METROPOLITAN EMERGENCY SERVICES BOARD
BOARD MEETING AGENDA

October 29, 2020, 10:00 a.m.

WebEx Meeting Link
Meeting Number: 126 893 0372
Meeting Password: 2BJhJGvHp78 (22545484 from phones and video systems)

1. **Call to Order** – Board Chair Commissioner Trista Matascastillo

2. **Approval of Agenda** – Commissioner Matascastillo

3. **Consent Agenda** – Rohret **(page 5)**
   A. Approval: September 9, 2020 Meeting Minutes **(page 7)**
   B. Approval: August 2020 Treasurer's Report **(page 17)**
   C. Approval: September 2020 Treasurer's Report **(page 19)**
   D. Approval of Amendments to Appendix C of Metro Radio Standards **(page 21)**
   E. Approval of Metro Transit Bi-Directional Amplifier Addition **(page 27)**
   F. Approval of 2021 Regional Grant Priorities **(page 29)**
   G. Approval of Amendments to Anoka County's ARMER Participation Plan **(page 31)**
   H. Approval of Multi-Entity MCC7500e Console Project & Connectivity Plan **(page 35)**
   I. Approval of Ramsey County's 9-1-1 Plan Amendment **(page 37)**
   J. Approval of 2021-2022 Lease with MMCD **(page 47)**
   K. Correspondence **(page *57*)**
   L. Draft October Executive Minutes **(page 59)**

4. **Presentation from Lumen & Intrado Regarding September 28, 2020 9-1-1 System Service Disruption**

5. **Radio Items** – Tracey Fredrick, Radio Services Coordinator – None

6. **9-1-1 Items** – Pete Eggimann, Director of 9-1-1 Services/Marcia Broman, 9-1-1 Data Coordinator
   A. Recommendation of RFP Award for NG9-1-1 Grant GIS Project **(page 63)**
   B. Acceptance of After-Action Review for Communications During May/June 2020 Civil Unrest **(page 81)**
   C. Recommendation to Begin Process to Develop Funding Plan and Request for Proposal for CAD-to-CAD Interoperability **(page 91)**

7. **EMS Items** – Ron Robinson, EMS Coordinator – None

8. **Administrative Items** – Jill Rohret, Executive Director – None

9. **Reports**
   A. Statewide Emergency Communications Board (SECB) Reports:
      1) Finance – Commissioner McMahon/Rohret
      2) Legislative – Commissioner Egan/Rohret – Meetings cancelled
      3) Steering – Commissioner Fernando/Rohret
      4) Other SECB Committees – Eggimann/Fredrick
      5) Board – Commissioner Matascastillo/Rohret

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10. **Old Business** – None

11. **New Business**
A. Approval of Executive Director Performance Review – Commissioner Matascastillo **(page 129)**
B. Recognition of Retiring MESB Members – Commissioner Mastascastillo/Jill Rohret

12. **Adjourn**

METROPOLITAN EMERGENCY SERVICES BOARD
BOARD MEETING AGENDA

October 29, 2020, 10:00 a.m.

WebEx Meeting Link
Meeting Number: 126 893 0372
Meeting Password: 2BJhJGvHp78 (22545484 from phones and video systems)

Metropolitan Emergency Services Board Members

Anoka County
- Commissioner Mike Gamache*
- Commissioner Mandy Meisner

Carver County
- Commissioner Gayle Degler
- Commissioner Jim Ische*

Chisago County
- Commissioner George McMahon*

City of Minneapolis
- Council Member Andrew Johnson*

Dakota County
- Commissioner Tom Egan* (2020 Vice Chair)
- Commissioner Mary Liz Holberg

Hennepin County
- Commissioner Irene Fernando* (2020 Secretary)
- Commissioner Jeff Johnson

Isanti County
- Commissioner Greg Anderson* (2020 Treasurer)

Ramsey County
- Commissioner Trista Matascastillo* (2020 Chair)
- Commissioner Jim McDonough

Scott County
- Commissioner Dave Beer
- Commissioner Tom Wolf*

Sherburne County
- Commissioner Felix Schmiesing*

Washington County
- Commissioner Wayne Johnson
- Commissioner Fran Miron*

*Denotes Executive Committee member

METROPOLITAN EMERGENCY SERVICES BOARD

Meeting Date: October 29, 2020
Agenda Item: 3. Consent Agenda
Presenter: Rohret

A. **Minutes** – The minutes of the September 9, 2020 meeting of the Board are attached for review and approval.

B. **August 2020 Treasurer's Report** – The Treasurer has reviewed the August 2020 financial statements and has given his approval of the report.

C. **September 2020 Treasurer's Report** – The Treasurer has reviewed the September 2020 financial statements and has given his approval of the report. At the time of this writing it is anticipated that this item will be ready for the October 29 board meeting.

D. **Approval of Amendments to Appendix C of Metro Radio Standards** – The Executive Committee recommends approval of these amendments.

E. **Approval of Metro Transit Bi-Directional Amplifier Addition** – The Executive Committee recommends approval of this request.

F. **Approval of 2021 Regional Grant Priorities** – The Executive Committee recommends approval of these grant priorities.

G. **Approval of Amendments to Anoka County's ARMER Participation Plan** – The Radio TOC recommends approval of the amendments to Anoka County's ARMER participation plan. The Radio TOC meets on October 28, 2020; this recommendation is anticipated.

H. **Approval of Multi-Entity MCC7500e Console Project & Connectivity Plan** – The Radio TOC recommends approval of this request.

I. **Approval of Ramsey County's 9-1-1 Plan Amendment** – The Executive Committee recommends approval of this plan amendment.

J. **Approval of 2021-2022 Lease with MMCD** – The Executive Committee recommends approval of the 2021-2022 lease with MMCD.

MOTION BY:
SECONDED BY:
MOTION:

PASS/FAIL

METROPOLITAN EMERGENCY SERVICES BOARD

Meeting Date: October 29, 2020
Agenda Item: 3. Consent Agenda
Presenter: Rohret

K. **Correspondence** – The correspondence included is the letter to Lumen requesting a presentation on the September 28, 2020 9-1-1 service disruption.

L. **Informational Only** – Draft Minutes of October 14, 2020 Executive Committee meeting.

MOTION BY:
SECONDED BY:
MOTION:

PASS/FAIL

METROPOLITAN EMERGENCY SERVICES BOARD

BOARD MEETING MINUTES
September 9, 2020
Meeting held via WebEx

Commissioners Present:
Greg Anderson, Isanti County
Dave Beer, Scott County
Gayle Degler, Carver County
Tom Egan, Dakota County
Irene Fernando, Hennepin County
Mike Gamache, Anoka County
Mary Liz Holberg, Dakota County
Jim Ische, Carver County – **absent**
Andrew Johnson, City of Minneapolis
Jeff Johnson, Hennepin County
Wayne Johnson, Washington County
Trista Matascastillo, Ramsey County
Jim McDonough, Ramsey County
George McMahon, Chisago County – **absent**
Mandy Meisner, Anoka County
Fran Miron, Washington County
Felix Schmiesing, Sherburne County
Tom Wolf, Scott County

Staff Present: Pete Eggimann; Tracey Fredrick; Jill Rohret; and Martha Ziese.

Others Present: Jay Arneson, MESB Board Counsel; Kathy Hughes, City of Minneapolis; Steve Pott, PSC Alliance; and Margaret Vesel, Larkin Hoffman.

1.Call to Order
The meeting was called to order at 10:02 a.m. by the 2020 MESB Chair, Commissioner Trista Matascastillo and the roll was called.

2. Approval of Agenda
Motion by Commissioner Miron, seconded by Commissioner Egan to approve the September 9, 2020 agenda. Motion carried.

Name	County/City	Yes	No
Anderson, G.	Isanti		
Beer, D.	Scott	X	
Degler, G.	Carver	X	
Egan, T.	Dakota	X	
Fernando, I.	Hennepin		
Gamache, M.	Anoka	X	
Holberg, M.	Dakota	X	
Ische, J.	Carver		
Johnson Andrew	Minneapolis	X	
Johnson, Jeff	Hennepin	X	
Johnson, Wayne	Washington	X	
Matascastillo, T.	Ramsey	X	
McDonough, J.	Ramsey	X	
McMahon, G.	Chisago		
Meisner, M.	Anoka	X	
Miron, F.	Washington	X	
Schmiesing, F.	Sherburne	X	
Wolf, T.	Scott	X	

Yea: 14 Nay: 0 Motion passes.

DRAFT

3. Approval of Consent Agenda

Motion by Commissioner Wolf, seconded by Commissioner Degler to approve the September 9, 2020 Consent Agenda. Motion carried.

Name	County/City	Yes	No
Anderson, G.	Isanti		
Beer, D.	Scott	X	
Degler, G.	Carver	X	
Egan, T.	Dakota	X	
Fernando, I.	Hennepin	X	
Gamache, M.	Anoka	X	
Holberg, M.	Dakota	X	
Ische, J.	Carver		
Johnson Andrew	Minneapolis	X	
Johnson, Jeff	Hennepin	X	
Johnson, Wayne	Washington	X	
Matascastillo, T.	Ramsey	X	
McDonough, J.	Ramsey	X	
McMahon, G.	Chisago		
Meisner, M.	Anoka	X	
Miron, F.	Washington	X	
Schmiesing, F.	Sherburne	X	
Wolf, T.	Scott	X	

Yea: 15 Nay: 0 Motion passes.

4. Radio Items

A. Approval to Accept 2019 SHSP Grant and 2020 SECB Grant

Tracey Fredrick requests the Board accept the 2019 State Homeland Security Program (SHSP) and the 2020 Statewide Emergency Communication Board (SECB) grants to the MESB. It is not known at this time what the full amount that will be allotted to the MESB. For the SECB grant, Fredrick anticipates an additional $300,000.00 to be added to the combined original grant amount of $25,000.00.

Fredrick said the SHSP grant for $25,000.00 will be used for radio technical and CRTF training.

Fredrick said the expected $300,000.00 SECB grant will be used to provide PSAP security audits, telecommunicator resiliency training and other development opportunities for 9-1-1 centers. All of these were included in the 2021 funding priorities.

Motion by Commissioner Egan, seconded by Commissioner Fernando to accept the 2019 SHSP Grant and 2020 SECB Grant. Motion carried.

Name	County/City	Yes	No
Anderson, G.	Isanti		
Beer, D.	Scott	X	
Degler, G.	Carver	X	
Egan, T.	Dakota	X	
Fernando, I.	Hennepin	X	
Gamache, M.	Anoka	X	
Holberg, M.	Dakota	X	

Ische, J.	Carver		
Johnson Andrew	Minneapolis	X	
Johnson, Jeff	Hennepin	X	
Johnson, Wayne	Washington	X	
Matascastillo, T.	Ramsey	X	
McDonough, J.	Ramsey	X	
McMahon, G.	Chisago		
Meisner, M.	Anoka	X	
Miron, F.	Washington	X	
Schmiesing, F.	Sherburne	X	
Wolf, T.	Scott	X	

Yea: 15 Nay: 0 Motion passes.

B. Approval of Amendment to Hennepin Healthcare's ARMER Participation Plan
Fredrick said Hennepin Healthcare requests approval of an amendment to its ARMER Participation Plan to add one Motorola MCC 7500 console to its network, which will create three positions in its dispatch center. Fredrick said the consoles have been purchased and are just waiting on approval to install them. The Radio TOC recommends approval of this amendment.

Motion made be Commissioner Schmiesing, seconded by Commissioner Wolf to approve the amendment to Hennepin Healthcare's ARMER Participation Plan. Motion carried.

Name	**County/City**	**Yes**	**No**
Anderson, G.	Isanti		
Beer, D.	Scott	X	
Degler, G.	Carver	X	
Egan, T.	Dakota	X	
Fernando, I.	Hennepin	X	
Gamache, M.	Anoka	X	
Holberg, M.	Dakota	X	
Ische, J.	Carver		
Johnson Andrew	Minneapolis	X	
Johnson, Jeff	Hennepin	X	
Johnson, Wayne	Washington	X	
Matascastillo, T.	Ramsey	X	
McDonough, J.	Ramsey	X	
McMahon, G.	Chisago		
Meisner, M.	Anoka	X	
Miron, F.	Washington	X	
Schmiesing, F.	Sherburne	X	
Wolf, T.	Scott	X	

Yea: 15 Nay: 0 Motion passes.

C. Approval of M Health Fairview's ARMER Participation Plan
Fredrick said M Health Fairview requests approval of its participation plan to become a full ARMER participant. M Health Fairview (MHF) brought its ARMER Participation plan before the Radio TOC for review. MHF will install consoles, which will replace consolettes in the dispatch center, which will reduce the amount of MHF traffic on the system. where there was a lengthy discussion about the new consoles brining in too much traffic. Fredrick said during the discussion, Ramsey County indicated it would be the most impacted if the consoles were not installed. The MESB is monitoring MHF's usage and if the usage is concerning, it can be

addressed immediately. The Radio TOC recommends approval of the MHF ARMER Participation Plan.

Commissioner MatasCastillo confirmed with Fredrick that the SECB has already granted their approval.

Commissioner McDonough asked how a usage issue would be resolved.

Fredrick said there will be closer monitoring done and the Ramsey County System Administrator has also expressed that he will be open to working with MHF so over usage does not become an issue.

Steve Pott said the equipment has not been ordered; per the MESB agreements, an approval is first needed before the equipment can be purchased. All Motorola equipment is ready to go with the installation timeline being before the end of the year

Commissioner McDonough asked that the board is kept updated on this project.

Fredrick said there will be a heightened awareness and a closer monitoring of the usage going forward.

Jill Rohret said M Health Fairview is abiding by the MESB request to wait to purchase equipment until all approvals are granted, should there be a need to change any part of the participation plan.

Commissioner MatasCastillo asked Pott to notify the board when the equipment has been purchased and if there are any concerns or changes regarding the install timeline.

Pott said there are not any additional operational changes to be made and the board will be kept updated of the progress of the install.

Motion made by Commissioner Gamache, seconded by Commissioner Wolf to approve the M Health Fairview Participation Plan to become a full ARMER participant. Motion carried.

Name	County/City	Yes	No
Anderson, G.	Isanti		
Beer, D.	Scott	X	
Degler, G.	Carver	X	
Egan, T.	Dakota	X	
Fernando, I.	Hennepin	X	
Gamache, M.	Anoka	X	
Holberg, M.	Dakota	X	
Ische, J.	Carver		
Johnson Andrew	Minneapolis	X	
Johnson, Jeff	Hennepin	X	
Johnson, Wayne	Washington	X	
Matascastillo, T.	Ramsey	X	
McDonough, J.	Ramsey	X	
McMahon, G.	Chisago		
Meisner, M.	Anoka	X	
Miron, F.	Washington	X	

Schmiesing, F.	Sherburne	X	
Wolf, T.	Scott	X	

Yea: 15 Nay: 0 Motion passes.

D. Approval of Amendments to MESB Radio Standards 3.14.0 and 3.21.0

Fredrick said Metro Standard 3.14.0 and 3.21.0 were reviewed as a result of the Civil Unrest After Action Report which is being drafted. In Standard 3.14.0, language was added for clarification that the two encrypted ME TAC talkgroups should not be programmed into non-law enforcement radios, unless a waiver is obtained. Language was also added to grant permission to the clear ME TAC talkgroups with written permission only. This language was added to provide ease of use of these talkgroups during emergent events.

For Metro Standard 3.21.0, the review work group made numerous changes to this standard. There were references to out of date State Standards. The state has revised the numbering of state standards and language was updated to reflect the new State Standard numbering. Fredrick said language has been added to use local talkgroups first, before moving to a statewide talkgroup. Changes to both standards were recommended by the workgroup and the Radio TOC recommends approval.

Motion made by Commissioner Meisner, seconded by Commissioner Fernando to approve amendments to MESB Metro Radio Standard 3.14.0 and 3.21.0. Motion carried.

Name	**County/City**	**Yes**	**No**
Anderson, G.	Isanti		
Beer, D.	Scott	X	
Degler, G.	Carver	X	
Egan, T.	Dakota	X	
Fernando, I.	Hennepin	X	
Gamache, M.	Anoka	X	
Holberg, M.	Dakota	X	
Ische, J.	Carver		
Johnson Andrew	Minneapolis	X	
Johnson, Jeff	Hennepin	X	
Johnson, Wayne	Washington	X	
Matascastillo, T.	Ramsey	X	
McDonough, J.	Ramsey	X	
McMahon, G.	Chisago		
Meisner, M.	Anoka	X	
Miron, F.	Washington	X	
Schmiesing, F.	Sherburne	X	
Wolf, T.	Scott	X	

Yea: 15 Nay: 0 Motion passes.

5. 9-1-1 Items

A. Approval of Amendment 5 to State/CenturyLink/MESB Contract for 9-1-1 Services

Pete Eggimann said Amendment 5 to the State/CenturyLink/MESB contract for 9-1-1 services is before the Board for approval. This amendment will extend the termination date of the contract to November 30, 2021. There are no other substantive changes in the contract amendment. Under this contract for 9-1-1 services, the MESB and the PSAPs are responsible for one-time costs associated with changes to the 9-1-1 system they initiated. Counsel has reviewed the agreement and found no issues of concern.

Motion made by Miron, seconded by Wolf to approve Amendment 5 to the contract State/CenturyLink/MESB for 9-1-1 services. Motion carried.

Name	County/City	Yes	No
Anderson, G.	Isanti		
Beer, D.	Scott	X	
Degler, G.	Carver	X	
Egan, T.	Dakota	X	
Fernando, I.	Hennepin	X	
Gamache, M.	Anoka	X	
Holberg, M.	Dakota	X	
Ische, J.	Carver		
Johnson Andrew	Minneapolis	X	
Johnson, Jeff	Hennepin	X	
Johnson, Wayne	Washington	X	
Matascastillo, T.	Ramsey	X	
McDonough, J.	Ramsey	X	
McMahon, G.	Chisago		
Meisner, M.	Anoka	X	
Miron, F.	Washington	X	
Schmiesing, F.	Sherburne	X	
Wolf, T.	Scott	X	

Yea: 15 Nay: 0 Motion passes.

B. Approval of Contract with Inteliquent and State of Minnesota for 9-1-1 Ingress Services
Eggimann said this is a contract is between the State, the MESB and Inteliquent for 9-1-1 ingress services. Inteliquent will provide the access points for the other telecommunication providers for the Minnesota 9-1-1 system. It also provides the conversion of telephone traffic to provide a consistent protocol that will be utilized by the future NG9-1-1 core services, routing and location determination. An RFP for NG9-1-1 core services is forthcoming in the future. This contract with Inteliquent for 9-1-1 ingress services is the first step into the next generation 9-1-1 world. This is a three-year contract that may be extended an additional two years.

Rohret said that there were changes to the Inteliquent contract after this meeting packet was put together. The final contract was received and reviewed by MESB Counsel.

Motion made Commissioner Egan, seconded by Commissioner Wolf to approve the contract with Inteliquent, the State of Minnesota and the MESB. Motion carried.

Name	County/City	Yes	No
Anderson, G.	Isanti		
Beer, D.	Scott	X	
Degler, G.	Carver	X	
Egan, T.	Dakota	X	
Fernando, I.	Hennepin	X	
Gamache, M.	Anoka	X	
Holberg, M.	Dakota	X	
Ische, J.	Carver		
Johnson Andrew	Minneapolis	X	
Johnson, Jeff	Hennepin	X	

Johnson, Wayne	Washington	X	
Matascastillo, T.	Ramsey	X	
McDonough, J.	Ramsey	X	
McMahon, G.	Chisago		
Meisner, M.	Anoka	X	
Miron, F.	Washington	X	
Schmiesing, F.	Sherburne	X	
Wolf, T.	Scott	X	

Yea: 15 Nay: 0 Motion passes.

6. EMS Items – None

7. Administrative Items

A. Discussion: Format for Remaining 2020 MESB Meetings

Rohret said at the July MESB meeting there was a discussion regarding how the remaining meetings in 2020 will be held. Because of the limitations of the Metro Counties Government Center's (MCGC) meeting rooms, Rohret recommends either continuing with virtual only meetings or holding meetings in a hybrid format that would allow both in-person and virtual participation.

Commissioner Matascastillo reminded members that if there is a hybrid approach to the board meetings, roll call votes will still be required.

Commissioner Meisner said she favors continuing virtual meetings.

Commissioner Gamache asked how many Board Members could be accommodated in the MCGC board room. Rohret said she thought nine and noted that most MESB staff would continue to be virtual, though she would attend in-person.

Commissioner Wayne Johnson said he saw no benefit of doing the hybrid approach.

Commissioner Egan said Dakota County will be conducting hybrid meetings as of September 22. Dakota County however has the ability to accommodate more than the MCGC meeting rooms, and therefore does not see the benefit of doing hybrid meetings.

Commissioner Fernando said she is in favor of staying with virtual meetings for now.

Commissioner MatasCastillo said the consensus for the group is to continue with virtual meetings for the remainder of 2020.

8. Reports

A. Legislative Report

Margaret Vesel said that Governor Walz has called a special session of the legislature for September 11, 2020. If a special session was not called, his executive powers would lapse, and a session would resume in one month.

Vesel said she and Rohret met last week with the Department of Public Safety about the upcoming 2021 legislative session. It has been common practice in the past during budget shortfalls to look at the overages of the different funds and if they could be used elsewhere in the state budget. The 9-1-1 Special Revenue Fund has always been looked at as a source for funding that can be possibly tapped. As always, the MESB will remain diligent in protecting those funds.

B. Statewide Emergency Communications Board (SECB) Reports

METROPOLITAN EMERGENCY SERVICES BOARD

1. Finance
Rohret said the Finance Committee met in August. There will not be a September meeting. Discussions continued about how grants are reviewed and dispersed.

2. Legislative – meeting cancelled.

3. Steering
Commissioner Fernando said the primary focus of the Steering Committee is planning for the multi-year statewide strategic plan. Some regions expressed a need to discuss regional needs prior to a discussion on a broader statewide plan. The same person who has facilitated for the prior two planning sessions facilitator that presented last year is assessing the inventory of discussions from the previous planning session. Commissioner Fernando said the bylaws for the SECB are being re-written so that the SECB committees will be governed by committee bylaws, which are separate from the SECB bylaws.

4. NG9-1-1
Eggimann said the NG9-1-1 Committee met in August. The agenda items were informational items and there were no action items.

5. LMR
Fredrick said the LMR has met twice this summer. Discussions were the M Health Participation Plan and several participation plan amendments.

6. Broadband/Wireless
Fredrick said the Broadband/Wireless Committee met but there was nothing impactful to the metro area discussed.

7. Interoperability
Fredrick said the Interoperability Committee met in July. Several Metro Communications Unit positions were approved.

8. SECB
Rohret said there were approvals for action items from committees at the August meeting. The strategic planning process for grants with ECN was discussed. There will be a meeting next week with Commissioner Matascastillo and Commissioner West on this topic.

9. Old Business
MESB RFP for Lobbying Services
Rohret said last year an amendment was made to the Larkin Hoffman contract for lobbying services. The board agreed the amendment would extend their contract until the end of 2020 and then to go out for an RFP. The RFP is drafted and ready to go. Rohret asked for direction on the timing for posting this RFP. Rohret said she would normally suggest bringing this approval at the November Board meeting, however the November meeting is rescheduled for October 29 because of the conflict of Veteran's Day falling on the same date.

Commissioner Gamache said he would recommend awarding the RFP at the January Board meeting. Commissioner Egan agreed.

Rohret said that any interviews for lobbying services will be held at the December Executive Committee meeting.

10. New Business
Rohret said it is time for her performance review. Board members will receive an email from

Jeff Timmerman of Dakota County with survey materials for the annual Executive Director review.

11. Adjournment
The meeting adjourned at 11:01 a.m.

DRAFT

METROPOLITAN
EMERGENCY SERVICES BOARD

2099 UNIVERSITY AVENUE WEST
SAINT PAUL, MINNESOTA
55104-3431

PHONE 651-643-8395
WWW.MN-MESB.ORG

TO: Metropolitan Emergency Services Board

FROM: Isanti County Commissioner Greg Anderson, MESB Treasurer

RE: Treasurer's Report – August 2020

DATE: September 25, 2020

As Treasurer for the Metropolitan Emergency Services Board it is necessary to review the following documents:

- Monthly summary financial reports for Administration, 9-1-1, Radio and EMS
- Explanation for significant variance from budget report for Administration, 9-1-1, Radio and EMS.

The review was conducted on September 24, 2020.

Sincerely,

Gregory C. Anderson

Greg Anderson
Commissioner, Isanti County
Treasurer, Metropolitan Emergency Services Board

METROPOLITAN
EMERGENCY SERVICES BOARD

2099 UNIVERSITY AVENUE WEST
SAINT PAUL, MINNESOTA
55104-3431

PHONE 651-643-8395
WWW.MN-MESB.ORG

TO: Metropolitan Emergency Services Board

FROM: Isanti County Commissioner Greg Anderson, MESB Treasurer

RE: Treasurer's Report – September 2020

DATE: October 20, 2020

As Treasurer for the Metropolitan Emergency Services Board it is necessary to review the following documents:

- Monthly summary financial reports for Administration, 9-1-1, Radio and EMS
- Explanation for significant variance from budget report for Administration, 9-1-1, Radio and EMS.

The review was conducted on October 20, 2020.

Sincerely,

Gregory C. Anderson

Greg Anderson
Commissioner, Isanti County
Treasurer, Metropolitan Emergency Services Board

METROPOLITAN EMERGENCY SERVICES BOARD

Meeting Date: October 29, 2020
Agenda Item: 3D. Approval of Amendments to Appendix C of Metro Radio Standards
Presenter: Fredrick

RECOMMENDATION
The Executive Committee recommends the approval of changes to Appendix C of the Metro Radio Standards.

BACKGROUND
The Metropolitan Emergency Services Board has established 43 standards for operating the ARMER system in the Metro Region. These standards range from how utilities are billed to how to request changes on the system. Several standards were updated after the merger of the 9-1-1 and Radio Boards and the creation of the MESB but have not had language or content changes for over 10 years.

ISSUES & CONCERNS
One Metro Radio Standard has been reviewed for content and language changes.

Updates to Appendix C were mainly made to include references for encryption, as several entities are considering encryption for radios, or have already made the transition. Other changes include references to State LMR standard and temporary access for talkgroups.

The standard will also be made ADA compliant.

The Radio TOC has reviewed the standard and has approved the changes outlined.

FINANCIAL IMPACT
None to MESB.

MOTION BY:
SECONDED BY:
MOTION:

PASS/FAIL

APPENDIX C – TALK GROUP PERMISSION LETTER TEMPLATE

METRO REGION
800 MHz Trunked Regional Public Safety Radio System
Standards, Protocols, Procedures

Document Section:	**Appendices**	Radio TOC Approval – Signature:
Sub-Section:	**METRO Appendix C**	
Procedure Title:	**TALK-GROUP PERMISSION LETTER TEMPLATE**	
Date Established:	**5/12/01**	
Replaces Document Dated:	**5/21/01**	MESB Approval - Signature:
Date Revised:	**~~2/25/09~~ 6/11/20**	

1. Purpose or Objective

The purpose of this template is to provide a guide for requesting the use of another owner's talkgroup resources. ~~Note that this is a two-sided, one sheet document.~~ Procedure for use of this letter is found in SECB Standard LMR-13 ~~ARMER Standard 2.7.0~~ —*Use of Shared Talk Groups*.

