Participating agencies include Alameda and Contra Costa Counties and the following cities and special districts: Alameda, Albany, Antioch, Berkeley, Brentwood, Clayton, Concord, Danville, Dublin, El Cerrito, Emeryville, Fremont, Hayward, Hercules, Lafayette, Livermore, Martinez, Moraga, Newark, Oakland, Oakley, Pinole, Pittsburg, Pleasant Hill, Pleasanton, Richmond, San Leandro, San Pablo, San Ramon, Union City, Walnut Creek, East Bay Regional Park District, Kensington Police Community Services District, Livermore Amador Valley Transit Authority, Moraga-Orinda Fire District, Rodeo-Hercules Fire District, San Ramon Valley Fire District, California Department of Transportation, Ohlone Community College District, Contra Costa Community College District, Dublin-San Ramon Services District and University of California, Berkeley

BOARD OF DIRECTORS MEETING

NOTICE OF REGULAR MEETING DATE: March 6, 2020

TIME: 10:00 a.m.

PLACE: Alameda County Sheriff's Office of Emergency Services and Homeland Security

4985 Broder Blvd. Dublin, CA 94568

AGENDA

1. Closed Session: (None) Time: N/A

2. <u>Call to Order/Roll Call</u>: (Regular Session) Time: 10:00 a.m.

3. Report on Closed Session: None

4. <u>Public Comments</u> (Meeting Open to the Public):

At this time, the public is permitted to address the Board on items within the Board's subject matter jurisdiction that do not appear on the agenda. Please step to the podium and clearly state your name for the record. In accordance with State Law, no action or discussion may take place on any item not appearing on the posted agenda. If the item requires action, it will be referred to staff and/or placed on the next agenda. In order that all interested parties have an opportunity to speak, please limit comments to a maximum of three (3) minutes. If you wish to comment on an item that is on the agenda, please wait until the item is read for consideration, and then make your way to the podium. Please limit comments to a maximum of three (3) minutes.

- 5. **Presentations:** None
- 6. <u>Approval of Minutes</u>
 - **6.1** Approval of Minutes from the Board Meeting of December 6, 2019
- 7. Written Communications: None
- **8. Public Hearings:** None
- 9. <u>Action Items</u>:
 - **9.1** Adopt a Resolution Conditionally Approving the City of Vallejo's Request to Temporarily Join EBRCSA

- 9.2 Adopt Resolutions Approving a Contract with CSI Telecommunications, Inc. to Develop a 10-Year Plan for EBRCSA's System and an Adjustment to the FY 2019/2020 Budget to Allocate the Cost for the Same.
- **9.3** Approve Finance Committee Recommendation Authorizing Executive Director to Negotiate a Cost Sharing Plan for the Simulcast Site Addition to Walton Lane
- **9.4** Adopt a Resolution Authorizing the Purchase of Dispatch Consoles for Alameda and Contra Costa Counties Radio Shops

10. Committee Updates:

- **10.1** Receive Informational Report on Recent Finance Committee Activities
- **10.2** Receive Informational Report on Recent Operations Committee Activities

11. Reports:

- **11.1** Receive an Update on the Time Division Multiple Access (TDMA) Upgrade
- 11.2 Receive Information on The City of Benicia Joint Powers Agreement
- 11.3 Receive Information on the City of Newark New Police Building

12. **Board Comments:**

13. Next Action Steps:

14. Adjournment

This AGENDA is posted in accordance with Government Code Section 54954.2(a) If requested, pursuant to Government Code Section 54953.2, this agenda shall be made available in appropriate alternative formats to persons with a disability, as required by Section 202 of the Americans with Disabilities Act of 1990 (42 U.S.C. Section 12132), and the federal rules and regulations adopted in implementation thereof. To make a request for disability-related modification or accommodation, please contact the EBRCSA at (925) 803-7802 at least 72 hours in advance of the meeting.

I hereby certify that the attached agenda was posted 72 hours before the noted meeting.

Tom McCarthy Executive Director Dated: 03012020

from Mc Carthy

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Participating agencies include Alameda and Contra Costa Counties and the following cities and special districts: Alameda, Albany, Antioch, Berkeley, Brentwood, Clayton, Concord, Danville, Dublin, El Cerrito, Emeryville, Fremont, Hayward, Hercules, Lafayette, Livermore, Martinez, Moraga, Newark, Oakland, Oakley, Pinole, Pittsburg, Pleasant Hill, Pleasanton, Richmond, San Leandro, San Pablo, San Ramon, Union City, Walnut Creek, East Bay Regional Park District, Kensington Police Community Services District, Livermore Amador Valley Transit Authority, Moraga-Orinda Fire District, Rodeo-Hercules Fire District, San Ramon Valley Fire District, California Department of Transportation, Ohlone Community College District, Contra Costa Community College District, Dublin-San Ramon Services District and University of California, Berkeley

AGENDA ITEM NO. 6.1

AGENDA STATEMENT BOARD OF DIRECTORS MEETING MEETING DATE: March 6, 2020

TO: Board of Directors

East Bay Regional Communications System Authority (EBRCSA)

FROM: Sheriff G. Ahern, Board Chair

East Bay Regional Communications System Authority

SUBJECT: Approval of Minutes of the December 6, 2019 Board of Directors Meeting

RECOMMENDATIONS:

Approve the minutes of the December 6, 2019 Board of Directors Meeting.

SUMMARY/DISCUSSION:

The Board of Directors will consider approval of the minutes of the December 6, 2019 Board of Directors Meeting.

RECOMMENDED ACTION:

It is recommended that the Board of Directors approve the minutes of the December 6, 2019 Board of Directors Meeting.

Participating agencies include Alameda and Contra Costa Counties and the following cities and special districts: Alameda, Albany, Antioch, Berkeley, Brentwood, Clayton, Concord, Danville, Dublin, El Cerrito, Emeryville, Fremont, Hayward, Hercules, Lafayette, Livermore, Martinez, Moraga, Newark, Oakland, Oakley, Pinole, Pittsburg, Pleasant Hill, Pleasanton, Richmond, San Leandro, San Pablo, San Ramon, Union City, Walnut Creek, East Bay Regional Park District, Kensington Police Community Services District, Livermore Amador Valley Transit Authority, Moraga-Orinda Fire District, Rodeo-Hercules Fire District, San Ramon Valley Fire District, California Department of Transportation, Ohlone Community College District, Contra Costa Community College District, Dublin-San Ramon Services District and University of California, Berkeley

BOARD OF DIRECTORS MEETING

REGULAR MEETING DATE: December 6, 2019

TIME: 10:00 a.m.

PLACE: Alameda County Sheriff's Office of Emergency Services and Homeland Security

4985 Broder Blvd. Dublin, CA 94568

MINUTES

1. Closed Session: None.

2. Call to Order/Roll Call: 10:00 a.m.

Boardmembers Present: Vice Chair Casten, C. Andersen, J. Calabrigo, A. Ciaburro, J. Diaz, T. Dupuis, N. Luby, R. McBain, P. Mulligan, C. Nice, M. Roberts, L. Smith, J. Tudor, D. Twa

Staff: T. McCarthy, L. McKinney, C. Boyer

Public: Shawny Williams, Vallejo Chief of Police; Daryl Arbuthnott, Vallejo Fire Chief; Naveed Ashraf, Chief Innovation Officer, Vallejo; Anne Cardwell, Assistant City Manager, Vallejo; G. Poole, Motorola

3. Report on Closed Session: None.

4. Public Comments:

Shawny Williams, Chief of Police, City of Vallejo, provided public comment regarding the City of Vallejo, and its Police and Fire becoming users of the East Bay Regional Communications System Authority (EBRCSA) as they were in need of a new radio system. They were in the process of joining Solano County radio system but it is not yet ready.

On motion of Bm. Andersen, seconded by Bm. Calabrigo and by unanimous vote, the Board directed Director McCarthy to explore the City of Vallejo becoming users of the System.

Presentations: None.

Alameda County Office of Homeland Security and Emergency Services 4985 Broder Blvd, Dublin CA 94568 ● (925) 803-7802 ● www.ebrcsa.org

6. Approval of Minutes

6.1 Approval of Minutes from the Board Meeting of September 27, 2019

On motion of Bm. McBain, seconded by Bm. Roberts and by unanimous vote, the Board of Directors adopted the minutes of the Regular Board Meeting of September 27, 2019.

- 7. <u>Written Communications</u>: None.
- **8. Public Hearings:** None.

9. Action Items:

9.1 Adopt 2020 EBRCSA Calendar Committees and Board Meetings

On motion of Bm. Twa, seconded by Bm. McBain and by unanimous vote, the Board of Directors approved the 2020 EBRCSA Calendar for Committees and Board meetings.

9.2 Annual Election of Board Chair and Vice Chair as Required by the JPA Agreement and Bylaws

Bm. Luby nominated G. Ahern to serve another year as Chair.

Bm. Mulligan nominated M. Casten to serve another year as Vice Chair

Bm. Calabrigo stated that the Finance Committee had discussed the Chair of the Board rotation between Alameda County and Contra Costa County, for either this year or next year. The length of rotation could be discussed.

Bm. Roberts stated may be a two- to four-year rotation would be reasonable.

The Board of Directors and Authority Counsel McKinney discussed the implementation of rotation between Counties, of the Chair and Vice Chair, and if it would require an amendment to the Authority's by-laws, or could it be done by enacting a policy. By consensus, the Board directed Director McCarthy to discuss with both the Operations and Finance Committee, a policy of County rotation of the Chair and Vice Chair.

On motion of Bm. Calabrigo, seconded by M. Roberts and by unanimous vote, the Board of Directors approved the appointment of G. Ahern as Chair and M. Casten as Vice Chair, of the Authority for another year.

9.3 Request by AT&T to Lease Space on the Patterson Pass Tower

Director McCarthy stated EBRCSA currently leased land from StopWaste.Org (StopWaste) in Patterson for microwave and radio antennas, which happens to be a high wind area. The Authority had been approached by Epic Wireless to do a site survey in Patterson because AT&T wanted to lease space on the tower. The

Director stated he had concerns regarding the use of the tower and shelter by another user. StopWaste stated it was their land and the Director stated they could look at site but he would need to take it to the full Board for consideration. He expressed his concern that with additional equipment, it would not allow for any future addition of EBRCSA equipment.

The Director stated the TAC Committee and Finance Committee had not agreed with moving forward with the lease. The Operations Committee had said more discussions could be had. CSI has done some reports and in the wind, the tower could move and affect radio reception. This is a prime spot for AT&T, but this could impede growth for EBRCSA equipment.

On motion of Bm. Ciaburro, seconded by Bm. McBain and by unanimous vote, the Board of Directors agreed with direction not to move forward with discussions with AT&T's use of EBRCSA's Patterson site.

By consensus, the Board of Directors directed the Executive Director to return with a policy item regarding other entities co-locating on EBRCSA sites.

10. Committee Updates:

10.1 Receive Informational Report on Recent Finance Committee Activities

Director McCarthy stated the Finance Committee had discussed the Patterson site and the rotation of the Chair and Vice Chair of the Board.

10.2 Receive Informational Report on Recent Operations Committee Activities

Director McCarthy stated there were no outstanding items to report.

11. Reports:

11.1 Receive an Update on the Time Division Multiple Access (TDMA) Upgrade

Director McCarthy stated the upgrade was going well. All System equipment had been upgraded. They were now working on radios. The cut over date was still June 30, 2020.

11.2 Receive an Update on Public Safety Power Shutdowns

Director McCarthy stated three generators failed during the shutdowns - one in Contra Costa County, two in Alameda County. Replacements were eventually found. Thirty-two generators are used within the System. Contra Costa County was looking to purchase two additional generators for such instances.

Bm. Roberts asked if there was anything the System could do proactively, in case there were further problems with the generators.

Director McCarthy stated generators were tested monthly. Batteries were also being replaced. He would like to find grant funding to allow EBRCSA to purchase backup generators.

Bm. Calabrigo asked if there was any other assistance that the Executive Director needed.

Director McCarthy stated the Counties' Radio Shops had been extremely helpful.

11.3 Receive Information East Bay Municipal District Request to Join EBRCSA

Director McCarthy stated he had been contacted by Steve Frew, Safety Manager for East Bay Municipal Utility District (EBMUD), to discuss the possibility of becoming a user of the System. The Finance Committee discussed the cost of radios and determined there would be a cost of \$111 per radio. Once informed, Mr. Frew stated EBMUD would no longer be looking to join the System.

11.4 Receive Information on Inter Sub System Interface with BART

Director McCarthy stated there had been unknown alarms on the System in relation to the Bay Area Rapid Transit (BART) Walnut Creek location of the Inter Sub System Interface (ISSI). He has tried several times to contact BART staff regarding this issue and has not received a response. This is critical right now because the Walnut Creek station is the only way Oakland Fire, Berkeley Fire, Moraga Fire and Fremont Fire Departments can communicate when they go underground at BART stations. BART has turned a deaf ear to this as they do not know how to move forward. Motorola has a technician that can do this but BART has not responded. He will discuss with EBRCSA member Fire Department Chiefs before turning off the ISSA.

