Call to Order – Board Chair Commissioner Trista Matascastillo

Approval of Agenda – Commissioner Matascastillo

Consent Agenda – Rohret (page 5)
A. Approval: July 8, 2020 Meeting Minutes
B. Approval: June 2020 Treasurer’s Report
C. Approval: July 2020 Treasurer’s Report
D. Correspondence

Radio Items – Tracey Fredrick, Radio Services Coordinator
A. Approval to Accept 2019 SHSP Grant and 2020 SECB Grant (page 21)
B. Approval of Amendment to Hennepin Healthcare’s ARMER Participation Plan (page 23)
C. Approval of M Health Fairview’s ARMER Participation Plan (page 25)
D. Approval of Amendments to MESB Radio Standards 3.14.0 and 3.21.0 (page 37)

9-1-1 Items – Pete Eggimann, Director of 9-1-1 Services
A. Approval of Amendment 5 to State/CenturyLink/MESB Contract for 9-1-1 Services (page 45)
B. Approval of Contract with Inteliquent and State of Minnesota for 9-1-1 Ingress Services (page 51)

EMS Items – Ron Robinson, EMS Coordinator – None

Administrative Items – Jill Rohret, Executive Director
A. Discussion: Format for Remaining 2020 MESB Meetings

Reports
A. Legislative Report – Margaret Vesel/Matthew Bergeron
B. Statewide Emergency Communications Board (SECB) Reports:
   1) Finance – Commissioner McMahon/Rohret
   2) Legislative – Commissioner Egan/Rohret – Meetings cancelled
   3) Steering – Commissioner Fernando/Rohret – Meets September 9
   4) Other SECB Committees – Eggimann/Fredrick
   5) Board – Commissioner Matascastillo/Rohret

Old Business
A. MESB RFP for Lobbying Services – Rohret
Metropolitan Emergency Services Board
Board Meeting Agenda
September 9, 2020, 10:00 a.m.

WebEx Meeting Link
Meeting Number: 126 082 4386
Meeting Password: Mq2MJqmn59 (67265763 from phones and video systems)

10. **New Business** – None

11. **Adjourn**
METROPOLITAN EMERGENCY SERVICES BOARD
BOARD MEETING AGENDA
September 9, 2020, 10:00 a.m.

WebEx Meeting Link
Meeting Number: 126 082 4386
Meeting Password: Mq2MJqmEn59 (67265763 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 Matascostillo* (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
A. **Minutes** – The minutes of the July 8, 2020 meeting of the Board are attached for review and approval.

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

C. **July 2020 Treasurer’s Report** – The Treasurer has reviewed the May 2020 financial statements and has given his approval of the report.

D. **Correspondence** – The correspondence included is the August ECN Newsletter (which is now bi-monthly).
Commissioners Present:
Greg Anderson, Isanti County - absent
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; Kelli Jackson; Ron Robinson; Jill Rohret; and Martha Ziese.

Others Present: Jay Arneson, MESB Board Counsel; Matthew Bergeron, Larkin Hoffman; Margaret Vesel, Larkin Hoffman; and Tony Martin, Hennepin County Sheriff’s Office.

1. Call to Order
The meeting was called to order at 10:04 a.m. by the 2020 MESB Chair, Commissioner Trista Matascastillo and the roll was called.

2. Approval of Agenda
Motion by Commissioner Degler, seconded by Commissioner Egan to approve the July 8, 2020 agenda. Motion carried.

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Yea: 13  Nay: 0  Motion passes.

3. Approval of Consent Agenda
Motion by Commissioner Miron, seconded by Commissioner Wolf to approve the July 8, 2020 Consent Agenda. Motion carried.

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Yea: 12  Nay: 0  Motion passes.

4. Radio Items
A. Approval of Amendment to Carver County’s ARMER Participation Plan
Tracey Fredrick said Carver County requests approval of an amendment to its ARMER participation plan to change its connection to the ARMER system from microwave radio links to a fiber optic network. The County installed a fiber optic ring with a redundant network path in 2013. Three of the current county radio sites are also connected via this fiber optic network; the sites are the Chaska Government Center, Chanhassen and Hollywood.

Fredrick said Carver County will decommission the microwave connections from Chanhassen to the Scott County’s Jackson tower and from the Sheriff’s PSAP location in Chaska to the Jackson tower. The microwave connections from Hollywood, Norwood Young America and Minnetrista will also be decommissioned, in lieu of the fiber optic path.

B. Approval to Update SECB Standard References in Metro Radio Standards
Fredrick said the MESB Executive Committee recommended approval to allow MESB staff to update references to SECB standards in metro radio standards; when references are updated a memo will be included in the Correspondence section of Board packets.

Motion made by Commissioner Degler, seconded by Commissioner Egan to approve agenda items 4A. approval of Carver County’s ARMER participation plan amendment and 4B. approval to update references to SECB standards in metro radio standards. Motion carried.

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C. Approval of Letter of Concern Regarding M Health Fairview EMS’ ARMER Use
Fredrick said M Health Fairview (MHF) EMS, which merged with HealthEast, will provide EMS service in the EMS PSAs owned by Fairview in Anoka, Chisago and Washington Counties. There is some concern from ARMER system administrators about MHF EMS’ use of the ARMER system, operating without consoles which will drag traffic across the region. Fredrick sent an April letter to MHF EMS and has spoken to the MHF EMS system administrator. Fredrick has also spoken with MHF EMS’ consultant.

Jill Rohret said the Executive Committee recommended a letter be drafted and brought to the Board for approval. She said the draft letter refers to state standards which state that ARMER plan amendments must be approved prior to the change in use. She noted that MHF EMS did submit its ARMER plan amendment on July 7.

The consensus of the Board was not to send the letter due to the submission of the ARMER plan amendment.

5. 9-1-1 Items
A. Approval of M Health Fairview EMS 9-1-1 Plan
Pete Eggimann said the MESB Executive Committee recommends approval of the M Health Fairview (MHF) EMS 9-1-1 plan to become a secondary PSAP on the 9-1-1 system.

Eggimann said the new SECB process to approve 9-1-1 plans requires approval at the regional level as well as approval by the SECB.

Commissioner Egan said this was addressed at last month’s MESB Executive Committee meeting last month. Dakota County staff continues to have concerns about the burden this addition would have on the radio system.

Eggimann said there have been discussions about those concerns, but those issues are related to the radio system, not 9-1-1. Regarding the 9-1-1 system, the proposed plan allows PSAPs to transfer calls to MHF EMS on the 9-1-1 system, which allows MHF EMS to receive the 9-1-1 location data associated with the call, which provides better location information and creates a more efficient call transfer process.

B. Approval of CHS1 Fiber Lease Amendment
Eggimann said MESB staff recommends the Board approve the amendment to the fiber lease agreement with Hennepin County, on behalf of the Call Handling System 1 (CHS-1).