(See next page)

Date:~~FINAL~~ Requesting Agency:~~FINAL~~

Metropolitan Emergency Services Board - ARMER System

AUTHORIZATION TO USE TALK-GROUPS NOT OWNED BY THE REQUESTING AGENCY

Date: _____

Requesting Agency: _____

Authorizing Agency: _____

Reason for Request ~~☐~~ __Add Talk Group(s) to Radios
Add Talkgroup(s) to Dispatch Console
~~☐~~ __Scan Talk Group(s)
~~☐~~ __Other _____

I. Request permission to ADD the following talk-groups

Talkg ~~G~~roup	**To Be Installed in: (i.e., Portable, Mobile, Command Post)**	**For the following Work Units:**	**If encrypted, CKR #**

II. Request permission to SCAN/ MONITOR the following talk-groups

Talkg ~~G~~roup	**To Be Installed in: (i.e., Portable, Mobile, Command Post)**	**To be monitored by the following positions:**	**Request for Receive Only**	**If encrypted, CKR #**

III. For Encrypted Talkgroup Requests

A. If you are given permission for a talkgroup that is encrypted, neither the talkgroup nor the encryption key will be shared without written permission from the grantor entity.

B. The encrypted talkgroup will be granted and programmed via:

__In-person Encryption Key transfer
__Keyloader to Keyloader transfer
__Loaded by granting agency keyloader only
__Other: please specify

IV~~II~~. Other Request/ Requirements (Explain)

_____

~~I~~V~~I~~. Reason for Request

Date:~~FINAL~~ Requesting Agency:~~FINAL~~

Note: If given permission for talkgroups on a temporary or event basis, the permission will be rescinded on dd/mm/yyyy.

_____

(Attach supporting documentation)

Name of individual completing application_____

Address_____

Phone_____ E-mail address_____

Date:~~FINAL~~ Requesting Agency:~~FINAL~~

This Page~~Side~~ for Authorizing Agency U~~u~~se Only

Metropolitan Emergency Services Board - ARMER System

AUTHORIZATION TO USE TALK GROUPS NOT OWNED BY THE REQUESTING AGENCY

Request Approved_____ Approved with Conditions_____ Denied_____

Conditions:

_____

_____

_____

_____

_____

Authorized Signature: _____

Name of Authorizing Individual _____

Address_____

Phone_____ E-mail address_____

METROPOLITAN EMERGENCY SERVICES BOARD

Meeting Date: October 29, 2020
Agenda Item: 3E. Approval of Metro Transit Bi-Directional Amplifier Addition
Presenter: Fredrick

RECOMMENDATION

The Executive Committee recommends approval of the Metro Transit request for a bi-directional amplifier equipment addition.

BACKGROUND

Metro Transit is requesting a bi-directional amplifier (BDA) to be added at the Mall of America transit facility. This addition will provide coverage across the facility where there is little to no coverage currently. This BDA will also provide coverage for the City of Bloomington Police Department, which shares the facility.

ISSUES & CONCERNS

The requested BDA equipment will connect to the ARMER system, utilizing the City Center site.

Since the writing of the letter to the Radio TOC, Metro Transit has received FCC registration for these devices.

FINANCIAL IMPACT

None to MESB.

MOTION BY:
SECONDED BY:
MOTION:

PASS/FAIL

September 10, 2020

Bob Shogren, Chairman
Radio Technical Operations Committee
Bi Directional Amplifier Request

Metro Transit is seeking permission to add Bi Directional Amplifiers at the Mall of America Transit facility.

This unit will be installed at the Mall of America Transit Center located at 60 East Broadway in the city of Bloomington. This unit is needed to enhance the coverage in the hallway, bathrooms, Transit platform and Police Department office where there is little to no coverage. This will also provide coverage for the City of Bloomington who have a police office next to the transit office.

These units will utilize the City Center site just like the rest of Metro Transit's BDA's. Metro Transit is currently in the process of getting these units registered with the FCC.

Sincerely,

Chad LeVasseur
Manager of Communication Systems
Metro Transit

METROPOLITAN EMERGENCY SERVICES BOARD

Meeting Date: October 29, 2020
Agenda Item: 3F. Approval of 2021 Regional Grant Funding Priorities
Presenter: Eggimann/Fredrick

RECOMMENDATION

The Executive Committee recommends including the following 9-1-1 items as regional funding priorities for grants available in 2021 (in priority order):

- CAD-to-CAD Regional Hub and Feasibility Study
- Vendor-provided resiliency training for telecommunicators
- PSAP Security Audits
- PSAP Back-up Equipment Cache
- Other 9-1-1 call processing or dispatch-related vendor-provided training
- T-CPR Training

The Executive Committee recommends including the following radio items as regional funding priorities for grants available in 2021 (in priority order):

- Vendor-provided technical training
- Communications Response Task Force (CRTF) training/exercise
- Assistance to attend the 2021 Public Safety Communications Conference
- Creation of an updated ARMER training video
- Purchase of laptop radio consoles to be used throughout the region
- Funding local Bi-directional amplifier (BDA) requests

BACKGROUND

Emergency Communication Networks (ECN) Division and the Statewide Emergency Communications Board (SECB) require regions to annually approve regional funding priorities. These priorities are to include projects/items/concepts for which regions can apply for grant funds through the SECB process. In the past, grants were only open to radio projects.

ISSUES & CONCERNS

9-1-1 projects are now eligible for grant funding. Due to this, both the 9-1-1 TOC and the Radio TOC develop their list of regional funding priorities. Grants are structured so that both 9-1-1 and radio projects apply for the same grant funds and are included in the same competitive structure.

MOTION BY:
SECONDED BY:
MOTION:

PASS/FAIL

METROPOLITAN EMERGENCY SERVICES BOARD

Meeting Date: October 29, 2020
Agenda Item: 3F. Approval of 2021 Regional Grant Funding Priorities
Presenter: Eggimann/Fredrick

State grant objectives and SECB funding hierarchy will determine which projects MESB staff will include in the grant applications. Generally, staff will apply for the highest priority project from both areas.

FINANCIAL IMPACT
None to the MESB other than staff time to apply for and process grants. Equipment will require a 50% match from the awarded agency.

MOTION BY:
SECONDED BY:
MOTION:

PASS/FAIL

METROPOLITAN EMERGENCY SERVICES BOARD

Meeting Date: October 29, 2020
Agenda Item: 3G. Approval of Amendments to the Anoka County Participation Plan
Presenter: Fredrick

RECOMMENDATION

The Radio Technical Operations Committee recommends approval of the amendment to the Anoka County ARMER participation plan*.

*The Radio TOC meets on Wednesday, October 28. This is being included in anticipation of a recommendation of approval from the Radio TOC.

BACKGROUND

Anoka County has been an ARMER participant since 2003. It has an approved full ARMER participation plan.

ISSUES & CONCERNS

Anoka County requests approval of an amendment to its ARMER participation plan to add five new MCC7500 consoles and change the number of console positions to 20 for future growth and to accommodate what is currently being utilized. In addition, Anoka County is making updates to its logger.

Anoka County has received federal CARES Act money to make these purchases. Anoka County plans to use the new consoles at its alternate dispatch area in the training room. For future planning, Anoka County could use the traditional consoles at a new facility that may be built in upcoming years.

FINANCIAL IMPACT

None to MESB.

MOTION BY:
SECONDED BY:
MOTION:

PASS/FAIL

Anoka County
COUNTY ADMINISTRATION
Emergency Communications Center / 911 / Radio Service

August 24, 2020

Participation Plan Amendment

Anoka County is formally requesting approval of an amendment to its participation plan to add five new MCC7500 consoles. Currently Anoka County operates 14 dispatch positions. We will be increasing our console count to 19 MCC7500 consoles.

There will not be any changes to CCGWs or logging with this addition. Anoka County has enough IDs to accommodate the additional consoles.

Thank you,

Valerie Sprynczynatyk
Emergency Communications Director

Additional Items for Anoka County request:

The Radio TOC heard the request for the Anoka County participation plan amendment on September 23, 2020. The group did make a motion to move the request forward since it is using CARES Act money that is expiring soon, but did ask for some follow-up items. Those items included:

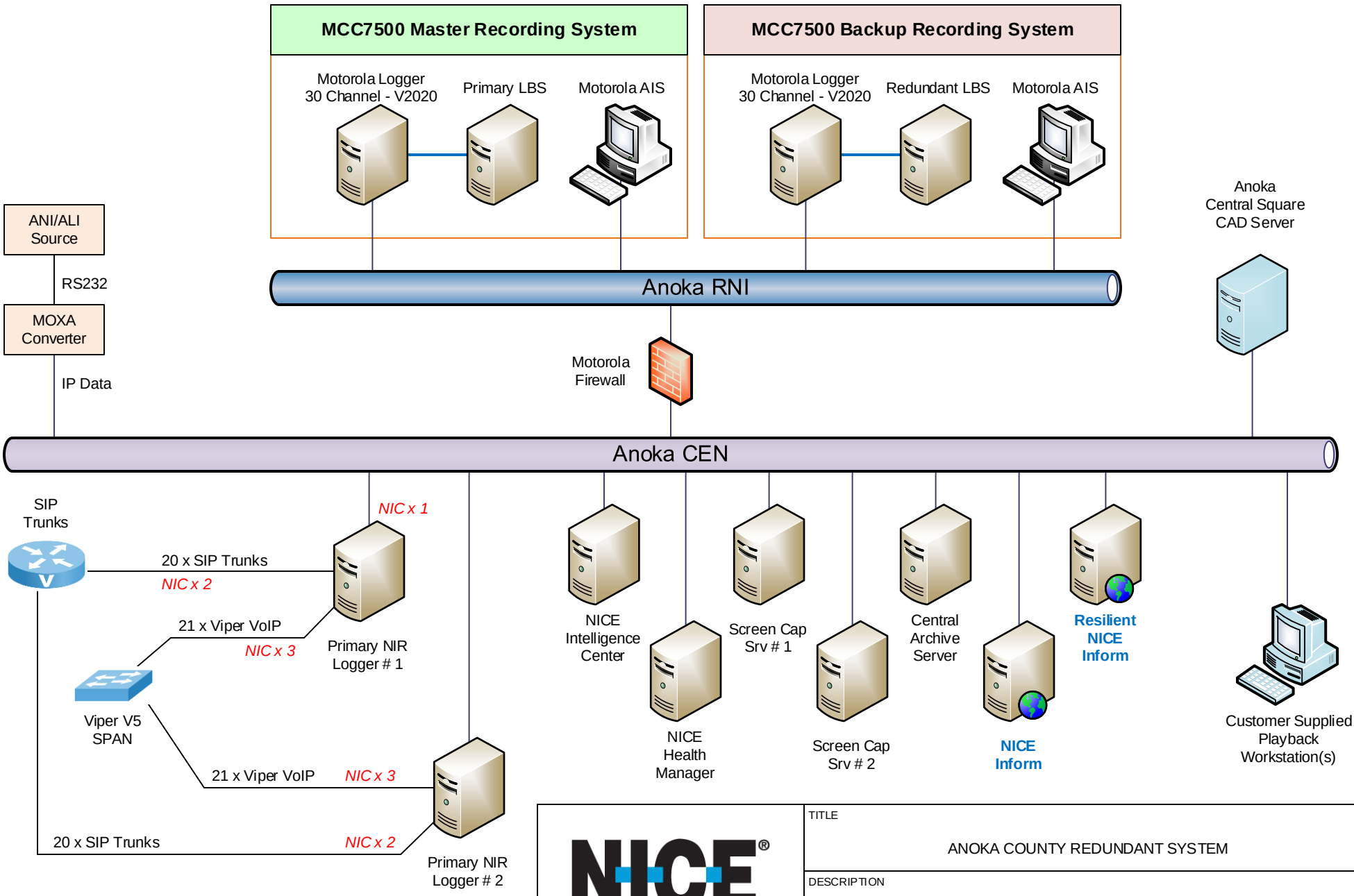
- Identify the system administrator
- Note R56 compliance
- Logger info
- Change position number to 20
- Technical drawing

As of Friday, October 16, 2020, the following items have been addressed:

Identify system administrator: Cory DeMuth has taken the position of Radio System Administrator in Anoka County. He still has to go through MnDOT and Motorola training to become a state recognized Level 2 system administrator. Until that happens, Curt Meyer and King Fung from Hennepin County have been identified as system administrators to assist Anoka.

Logger info/Technical drawing from NICE was received and included in the packet.

Change position number to 20: information was provided that states Anoka County has been allocated 25 licenses from Motorola.



This diagram is for informational purposes only. It is not meant to depict the actual network design or configuration.

NICE®	TITLE: ANOKA COUNTY REDUNDANT SYSTEM		
	DESCRIPTION: MOTOROLA AND NICE WITH INFORM		
DRAWN BY: DAVE LANGLANDS		FILENAME: ANOKA OVERVIEW V1.VSD	REV: 1
REVISED: 10/5/2020	SCALE: NTS		SHEET: 34 OF 1

METROPOLITAN EMERGENCY SERVICES BOARD

Meeting Date: October 29, 2020
Agenda Item: 3H. Approval of Multi-Entity MCC7500e Console Project & Connectivity Plan
Presenter: Fredrick

RECOMMENDATION

The Radio Technical Operations Committee recommends the approval of the Multi-Entity MCC7500e console project and connectivity plan.

BACKGROUND

Five metro entities (Anoka County, Chisago County, Hennepin County, Hennepin EMS, and Scott County) are participating in a project to purchase and deploy Motorola MCC7550e stations for back-up and emergency operations.

ISSUES & CONCERNS

The five entities which are participating in this project often assist each other with mobile deployments and back-up situations. The partnership gives each entity four ports for dispatch consoles and the costs will be distributed amongst participating entities.

The connections will be housed at the Zone 2 Mobile Switching Office at Hennepin County's location in Plymouth and will use two link operator servers. The back-up link operator server will also be the financial responsibility of each participating entity.

MnDOT has reviewed the technical and architectural proposal and approves the additions.

FINANCIAL IMPACT

None to MESB.

MOTION BY:
SECONDED BY:
MOTION:

PASS/FAIL

Hennepin County Sheriff's Office
1245 Shenandoah Lane N
Plymouth MN 55345

September 2nd, 2020

Ms. Tracey Fredrick
Metropolitan Emergency Services Board
2099 University Ave West
St. Paul, MN 55105

Dear Ms. Fredrick,

Hennepin County Sheriff's Office is working with Anoka County, Chisago County, Scott County, and HCMC EMS on a new MCC7500E dispatch project. This partnership will provide backup dispatch consoles functionality that can be setup with mobile deployments, and/or for telecommute work environments.

The architecture of this system will include 2 link operator servers, a main and a standby. This will be connected and housed at the Zone 2 MSO (mobile switching office) located at the ECF (Emergency Communications Facility) in Plymouth as site 7. Each agency will be allotted 4 ports each for dispatch console positions. The cost of the link operator servers will be distributed between all the agencies, and the cost of each dispatch console will be the responsibility of the user agency. The backhaul links from the dispatch console locations to the link operator servers will be the responsibility of each user agency and will be a cellular connection such as: Firstnet, Verizon, TMobile, or Sprint.

This letter is to request approval of this ARMER Move Addition Changes to our respective plans. If you have any question, please let me know.

King Wai Fung
King Fung
Senior Professional Engineer

CC: Anoka County – Valerie Sprynczynatyk
Chisago County – Jake Thompson
HCMC EMS – Wade Johnson
Hennepin County Sheriff – Curt Meyers
Scott County - Nick Schatz

METROPOLITAN EMERGENCY SERVICES BOARD

Meeting Date: October 29, 2020
Agenda Item: 3I. Approval of Amendment to Ramsey County's 9-1-1 Plan
Presenter: Eggimann

RECOMMENDATION
The Executive Committee recommends approval of the amendment to Ramsey County's 9-1-1 Plan to make their VESTA 9-1-1 answering application geo-diverse.

BACKGROUND
The MESB maintains the consolidated regional 9-1-1 plan. As the 9-1-1 system transitions to Next Generation 9-1-1, changes to the plan must be approved by the regional emergency communications board as well as the Statewide Emergency Communications Board, similar to how changes are approved for the ARMER system.

ISSUES & CONCERNS
Ramsey County Emergency Communications Center (RCECC) wants to add physical diversity and redundancy to its 9-1-1 answering application. This involves moving one of the existing servers from St. Paul to Arden Hills and upgrading the ESInet connectivity at both locations. RCECC proposes two physically diverse ESInet paths to each of the locations for a total of four physically diverse ESInet connections. RCECC will provide the fiber connectivity to link the VESTA servers between the sites.

RCECC intends to configure the VESTA system to enable 9-1-1 calls to be routed simultaneously to workstations at both locations; this permits both locations to be staffed and all the VESTA workstations at both locations to be used, if necessary. RCECC will utilize the current Arden Hills backup center ESInet uniform resource identifier (URI) to receive 9-1-1 calls transferred from other PSAPs. This URI can also support receiving 9-1-1 calls for other metro PSAPs during PSAP abandonment and emergency PSAP consolidation events. This allows RCECC to have a separate 9-1-1 queue in the new VESTA system for outside agencies and gives the ability for an outside agency (or agencies) to utilize the RCECC backup center and only answer calls in the "Outside Agency" queue.

The current ESInet and administrative telephone connectivity to the St. Paul location depend on copper wiring. This copper telephone wiring has become increasingly susceptible to service failure during rain events and wet ground conditions. The requested network change will move the ESInet service to fiber cables that are not as susceptible to water degradation of service, which should improve overall network performance and reliability at the St. Paul location.

MOTION BY:
SECONDED BY:
MOTION:

PASS/FAIL

METROPOLITAN EMERGENCY SERVICES BOARD

Meeting Date: October 29, 2020
Agenda Item: 3I. Approval of Amendment to Ramsey County's 9-1-1 Plan
Presenter: Eggimann

(See attached diagrams and narrative)

The two diverse fiber ESInet connections to the St. Paul location have been identified. A new fiber path to the Arden Hills location is planned. Diversity options for the fourth path to the Arden Hills location are still being finalized, with options from both Lumen and MN.IT being considered.

FINANCIAL IMPACT

There should be no financial impact to the MESB for this ESInet change. Following past practice, RCECC will be responsible for the non-recurring installation costs associated with this implementation. The state 9-1-1 program at ECN will be responsible for the monthly recurring costs for two diverse ESInet connections but may not cover the cost for the additional two ESInet connections being requested by RCECC. The MESB, RCECC, and ECN will review the reimbursement together to ensure consistency between what ECN is doing in greater Minnesota and the metro area.

MOTION BY:
SECONDED BY:
MOTION:

PASS/FAIL

Request from Ramsey County for a modification to the Ten-County Metropolitan Area Consolidated 9-1-1 Plan maintained by the Metropolitan Emergency Services Board

Background
Ramsey County Emergency Communications Center, as part of a life-cycle replacement upgrade to their 9-1-1 Customer Premise Equipment (VESTA 9-1-1), intends to add active geo-diversity and redundancy to their 9-1-1 emergency and non-emergency telephone lines.

The current configuration includes two separate VESTA 9-1-1 systems, one at the primary site in Saint Paul, and a second at the disaster recovery site in Arden Hills. The two systems are currently run independently and do not have any connections between them for redundancy.

The new VESTA 9-1-1 system will split the A and B servers between Saint Paul and Arden Hills, with County owned, redundant fiber optic connections between them, creating a single geo-diverse VESTA 9-1-1 system with redundant ESInet and SIP (Session Initiation Protocol) non-emergency connections at each location.

Necessity for 9-1-1 Plan Change
Copper wire infrastructure surrounding the Saint Paul location is aged and continues to have problems with moisture and flooding. Upgrading current ESInet connections to fiber, and non-emergency lines to SIP at Saint Paul, and having redundant Fiber and Copper connections available in Arden Hills, will significantly increase the reliability, redundancy, and capacity of Ramsey Counties 9-1-1 emergency and non-emergency infrastructure. *See figure 1 and figure 2 attachments.*

The plan change will allow both 9-1-1 and non-emergency calls to be taken simultaneously at both Arden Hills and Saint Paul. Calls taken at either location will be visible to telecommunicators and dispatchers at either location, allowing the two geo-diverse locations to function seamlessly as a single system. If the two sites lose connectivity between them, they both act as fully functional independent sites until connectivity is restored.

Requested Change
Ramsey County PSAP requests the ten-county Metropolitan Area Consolidated 9-1-1 Plan maintained by the Metropolitan Emergency Services Board, be modified allowing for the two current ESInet connections in Saint Paul to be upgraded from copper wire DS1 connections to 10 Mbps ethernet fiber optic connections. Additionally, an upgrade of the current single DS1, copper wire connection, in Arden Hills to a 10 Mbps ethernet fiber optic connection, and the addition of a second redundant ESInet connection in Arden Hills *(this redundant Arden Hills connection is not yet finalized, copper versus fiber. In order to provide the necessary capacity as a consolidation site, current options for the second connection are 4 x DS1 circuits through Lumen, or a circuit through Minnesota IT Services, (MNIT)).*

Projected Non-Recurring Costs
It is anticipated there will be no non-recurring costs related to the requested plan change.

Projected Recurring Costs

RCECC St Paul -primary		10 Mbps Private IQ Port	$ 217
RCECC St Paul – primary		NMS- Select	$ 50
RCECC St Paul -primary		10 Mbps CenturyLink Loop	$ 620
RCECC St Paul - primary		Diversity	$ 150
RCECC St Paul - secondary		10 Mbps Private IQ Port	$ 217
RCECC St Paul - secondary		NMS- Select	$ 50
RCECC St Paul - secondary		10 Mbps CenturyLink Loop	$ 620
RCECC St Paul - secondary		Diversity	$ 150
			$ 2,074
RCECC current St Paul circuit costs			$ 1,500
Difference in old and new RCECC St Paul total MRC			$ 578
RCECC Arden Hills -secondary		6 Mbps Private IQ Port	$ 175
RCECC Arden Hills -secondary		NMS- Select	$ 50
RCECC Arden Hills -secondary		4xDS1 CenturyLink Loop	$ 125
RCECC Arden Hills -secondary		4xDS1 CenturyLink Loop	$ 125
RCECC Arden Hills -secondary		4xDS1 CenturyLink Loop	$ 125
RCECC Arden Hills -secondary		4xDS1 CenturyLink Loop	$ 125
RCECC Arden Hills -secondary		Diversity	$ 150
			$ 875

RCECC Arden Hills - primary		10 Mbps Private IQ Port	$ 217
RCECC Arden Hills –primary		NMS- Select	$ 50
RCECC Arden Hills -primary		10 Mbps CenturyLink Loop	$ 620
RCECC Arden Hills -primary		Diversity	$ 150
			$ 1,037
Total both circuits AH site			$ 1,912
RCECC current Arden Hills circuit costs			$ 350
Difference in old and new RCECC Arden Hills total MRC			$ 1,562

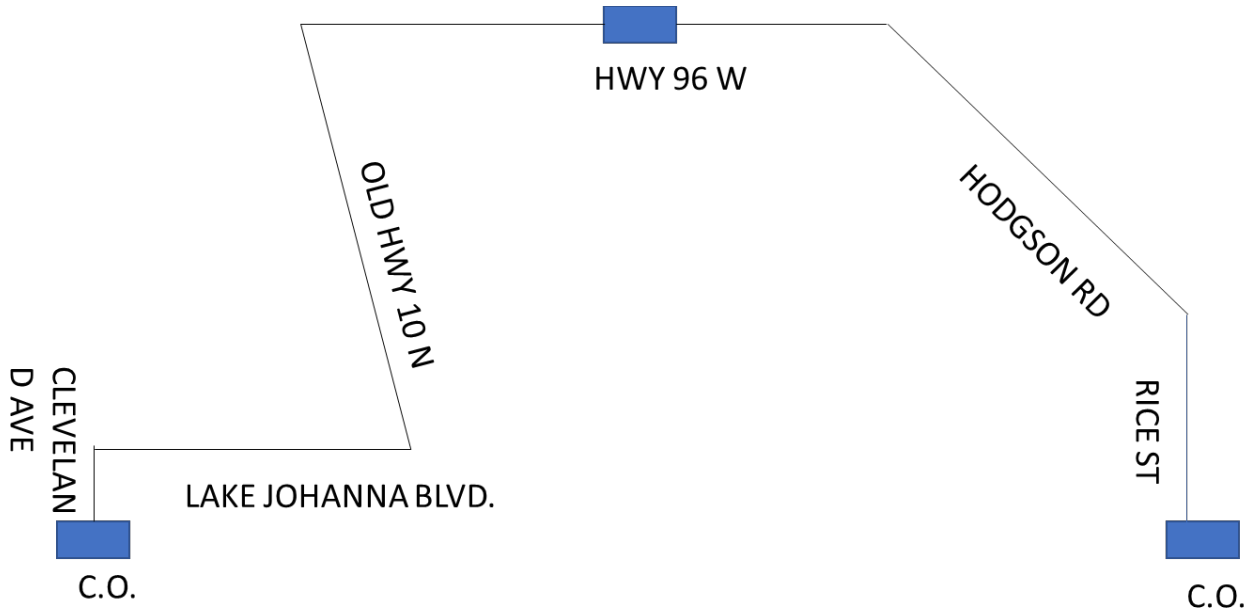


Figure 1. Arden Hills site, 1411 Paul Kirkwold Dr, with redundant geo-diverse ESInet connectivity.