Bm. Roberts left at 10:43 a.m.

Bm. Luby stated recent incidents made this a public safety issue.

By consensus, the Board directed Director McCarthy to draft a letter to the BART General Manager, copying BART Board of Directors, regarding the ISSA at the Walnut Creek Station, providing anecdotal information, and stressing public safety concerns for law, fire, and the public.

12. Board Comments: None.

13. <u>Next Action Steps:</u>

Directed the Executive Director to return with a policy item regarding other entities colocating on EBRCSA sites; and draft letter to BART General Manager and Board of Directors.

14. Adjournment:

With no further business coming before the Board of Directors, the meeting was adjourned at 10:46 a.m.



Participating agencies include Alameda and Contra Costa Counties and the following cities and special districts: Alameda, Albany, Antioch, Berkeley, Brentwood, Clayton, Concord, Danville, Dublin, El Cerrito, Emeryville, Fremont, Hayward, Hercules, Lafayette, Livermore, Martinez, Moraga, Newark, Oakley, Pinole, Pittsburg, Pleasant Hill, Pleasanton, Richmond, San Leandro, San Pablo, San Ramon, Union City, Walnut Creek, East Bay Regional Park District, Kensington Police Community Services District, Livermore Amador Valley Transit Authority, Moraga-Orinda Fire District, Rodeo-Hercules Fire District, San Ramon Valley Fire District, California Department of Transportation, Ohlone Community College District, Contra Costa Community College District, Dublin-San Ramon Services District and University of California, Berkeley

AGENDA ITEM 9.1.

AGENDA STATEMENT BOARD OF DIRECTORS MEETING MEETING DATE: March 6, 2020

TO: Board of Directors

East Bay Regional Communications System Authority (EBRCSA)

FROM: Sheriff Greg Ahern, Board Chair

East Bay Regional Communications System Authority

SUBJECT: Adopt a Resolution Conditionally Approving the City of Vallejo's Request to

Temporarily Join East Bay Regional Communication System Authority

RECOMMENDATIONS:

Adopt a Resolution conditionally approving the request by the City of Vallejo to temporarily join East Bay Regional Communication System Authority (EBRCSA).

SUMMARY/DISCUSSION:

Shawny Williams, Police Chief City of Vallejo, and Members of the City of Vallejo Executive Team attended the December 6, 2019EBRCSA Board of Directors meeting. Chief Williams, during Public Comment, requested the EBRCSA consider a request by the City of Vallejo to join it on a temporary basis.

The City of Vallejo (Vallejo) operates its own radio system for Police and Fire utilizing its VHF radio system. Its VHF radio system has reached its end of life and is unreliable for public safety. The VHF system needs major repairs to continue to function and Vallejo instead, proposes to utilize the EBRCSA Radio system as it builds infrastructure designed to eventually connect to the Solano County Radio Master Site. The County of Solano has built an "M" Core similar to the EBRCSA "M" Core, however, the infrastructure needed to connect Vallejo is in the planning

and engineering stage right now. In addition, the County of Solano has not formulated the Joint Powers Agreement (JPA) necessary to develop its County Radio Group. On February 13, 2020, the Solano County Sheriff and Chiefs of Police voted, unanimously, to hire Mirror Consulting to develop their JPA at the Solano County Law Enforcement Agencies (SCLEA) meeting. It is estimated that it will take approximately one year for the development and implementation of the JPA.

Given that, Vallejo is requesting to join EBRCSA as it engineers and builds the necessary infrastructure to communicate with the Solano County "M" Core and become a member of the Solano County Radio Group.

Representatives from Vallejo have met with the Executive Director and discussed its needs. It has purchased radios for the Vallejo Fire Department which can be used on the EBRCSA System. It has also purchased new consoles which are compatible with EBRCSA.

On February 14, 2020, the Executive Director, the Vallejo Assistant City Manager and staff from Vallejo's Information Technology Department as well as Motorola and Day Wireless engineers and sales staff met to determine what equipment it would need to purchase in order to temporarily join EBRCSA. Vallejo proposes to purchase all equipment and radios necessary to join EBRCSA to allow it to retain the equipment when it eventually becomes a member of the Solano County Radio Group. It further proposes to pay for all installation and optimization of the equipment to connect to the EBRCSA system. A side letter concerning the purchase and installation and costs will be attached to the Operating Agreement.

However, Vallejo is seeking the Board's approval to temporarily join EBRCSA prior to purchasing the required radios for the Police Department.

Vallejo performed drive testing and EBRCSA's coverage maps show the the north part of Vallejo does not have the 95% on hip portable coverage. However, Motorola is investigating the possibility of technology which could boost the radio signal to improve radio transmissions in the northern part of Vallejo.

The length of time that Vallejo will need to be an EBRCSA member is estimated to be two years. The Solano County JPA will be developed while Vallejo determines how many sites will need to be built. A new AT&T tower is being built at the Solano County Fairgrounds located in Vallejo, with an estimated completion date of one year. Once completed, the tower could be used to provide Vallejo's connection to Solano County's "M" Core.

EBRCSA is the only viable radio system which can provide coverage to Vallejo at this time. The Executive Director has spoken with the Contra Costa County Department of IT Radio Shop and they do not anticipate any problems occurring on the EBRCSA Radio System if Vallejo is added. The County of Solano is aware of Vallejo's request to temporarily join EBRCSA and the Radio Manager was at the meeting on February 14, 2020.

FINANCIAL IMPACT;

If the Board allowed Vallejo to temporarily join EBRCSA, it will not have any fiscal impact to the EBRCSA Budget because Vallejo proposes to purchase all equipment and pay for all installation and optimization of the equipment to connect to EBRCSA. The consoles will be under warranty for the first year through Motorola. If Vallejo is authorized to join EBRCSA, its membership should also be conditioned upon obtaining a maintenance contract for any repair or maintenance to its consoles and backroom infrastructure, after warranty, and a SUA II for the period it is a member. In addition, the advisory Committees recommended that Vallejo pay a one time \$4,000.00 administrative fee, as the City of Benicia did, to cover any costs outside of the Operating and Service Payment. Vallejo proposes also to pay the \$200 per radio, \$30 per radio/per month for Operating Payment, and \$15 per radio/per month Service Payment if its membership in EBRCSA is approved.

COMMITTEE REVIEW:

The Operations and Finance Committees have reviewed Vallejo's request and made the following recommendations: 1) authorize approval for Vallejo's membership but limit it to a 2 to 4 year term, after which, it would either return to its system or become a member of Solano County's Radio Group Group; and 2) if Vallejo's use of EBCRSA's system interferes or degrades the level of coverage to EBRCSA members, then Vallejo would be required to terminate its membership and discontinue its use of the EBRCSA system within 60 days from a Board determination finding such impact.

RECOMMENDED ACTION:

It is recommended that the Board of Directors adopt a Resolution approving Vallejo's request to join EBRCSA for a period not to exceed four years or the time at which it may join the Solano County Radio Group, whichever occurs first, conditioned upon all of the following:

- 1. Vallejo purchases all equipment determined necessary by EBRCSA to join as a member and pays for all installation and optimization of the equipment to connect to its system;
- 2. Enter into a maintenance contract for any repair or maintenance to its consoles and backroom infrastructure, after warranty, and a SUA II for the period Vallejo is a member;
- 3. Vallejo pays a one time \$4,000.00 administrative fee to EBRCSA;
- 4. Vallejo also to pays the \$200 per required radio, \$30 per radio/per month for Operating Payment, and \$15 per radio/per month Service Payment; and
- 5. If Vallejo's use of the system interferes or degrades the level of coverage to EBRCSA members, then it would terminate its membership and discontinue its use of the EBRCSA system within 60 days from a Board determination finding such impact.

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RESOLUTION NO. 20-

RESOLUTION CONDITIONALLY AUTHORIZING THE CITY OF VALLEJO TO TEMPORARILY JOIN THE EAST BAY REGIONAL COMMUNICATIONS SYSTEM AUTHORITY

WHEREAS, the pursuant to Government Code Section 6500 *et seq.* and the Joint Exercise of Powers Agreement executed by its members ("JEPA"), the East Bay Regional Communications System Authority ("EBRCSA") is authorized to acquire, plan, design, finance, construct, operate and maintain a P-25 compliant communications system serving Alameda and Contra Costa counties and individual political jurisdictions therein ("System"); and

WHEREAS, Section 13 of the JEPA allows new parties to become members on any conditions prescribed by the Board of Directors including payment of special fees and charges; and

WHEREAS, the City of Vallejo ("Vallejo") has been evaluating the East Bay Regional Communications System Authority ("EBRCSA") System; and

WHEREAS, Vallejo operates its own radio system which has reached its end of life and is unreliable for its public safety needs; and

WHEREAS, although the County of Solano has built an "M" Core similar to the EBRCSA "M" Core, the infrastructure needed to connect Vallejo has not been developed yet and Solano County has not formulated the Joint Powers Agreement ("JPA") necessary to develop its County Radio Group; and

WHEREAS, it is estimated that the County of Solano infrastructure and JPA will be developed within the next four (4) years; and

WHEREAS, EBRCSA maintains only viable System which can provide coverage to Vallejo at this time and the technical evaluation of adding Vallejo to the System has not revealed any concerns; and

WHEREAS, there is an immediate need for Vallejo to temporarily join EBRCSA while the Solano County infrastructure and JPA are developed; and

WHEREAS, Vallejo has proposed entering into an Operating Agreement with EBRCSA and pay the costs associated therein as well purchase all equipment determined necessary by EBRCSA and all installation and optimization of the equipment to connect to its System; and

WHEREAS, the Operations and Finance Committees recommended additional conditions be imposed on Vallejo's temporary membership;

NOW, THEREFORE, BE IT RESOLVED THAT, good cause appearing therefor, as evidenced by the staff report accompanying this Resolution, the Board of Directors of the East Bay Regional Communications System Authority does hereby approve the request of the City of Vallejo to become a member of EBRCSA for a period of time not to exceed the earlier of: (1) four (4) years from the date of execution of the Operating Agreement; or (2) the time by which it may join the Solano County Radio Group, whichever occurs first, conditioned upon all of the following:

- 1. Vallejo purchases all equipment determined necessary by EBRCSA to connect to the System and covers the costs associated with installation and optimization of such equipment; and
- 2. Vallejo enters into a maintenance contract for any repair or maintenance required to be performed on its consoles and infrastructure necessary to connect to the System, after warranty, and a SUA II for and maintains such contract for the period of time it is a member; and
- 3. Vallejo remits a one time \$4,000.00 administrative fee to EBRCSA upon execution of the Operating Agreement; and
- 4. Vallejo remits \$200 per required radio, \$30 per radio/per month for Operating Payment, and \$15 per radio/per month as a Service Payment; and
- 5. If Vallejo's use of the System interferes or degrades the level of coverage to existing EBRCSA members, then it shall terminate its membership and discontinue its use of the System within 60 days from a Board determination finding such impact whether or not the Solano County Group has been formed or is can accept it as a member.

BE IT FURTHER RESOLVED THAT, the Board of Directors of the East Bay Regional Communications System Authority does hereby authorize its Chair to execute an Operating Agreement and its Executive Director to negotiate and execute a Side Letter of Agreement with the City of Vallejo which shall incorporate the terms approved by the Board relating to the City of Vallejo's conditional membership as set forth above.

On motion of xx, seconded by xx, the foregoing Resolution was passed and adopted this 6th day of March 2020, by the following votes:

AYES:	
NOES:	
ABSTENTIONS:	
ABSENT:	
	ATTEST:
	Caroline Soto, Secretary

Participating agencies include Alameda and Contra Costa Counties and the following cities and special districts: Alameda, Albany, Antioch, Berkeley, Brentwood, Clayton, Concord, Danville, Dublin, El Cerrito, Emeryville, Fremont, Hayward, Hercules, Lafayette, Livermore, Martinez, Moraga, Newark, Oakley, Pinole, Pittsburg, Pleasant Hill, Pleasanton, Richmond, San Leandro, San Pablo, San Ramon, Union City, Walnut Creek, East Bay Regional Park District, Kensington Police Community Services District, Livermore Amador Valley Transit Authority, Moraga-Orinda Fire District, Rodeo-Hercules Fire District, San Ramon Valley Fire District, California Department of Transportation, Ohlone Community College District, Contra Costa Community College District, Dublin-San Ramon Services District and University of California, Berkeley

AGENDA ITEM NO. 9.2.