Eggimann said the MESB serves as contract manager for CHS-1, which is a shared call handling system for Allina Health EMS, City of Edina, City of Minneapolis, Hennepin County Sheriff’s Office and Hennepin EMAS. In 2015, the MESB executed a lease agreement with Hennepin County in 2015, on behalf of CHS-1, for use of the county’s diverse, redundant IT fiber for the call handling system; the lease agreement expired on June 30, 2020. The proposed lease amendment extends the lease termination to June 30, 2023 and updates the participating PSAP payment schedule.

Motion made by Commissioner McDonough, seconded by Commissioner Fernando to approve agenda items 5A. approval of M Health Fairview (MHF) 9-1-1 plan and 5B. approval of CHS-1 Fiber Lease Amendment. Motion carried.

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Yea: 14   Nay: 0   Motion passes.

6. EMS Items – None.

7. Administrative Items
A. Approval of 2021 MESB Operational Budget
Rohret said the 2021 MESB Operational Budget was reviewed by the MESB Executive Committee in June and was recommended for approval. She reminded members that JPA members are to be notified by August 1 of what their next year’s assessments will be. The preliminary budget is approved in July; if staff can make adjustments over the remaining months of the year, a final budget will be on the November agenda.

Rohret said there has been every effort to assure there would be no or very little increase in assessments to JPA members for 2021.

Rohret the 2021 budget includes a 3% increase for staff merit increases; the overall staff salaries line includes a 5.22% increase primarily due to the GIS position added by the Board in 2019. Benefits increased by 4.6%. The Professional Services line increased by 5% due to the new expense of human resources services. She said office supplies decreased by 30% partly because of changes in software
maintenance. The equipment line decreased by 28% as the staff computer replacement cycle is complete for the time being. Overall board expenses have been decreased by 8% due to the anticipation of less than 12 in-person meetings.

On the revenue side, the budget includes using anticipated insurance dividends to reduce assessments, totaling $6,000.00 for 2021. Per January 2019 Board action, the 2021 budget includes a contribution from the Hennepin County Investment Fund to cover 3/5 of the salary and benefits for the GIS Specialist position added in 2019. The 2021 budget includes using forecasted unspent funds from the 2020 budget, due to effects of the coronavirus as a way to keep assessment changes low.

Rohret said the 2021 MESB operational budget results in a 0% increase in assessments in 2021. The effect on assessment amounts varies by county/city due to population shifts; the overall total amount of assessments did not change, but actual individual amounts vary due to population shifts.

B. Approval of MESB 2021-2025 Capital Budget
Rohret said the 2021-2025 MESB capital budget was reviewed by the MESB Executive Committee in June and recommended for approval.

Rohret said the 2015-2025 capital budget is similar to the last capital budget, though it does not include any administrative projects. She said the 9-1-1 projects were the same as in the 2020-2024 capital budget. The timing of the projects could change due to coordination with the State of Minnesota.

C. Approval of Change to Per Diem Payments for Virtual Meetings
Rohret said that the Executive Committee recommends the suspension of per diem payments until in-person meetings resume.

Motion made by Commissioner Degler, seconded by Commissioner Jeff Johnson to approve agenda items 7A. approval of the 2021 MESB operational budget, 7B. approval of the MESB 2021-2025 capital budget, and 7C. approval of a change to per diem payments for virtual meetings. Motion carried.

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Yea: 14   Nay: 0   Motion passes.

D. Discussion of Format for Remaining 2020 Meetings
Rohret said that in June the Executive Committee discussed how to hold MESB meetings for the remainder of the year. The committee's recommendation was to hold hybrid virtual meetings starting in August or September. She noted that some counties have resumed in-person meetings and some are holding hybrid meetings where board members can either attend virtually or in-person.

Commissioners Gamache and Meisner as well as Council Member Andrew Johnson supported virtual meetings into the fall and possibly into 2021.

Commissioners Wayne Johnson, Schmiesing, and Wolf recommend resuming in-person meetings in the fall.

Commissioner Egan said according to the Dakota County Attorney, the decision to resume in-person meetings cannot be reversed. He recommends assessing whether in-person meetings should resume in the fall.

Commissioner McDonough said it will be a lot of work to enable in-person meetings at the MESB and is in favor to continue virtual meetings through September and re-evaluate the decision in the fall.

Commissioner Matascastillo said the August and September be virtual meetings.

8. Reports
A. Legislative Report
Margaret Vesel gave a legislative update. The session ended May 18. The issues left unresolved were the COVID funding, a bonding bill, a public safety reform package, and the possibility of a tax bill. A special session is called for Monday, July 13.

B. Statewide Emergency Communications Board (SECB) Reports
1) Finance
Rohret said the Finance Committee met in May and was cancelled in June. The committee will meet July 9.

2) Legislative – Cancelled

3) Steering
Commissioner Fernando said the Steering Committee will meet today and discuss bylaws and have a broader discussion on strategic planning and achieving more involvement with all the regions.

4) Other SECB Committees
Eggimann said the NG9-1-1 Committee met on June 17. Discussions included GIS roadmap work, training and telephone CPR certification for dispatchers. There were two special reports: COVID-19 impact and civil unrest. There were no action items.

Fredrick said the LMR committee met in June and approved both the Carver County request and the Edina Fire Department request that were approved here today. Radios are being upgraded to the 2020.1 release and the committee will meet again on July 14. She said the Interoperability Committee met in May and had multiple COMU recognitions and renewals on its agenda. The committee will meet again on July 21.
Fredrick said the Wireless Broadband Committee met in June and introduced the Connecting Heroes program from T-Mobile and are working on a priority list for FirstNet.

5) SECB
Rohret said the SECB approved the Carver County and Edina Fire requests. The SECB also approved the 9-1-1 plan for MHF EMX, contingent on it receiving MESB approval today.

9. Old Business – None

10. New Business
A. Report on 9-1-1 System During May/June 2020 Civil Unrest
Eggimann presented a report on how the 9-1-1 system functioned during the civil unrest in May and June 2020. He that highlighted the 9-1-1 call statistics from the 10-day period just before and after the civil unrest related to the death of George Floyd. The 9-1-1 system functioned as designed throughout the event, but the Minneapolis and Ramsey County Emergency Communications Centers were overwhelmed with calls at various times during the event when they received six to seven times their normal call volume. Text-to-911 messaging also spiked sharply during the same time period.

Eggimann said the 9-1-1 and Radio Technical Operations Committees have formed a work group to prepare an after-action report to review what worked well and what did not work well with both the 9-1-1 and ARMER systems during the event.

Commissioner Wayne Johnson said there has been a lot from media that brings up the question that de-funding the police would affect 9-1-1.

Councilmember Johnson confirmed that the 9-1-1 funding would not be affected by lack of police de-funding. The surcharge would not affect the funding to the 9-1-1 system.

Commissioner McDonough asked if calls could roll over to other PSAPs to handle the day-to-day 9-1-1 calls in the event of these unusual spikes to the 9-1-1 system?