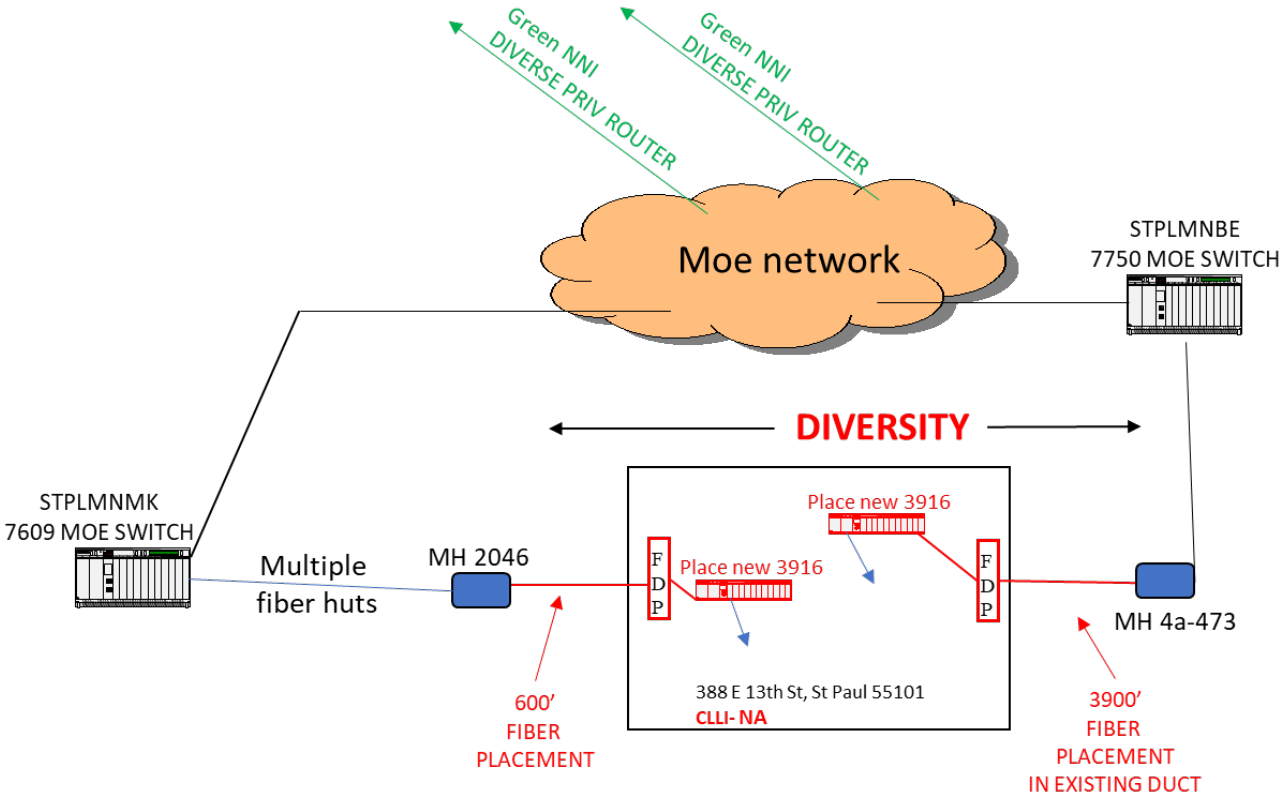


Figure 2. Saint Paul site, 388 13th St, with two fiber optic ESInet connections.

MOTOROLA SOLUTIONS

Solutions Engineering

42505 Rio Nedo
Temecula, CA 92590
Tel. 951.719.2100
Fax 951.269.2727

Ramsey County – Arden Hills, MN

Geo Diverse VESTA® 9-1-1 Call Processing

Solution Diagram from Motorola Solutions Inc.

Assumptions / Notes / Purpose:	Legend	
The following drawings provide a high level illustration of the proposed deployment model of using virtualized servers with a VESTA 9-1-1	LAN A LAN B Digital Analog Mixed WAN	Optional Optional Demarc Point VRRP 10GbE

Title: **Ramsey County – Arden Hills MN Solution Diagram**	
Project: **Ramsey County – Arden Hills MN**	
Version: 08.17.20a	Date: Aug 17, 2020
☐ Preliminary ☑ Final	
Filename: Ramsey County MN Diagram 08.17.20a.vsd	
Engineer: Mark Gallant/Tim Tallman	Page: 1 of 4

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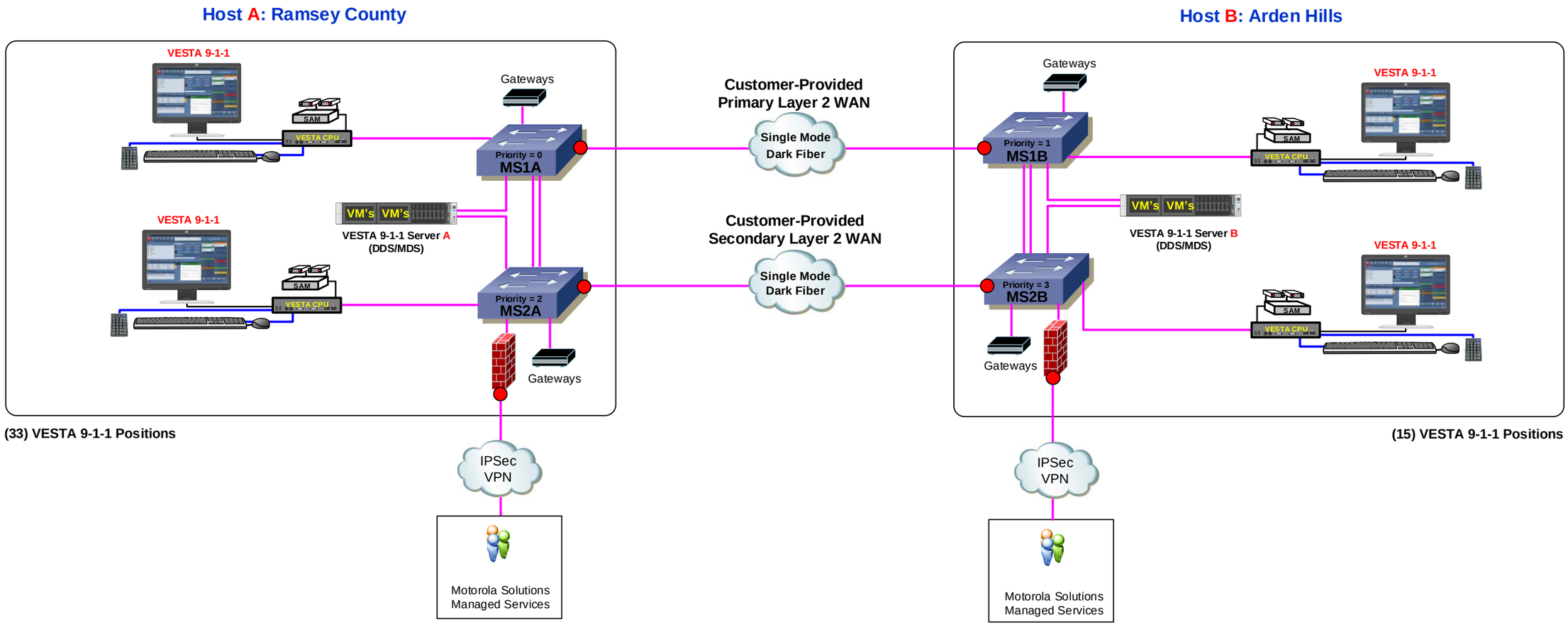
Ramsey County – Arden Hills VESTA 7.4 9-1-1 Geo-Diverse System



MSI - Network Demarcation Point

Core and Access Layer Switches
(3) Cisco 2960-X **at Host A**
(3) Cisco 2960-X **at Host B**

GBIC's for Layer 2 Connections
(2) GBIC SFP MOD GLC-ZX-SM **at Host A**
(2) GBIC SFP MOD GLC-ZX-SM **at Host B**

This diagram is conceptual in nature and used to provide an overview only.

Ramsey County - Arden Hills VESTA 7.4 9-1-1 Geo-Diverse System

MOTOROLA SOLUTIONS

10-Digit Non-Emergency **SIP** Calls

CenturyLink C.O

10-Digit Non-Emergency **SIP** Calls

9-1-1 Calls using RFAI **SIP**

WEST TCC w RFAI 9-1-1

9-1-1 Calls using RFAI **SIP**

WEST/Intrado

Host A: Ramsey County

(33) VESTA 9-1-1

CTL ADTRAN

(1) PRI Ckt.
AAC Outbound Circuit

(2) PRI Ckts.

Motorola Solutions Fortinet **60E** EIM/SMS Firewall

Motorola Solutions Fortinet **60E** Network Firewall

AudioCodes Gateways

HUD 55" Display

Aries Media Player

AAC (CFS Server)

8TB NAS

A ALI DB

VESTA 9-1-1 Server A (DDS/MDS)

VM's VM's

VESTA Analytics Standard Svr.

Heads Up Display Med. Enterprise Server

Admin PC

Analytics/HUD/AV Admin PC's x 2

GBIC

TS-4

TS-4

Recorder

Black Box TL159A-R4

Black Box TL601A-R2

Cisco 2960X 48-Port Switches x 3

GBIC

VESTA Map Local Server

CAD Server

9483 NetClock Time Server/ Master Clock

B ALI DB

VESTA 9-1-1

SAM

VESTA CPU

Netclock Antenna

To Ground

Ramsey County A
388th 13th Street
St. Paul, MN 55101

Site ID# 103825

Motorola Solutions Managed Services

IPSec VPN

Primary Layer 2 WAN (SM Dark Fiber)

Secondary Layer 2 WAN (SM Dark Fiber)

Customer-Provided Dark Fiber

Host B: Arden Hills

(15) VESTA 9-1-1

CTL ADTRAN

(1) PRI Ckt.
AAC Outbound Circuit

(2) PRI Ckts.

Motorola Solutions Fortinet **60E** EIM/SMS Firewall

Motorola Solutions Fortinet **60E** Network Firewall

AudioCodes Gateways

Analytics Admin PC x 1

Admin PC

Customer-Provided Display

HUD Display

Aries Media Player

A ALI DB

VESTA 9-1-1 Server B (DDS/MDS)

VM's VM's

GBIC

TS-4

TS-4

Recorder

Black Box TL601A-R2

Black Box TL159A-R4

Cisco 2960X 48-Port Switches x 3

GBIC

CAD Server

9483 NetClock Time Server/ Master Clock

B ALI DB

VESTA 9-1-1

SAM

VESTA CPU

Netclock Antenna

To Ground

Arden Hills B
1411 Paul Kirkwood Drive
Arden Hills, MN 55112

Site ID# 108443

This diagram is conceptual in nature and used to provide an overview only.

Drawing Revision Notes:

Revision 06.11.20a – [mdg] initial design
Revision 08.03.20a – [mdg] updated with PRI from CenturyLink versus SIP for admin calls.
Revision 08.11.20a – [mdg] synced the diagram up with the proposal
Revision 08.17.20a – [mdg] added Aries Media Player to Arden Hills with customer providing the display panel.

MOTOROLA SOLUTIONS

METROPOLITAN EMERGENCY SERVICES BOARD

Meeting Date: October 29, 2020
Agenda Item: 3J. Approval of 2021-2022 Lease with MMCD
Presenter: Rohret

RECOMMENDATION
The Executive Committee recommends approval of the renewal of the 2021-2022 lease agreement with Metropolitan Mosquito Control District (MMCD) for office and storage space.

BACKGROUND
MMCD owns and manages the Metro Counties Government Center building, from which the MESB leases office and storage space, as well as meeting rooms. The current lease is January 1, 2019 through December 31, 2020.

ISSUES & CONCERNS
The term of the proposed renewal agreement is January 1, 2021 through December 31, 2022. The agreement includes a three percent (3%) rent increase over the lease term, which will increase our monthly rent payment by $64.00, to $2,201.00 per month. The rent includes utilities, security, cleaning services and parking.

MESB Counsel has reviewed the lease agreement.

FINANCIAL IMPACT
The rent increase was not included in the 2021 Operational Budget, due to MESB staff error, but the total rent increase of $768 should not adversely affect the overall budget.

MOTION BY:
SECONDED BY:
MOTION:

PASS/FAIL

LEASE

This lease, entered into as of the first day of January, 1, 2021, between Metropolitan Mosquito Control District; a government corporation (hereinafter called "Lessor") having an address of 2099 University Avenue West, St. Paul, Minnesota 55104-3431 and the Metropolitan Emergency Services Board, a Minnesota joint powers organization (hereinafter called "Lessee"). 2099 University Avenue West, St. Paul, Minnesota 55104.

1. DEMISE: Lessor leases to Lessee and Lessee leases from Lessor the following: the office space described in the attached document marked as Exhibit "A" and made a part hereof (the "Office Space"), located at 2099 University Avenue West, St. Paul, Minnesota. In addition, Lessee shall have the right, in common with Lessor and those lawfully claiming under Lessor, to use the driveways, sidewalks, parking areas, entryways, staircases, elevators, lavatories, and other common facilities on the Land and the Building (the "Common Areas"). See (Exhibit “B”).

2. TERM: To have and hold said Office Space together with all rights, easements, privileges and appurtenances thereunto belonging (all of which are hereinafter collectively referred to as the "Premises") unto Lessee for a term commencing January 1, 2021, the date that the Lessee takes possession of the Premises (the "Commencement Date") and ending on the last day of December 2022.

3. OPTION TO RENEW: It is agreed that Lessee is granted the option to renew this lease under the same terms and conditions, or modified terms and conditions as the Lessee and Lessor may mutually agree to, for additional periods agreed to.

To exercise said option Lessee must notify Lessor in writing no later than thirty (30) days before the expiration of this lease.

4. USE OF PREMISES: The Premises shall be used and occupied by Lessee for general office and for public meetings. Lessee shall be entitled to use the Board room in the Building, at no additional cost and shall have priority over non-tenants for scheduling use of the Board room. The Board room (room 205) may be used when an event occurred that interrupted or overwhelmed regional response capabilities as described in a Memorandum of Agreement between the Lessor and Lessee (Exhibit “C”).

5. RENT: Lessee covenants to pay Lessor, without demand, rent for the Premises in monthly payments of: $2,201.00, for the period from January 1, 2021 through December 31, 2022. Lessee and Lessor agree that they may, from time to time, share resources for their mutual benefit, and that any charges that they agree to for any items shared will not be part of this lease, but may be added to or subtracted from lease invoices for purposes of simplified payment.

6. BUILDING SERVICES: Lessor shall furnish Lessee the following services:

A. Maintenance, repair, cleaning/custodial/janitorial services including trash removal and snow and ice removal for Building and Land, (Exhibit C) including, but not limited to, the Common Areas and the Premises;

B. Heat and air conditioning service throughout the year for the Building and the Premises to the extent required to maintain comfortable interior temperatures, proper humidity and ventilation;

C. Public toilet facilities on each floor of the Building;

D. Gas, electricity and water (In the event gas, electricity or water rates are increased during the terms of this lease or its renewal, Lessee agrees to pay its proportionate share of any increase), which shall be payable as additional Rent.

Lessor shall make such repairs or replacements to Building utility distribution lines and other facilities as may be required to restore any such service interrupted or suspended. In the event of an interruption or suspension of, or fluctuation in, any Lessor provided building service which continues for a period of five (5) or more consecutive days of Lessee’s normal business operation and which, in the opinion of Lessee deprives Lessee of beneficial occupancy of the Premises, Lessee shall have the right to provide such substitute service at the sole cost, risk, and liability of Lessor, but such cost, risk, and liability not to exceed the rents payable for the applicable period, and deduct the actual cost thereof from the next payment(s) of rent.

7. LOSS OR DAMAGE TO PROPERTY: All personal property belonging to Lessee or any other person located in or about the Premises or the Building shall be there at the sole risk of Lessee or such other person, and neither Lessor nor Lessor’s agents or employees shall be liable for the theft or misappropriation thereof, or

for any damage or injury thereto, or for the death or injury of Lessee or any other persons or damage to property caused by water, snow, frost, steam, heat, cold, dampness, falling plaster, explosions, sewers or sewage, gas, odors, noise, the bursting or leaking of pipes, plumbing, electrical wiring, and equipment and fixtures of all kinds, or by any act or neglect of other tenants or occupants of the Building, or of any other person, or caused in any other manner whatsoever, unless the same shall proximately result from the negligence of Lessor or Lessor's agents or employees or from failure of Lessor to perform its obligations hereunder.

8. HOLDING OVER: Should Lessee remain in possession of the Premises after the expiration of the term of this lease as the same may have been extended, then, unless a new agreement in writing shall have been entered into between the parties hereto, Lessee shall be a tenant from month to month. Lessee shall be required to give a sixty (60) day notice before vacating the Premises. Such tenancy shall otherwise be subject to all of the covenants and agreements of this lease, at a monthly rental equal to the last monthly installment of rent payable hereunder.

9. ASSIGNMENT AND SUBLETTING: Lessee shall not assign, mortgage, hypothecate or convey this lease or any interest therein, or sublet the Premises or any part thereof, without in each case the prior written consent of Lessor which shall not be unreasonably withheld or delayed. Lessor hereby consents to the transfer of Lessee's interests hereunder to a successor organization; provided, however, that such transferee shall assume the duties and obligations of Lessee hereunder, and provided, further, that Lessee shall not be relieved of liability therefore.

10. SURRENDER: At the expiration of the term hereof, Lessee shall quit and surrender the Premises, together with all installations, improvements, and alterations (including partitions) which may have been installed by Lessor or Lessee (except Lessee's property as provided for in Paragraph 12 below), broom clean and in as good condition as when possession was accepted by Lessee; reasonable use, wear and tear, loss or damage by fire, the elements or other casualty and taking by eminent domain excepted. If Lessee fails to remove Lessee's equipment that it has a right to remove from the Premises within thirty (30) days of the date Lessee is required to surrender the Premises, Lessee shall be conclusively presumed to have abandoned the same, and ownership thereof shall forthwith vest in Lessor without payment or credit to Lessee. If Lessee fails to remove said equipment at the expiration of the term hereof, Lessee shall be responsible for payment of rent on a per diem basis for so long as said equipment remains on the Premises, for up to thirty (30) days.

11. USE OF PREMISES BY LESSEE: Subject to the obligations of Lessor set forth in Paragraph 6 above, Lessee shall take good care of the Premises and the fixtures and improvements therein and will not sell or store therein any spirituous, malt or vinous liquors, or any narcotic drugs; will not make or permit any use of the Premises which is forbidden by ordinance, statute or government regulation or which may increase the premium cost of, or invalidate, any policy of insurance carried on the Building or covering its operation, and will comply with, the Rules and Regulations, if any. Lessee shall give prompt notice to Lessor in case of fire or accident in the Premises or of any defects, damage or injury therein or to any fixtures or equipment.

12. LESSEE'S PROPERTY: Lessee shall have the right to place in the Premises at such locations therein as Lessee may from time to time determine, Lessee's furniture, trade fixtures and business office machines and equipment. Such personal property shall be and remain the property of Lessee, and may be removed, replaced or supplemented by Lessee, at any time during the lease term, upon its expiration or upon its earlier termination in any manner; Lessee, however, agreeing to repair at Lessee's expense any damage to the Premises and the Building caused by such placement or removal.

13. UNTENANTABILITY: If the Premises shall be partially damaged by fire or other casualty, acts of God or other cause, and such damage can reasonably be repaired within sixty (60) days after such damage occurs, then this lease shall remain in full force and effect and the damage to the Premises shall be promptly repaired by the Lessor within such period. Rent shall be abated until such repairs are completed and full possession of the Premises is restored to Lessee on a per diem basis proportionate to the extent and for the period that the Premises are unfit for occupancy. Provided Lessor commences promptly and proceeds diligently with such repair, Lessor shall incur no liability on account of any delay in the completion of such repairs which may arise by reason of labor difficulties or any other cause beyond Lessor's control. If the Premises or the Building are made unfit for occupancy by fire or other casualty, acts of God or other cause, to the extent to which such cannot reasonably be repaired within sixty (60) days after such casualty, Lessor and Lessee shall each have the right to elect to terminate this lease as of the date when the Premises or the Building are so made unfit for occupancy, by written notice to the other within fifteen (15) days after that date. If this lease is not so terminated, Lessor shall repair, restore, or rehabilitate the Premises and the Building at Lessor's expense within ninety (90) days after the damage, and rent shall be abated on a per diem basis proportionate to the extent and for the period that the Premises or the Building are unfit for occupancy. In the event Lessor shall not substantially complete the work within said 90-day period, Lessee shall again have the right to elect to terminate this lease, as of the date of such damage, by written notice to Lessor not later than ten (10) days after the

expiration of said 90-day period. Rent shall continue to be abated on a per diem basis to the extent and for the period that the Premises or the Building are unfit for occupancy. In the event of termination of this lease pursuant to this paragraph, rent shall be apportioned on a per diem basis to and including the date Lessee surrenders possession of the Premises.

14. EMINENT DOMAIN: If the whole or any part of the Premises, the Building or the Land shall be appropriated, condemned, taken or otherwise acquired by any public or quasi-public authority under the power of eminent domain, condemnation or other proceedings (a "Taking"), and, in the opinion of Lessee, such Taking makes it impractical for Lessee to continue beneficial occupancy of the Premises, then Lessee shall have the right and option to terminate this lease by giving written notice to Lessor within sixty (60) days next following notice for such Taking, in which event this lease and the estate hereby created shall terminate and wholly expire on the earlier of the date legal title shall vest in the appropriator, or, condemnor or the date following Lessee's notice of termination on which Lessee surrenders possession of the Premises, and all rent shall be prorated and adjusted as of said date. In no event shall Lessee have any claim against Lessor by reason of any Taking; provided, however, that Lessee hereby reserves the right to any award or compensation separately recoverable for loss of business, moving, and relocation expenses or otherwise.

15. DEFAULT: If the rent or any part thereof shall at any time be in arrears and unpaid, and shall so remain for twenty (20) days following written notice by Lessor to Lessee, or if Lessee shall fail to keep and perform any of the other covenants, agreements or conditions of this lease on its part to be performed within thirty (30) days following written notice of such default, except that Lessee shall not be in default hereunder if such performance shall require more than thirty (30) days to complete and Lessee undertakes such performance within such period and proceeds with completion of such performance or if Lessee shall abandon or vacate the Premises during the term hereof, or if the interest of Lessee in the Premises shall be sold under execution or other legal process; then, in any such event, Lessor may enter in and upon the Premises and again have and repossess and enjoy the same as if this lease had not been made, and thereupon this lease and every obligation herein contained on the part of Lessee to be kept and performed shall cease, terminate and be utterly void; without prejudice, however, to the right of Lessor to recover from Lessee or its successors or assigns all rent due up to the time of such entry. The commencement of a proceeding or suit in forcible entry and detainer or in ejectment or otherwise, after any default by Lessee, shall be equivalent in every respect to actual entry by the Lessor. In case of any such default by Lessee and entry by Lessor, Lessor shall use best efforts to relet the Premises for the remainder of said term for the highest rent obtainable and may recover from Lessee any deficiency between the amount so obtained and the amount of rent hereinbefore reserved.

16. QUIET ENJOYMENT: Lessor and heirs, personal representatives, successors and assigns do hereby warrant that it/he/she/they have good and marketable fee simple title to the Land and Building and have the lawful authority to make this lease, and shall defend the Lessee in the quiet enjoyment and peaceable possession of the Premises during the term of this lease and any extension thereof against the claims of all persons whatsoever.

17. SIGNS: Lessor, at its expense, shall provide a sign in the parking lot and a sign at the front entrance of the Premises identifying the Building as the offices of the Metropolitan Emergency Services Board. Lessor, at its expense, shall install signs on the doors or walls outside of any rooms which are included in the Premises, identifying the Premises as the offices of the Metropolitan Emergency Services Board. Lessee may place meeting notices on the bulletin board in the lobby area of the Building. Lessee may also place temporary signs near the Board room on those days the Board room is used by Lessee.

18. LIABILITY: Lessor and Lessee agree that each will be responsible for its own acts and the results thereof, to the extent authorized by law, and shall not be responsible for the acts of the other and the results thereof. The liability of each shall be governed by the provisions of Minnesota Statutes Chapter 466.

19. WAIVER OF SUBROGATION: Lessor and Lessee each hereby release the other and their respective agents and employees, from any claim for damage or destruction to the Premises, the Building or the contents thereof belonging to either, or for business interruption of either, caused by fire or other peril usually covered by fire, extended coverage vandalism and malicious mischief insurance in the amount of the full replacement cost thereof, whether or not such insurance is maintained and in effect, and whether or not any proceeds of insurance are recoverable thereon, whether the loss shall be due to the negligence of either of them or otherwise. It is further agreed that this release or consent thereto shall be included (to the extent same is permitted by the chosen carrier and/or is legally effective) in any insurance coverage carried by either party on the Premises, the Building or property situated therein so that this release shall be binding upon the respective companies carrying such insurance on the Premises, the Building or the contents thereof.

20. INDEPENDENT CONTRACTOR: It is agreed that nothing herein contained is intended or should be construed in any manner as creating or establishing the relationship of a joint venture or partnership between the

parties hereto or as constituting the Lessor as the agent, representative or employee of the Lessee for any purpose or in any manner whatsoever. Lessor is to be and shall remain an independent contractor under this Agreement.

21. RECORDING: If either of the parties hereto desire to record this lease, Lessor and Lessee agree to execute a Memorandum of this lease, which Memorandum of Lease may then be recorded in the Office of the County Recorder of the county in which the Land and Building are located, at the expense of the party desiring recordation.

22. PARAGRAPH HEADINGS: The paragraph headings appearing in this lease are inserted only as a matter of convenience and for reference purposes, and in no way define, limit or describe the scope and intent of this lease, or any paragraph hereof, nor in any way affect it.

23. NOTICES: All notices which may be necessary or proper for either party to serve upon the other shall be effectively served if sent by certified mail, return receipt requested, to the parties hereto at the address set forth in the caption of this lease or at such other address of which one party may so notify in writing the other from time to time.

24. ENTIRE AGREEMENT: This lease contains the entire agreement between the parties hereto and shall not be modified in any manner except by an instrument in writing executed by said parties or their respective successors or assigns in interest.

IN WITNESS WHEREOF, Lessee and Lessor have executed triplicate counterparts of this lease on the day, month and year first above shown.