AGENDA STATEMENT BOARD OF DIRECTORS MEETING DATE: March 6, 2020

TO: Board of Directors

East Bay Regional Communications System Authority (EBRCSA)

FROM: Sheriff Greg Ahern, Board Chair

East Bay Regional Communications System Authority

SUBJECT: Adopt Resolutions Approving a Contract with CSI Telecommunications, Inc. to

Develop a 10-Year Plan Regarding EBCRSA's System and an Adjustment to the

FY 2019/2020 Budget to Allocate the Cost for the Same

RECOMMENDATIONS:

Adopt:

- 1. A Resolution approving a contract with CSI Telecommunications, Inc. (CSI) to develop a 10-Year Plan which shall evaluate the site conditions, equipment, and infrastructure of the EBRCSA system and identify expectations over the next ten years regarding projected lifespan and vendor support; and
- 2. A Resolution adopting and implementing an adjustment to the administrative budget for the Fiscal Year 2019/2020 to allocate the cost for CSI to develop the 10 Year Plan.

SUMMARY/DISCUSSION:

CSI is a team of engineers who are subject matter experts in radio communication, microwave systems, and radio interference. CSI has assisted EBRCSA in securing Radio Frequencies from the Federal Communication Commission (FCC) for several years. CSI has also provided subject matter expertise in the transition to TDMA and other changes to the EBRCSA System.

CSI proposed scope of work includes inspections of EBRCSA's Master Site and 32 simulcast sites to evaluate the conditions and infrastructure that support the Motorola equipment. The

Alameda County Office of Homeland Security and Emergency Services 4985 Broder Blvd, Dublin CA 94568 ● (925) 803-7802 ● www.ebrcsa.org

inspections will evaluate the emergency power, towers, cables, equipment, and shelters including the size/capacity of the shelter. CSI will review the findings of the inspections with current inventory records as well as the Motorola Service Update Agreement (SUA) to determine which equipment needs to be addressed over the next ten years based on projected lifespan and vendor support. CSI will provide EBRCSA a report of projected action items and their associated estimated costs.

The attached proposal (Attachment "A") provided by CSI provides additional information as to the scope of work proposed.

CSI has estimated the cost to develop the 10-year Plan to be \$133,740.00, including expenses.

FISCAL IMPACT:

The Finance and Operations Committees, at their February 21, 2020 meeting, recommended the Board of Directors enter into contract with CSI Telecommunications, Inc. (CSI) to develop a 10-Year Plan. CSI shall evaluate the site conditions, equipment, and infrastructure of the EBRCSA system and identify expectations over the next ten years regarding projected lifespan and vendor support. The approved EBRCSA Expenditure Detail for FY 2019/2020 does not include the work to be performed in developing the 10-Year Plan. A proposed Resolution adopting and implementing an adjustment to the administrative budge for the FY 2019/2020 EBRCSA Budget is attached as Attachment C. The cost of the CSI contract will be covered by operating revenue and will not require an increase in the user fees for EBRCSA members.

RECOMMENDED ACTION:

It is recommended that the Board of Directors of the EBRCSA adopt a Resolution approving an agreement with CSI to develop a 10-Year Plan, not to exceed \$133,740.00, and authorize the Chair to execute the contract and authorize the Executive Director to take such further action as may be necessary to implement the agreement. It is further recommended that that the Board of Directors adopt the proposed Resolution in Attachment C adopting and implementing an adjustment to the administrative budget for the Fiscal Year 2019/2020 based upon CSI's proposal to develop the 10-Year Plan.

Attachments:

Attachment "A" CSI Proposal to Develop 10-Year Plan

Attachment "B" Resolution Approving CSI Contract for 10-Year Plan

Attachment "C" Resolution Adopting and Implementing Adjustment to FY 2019/2020

Administrative Budget

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EBRCSA 10 Year Plan Scope of Work

CSI Responsibilities

- 1. Visit the Master Site and 32 simulcast sites of EBRCSA, evaluating site conditions and the infrastructure (power systems, tower, cables, etc.) which support the Motorola equipment.
 - Emergency power capacity (commercial service, generator sizing, DC power supply capacity, battery backup time, battery age)
 - Recommendations of tower analysis as needed
 - Shelter capacity for growth
 - Equipment associated with the P25 system not covered under the SUA (for example Trak frequency standards)
- 2. Review the findings of the site visits with current inventory records as well as the Motorola SUA to determine which equipment needs to be addressed over the next ten years based on projected life-span and vendor support.
- 3. Provide to EBRCSA a report of:
 - a. Projected action items and their associated estimated costs.
 - b. Site reports including a high-level description, summary of assets, and a tabular inventory of assets at the site including quantity, estimated year to replace, condition, etc. A report on one site will be performed; once the content and format are agreed upon by EBRCSA and CSI, the other sites will then be documented.

EBRCSA Responsibilities:

- 1. Provide escort to sites as needed.
- 2. Provide existing documentation.

Assumptions/Constraints

- Asset inventory to be based on "box level" detail, i.e. items with assets tags and not component parts
- Motorola items covered under the SUA will be noted and summarized in inventory as a single line item per site
- Microwave radio equipment will be noted and summarized in inventory as single line item per site assuming this will be addressed either by Motorola under an SUA or Aviat as an MUA.
- Tower Structural Analysis cost estimate based on the ready availability of previous tower engineering documentation.
- Eight tower structural analyses are included in our estimate based on general knowledge of
 most of the Contra Costa sites and may change based on the site visits. This analysis is for
 budgeting only with the understanding that loading may change over time due to other
 uses/users of the towers which may require an updated Tower Structural Analysis.

Estimated Costs

Task	Description	Hours	Labor	Expenses	Total
1	Site evaluations	194	\$41,710	\$696	\$42,406
1a	Tower Structural Analysis (based on 8 towers requiring analysis)	188	\$40,420	\$0	\$40,420
2	Compile and analyze evaluations, inventory records, etc.	120	\$25,800	\$0	\$25,800
3	Create and present report, include costs estimates for each year		\$24,940	\$174	\$25,114
	Total	618	\$132,870	\$870	\$133,740

RESOLUTION NO. 20-

AUTHORIZING THE EBRCSA CHAIR TO EXECUTE, AND THE EXECUTIVE DIRECTOR TO IMPLEMENT, AN AGREEMENT WITH CSI TECHNOLOGY, INC. TO DEVELOP A TEN YEAR PLAN REGARDING THE EBRCSA SYSTEM

WHEREAS, the East Bay Regional Communications System Authority ("EBRCSA") P-25 compliant communications system serving Alameda and Contra Costa counties and individual political jurisdictions therein (the "System"); and

WHEREAS, EBRCSA has been contracting with with CSI Telecommunications, Inc. ("CSI") for several years for work related to the Time Division Multiple Access and future Microwave upgrades to the System; and

WHEREAS, EBRCSA has an increased need for CSI's services to develop a 10-Year Plan which shall evaluate the site conditions, equipment, and infrastructure of the System and identify expectations over the next ten years regarding projected lifespan and vendor support; and

WHEREAS, CSI has submitted a proposal to develop the 10-Year Plan for a not-to-exceed price of \$133,740.00; and

WHEREAS, funds are available for the agreement and will be identified as to specific source; and

WHEREAS, the Finance Committee reviewed and recommended entering into the agreement.

NOW, THEREFORE, BE IT RESOLVED THAT, good cause appearing therefor, the Chair of the East Bay Regional Communications System Authority is authorized to execute, and the Executive Director is authorized to take such other and further action as necessary to implement, an agreement with CSI Telecommunications, Inc., in form approved by EBRCSA General Counsel, and in an amount not to exceed \$133,740.00.

On motion of xx, seconded by xx, the foregoing Resolution was passed and adopted this 6^{th} day of March, 2020, by the following votes:

AYES:

NOES:	
ABSTENTIONS:	
ABSENT:	ATTEST:Caroline Soto, Secretary

3489066.1

RESOLUTION NO. 20-XX

RESOLUTION ADOPTING AND IMPLEMENTING AN ADJUSTMENT TO ADMINISTRATIVE BUDGET FOR FISCAL YEAR 2019/2020

WHEREAS, on May 10, 2019, the East Bay Communications System Authority ("EBRCSA") Board of Directors adopted the Fiscal Year 2019/2020 Administrative Budget for the EBRCSA; and

WHEREAS, the EBRCSA Finance Committee and Operations Committee have identified additional items requiring the establishment of a change in line item for the increase in cost for services performed by the CSI Telecommunications, Inc. ("CSI") to be performed on the EBRCSA system in the accompanying Agenda Statement incorporated herein by reference, and have recommended that the EBRCSA Board of Directors so adjust the Fiscal Year 2019/2020 Administrative Budget; and

WHEREAS, the EBRCSA Board of Directors Finance Committee has identified an increase to the FY 2019/2020 budget; and

WHEREAS, the EBRCSA Board of Directors has reviewed and considered the proposed budget adjustment, has reviewed EBRCSA's current revenues and expenses, has heard all comment thereon, and finds good cause therefor.

NOW, THEREFORE, BE IT RESOLVED THAT the Board of Directors of the East Bay Regional Communications System Authority does hereby adopt a budget adjustment to the Fiscal Year 2019/2020 Administrative Budget for the EBRCSA by increasing the line item for CSI Telecommunications, Inc. to develop a 10 Year Plan regarding the EBRCSA system, and authorizes the Executive Director to implement such change to the Fiscal Year 2019/2020 Administrative Budget.

On motion of xx, seconded by xx, the foregoing Resolution was passed and adopted this 6th day of March 2020, by the following votes:

AYES:		
NOES:		
ABSTENTIONS:		
ABSENT:		

ATTEST:
Caroline Soto, Secretary
2480046.1



East Bay Regional Communications System Authority



Participating agencies include Alameda and Contra Costa Counties and the following cities and special districts: Alameda, Albany, Antioch, Berkeley, Brentwood, Clayton, Concord, Danville, Dublin, El Cerrito, Emeryville, Fremont, Hayward, Hercules, Lafayette, Livermore, Martinez, Moraga, Newark, Oakley, Pinole, Pittsburg, Pleasant Hill, Pleasanton, Richmond, San Leandro, San Pablo, San Ramon, Union City, Walnut Creek, East Bay Regional Park District, Kensington Police Community Services District, Livermore Amador Valley Transit Authority, Moraga-Orinda Fire District, Rodeo-Hercules Fire District, San Ramon Valley Fire District, California Department of Transportation, Ohlone Community College District, Contra Costa Community College District, Dublin-San Ramon Services District and University of California, Berkeley

AGENDA ITEM 9.2D.

STAFF REPORT BOARD OF DIRECTORS MEETING MARCH 6, 2020

SUMMARY:

Adjust the fiscal year 2019-20 budget for the following:

- 1. Enter into an agreement with CSI Telecommunications, Inc. to provide a ten-year capital asset plan
- 2. Purchase dispatch consoles for the Alameda County and Contra Costa County radio shops
- 3. Expense for three-year maintenance for generators
- 4. Expense for small and non-recurring maintenance items

Below is a summary of the proposed budget adjustments for FY2019-20:

REVENUES

Operating payments	\$ 146,000
Grants	167,000
Total	\$ 313,000

EXPENSES

Administration	\$ 134,000
Maintenance	27,000
Capital	152,000
Total	\$ 313,000

RECOMMENDED ACTION:

Staff recommends that the Board approve the budget adjustment for fiscal year 2019-20.