Eggimann stated that there are tools available for implementation that would allow for PSAPs to share 9-1-1 call workloads by answering each other’s 9-1-1 calls and send call information to the appropriate PSAP for dispatch. He expects a discussion of workload sharing to be part of the after-action report. Issues of governance, training, and funding would need to be worked out.

Commissioner Fernando asked if there was data indicating legitimate calls versus prank calls and attacks on the system. Maintaining the integrity of our 9-1-1 system is paramount, further discussion is needed. Counties/Sheriff departments are tasked with staffing our 9-1-1 centers, so further clarification as to what de-funding means is necessary.

Commissioner Gamache asked if there was data indicating if there were more text calls during the protests.

Eggimann said it seems there was a slow growth of text calls during the protests, but nothing significant. Request of service through social media sites has been on the rise. He stated that it would not be possible to receive data indicating the number of prank calls received during the period of civil unrest.
Rohret noted that the reduction in car traffic related to the coronavirus in March and April resulted in a drop in 9-1-1 calls. It was an interesting juxtaposition from the fewer 9-1-1 calls in March-April to a huge spike during the protests. However, 9-1-1 calls are now near normal levels.

11. Adjournment
The meeting adjourned at 11:39 a.m.
TO: Metropolitan Emergency Services Board

FROM: Isanti County Commissioner Greg Anderson, MESB Treasurer

RE: Treasurer’s Report – June 2020

DATE: July 23, 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 July 23, 2020.

Sincerely,

Greg Anderson
Commissioner, Isanti County
Treasurer, Metropolitan Emergency Services Board
TO: Metropolitan Emergency Services Board
FROM: Isanti County Commissioner Greg Anderson, MESB Treasurer
RE: Treasurer’s Report – July 2020
DATE: August 24, 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 August 24, 2020.

Sincerely,

Greg Anderson
Commissioner, Isanti County
Treasurer, Metropolitan Emergency Services Board
Where is summer going? Seems like the last of the snow just melted, the days are already getting shorter, and there is a chill in the morning air. Looking back on our 2020 progress plan, the “unplanned” has certainly taken precedence over anything that had previously been identified as a “planned” activity. Similar to what all of you have been experiencing, the Emergency Communication Networks (ECN) team continues to react and realign priorities to respond to needs that erupt during these unprecedented times.

After learning COVID-19 would not permit us to host our quarterly in person Regional Leadership Meeting in July, we strived to find an abbreviated, yet productive, alternative. We were pleased to have more than 60 attendees participate in our first virtual stakeholder engagement sessions on July 27. We hosted a two-hour morning session, repeating that with a two-hour evening session. In addition to providing a brief ECN update, the focus of these sessions centered on Improvement Planning and Strategic Planning. Anticipating we will remain in isolation through the end of the year, our fourth quarter Regional Leadership Meeting will likely follow this same virtual format on October 26. Mark your calendars!

Many of our successes in Minnesota’s public safety arena have been the direct result of networking together and meeting face-to-face, with the pre and post-meeting informal conversations garnering as much productivity as the actual meeting. We all miss this interaction and look forward to being able to reconvene in person; however during the interim, it is essential we embrace meeting virtually in the interest of keeping the programs for all four of our emergency communication networks moving forward. The situations we are encountering in Minnesota and across the nation exemplify the need for robust, reliable and sophisticated platforms for 9-1-1, land mobile radio, wireless broadband and integrated public alert and warning. Together, we are smarter than any one of us individually and we must continue to work together toward our common goals.

Speaking of common goals, our next three-year strategic planning session is right around the corner. In sync with the prior two rounds of strategic planning, our statewide two-day session will occur at the end of March or early April 2021. The Steering Committee already has this initiative on its radar. Commissioner Irene Fernando, chair of the Steering Committee, attended both stakeholder engagement sessions on July 27 and addressed the desire to host regional strategic planning sessions in advance of the statewide session. This is in response to five regions identifying regional strategic planning as a priority. Judy Plante, professional facilitator and the facilitator for both of our previous strategic planning sessions, is looking forward to incorporating regional strategic planning sessions as the pre-cursor for the 2021 statewide session. The costs associated with facilitating the regional and the state strategic planning will be supported by ECN. With guidance from the Steering Committee, ECN has already met with Judy Plante. She is developing an appropriate format for meeting virtually with each of the regions, supported by their respective Regional Interoperability Coordinator (RIC), and with the ECN team to prioritize their respective needs in order to better aggregate those individual priorities into a single statewide plan. Stay tuned for more information as this plan comes together.
The job posting to fill the 9-1-1 Program Manager position closed on August 14. We hope to receive a pool of qualified and enthusiastic candidates who have an interest in leading and managing our 9-1-1 program going forward.

We hope to be nearing the finish line for announcing the request for proposal (RFP) for professional and technical consulting services for continued support for Next Generation 9-1-1 (NG9-1-1) migration. Our previous contract expired in April 2020. We are eager to have this RFP awarded and a team of subject matter experts on board to support us for the next five years.

OnStar is offering an enhancement to its telematics services previously limited to GM vehicles. Please watch YouTube video for the most updated information about the new OnStar Guardian mobile app.

ECN is very close to making a formal aware to a prospective vendor interested in managing our Ingress Networking Rehoming (in accordance with the specifications defined within our RFP) after many weeks of comprehensive contract negotiations.

RapidDeploy continues to be evaluated by Minnesota regions for usability. We are actively preparing for participation from several regions by developing the authoritative location connectivity, as well as negotiating installation of necessary equipment to support the efforts. It is our expectation that this tool will be in service late in the third quarter of 2020, with more active installations as requested.

GIS

The NG9-1-1 Program’s Geographic Information Systems (GIS) team continues to make progress on the new communication website. The goal is to create a one stop location for the Minnesota NG9-1-1 GIS Program. Content will be available for the public, stakeholders and local data providers. The focus of the initial release will be public content such as a status dashboard. This site will help address the level of community engagement and transparency the program delivers for the state. No release date was available at the time of this newsletter.

The NG9-1-1 Program is collating responses to the feedback received during the review of the Minnesota NG9-1-1 GIS Implementation Roadmap. The responses will be rolled up into the Roadmap, where applicable. In addition, all responses will be available in a separate document. These documents will be available on the communication website mentioned above.

ECN and the Minnesota Geospatial Information Office (MnGeo) staff are active contributors and participants in National Emergency Number Association (NENA) committees and workgroups. MnGeo staff are on the NG9-1-1 GIS Data Model V2 (Data Structures) and the NG9-1-1 GIS Data Transition (Data Management) working groups.

More information about the GIS project can be found on ECN’s NG9-1-1 GIS Project website.

Norm Anderson (651-201-2483 or 651-201-7559) is the GIS Project Manager for ECN and MnGeo. Akiko Nakamura (651-201-7558) from our office is also working on the project, so please feel free to reach out to either one of them with questions related to the GIS project.

COOP Plans

The Continuity of Operations (COOP) Tabletop Exercise Final Planning Meeting (FPM) was held via WebEx on August 6. Objectives were identified and reviewed.