Lessor: METROPOLITAN MOSQUITO CONTROL DISTRICT

By: _____
Chair

_____
Business Administrator

Date: _____

Approved as to form:

_____
MMCD Counsel

Date: _____

Lessee: METROPOLITAN EMERGENCY SERVICES BOARD

By: _____
Chair

Date: _____

Approved as to form:

_____
MESB Counsel

Date: _____

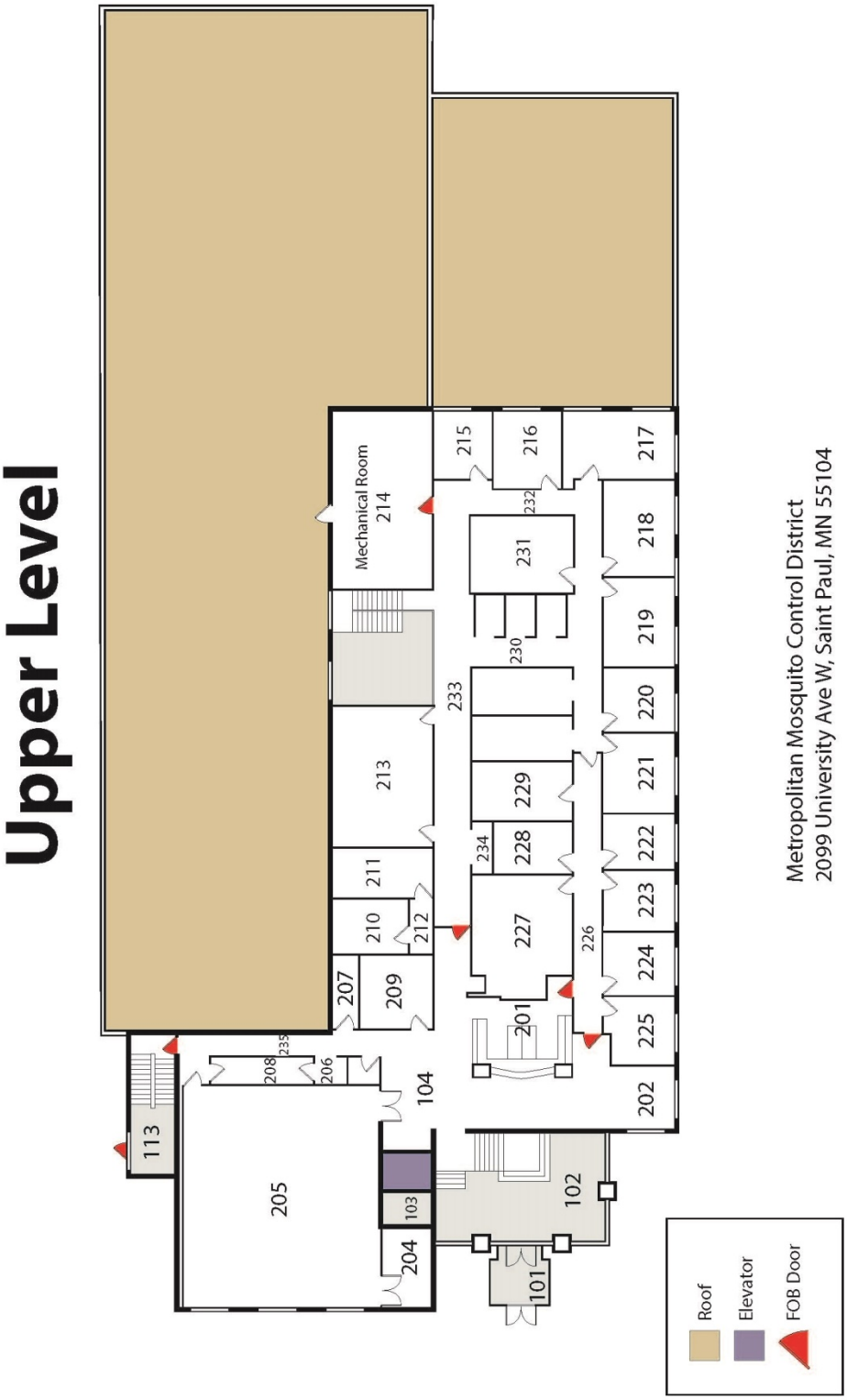
EXHIBIT “A”

Four (4) offices, #’s 222, 223, 224 & 225.	864 sq. ft.
Rm 227 conference room	334 sq. ft.
Rm 228 break/work room	140 sq. ft.
Rm 229	198 sq. ft.
Rm 208 Admin Asst. area	144 sq. ft.
Rm 221	200 sq. ft.
Rm 220	153 sq. ft.
Rm 230 Two (2) Cubicle (48sq. ft. each)	98 sq. ft.
GIS Technician (Rm 233)	120 sq. ft.
Rm 117 Garage Storage 254*.5	127 sq. ft.
Rm 119 Garage Storage 265*.5	132.5 sq. ft.
Rm 115 Pallet shelving 135*.75*.5	50.625 sq. ft.
Rm 115 Garage space (storage for trailers)	630 sq. ft.
Total	3,191.125 sq. ft.

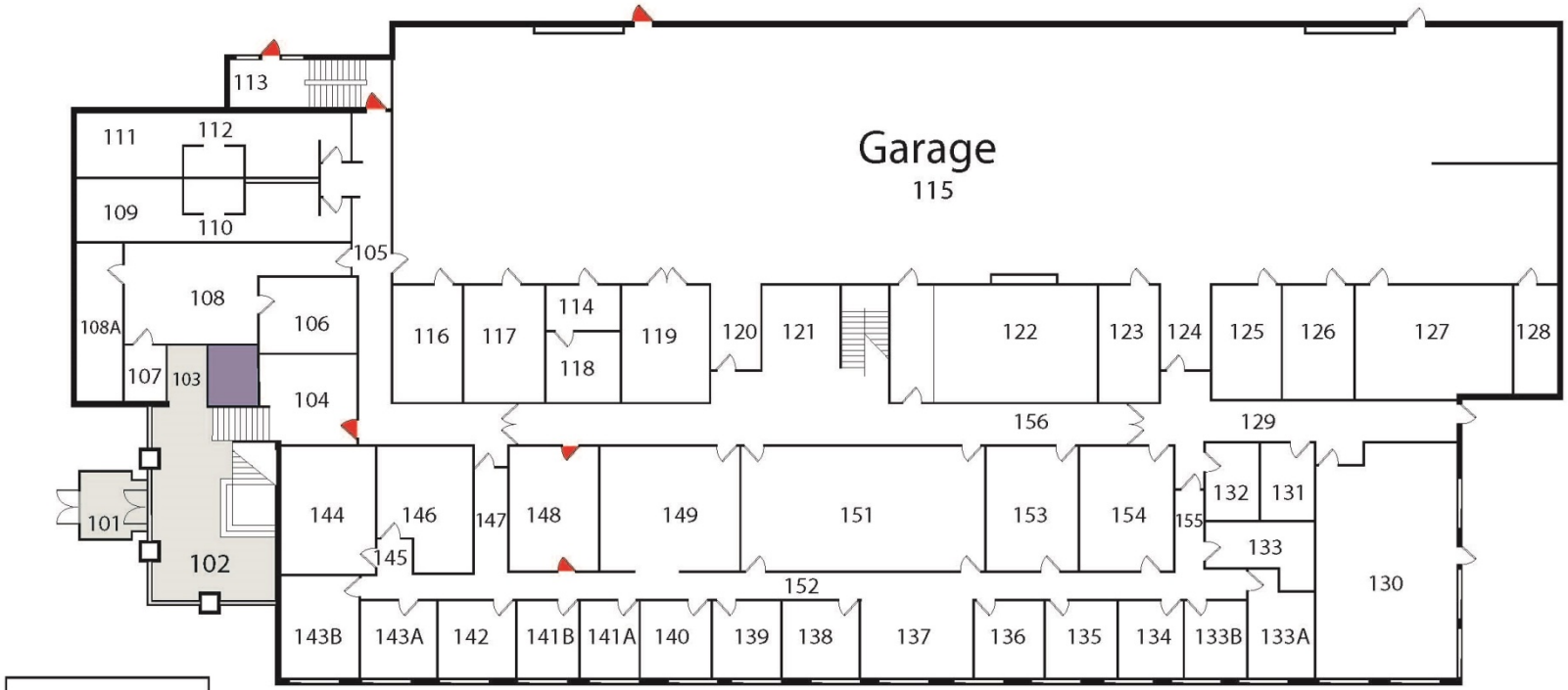
Note: See Exhibit “B” for room locations in St. Paul Building.

EXHIBIT “B”

Building plan (room layout): 2099 University Avenue West, St. Paul, MN 55104



Lower Level



Metropolitan Mosquito Control District
2099 University Ave W, Saint Paul, MN 55104

METROPOLITAN MOSQUITO CONTROL DISTRICT

Website: www.mmcd.org

Metro Counties Government Center
2099 University Avenue West
Saint Paul, MN 55104-3431

Phone: 651-645-9149
FAX: 651-645-3246
TTY use Minnesota Relay Service

EXHIBIT "C"

Memorandum of Agreement between the Metropolitan Mosquito Control District (MMCD) and the Metropolitan Emergency Services Board (MESB)

I. Basis of Agreement.

A. The Metropolitan Emergency Services Board (MESB) has proposed using the board room (205) at the Metro Counties Government Center as a Multi-Agency Coordination Center (MACC). This room would be used when an event occurred that interrupted or overwhelmed regional response capabilities. The MACC would be the location used to assemble top representatives from multiple agencies and disciplines to coordinate the sustained response to an event or incident.

Examples of when a MACC may be needed:

- When an emergency extends beyond two or more jurisdictions and exceeds the local agency or hospital capacities, such as a large or multiple tornadoes, floods, or terrorist attacks.
- When a national, state-wide, or region-wide emergency occurs, such as an influenza pandemic.
- When multiagency coordination is needed to facilitate policy coordination, such as the 2008 Republican National Convention where the EMS entity of the MESB assembled, staffed, and operated an EMS specific MACC and deployed strike teams from the Metropolitan Counties Government Center.

II. Board room upgrades.

A. The board room can seat up to 50 individuals in a classroom setting and with a number of upgrades could provide state-of-the-art interoperable communications including data voice, radio access and video conferencing. The upgrades would be accomplished using Homeland Security and Emergency Management grant funds.

The proposed upgrades for the board room:

- SMART Board technology with HD projector
- HD projector for the existing big screen
- Technology podium and "Sympodium" technology for the SMART board
- Integrated sound/recording system
- Videoconferencing capability -interoperable with other systems in region; (portable -could be used in other conference rooms)
- Flat screen monitors for videoconferencing system;
- Additional 20-30 phone lines;
- Additional fiber optic data link; and
- Ancillary IT hardware/backup.

In addition, a backup power (automatically switched) station would be installed.

III. Guidelines for MACC use.

A. MMCD and MESB agree that the following guidelines shall apply in operating the board room as a MACC.

1. The Executive Directors of both MMCD and MESB after consultation with their respective board chairs must agree that an event or incident rises to the level of need to implement the board room to MACC status.

2. MMCD maintains ultimate control of who is authorized to enter its property at 2099 University Avenue West. MESB will provide MMCD a list of people who require access to the building and at what times for any particular event or incident. MMCD would also require those individuals to wear a badge or other visible identification. MMCD and MESB will work together to facilitate access to the building while maintaining a safe secure workplace for their employees and the public.

3. The MESB will be responsible for any maintenance or repair costs associated with operating the board room as a MACC.

4. If other meetings scheduled for the board room are impacted due to MACC status MMCD's Administrative Secretary will contact the appropriate groups.

5. Any other expanded use of the board room would have to be mutually agreed upon by the governing boards of MMCD and MESB.

IV. Review of Memorandum of Agreement

A. This memorandum of agreement shall become effective as soon as it is signed by both parties and will remain in force until revised unless terminated by mutual consent or by either party after 30 days advance written notice to the other party.

B. This agreement may be modified at any time by mutual agreement. MMCD and MESB will review this agreement annually beginning December 1 and will be completed no later than January 31.

METROPOLITAN
EMERGENCY SERVICES BOARD

2099 UNIVERSITY AVENUE WEST
SAINT PAUL, MINNESOTA
55104-3431

PHONE 651-643-8395
WWW.MN-MESB.ORG

October 1, 2020

VIA ELECTRONIC MAIL
Ms. Rhonda Kriss
Lumen
200 S. Fifth Street
Minneapolis, MN 55402
rhonda.kriss@lumen.com

VIA ELECTRONIC MAIL
Mr. Matthew Hoffer
Lumen
200 S. Fifth Street
Minneapolis, MN 55402
matthew.hoffer@lumen.com

Dear Ms. Kriss and Mr. Hoffer:

I am writing today to request Lumen attend (virtually) the October 29, 2020 meeting of the Metropolitan Emergency Services Board (MESB) to discuss the 9-1-1 service disruption which occurred on Monday, September 28, 2020.

This most recent event had many similarities to that which occurred on August 1, 2018, even though improvements were to have been made regarding maintenance procedures and notification processes. The MESB was assured by Ms. Sally Bakarich and Mr. Carl Klein at its September 12, 2018 meeting that improvements were made. It is disappointing to see that many of the same problems which occurred in 2018 also occurred on September 28, 2020.

Though the MESB would be happy to have the local 9-1-1 Lumen team attend the meeting, it is the Board's belief that the issues need to be addressed by those within Lumen who direct the processes and the relationship with its contracted vendor, Intrado. The Board is interested in hearing the cause of the disruption and what mitigation efforts Lumen and Intrado are making to prevent such issues from re-occurring in the future.

Please provide Jill Rohret, MESB Executive Director, with the names and email addresses of those who will attend the meeting. Ms. Rohret will send the virtual meeting information directly to those people. Ms. Rohret can be reached at (651) 643-8394 or jrohret@mn-mesb.org. Please contact Ms. Rohret directly with any questions regarding either the meeting or this request.

Thank you for your time and consideration.

Sincerely,

Trista Matascastillo
Chair, Metropolitan Emergency Services Board
Ramsey County Commissioner

cc: MESB Board
Mr. Jake Jacobson, Lumen
Ms. Dana Wahlberg, ECN

METROPOLITAN EMERGENCY SERVICES BOARD

EXECUTIVE COMMITTEE MEETING MINUTES
October 14, 2020
Meeting held via WebEx

Commissioners:

Greg Anderson, Isanti County
Tom Egan, Dakota County
Irene Fernando, Hennepin County
Mike Gamache, Anoka County**-absent**
Jim Ische, Carver County
Andrew Johnson, City of Minneapolis**-absent**
Trista Matascastillo, Ramsey County
George McMahon, Chisago County
Fran Miron, Washington County
Felix Schmiesing, Sherburne County
Tom Wolf, Scott County

Staff Present: Marcia Broman; Pete Eggimann; Tracey Fredrick; Jill Rohret; and Martha Ziese.

Guests Present: Jay Arneson, *MESB Board Counsel.*

1. Call to Order:
The meeting was called to order at 10:01 a.m. by MESB Chair Commissioner Trista Matascastillo.

2. Approval of October 14, 2020 Agenda
Motion made by Commissioner Ische, seconded by Commissioner Wolf to approve the MESB October 14, 2020 Executive Committee Agenda. Motion carried.

Roll call for Approval of Agenda

Name	County/City	Yes	No
Anderson, G.	Isanti	X	
Egan, T.	Dakota	X	
Fernando, I.	Hennepin		
Gamache, M.	Anoka		
Ische, J.	Carver	X	
Johnson, A.	Minneapolis		
MatasCastillo, T.	Ramsey	X	
McMahon, G.	Chisago	X	
Miron, F.	Washington	X	
Schmiesing, F.	Sherburne	X	
Wolf, T.	Scott	X	

Yea: 8 Nay: 0 Motion passes.

3. Approval of Minutes
Motion made by Commissioner Egan, seconded by Commissioner Miron to approve the MESB Executive Committee July 8, 2020 minutes. Motion carried.

Roll call for Approval of Minutes

Name	County/City	Yes	No
Anderson, G.	Isanti	X	
Egan, T.	Dakota	X	
Fernando, I.	Hennepin		
Gamache, M.	Anoka		
Ische, J.	Carver	X	
Johnson, A.	Minneapolis		

DRAFT

MatasCastillo, T.	Ramsey	X	
McMahon, G.	Chisago	X	
Miron, F.	Washington	X	
Schmiesing, F.	Sherburne	X	
Wolf, T.	Scott	X	

Yea: 8 Nay: 0 Motion passes.

4. Radio Items

A. Approval of Amendment to Appendix C of Metro Radio Standards

Fredrick said the Radio TOC recommends the Executive Committee to recommend approval of the amendments to Appendix C of the Metro Radio Standards. Appendix C is the metro talkgroup template. The main changes to this standard are updates of language referring to state standards and to add language to include encrypted talk groups. Many metro entities already have or are considering encryption.

Motion made by Commissioner Miron, seconded by Commissioner McMahon to approve the amendments to Appendix C of Metro Radio Standards. Motion carried.

B. Approval of Metro Transit Bi-Directional Amplifier Addition

Fredrick said the Radio TOC recommends the Executive Committee recommend approval of Metro Transit's request to add a bi-directional amplifier (BDA). The addition will provide coverage at the Mall of America and will share space with the City of Bloomington. It will be connected to City Center location for coverage.

Motion made by Commissioner Egan, seconded by Commissioner Wolf to approve the Metro Transit bi-directional amplifier addition. Motion carried.

C. Approval of 2021 Regional Grant Priorities

Fredrick said ECN and the SECB require regions to annually approve regional funding priorities. The 9-1-1 TOC recommends the prioritized regional funding priorities for grants available in 2021 to be CAD-to-CAD regional hub and feasibility study, vendor-provided resiliency training for telecommunicators, PSAP security audits, PSAP back-up equipment cache, 9-1-1 call processing or dispatch-related vendor-provided training, and T-CPR training.

Fredrick said the Radio TOC recommends prioritized items that are similar to last year's priorities. Those items are vendor-provided technical training, Communications Response Task Force (CRTF) training/exercise, funds to attend the 2021 Public Safety Communications Conference, creation of an updated ARMER training video, purchase of laptop radio consoles to be used throughout the region, and funding local bi-directional amplifier (BDA) requests.

Motion made by Commissioner Ische, seconded by Commissioner Wolf to approve 2021 regional grant priorities. Motion carried.

Roll call for Items 4A-C

Name	County/City	Yes	No
Anderson, G.	Isanti	X	
Egan, T.	Dakota	X	
Fernando, I.	Hennepin	X	
Gamache, M.	Anoka		
Ische, J.	Carver	X	
Johnson, A.	Minneapolis		

MatasCastillo, T.	Ramsey	X	
McMahon, G.	Chisago	X	
Miron, F.	Washington	X	
Schmiesing, F.	Sherburne	X	
Wolf, T.	Scott	X	

Yea: 9 Nay: 0 Motion passes.

5. 9-1-1 Items

A. Approval of Ramsey County's 9-1-1 Plan Amendment

Pete Eggimann said the request from Ramsey County is to make its 9-1-1 application software GEO-diverse. Currently Ramsey County has two servers which reside in St. Paul. Ramsey County would like to move one of those servers to Arden Hills and connect the two with the county's fiber connection. The request involves moving off the copper facility and onto the fiber connection and establishing a total of four connections. Wet weather affects the St. Paul copper circuits. The cost will be picked up by Ramsey County for recurring costs and the state will pay for at least two of the circuits.

Commissioner Miron asked if there were any other advantages to separate the locations in a civil unrest event or national disaster. Eggimann responded that the advantages are significant operationally. One important advantage is enabling another location to pick up calls for another PSAP.

Motion made by Commissioner McMahon, seconded by Commissioner Egan to approve Ramsey County's 9-1-1 plan amendment. Motion carried.

B. Recommendation of RFP Award for NG9-1-1 Grant GIS Project

Marcia Broman said that at the end of 2019, the MESB applied to ECN for a grant focusing on the Master Street Address Guide (MSAG) maintenance process. The MESB was awarded a grant for $150,000.00. In August, the MESB issued an RFP for this project. Two proposals were received. The RFP review team requests the MESB Executive Committee to recommend approval to award the RFP to one of the two vendors.

Motion made by Commissioner Miron, seconded by Commissioner Wolf to recognize this strategic position for the MESB and recommend approval of the award to one of the two responding vendors. Motion carried.

Roll call for Items 5A-B

Name	County/City	Yes	No
Anderson, G.	Isanti	X	
Egan, T.	Dakota	X	
Fernando, I.	Hennepin	X	
Gamache, M.	Anoka		
Ische, J.	Carver	X	
Johnson, A.	Minneapolis		
MatasCastillo, T.	Ramsey	X	
McMahon, G.	Chisago	X	
Miron, F.	Washington	X	
Schmiesing, F.	Sherburne	X	
Wolf, T.	Scott	X	

Yea: 9 Nay: 0 Motion passes.

6. EMS Items – None

7. Administrative Items

A. Approval of 2021-2022 Lease with MMCD

Rohret requested the Executive Committee recommend Board approval of the 2021-2022 lease with MMCD. The lease includes a three percent rent increase. Though this increase was not included in the 2021 budget, the increase was small enough that contingency funds can be used to cover the increase amount.

Motion made by Commissioner Miron, seconded by Commissioner Wolf to approve the 2021-2022 lease with MMCD. Motion carried.

Roll call approving the 2021-2022 Lease with MMCD

Name	County/City	Yes	No
Anderson, G.	Isanti	X	
Egan, T.	Dakota	X	
Fernando, I.	Hennepin	X	
Gamache, M.	Anoka		
Ische, J.	Carver	X	
Johnson, A.	Minneapolis		
MatasCastillo, T.	Ramsey	X	
McMahon, G.	Chisago	X	
Miron, F.	Washington	X	
Schmiesing, F.	Sherburne	X	
Wolf, T.	Scott	X	

Yea: 9 Nay: 0 Motion passes.

8. Old Business – None

9. New Business – Closed meeting

A. 2020 Executive Director Performance Review

Upon the re-opening of the meeting, Commissioner Mastacastilllo said the MESB Executive Committee recommends the rating of Exceeds Standards for the Executive Director's performance review and instead of a pay increase, to provide an additional FTO hours to keep the balance at 1,000 hours. The committee also recommends adding an additional goal for Rohret's 2021 goals.

10. Adjournment

The meeting adjourned at 10:45 a.m.

DRAFT

METROPOLITAN EMERGENCY SERVICES BOARD

Meeting Date: October 29, 2020
Agenda Item: 6A. Recommendation for RFP Award for NG9-1-1 GIS-Derived MSAG Maintenance Process
Presenter: Broman

RECOMMENDATION

The Executive Committee recommends awarding the request for proposal for NG9-1-1 GIS-Derived Master Street Address Guide (MSAG) Maintenance Process to one of the two respondents.

BACKGROUND

The Minnesota Department of Public Safety, Emergency Communication Networks division applied for funds from the federal Next Generation 9-1-1 Grant. The MESB applied for and received a $150,000.00 grant for a GIS-derived MSAG maintenance process.

ISSUES & CONCERNS

An RFP was issued on August 17 for this project. The deadline for submissions was September 11. Two responses were received, one from GeoComm and one from CenturyLink (now known as Lumen). An evaluation team of MESB 9-1-1 program staff evaluated the two proposals and is requesting the Executive Committee to forward a recommendation to the Board.

The grant terminates on March 1, 2022, which means all services and functions which need to be done under this grant project must be complete by then; final invoicing must also be received by that date.

FINANCIAL IMPACT

The MESB received a grant of $150,000.00 from the federal NG9-1-1 grant, via the Minnesota Department of Public Safety, Emergency Communication Networks division. The entire grant project will be funded from that grant, though staff time in working with the vendor and in managing the grant will be required.

It is possible that this project could identify needs for future expenditures by the MESB on behalf of the ten-county region.

MOTION BY:
SECONDED BY:
MOTION:

PASS/FAIL

METROPOLITAN EMERGENCY SERVICES BOARD

REQUEST FOR PROPOSALS (RFP)

NG9-1-1 GIS-Derived Master Street Address Guide (MSAG) Maintenance Process

DUE DATE:
September 11, 2020

ISSUED BY:
METROPOLITAN EMERGENCY SERVICES BOARD

1 Request Summary/Project Goal

The Metropolitan Emergency Services Board (MESB) is soliciting proposals from qualified respondents to develop a Next Generation 9-1-1 (NG9-1-1) GIS-derived Master Street Address Guide (MSAG) maintenance process that can be implemented for the 10-county Minneapolis/St. Paul metropolitan region.

The goal of the project is to further the integration of the metro area's existing legacy 9-1-1 data processes with those needed for NG9-1-1. In the instance of this project, such integration would involve more closely aligning and streamlining those processes related to MSAG data management. The project would:

- Identify and evaluate potential GIS-derived MSAG conversion and maintenance processes for use going forward during the transition to full implementation of NG9-1-1 Core Services
- Create tabular MSAG(s) fully consistent with validated authoritative source geospatial data
- Support the replacement of legacy 9-1-1 MSAG(s) with tabular MSAG(s) that are fully consistent with validated geospatial data
- Establish a process to maintain ongoing synchronization between the MSAG(s) used in legacy 9-1-1 data management and the source geospatial data as those datasets change

It should be noted that this project is being pursued under a Federal NG9-1-1 grant received by the State of Minnesota Department of Public Safety-Emergency Communication Networks (DPS-ECN) and sub-granted to the MESB. As such, certain requirements apply, as outlined in this document and any resulting contract. This includes a firm completion requirement that all work must be complete, and invoices submitted to the MESB no later than March 1, 2022.

The implementation of the process developed under this request may become the basis for additional requests for proposals in the future, contingent on funding availability and NG9-1-1 Core Services implementation timelines.

2 Background- MESB

The MESB was established by Joint Powers Agreement for the purpose of overseeing the 9-1-1 system, the metro portion of the Allied Radio Matrix for Emergency Response (ARMER) system, and EMS in the metropolitan area of Minneapolis/St. Paul. The Board consists of commissioners from the counties of Anoka, Carver, Chisago, Dakota, Hennepin, Isanti, Ramsey, Scott, Sherburne, Washington, and a council member from the City of Minneapolis. One of MESB's regional roles includes planning, coordinating, and supporting the Public Safety Answering Points (PSAPs) in the MESB region on 9-1-1 data matters. Under the MESB, the region is served by 18 primary PSAPs and 6 secondary PSAPs. Additional information about the MESB and the metro region 9-1-1 system may be found at: www.mn-mesb.org

3 Background – MESB Region Legacy 9-1-1 and NG9-1-1 Data

3.1 MESB Regional Legacy 9-1-1 Data

3.1.1 Automatic Location Identification Data

The 10-county MESB region participates in a 9-1-1 system operated by CenturyLink as the 9-1-1 system integrator. The regional Automatic Location Identification (ALI) telephone number record data is currently stored in data systems hosted by Intrado, Inc., CenturyLink's vendor. ALI addresses in the region conform to the requirements of the MESB regional MSAG, including those defined in the next section.

3.1.2 Master Street Address Guide

MSAG data is maintained by the MESB-member PSAPs and the MESB staff as part of a 10-county metro regional MSAG. The regional MSAG is stored in Intrado's data system. Updates to that MSAG are made via Intrado's web-based application.

Key points regarding the regional MSAG are:

- The MSAG uses the street name fields required by CenturyLink and Intrado. As such, the MSAG street name elements are currently parsed into two fields, pre-directional and street name. Elements of the official street name, other than a pre-directional, are contained in the MSAG street name field.
- The MSAG street names use standard directional abbreviations for pre- and post-directions (i.e. N, S, E, W, NE, NW, SE, SW). As previously mentioned, when post-directions are used, they are included in the MSAG street name field.
- Street name post-types in the MSAG are abbreviated according to USPS Publication 28, Appendix C1. Any post-types in use in the region that are not contained in USPS Publication 28, Appendix C1 are spelled out. As previously mentioned, post-types are included in the MSAG street name field.
- Street name pre-types are fully spelled out and included in the MSAG street name field.
- The MSAG uses jurisdictions (city/township) as MSAG community names, not postal communities.

A quarterly version of the regional MSAG is available at the following link:
https://gisdata.mn.gov/dataset/org-mn-mesb-loc-msag

3.1.3 Emergency Service Zone/Number Data

The MESB-member PSAPs represent their Emergency Service Zones (ESZs) for public safety response in their MSAG and ALI data as Emergency Service Numbers (ESNs). The ESN is carried

as an attribute in the Minnesota Geospatial Advisory Council (GAC) schemas for regional road centerline and address point datasets.

3.2 Regional NG9-1-1 Geospatial Data

3.2.1 Road Centerline

County staff at each of the ten counties comprising the MESB region currently maintain an authoritative road centerline dataset and periodically submit updates to a 9-1-1 portal. All road centerline updates are submitted in the current Minnesota Geospatial Advisory Council (GAC) schema and projection. A 10-county aggregation is done nightly by the Metropolitan Council (MetroGIS) and the resulting road centerline dataset is made publicly available on the Minnesota Geospatial Commons. The frequency of individual county road centerline updates varies by county but is generally monthly.