Participating agencies include Alameda and Contra Costa Counties and the following cities and special districts: Alameda, Albany, Antioch, Berkeley, Brentwood, Clayton, Concord, Danville, Dublin, El Cerrito, Emeryville, Fremont, Hayward, Hercules, Lafayette, Livermore, Martinez, Moraga, Newark, Oakley, Pinole, Pittsburg, Pleasant Hill, Pleasanton, Richmond, San Leandro, San Pablo, San Ramon, Union City, Walnut Creek, East Bay Regional Park District, Kensington Police Community Services District, Livermore Amador Valley Transit Authority, Moraga-Orinda Fire District, Rodeo-Hercules Fire District, San Ramon Valley Fire District, Ohlone Community College District, Contra Costa Community College District, Dublin-San Ramon Services District and University of California, Berkeley

AMENDED BUDGET FISCAL YEAR 2019-20

Revenues

Total revenues	 7,837,000
Interest	 80,000
Grants	167,000
Service payments	1,190,000
Operating payments	\$ 6,400,000

Expenses

Expenses	
Administration	414,000
Audit fees	20,000
Insurance	30,000
Lease	70,000
Legal	20,000
Licenses and permits	30,000
Membership fees	10,000
Maintenance	3,584,000
Security	11,000
Utilities	160,000
Website hosting	4,000
Total operating expenses	4,353,000
Capital	2,067,000
Debt service	650,000
Total expenses	7,070,000
Net Income	\$ 767,000

EAST BAY REGIONAL COMMUNICATIONS SYSTEM EXPENDITURE DETAIL FISCAL YEAR 2019-2020

OPERATING EXPENSES		FY19-20 pproved	FY19-20 Amendment #2		FY19-20 Amended		
Administration		ррготса	Amen	differit #2		Amenaea	
Executive director	\$	225,000	\$	_	\$	225,000	
Administrative assistant	Ψ	40,000	Ψ	_	Ψ	40,000	
Planning		-		134,000		134,000	
Travel		5,000		-		5,000	
Miscellaneous		10,000		_		10,000	
Audit fees		20,000		_		20,000	
Insurance		30,000		_		30,000	
Legal		20,000		-		20,000	
Lease		70,000		-		70,000	
Licenses and permits		30,000		-		30,000	
Membership fees		10,000		-		10,000	
Maintenance		•				ŕ	
Service agreement		1,065,000		-		1,065,000	
Software maintenance (SUA II)		962,000		-		962,000	
Network administration		260,000		-		260,000	
HVAC maintenance		20,000		-		20,000	
Generator maintenance		40,000		17,000		57,000	
ALCO general maintenance		600,000		-		600,000	
COCO general maintenance		230,000		-		230,000	
CSI telecommunications		200,000		-		200,000	
Microwave maintenance		180,000				180,000	
Miscellaneous		-		10,000		10,000	
Security		11,000		-		11,000	
Utilities		160,000		-		160,000	
Website hosting		4,000				4,000	
Total expenses		4,192,000		161,000		4,353,000	
CAPITAL EXPENDITURES							
TDMA Upgrade		1,665,000		_		1,665,000	
DC Power Upgrade		250,000		_		250,000	
Dispatch Consoles		-		152,000		152,000	
Total expenditures		1,915,000	-	152,000		2,067,000	
•							
DEBT SERVICE		454.000				454.000	
Principal 		454,000		-		454,000	
Interest	_	196,000	<u> </u>		<u> </u>	196,000	
Total expenses	\$	650,000	\$		\$	650,000	

^{1.} Motorola service agreement increased due to a new 4 year contract

^{2.} Network administration contract increased

^{3.} TDMA Upgrade Expense is the annual payment for the Change Order approved by the Board of Directors

^{4.} DC Power Updgrade Expense is an annual amount to replace the batteries in various locations

PROJECTED CASH RESERVE BALANCES FISCAL YEAR 2019-2020

	FY18-19 FY18-19		FY19-20		
Operating Reserve	F	inal Budget		Projected	Budget
Beginning Balance	\$	1,763,500	\$	1,763,500	\$ 1,943,000
Operating Payments		5,900,000		6,019,000	6,400,000
Initial Payments		-		46,000	-
Interest		50,000		80,000	80,000
Operating Expenses		(4,038,000)		(3,886,000)	(4,353,000)
Transfer to Capital Reserve		(1,656,500)		(2,079,500)	(1,893,500)
Ending Balance		2,019,000		1,943,000	2,176,500
Debt Service Reserve					
Beginning Balance		1,000,000		1,000,000	1,000,000
Service Payments		1,300,000		1,223,000	1,190,000
Debt Service		(650,000)		(650,000)	(650,000)
Transfer to Capital Reserve	(650,000) (573,00		(573,000)	(540,000)	
Ending Balance	1,000,000 1,000,000		1,000,000	1,000,000	
Capital Reserve					
Beginning Balance		7,909,925		7,909,925	8,647,425
Grants		-		-	167,000
Transfer In		2,306,500		2,652,500	2,433,500
Capital		(1,915,000)		(1,915,000)	(2,067,000)
Ending Balance	8,301,425 8,647,425		9,180,925		
Total Reserve Balance	\$	11,320,425	\$	11,590,425	\$ 12,357,425

- 1. Operating Reserve Balance is equal to 50% of the next fiscal years Operating Budget
- 2. Debt Reserve Balance is set to equal \$1,000,000 every fiscal year
- 3. Capital Reserve Balance is the projected remaining cash after the Operating and Debt Reserve requirments have been met

EAST BAY REGIONAL COMMUNICATIONS SYSTEM AUTHORITY 10 YEAR CASH FLOW PROJECTION

	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26	FY 2026-27	FY 2027-28	FY 2028-29
Operating Reserve	Projected	Budget	Forecast								
Balance - beginning	1,763,500	1,943,000	2,176,500	2,220,665	2,273,185	2,336,600	2,397,288	2,469,207	2,551,783	2,618,886	2,697,452
Operating payments	6,019,000	6,400,000	6,447,400	6,447,400	6,447,400	6,447,400	6,447,400	6,447,400	6,447,400	6,447,400	6,447,400
Initial payments	46,000	-	-	-	-	-	-	-	-	-	-
Interest	80,000	80,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000
Administration	(232,000)	(414,000)	(426,420)	(439,213)	(452,389)	(465,961)	(479,939)	(494,338)	(509,168)	(524,443)	(540,176)
Audit fees	(13,000)	(20,000)	(20,600)	(21,218)	(21,855)	(22,510)	(23,185)	(23,881)	(24,597)	(25,335)	(26,095)
Insurance	(24,000)	(30,000)	(30,900)	(31,827)	(32,782)	(33,765)	(34,778)	(35,822)	(36,896)	(38,003)	(39,143)
Legal	(5,000)	(20,000)	(20,600)	(21,218)	(21,855)	(22,510)	(23,185)	(23,881)	(24,597)	(25,335)	(26,095)
Lease	(64,000)	(70,000)	(72,100)	(74,263)	(76,491)	(78,786)	(81,149)	(83,584)	(86,091)	(88,674)	(91,334)
Licenses and permits	(6,000)	(30,000)	(30,900)	(31,827)	(32,782)	(33,765)	(34,778)	(35,822)	(36,896)	(38,003)	(39,143)
Membership fees	(9,000)	(10,000)	(10,300)	(10,609)	(10,927)	(11,255)	(11,593)	(11,941)	(12,299)	(12,668)	(13,048)
Maintenance											
Customer svc. agmt.	(967,000)	(1,065,000)	(1,078,000)	(1,088,000)	(1,099,000)	(1,131,970)	(1,165,929)	(1,200,907)	(1,236,934)	(1,274,042)	(1,312,263)
SUA II	(939,000)	(962,000)	(990,860)	(1,020,586)	(1,051,203)	(1,082,739)	(1,115,222)	(1,148,678)	(1,183,139)	(1,218,633)	(1,255,192)
System management	(250,000)	(260,000)	(262,000)	(264,000)	(267,000)	(275,010)	(283,260)	(291,758)	(300,511)	(309,526)	(318,812)
HVAC	(25,000)	(20,000)	(20,600)	(21,218)	(21,855)	(22,510)	(23,185)	(23,881)	(24,597)	(25,335)	(26,095)
Generators	(57,000)	(57,000)	(41,200)	(42,436)	(60,709)	(43,709)	(45,020)	(63,371)	(46,371)	(47,762)	(66,195)
ALCO maintenance	(600,000)	(600,000)	(618,000)	(636,540)	(655,636)	(675,305)	(695,564)	(716,431)	(737,924)	(760,062)	(782,864)
COCO maintenance	(150,000)	(230,000)	(236,900)	(244,007)	(251,327)	(258,867)	(266,633)	(274,632)	(282,871)	(291,357)	(300,098)
CSI telecommunications	(200,000)	(200,000)	(206,000)	(212,180)	(218,545)	(225,102)	(231,855)	(238,810)	(245,975)	(253,354)	(260,955)
Microwave maintenance	(180,000)	(180,000)	(185,400)	(190,962)	(196,691)	(202,592)	(208,669)	(214,929)	(221,377)	(228,019)	(234,859)
Miscellaneous maintenance	-	(10,000)	(10,300)	(10,609)	(10,927)	(11,255)	(11,593)	(11,941)	(12,299)	(12,668)	(13,048)
Security	(11,000)	(11,000)	(11,330)	(11,670)	(12,020)	(12,381)	(12,752)	(13,135)	(13,529)	(13,934)	(14,353)
Utilities	(150,000)	(160,000)	(164,800)	(169,744)	(174,836)	(180,081)	(185,484)	(191,048)	(196,780)	(202,683)	(208,764)
Web site hosting	(4,000)	(4,000)	(4,120)	(4,244)	(4,371)	(4,502)	(4,637)	(4,776)	(4,919)	(5,067)	(5,219)
Transfer to Capital Reserve	(2,079,500)	(1,893,500)	(1,981,905)	(1,868,510)	(1,730,783)	(1,612,137)	(1,457,068)	(1,281,258)	(1,162,526)	(993,929)	(804,225)
Balance - ending	1,943,000	2,176,500	2,220,665	2,273,185	2,336,600	2,397,288	2,469,207	2,551,783	2,618,886	2,697,452	2,786,876
		-	<u>.</u>		<u> </u>		<u> </u>			-	
Debt Service Reserve											
Balance - beginning	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	-	-
Service payment	1,223,000	1,190,000	1,222,248	1,222,248	1,222,248	1,222,248	1,222,248	1,222,248	1,222,248	-	-
Principal	(454,000)	(473,000)	(492,000)	(512,000)	(532,000)	(553,000)	(576,000)	(600,000)	(623,000)	-	-
Bond interest	(196,000)	(177,000)	(158,000)	(138,000)	(118,000)	(97,000)	(74,000)	(50,000)	(27,000)	-	-
Transfer to Capital Reserve	(573,000)	(540,000)	(572,248)	(572,248)	(572,248)	(572,248)	(572,248)	(572,248)	(1,572,248)	-	-
Balance - ending	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	-	-	-
Control December											
Capital Reserve	7,000,025	0.647.425	0.400.025	0.020.070	10 245 026	10 722 000	12 660 252	14 447 560	16 051 075	10 525 040	10 270 770
Balance - beginning	7,909,925	8,647,425	9,180,925	9,820,078	10,345,836	10,733,868	12,668,252	14,447,569	16,051,075	18,535,849	19,279,778
Grants	2 (52 500	167,000	2 554 453	2 440 750	2 202 024	2 404 225	2 020 246	1 052 500	2 724 774	- 002.020	- 004 225
Transfer In	2,652,500	2,433,500	2,554,153	2,440,758	2,303,031	2,184,385	2,029,316	1,853,506	2,734,774	993,929	804,225
Capital	(1,915,000)	(2,067,000)	(1,915,000)	(1,915,000)	(1,915,000)	(250,000)	(250,000)	(250,000)	(250,000)	(250,000)	(250,000)
Balance - ending	8,647,425	9,180,925	9,820,078	10,345,836	10,733,868	12,668,252	14,447,569	16,051,075	18,535,849	19,279,778	19,834,003
TOTAL RESERVE BALANCE	11,590,425	12,357,425	13,040,743	13,619,021	14,070,468	16,065,540	17,916,775	19,602,858	21,154,735	21,977,230	22,620,879



Participating agencies include Alameda and Contra Costa Counties and the following cities and special districts: Alameda, Albany, Antioch, Berkeley, Brentwood, Clayton, Concord, Danville, Dublin, El Cerrito, Emeryville, Fremont, Hayward, Hercules, Lafayette, Livermore, Martinez, Moraga, Newark, Oakley, Pinole, Pittsburg, Pleasant Hill, Pleasanton, Richmond, San Leandro, San Pablo, San Ramon, Union City, Walnut Creek, East Bay Regional Park District, Kensington Police Community Services District, Livermore Amador Valley Transit Authority, Moraga-Orinda Fire District, Rodeo-Hercules Fire District, San Ramon Valley Fire District, California Department of Transportation, Ohlone Community College District, Contra Costa Community College District, Dublin-San Ramon Services District and University of California, Berkeley

AGENDA ITEM NO. 9.3.

AGENDA STATEMENT BOARD OF DIRECTORS MEETING MEETING DATE: March 6, 2020

TO: Board of Directors

East Bay Regional Communications System Authority (EBRCSA)

FROM: Sheriff G. Ahern, Board Chair

East Bay Regional Communications System Authority

SUBJECT: Approve the Finance Committee Recommendation Concerning Walton Lane

Simulcast Site Add On

RECOMMENDATIONS:

Approve the Finance Committee recommendation to authorize the Executive Director to negotiate a cost sharing plan for the Walton Lane site in Antioch with the City of Antioch as follows:

- 1. EBRCSA funds the cost of the necessary equipment and installation for the Simulcast Cell at Walton Lane at \$1,065,845.00.
- 2. EBRCSA obtain the required FCC licensing and cover the cost of maintaining the Licenses.
- 3. The City of Antioch obtain any necessary permits relating to construction of the Simulcast Cell.
- 4. The City of Antioch negotiates a lease for the tower space.
- 5. The City of Antioch funds the costs to connect the Simulcast Cell to PG&E and ongoing cost of PG&E service.
- 6. The City of Antioch provides the land and shelter or cabinets for the necessary equipment required for the Simulcast Cell.

