountered.

## 9.6 Assumptions

**a.** The CAO will be able to negotiate lease agreements for the scheduled utilization of conference rooms of sufficient capacity to support video teleconferencing of the County's Board Meetings, at each of the designated remote sites, on a long term basis.

**b.** The SBC TV-1 Point-to-Point Network Services will require high data rate (fiber optic cable) network service at each of the five designated remote sites. This TIP assumes that SBC provided high data rate (fiber optic cable) network service is currently available at, or near, each of the five designated remote sites. If fiber is currently not available at a remote site, fiber can be extended by SBC to the site at reasonable cost, in a timely manner. Note that additional costs (and installation delays) may be incurred to extend fiber to remote sites located outside of the SBC Service Area, due to the need for SBC to negotiate fiber lease agreements with other vendors.

**c.** Secure storage will be available at each remote site to secure equipment and materials utilized to support video teleconferencing. Safeguarding of installed color television cameras, monitors, audio systems, printers, and laptop computers is a concern, however, it may be possible to mount these items in secure areas, or provide appropriate safeguards as needed.

## 10.0 Summary

This study examined several technical solutions to meet the requirements to provide broadcast quality video teleconferencing to allow the public to participate in the County's Board Meetings, without having to travel long distances from their homes to the Hall of Administration.

The remote video conferencing design proposed by Network Television Time, Inc./GovTV, utilizing SBC TV-1 Point-to-Point Fiber Network Services, is clearly the best available solution that meets all requirements, at the lowest price.

# Teleconferencing Implementation Plan

## EXHIBIT I – TECHNICAL ANALYSIS

### Teleconferencing Network Technologies

While the technologies that comprise today's video teleconferencing networks have been available for many years, significant developments contributing to the practical application of broadcast quality color television technologies have occurred during the past few years. There are several approaches to meeting the specified requirement for broadcast quality video teleconferencing. Each of these approaches was assessed by ISD's technical team.

### Point-to-Point DS-3 Network Service

This approach requires that video teleconferencing signals be processed, to compress and encode signals for transmission over high data rate, point-to-point (fiber optic) networks. At the receiving destination, the compressed video signals are decompressed, resulting in broadcast quality television signals.

This option requires coder/decoder (codec) video processing systems at each location. Multiplex equipment to integrate audio/video signals and data traffic for transmission over leased (SBC) DS-3 Point-to-Point Network Service, at data rates approaching 45 Mbps speeds, are also required at each location.

Because (SBC) DS-3 Point-to-Point Network Service is mileage sensitive, rates for this service tend to be higher than other fiber optic network services available. Also, this alternative is relatively complex, requires codecs and multiplex equipment at each location, and is therefore more expensive than other options considered.

### Switched Metro Ethernet Service

The leased (SBC) Switched Metro Ethernet (OPT-E-MAN) video teleconferencing network service option would provide each end point with 10/100 Mbps standard Ethernet interface installed. Data rates would be determined based on quality of service required. Since OPT-E-MAN network service is not mileage sensitive, this option may have lower costs.

This approach also requires that the video teleconferencing signals be processed, to compress and encode signals, for transmission over the point-to-point OPT-E-MAN networks. At the receiving destination, the compressed video signals are decompressed, resulting in broadcast quality television signals. However, this alternative is also relatively more complex, since the video teleconferencing network requires codecs and Ethernet switch equipment to interface with the 10/100 standard Ethernet interface at each location. Due to the additional equipment required, this alternative is more expensive than other options considered.

## Multi-Rate ISDN Network Service

Multi-rate ISDN (Integrated Services Digital Network) provides appropriate increments of switched digital bandwidth. The City of Los Angeles is planning to utilize multi-rate ISDN to support video teleconferencing of their City Council meeting to a pilot site at the San Fernando Valley.

The City plans to have their system operational later this year. During recent tests, City engineers observed that video image quality was acceptable (using VBrick video signal processors) but they experienced network transmission delays (approximately 1 second), and their system had limited echo suppression capability. City engineers indicated that their current system was probably an interim solution, and they would be looking at alternative video teleconferencing systems capable of supporting higher data rates in the near future.