The link to access the regional road centerline dataset is: https://gisdata.mn.gov/dataset/us-mn-state-metrogis-trans-road-centerlines-gac

The Minnesota GAC road centerline schema is available at the following link: https://www.mngeo.state.mn.us/committee/standards/standards_adopted_devel.html

3.2.2 Address Points

County staff at each of the ten counties comprising the MESB region currently maintain an authoritative address point dataset and periodically submit updates to a 9-1-1 portal. All address point updates are submitted in the current Minnesota Geospatial Advisory Council (GAC) schema and projection. A 10-county aggregation is done nightly by the Metropolitan Council (MetroGIS) and the resulting address point dataset is made publicly available on the Minnesota Geospatial Commons. The frequency of individual county address point updates varies by county but is generally monthly.

The link to access the regional address point dataset is: https://gisdata.mn.gov/dataset/us-mn-state-metrogis-loc-address-points

The Minnesota GAC address point schema is available at the following link: https://www.mngeo.state.mn.us/committee/standards/standards_adopted_devel.html

3.2.3 Boundary Polygons

MESB staff, in cooperation with member PSAPs, maintain regional PSAP, ESZ, law enforcement, fire, and emergency medical response agency boundary polygons. The boundaries are maintained as part of a 10-county metro regional polygon dataset. A minimum, the MESB submits boundary polygon updates to Minnesota Geospatial Commons on a quarterly basis. A MSAG community boundary polygon layer is also available for reference. Currently the polygon datasets are available in the metro regional projection and schemas; however, they can be provided in the NENA projection and schemas upon request.

The link to access the regional boundary polygons is: https://gisdata.mn.gov/organization/org-mn-mesb

3.3 Existing NG9-1-1-related Data Synchronization

3.3.1 ALI to Road Centerline and Address Points

The MESB and its 9-1-1 and GIS partners have been collaboratively engaged in preparing the region's geospatial data for use in NG9-1-1. As a result, significant synchronization of legacy 9-1-1 and NG9-1-1 data has been completed. While there is not yet a 100% match of ALI addresses to the road centerline and/or address point datasets, many of the PSAPs have reached a point of synchronization where replacement of their existing legacy MSAG with a MSAG very closely aligned with their county's validated geospatial data would be beneficial.

For the MESB and its PSAPs, legacy MSAG replacement aids in streamlining processes, maintaining ongoing MSAG/dataset synchronization, and understanding NG9-1-1 related roles and data workflows. Pursuing this step for MESB PSAPs with sufficient data readiness maintains forward momentum in the NG9-1-1 data transition until such time as Greater Minnesota reaches NG9-1-1 data readiness or a NG9-1-1 Core Services Provider is selected/implemented.

3.3.2 GIS-derived MSAGs

Using internal methods, the MESB has assisted several PSAPs in the creation and replacement of their legacy MSAG with a tabular MSAG that is consistent with their county's validated, authoritative source geospatial data. Aspects of the internal method entailed some manual adjustments to the GIS-derived MSAG to finetune the MSAG's content.

The intent of this request is to identify and evaluate potential GIS-derived MSAG conversion and maintenance processes for use going forward. The goal is to develop a sustainable process that allows the GIS-derived MSAG, with a minimum of manual intervention, to stay aligned with the authoritative geospatial data as it inevitably changes over time. This request aids the MESB in evaluating whether more automated or refined methods are available that can bridge the gap between now and the implementation of NG9-1-1 Core Services. It also assists in understanding how ongoing process/workflows, established prior to the NG9-1-1 Core Services implementation, could be capitalized upon after the transition.

4 Scope of work:

4.1 Main project components

At a high level, the project is anticipated to include:

- Data submission and retrieval methods
- GIS-derived tabular MSAG creation

- Legacy MSAG to GIS-derived MSAG transition
- Ongoing GIS-derived MSAG maintenance & synchronization with source geospatial data
- Process and workflow documentation
- Project Management

4.2 Roles

For purposes of the project, the following high-level roles would apply:

- The Respondent will provide project management associated with its services. The Respondent's primary point of contact for the project will be the MESB's 9-1-1 Data Coordinator. MESB staff will coordinate with County GIS departments and PSAPs. Any needed contacts between the Respondent and the 9-1-1 service provider (CenturyLink) and/or Intrado will be coordinated through the MESB.
- The Respondent will receive the regionally aggregated geospatial datasets: road centerlines, address points, and boundary polygons. The aggregated datasets will be available for download at the Minnesota Geospatial Commons in multiple GIS formats.
- If the Respondent identifies data remediation required in the authoritative geospatial datasets, the Respondent will provide those geospatial data remediation recommendations in a manner that follows guidelines mutually agreed upon with the MESB and is easily consumed within ESRI ArcGIS (e.g. communicating data remediation recommendations by returning an edited version of a geospatial dataset to the MESB.)
- Any required editing of the authoritative road centerline and address point datasets will be done by the affected County GIS staff. The county will then submit new versions of their data for aggregation into the regional datasets.
- Any required editing of the authoritative boundary polygon datasets (e.g. PSAP/ESZ) will be done by MESB GIS staff.
- MESB will arrange for the Respondent to receive the necessary legacy MSAG/ALI data.
- If the Respondent identifies data remediation required to the legacy MSAG/ALI during its preparatory work for creating a GIS-derived MSAG, the Respondent will provide those data remediation recommendations in a manner that follows guidelines mutually agreed upon with MESB.
- Any required editing of the legacy MSAG/ALI will be submitted by the MESB through Intrado's web-based application or other method arranged between the MESB and the 9-1-1 system integrator.

4.3 Extent

At a minimum, the project will involve two county PSAPs in the MESB region. For planning purposes, this would include:

- One PSAP that has completed an initial transition of its "live" MSAG to a tabular MSAG that is substantively aligned with its source geospatial data: *(Note: In this instance, "live" MSAG refers to the version used for active E9-1-1 ALI location validation and call routing)*
    - Population size of approximately 400,000-450,000

- Approximate results (May 2020) using ESRI address locators set at 100% match:
  - Match rate of unique addressees in ALI to road centerline = 99.9% match
  - Match rate of unique addresses in ALI to composite of road centerline and address points = essentially 100%

- One PSAP that has not completed such a GIS-derived MSAG transition:
  - Population size of approximately 100,000-150,000
  - Approximate results (May 2020) using ESRI address locators set at 100% match:
    - Match rate of unique addressees in ALI to road centerline = 99% match
    - Match rate of unique addresses in ALI to composite of road centerline and address points = 99.8% match

Other PSAP options may be considered as mutually agreed between the parties.

The Respondent:	**Complies**	**Does not Comply**	**Partially Complies**
4.3.1 Understands that the project involves a minimum of two county PSAPs in the MESB region at differing stages of consistency between their "live" tabular MSAG and their geospatial data, one PSAP of ~400,000-450,000 population with the initial MSAG transition complete, and one PSAP of ~100,000-150,000 population with the initial MSAG. transition not yet complete. *Note: Other PSAP options may be considered as mutually agreed between the parties. If the Respondent's solution allows for additional PSAPs to be completed within the project pricing constraints specified in this document, Respondent may note this as optional services.*			
Exceptions to Requirement:			
Details to support response:			

4.4 Industry Standards Compliance

MESB seeks a solution that complies with nationally accepted standards and recommendations for NG9-1-1 GIS data and its transition from legacy 9-1-1 data. The Respondent's proposed services and tools shall comply with applicable data-related provisions of the National Emergency Number Association (NENA):

- NENA STA-015.10-2018 NENA Standard Data Formats for E9 1 1 Data Exchange & GIS Mapping

- NENA-STA-006.1.1-2020 NENA Standard for NG9-1-1 GIS Data Model
- NENA 71-501 Synchronizing Geographic Information System Databases with MSAG & ALI Information Document
- NENA-INF-014.1-2015 NENA Information Document for Development of Site/Structure Address Point GIS Data for 9-1-1
- NENA-REQ-002.1-2016 NENA Next Generation 9-1-1 Data Management Requirements
- NENA-STA-005.1.1-2017 NENA Standards for the Provisioning and Maintenance of GIS data to ECRF and LVFs
- NENA-INF-027.1-2018 NENA Information Document for Location Validation Function Consistency
- NENA-INF-028.1-2020 NENA Information Document for GIS Data Stewardship for NG9-1-1

The Respondent shall:	**Complies**	**Does not Comply**	**Partially Complies**
4.4.1 Provide a solution that aligns with applicable MSAG, GIS-derived MSAG, and NG9-1-1 data transition methodologies and standards outlined in NENA data-related standards and informational documents.			
Exceptions to Requirement:			
Details to Support Response:			

4.5 Data Submission and Retrieval

Due to the pandemic, it is anticipated that the project will be conducted remotely for the foreseeable future without any on-site involvement by the Respondent. This includes project participants (Respondent and MESB) performing the exchange and access of data from various telework arrangements. As a result, the Respondent must have a data submission and retrieval plan that accommodates such constraints.

The Respondent shall:	**Complies**	**Does not Comply**	**Partially Complies**
4.5.1 Provide a secure web-based portal for submission (upload) and download of data to be used in delivery of the Respondent's services.			
4.5.2 Provide the ability to view and download all datasets, reports, and error files via the Respondent's web-based portal.			

4.5.3 Allow multiple identified users to upload and download data related to the project, as well as view and download datasets, reports, and error files from the Respondent's web-based portal.			
4.5.4 Accept and utilize MSAGs in the format used by Intrado for CenturyLink 9-1-1 systems in the State of Minnesota.			
4.5.5 Accept and utilize road centerline and address point datasets in the Minnesota Geospatial Advisory Council schemas and projection in file geodatabase *(.gdb)* format.			
4.5.6 Accept and utilize boundary polygon data in the native schemas and projection currently available on the Minnesota Geospatial Commons in file geodatabase (*.gdb)* format.			
4.5.7 Provide the ability to output any errors resulting from data validations used by the Respondent in formats that can be easily sorted, filtered, summarized, and otherwise organized; Any errors related to geospatial data must be output or provided in a manner that is easily consumed within ESRI ArcGIS .			
4.5.8 Provide the ability to output MSAGs and MSAG updates in the format used by Intrado for CenturyLink 9-1-1 systems in the State of Minnesota.			
4.5.9 Provide the ability to export road centerline and address point datasets in the Minnesota Geospatial Advisory Council schemas in file geodatabase (*.gdb)* format.			
4.5.10 Provide the ability to export boundary polygon data in native schemas in file geodatabase (*.gdb)* format.			
Exceptions to requirements:			
Details to support responses:			

4.6 GIS-derived Tabular MSAG Creation

Important Note: *The following scope of work requirements apply to a minimum of two MESB PSAPs (i.e. one that has completed the initial step of substantially aligning their "live" MSAG to its geospatial data and one PSAP that has not completed such a transition.)*			
The Respondent shall:	**Complies**	**Does not Comply**	**Partially Complies**

4.6.1 Provide an overview of the Respondent's GIS-derived tabular MSAG creation process prior to beginning the effort.			
4.6.2 Provide a list of data readiness assessments that the Respondent recommends source geospatial and legacy data meet prior to GIS-derived MSAG creation.			
4.6.3 Assess the data readiness of the source geospatial and legacy data for GIS-derived MSAG creation (e.g. including, but not limited to, performing a validation that compares PSAP ALI addresses to the geospatial data).			
4.6.4 Provide the results of the validations conducted on the source geospatial and legacy data, including all errors identified.			
4.6.5 Investigate any errors resulting from the recommended validations and identify appropriate data remediation measures for the geospatial and legacy ALI/MSAG data (i.e. identify corrections needed to the source data).			
4.6.6 Identify and track geospatial features reported as non-critical errors which cannot be corrected because of real-world situations and, as a result, are to be excluded from ongoing validation error reporting.			
4.6.7 Provide to MESB the Respondent's recommended geospatial data remediation changes in a manner that is easily consumed within ESRI ArcGIS and allows the recommended changes to be easily identified, understood and reviewed by the data producer and then incorporated into the source datasets. (Actual updating of authoritative geospatial data will be done by MESB/County GIS staff.)			
4.6.8 Provide to MESB the Respondent's recommended ALI data remediation changes in such a manner as it is easily identifiable which records are to be modified and what modifications are recommended. The Respondent may need to differentiate between recommendations best handled using MSAG corrections as the means to update the ALI and those best handled as individual ALI record changes. (Actual updating of source ALI/MSAG data will be coordinated by MESB with the appropriate parties.)			
4.6.9 Provide a sustainable method that easily allows for the extraction/creation of one PSAP's GIS-derived MSAG utilizing the regional datasets consisting of geospatial data for multiple PSAPs.			
4.6.10 Provide a sustainable method for handling the inclusion of entries in the GIS-derived MSAG for addresses			

that are only valid as address points (no matching valid road centerline segment).			
4.6.11 Provide a sustainable method for handling the inclusion of entries in the GIS-derived MSAG for addresses that only validate to an alternate street name on a road centerline segment.			
4.6.12 Provide a sustainable method for handling boundary road centerline segments in the GIS-derived MSAG creation process such that, when creating the GIS-derived MSAG for one PSAP, an MSAG entry related to the side of the road centerline in the neighboring PSAP's serving area is not included.			
4.6.13 Provide a sustainable method for handling exceptions to non-critical errors in the geospatial data.			
4.6.14 Create a complete tabular MSAG for the PSAP that is derived from and matches the geospatial data.			
4.6.15 Demonstrate that the GIS-derived MSAG has no range overlaps.			
4.6.16 Demonstrate that the GIS-derived MSAG covers all the PSAP's ALI addresses and address point addresses.			
4.6.17 Demonstrate that the ESN assigned from the GIS-derived MSAG for each unique PSAP ALI and address point address is the same as that assigned by the legacy MSAG.			
4.6.18 Provide a final complete PSAP MSAG file that includes the GIS-derived MSAG and any additional MSAG entries from the PSAP's legacy MSAG that are necessary to support non-address related ALI records (e.g. MSAG entries associated wireless and VoIP ESRK/ESQK ALI records, as well as some error conditions).			
Exceptions to the requirements:			
Details to support responses:			

4.7 Legacy MSAG to GIS-derived Tabular MSAG Transition

Important Note: *The following scope of work requirements apply to a minimum of two MESB PSAPs (i.e. one that has completed the initial step of substantially aligning their "live" MSAG to its geospatial data and one PSAP that has not completed such a transition.)*

The Respondent shall:	**Complies**	**Does not Comply**	**Partially Complies**
4.7.1 Create and provide a file in *.csv* format of MSAG "delta" changes that identifies the current (old) MSAG record needing change/deletion and the resulting new MSAG record(s) needed to make the MSAG consistent with the source geospatial data. Such MSAG "delta" changes must be appropriately aligned, relating old-to-new to facilitate "live" MSAG update.			
4.7.2 Provide support during the transition of the "live" PSAP MSAG to answer questions that may arise (e.g. provide remediation if a Respondent-recommended MSAG "delta" change would "orphan" a newly updated ALI record with an address that had not appeared in the version of ALI used by the Respondent to QC the GIS-derived MSAG).			
Exceptions to the requirements:			
Details to support responses:			

4.8 Ongoing GIS-derived MSAG maintenance & synchronization with source geospatial data

The Respondent shall:	**Complies**	**Does not Comply**	**Partially Complies**
4.8.1 Provide the Respondent's recommended process and workflow for ongoing GIS-derived MSAG maintenance and synchronization with source geospatial data. Such recommendations must be sustainable and appropriate for the MESB, its county GIS partners, and member PSAPs. They must also be appropriate for the period of transition from the current state until a statewide NG9-1-1 Core Services provider implementation is ready.			
4.8.2 Include in Respondent's recommendations how feedback on the GIS-derived MSAG's content from telecom service provider users is best incorporated into the ongoing process and workflow for maintaining synchronization			

between the geospatial data and the GIS-derived MSAG (e.g. MSAG change requests).			
4.8.3 Present the Respondent's recommended process and workflow to the MESB, the affected County GIS and PSAP contacts, and other interested regional representatives that MESB deems appropriate.			
4.8.4 Consume new versions of the source geospatial data at least monthly, detect changes, process verified error exceptions, identify needed MSAG updates, and provide MSAG "delta" changes to be made in the "live" MSAG for the PSAPs involved in the project. This will serve as a demonstration, over a series of months, of the Respondent's recommended process and workflow to keep the "in-use" GIS-derived MSAGs synchronized with the source geospatial data.			
4.8.5 If the Respondent has tools in their recommended ongoing process and workflow that allow for the MESB to self-initiate and manage the consumption of new versions of source geospatial data, detection of changes, processing error exceptions, identification of needed MSAG updates, and provision of MSAG "delta" changes, the Respondent will provide the necessary tools, documentation, and training for MESB to perform such functions for a mutually agreed upon period prior to the conclusion of the project.			
Exceptions to the requirements:			
Details to support responses:			

4.9 Process and Workflow Documentation

The Respondent shall:	**Complies**	**Does not Comply**	**Partially Complies**
4.9.1 Provide the MESB, in documented form, the Respondent's recommendations for a successful ongoing GIS-derived MSAG maintenance and synchronization process. Such recommendations must include appropriate explanations and workflow diagrams and be appropriate for			

the period of transition from the current state until the NG9-1-1 Core Services provider implementation is ready.			
4.9.2 Provide the MESB, in documented form, the Respondent's recommendations for the ongoing roles/responsibilities for GIS-derived MSAG maintenance and synchronization. Such guidance should be based on the Respondent's familiarity with the roles of the county and regional geospatial and 9-1-1 partners gained during the project, understanding of the Minnesota NG9-1-1 transition, and knowledge of industry NG9-1-1 data transition best practices.			
4.9.3 Provide, in documented form, the Respondent's recommended plan for the GIS-derived MSAG transition for the MESB region. The guidance should assess the readiness of the remaining counties/PSAPs for the transition, identify any changes to the region's geospatial data schemas or practices that would facilitate such a transition, identify transition options, evaluate the options, outline timing considerations, and assess how ongoing process/workflows established prior to the NG9-1-1 Core Service provider implementation could be capitalized upon after the transition.			
4.9.4 Present the Respondent's summary of the project and recommendations to the MESB, the affected County GIS and PSAP contacts, and other interested regional representatives that MESB deems appropriate.			
Exceptions to the requirements:			
Details to support responses:			

4.10 Project Management

The Respondent shall provide:	Complies	Does not Comply	Partially Complies
4.10.1 A project manager with understanding of the Respondent's services, GIS, legacy 9-1-1 data management			

practices, and NG9-1-1 geospatial data, including GIS-derived MSAGs.			
4.10.2 A documented project plan and schedule, updated as project progresses.			
4.10.3 A minimum of monthly status conference calls with MESB and PSAP/County GIS representatives (as appropriate).			
4.10.4 A minimum of monthly documented status reports, outlining progress made toward milestones, next steps, and roadblocks/concerns. This is to include tracking of any unresolved issues identified by the MESB with the Respondent's tools or processes.			
4.10.5 Documentation and training on any tools, reports, or processes applicable to the services provided by the Respondent.			
4.10.6 Coordination of online meetings, as needed, to facilitate remote communication among project participants (e.g. Microsoft Teams, WebEx preferred; Zoom not acceptable).			
4.10.7 Knowledgeable point of contact for questions about Respondent's tools, reports, or services that cannot be answered from the available documentation and training.			
Exceptions to the requirements:			
Details to support responses:			

5 Submission Requirements

5.1 Form and Content

Key submission requirements:

- The *Scope of Work* section of this document includes key project requirements. As the means to indicate its compliance with these project requirements, the Respondent must include the tables (content and format) from the *Scope of Work* section in its response. Indicate compliance for an item by placing an "X" under the appropriate column (i.e.

complies, does not comply, partially complies.) When partially complying to a requirement, the Respondent should note the exceptions at the bottom of the table. Any details the Respondent chooses to provide in support of its ability and advantage in meeting the project requirements should be noted at the bottom of the appropriate table.

- The submission must include the experience the respondent has in relation to NG9-1-1 data transition, legacy 9-1-1 and NG9-1-1 data management, legacy and GIS-derived MSAGs, and geospatial data process development.
- The submission must include the identity and qualifications of the person, or persons, the respondent would assign to the project.
- A list of three references from similar projects must be provided.
- A project timeline from the contract award to the completion of deliverables must be included. The entire project must be completed, including submitting final invoices to the MESB, no later than March 1, 2022.
- The submission must list known potential conflicts, if any, or provide a statement that none exist.
- Submissions must be provided via email; files shall be in .pdf format.

5.2 Project Pricing

The services/deliverables requested under this request are associated with a Federal NG9-1-1 grant received by the State of Minnesota Department of Public Safety-Emergency Communication Networks (DPS-ECN). Funds are being sub-granted from DPS-ECN to the MESB for this project. As such, the services under this request cannot exceed a total of $150,000.

The pricing template included in Attachment A must be used for pricing submissions. Note:

- The Respondent must be explicitly clear in its pricing submission on which line items are stand-alone items that can be individually evaluated, and which are unbundled.

- Pricing options for portions of the project can and are recommended to be provided in the event the total project cost of the Respondent's proposed solution exceeds the amount of grant money available.

- If the Respondent's solution allows for additional PSAPs (beyond the specified two) to be completed within the project pricing and timeline constraints specified in this document, the Respondent should note this as optional services.

- MESB, at its sole discretion, may pursue services under this request. The MESB reserves the right to select one, some, all or none of the line items outlined in a Respondent's pricing submission.

Pricing information should be submitted in a separate .pdf document from the proposal's narrative.

6 Selection Process

The final decision of the selection of the respondent to develop the NG9-1-1 GIS-derived Master Street Address Guide (MSAG) maintenance process will be made by the Metropolitan Emergency Services Board (MESB), with recommendations from the MESB 9-1-1 Technical Operations Committee. The final agreement will be in the form of a written contract between the respondent and the MESB.

The MESB reserves the right to reject any, or all, proposals, and to request additional information from all proposers. All questions and correspondence should be directed to Jill Rohret, Executive Director, in writing at jrohret@mn-mesb.org or via telephone at (651) 643-8394. Contact with MESB personnel other than Jill Rohret regarding this RFP may be grounds for elimination from the selection process.

Proposals are due by 4:00 p.m. on Friday, September 11, 2020, e-mailed to: Jill Rohret, Executive Director, jrohret@mn-mesb.org.

PUBLIC DATA

Proposals submitted become a matter of public record. Information supplied by any proposer is subject to the Minnesota Government Data Practices Act, Minnesota Statutes, Sections 13.01 et seq.

Public Record: Under Minnesota law, data submitted by a business to a government entity in response to a request for proposal are private or nonpublic data until the responses are opened. Once the responses are opened, the name of the proposer becomes public. All other data in a proposer's response to a request for proposal are private or nonpublic data until completion of the evaluation process. Completion of the evaluation process means that the government entity has completed negotiating the contract with the selected proposer. After a government entity has completed the evaluation process, all remaining data submitted by all proposers are public with the exception of trade secret data as defined and classified in Minn. Stat. Section 13.37. A statement by a proposer that submitted data are copyrighted or otherwise protected does not prevent public access to the data contained in the response if such data does not qualify as trade secret data.

METROPOLITAN EMERGENCY SERVICES BOARD

Meeting Date: October 29, 2020
Agenda Item: 6B. Acceptance of After-Action Review for Communications During May/June 2020 Civil Unrest
Presenter: Eggimann

RECOMMENDATION

The 9-1-1 and Radio Technical Operations Committees (TOCs) recommend acceptance of the After-Action Review for Communications During May/June 2020 Civil Unrest.

BACKGROUND

A joint workgroup was formed from members of the 9-1-1 and Radio TOCs to conduct an after-action review of how the 9-1-1 and ARMER systems performed and were utilized during the civil unrest and rioting that occurred following the in-custody death of George Floyd on May 25, 2020 in Minneapolis.

ISSUES & CONCERNS

The workgroup documented the system strengths and issues identified for both 9-1-1 and the ARMER systems. In addition, the workgroup identified personnel and event management issues which affected performance on both systems. The report concludes with a list of 15 prioritized recommendations the workgroup believes would help mitigate the issues identified.

Implementing all the recommendations contained in the report will require significant cooperation between jurisdictions and agencies involved.

FINANCIAL IMPACT

There is no financial impact to accept the report. However, if the MESB pursues some or all of the recommendations, there could be a financial impact to the MESB and/or PSAPs and radio shops, dependent on the implementation plan adopted by the jurisdictions and agencies involved.

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May/June 2020 Civil Unrest

After Action Report/Improvement Plan

Metropolitan Emergency Services Board
9-1-1 and Radio Technical Operations Committees

October 15, 2020

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INTRODUCTION

On Monday, May 25, 2020, the Minneapolis Police Department responded to an incident which led to the arrest of George Floyd. Floyd died during the arrest with much of the incident captured by bystander video. The posting of the video on social media led to several days of mass protests in Minneapolis and St. Paul. Concurrently, smaller groups of people began rioting and looting, which resulted in the wide-spread destruction of public and private property. There were injuries and deaths reported during the civil unrest which continued for several days throughout parts of Minneapolis and St. Paul, ultimately requiring law enforcement assistance from across the state and the Minnesota National Guard being deployed to restore order in the metropolitan area. Civil unrest and rioting that began because of Floyd's death and the associated civil unrest in Minnesota continues in numerous cities across the country at the time of the writing of this report.

The Metropolitan Emergency Services Board, which coordinates both the 9-1-1 and Allied Radio Matrix for Emergency Response (ARMER) radio systems on a regional basis for the ten-county Minneapolis/St. Paul metropolitan region, has standing committees which provide input and make recommendations regarding the systems' operations. The committees formed a joint 9-1-1/radio work group to conduct an after-action review (AAR) of how the systems performed during the civil unrest following the death of George Floyd. This report contains the AAR work group's observations, conclusions, and recommendations.

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STRENGTHS

1) The 9-1-1 and ARMER radio systems both functioned as designed throughout the multi-day event even while experiencing call volume peaks six to seven times greater than normal.

2) Text-to-9-1-1 message rates also spiked during the same time but provided an alternative means of reaching 9-1-1 when the 9-1-1 voice system became overloaded with voice calls. For example, the Ramsey County Emergency Communications Center (RCECC) reported receiving 399 text-to-9-1-1 messages within a four-hour period during the event. The normal monthly average for text messaging to 9-1-1 at RCECC is approximately 100 messages per month.

3) There were no 9-1-1 or ARMER system equipment or network failures during this time.

4) Management of interoperable talkgroups was effectively handled by use of the established reservation system.

5) Communications Unit Leaders (COML) from Hennepin County Medical Center (HCMC), Minneapolis Emergency Communications Center (MECC) and the Minnesota National Guard on their own initiative began coordination early on specific to the communication needs of Minneapolis.