The COOP Tabletop Exercise will be held on September 17, from 9 a.m. until noon. Due to COVID-19, it will be held virtually instead of in-person, as originally planned.

The exercise will include several scenarios and incorporate discussion about various technologies, which should prove to be fruitful for public safety answering points (PSAPs).

If you have not yet signed up but wish to participate (or if you need the link for the WebEx meeting), contact Cathy Anderson (651-201-7548).

Personnel outside the PSAP who might be involved with an incident where you would initiate your COOP (fire
Committee and Workgroup Update

The monthly Wireless Broadband and Applications Committee (WBB&A) met on June 16. Televate presented survey findings and the results of their analysis of the network requirements re-categorization. This research will set a foundation for the committee's work going forward. The survey resulted in a recommendation that the following findings be addressed over the next several months:

- Coverage
- Funding (including Bring Your Own Device (BYOD) guidance)
- Situational awareness
- Interoperability of applications

The combined Standards and Applications workgroups met on July 31 to address some of the findings from the survey, which included creating the Basic Application Best Practice Guide. Additional meetings have been set for the last Friday of each month with the next meeting on August 28.

This project is paving the way to establish interoperability across the program. Public safety partners interested in shaping the future of this program are encouraged to join the workgroup. Reach out to the committee chairs or Melinda Miller (651-201-7554), Program Manager, to be added as a member or, receive meeting and progress notifications.

Are mobile apps your thing? We need you!

Televate presented the Best Practice Guide Outline at the first meeting of the workgroup. The outline noted the topics that should be addressed when building a best practice guide for basic applications. The presentation and outline were included in the workgroup packet, but if you would like a copy, contact Melinda Miller (651-201-7554). The workgroup is looking for feedback on the outline, so please send your feedback to the program chief, finance officer, etc.) are also welcome to participate.
manager, Melinda Miller (651-201-7554), or the workgroup chair, Melissa Reeder.

**Updates to the Website**

The Carrier Evaluation Checklist has been added to the ECN website under Wireless Broadband Reports. Mission Critical Communications highlighted the checklist in July, noting that it was a most read article. How has it helped you? ECN would like feedback. Did the checklist work effectively? Are there issues not addressed that should be added? Or, just a quick comment that you used it. Contact Melinda Miller (651-201-7554).

The FirstNet adoption map has been updated in HSIN for registered members, too.

**IPAWS**

Alerting Authorities Performing Proficiency Demonstrations

Jurisdictions performing FEMA Proficiency Demonstrations: 3rd Quarter (April - June)

Third quarter results have been released from Federal Emergency Management Agency (FEMA), which are significantly better than second quarter. Below is a breakdown (the first number is this quarter and the second number is from last quarter for comparison):

- Sent all three months: 83%, up from (68%)
- Missed one month: 3%, down from (14%)
- Missed two months: 6%, up from (2%)
- Had hold from FEMA (Aitkin and Becker): 2%, up from (1%)
- Did not perform them: 6%, down from (16%)

**Interoperability**

**Conventional Interoperability Plan**

ECN and MnDOT are collaborating to execute the 2020 Minnesota Land Mobile Radio Conventional Interoperability Plan. Updates to the state VHF resources have been made in the southern regions of the state and will migrate north. ECN has met via teleconference with PSAP leadership and ARMER system administrators to discuss updates to the statewide VHF interoperability network of tower sites. Dispatch console programming guidance and dispatcher education will be shared with regions as the rollout occurs. A dispatcher reference guide is available on in the Training Resources section of the ECN Training website.

**Interstate Interoperability Workgroup**

The Interstate Interoperability Workgroup presented two land mobile radio interstate interoperability documents—a best practices guide and a technology plan—to the Interoperability Committee and the Land Mobile Radio Committee. Both approved the documents will be presenting them to the SECB in August for approval.

**LTE-LMR Workgroup**

The LTE-LMR workgroup met monthly since November and had nearly completed its work on a standard to prescribing how a Push-to-Talk over Cellular (PoC)
technology may interface with the ARMER network. At its June meeting the workgroup felt that the standard they had drafted was too narrowly focused and decided to take a fresh look from a broader perspective. The workgroup has drafted new language and will look to refine their work at its next meeting in August.

**Resources**

ECN will use this new Resources section to share information that it thinks you will find useful. These items will also be posted to the **ECN Training webpage** as Upcoming Training Opportunities or Resources:

- **8/19 Webinar:** [Make the most of your organization’s investments: Lifecycle Planning for Emergency Communications](#)
- **9/17 Webinar:** [EXERCISE! EXERCISE! EXERCISE! Learn how to turn evaluations into real-world communications improvements.](#)
- [Communications Resiliency](#) (RF interference & cyber resiliency resources)
- [Succession Planning Resources For Public Safety Communications Guide](#)
RECOMMENDATION
Staff recommends the Board accept the 2019 State Homeland Security Program (SHSP) and the 2020 Statewide Emergency Communication Board (SECB) grants to the MESB.

BACKGROUND
Minnesota Department of Public Safety, Division of Emergency Communication Networks (DPS-ECN) has issued a grant agreement to the MESB in the amount of $25,000.00 for equipment, training and exercises under SHSP.

The MESB will use $24,000.00 for radio technical training. It is likely that this class will be held in third or early fourth quarter 2020. Exact dates are subject to trainer availability.

The MESB will use $1,000.00 for a Communications Response Task Force (CRTF) training and exercise. This exercise is scheduled for September 15, 2020.

DPS-ECN has also issued a notice of a grant agreement to the MESB for the SECB grant. In March 2020, the MESB executed a grant agreement for $25,000.00 towards this grant. The MESB will receive additional grant funds under the SECB grant, although at this time, the full award amount is unknown; it is expected to be an additional $300,000.00.

The MESB will use these funds for PSAP security audits, telecommunicator resiliency training, and other training and development opportunities. These items were included in the MESB’s approved 2020 funding priorities.

ISSUES & CONCERNS
The SHSP grant ends on December 1, 2020, which gives a very short time to spend funds. The MESB has already taken some preliminary steps to ensure that all funds from this grant can be spent prior to December 1, 2020. All financial statement reports (FSR) must be submitted to ECN no later than December 31, 2020 for the SHSP grant.

The entirety of the 2020 SECB grant has not been allocated to agencies. Full coverage of the opportunities listed above may be able to be funded out of this additional dollar amount, once awarded. Funds must be spent and financial statement reports (FSR) submitted to ECN no later than June 1, 2021 for the SECB grant.

MOTION: PASS/FAIL
Meeting Date: September 9, 2020
Agenda Item: 4A. Acceptance of FY2019 SHSP and FY2020 SECB Grants
Presenter: Fredrick

FINANCIAL IMPACT
None to MESB.
METROPOLITAN EMERGENCY SERVICES BOARD

Meeting Date: September 9, 2020
Agenda Item: 4B. Approval of Amendment to Hennepin Healthcare Participation Plan
Presenter: Fredrick

RECOMMENDATION
The Radio Technical Operations Committee recommends the approval of the amendment to the Hennepin Healthcare’s ARMER participation plan.