SUMMARY/DISCUSSION:

The Board of Directors, at its the March 1, 2019 meeting, directed the Executive Director to develop a plan to fill the radio gaps in the area of Walton Lane and James Donlon Blvd., in the City of Antioch. The Executive Director worked with CSI, Motorola, and the Contra Costa County Radio Shop to identify potential sites where the equipment and antenna could be built or added so that the area would have radio coverage. CSI was tasked with identifying four different sites with the priority to utilize existing sites rather than build a new site. CSI found that Twitchell Island in Sacramento County had a tower with adequate space on the tower and in the shelter. The Executive Director contacted the Radio Shop Manager for Sacramento County who was willing to allow EBRCSA to add the equipment to the Tower in August of 2019. The site was built by the Department of Water Ways and EBRCSA began analyzing the potential to utilize the tower. Several potential scenarios were run, and it was found that the site was not suitable for a Simulcast Network as it caused interference in the Cities of Oakley and Brentwood.

CSI performed various tests in hope of developing an option to the Simulcast Network and was unable to find a solution, so CSI began to review the other potential sites. While reviewing Walton Lane, CSI and the Technicians from Contra Costa County returned to the site and found that one of the shelters that was abandoned had been removed. Despite that, CSI confirmed that Walton Lane is still considered the best option.

Although the Walton Lane site has optimal coverage, a tower in place, and PG&E infrastructure, it does not have enough space or power supply at the current Antioch Shelter. It is possible the site where the shelter was removed may be used to reconnect the electricity, but it must be examined to determine the cost of connection to PG&E. It is recommended that this survey be performed by the City of Antioch.

In contrast, if a new site was to be built, the cost would be considerably higher due to acquisition of land, installation of a tower, and installation of PG&E service. Motorola has estimated the cost for the Simulcast Site, which includes a four-bay outdoor equipment cabinet, to be \$1,065,845.00. If the Board approves the recommendation and an agreement is reached with Antioch, CSI can assist with the application of any necessary FCC licenses and permits.

COMMITTEE RECOMMENDATIONS:

The Operations Committee and Finance Committee both discussed Walton Lane. The consensus was that the area needs coverage to allow Public Safety to communicate in the area of James Donlon Blvd., Antioch. The Finance Committee recommended that the Board authorize the Executive Director to negotiate a cost sharing plan for the Walton Lane site in Antioch with the City of Antioch as follows:

- 1. EBRCSA funds the cost of the necessary equipment and installation for the Simulcast Cell at Walton Lane at \$1,065,845.00.
- 2. EBRCSA obtain the required FCC licensing and cover the cost of maintaining the Licenses.
- 3. The City of Antioch obtain any necessary permits relating to construction of the Simulcast Cell.
- 4. The City of Antioch negotiates a lease for the tower space.

- 5. The City of Antioch funds the costs to connect the Simulcast Cell to PG&E and ongoing cost of PG&E service.
- 6. The City of Antioch provides the land and shelter or cabinets for the necessary equipment required for the Simulcast Cell.

Staff requests the Board approve the Finance Committee recommendation and to allow the Executive Direction to facilitate an agreement with the City of Antioch. The site at Walton Lane will also improve radio communications for Contra Costa Fire, AMR Ambulance, and the Contra Costa County Sheriff.

FISCAL IMPACT:

The Finance Committee recommended the Executive Director negotiate a cost sharing plan with Antioch, as set forth above. If the Board approves the recommendation, the Executive Director will then seek the Committees and the Board of Directors approval for any expenditures associated with a negotiated cost sharing plan with Antioch in the future.

RECOMMENDED ACTION:

Approve the Finance Committee recommendation to authorize the Executive Director to negotiate a cost sharing plan for the Walton Lane site in Antioch with the City of Antioch as follows:

Attachments:

"A" – Motorola Walton Lane Simulcast Site Add-On November 1, 2019 3489102.1

Participating agencies include Alameda and Contra Costa Counties and the following cities and special districts: Alameda, Albany, Antioch, Berkeley, Brentwood, Clayton, Concord, Danville, Dublin, El Cerrito, Emeryville, Fremont, Hayward, Hercules, Lafayette, Livermore, Martinez, Moraga, Newark, Oakley, Pinole, Pittsburg, Pleasant Hill, Pleasanton, Richmond, San Leandro, San Pablo, San Ramon, Union City, Walnut Creek, East Bay Regional Park District, Kensington Police Community Services District, Livermore Amador Valley Transit Authority, Moraga-Orinda Fire District, Rodeo-Hercules Fire District, San Ramon Valley Fire District, California Department of Transportation, Ohlone Community College District, Contra Costa Community College District, Dublin-San Ramon Services District and University of California, Berkeley

AGENDA ITEM 9.4.

AGENDA STATEMENT BOARD OF DIRECTORS MEETING MEETING DATE: March 6, 2020

TO: Board of Directors

East Bay Regional Communications System Authority (EBRCSA)

FROM: Sheriff Greg Ahern, Board Chair

East Bay Regional Communications System Authority

SUBJECT: Adopt Resolutions Authorizing the Purchase of Dispatch Consoles for Alameda

County and Contra Costa County Radio Shops and an Adjustment to the FY

2019/2020 Budget to Allocate the Cost for the Same

RECOMMENDATIONS:

Adopt:

- 1. A Resolution Authorizing Purchase of Dispatch Consoles for Alameda and Contra Costa County Radio Shops utilizing Bay Area Urban Areas Security Initiative (UASI) 2018 Grant funds: and
- 2. A Resolution adopting and implementing an adjustment to the administrative budget for the Fiscal Year 2019/2020 to allocate the cost for purchase of the dispatch consoles

SUMMARY/DISCUSSION:

The Alameda and Contra Costa County Radio Shops are responsible for updating, maintaining, and repairing the EBRCSA operating system. In order to make system changes, provide system updates, and maintain the system, it requires a technician to go to a dispatch center and ask to use one of the dispatch consoles for an undetermined amount of time depending on what is being done. The only way for the technician to access the system is via a dispatch console connected to the network.

Alameda and Contra Costa Counties requested that a dispatch console be purchased for each Radio Shop to avoid this impact. EBRCSA was awarded \$167,000.00 in grant funds from UASI to pay for the purchase of the Dispatch Consoles and Motorola estimates the cost for the two consoles to be \$142,778.00. In addition, the cost of the SUA II through year 2023 is \$8,574.00. Thus, the total cost of the consoles and the SUA II will be \$151,352.00. EBRCSA can cover this cost with operating funds and then submit a request for reimbursement through the UASI 2018 Grant.

FINANCIAL IMPACT;

The purchase of the consoles will be paid from EBRCSA Operating Funds and the account will be reimbursed after reimbursement from the UASI Grant funds. A proposed Resolution approving the budget adjustment is attached as Exhibit B. The purchase of the consoles will not require an increase in user fees for EBRCSA members.

COMMITTEE REVIEW:

The Operations and Finance Committees have reviewed the staff's recommendation action and have concurred.

RECOMMENDED ACTION:

It is recommended that the Board of Directors of the EBRCSA adopt a Resolution approving the purchase of a Dispatch Console for each of the Alameda and Contra Costa Counties Radio Shops as set forth in Attachment A and a Resolution adopting and implementing an adjustment to the administrative budget for the Fiscal Year 2019/2020 to allocate the cost for purchase of the dispatch consoles as set forth in Attachment B . The consoles will be paid for utilizing 2018 UASI Grant Funding.

Attachment "A" Resolution Approving Purchase of Dispatch Consoles and Submission of a

Request for Reimbursement to UASI

Attachment "B" Resolution Adopting and Implementing Adjustment to FY 2019/2020

Administrative Budget

Attachment "C" Radio Shops Dispatch Console Ad-On

3489137.1



EAST BAY REGIONAL COMMUNICATIONS SYSTEM AUTHORITY

RADIO SHOPS DISPATCH CONSOLE ADD-ON

JANUARY 30, 2020

The design, technical, pricing, and other information ("Information") furnished with this submission is proprietary and/or trade secret information of Motorola Solutions, Inc. ("Motorola Solutions") and is submitted with the restriction that it is to be used for evaluation purposes only. To the fullest extent allowed by applicable law, the Information is not to be disclosed publicly or in any manner to anyone other than those required to evaluate the Information without the express written permission of Motorola Solutions.

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Motorola Solutions 10680 Treena Street, Suite #200 San Diego, CA. 92131 USA

January 30, 2020

Mr. Tom McCarthy
Executive Director
East Bay Regional Communications System Authority
4985 Broder Blvd.
Dublin, CA 94568

Subject: Radio Shops Dispatch Console Add-on

Dear Director McCarthy:

Motorola Solutions, Inc. ("Motorola") is pleased to provide the East Bay Regional Communications System Authority ("EBRCSA") the following Proposal for two additional MCC7500 console positions. The project will add one console position each to the existing consoles sites at Alameda County ITD radio shop in San Leandro and Contra Costa County DoIT radio shop in Martinez.

This Proposal is a firm offer, subject to the terms and conditions of the existing Communications System Agreement (CSA) between EBRCSA and Motorola, dated July 07, 2009, extended on July 6, 2012, and extended again on July 6, 2017 through July 6, 2020. Under Section 3.4 of the existing contract, EBRCSA may purchase additional goods and services from the CSA. Motorola's proposal is based on the assumption that EBRCSA will use this right under Section 3.4 of the CSA for the proposed transaction. Therefore, as in the past, EBRCSA may accept the proposal by executing a Change Order to the current CSA.

Any questions EBRCSA has regarding this proposal can be directed to Gordon Poole, Senior Account Manager at (408) 306-5622, (gordon.poole@motorolasolutions.com).

We thank you for the continued privilage of furnishing EBRCSA with "best in class" solutions that help protect your first responders and assist their efforts saving lives and property.

Sincerely,

Motorola Solutions, Inc.

Michael De Benedetti Area Sales Manager

East Bay Regional Communications System Authority Radio Shops Dispatch Console Add-on

January 30, 2020 Use or disclosure of this proposal is subject to the restrictions on the cover page.



SECTION 1

SYSTEM OVERVIEW

1.1 MCC 7500 DISPATCH CONSOLE POSITION ADD-ON

Motorola is pleased to present the East Bay Regional Communications System Authority (EBRCSA) with a system design for an MCC 7500 dispatch console system add-on for the Alameda Radio Shop and the Contra Costa County Radio Shop. This will aid the users in improving safety and providing effective voice communications. Requirements for the system are described herein and are delineated throughout this system description.

This MCC 7500 IP-based console design interfaces with the existing trunking and conventional resources used by EBRCSA. This design ensures that the current and future migration strategies of EBRCSA are tied into one gradual transition while upholding the operations of the office.

This proposal includes one (1) additional MCC7500 Dispatch Console Position at the Alameda County Radio Shop and the one (1) additional MCC7500 Dispatch Console Position at the Contra Costa County Radio Shop.

Both radio console systems will be connected into the East Bay Regional Communications System Authority (EBRCSA) 700/800 MHz ASTRO P25® Trunked System via the existing EBRCSA transport network.

SYSTEM DESCRIPTION

2.1 EBRCSA SYSTEM OVERVIEW

The MCC 7500 Dispatch Console is a mission critical IP command and control solution designed to ensure optimal quality audio and reliable communication. Console positions are connected directly to the EBRCSA transport network which supports communication with both trunked and conventional radios.

The MCC 7500 console delivers true wire-line capability including Console Priority to give dispatchers immediate access to a talkgroup or conventional channel.

The MCC 7500 voice processing hardware (VPM hardware) is used to perform dispatch operations. It supports end-to-end encryption.

This new MCC 7500 consists of a Dispatch Console PC, monitor, Voice Processor Module (VPM), two speakers, two headset jacks, and gooseneck microphone.

Table 2-1: MCC 7500 Configuration Summary

Dispatch Site	Alameda Co Radio Shop	CoCoCo Radio Shop
Version of OS	Windows 10	Windows 10
PC Model	HP Z2 Mini	HP Z2 Mini
Monitor	19" Non Touch	19" Non Touch
# Speaker per op	2	2
# Headset jack per op	2	2
# Gooseneck Microphone per op	1	1
# Footswitch per op	0	0
Encryption – Add Multi Key	ADP - AES	ADP - AES

2.2 MCC 7500 DISPATCH CONSOLE COMPONENT **DESCRIPTION**

The proposed MCC 7500 Dispatch IP Console consists of the following elements:

- Operator position computer
- Voice Processing Module (VPM)

This section discusses the various components that make up the proposed MCC 7500 Dispatch Console system, Figure 2-1. These components are connected together and to the rest of the ASTRO 25 system on an IP network via console site routers and switches. The MCC 7500 Dispatch Console functions as an integrated component of the total radio system, fully participating in system level features such as end-to-end encryption and agency partitioning.

Since the network is IP-based, the system's interfaces and components can be distributed physically throughout the network.