ISSUES IDENTIFIED

9-1-1 System Issues:

1) Extreme Spikes in 9-1-1 Call Volume – While the 9-1-1 system continued to deliver extremely high volumes of calls to the emergency communications centers (ECC) across the region, there were times when the number of calls coming in exceeded the number of calls the ECC telecommunicators on-duty could effectively answer. It should be noted that it is not feasible to design systems or staffing plans at the levels required to handle an extreme increase in 911 traffic resulting from an unexpected, critical incident.
    a. When the 9-1-1 call volume during this event reached the designated capacity for each of the ECCs, callers to MECC received fast busy signals (to alert them their 9-1-1 calls could not be delivered). RCECC overflows 9-1-1 calls to administrative lines. This is the overflow call handling treatment currently configured for the system and it worked as designed.

2) Wireless 9-1-1 calls competed with regular wireless calls for access to wireless carrier cell sector capacity on systems which were saturated during the event, causing some wireless 9-1-1 calls to be handled by neighboring cell towers not physically close to where the caller was located. This resulted in some wireless 9-1-1 calls being routed to the wrong ECCs, e.g. some wireless callers physically located in Minneapolis had their calls routed to Anoka County. This routing occurred without any of the ECCs receiving notification of the abnormal routing, adding to the length of time needed to process calls. The abnormal routing happened due to the way the wireless carriers currently have their systems designed; their systems functioned as designed but caused a negative impact on the ability of the metropolitan region ECCs to process 9-1-1 calls.

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3) The MECC backup 9-1-1 center was located within the Minneapolis Police Department Third Precinct building and was destroyed when the decision was made by city leaders to abandon that building. This eliminated the option for MECC to staff additional workstations utilizing both their primary and backup locations.

4) There was no ability to transfer 9-1-1 callers or the incident information being reported between ECCs because of radio and telephone system congestion, as well as the lack of an implemented regional workload-sharing system, such as a regional or statewide computer-aided dispatch (CAD)-to-CAD interoperability system.

Radio System Issues:

1) The lack of encrypted talkgroups and responder radios capable of using the encrypted talkgroups that were available created operational impacts by forcing the use of clear talkgroups. This inability for responders to all use encrypted resources gave the civil unrest leaders an opportunity to use radio scanners and scanner apps on smart phones to intercept and react to responder radio transmissions in real time.

2) Radio users experienced a busy tone, or "bonk," on some statewide talkgroups. This was noticed when MECC and Minneapolis Police Department command staff could not transmit over the radio. The Minneapolis Radio System Administrator was contacted about this problem and identified the talkgroups on which this was occurring. The System Administrator then contacted the ARMER system vendor, Motorola, and began testing and documenting examples. Motorola identified the problem as a radio console outside the metropolitan area having an improper configuration setting. The busy tone issue users experienced was resolved quickly after the configuration issue was corrected.

3) Per the ARMER standards, only law enforcement has ability to use LTAC, LTACE, and METAC 11E and 12E talkgroups and have their radios programmed accordingly. This prevented fire and EMS responders from being able to monitor law enforcement radio traffic. STACs were used as alternative talkgroups to enable fire and EMS situational awareness, however these resources operate in clear mode, which added to the issue identified in item 1 above.

4) Emergency responder resources brought in from greater Minnesota did not have the metropolitan regional interoperability talkgroups programmed in their radios. This caused overuse of the statewide STAC and LTAC resources, which were needed for use in other areas of the state. Many of these responders also did not have encryption-enabled devices, including the Minnesota State Patrol.

5) Radios from the Minneapolis Police Department's Third Precinct were stolen by rioters when the decision was made to abandon that building. The stolen radios were then used by rioters to monitor and interfere with legitimate emergency response operations and possibly evade arrest.

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Personnel and Event Management Issues:

1) Contingency plans which were in place within the ECCs were not designed for events that were longer than 72 hours in duration. The telecommunicators were physically exhausted, as well as mentally and emotionally drained by this event.

2) The temporary location chosen for the Multi-Agency Coordination Center (MACC) did not take advantage of existing emergency management technology available at the Minneapolis Emergency Operations Training Facility (EOTF), including access to the Minneapolis Camera System. The Minneapolis EOTF was identified to MECC as the Minneapolis Command Center on Wednesday, May 27th, the day before the MACC was set up. This resulted in Minneapolis having to staff both locations and complicated coordination between the locations, as well as confusion over where incident command was located.

3) The Minnesota Department of Public Safety (DPS) and local law enforcement initiated the MACC on May 28. Communications and response coordination between the MACC and the metro area ECCs was never adequately established during this event.

4) Emergency responder location was not available at a regional level to the ECCs or the MACC.
    a. The St. Paul Police Department utilized an online application that enabled the police department to track its officers' locations in real time at the SPPD EOC, but this responder location information was not available at the MACC or the ECCs.

5) Talkgroups were patched for long periods of time. Some agencies patched their main channels with tactical talkgroups, which tied up multiple zones.

6) Lack of Incident Command Structure (ICS) implementation at MACC.
    a. There was confusion after the incident control was transferred from the Minneapolis Command Center at the EOTF to the MACC.
    b. Lack of a clearly identified Incident Commander led to vague, conflicting decisions or orders coming out of the MACC regarding the coordination of emergency responders and what information was given to the public.
    c. Several ICS 205 documents were sent out in a short amount of time by the MACC and the ECCs, without coordination.
        i. Both MECC and RCECC did not receive clear coordination with the MACC. Conflicting communications plans (ICS 205s) were issued, including the use of different email distribution groups to disseminate the ICS 205s.
    d. There was no clear delineation on what emergency response resources were going to be dispatched directly by personnel at the MACC and which resources would be coordinated by the emergency communications centers. Resources responding within Minneapolis were not all under control of MECC (e.g. State Patrol). This led to confusion on which talkgroups responders were assigned to and who was responding to a given event.

7) There appears to be a fundamental misunderstanding about what the emergency communications center role is in the emergency response continuum, as well as within the ICS structure. The agency heads and elected officials repeatedly advised the public to call 9-1-1 for inappropriate reasons (e.g. tip line calls on unlicensed vehicles) which contributed significantly to the spike in 9-1-1 call volume and interfered in the ECC personnel's ability to

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receive, classify, prioritize, assess available emergency response resources, and coordinate the emergency response to the incidents as they were reported.

a. Ten-digit administrative telephone numbers that terminate and ring in the ECCs were included in press briefings as alternative numbers to use to report emergency events or crime tips. Calls to these numbers may have gone unanswered because of the priority given to 9-1-1 calls and the volume of 9-1-1 calls. Callers also used these numbers, as well as 9-1-1, to verbally abuse the telecommunicators, make vulgar disparaging statements about the police officers, and complain about the lack of emergency response. These calls were filled with profanity, yelling, and personal attacks on the telecommunicators, further negatively impacting the telecommunicator's ability to do their job.

RECOMMENDATIONS

1) Establish the governance structure, on-going funding model, training, and procedures to deploy and utilize 9-1-1 call workload sharing between cooperating ECCs.

2) Identify and implement workload sharing applications that will:
   a. Permit 9-1-1 calls to overflow to neighboring ECCs which have agreed to work together cooperatively.
   b. Identify on-going funding and provide CAD-to-CAD interoperability to support allowing overflow calls to neighboring ECCs which have agreed to work together to be answered, triaged, classified (type or nature code assignment), and sent electronically into the original destination ECC's CAD dispatch queue, permitting the original destination ECC to coordinate the emergency response to incidents within its jurisdiction.
   c. Establish a regional CAD incident display map showing the location of emergency responders (both personnel and units) and incidents in progress, permitting the appropriate personnel to have a big picture understanding of what is happening at the regional level in real time.

3) Identify telecommunicator resources to support any ECC personnel that have been involved in prolonged or horrific emergency events and may not recognize the extent they have been impacted mentally and emotionally, and those that recognize they need help.

4) Establish procedures to support the use and staffing of community tip lines that do not terminate in or interfere with ECC operations or negatively impact the 9-1-1 system whenever law enforcement or fire establish a joint command facility (e.g. MACC).

5) Establish or update an existing metro region 9-1-1 standard to block "anonymous" calls to admin lines that terminate in the ECC to reduce harassing, abusive, or denial of service attack calls that can negatively impact ECC operations.

6) Provide training to agency heads and elected officials regarding the role of the emergency communications centers and COMLs in the emergency response continuum. Work together with other emergency responder agencies to include an emergency communications and

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response coordination training module to be incorporated into new hire training, as well as in-service training, provided by the law enforcement, fire, and EMS agencies to their staff.

a. Response agency command staff need to be trained on the existence and need/use of the Metro Region Communications Response Task Force (CRTF).
    i. Command staff turnover is a problem; special training directed specifically for command staff be should be developed.
    ii. Include State Duty Officer training to assist in understanding the communications resources and processes to be utilized as part of the ICS structure.
b. Build relationships between the CRTF and agency command staff.
c. Ensure that ECC management personnel are included in all EOC/MACC operations at the same level, and at the same time, as law enforcement, fire, and EMS management personnel are included
d. Include COMU representatives at the MACC at the beginning of MACC operations

7) Create or update an existing standard to require ARMER talkgroups to be labeled using the same talkgroup names system wide. Currently, different agencies label the same talkgroup by different names.

8) Conduct on-going ARMER training for law enforcement, fire, and EMS responders, both for new-hires and as part of regular in-service training, as required in SECB Standards LMR-29, LMR-30, and LMR-31.

9) Create better advertisement of available resources, such as equipment caches, CRTF, etc. at a state level

10) Identify regional, or statewide, EOC or MACC locations that can be properly equipped in advance.

11) Establish regional communications plans that can be practiced and implemented by the appropriate COMLs as soon as an incident escalates into a multi-agency, multi-jurisdictional event. This should be incorporated into the ICS implementation plans but could be activated before the ICS structure is established beyond the initial response. This response should also include the distribution of a consolidated ICS 205 form and can include additional forms in the future, such as an ICS 205a or ICS 217 form.

12) Create or update an existing metro region ARMER standard that recommends requesting the deployment of CRTF resources when an incident escalates to include multi-jurisdiction coordination or multi-agency responses from more than one ECC service area. This should not be dependent on whether law enforcement or fire establish a joint command facility (e.g. MACC).
    a. Define how CRTF is activated.
    b. Notify the State Duty Officer as soon as a request to deploy the CRTF is received.
    c. Ensure the State Duty Officer documentation related to CRTF deployment is current.
    d. Define how the regional ECCs will be notified.

13) Provide training to agency heads and elected officials regarding the role of the emergency communications centers and COMLs in the emergency response continuum. Work together with other emergency responder agencies to include an emergency communications and response coordination training module to be incorporated into new hire training, as well as in-service training, provided by the law enforcement, fire, and EMS agencies to their staff.

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a. Response agency command staff need to be educated on the existence and need/use of the CRTF.
    i. Command staff turnover is a problem; special training directed specifically for command staff be should be developed.
    ii. Include State Duty Officer training to assist in understanding the communications resources and processes to be utilized as part of the ICS structure.
b. Build relationships between the CRTF and agency command staff.
c. During the event, some agency heads expressed concern that their responders would not be able to find the talkgroups specified in the ICS 205s on their radio.
d. Add the MESB's ARMER training video on changing zones on subscriber units uploaded to the MESB website. (As of the final draft of this document, this video is available on the MESB's website and the link has been distributed to metro region ARMER system administrators.)

14) For jurisdictions where there are separate management structures for 9-1-1 and ARMER, regular coordination meetings need to be established so that the two teams identify issues proactively and work together to address the issues. This coordination should include contingency planning for system failures and multi-agency events.

15) Establish a timeline for requiring encryption-capable radios for response agencies within the metro area.

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APPENDIX A – AFTER ACTION REPORT PARTICIPATING DEPARTMENTS

Anoka County Emergency Communications Center

Hennepin Co. Sheriff's Office

Metropolitan Airports Commission Emergency Communications Center

Metropolitan Emergency Services Board Staff

Minneapolis Radio Communications Electronics

Minneapolis Emergency Communications Center

Ramsey Co. Emergency Communications Center

Washington Co. Sheriff's Office

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METROPOLITAN EMERGENCY SERVICES BOARD

Meeting Date: October 29, 2020
Agenda Item: 6C. Recommendation to Begin the Development of an RFP for CAD-to-CAD Interoperability, to Include the Development of a Funding Plan
Presenter: Eggimann

RECOMMENDATION
The 9-1-1 Technical Operations Committee (TOC) recommends the Board begin the process to develop an RFP for a CAD-to-CAD interoperability and situational awareness solution, including a funding plan, as recommended in the After-Action Report for Communications during the May/June 2020 civil unrest.

BACKGROUND
A joint work group was formed from members of the 9-1-1 and Radio TOCs to conduct an after-action review of how the 9-1-1 and ARMER systems performed and were utilized during the civil unrest and rioting that occurred following the in-custody death of George Floyd on May 25, 2020 in Minneapolis. The highest priority technical recommendation in the report was to enable 9-1-1 call workload sharing between the metro emergency communications centers (ECCs), which we have traditionally called PSAPs.

ISSUES & CONCERNS
The 9-1-1 TOC's recommendation for CAD-to-CAD interoperability includes the implementation of a regional situational awareness solution which may support tactical dispatch of response units assigned to multi-agency, multi-jurisdictional events under the management of a multi-agency coordination center (MACC). The overall goal of the recommendation is to give the ECCs, the emergency response agency heads, and the elected officials the tools needed to handle the 9-1-1 calls, confirm the incident locations, properly classify the incidents and the response resources needed, assess the incidents currently in progress, and prioritize the available response resources in real time across the region to facilitate management of ongoing events.

This recommendation is not a small under-taking. It will require a workgroup to develop goals of the project, before an RFP can be developed and issued. Additionally, funding must be identified and secured before an RFP is developed. Additionally, a governance and management structure for this regional workload sharing resource will need to be established as well as a funding plan, not only for the initial purchase, but also for on-going operations. The ECCs, or their governing bodies, will need to choose whether to participate in workload sharing with other

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METROPOLITAN EMERGENCY SERVICES BOARD

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Agenda Item: 6C. Recommendation to Begin the Development of an RFP for CAD-to-CAD Interoperability, to Include the Development of a Funding Plan
Presenter: Eggimann

ECCs and cooperative agreements will need to be put in place between the participating ECCs. A public safety wide area network (WAN) which can support 9-1-1 as well as other public safety applications including this CAD-to-CAD interoperability and regional awareness solution will need to be put in place connecting the regional ECCs together. This WAN is already part of the MESB's NG9-1-1 transition plan and funding for it is included in the MESB capital budget.

FINANCIAL IMPACT

As previously stated, funding for the WAN is included in the MESB's capital budget. In addition, the MESB will need to determine if it will assume the cost of the regional system components necessary to support the interoperability between the regional ECCs, both for the initial purchase as well as on-going operations. There will be costs to the individual ECCs related to the interface needed to connect their existing CAD to the regional components. The costs for both the ECCs and the MESB should be identified in the RFP responses.

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Recommendation for Regional Workload Sharing and Situational Awareness Application Implementation

Recommendation:

The Metropolitan Emergency Services Board (MESB) 9-1-1 Technical Operations Committee (TOC) recommends that regional CAD-to-CAD interoperability and situational awareness systems be procured and implemented as soon as practicable. The systems should enable cooperating emergency communications centers (ECC) to answer and dispatch each other's 9-1-1 calls in the event an ECC is temporarily overwhelmed with a surge of calls associated with a high-visibility or large-scale event. In addition, the system should support regional situational awareness tools that will allow metro region ECCs to see and understand 9-1-1 call flow and emergency events in progress at any given time, both in their own ECC service areas as well as within the entire region. The system should also support multi-agency, multi-jurisdictional tactical dispatch capabilities that enables dispatch to tactical teams assigned to an event, responder location display, and situational awareness for Incident Command personnel who have assumed responsibility for a multi-agency, multi-jurisdiction large-scale event.

Background:

During late May and early June, the metro region experienced several days of civil unrest and rioting that lead to death and injury. In addition, hundreds of businesses, buildings, and government property, including the Third Precinct of the Minneapolis Police Department, were destroyed. The mayors of Minneapolis and St. Paul each declared a state of emergency followed by the Governor's emergency declaration and a call-up of the Minnesota National Guard to assist in restoring order. During this time a multi-agency coordination center (MACC) was established to manage the response to the civil unrest occurring in multiple jurisdictions.

In July 2020, the MESB 9-1-1 and Radio Technical Operations Committees (TOC) formed a joint workgroup to prepare an after-action review report regarding how the 9-1-1 and the ARMER radio communications systems functioned and were utilized during the civil unrest. That report (Attachment A) identified numerous issues that, if addressed, would improve the overall response to a similar multi-agency, multi-jurisdiction emergent event in the future. From a systems standpoint, the lack of CAD-to-CAD interoperability, tactical dispatch capabilities, and regional situational awareness were identified as the highest priority technical issues to be addressed in that report.

CAD-to-CAD Interoperability:

In 2018, the MESB received a grant from the Statewide Emergency Communication Board (SECB) to conduct a CAD-to-CAD interoperability feasibility study for the metro region. The study (Attachment B) concluded with a recommendation for the implementation of a smart-hub CAD-to-CAD interoperability system to support two-way communications between CAD systems at each of the metro region ECCs. CAD-to-CAD interoperability was included in the 2019-2021 SECB Strategic Plan, . Implementation of CAD-to-CAD interoperability in the metro region would be consistent with the SECB vision of statewide CAD data sharing.

If implemented, CAD-to-CAD interoperability using a smart-hub allows a telecommunicator at a neighboring ECC to perform call-taking functions (e.g. caller location verification, incident-type classification, etc.) for an ECC being overwhelmed with 9-1-1 calls. For example, if HCECC was overwhelmed with 9-1-1 calls, calls could be answered by Anoka County. In this example, an Anoka County telecommunicator performs call-taking functions using Anoka County's CAD system according to Anoka County procedures and then transmits the call data through the CAD-to-CAD interoperability smart-hub to HCECC's CAD dispatch queue. The smart-hub translates the data into HCECC's CAD system coding, allowing an HCECC telecommunicator to assess the incident response requirements and the available response resources in the HCECC CAD environment and coordinate the emergency response in accordance with HCECC policies and procedures.

Participation in a regional CAD-to-CAD interoperability smart-hub system would be determined by each ECC and/or governing body. Participation would be governed by cooperative agreements which define rules and roles of workload sharing. However, the capability to overflow 9-1-1 calls to participating ECCs enables a higher percentage of 9-1-1 calls to be answered than is currently possible, even during high visibility, large-scale events similar to the civil unrest that occurred in May and June 2020.

Regional Situational Awareness/Tactical Dispatch Capabilities:

Today, each metro ECC tracks its own calls, events, and responders in their respective CAD systems. Though telecommunicators have good situational awareness within their own ECC's service area, in most cases they do not have visibility into what is occurring in neighboring service areas. This prevents ECCs that would like to work cooperatively with one another to implement strategies that could improve response times, particularly for fire and EMS events such as "closest available unit dispatch," where the closest unit regardless of jurisdiction is assigned to an event. A regional situational awareness application that can display all calls, events in progress, responder status, and responder location across jurisdictions supports a higher level of response coordination, as well as response unit backfilling and move-up assignments, to cover areas where the primary response unit is already assigned to another event.

In a similar fashion, when a large-scale event occurs covering multiple ECC service areas and response units from multiple jurisdictions, a regional situational awareness application can display what is happening in the entire event area as well as the response unit availability and current assignment status. During the civil unrest in May and June in the metropolitan region, the After-Action Report clearly identified the lack of communication and coordination between the ECCs and the MACC. A regional situational awareness application could have provided the Incident Command team at the MACC and the ECCs tools to see where incidents were occurring and where responders were in real time. A regional situational awareness application could provide tactical dispatch capabilities and support the use of multi-agency response units, specifically formed for and assigned to the event, to be dispatched directly by the emergency communications dispatch team assigned to the MACC. Response units not assigned to the event would operate as normal with their respective ECC. The call and incident data would flow from the ECCs to the regional situational awareness application through the CAD-to-CAD smart-hub system described earlier.

Underlying Wide Area Network Connectivity:

The CAD-to-CAD interoperability and regional situational awareness systems in this recommendation will need to be connected to each of the regional ECCs. The wide area network (WAN) to provide this connectivity has not yet been implemented but is already part of the MESB transition-to-NG9-1-1 strategic plan. The plan calls for a regional public safety WAN that supports 9-1-1 call delivery, as well as other mission critical public safety applications, including cloud-based or shared applications used by the ECCs such as the recommended systems. The funding for the WAN is currently in the MESB capital budget.

Related Issues Identified:

The scale of this recommendation should not be underestimated. The technical aspects of implementing these recommended systems is straightforward. However, a vendor contract will be needed to monitor and maintain these systems on a 24x7 basis going forward. Since these proposed capabilities would be new, a governance structure representing the governing bodies operating the regional ECCs and a representative group of ECC managers will be needed to provide operational input for the systems. A funding plan must be developed that includes both the initial implementation costs and the ongoing operating expenses associated with the systems and the underlying wide area network connectivity. Training material for the ECCs on how to utilize these systems will also need to be developed. Adequate staffing at the ECCs must be maintained.

Summary:

As we have seen recently large-scale events often cover multiple jurisdictions and require emergency responders from across the region, and sometimes even from outside the region. Managing the emergency response to these events is a challenge under the best of circumstances. And with the proliferation of wireless devices throughout the population, high visibility events can generate surges of 9-1-1 calls that can temporarily overwhelm the resources of a single ECC as part of day-to-day operations.

The CAD-to-CAD smart-hub and the regional situational awareness applications described in this recommendation, if implemented, will provide the foundation for greater coordination of emergency communications and response resources during day-to-day operations as well as large-scale events. This will permit greater efficiency in the use of these limited resources. No single agency or jurisdiction can be staffed or equipped to handle every emergency event within their service area and will experience times when their response resources are overwhelmed and exhausted. In the same respect, the proposed systems will not lower day-to-day ECC staffing needs and cannot compensate for chronic understaffing at any of the regional ECCs. By working together in an informed and coordinated manner supported by the tools in this recommendation, the regional emergency call and response resources are sufficient to handle major events as well as continued day-to-day operations.

Attachment A:

After-Action Review Report

Attachment B:

CAD-to-CAD Feasibility Study

Metropolitan Emergency Services Board

CAD-to-CAD Interoperability Feasibility Report and Recommendations – DRAFT v9

February 21, 2018

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1.0 Executive Summary

Winbourne is pleased to provide this feasibility report on Computer Aided Dispatch (CAD) interoperability and recommendations to Metropolitan Emergency Services Board (MESB). Our team worked closely with all Twin Cities metropolitan region PSAPs, CAD-to-CAD vendors and CAD vendors to gather the information that is used in our findings. Our recommendations are based on the information gathered, industry knowledge, and our experience with similar projects.

1.1 Overview of Project Scope

Winbourne Consulting LLC was engaged by the MESB to provide expert consulting services to perform a CAD-to-CAD interoperability and feasibility study and to provide a report and recommendations.

As part of the engagement, we provided MESB a CAD-to-CAD white paper that was distributed to all metro region PSAPs prior to a kick-off meeting. During the kick-off meeting, our team went through highlights of the CAD-to-CAD white paper including situational awareness, resource sharing, incident transfer capability, NG9-1-1 compatibility and interoperability.

We interviewed the metro region PSAPs to answer questions regarding CAD-to-CAD interoperability, gather information regarding each PSAP's technology and CAD software, and determine each PSAP's willingness to participate in a regional interoperability initiative utilizing a Commercial off the Shelf (COTS) CAD-to-CAD solution.

Our team contacted the three major CAD-to-CAD software vendors in order to determine their ability to provide a solution that would meet MESB's needs for a regional CAD-to-CAD interoperability solution.

We worked closely with MESB to ensure that all of the PSAPs in the metro region had their needs and desires for a regional CAD-to-CAD interoperability solution represented in the report.

This report documents our findings and recommendations. Each recommendation also includes a projected timetable for implementation and a preliminary, budgetary-level cost estimate.

1.2 Our Methodology

Our methodology for conducting the analysis was based on several factors:

- Clarifying study objectives with MESB

- Conducting data gathering and verification
- Obtaining best practice examples from other regional CAD-to-CAD installations
- Determining relevant findings associated with the project objectives and developing related recommendations
- Obtaining feedback from stakeholders such as MESB and metro region PSAPs
- Maintaining regular communications with MESB and other stakeholders throughout the project
- Documenting our findings and recommendations in project briefings and in this final report

1.3 Summary of Findings and Recommendations

The Statement of Work (SOW) posed three primary study requirements, the findings and recommendations for which are summarized below:

Inventory/Interest

Our analysis shows that most of the PSAPs have CAD systems capable of supporting a COTS CAD-to-CAD solution with Automatic Vehicle Location (AVL) closest resource dispatch capability.

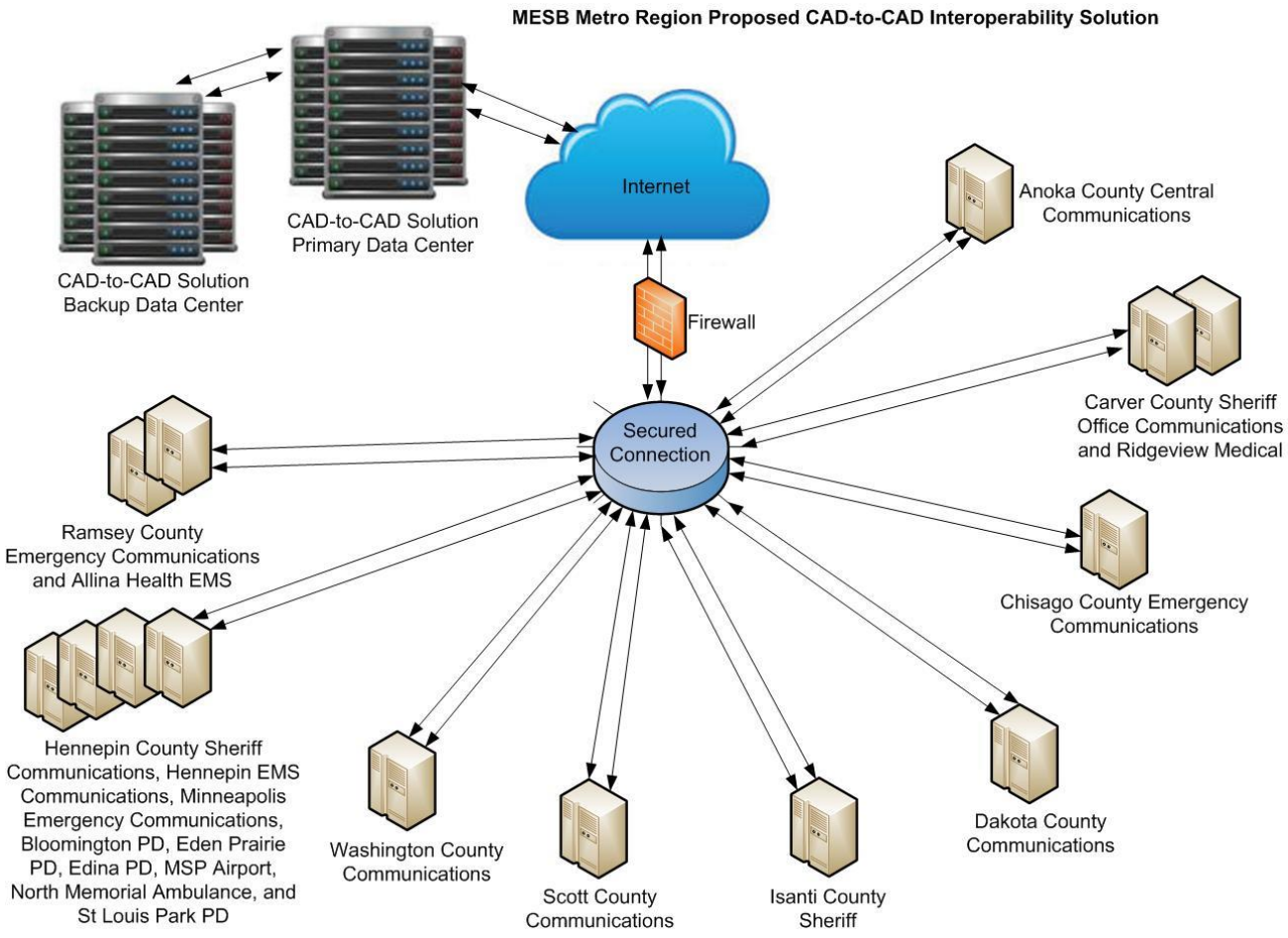
Based on our contact and interview process with the metro region PSAPs, we determined that there is a high level of interest for a COTS CAD-to-CAD regional interoperability solution. We also found that many of the PSAPs expressed a desire to expand the data sharing capability of a CAD-to-CAD solution to neighboring counties outside of the metro region, primarily because these counties already have mutual aid agreements with many of the metro region PSAPs.