BACKGROUND
Hennepin Healthcare (HCMC) is an ARMER participant under the Hennepin County plan. It currently utilizes a sub-participant (sponsored) ARMER participation plan with DPS-ECN.

ISSUES & CONCERNS
HCMC requests approval of an amendment to its ARMER participation plan to add one MCC7500 console to its network. The new console will allow HCMC to meet its day-to-day operational needs and bring its consoles up to three. HCMC operates a three-person dispatch center; the addition of the console will make regular operations easier. The console has been procured from Motorola and is awaiting installation.

FINANCIAL IMPACT
None to MESB.

MOTION BY:
SECONDED BY:
MOTION:
PASS/FAIL
Ms. Jodi Mager
HHS Security Department MC RL
701 Park Ave South
Minneapolis, MN 55415

6/29/2020

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

Dear Ms. Fredrick,

Hennepin Healthcare is requesting the approval to add 1 new MCC7500 dispatch console from the Technical Operations Committee. Hennepin Healthcare is planning to add 1 new MCC7500 dispatch console operator position at our facility. This additional operator position is needed to meet our day to day operational demands. We currently have 2 dispatch consoles but operate a 3 desk dispatch center. We are working with Motorola to procure the equipment and project management services. For installation we will be working with the Hennepin County Sheriff's Office technicians. We are expecting this work to be completed during the 3rd quarter of this year.

Thank you.

Sincerely,

Lt. Jodi Mager
RECOMMENDATION
The Radio Technical Operations Committee recommends the approval of the M Health Fairview (MHF) plan to become a full ARMER participant.

BACKGROUND
M Health Fairview (MHF) recently took over services for HealthEast and has become a new entity which includes the University of Minnesota Health System and Fairview Clinics and Hospitals. HealthEast became an ARMER participant in 2004, however MHF submitted a new ARMER plan to encompass all of the entities it now represents and the way it has assumed business operations.

ISSUES & CONCERNS
MHF presented a full ARMER participation plan to include four console positions for its dispatch center. The MHF dispatch center currently operates on control stations (consolettes) and, as part of its plan, will upgrade to Motorola MCC7500 stations. MHF anticipates the consoles to be installed by end of third quarter 2020, although installation may be delayed due to delivery during the pandemic.

Until the new stations are installed, the MHF dispatch center will operate on RF channels, which could cause some system loading issues, mainly in Ramsey County. The Ramsey County system administrator has given input to this concern, and local administrators and staff will be monitoring usage for any potential issues. At this time, all parties are agreeable to MHF coming on as a full participant with this plan.

FINANCIAL IMPACT
None to MESB. MHF is responsible for all costs associated with its participation.
Technical Plan

for ARMER

800 MHz Trunked Radio System Participation

by

M Health Fairview

Submitted to:
Metropolitan Emergency Services Board

July 7, 2020
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Executive Summary & Overview of M Health Fairview Plan

Below is a high-level synopsis of the plan being proposed by M Health Fairview to become a full participant of the ARMER 800 MHz system. Further narrative is contained later in this document describing the topics which are summarized below. M Health Fairview is the newly expanded collaboration among the University of Minnesota, University of Minnesota Physicians, and Fairview Health Services. The healthcare system includes a network of 10 hospitals and 60 clinics. The EMS/ambulance function formerly called HealthEast is also part of the M Health Fairview network.

The M Health Fairview call center and dispatch center is located at 799 Reaney Ave, St. Paul. M Health Fairview intends to upgrade their equipment and capabilities to establish a PSAP capable of receiving 911 calls as a secondary answering point to better serve the public.

This radio plan contemplates adding a new 4 position Motorola MCC 7500 console system at the Reaney Avenue building, integrated with the ARMER Zone 1 controller located at Waters Edge. This console arrangement will require two leased T-1’s to the Zone 1 controller. Calls are currently dispatched using control stations on the ARMER network since 2003. M Health Fairview will also install a Conventional Site Controller and Conventional Channel Gateways (CCGW) at the Reaney Avenue location, to provide backup dispatching capabilities in the event of a network failure. The existing control stations will be reconfigured and connected to the CCGW’s for backup purposes in the event of loss of Zone controller connectivity.

M Health Fairview currently operates 24 Advanced Life Support (ALS) ambulance shifts per day. They provide primary ALS response in Dakota, Ramsey, Washington and Chisago counties. They also have a contract with Northfield Ambulance Service to provide dispatch services. Northfield Ambulance has primary response areas in Dakota and Rice counties. All of the M Health Fairview and Northfield users are currently using the ARMER network for day-to-day operations. There has been some discussion about operations in the Princeton area, but there are no plans to expand to that area, at this time. If a decision is made in the future to expand into the Princeton area, M Health Fairview will present an ARMER plan amendment requesting the expansion.

In 2003, HealthEast Transportation (now operating as M Health Fairview) submitted a request for participation in the 800 MHz system to the Metropolitan Radio Board. Since that time, the authorized talkgroups and radio ID’s has increased to 26 and 164, respectively. 3 of those radio ID’s are used for the control stations currently used with the system. We anticipate using those existing control stations as backup in the dispatch center. M Health Fairview recently had 176 ID’s in the system, about 150 of which were active each month. M Health Fairview has reduced the
number of ID’s in the system to their authorized number and is not requesting additional radio ID’s at this time. M Health Fairview does not expect to request additional talkgroups over the next five (5) years. The radios and talkgroups used by Northfield Ambulance are also currently operating as part of the M Health Fairview portfolio.

The purchase of dispatch console and network connectivity equipment will be funded internally by M Health Fairview and is not contingent on receiving grant funding. M Health Fairview hopes to complete the installation within the 2020 calendar year, or at such time as the plan receives final SECB approval.

**Primary Project Challenge**

Establishing network connectivity from the Reaney Avenue facility will be a challenge. The building is relatively short, so a microwave path to a nearby site isn’t possible. M Health Fairview intends to use two diverse T1 paths to achieve connectivity to Reaney Avenue. The first will be a leased T1 from Reaney Avenue to the MnDOT John Ireland building, where it will travel on a MnDOT T1 to Water’s Edge. The second will use existing M Health Fairview fiber to get from Reaney Avenue to their ambulance facility in Forest Lake. A leased T1 will connect the Forest Lake location directly to Water’s Edge.

**SECTION 1 - BACKGROUND**

**Introduction**

This document is prepared as the technical plan for M Health Fairview’s participation on the Minnesota ARMER 800 MHz trunked radio system. The primary audience for this plan is the Statewide Radio Board Operations & Technical Committee (OTC). Prior to submission to the OTC, this plan was presented to and accepted by the Metropolitan Emergency Services Board’s Radio Technical Operations Committee, as well as the Metropolitan Emergency Services Board.

**Project Funding**

M Health Fairview has identified internal funding to purchase and install the dispatch consoles and related equipment, as described in this document.