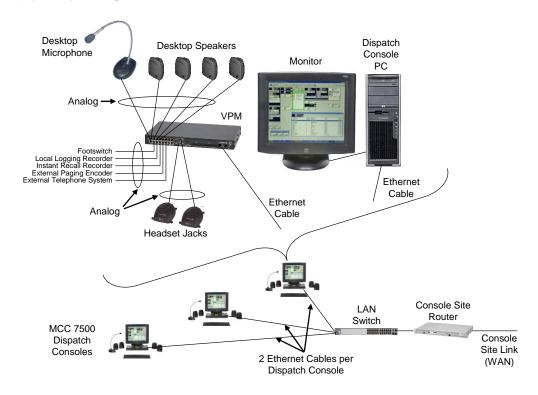


Figure 2-1: Motorola MCC 7500 Dispatch Console Hardware Architecture

2.2.1 **Operator Position Components**

MCC 7500 operator positions connect directly to the radio system's IP transport network without gateways or interface boxes. Audio processing, encryption, and switching intelligence for dispatch are performed within each software-based operator position, without additional centralized electronics.



Figure 2-2: MCC 7500 Operator Position

An MCC 7500 operator position consists of a computer, a Voice Processing Module (VPM), one select speaker, up to three unselect speakers, a desktop gooseneck microphone and/or headset jack box with in-line PTT amplifier and headset. (Figure 2-2).

Voice Processing Module (VPM)

The VPM provides vocoding and audio processing services for the dispatch console. It connects to the console site LAN switch and communicates with the dispatch console PC via Ethernet. Each operator position includes a PC and a dedicated VPM. The VPM also provides connections for analog devices to be connected to the digital console.

The VPM has connectors for the following devices:

- One desktop microphone
- Two headset jacks
- Two desktop speakers
- Logging recorder
- Radio instant recall recorder
- Telephone instant recall recorder

Desktop Speakers

Each dispatch console is capable of supporting up to eight audio speakers. In this design, 2 speakers are included per position. These speakers supply audio for select/unselect, as well as pre-determined audio sources to specific monitor speakers, each of which transmits unique audio—that is, an audio source cannot appear in multiple speakers at a single dispatch console. Monitor speakers can tie specific talkgroups to a certain speaker.

Each speaker has individual volume controls, and contains an amplifier that provides a maximum of 2 Watts of power output. Speakers are self-contained units, and can be placed on a desktop, mounted in a rack/furniture, mounted on a wall, or mounted on a computer monitor.

Headset Jack

Each dispatch console is capable of supporting up to two headset jacks. A headset jack allows a dispatch console user to use a headset while operating the dispatch console. Each headset can either be connected to the console for supervisory applications, or to a desk telephone. The equipment design proposed includes two headset jack(s) per operator.

The headset jack contains two volume controls: one for adjusting the level of received radio audio and one for adjusting the level of received telephone audio.

The headset jack supports headsets which use either PJ7 (6-wire) or PJ327 (4-wire) long frame connectors (6-wire headsets have a PTT button while 4-wire headsets do not have a PTT button).

Instant Recall Recorder Port (for Radio)

Short-term, console-specific audio recording is a mechanism used to record a portion of the inbound audio present on a specific dispatch console and make it readily available to the dispatch console user. This recorded audio is retained by the recording system for a short period (typically about 60 minutes) and is easily played back by the dispatch console user. This allows the dispatch console user to replay received audio that the user may have missed.

The instant recall recorder port (for radio) allows an instant recall recorder to be connected to a dispatch console. The port provides an output containing the receive radio audio on the selected channels. Transmit audio of any type (from either this dispatch console or a parallel dispatch console) as well as tones generated by the dispatch console (emergency tones, callback tones, busy tones) are not included in the audio output.

Dispatch console generated tones (e.g., emergency alarm tones, trunking busy tones, error tones, etc.) are not included in the audio appearing at the analog audio output. This is done so that they do not interfere with the dispatch console user's ability to understand the voice audio that was recorded.

Telephone/Headset Port

The telephone/headset port allows an external telephone set to be connected to the dispatch console. The dispatch console's headset can then be used to communicate on both the radio system and a telephone system (i.e. a 911 system).

When a telephone call occurs at a dispatch position, radio audio is directed from the headset to the appropriate console speaker. The headset microphone audio is routed to the telephone, allowing the dispatch console user to communicate hands-free on the telephone set. When the dispatch operator ends their call, the headset reverts back to full radio operation.

When the dispatch operator transmits on a radio resource during a telephone call, the headset microphone is re-routed to the radio system for the duration of the transmission. Once the transmission is completed, the headset microphone is routed back to the telephone. During the transmission, the dispatch operator continues to hear the telephone audio through the headset.

Personal Computer (PC)

The dispatch console uses an off-the-shelf shelf personal computer, running the Microsoft Windows operating system. The PCs have a minitower form factor and come with a keyboard and mouse. A variety of monitors are supported, including both touch and non-touch operation.

2.2.2 Additional MCC 7500 Console Dispatch System Features

The MCC 7500 is a feature-rich, modular platform that has been configured to maximize the utility of the system to your unique needs. The following sections provide discussion of the key MCC 7500 IP Dispatch Console features.

2.2.2.1 Integrated with the ASTRO 25 Network

The MCC 7500 IP Dispatch Console is seamlessly integrated into the ASTRO 25 Mission Critical Trunking Network. The console connects directly to the EBRCS Master Site via an IP backbone. This IP approach eliminates the need for space-consuming backroom electronics. All dispatch activity is performed over IP. The physical space needed to accommodate the MCC 7500 console position is no more than required for a personal computer.

Both trunked talk groups and conventional radio channels can be accessed and controlled from one MCC 7500 IP Dispatch Console over the same network, thus reducing overall transport costs. All conventional resources become shared resources within the ASTRO 25 network, reducing the need for duplicate fixed network equipment.

Inherent integration with the ASTRO 25 network means:

- Voice quality is optimized, eliminating the potential for audio degradation.
- Quality of service is maintained, regardless of the size of the system.
- IP network redundancy ensures call traffic delivery.
- Rapid call set up times that remain constant, regardless of the size of the system.
- Improved bandwidth efficiencies reduce transport costs.
- Flexibility in usage of the operator configuration any operator can do their job from any position in the network.
- Inherent access to all system resources within the network by eliminating equipment and coverage constraints, providing dispatch priority to reach any user when needed.

2.2.2.2 Proven Graphical User Interface

The MCC 7500's intuitive graphical user interface (GUI) optimizes user efficiency. The MCC 7500 user interface is an enhanced version of Motorola's proven radio dispatch GUI. For new users, the graphical icons and unsurpassed flexibility make the MCC 7500 console GUI easy to learn and operate.

The MCC 7500 GUI is highly configurable and customizable by agency or user to meet dynamic needs and requirements. The MCC 7500 GUI makes the most use of monitor space, maximizing the number of resources a supervisor is able to easily view and control. Features include:

- Six (6) screen configurations (folders) for added resource capacity, for shift changes, or for differing radio dispatch scenarios and/or responsibilities.
- Sixteen different radio patch configurations per MCC 7500 IP Dispatch Console.
- Call history log for up to 1000 calls.

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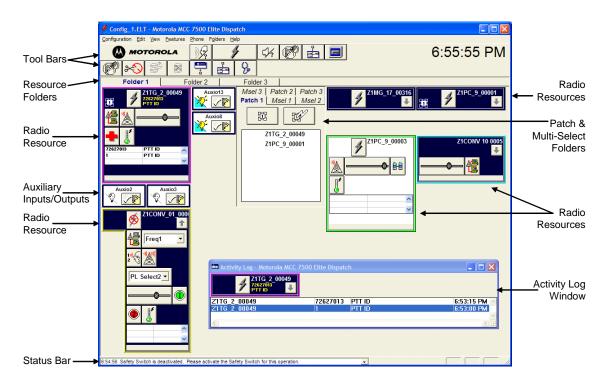


Figure 2-3: Radio Dispatch GUI

The radio console computer and software are the user interface to the ASTRO 25 IP network. Figure 2-3 (above) is a screenshot of the MCC 7500 IP Dispatch Console's Graphical User Interface (GUI).

2.2.2.3 Centralized Network Configuration and Fault Management

Centralized configuration is a unique MCC 7500 IP Dispatch Console feature that speeds console set up, enhancement, or expansion efforts and makes the most efficient use of resources.

- Configuration of the MCC 7500 IP Dispatch Console positions is accomplished via the User Configuration Manager (UCM).
- There is no need to separately maintain or manage configuration databases solely for the radio dispatch equipment.
- Redundancy and potential errors from entering radio IDs and other data at multiple locations are eliminated.
- Console configuration changes are immediately and automatically distributed to radio dispatch positions.
- Call traffic and performance reports for each console can be generated from the Network Manager.
- Historical reports can assist in making informed decisions regarding radio console changes for optimal effectiveness and efficiency.
- Centralized fault management allows reduced service times, and quicker resolution of issues.

The MCC 7500 IP Dispatch Console is designed to continuously monitor its application software and important hardware elements to make sure it is operating efficiently at all times. Network connections and control paths between the consoles and various elements are also monitored to make sure they are operating efficiently.

2.2.2.4 Mission Critical Audio and Tones

The MCC 7500 IP Dispatch Console is designed:

- To minimize the impact of any momentary glitches in IP audio packet delivery.
- With robust error mitigation methods in place so call audio is not degraded even when the system is heavily loaded in a crisis. This improves dispatcher accuracy to minimize communication errors and repeated transmissions.
- To optimize the quality of tones sent to the radio users to improve the accuracy of their interpretation and response. Special protocols are used in the MCC 7500 IP software to enhance the quality of Alert Tones and Channel Marker tones used in trunking, which can be subject to distortion from the Project 25 IMBE vocoder.

2.2.2.5 Reliability and Availability

The MCC 7500 IP Dispatch Console and services are optimized for real-time audio, essential for mission critical operations. The MCC 7500 is designed to prioritize emergency calls over other traffic. Queuing of voice is kept to a minimum and calls are transmitted in 450 milliseconds or less.

SECTION 3

STATEMENT OF WORK

Motorola Solutions is proposing to East Bay Regional Communications System Authority (EBRCSA) the installation and configuration of the following equipment at the specified locations as shown in Table 3-1.

Table 3-1: Major Equipment by Site

Site Name	Major Equipment
Alameda Co. Radio Shop	Implement (1) Position MCC 7500 Dispatch Console
Contra Costa Co. Radio Shop	Implement (1) Position MCC 7500 Dispatch Console
EBRCSA Master Site	Add Console Licenses to M Core and TNCT

The document delineates the general responsibilities between Motorola Solutions and EBRCSA as agreed to by contract.

MOTOROLA SOLUTIONS RESPONSIBILITIES 3.1

Motorola Solutions' general responsibilities include the following:

- Schedule the optimization in agreement with EBRCSA.
- Perform the configuration and optimization of the Motorola Solutions supplied equipment described above.
- Coordinate the activities of all Motorola Solutions subcontractors under this contract.
- Administer safe work procedures for installation.
- Provide EBRCSA with the appropriate system interconnect specifications.

3.2 **EBRCSA RESPONSIBILITIES**

EBRCSA will assume responsibility for the installation of all equipment and work necessary for completion of this project that is not provided by Motorola Solutions. EBRCSA general responsibilities include the following:

- Provide all buildings, equipment shelters, and towers required for system installation that meet R56 standards.
- Insure communications sites meet space, grounding, power, and connectivity requirements for the installation of all equipment.
- Assemble and install console equipment at the radio shop locations.
- Will be responsible for site access, and permitting required for project implementation.
- Will provide the cold installation of all MCC 7500 Dispatch Console equipment provided in this proposal.
- Provide required system interconnections and testing of Network Links to and from the EBRCSA Master Site and the Alameda Co. and Contra Costa Co. radio shops.
- Will provide a dedicated delivery point, such as a warehouse, for receipt, inventory and storage of equipment prior to delivery to the site(s).
- Coordinate the activities of all EBRCSA's vendors or other contractors

ASSUMPTIONS 3.3

Motorola Solutions has made several assumptions in preparing this proposal, which are noted below.

- All existing sites or equipment locations will have sufficient space available for the system described.
- All existing sites or equipment locations will have adequate electrical power and site grounding suitable to support the requirements of the system described.
- There is no more than 25' wire distance between existing power system and new equipment terminals
- There is a site R56 compliant ground connection within 33' of new equipment installation location.
- Any site/location upgrades or modifications are the responsibility of EBRCSA.
- EBRCSA will be responsible for removal of equipment necessary to accommodate the new Motorola Solutions provided equipment.
- Approved local, State, or Federal permits as may be required for the installation and operation of the proposed equipment, are the responsibility of EBRCSA.
- Any required system interconnections not specifically outlined here will be provided by EBRCSA, including but not limited to dedicated phone circuits.
- EBRCSA will provide the backhaul demarcation point within 10' of the MCC 7500 Dispatch Console location.
- EBRCSA will provide a dedicated delivery point for receipt, inventory, and storage of equipment prior to delivery to the site.
- Work will be completed during non-holidays Monday Friday during normal business hours, 8:00 am - 5:00 pm.
- Training is not included in this proposal.
- Foot switches and IRR have not been included in this proposal.
- There are spare Ethernet ports in the existing LAN at the radio shops to accommodate the additional MCC 7500 Operator Position.
- Motorola Solutions is not responsible for interference caused or received by the Motorola Solutions provided equipment except for interference that is directly caused by the Motorola Solutions provided transmitter(s) to the Motorola Solutions provided receiver(s). Should the EBRCSA's system experience interference, Motorola Solutions can be contracted to investigate the source and recommend solutions to mitigate the issue.