Preliminary Recommendations

Utilizing the data collected through our PSAP interview process, our knowledge of the industry and other similar regional data interoperability projects, we recommend that MESB procure a bi-directional COTS CAD-to-CAD solution that will interconnect all metro region PSAPs. We also recommend that the COTS CAD-to-CAD solution be robust enough to allow neighboring counties and PSAPs to join. We further recommend the use of a request for proposal (RFP) process with detailed CAD-to-CAD operational and technical requirements to procure the COTS CAD-to-CAD solution.

Our recommendation is that MESB procure and maintain the CAD-to-CAD solution for all metro region PSAPs, and that MESB draft the agreement language for the participating metro region PSAPs to sign, as part of the CAD-to-CAD implementation and go-live process.

The following, Figure 1, illustrates the proposed CAD-to-CAD solution with connectivity between all metro region PSAPs.



(Figure 1)

PSAP Interviews & Recommendations

Our team conducted a thorough analysis of the metro region PSAPs, including CAD and AVL capabilities and willingness to participate in a regional CAD-to-CAD interoperability initiative. Through our extensive interview process, we can report that all of the metro region PSAPs are in favor of a CAD-to-CAD interoperability solution. Furthermore, all of the metro region PSAPs

interviewed expressed full support for MESB to procure and manage the regional CAD-to-CAD interoperability solution.

Winbourne is basing our recommendation on the analysis and interview process with the metro region PSAPs, contact with the CAD-to-CAD vendors, and contact with the CAD vendors that are currently providing solutions to the metro region PSAPs, industry knowledge and other experiences with similar projects. Our recommendation is based on all of these factors, and we are pleased to recommend that MESB strongly consider the procurement and implementation of a regional COTS CAD-to-CAD interoperability solution.

1.4 Summary of Cost Estimates

We prepared cost estimates for a regional CAD-to-CAD solution including the CAD-to-CAD product and interface costs to each metro region PSAP's CAD system. We used multiple data sources for these cost estimates to include CAD-to-CAD vendors, CAD vendors, open source data (Internet), and our personal experience with the costs for these types of systems.

The detail capital and recurring costs are presented in the CAD-to-CAD cost estimate section 2g.1 of this report.

We broke down the cost estimates into three primary categories of CAD-to-CAD procurement, CAD-to-CAD solution/product, and each PSAPs CAD Interface to the CAD-to-CAD solution. We then looked at low and high estimates for each category to come up with a total budgetary cost estimate for the entire project, ranging from $2,100,000 on the low end to $5,690,000 on the high end, with a median of $3,895,000.

The ongoing cost for the CAD-to-CAD solution ranges from $200,000/year on the low end to $600,000/year on the high end, with a median of $400,000/year. The ongoing cost for each PSAPs CAD interface to the CAD-to-CAD solution ranges from $12,000/year on the low end to $18,000/year on the high end, with a median of $15,000/year.

To add the Minnesota State Patrol to the CAD-to-CAD interoperability project we estimate a cost range from $120,000 on the low end to $160,000 on the high end, with a median cost of $140,000.

The five year total cost for the entire CAD-to-CAD project ranges from $4,040,000 on the low end to $9,800,000 on the high end, with a median of $6,920,000.

1.5 Summary of Implementation Timeline

Our team broke down the implementation timeline into two primary sections of CAD-to-CAD procurement, and CAD-to-CAD implementation which includes interfacing each PSAP to the CAD-to-CAD solution. The timeline was developed based on discussions with the CAD-to-CAD vendors, the CAD vendors, open source data (Internet), industry knowledge and our personal experience with implementing these types of systems. The detail CAD-to-CAD estimated implementation timeline can be found in section 2g.2 of this report.

To summarize, we believe that the CAD-to-CAD procurement process will take about 6 to 7 months to complete. The CAD-to-CAD implementation, CAD interfaces to each PSAP and PSAP certification process will take 12 to 18 months to complete. This means that the entire project from start to finish will take between 18 and 24 months to complete.

2.0 Project Study Requirements

The Project Scope as stated in the MESB's RFP has the following requirements:

a. *Inventory by PSAP of the CAD product currently in use, including options, and software release levels.*
b. *Inventory by PSAP on Automatic Vehicle Location (AVL) capabilities for tracking responder vehicles and status, including vendor, options, and software release levels.*
c. *Identify PSAPs who are interested in entering into a cooperative agreement to share CAD and responder data in real time.*
d. *Data interoperability options – minimum of two options*
    - *Examples from interoperability projects currently operating in other parts of the country.*
    - *Cost estimates for each option.*
e. *Recommendation for implementation of a regional CAD-to-CAD data interoperability project.*
    - *Implementation timeline and identifiable milestones for the completed regional CAD data interoperability project.*
    - *Identification of the next step*
        - *Cost estimates for the next step*
f. *Identify any legal issues that sharing CAD data may create for the* metro region *PSAPs.*

- *Recommendations on how to deal with legal issues.*

g. *Identify your expectations for the MESB and the metro PSAPs in the preparation and completion of the RFP report and recommendations.*

2.01 Data Interoperability Overview

Data interoperability is emerging as a key public safety requirement. It is taking on the imperative that voice interoperability did after the attacks on September 11, 2001. The challenge of public safety data interoperability between CAD systems is being addressed by a growing number of communities and technology vendors across the country. Data interoperability is developing as a requirement for multi-jurisdictional regions that share multiple borders. During the past 5-10 years, the number of regions across the country that are using a form of CAD interoperability or CAD-to-CAD interface has continued to grow.

2.02 CAD-to-CAD Overview

A key challenge for many PSAPs is the lack of timely access to personnel and resource information in neighboring jurisdictions, particularly when units in the neighboring jurisdiction are the closest available to the incident. When an incident occurs near the border between jurisdictional boundaries, dispatchers lose time by having to make phone calls to locate and dispatch the closest resources.

CAD-to-CAD interoperability can speed the incident response by using pre-determined dispatch agreements to send the closest available unit automatically. Using this solution, dispatchers can view all resources available to them, including those located in neighboring jurisdictions. The PSAP CAD systems can use this information to automatically dispatch resources based on closest distance to the incident and required type of unit.

The major benefits of CAD interoperability include:

- Reduction in response time
- Increased personnel efficiency
- Increased vehicle efficiency
- Situational awareness

The reduction in response time can potentially equate to lives saved, while the increase in personnel and vehicle efficiency can prove valuable to agencies with constrained funding.

The table in Figure 2 represents examples of CAD-to-CAD regional initiatives in large jurisdictions and regions in the U.S. Each of these jurisdictions has reported on incidents aided by the CAD-to-CAD solution they use.

While CAD-to-CAD integration is most valuable to fire and EMS, it also provides situational awareness and resources for law enforcement. Utilizing a CAD-to-CAD solution throughout the metro region can reduce response time and create a cooperative environment for law enforcement, fire and EMS by providing a view of resources near jurisdictional borders, as well as incidents on the adjoining borders that could impact each jurisdiction.

Region	Population
Virginia: Fairfax County, Arlington County and the City of Alexandria	Over 1.6 million residents
California: Silicon Valley Regional Interoperability Project (SVRIP): 19 PSAPs in Santa Clara County	Over 1.8 million residents
California: San Diego Regional Interoperability Project: 14 public safety agencies and PSAPs	Over 1.4 million residents
Oregon: Lake Oswego City, the City of Portland, and the counties of Multnomah, Clackamas, Clark, Columbia, and Washington	Over 2.3 million residents
Arizona: Cities of Phoenix and Mesa	Over 2 million residents
Massachusetts: Boston, Cambridge, Brookline, Chelsea, Everett, Somerville, Quincy, Winthrop, Revere, Northeastern University, Harvard University	Over 4 million residents
California: Los Angeles Fire Department, Verdugo Fire Communications Center (dispatches for 12 fire departments), Los Angeles City Fire Department, Long Beach Fire Department	Over 11 million residents
Tennessee: Nashville Regional Information System includes 24 PSAPs	Over 1.7 million residents

(Figure 2)

In an integrated environment, all jurisdictions actively cooperate to provide the fastest and most comprehensive response to all types of incidents. Not only does this solution

enhance the fire and EMS mutual aid capability, it also provides law enforcement with a visual of all police and sheriff units in the vicinity of a major incident. In situations such as a high-speed car chase through multiple jurisdictions, the CAD-to-CAD solution prevents the use of too many units trying to follow the suspect; instead, each agency has situational awareness of all units near the suspect vehicle and they can respond more effectively.

Having a CAD-to-CAD solution typically improves technological cooperation and coordination between all public safety agencies. For example, in anticipation of changes in 9-1-1 communications related to Next Generation 9-1-1 (NG9-1-1), metro region PSAPs utilizing a CAD-to-CAD solution would benefit from all of the NG9-1-1 data utilization functionality and integration, including electronic fire and burglar alarms, panic buttons, car-telematics, shot-spotter, smartphone apps, texting, photos, video, and social media that will be implemented over the next few years.

Using a CAD-to-CAD solution, the metro region PSAPs can receive dispatch information related to everything going on in the neighboring communities, counties and metro region, enhancing situational awareness. Each PSAP maintains complete control over its data and the resources it shares with others, and each plays a role in determining which data and resources it wants to receive.

Specific benefits that can be obtained through this integrated approach include the following:

- Provide a regional public safety solution for sharing incident information, delivering each entity with incident information in a timely manner.
- Opportunity to evolve to closest available dispatch for ambulance and fire calls for service.
- Add to the capabilities provided by the ARMER system by adding additional capability for regional response.
- Enhance the regional disaster response by making regional incident data available during a major incident.
- The ability to setup geographic areas around a municipality or a county is called “Geo-Fencing.” This capability allows PSAPs to monitor incident/call activity in a predetermined Geo-Fence area and provide valuable information to public safety officials and the public.

2a PSAP CAD System Inventory

Our team worked with MESB to gather the CAD system information including vendor name, CAD version and number of positions.

The table in Figure 3 depicts the CAD system inventory information collected:

County	Agency	Positions	CAD Vendor	CAD Version
Anoka	Anoka County Central Communications	15	TriTech	Inform 5.7
Carver	Carver County Sheriff Office Communications	9	CIS (Computer Info Systems)	13.05.01 Build 096
Carver	Ridgeview Medical	4	Zoll	RescueNet Dispatch 4.6.1.774 SP1
Chisago	Chisago County Emergency Communications Center	10	ProPhoenix	2016 R2, 10/24/17
Dakota	Dakota County Communications	25	TriTech	Inform 5.7
Hennepin	Bloomington PD	12	TriTech	Inform 5.7
Hennepin	Eden Prairie PD	4	Tyler Technologies	New World 10.2
Hennepin	Edina PD	5	Superion (OSSI)	17.1
Hennepin	Hennepin County Sheriff Communications	45	TriTech	Tiburon IQCAD 3.7 TriTech Inform 5.7 or 5.8 Q2 2018
Hennepin	Hennepin EMS Communications	6	TriTech	Inform 5.6 now Q1 2018 Inform 5.7
Hennepin	Minneapolis Emergency Communications Center	41	TriTech	Inform 5.6 now Q1 2018 Inform 5.7
Hennepin	MSP Airport	10	Tritech	Inform 5.8.2
Hennepin	North Memorial Ambulance	8	Hexagon/Intergraph	Version 9.4 go-live Feb 2018
Hennepin	St. Louis Park PD	3	TriTech	Zuercher 13.0
Hennepin	University of Minnesota	5	TriTech	Inform 5.6 now Q1 2018 Inform 5.7 (share with MECC)
Isanti	Isanti County Sheriff	3	TriTech	LETG (Zuercher) 1.17.12.10
Ramsey	Allina Health EMS	17	TriTech	Inform 5.7
Ramsey	Ramsey County Emergency Communications Center	65	TriTech	Inform 5.8.2
Scott	Scott County Communications	8	TriTech	LETG (Zuercher) 2.1.5.8
Washington	Washington County Communications	18	TriTech	Inform 5.7 (2018 go-live)

(Figure 3)

2b PSAP AVL Capability

The table in Figure 4 depicts the Mobile AVL inventory information collected: Note: AVL enabled means that the Mobile System supports AVL, but not all units may have AVL.

County	Agency	Units per Shift	Total Units in CAD	Mobile System	AVL Enabled
Anoka	Anoka County Central Communications	100	2,500	TriTech	YES
Carver	Carver County Sheriff Office Communications	30	800	CIS (Computer Info Systems)	NO
Carver	Ridgeview Medical	10	19	Zoll	YES
Chisago	Chisago County Emergency Communications Center	46	133	ProPhoenix	YES
Dakota	Dakota County Communications	255	2,027	TriTech	YES
Hennepin	Bloomington PD	100	275	TriTech	YES
Hennepin	Eden Prairie PD	10	264	Tyler Technologies	YES
Hennepin	Edina PD	20	202	Superion (OSSI)	YES
Hennepin	Hennepin County Sheriff Communications	181	3,141	TriTech	YES
Hennepin	Hennepin EMS Communications	26	47	TriTech	YES
Hennepin	Minneapolis Emergency Communications Center	300	5,000	TriTech	YES
Hennepin	MSP Airport	40	687	Tritech	YES
Hennepin	North Memorial Ambulance	50	126	Hexagon/Intergraph	YES
Hennepin	St. Louis Park PD	12	163	TriTech	YES
Hennepin	University of Minnesota	10	200	TriTech	YES
Isanti	Isanti County Sheriff	24	135	TriTech	YES
Ramsey	Allina Health EMS	50	105	TriTech	YES
Ramsey	Ramsey County Emergency Communications Center	250	2,743	TriTech	YES
Scott	Scott County Communications	65	621	TriTech	YES
Washington	Washington County Communications	150	300	TriTech	YES

(Figure 4)

2c PSAP Level of Interest

All metro region PSAPs were provided a "CAD-to-CAD White Paper" in preparation for the CAD-to-CAD interoperability feasibility kickoff meeting held on October 15th, 2017. The purpose of the white paper was to provide each PSAP with an understanding of the benefits of a CAD-to-CAD integrated solution and what such a solution could bring to the region. During the kickoff meeting Winbourne presented an overview of the investigative and recommendation processes used to develop the CAD-to-CAD interoperability feasibility report and recommendations, and a high-level CAD-to-CAD presentation on capabilities and integration options.

The following are the investigative processes used in the study:

- Determine the level of interest among city, county, and municipal PSAPs.
- Inventory by PSAP of current CAD, mobile and mapping product versions and vendors.
- Evaluate AVL utilization and usefulness.
- Evaluate existing cooperative agreements and data sharing initiatives
- Identify legal issues and determine an organizational structure that would support a successful regional CAD-to-CAD solution.

The Winbourne team and MESB staff arranged and conducted onsite interviews with PSAP staff in the cities of Bloomington, Edina, St. Louis Park and the counties of Anoka, Carver, Dakota, Hennepin, Ramsey, and Scott during the week of October 16th, 2017 and with Allina Health EMS, the city of Minneapolis, the State 911 Program Manager, and Washington County during the week of December 11th, 2017. Our team also conducted phone interviews with Chisago County, Eden Prairie, Minneapolis, North Memorial, and State Patrol during that time.

The interview process was designed to assess each PSAPs understanding of the benefits of a CAD-to-CAD solution for the metro region and assess the level of interest each PSAP had in participating in a regional CAD-to-CAD initiative.

During the interview process, our team also assessed the current level of cooperation and integration between PSAPs. For example, Hennepin, Edina, Bloomington, Ramsey and Minneapolis utilize a read-only CAD-to-CAD solution from FATPOT and Bloomington, Allina Health EMS and the MSP Airport utilize the TriTech bi-directional CAD-to-CAD solution. Our research showed that all of the metro region agencies have some type of mutual aid agreements with neighboring agencies, with the majority geared toward fire or EMS, and a smaller percentage geared toward law enforcement.

The agencies that have law enforcement mutual aid agreements deal primarily with SWAT, K9 and State Patrol resources, while fire and EMS have broader mutual aid agreements that involve most fire and EMS resources. Only a very small percentage of fire and EMS agencies have automatic mutual aid agreements.

Our study shows that only a handful of the agencies utilize closest unit calculations to dispatch fire and EMS first responders, and none utilize closest unit calculations to dispatch law enforcement first responders.

During the interview process our team asked the question as to how a CAD-to-CAD initiative would benefit each PSAP. Following is a sampling of the information collected:

- Each PSAP interviewed felt that they would benefit from a regional CAD-to-CAD initiative.
- Many of the PSAPs have bordering counties that are not currently part of the MESB metro region; because these PSAPs do mutual aid with these surrounding counties/agencies on a daily basis, they felt that the CAD-to-CAD initiative should be expanded to include these additional counties.
- Washington County expressed interest in the program because they currently have a lot of mutual aid calls with surrounding agencies, and currently the only way to request units from those agencies is using the radio or telephone, which is very time consuming. All of the agencies they dispatch would be very supportive of a CAD-to-CAD initiative because they would realize huge response time savings.
- MSP Airport felt the system would be very useful especially in situations like the recent protests they had. They also send their K9 officers all over the area, which would be easier accomplished with a CAD-to-CAD solution.
- Bloomington expressed similar sentiments about how it would have been very useful to have a CAD-to-CAD solution in place during the protests, because of situational awareness and coordination of resources with everyone.
- Allina EMS felt it would be a safety factor for their paramedics if they had the ability to be able to view the map to see how far out law or fire was to their scene.
- Edina and Richfield PD and FD were ready to do a CAD-to-CAD years ago, but then an issue came up with the LOGIS's CAD project resulting in the CAD-to-CAD project being put on the back burner.
- Richfield FD stated that all structure fires in Hennepin County except for Minneapolis have auto aid and mutual aid and with a CAD-to-CAD solution this

would be streamlined and tremendously improve the process and response time.

- Edina PD expressed interest in extending the CAD-to-CAD initiative to include sharing RMS data amongst the law enforcement agencies.
- Minneapolis stated that they currently hail over the radio for mutual aid, this adds a lot of time to the call and opens itself up for operator error with addresses. They see CAD-to-CAD as solving this problem.
- Ramsey County recognizes that CAD-to-CAD will cut down on the call taker/dispatcher work load; and with their staff shortage, they see this as a benefit.
- Dakota County has bi-directional CAD-to-CAD with Rice/Steele County via TriTech, and they are experiencing benefits in sharing information and resources by reducing the need for radio or telephone communication between dispatchers and first responders. They believe a regional CAD-to-CAD solution will improve this process across the region and cut down on workload for their dispatchers.
- Scott County has frequent fire and EMS responses outside their own county and they feel that a CAD-to-CAD solution would save them time, cut down the response time, and ultimately save money.
- Carver County has several of their fire departments do mutual aid nearly every day with surrounding agencies, and they feel that a CAD-to-CAD solution would save time and reduce the chance for human error when communicating an incident location verbally; which, if incorrectly understood by the receiving dispatcher, can result in sending a fire or EMS unit to the wrong address.

Our team also compiled the following findings and observations:

- Many of the agencies hail over the radio when requesting mutual aid. They found this to be faster than calling on a non-emergency telephone line, which often goes unanswered if the other agency is busy. Some of the agencies must use both the radio and telephone to request mutual aid. These methods are time consuming and may result in a mistake on the address which could further add to a delay in response. This also puts a great workload on the call takers and/or dispatchers.
- Most agencies don't have the ability to see a map display that shows their units and surrounding area units. When an agency has requested mutual aid, they do not have the ability to see how far out the mutual aid agency responders are. In the example of an EMS unit on scene awaiting law enforcement response for

safety reasons, this information is critical to the safety of the paramedics on scene.

- All fire agencies within Hennepin County have an automatic mutual aid agreement for working structure fires. When an agency is requesting mutual aid for a working structure fire, the dispatcher does not have to get permission from fire command; the appropriate available units are automatically dispatched.
- Many of the metro region PSAPs interviewed expressed an interest in expanding the CAD-to-CAD solution to include their non-metro surrounding counties. These PSAPs, at minimum, dispatch fire and EMS mutual aid on a regular basis. Some of them also dispatch law enforcement mutual aid on a regular basis. Everyone understands the value of saving time and less chance for mistakes in passing along the information between agencies.
- Agencies throughout the nine-county metro region often respond on mutual aid events, such as protests which shut down major roadways. The only way they have to communicate regionally is via the radio system. This can be problematic, as transmissions can be missed and/or units can walk over each other in an active situation.
- Several law enforcement agency representatives expressed interest in using CAD-to-CAD as a gateway for sharing RMS or more specifically Master Name Index information throughout the nine-county metro region.
- Some of the agencies use encrypted radio talkgroups. If an agency providing mutual aid does not have access to those encrypted radio talkgroups, they can't communicate with responders from the primary jurisdiction. A CAD-to-CAD solution provides a secondary way that critical information can be shared with responding units.
- The majority of the agencies interviewed recognized the importance of having the MESB as a leader and conduit for this project, and that utilizing a hosted CAD-to-CAD solution could remove some of the potential political problems that could arise if one user agency were to act as the host.

Throughout the interview process our team found full support of the CAD-to-CAD initiative. The metro region agencies are committed to communication, system interoperability, data and resource sharing, but with the understanding that each PSAP/agency has full control over what data and resources are shared.

The PSAPs/agencies interviewed expressed a desire for MESB to draft regional interoperability agreements that not only address mutual aid agreements but also address the CAD-to-CAD initiatives of data and resource sharing.

In conclusion, all metro region PSAPs/agencies are in favor of procuring and implementing a regional CAD-to-CAD solution that not only serves PSAPs in the metro region, but could be expanded to support any surrounding PSAPs that want to join, if the MESB chooses to do so. The MN State Patrol has expressed an interest in participating in a regional CAD-to-CAD solution if one is implemented.

2d Data Interoperability Options

There have been many attempts to provide data interoperability to PSAPs over the years, but most of them have fallen short of expectation, or were not scalable enough to handle regional PSAP environments with multiple CAD vendors.

Winbourne examined the different data interoperability models that are available to PSAPs in the Public Safety market:

- **Consolidation Model** – Multiple PSAPs join together to form one large center and utilize a single CAD system. The Consolidation Model provides a fully integrated solution for the participating agencies, but it does nothing for neighboring agencies.
- **Point-to-Point Interface Model** – Two PSAPs with different CAD vendors contract each CAD vendor to create an interface between the two CAD systems. The Point-to-Point Interface Model can provide a fully integrated solution between the participating PSAPs. It is typically very expensive and difficult to maintain, however, because each time a CAD vendor upgrades its CAD system, there is a high likelihood that the CAD-to-CAD interface breaks. Furthermore, the Point-to-Point Interface Model, like the Consolidation Model, does not address connectivity with neighboring agencies.
- **Message Broker Model** – Two or more PSAPs with different CAD vendors contract with a third-party vendor to create a rudimentary hub that acts as a transfer agent to deliver basic CAD information to each participating CAD system. The Message Broker Model provides a more flexible solution by interconnecting two or more PSAPs CAD systems, but it generally is not robust enough to provide the flexibility and functionality required by most PSAPs.
- **Intelligent Hub Model** - Two or more PSAPs with different CAD vendors, or the same CAD vendor, contract with a third-party vendor to create an intelligent hub that acts as a transfer agent to deliver complex and configurable CAD

information between all participating CAD systems. The Intelligent Hub Model is similar to the Message Broker Model, and in some cases can coexist with the Message Broker Model to deliver the most flexible, user-definable and cost-effective solution.

All four of these models can share data between PSAPs, but only the Intelligent Hub Model and Message Broker Model can support regional PSAPs with different CAD vendors.

Three primary vendors have emerged to provide either an Intelligent Hub Model, a Message Broker Model, or a hybrid Intelligent Hub-Message Broker Model solution. These solutions have been coined CAD-to-CAD products, because they form a data bridge between disparate CAD systems allowing data to be shared.

Within these CAD-to-CAD products there are two different levels of data sharing:

- The first is a one-way, view-only, interface that is used to extract data from each participating PSAPs CAD system and shared it with all of the participating PSAPs. The one-way, view-only, interface is very cost effective and does not require participation by each PSAP's CAD vendor, but it is very limiting. In a one-way, view-only interface data can be viewed by all participating agencies, but the data cannot be acted upon. For example, one PSAP can share information that there is an auto accident with injury at the intersection of Main/First, but no resources can be shared to assist with the incident.
- The second is a bi-directional interface used not only to extract data from each participating PSAPs CAD system, but more importantly it can share resources and incident information with each PSAPs CAD system. All data, including alerts, incident and narrative information, resources and text messages, can be shared between all participating PSAPs. This functionality means that any PSAP can send incident information to any other PSAP and each PSAP can share resources with other PSAPs. This allows multiple PSAPs to share a single incident and each one can electronically dispatch fire, EMS and police units based on mutual aid or regional resource sharing agreements. The bi-directional interface can also automate mutual aid responses, reduce response time and eliminate typing errors by telecommunicators.

All three of the CAD-to-CAD vendors provide solutions that address one or both of the connectivity options, one-way interface and/or bi-directional interface.

2e Regional CAD-to-CAD Data Interoperability Recommendations

Our team found widespread support for establishing CAD-to-CAD connectivity between all of the metro region PSAPs during our interview process. Prior to these discussions, steps were taken by some of the PSAPs to share data, and some even implemented a one-way, view-only CAD-to-CAD solution; but a comprehensive regional bi-directional CAD-to-CAD solution has not been attempted.