**SECTION 2 – ELEMENTS OF THE TECHNICAL PLAN**

**M Health Fairview Location & Resources**

M Health Fairview dispatch operations are located at 799 Reaney Ave, St. Paul. The communications center is currently equipped with ARMER control stations to facilitate communications with the units in the field.
M Health Fairview Connectivity

M Health Fairview intends to establish a dual connection to the ARMER network. Conversations, by M Health Fairview staff, with MnDOT staff have developed into a preferred strategy with one ARMER connection point being at the MnDOT John Ireland site, and the second will terminate at the Water's Edge site. A sketch of the planned connections is below.
Backup & Redundancy

There will be three (3) control stations which will be used for backup at the Reaney Avenue location. Appropriate consideration will be given to good RF isolation engineering practices in configuring backup control station deployment. The control stations will be connected to the dispatch consoles using a CCGW(s).

Equipment Additions

M Health Fairview intends to implement a proposal from Motorola which includes services and Qty. 4 – MCC7500e workstations, a Conventional Site Controller, Qty. 2 – CCGW’s and the necessary switches and routers to complete the connectivity to the ARMER network. The 2 Conventional Channel Gateway’s (CCGW) will support the operation of the backup 800 MHz control stations. See Attachment 1 for Motorola Proposed Equipment Configuration.

M Health Fairview Audio Logging

M Health Fairview will contract with an existing AIS based logging system. At this point in time, Central Minnesota or the Rice/Steel County may host ARMER logging. This contracted arrangement will be implemented by the time the console system is installed.

System Loading/Call Activity

All of the dispatch and subscriber unit radio traffic is currently carried on the ARMER network. The monthly activity reports distributed by MnDOT show that the overall M Health Fairview (HealthEast) talkgroup traffic is very consistent:

<table>
<thead>
<tr>
<th>Month</th>
<th>Total Seconds</th>
</tr>
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<tbody>
<tr>
<td>Sept 2019</td>
<td>1,752,275</td>
</tr>
<tr>
<td>October 2019</td>
<td>1,825,335</td>
</tr>
<tr>
<td>November 2019</td>
<td>1,740,848</td>
</tr>
<tr>
<td>December 2019</td>
<td>1,805,560</td>
</tr>
<tr>
<td>January 2020</td>
<td>1,839,182</td>
</tr>
<tr>
<td>March 2020</td>
<td>1,651,319</td>
</tr>
<tr>
<td>April 2020</td>
<td>1,346,822</td>
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<tr>
<td>May 2020</td>
<td>1,624,798</td>
</tr>
<tr>
<td>June 2020</td>
<td>1,757,098</td>
</tr>
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</table>

The net amount of radio traffic is expected to remain the same or drop slightly, because the dispatch audio will originate from the system rather than over the air.
Subscriber Radio Fleet/Radio ID’s

According to the MnDOT reports, M Health Fairview recently had 176 radio ID’s registered in the system, 3 of which are used for the control stations currently used for dispatch with the system. We anticipate using those existing control stations as backup in the dispatch center, after the console system is installed. M Health Fairview eliminated some unused ID’s to bring the total to their authorized number – 164. M Health Fairview is not requesting any additional radio ID’s. M Health Fairview will require new ID’s for the MCC 7500 dispatch consoles.

Fleet Map

M Health Fairview currently has 14 talkgroups defined in the system. M Health Fairview is allowed up to 26 talkgroups. M Health Fairview does not expect to need more than 26 talkgroups over the next five (5) years.

The M Health Fairview Statewide talkgroup is only used in those cases where a transport vehicle leaves the metropolitan area for a long-distance transport. The out of area transports involve minimal communications.

Interoperability

Primary interoperability will be achieved via shared use of the ARMER regional and statewide interoperability talkgroups. All M Health Fairview radios will be programmed with the required interoperability talkgroups for an EMS provider.

Schedule

M Health Fairview hopes to install the new consoles in the next several months and desires to secure MESB, OTC, and SECB approvals by December 31, 2020.

Training

M Health Fairview is already a limited participant on the ARMER system. Their staff receives ARMER training when they are hired and receive the initial employee training. The operation of the new consoles will require some training, but the dispatchers are already trained in the appropriate use of ARMER resources.

System Maintenance

M Health Fairview uses Baycom from Maple Grove, MN as their maintenance and service provider.
**System Administration**

M Health Fairview intends to initially use Baycom for system administration. M Health Fairview staff recently attended the CPS and best practices training to perform radio programming. M Health Fairview intends to send staff to additional training to perform the system administration function, in the future.

**SUMMARY**

In summary, the major elements of this participation plan request are:

- Installation and connection of 4 position MCC7500 Console system
- Dual T1 connectivity to the zone controller
- Continued authorization for 26 talkgroups, including the existing statewide roaming talkgroup
- Increase authorization to 195 radio ID’s
- Authorization for 5 new ID’s for the MCC 7500 Console system

M Health Fairview looks forward to approval of this plan with expected beneficial use of the consoles by December 31, 2020. M Health Fairview believes migrating to fully functioning ARMER consoles will make the most efficient use of the ARMER system and allow for best patient service.
Attachment A - Motorola Proposed Equipment Configuration

[ Diagram of HealthEast Dispatch Site with legend and labels for components such as Conventional Site Controller, Site LAN Switches, and interfaces to Customer Enterprise Network. ]
July 28, 2020

To: Tracey Fredrick

From: Steve Pott, PSC Alliance

RE: M Health Fairview Participation Plan

This memo serves as clarification to some of the information found in the M Health Fairview Participation Plan submitted to and approved by the MESB Technical Committee. The two points of clarification are the number of authorized radio ID’s, the number of console ID’s and the number of Conventional Channel Gateway (CCGW) ports required for M Health Fairview.

M Health Fairview currently is authorized to have 164 radio ID’s active in the system. This number of authorized radios is correct in the body of the document, but was incorrectly shown as requesting an increase to 195 radio ID’s. M Health Fairview is not requesting additional radio ID’s, and will maintain no more than 164 ID’s in the system, as currently authorized.

M Health Fairview has a proposal from Motorola to purchase and install a 4 position MCC7500e dispatch console system. 4 ID’s will be required for the console positions. The Plan that was submitted requested a total of 5 ID’s for the console system – the 5th ID would be reserved for an AIS server, if needed. M Health Fairview is currently negotiating with ARMER entities with existing system logging capabilities. If those negotiations prove successful, the 5th ID will not be needed. M Health Fairview needs a reliable logging system, so the 5th ID may be required if they don’t find a suitable host for their logging needs.

Motorola’s proposal includes Qty 2, CCGW’s with a total of 16 ports that could be used to control 4 wire radio interfaces. M Health Fairview has an immediate need to use 4 of those ports, and would like to reserve up to 4 additional ports for use in the future. Potential future uses of these ports would be for additional backup control stations, or interop resources.