Due to the bandwidth limitations, Multi-rate ISDN does not appear to be a viable option for the County's planned Teleconferencing for remote coverage of the Board Meetings.

## TV-1 Point-to-Point Network Service

The (SBC) TV-1 Point-to-Point Network Service provides for the transmission of standard, uncompressed NTSC (National Television Standards Committee) television video over leased fiber optic circuits from remote sites to the central Television Switching Center (6100 Sunset Blvd.). At the Switching Center, the received television video signals can be switched and routed over similar TV-1 point-to-point, fiber circuits to their destination. Audio signals are similarly routed and switched over separate digital voice circuits. This is the same network service option utilized by commercial broadcast television, and provides very reliable, high broadcast quality, video signals at relatively low cost.

The (SBC) TV-1 Point-to-Point Network Service is utilized by Network Television Time, Inc./GovTV (NTT), currently under County contract to provide television services associated with the broadcast of County Board Meetings, conducted in the Board Hearing Room, at the Hall of Administration. A proposal submitted by NTT recommends using this design for video teleconferencing at the remote locations as an extension to the current television services utilized successfully for many years for the broadcast of County Board Meetings. Using the existing technology in the Board room the received video and audio signals can be integrated in the studio for display on television monitors in the Board Hearing Room, and subsequent television broadcast. The broadcast television (video and audio) signals would be routed for distribution to each remote video teleconferencing site.

## Countywide Enterprise Network

The Countywide Enterprise Network provides high data rate network services to subscribers throughout the County. While the Enterprise Network is capable of providing DS-3 service, use of the Enterprise Network to support video teleconferencing for remote coverage of Board Meetings would require codecs and multiplex equipment. In addition to increased equipment costs, the increased teleconferencing traffic could interfere with the services currently provided to

subscribers. Additional costs would be incurred by the County to expand existing DS-3 Enterprise Network Services.

Utilization of the Enterprise Network does not appear to be a viable option for the County's planned Video Teleconferencing for remote coverage of the Board Meetings. However, the Enterprise Network could be utilized in a supporting role, by providing E-mail service for the registration and coordination of public speakers.

## Other Teleconferencing Systems

Other video teleconferencing solutions were also considered, including systems offered by Digital System Technology, Inc., Hoffman Video, and Spinitar. Such systems are designed to provide point-to-point video teleconferencing for person-to-person conferencing, which is not comparable to broadcast quality television. These vendors provide audio and video systems and multiplex equipment, however, they typically do not provide network services, nor do they provide teleconferencing operations support, nor do they provide television broadcast services.

Such video teleconferencing systems are not a viable option for the County's planned Video Teleconferencing for remote coverage of the Board Meetings.

## Recommended Teleconferencing Service Provider

Network Television Time, Inc./GovTV, currently under contract to provide television services associated with the broadcast of County Board Meetings, has submitted a proposal to provide video teleconferencing services to each of five remote sites. The proposal offers two approaches to address the Board's needs. The first option utilizes SBC DS-3 Network Services to provide high data rate point-to-point fiber circuits from the Board Hearing Room to each of the five designated remote locations. Note that this option requires codecs and multiplex equipment at each location, which increases the overall cost ISDN audio backup circuits)

The second NTT option uses SBC TV-1 fiber transmission of video, primary digital audio circuits, and ISDN circuits for backup audio system. The SBC TV-1 Network Services to provide high data rate point-to-point fiber circuits for the transmission of video signals to/from each remote site to the Television Switching Center. Digital audio circuits are utilized for transmission of audio signals to/from each remote site to the Switching Center. At the Switching Center, video and audio signals are routed over comparable TV-1 and audio circuits to the Board Hearing Room for integration and display, and subsequent television broadcast. Note that this option does not require codecs and multiplex equipment, which decreases the overall cost.

## Evaluation of Alternative Options

While several video teleconferencing systems were evaluated, only the two alternative solutions submitted by Network Television Time, Inc./GovTV fully meet all requirements for broadcast quality video teleconferencing. Of the two options, the SBC TV-1 Network Services is clearly the best, and also the least expensive.