EQUIPMENT LIST

This section lists the equipment necessary for the proposed solution.

EBRCSA Master Site Core

QTY	NOMENCLATURE	DESCRIPTION
1	SQM01SUM0323	MASTER SITE CONFIGURATION
1	CA03517AB	ADD: CORE EXPANSION
1	UA00156AA	ADD: MCC7500 CONSOLE LICENSES (QTY 5)

Alameda County Radio Shop

Alaili	eda County Radio Shop	
QTY	NOMENCLATURE	DESCRIPTION
1	B1905	MCC 7500 ASTRO 25 SOFTWARE
1	B1933	MOTOROLA VOICE PROCESSOR MODULE
1	CA01642AA	ADD: MCC 7500 BASIC CONSOLE FUNCTIONALITY SOFTWARE LICENSE
1	CA01644AA	ADD: MCC 7500 /MCC 7100 ADV CONVL OPERATION
1	CA01643AA	ADD: MCC 7500 / MCC 7100 TRUNKING OPERATION
1	CA00147AF	ADD: MCC 7500 SECURE OPERATION
1	CA00182AB	ADD: AES ALGORITHM
1	CA00245AA	ADD: ADP ALGORITHM
1	CA00140AA	ADD: AC LINE CORD, NORTH AMERICAN
1	DSTG191B	TECH GLOBAL EVOLUTION SERIES 19INCH NON TOUCH
1	TT3492	Z2 G4 MINI WORKSTATION NON RETURNAB
2	B1912	MCC SERIES DESKTOP SPEAKER
1	B1914	MCC SERIES DESKTOP GOOSENECK MICROPHONE
2	B1913	MCC SERIES HEADSET JACK
1	T7449	WINDOWS SUPPLEMENTAL TRANS CONFIG
1	T7885	MCAFEE WINDOWS AV CLIENT
		SPD, TYPE 3, 120V RACK MOUNT, 15A PLUG-IN W/ (6) 15A NEMA 5-15
1	DSRMP615A	OUTLETS

Contra Costa County Radio Shop

QTY	NOMENCLATURE	DESCRIPTION
1	B1905	MCC 7500 ASTRO 25 SOFTWARE
1	B1933	MOTOROLA VOICE PROCESSOR MODULE
1	CA01642AA	ADD: MCC 7500 BASIC CONSOLE FUNCTIONALITY SOFTWARE LICENSE
1	CA01644AA	ADD: MCC 7500 /MCC 7100 ADV CONVL OPERATION
1	CA01643AA	ADD: MCC 7500 / MCC 7100 TRUNKING OPERATION
1	CA00147AF	ADD: MCC 7500 SECURE OPERATION
1	CA00182AB	ADD: AES ALGORITHM
1	CA00245AA	ADD: ADP ALGORITHM
1	CA00140AA	ADD: AC LINE CORD, NORTH AMERICAN
1	DSTG191B	TECH GLOBAL EVOLUTION SERIES 19INCH NON TOUCH
1	TT3492	Z2 G4 MINI WORKSTATION NON RETURNAB
2	B1912	MCC SERIES DESKTOP SPEAKER
1	B1914	MCC SERIES DESKTOP GOOSENECK MICROPHONE
2	B1913	MCC SERIES HEADSET JACK
1	T7449	WINDOWS SUPPLEMENTAL TRANS CONFIG
1	T7885	MCAFEE WINDOWS AV CLIENT
		SPD, TYPE 3, 120V RACK MOUNT, 15A PLUG-IN W/ (6) 15A NEMA 5-15
1	DSRMP615A	OUTLETS

SECTION 5

WARRANTY AND MAINTENANCE

5.1 WARRANTY SERVICES EBRCSA MCC 7500 **CONSOLE ADD ONS**

Motorola Solutions will provide warranty services per our standard warranty terms and conditions as outlined within the Contract Documentation section within this proposal. In addition to the Standard Commercial Warranty, Post Warranty Services for this MCC 7500 Console Add On project will be included to match the current East Bay Regional Communications System Authority (EBRCSA) Maintenance and System Upgrade Agreements.

POST WARRANTY MAINTENANCE SERVICES 5.2 COSTS EBRCSA FOR ALAMEDA CO. AND CONTRA COSTA CO. MCC 7500 CONSOLE ADD ONS

Motorola Solutions will add maintenance services for each of the Alameda Co. and Contra Costa Co.radio shop MCC 7500 Dispatch Console Ops to the existing EBRCSA maintenance contrat for the following amounts.

EBRCSA Alameda Co. Radio Shop 1 Position MCC 7500 Dispatch Console Op Annual Maintenance

2020	2021	2022	2023
Included	\$1,656	\$1,706	\$1,757

EBRCSA Contra Costa Co. Radio Shop 1 Position MCC 7500 Dispatch Console Op Annual Maintenance

2020	2021	2022	2023
Included	\$1,656	\$1,706	\$1,757

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5.3 POST WARRANTY SUA II ANNUAL COSTS SERVICES EBRCSA MCC 7500 CONSOLE ADD ONS

Motorola Solutions will add SUA II services for each of the Alameda Co. and Contra Costa Co. radio shop MCC 7500 Dispatch Console Ops to the existing EBRCSA SUA II contrat for the following amounts.

EBRCSA Alameda Co. 1 Position MCC 7500 Dispatch Console Op Post Warranty SUA II

2020	2021	2022	2023
Included	\$1,387	\$1,429	\$1,471

EBRCSA Contra Costa Co. 1 Position MCC 7500 Dispatch Console Op Post Warranty SUA II

2020	2021	2022	2023
Included	\$1,387	\$1,429	\$1,471



6.1 PRICING SUMMARY

Costs for equipment and optimization services for the Alameda Co. and Contra Costa Co. radio shop MCC 7500 Dispatch Console Add-ons.

Equipment and Services	Pricing
Equipment Cost Before Discount	\$100,630
Equipment Discount	(\$19,697)
Equipment Cost After Discount	\$80,933
9.25% Sales Tax on Equipment	\$7,486
Total Equipment Cost	\$88,420
System Integration Cost	\$54,358
TOTAL COST	\$142,778

6.2 PAYMENT TERMS

System Invoicing Milestones:

- 1. 50% of the Contract Price due upon contract execution.
- 2. 50% of the Contract Price due upon Final Acceptance.

Overdue invoices will bear simple interest at the rate of ten percent (10%) per annum, unless such rate exceeds the maximum allowed by law, in which case it will be reduced to the maximum allowable rate.

SECTION 7

CONTRACTUAL DOCUMENTATION

This proposal is subject to the terms and conditions of the Communications System Agreement, dated July, 7, 2009, and extended until July 6, 2020, between EBRCSA and Motorola Solutions (the "CSA"). Under Section 3.4 of the CSA, EBRCSA may purchase additional goods and services. Motorola Solutions' proposal is based on the assumption that EBRCSA will use this right under Section 3.4 of the CSA for the proposed transaction. Therefore, EBRCSA may accept the proposal by either issuing a Purchase Order that refers to the CSA and the Motorola Solutions proposal, or by executing a Change Order to the current CSA. If you prefer the latter method, Motorola Solutions will gladly prepare the Change Order document for execution.

RESOLUTION NO. 20-

RESOLUTION APPROVING THE PURCHASE OF DISPATCH CONSOLES FOR ALAMEDA AND CONTRA COSTA COUNTY RADIO SHOPS AND AUTHORIZING THE CHAIR TO EXECUTE AND THE EXECUTIVE DIRECTOR TO SUBMIT A REQUEST FOR REIMBURSEMENT TO THE BAY AREA URBAN AREAS SECURITY INITIATIVE

WHEREAS, the pursuant to Government Code Section 6500 *et seq.* and the Joint Exercise of Powers Agreement executed by its members, the East Bay Regional Communications System Authority ("EBRCSA") is authorized to acquire, plan, design, finance, construct, operate and maintain a P-25 compliant communications system serving Alameda and Contra Costa counties and individual political jurisdictions therein ("System"); and

WHEREAS, the Alameda and Contra Costa County Radio Shops are responsible for updating, maintaining, and repairing the System; and

WHEREAS, in order to make system changes, provide system updates, and maintain the system, a technician must travel to a dispatch center and access a dispatch console connected to the network for an undetermined amount of time depending on the work to be accomplished; and

WHEREAS, Alameda and Contra Costa Counties requested that a dispatch console be purchased for each Radio Shop to avoid this impact; and

WHEREAS, EBRCSA was awarded \$167,000.00 in grant funds from Bay Area Urban Areas Security Initiative (UASI) to pay for the purchase of the dispatch consoles; and

WHEREAS, the estimated the cost for the two consoles and the associated System Upgrade II ("SUA II") costs is \$151,352.00; and

WHEREAS, funds are available for the purchase and good cause appears therefor.

NOW, THEREFORE, BE IT RESOLVED THAT the Board of Directors of the East Bay Regional Communications System Authority does hereby: (1) approve the purchase of two MCC7500 Dispatch Consoles and associated SUA II costs for a not-to-exceed cost of \$151,352.00; (2) authorize its Chair to execute and the Executive Director to submit a request for reimbursement to UASI from EBRCSA's awarded grant funds; and (3) authorize its Executive Director to take such further action as may be necessary and appropriate to implement such purchase and reimbursement request.

On motion of xx, seconded by xx, the foregoing Resolution was passed and adopted this 6th day of March, 2020, by the following vote:
AYES:
NOES:
ABSTENTIONS:
ABSENT:
ATTEST:
Caroline Soto, Secretary

3489165.1

RESOLUTION NO. 20-XX

RESOLUTION ADOPTING AND IMPLEMENTING AN ADJUSTMENT TO ADMINISTRATIVE BUDGET FOR FISCAL YEAR 2019/2020

WHEREAS, on May 10, 2019, the East Bay Communications System Authority ("EBRCSA") Board of Directors adopted the Fiscal Year 2019/2020 Administrative Budget for the EBRCSA; and

WHEREAS, the EBRCSA Finance Committee and Operations Committee have identified additional items requiring the establishment of a change in line item for the purchase of Dispatch Consoles for Alameda and Contra Costa County Radio Shops and have recommended that the EBRCSA Board of Directors so adjust the Fiscal Year 2019/2020 Administrative Budget; and

WHEREAS, the EBRCSA Board of Directors Finance Committee has identified an increase to the FY 2019/2020 budget; and

WHEREAS, the EBRCSA Board of Directors has reviewed and considered the proposed budget adjustment, has reviewed EBRCSA's current revenues and expenses, has heard all comment thereon, and finds good cause therefor.

NOW, THEREFORE, BE IT RESOLVED THAT the Board of Directors of the East Bay Regional Communications System Authority does hereby adopt a budget adjustment to the Fiscal Year 2019/2020 Administrative Budget, Operating Expenses, for the EBRCSA, by increasing the Administration, Planning for the purchase of two Dispatch Consoles for the System, and authorizes the Executive Director to implement such change to the Fiscal Year 2019/2020 Administrative Budget.

On motion of xx, seconded by xx, the foregoing Resolution was passed and adopted this 6th day of March, 2020, by the following votes:

ABSENT:	
ABSTENTIONS:	
NOES:	
AYES:	

ATTEST:
Caroline Soto, Secretary
2490209 1



East Bay Regional Communications System Authority



Participating agencies include Alameda and Contra Costa Counties and the following cities and special districts: Alameda, Albany, Antioch, Berkeley, Brentwood, Clayton, Concord, Danville, Dublin, El Cerrito, Emeryville, Fremont, Hayward, Hercules, Lafayette, Livermore, Martinez, Moraga, Newark, Oakley, Pinole, Pittsburg, Pleasant Hill, Pleasanton, Richmond, San Leandro, San Pablo, San Ramon, Union City, Walnut Creek, East Bay Regional Park District, Kensington Police Community Services District, Livermore Amador Valley Transit Authority, Moraga-Orinda Fire District, Rodeo-Hercules Fire District, San Ramon Valley Fire District, California Department of Transportation, Ohlone Community College District, Contra Costa Community College District, Dublin-San Ramon Services District and University of California, Berkeley

AGENDA ITEM 9.4D.