Please let me know if you need any more information, or further clarification.
RECOMMENDATION
The Radio TOC recommends the Board approve amendments to Metro Radio Standards 3.14.0 – Use of Metro ARMER ME TACs and 3.21.0 – Initial Communications Plan for Large-Scale and Disaster Level Mutual Aid Incidents.

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
Two metro radio standards have been reviewed for content and language changes.

The first is to Standard 3.14.0 – Metro ME TACs. Language was added for clarification that the two encrypted ME TAC talkgroups should not be programmed into non-law enforcement radios, unless with 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.

The second is to Standard 3.21.0 – Initial Communications Plan for Large Scale Events. Some minor changes were made to update references to State SECB Standards, as those have changed numbering. In coordination with the Metro ME TAC standard above, language has been added to use local talkgroups first, before moving to a statewide talkgroup. This will help to limit system loading during future events. The standard referenced some out-of-date practices, which has been removed with these amendments. Also noted discussion about this standard included introduction to the State to become an SECB standard; the MESB will retain its own version of this standard.

Both standards will also be made ADA compliant.

FINANCIAL IMPACT
None to MESB.

MOTION BY:
SECONDED BY:
MOTION:
PASS/FAIL
1. Purpose or Objective
   To establish policy and procedures for use of the metro region ARMER ME TAC 1-12E talkgroups. These talkgroups are a region-wide resource to facilitate communications between agencies that typically do not communicate with each other on a regular basis. This policy will serve to minimize usage conflicts when an interoperability talkgroup is needed for an event.

2. Technical Background
   • Capabilities
     It is possible to have access to ME TAC talkgroups in radios used by metro agencies that share use of the ARMER system. These common talkgroups can be used for a wide range of intercommunication when coordination of activities between personnel of different agencies is needed on an event. Patching of the talkgroups can be done to any single non-hard patched conventional resource, other common talkgroups or to private talkgroups as needed to facilitate communications for an event.

   • Constraints
     Some of these talkgroups may be used as part of a soft patch to common VHF channels that are restricted for use by personnel of specific services, such as the VLAW31 VHF frequency that may only be used by law enforcement and EMS personnel. The dispatch center creating the patch is responsible for checking for proper talkgroup authorizations when creating soft patches.

     Because many different agencies may be communicating with one another, for purposes of safety, plain English/common terminology must be used when communicating on these regional resources. The use of ten codes is not permitted. This pertains to direct or indirect (when in soft patch) use of these regional resources.

     The availability and the use of these talkgroups should be easily understood by radio user personnel who are primarily concerned with their mission.

     **ME TACs are not to be used for an internal event. Private, other tactical, administrative, or common talkgroups are for internal agency communications. ME TACs should be used only when interoperability with external agencies is needed or is likely.**

       ME TAC’s 1-10 shall not be encrypted.

       ME TAC’s 11E and 12E are always encrypted.

     Metro region-wide ARMER talkgroups may only be in one patch at a time.

3. Operational Context
   These talkgroups are metro region resources to facilitate communication between agencies that typically do not communicate with each other on a regular basis.

   ME TAC1-10 are available for use by all users.
ME TAC11E and-12E are only available for law enforcement; these should not be programmed in non-law enforcement cache radios.

Agencies not included under the MESB joint powers agreement require written permission from the MESB for use of the ME TAC E talkgroups. Permission shall be granted for clear talkgroups to MN Public Safety agencies with written documentation provided to the MESB Regional Radio Services Coordinator.

4. Recommended Protocol/Standard
ME TAC 1-10 Talkgroups

<table>
<thead>
<tr>
<th>TG Requirements</th>
<th>For Whom?</th>
<th>To Talkgroup(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highly Recommended</td>
<td>All public safety and public service mobiles, portables, PSAPs</td>
<td></td>
</tr>
<tr>
<td>Recommended</td>
<td>All public safety and public service mobiles, portables, PSAPs</td>
<td></td>
</tr>
<tr>
<td>Optional</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>Not Allowed</td>
<td>None</td>
<td></td>
</tr>
</tbody>
</table>

Cross Patch Standard
Soft Patch | Optional | As needed |
Hard Patch | No | None |

In order to meet the communication needs for an event, the ME TAC1-10 talkgroups may be patched to:
- Conventional RF resources, such as VHF, UHF, etc.
- Private agency talkgroups, such as dispatch mains, tactical talkgroups, etc.
- Direct patches between the ME TAC talkgroups, although this would not be preferred as a method of resolving communications needs.

ME TAC11E-12E Talkgroups

<table>
<thead>
<tr>
<th>TG Requirements</th>
<th>For Whom?</th>
<th>To Talkgroup(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highly Recommended</td>
<td>All public safety and public service mobiles, portables, PSAPs</td>
<td></td>
</tr>
<tr>
<td>Recommended</td>
<td>All public safety and public service mobiles, portables, PSAPs</td>
<td></td>
</tr>
<tr>
<td>Optional</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>Not Allowed</td>
<td>Non-law enforcement users</td>
<td></td>
</tr>
</tbody>
</table>

Cross Patch Standard
Soft Patch | Yes/No | Optional |
Hard Patch | Yes/No | Optional |

ME TAC11E and 12E talkgroups may only be patched to another talkgroup encrypted by ADP, DES, or AES encryption.

The Status Board application will be used to manage the talkgroup resources.

The ME TAC talkgroups shall only be used when there is a significant need for interagency communications and other suitable means for interagency communications are unavailable, to avoid a reduction in availability of these resources when needed for important events.

None of the ME TAC talkgroups shall be part of any system-configured multi-group.

It is recommended that metro region ARMER system public safety dispatch consoles have all the ME TAC talkgroups available for patching. It is highly recommended that metro agency consolettes or RF stations have all ME TAC talkgroups.
If an agency elects to not program a sufficient quantity of these tactical talkgroups, it is the individual agency’s responsibility to understand that it will be limiting its ability to communicate with other agencies during an emergency event. The agency will be responsible to resolve its interagency communications methods during an event.

5. Recommended Procedure
The pool talkgroups may be either used directly or be patched to other resources to meet the communication needs of an event.

The usage of ME TAC 1-10 talkgroups for **EMERGENCY or IN PROGRESS** interoperability events should be ME TAC 1, 2, 3, 4 . . .10 in that order.

The usage of ME TACs for **PREPLANNED NON-EMERGENCY** interoperability events should be ME TAC 10, 9, 8, 7 . . .1 in that order. **ME TAC 1 will not be reserved for planned events.**

When formulating communications plans, Communication Unit Leaders (COMLs) should check with the agencies involved in interoperability events to see what shared resources are available.

When a resource is needed, the requesting agency will contact the appropriate metro region ARMER dispatch center to have the next preferred available talkgroup granted. The dispatch center will utilize the Status Board application to identify the status of the resource.

At the conclusion of the event, the ARMER dispatch center will remove any patches that were used for the event and update the Status Board.

Resources that are patched to these talkgroups, such as VLAW31, VFIRE23, and VMED28 VHF radio frequencies shall continue to adhere to the rules set forth by the groups that govern the use of their respective conventional radio resources.