Our team's recommendations are based on the metro region PSAP interview process, industry knowledge and availability of COTS CAD-to-CAD product solutions.

We recommend that the MESB procure a bi-directional COTS CAD-to-CAD solution that will interconnect all metro region PSAPs. Should the MESB choose to purchase a COTS CAD-to-CAD solution on behalf of metro region PSAPs, it could consider purchasing a solution robust enough to allow neighboring counties/PSAPs to participate, if the MESB makes that policy decision. Winbourne acknowledges that allowing non-metro agencies to participate raises political and legal issues for the MESB that need to be considered.

We further recommend the use of a Request for Proposal (RFP) process that includes a detailed CAD-to-CAD operational and technical requirements section in order to procure the COTS CAD-to-CAD solution that best meets the needs of the metro region PSAPs.

The detailed CAD-to-CAD requirements need to address the following minimum features and functions:

- The CAD-to-CAD solution needs to be based on the Intelligent Hub Model, the Message Broker Model, or a hybrid Intelligent Hub-Message Broker Model
- The solution needs to support a standard Application Program Interface (API)
- Data sharing needs to be bi-directional in nature and provide each PSAP the capability to decide what information and resources will be shared
- Provide capability to track and view the status of all resources and assets of all agencies, in real-time
- Allow viewing and the ability to add information to any shared incident/call
- Ability to transfer incident/call information between all PSAPs CAD systems
- Send, receive and acknowledge requests for resources
- Approve or deny the request for resources
- Handle unit recommendations within each CAD supported by CAD-to-CAD.
- Send incident information to another PSAP or approved resource
- Send supplemental, hazard, premise or additional relevant information to another PSAP or approved resource

- Send information to another PSAP's mobile data computer system
- Support mutual aid and automatic aid agreements within CAD-to-CAD
- Support NG9-1-1 data including texting, photos, video, social media, electronic fire/burglar alarms, panic buttons, car-telematics, smartphone apps, etc.

While these are a few of the CAD-to-CAD requirements, we recommend partnering with a consulting firm that has extensive industry knowledge and customer references in providing CAD-to-CAD acquisition services in order to procure a CAD-to-CAD solution that meets all of the needs of the metro region PSAPs.

2f Legal Issues of a CAD-to-CAD Interoperability Solution

MESB requested Winbourne identify any legal issues which were raised in CAD-to-CAD interoperability solutions implemented in other parts of the country, and which may occur if such a solution was implemented in the metro region. Winbourne could not find any cases or legal precedence that involved sharing CAD data via a CAD-to-CAD system.

Because most data that is shared through a CAD-to-CAD solution is not considered sensitive, Winbourne surmises that the only legal issues that may arise are with the permission of each PSAP to share their information and resources with all of the other PSAPs. Typically, there are mutual aid, automatic aid or other data and resource sharing agreements that PSAPs sign in order to mitigate any legal concerns. Since MESB has cooperative agreements with some of the metro region PSAPs for other projects, we recommend taking a similar approach to cover the ability to share CAD-to-CAD related data and resources.

We have found that selecting a CAD-to CAD solution which includes the ability for each agency to control what information and resources it shares with other PSAPs eliminates concerns and helps with participation. This, on a local level, helps each PSAP control what information and resources it will share based on the approval of their legal representatives.

Winbourne Consulting can supply guidelines and best practices to help MESB develop CAD-to-CAD governance language that can augment the current agreements between the metro region PSAPs.

2g Report and Recommendations

Winbourne conducted a thorough analysis, including extensive interviews with all of the metro region PSAPs, to determine the feasibility of a regional CAD-to-CAD interoperability solution.

Our research shows that all of the metro region PSAPs are in favor of a CAD-to-CAD interoperability solution, with some of the PSAPs having taken steps toward interoperability on their own. All of the metro region PSAPs interviewed expressed full support for a regional CAD-to-CAD interoperability solution, if the MESB coordinated its procurement and was involved in its management. The PSAPs felt that MESB was in the best position to offer a neutral and supportive environment for all of the metro region PSAPs to participate equally in a CAD-to-CAD interoperability solution.

Based on our analysis, interview process, industry knowledge and other similar interoperability projects we highly recommend that MESB procure and implement a regional COTS CAD-to-CAD solution that will interconnect all of the metro region PSAPs.

In conclusion, Winbourne consulting would like to thank MESB for the opportunity to conduct this valuable study and we are pleased to recommend that MESB strongly consider the procurement and implementation of a regional COTS CAD-to-CAD interoperability solution.

2g.1 CAD-to-CAD Cost Estimate

We based our cost estimates by contacting the CAD vendors of CAD systems utilized in the metro region PSAPs and the CAD-to-CAD solution vendors. Project management and implementation cost estimates are based on our experiences with these types of projects. Following are tables depicting the low, high and median cost estimates for each phase of the CAD-to-CAD interoperability solution project.

The table in Figure 5 depicts the cost estimates for each metro region PSAP's CAD system to interface with the selected CAD-to-CAD solution API.

Description	# of PSAPs	Low Cost Estimate	High Cost Estimate	Low Total for all PSAPs	High Total for all PSAPs
CAD Interface Cost					
TriTech	13	$40,000	$100,000	$520,000	$1,300,000
Tyler Technology (New World)	1	$60,000	$100,000	$60,000	$100,000
Superion (OSSI)	1	$60,000	$100,000	$60,000	$100,000
CIS (Computer Info Systems)	1	$40,000	$60,000	$40,000	$60,000
ProPhoenix	1	$40,000	$60,000	$40,000	$60,000
Zoll	1	$40,000	$60,000	$40,000	$60,000
Hexagon/Intergraph	1	$60,000	$100,000	$60,000	$100,000
CAD Interface Cost Totals	**19**			**$820,000**	**$1,780,000**

Figure 5

In addition, the cost for the Minnesota State Patrol to join the metro region CAD-to-CAD solution ranges from $60,000 to $100,000 for the CAD interface to the CAD-to-CAD interoperability solution API, and from $40,000 to $60,000 for the connection to the CAD-to-CAD interoperability solution.

The table in Figure 6 depicts the procurement and project management low, high and median cost estimates:

Description	Low Cost Estimate	High Cost Estimate	Median Cost Estimate
CAD-to-CAD Procurement/Implementation			
CAD-to-CAD detailed requirements	$15,000	$25,000	$20,000
CAD-to-CAD RFP support, vendor demonstrations, selection and contract negotiation	$15,000	$25,000	$20,000
CAD-to-CAD implementation and project management	$150,000	$300,000	$225,000
CAD-to-CAD Procurement/Implementation Totals	**$180,000**	**$350,000**	**$265,000**

(Figure 6)

The table in Figure 7 depicts the CAD-to-CAD Product and Solution low, high and median cost estimates:

Description	Low Cost Estimate	High Cost Estimate	Median Cost Estimate
CAD-to-CAD Product and Solution			
CAD-to-CAD software	$500,000	$2,100,000	$1,300,000
19 CAD interfaces to CAD-to-CAD software	$400,000	$600,000	$500,000
CAD-to-CAD training	$50,000	$260,000	$155,000
CAD-to-CAD project management	$150,000	$600,000	$375,000
CAD-to-CAD Solution/Product Totals	**$1,100,000**	**$3,560,000**	**$2,330,000**

(Figure 7)

The table in Figure 8 depicts the total budgetary requirements for the entire project using the low, high and median cost estimates:

Description	Low Cost Estimate	High Cost Estimate	Median Cost Estimate
CAD Interfaces to CAD-to-CAD solution Totals	$820,000	$1,780,000	$1,300,000
CAD-to-CAD Procurement/Implementation Totals	$180,000	$350,000	$265,000
CAD-to-CAD Solution/Product Totals	$1,100,000	$3,560,000	$2,330,000
CAD Interfaces and CAD-to-CAD Procurement/Implementation and Solution/Product Totals	**$2,100,000**	**$5,690,000**	**$3,895,000**

(Figure 8)

The table in Figure 9 depicts the ongoing yearly budgetary requirement for MESB to support the CAD-to-CAD solution and for the ongoing yearly cost for each PSAP to support their CAD interface to the CAD-to-CAD solution:

Description	Low Cost Estimate	High Cost Estimate	Median Cost Estimate
CAD-to-CAD Solution Annual Maintenance Totals	**$200,000**	**$600,000**	**$400,000**
Each PSAP's CAD interface to the CAD-to-CAD Solution Annual Maintenance Totals	**$12,000**	**$18,000**	**$15,000**

(Figure 9)

The table in Figure 10 depicts the cost per PSAP per year over a five-year period.

This cost was derived by multiplying the number of positions within each PSAP by the cost per position to get total cost estimates per year per PSAP:

County	Agency	Positions	Low Cost Estimate per Year	High Cost Estimate per Year High	Median Cost Estimate per Year
Anoka	Anoka County Central Communications	15	38,722	93,930	66,326
Carver	Carver County Sheriff Office Communications	9	23,233	56,358	39,796
Carver	Ridgeview Medical	4	10,326	25,048	17,687
Chisago	Chisago County Emergency Communications	10	25,815	62,620	44,217
Dakota	Dakota County Communications	25	64,537	156,550	110,543
Hennepin	Bloomington PD	12	30,978	75,144	53,061
Hennepin	Eden Prairie PD	4	10,326	25,048	17,687
Hennepin	Edina PD	5	12,907	31,310	22,109
Hennepin	Hennepin County Sheriff Communications	45	116,166	281,789	198,978
Hennepin	Hennepin EMS Communications	6	15,489	37,572	26,530
Hennepin	Minneapolis Emergency Communications	41	105,840	256,741	181,291
Hennepin	MSP Airport	10	25,815	62,620	44,217
Hennepin	North Memorial Ambulance	8	20,652	50,096	35,374
Hennepin	St. Louis Park PD	3	7,744	18,786	13,265
Hennepin	University of Minnesota	5	12,907	31,310	22,109
Isanti	Isanti County Sheriff	3	7,744	18,786	13,265
Ramsey	Allina Health EMS	17	43,885	106,454	75,169
Ramsey	Ramsey County Emergency Communications	65	167,796	407,029	287,412
Scott	Scott County Communications	8	20,652	50,096	35,374
Washington	Washington County Communications	18	46,466	112,716	79,591
	Total Positions	**313**	**808,000**	**1,960,000**	**1,384,000**

(Figure 10)

The table in Figure 11 depicts the cost per unit per year over a five-year period. This cost was derived by multiplying the number of units per shift by the cost per unit to get total cost estimates per year per PSAP:

County	Agency	Units per Shift	Low Cost Estimate per Year	High Cost Estimate per Year	Median Cost Estimate per Year
Anoka	Anoka County Central Communications	100	46,732	113,360	80,046
Carver	Carver County Sheriff Office Communications	30	14,020	34,008	24,014
Carver	Ridgeview Medical	10	4,673	11,336	8,005
Chisago	Chisago County Emergency Communications	46	21,497	52,146	36,821
Dakota	Dakota County Communications	255	119,167	289,069	204,118
Hennepin	Bloomington PD	100	46,732	113,360	80,046
Hennepin	Eden Prairie PD	10	4,673	11,336	8,005
Hennepin	Edina PD	20	9,346	22,672	16,009
Hennepin	Hennepin County Sheriff Communications	181	84,585	205,182	144,884
Hennepin	Hennepin EMS Communications	26	12,150	29,474	20,812
Hennepin	Minneapolis Emergency Communications	300	140,197	340,081	240,139
Hennepin	MSP Airport	40	18,693	45,344	32,019
Hennepin	North Memorial Ambulance	50	23,366	56,680	40,023
Hennepin	St. Louis Park PD	12	5,608	13,603	9,606
Hennepin	University of Minnesota	10	4,673	11,336	8,005
Isanti	Isanti County Sheriff	24	11,216	27,206	19,211
Ramsey	Allina Health EMS	50	23,366	56,680	40,023
Ramsey	Ramsey County Emergency Communications	250	116,831	283,401	200,116
Scott	Scott County Communications	65	30,376	73,684	52,030
Washington	Washington County Communications	150	70,098	170,040	120,069
	Total Units per Shift	**1,729**	**808,000**	**1,960,000**	**1,384,000**

(Figure 11)

The table in Figure 12 depicts the five-year total cost estimates for the initial procurement and implementation of the CAD-to-CAD solution, product and CAD interfaces, and the ongoing maintenance costs for the CAD-to-CAD solution and CAD interfaces:

Description	Low Cost Estimate	High Cost Estimate	Median Cost Estimate
CAD-to-CAD Procurement and Implementation Totals	$180,000	$350,000	$265,000
CAD-to-CAD Solution and Product Totals	$1,100,000	$3,560,000	$2,330,000
CAD Interfaces to CAD-to-CAD solution Totals	$820,000	$1,780,000	$1,300,000
5 Years of CAD-to-CAD Solution Maintenance Totals	$800,000	$2,400,000	$1,600,000
5 Years of 19 PSAPs CAD interface Maintenance Totals	$1,140,000	$1,710,000	$1,425,000
5 Year Cost of CAD-to-CAD and CAD interfaces Totals	**$4,040,000**	**$9,800,000**	**$6,920,000**

(Figure 12)

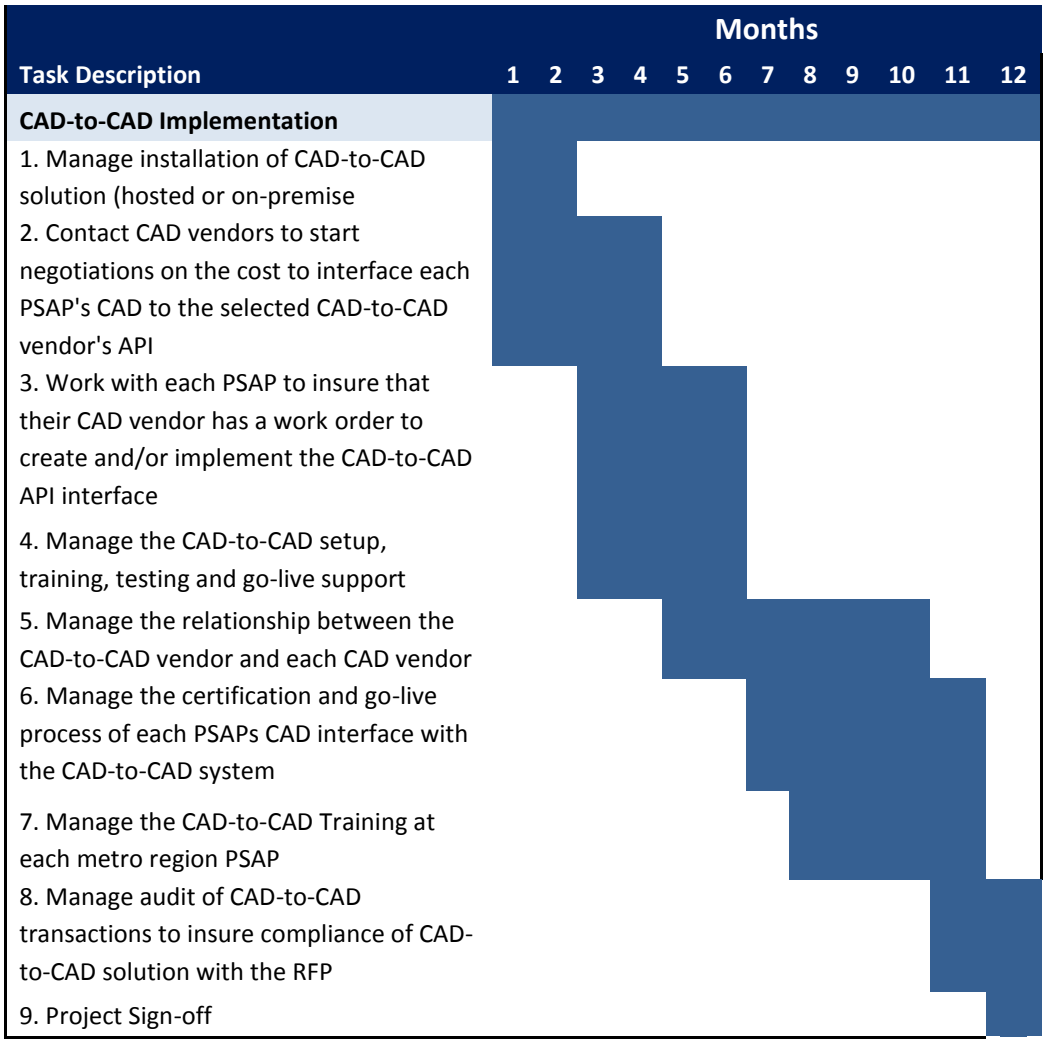
The CAD-to-CAD solution and CAD interface cost estimates, while having a relatively large variance, reflect the cost estimates received from the three major CAD-to-CAD vendors and the PSAPs' CAD vendors. The procurement and project management estimates were based on our knowledge of the industry and other similar projects.

2g.2 CAD-to-CAD Estimated Implementation Timeline

Since the CAD-to-CAD integration requires procuring and implementing a CAD-to-CAD solution as well as coordinating the CAD interfaces with each metro region PSAPs CAD vendor, we broke down the estimated timeline into two sections; CAD-to-CAD implementation and CAD-to-CAD procurement.

The CAD-to-CAD implementation timeline reflects the management of all of the installation processes including setup, administrative and end-user training, testing along with the administration of the CAD-to-CAD solution from start to go-live, as well as testing and certification of each PSAPs CAD vendor interface to the CAD-to-CAD solution.

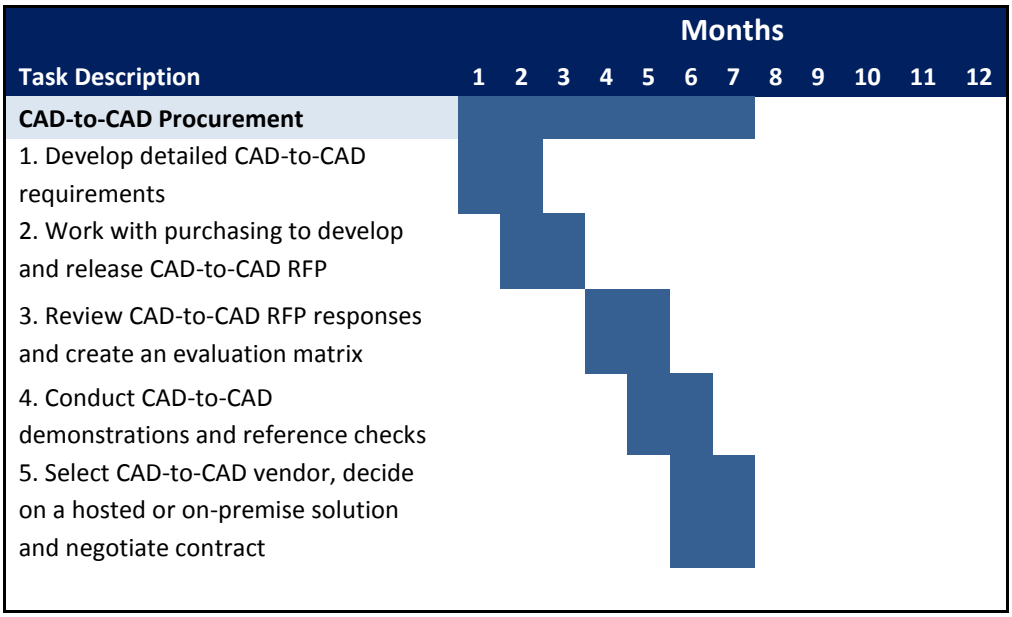
The table in Figure 12 depicts the tasks required to implement a CAD-to-CAD solution and certify all PSAPs CAD interfaces to the CAD-to-CAD solution:



(Figure 13)

The CAD-to-CAD procurement timeline reflects the development of a detailed requirements document, working with purchasing to release a RFP, reviewing, evaluating and rating the CAD-to-CAD responses, doing scenario-based demos with the CAD-to-CAD vendors to insure that the best solution is selected, selecting the vendor with the best CAD-to-CAD solution for the metro region, and negotiating the contract.

The table in Figure 13 depicts the tasks required to procure a CAD-to-CAD solution:



(Figure 13)

In Summary, the CAD-to-CAD procurement process is estimated to take between 6 to 7 months to complete.

The CAD-to-CAD implementation, CAD interface testing and certification of each PSAP is estimated to take between 12 to 18 months to complete.

Based on these estimates the entire project, from start to finish, is predicted to take between 18 and 24 months to complete.

2g.3 Scenario-Based Findings and Recommendations

The following scenarios and recommendations were developed based on our interview process with the metro region PSAPs; they substantiate our recommendation for a regional CAD-to-CAD solution and how it could positively affect the cooperation, data and resource sharing capability of the region.

The scenarios and recommendations aren't in any specific order and reflect the sentiments of the PSAPs that brought them up during our interview process.

The following table depicts scenarios and recommendations based on the interview process of the metro region PSAPs:

MESB PSAP Scenarios and CAD-to-CAD applicability

Finding: Current Methods to Obtain Mutual Aid

Many of the agencies hail over the radio when requesting mutual aid. They found this to be faster than calling on a non-emergency telephone line, which often goes unanswered if the other agency is busy. Some agencies do both, hailing via radio and calling via telephone for mutual aid. These methods are time consuming and may result in a mistake on the address, which could further delay a response. This puts a great workload on the call takers and/or dispatchers.

Recommendation:

Winbourne Consulting recognizes that all public safety agencies would benefit from using a CAD-to-CAD solution. By being able to send a CAD incident directly to the agency from which they are requesting mutual aid, they can save seconds, if not minutes in getting a response started. They will also be able to ensure that the mutual aid agency has all of the correct and current call information. Use of CAD-to-CAD could dramatically reduce the workload on both call takers and dispatchers.

Finding: Mapping

None of the agencies have the ability to see a map display that shows its units and those of its neighboring jurisdictions. When an agency has requested mutual aid, they do not have the ability to see how far away the mutual aid agency responders are. For example, if an EMS unit is on scene and awaiting law enforcement response for safety reasons, this information is critical to the safety of the paramedics on scene.

Recommendation:

Winbourne Consulting recognizes that all public safety agencies could benefit from being able to look at a regional map and see all available and activity resources. While this is not something that is used all of the time, in certain situations it can provide a critical first responder safety feature and situational awareness.

Finding: Automatic Mutual Aid

All fire agencies within Hennepin County have an automatic mutual aid agreement for working structure fires. When an agency is requesting mutual aid for a working structure fire, the dispatcher does not have to get permission from fire command as the appropriate available units are automatically dispatched.

Recommendation:

Winbourne Consulting recommends that each metro region PSAP evaluate their individual mutual aid agreements with other PSAPs and determine which ones could be automatic mutual aid agreements. CAD-to-CAD systems that have been implemented in other parts of the country have successfully expanded mutual aid agreements to automatic mutual aid agreements that incorporate fire, EMS and law enforcement services.

Finding: Mutual Aid Response

Agencies throughout the nine-county metro area often respond on mutual aid events. One example is when protesters close down major roadways. The only way to communicate regionally is via the radio system. This can be problematic, and transmissions can be missed and/or units can walk over each other in an active situation.

Recommendation:

Winbourne Consulting recommends that metro region PSAPs evaluate how a CAD-to-CAD solution could be utilized in major mutual aid events and develop standard operating procedures accordingly. The CAD-to-CAD map can also be used as a tool for a real-time view of staging and where current units are located. Emphasis can be placed on using CAD-to-CAD comments from dispatch, first responders and scene command to monitor real time information being provided.

Finding: Records Management

Several law enforcement agencies expressed interest in using CAD-to-CAD as a gateway for sharing RMS or more specifically Master Name Index information throughout the nine-county metro area.

Recommendation:

Winbourne Consulting recognizes that this feature was not part of the original idea of a CAD-to-CAD system but acknowledges the value and officer safety feature this could provide. We recommend asking vendors to offer this function as an optional feature in the predicted CAD-to-CAD RFP.

Finding: Current CAD System

Our analysis shows that most of the PSAPs have CAD systems that will support a CAD-to-CAD interface. The majority of the agencies in the metro region are using some version of CAD from TriTech.

Recommendation:

Winbourne Consulting recommends working directly with TriTech to try to leverage this for a lower CAD-to-CAD interface price.

Finding: Encrypted Radio Channels

Some of the agencies use an encrypted radio channel, but if a responding agency does not have access to the encrypted radio channel a CAD-to-CAD interface could provide a means to share critical information with responding units.

Recommendation:

Winbourne Consulting agrees that a CAD-to-CAD solution would add another method of communicating important incident and officer safety information, and it could help agencies that don't have access to a specific radio channel to communicate. We recommend this topic be addressed when developing the standard operating procedures for this project.

Finding: Dispatcher Workload

Many of the agencies interviewed felt that a CAD-to-CAD solution would help decrease the workload of their dispatchers; many PSAPs are short-staffed and this project would help them all around.

Recommendation:

Winbourne agrees that a CAD-to-CAD solution could help with dispatcher workload. We also recommend doing a study one year after implementation to see what type of impact the solution actually has on dispatcher workload.

Finding: MESB as Leader

The majority of agencies interviewed recognized the importance of having a known regional agency, such as the MESB, as a leader and conduit for this project. Doing so in a hosted CAD-to-CAD environment removes some of the potential political problems that could arise if one user agency were to act as the host.

Recommendation:

Winbourne Consulting agrees with the agencies' viewpoints and, based on previous experiences with other clients, acknowledges that an entity such as the MESB provides a situation that could remove some political push-back. When considering an on-premise CAD-to-CAD solution, Winbourne Consulting recommends choosing neutral sites for both the primary and secondary sites, or utilize a hosted option offered by the CAD-to-CAD vendor.

METROPOLITAN EMERGENCY SERVICES BOARD

Meeting Date: October 29, 2020
Agenda Item: 11A. Recommendation for 2020 Executive Director Performance Review
Presenter: Matascastillo

RECOMMENDATION

The Executive Committee recommends approving the 2020 Executive Director Performance Review with the Exceeds Standards rating and in lieu of a salary increase, providing the Executive Director with an additional 50 FTO hours.

BACKGROUND

Metropolitan Emergency Services Board Policy 032 describes the process used for the Executive Director's performance review. Dakota County assisted the Board Chair with the process and collected survey results from both MESB board members and staff.

ISSUES & CONCERNS

At its October 14, 2020 meeting, the Executive Committee discussed the survey results and recommended approving the performance review with an Exceeds Standards rating.

The Executive Committee discussed what merit increase should be given. The Chair noted that the Executive Director requested no salary increase for the 2020 review. With a mind towards the 2021 budget and taking Ms. Rohret's request into consideration, the Executive Committee recommends granting the Director an additional 50 hours of FTO, in lieu of a salary adjustment.

Additionally, the Executive Committee requested that Rohret amend her 2021 goals to include continuous improvement of communication with internal staff, particularly during extraordinary circumstances, such as during a pandemic.

FINANCIAL IMPACT

This recommendation limits the financial impact to the Board. The 2021 budget will not be affected by this decision. However, at some point the FTO hours will be used and the Board will have to pay for those hours.

MOTION BY:
SECONDED BY:
MOTION:

PASS/FAIL