STAFF REPORT BOARD OF DIRECTORS MEETING MARCH 6, 2020

SUMMARY:

Adjust the fiscal year 2019-20 budget for the following:

- 1. Enter into an agreement with CSI Telecommunications, Inc. to provide a ten-year capital asset plan
- 2. Purchase dispatch consoles for the Alameda County and Contra Costa County radio shops
- 3. Expense for three-year maintenance for generators
- 4. Expense for small and non-recurring maintenance items

Below is a summary of the proposed budget adjustments for FY2019-20:

REVENUES

Operating payments	\$ 146,000
Grants	167,000
Total	\$ 313,000

EXPENSES

Administration	\$ 134,000
Maintenance	27,000
Capital	 152,000
Total	\$ 313,000

RECOMMENDED ACTION:

Staff recommends that the Board approve the budget adjustment for fiscal year 2019-20.







Participating agencies include Alameda and Contra Costa Counties and the following cities and special districts: Alameda, Albany, Antioch, Berkeley, Brentwood, Clayton, Concord, Danville, Dublin, El Cerrito, Emeryville, Fremont, Hayward, Hercules, Lafayette, Livermore, Martinez, Moraga, Newark, Oakley, Pinole, Pittsburg, Pleasant Hill, Pleasanton, Richmond, San Leandro, San Pablo, San Ramon, Union City, Walnut Creek, East Bay Regional Park District, Kensington Police Community Services District, Livermore Amador Valley Transit Authority, Moraga-Orinda Fire District, Rodeo-Hercules Fire District, San Ramon Valley Fire District, Ohlone Community College District, Contra Costa Community College District, Dublin-San Ramon Services District and University of California, Berkeley

AMENDED BUDGET FISCAL YEAR 2019-20

Revenues

Total revenues	 7,837,000
Interest	 80,000
Grants	167,000
Service payments	1,190,000
Operating payments	\$ 6,400,000

Expenses

Expenses	
Administration	414,000
Audit fees	20,000
Insurance	30,000
Lease	70,000
Legal	20,000
Licenses and permits	30,000
Membership fees	10,000
Maintenance	3,584,000
Security	11,000
Utilities	160,000
Website hosting	4,000
Total operating expenses	4,353,000
Capital	2,067,000
Debt service	650,000
Total expenses	7,070,000
Net Income	\$ 767,000

EAST BAY REGIONAL COMMUNICATIONS SYSTEM EXPENDITURE DETAIL FISCAL YEAR 2019-2020

OPERATING EXPENSES		FY19-20 pproved	FY19-20 Amendment #2		FY19-20 Amended		
Administration		ррготса	Amen	differit #2		Amenaea	
Executive director	\$	225,000	\$	_	\$	225,000	
Administrative assistant	Ψ	40,000	Ψ	_	Y	40,000	
Planning		-		134,000		134,000	
Travel		5,000		-		5,000	
Miscellaneous		10,000		-		10,000	
Audit fees		20,000		-		20,000	
Insurance		30,000		-		30,000	
Legal		20,000		-		20,000	
Lease		70,000		-		70,000	
Licenses and permits		30,000		-		30,000	
Membership fees		10,000		-		10,000	
Maintenance							
Service agreement		1,065,000		-		1,065,000	
Software maintenance (SUA II)		962,000		-		962,000	
Network administration		260,000		-		260,000	
HVAC maintenance		20,000		-		20,000	
Generator maintenance		40,000		17,000		57,000	
ALCO general maintenance		600,000		-		600,000	
COCO general maintenance		230,000		-		230,000	
CSI telecommunications		200,000		-		200,000	
Microwave maintenance		180,000				180,000	
Miscellaneous		-		10,000		10,000	
Security		11,000		-		11,000	
Utilities		160,000		-		160,000	
Website hosting		4,000				4,000	
Total expenses		4,192,000		161,000		4,353,000	
CAPITAL EXPENDITURES							
TDMA Upgrade		1,665,000		_		1,665,000	
DC Power Upgrade		250,000		_		250,000	
Dispatch Consoles		-		152,000		152,000	
Total expenditures		1,915,000	_	152,000		2,067,000	
•		<u> </u>				· ·	
DEBT SERVICE		454.000				454.000	
Principal		454,000		-		454,000	
Interest Total expenses	<u> </u>	196,000	<u> </u>		<u> </u>	196,000	
Total expenses	\$	650,000	\$		\$	650,000	

^{1.} Motorola service agreement increased due to a new 4 year contract

^{2.} Network administration contract increased

^{3.} TDMA Upgrade Expense is the annual payment for the Change Order approved by the Board of Directors

^{4.} DC Power Updgrade Expense is an annual amount to replace the batteries in various locations

PROJECTED CASH RESERVE BALANCES FISCAL YEAR 2019-2020

	FY18-19 FY18-19			FY19-20				
Operating Reserve	F	inal Budget		Projected		Budget		
Beginning Balance	\$	1,763,500	\$	1,763,500	\$	1,943,000		
Operating Payments		5,900,000		6,019,000		6,400,000		
Initial Payments		-		46,000		-		
Interest		50,000		80,000		80,000		
Operating Expenses		(4,038,000)		(3,886,000)	(4,353,000)			
Transfer to Capital Reserve		(1,656,500)		(2,079,500)		(1,893,500)		
Ending Balance		2,019,000		1,943,000		2,176,500		
Debt Service Reserve								
Beginning Balance		1,000,000		1,000,000		1,000,000		
Service Payments		1,300,000		1,223,000		1,190,000		
Debt Service		(650,000)		(650,000)		(650,000)		
Transfer to Capital Reserve		(650,000)		(573,000)		(540,000)		
Ending Balance		1,000,000		1,000,000		1,000,000		
Capital Reserve								
Beginning Balance		7,909,925		7,909,925		8,647,425		
Grants		-		-		167,000		
Transfer In		2,306,500		2,652,500		2,433,500		
Capital		(1,915,000)		(1,915,000)		(2,067,000)		
Ending Balance	8,301,425 8,647,425				9,180,925			
Total Reserve Balance	\$	11,320,425	\$	11,590,425	\$	12,357,425		

- 1. Operating Reserve Balance is equal to 50% of the next fiscal years Operating Budget
- 2. Debt Reserve Balance is set to equal \$1,000,000 every fiscal year
- 3. Capital Reserve Balance is the projected remaining cash after the Operating and Debt Reserve requirments have been met

EAST BAY REGIONAL COMMUNICATIONS SYSTEM AUTHORITY 10 YEAR CASH FLOW PROJECTION

	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26	FY 2026-27	FY 2027-28	FY 2028-29
Operating Reserve	Projected	Budget	Forecast								
Balance - beginning	1,763,500	1,943,000	2,176,500	2,220,665	2,273,185	2,336,600	2,397,288	2,469,207	2,551,783	2,618,886	2,697,452
Operating payments	6,019,000	6,400,000	6,447,400	6,447,400	6,447,400	6,447,400	6,447,400	6,447,400	6,447,400	6,447,400	6,447,400
Initial payments	46,000	-	-	-	-	-	-	-	-	-	-
Interest	80,000	80,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000
Administration	(232,000)	(414,000)	(426,420)	(439,213)	(452,389)	(465,961)	(479,939)	(494,338)	(509,168)	(524,443)	(540,176)
Audit fees	(13,000)	(20,000)	(20,600)	(21,218)	(21,855)	(22,510)	(23,185)	(23,881)	(24,597)	(25,335)	(26,095)
Insurance	(24,000)	(30,000)	(30,900)	(31,827)	(32,782)	(33,765)	(34,778)	(35,822)	(36,896)	(38,003)	(39,143)
Legal	(5,000)	(20,000)	(20,600)	(21,218)	(21,855)	(22,510)	(23,185)	(23,881)	(24,597)	(25,335)	(26,095)
Lease	(64,000)	(70,000)	(72,100)	(74,263)	(76,491)	(78,786)	(81,149)	(83,584)	(86,091)	(88,674)	(91,334)
Licenses and permits	(6,000)	(30,000)	(30,900)	(31,827)	(32,782)	(33,765)	(34,778)	(35,822)	(36,896)	(38,003)	(39,143)
Membership fees	(9,000)	(10,000)	(10,300)	(10,609)	(10,927)	(11,255)	(11,593)	(11,941)	(12,299)	(12,668)	(13,048)
Maintenance											
Customer svc. agmt.	(967,000)	(1,065,000)	(1,078,000)	(1,088,000)	(1,099,000)	(1,131,970)	(1,165,929)	(1,200,907)	(1,236,934)	(1,274,042)	(1,312,263)
SUA II	(939,000)	(962,000)	(990,860)	(1,020,586)	(1,051,203)	(1,082,739)	(1,115,222)	(1,148,678)	(1,183,139)	(1,218,633)	(1,255,192)
System management	(250,000)	(260,000)	(262,000)	(264,000)	(267,000)	(275,010)	(283,260)	(291,758)	(300,511)	(309,526)	(318,812)
HVAC	(25,000)	(20,000)	(20,600)	(21,218)	(21,855)	(22,510)	(23,185)	(23,881)	(24,597)	(25,335)	(26,095)
Generators	(57,000)	(57,000)	(41,200)	(42,436)	(60,709)	(43,709)	(45,020)	(63,371)	(46,371)	(47,762)	(66,195)
ALCO maintenance	(600,000)	(600,000)	(618,000)	(636,540)	(655,636)	(675,305)	(695,564)	(716,431)	(737,924)	(760,062)	(782,864)
COCO maintenance	(150,000)	(230,000)	(236,900)	(244,007)	(251,327)	(258,867)	(266,633)	(274,632)	(282,871)	(291,357)	(300,098)
CSI telecommunications	(200,000)	(200,000)	(206,000)	(212,180)	(218,545)	(225,102)	(231,855)	(238,810)	(245,975)	(253,354)	(260,955)
Microwave maintenance	(180,000)	(180,000)	(185,400)	(190,962)	(196,691)	(202,592)	(208,669)	(214,929)	(221,377)	(228,019)	(234,859)
Miscellaneous maintenance	-	(10,000)	(10,300)	(10,609)	(10,927)	(11,255)	(11,593)	(11,941)	(12,299)	(12,668)	(13,048)
Security	(11,000)	(11,000)	(11,330)	(11,670)	(12,020)	(12,381)	(12,752)	(13,135)	(13,529)	(13,934)	(14,353)
Utilities	(150,000)	(160,000)	(164,800)	(169,744)	(174,836)	(180,081)	(185,484)	(191,048)	(196,780)	(202,683)	(208,764)
Web site hosting	(4,000)	(4,000)	(4,120)	(4,244)	(4,371)	(4,502)	(4,637)	(4,776)	(4,919)	(5,067)	(5,219)
Transfer to Capital Reserve	(2,079,500)	(1,893,500)	(1,981,905)	(1,868,510)	(1,730,783)	(1,612,137)	(1,457,068)	(1,281,258)	(1,162,526)	(993,929)	(804,225)
Balance - ending	1,943,000	2,176,500	2,220,665	2,273,185	2,336,600	2,397,288	2,469,207	2,551,783	2,618,886	2,697,452	2,786,876
Debt Service Reserve											
Balance - beginning	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	-	-
Service payment	1,223,000	1,190,000	1,222,248	1,222,248	1,222,248	1,222,248	1,222,248	1,222,248	1,222,248	-	-
Principal	(454,000)	(473,000)	(492,000)	(512,000)	(532,000)	(553,000)	(576,000)	(600,000)	(623,000)	-	-
Bond interest	(196,000)	(177,000)	(158,000)	(138,000)	(118,000)	(97,000)	(74,000)	(50,000)	(27,000)	-	-
Transfer to Capital Reserve	(573,000)	(540,000)	(572,248)	(572,248)	(572,248)	(572,248)	(572,248)	(572,248)	(1,572,248)	_	-
Balance - ending	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	-	-	-
								<u>.</u>			
<u>Capital Reserve</u>											
Balance - beginning	7,909,925	8,647,425	9,180,925	9,820,078	10,345,836	10,733,868	12,668,252	14,447,569	16,051,075	18,535,849	19,279,778
Grants	-	167,000	-	-	-	-	-	-	-	-	-
Transfer In	2,652,500	2,433,500	2,554,153	2,440,758	2,303,031	2,184,385	2,029,316	1,853,506	2,734,774	993,929	804,225
Capital	(1,915,000)	(2,067,000)	(1,915,000)	(1,915,000)	(1,915,000)	(250,000)	(250,000)	(250,000)	(250,000)	(250,000)	(250,000)
Balance - ending	8,647,425	9,180,925	9,820,078	10,345,836	10,733,868	12,668,252	14,447,569	16,051,075	18,535,849	19,279,778	19,834,003
TOTAL RESERVE BALANCE	11,590,425	12,357,425	13,040,743	13,619,021	14,070,468	16,065,540	17,916,775	19,602,858	21,154,735	21,977,230	22,620,879