**NOTE:** Dispatch centers initiating any soft patches must announce the patch after it is set up AND prior to it being taken down.

6. Management
Metro Region dispatch center managers and supervisors for agencies on the ARMER system shall ensure that this procedure for usage and assignment of the ME TAC talkgroups be adhered to, as well as the setting up of soft patches for which they are responsible.

The Minnesota Status Board System Administrator shall be responsible for the Status Board application.

Dispatch center operators shall receive initial and continuing training on the use of this procedure.

The Metropolitan Emergency Services Board will be responsible for the ME TAC E encryption key.
1. **Purpose or Objective:**
To recommend an initial "default" incident communications plan utilizing the statewide ARMER interoperability talkgroups to facilitate effective command, control, situational awareness, coordination and staging for the initial response to a large scale and/or disaster level incident.

2. **Technical Background:**
   - **Capabilities**
     The Statewide Emergency Communications Board (SECB) has established a standard for use of the statewide incident response talkgroups in SECB State ARMER Standard IOP-3 (formerly ARMER Standard 3.16.0). This standard encourages communications interoperability among first responders and establishes common statewide talkgroups to facilitate interoperability. The statewide talkgroups authorized for communication between service branches are S-TAC 1-12. Law enforcement has an additional four clear and eight encrypted statewide tactical talkgroups.
   
   - **Constraints**
     Experience has shown that all agencies have used many different processes in the past. Not all responding agencies to a large-scale incident may have regional interoperability talkgroups. This standard strives for consistency among all metro agencies.

3. **Operational Context:**
These recommendations are based on core principles of National Incident Management System (NIMS) including establishment of an Incident Communications Plan to support the Incident Command System (ICS) as it is established for a large-scale mutual aid incident. Lessons learned from the Twin Cities Urban Areas Security Initiative (UASI) Tactical Interoperable Communications (TIC) Plan validation exercise evaluated by the Department...
of Homeland Security and after action reports I-35W bridge collapse also provide a basis for this standard.

4. **Recommended Protocol:**
   SECBtate ARMER Standard IOP-33.16.0 (formerly ARMER Standard 3.16.0; effective June 12, 2017) requires STAC 1-12 plus STAC 13E and 14E talkgroups to be programmed in all PSAP consoles. Any PSAPs which do not have space in its consoles for these resources must file a variance with the SECB.

5. **Recommended Procedure:**
   When an emergent large scale or disaster level incident requires an immediate and massive mutual aid response, the following initial Incident Communications Plan should be implemented by the dispatch center with primary control of the incident:

   A. The Incident Commander (IC) should be identified. A Command Net should be immediately established utilizing the first available STAC talkgroup, **starting with STAC 2; STAC 1 is typically assigned last, as it is normally used for helicopter landings.** The Command Net should be used for communications between the IC, the controlling dispatch center, other dispatch centers providing resources and the Emergency Operations Center if established.

   B. A Staging Net should be established utilizing the next available STAC talkgroup, **starting with STAC 2.** The Staging Net STAC should be patched to conventional interoperability resources if agencies outside the ARMER network are involved. This will be dependent on the nature of the response, e.g. VLAW31 for Law Enforcement, VFIRE21 for Fire responses, ect.. During initial response this talkgroup would be used to notify responders of situation updates. The use of this talkgroup will transition to a Staging Net talkgroup. For local metro response, ME TACs should be utilized before going to an STAC.

   C. A Staging Officer should be assigned by discipline (Police, Fire, EMS) and a physical location for the incident staging area(s) designated.

   D. In the absence of an ICS structure and Staging Officer, during the initial phase of the response, the controlling dispatch center may designate a staging area as a collection point for responding mutual aid agencies from all branches. Once the ICS structure and Staging Officer are in place, units will be moved to the designated discipline staging by that specific Staging Officer.

   E. Operations Section Tactical Nets should be established for each major service branch on statewide TACs using the first available STAC after the Command and Staging Nets are established. Units will be assigned to the designated Tactical Net upon receiving their assignment at staging. **Consideration should be given to channel capacity at the ARMER sites covering the incident to prevent system busy conditions.**

   F. The attached ICS-205 should be used as a *sample* ICS-205 for the initial recommended Incident Communications Plan until the incident Communications Unit Leader (COML) prepares the ICS-205 for the next operational period.

   G. Whenever possible, talkgroups should be reduced to regional or local talkgroups to help prevent system loading outside the incident area.
H. If and when transfer of command occurs, appropriate handoffs need to happen to ensure a smooth transition.

F. Whenever possible talkgroups should be reduced to regional or local talkgroups to help prevent system loading outside the incident area.

Upon initial response the dispatch center with primary control of the incident is responsible for the following:

- Assigning the proper STACs for the Command Net and the Staging Net
- Assigning the proper STACs for Operations Section Tactical Nets; Law enforcement may use their service branch-specific talkgroups
- Establishing the necessary patches to ARMER resources and conventional channels as required
- Updating the status of the incident to effected PSAPs using the METCOM talkgroup
- Announcing the mutual aid staging collection point if there is no ICS structure to designate
- Announcing the location of the incident staging area(s) to incoming units
- Announcing the need for personnel and resources
- Updating the Status Board application to designate which interoperability resources have been assigned for use
- Advising when responding units can be cancelled
- Utilize regional talkgroups when feasible

This communications plan deals with the gap between the initial dispatch of the incident and the establishment of an ICS Communications Unit to prepare the Incident Communications Plan for the next operational period.

6. **Management:**

Dispatch center managers and supervisors for agencies on the Metro ARMER system shall ensure that staff is trained on this procedure and that it is followed, for usage and assignment of the STAC talkgroups be adhered to, as well as the setting up of soft patches for which they are responsible.
<table>
<thead>
<tr>
<th>Line</th>
<th>Function (NET)</th>
<th>Talkgroup/Channel/Phone</th>
<th>Assignment</th>
<th>RX Freq (N or W)</th>
<th>RX Tone/NAC</th>
<th>TX Freq (N or W)</th>
<th>TX Tone/NAC</th>
<th>Mode</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>COMMAND</td>
<td>STAC2 (or first available STAC)</td>
<td>INCIDENT COMMAND</td>
<td>ARMER</td>
<td>ARMER</td>
<td>D</td>
<td>AREA COMMAND, INCIDENT COMMAND, COMMAND STAFF, GENERAL STAFF, SECTION CHIEF, INCIDENT DISPATCH CENTER, etc.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>SUPPORT</td>
<td>STAC3 (or next available STAC)</td>
<td>STAGING</td>
<td>ARMER</td>
<td>ARMER</td>
<td>D</td>
<td>ALL INCOMING CALLS—CHEF IN INITIAL ASSIGNMENT—PATCH AS NECESSARY TO VHF CONVENTIONAL RESOURCES</td>
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<td></td>
</tr>
<tr>
<td>3</td>
<td>TACTICAL</td>
<td>STAC4 (or next available STAC)</td>
<td>LAW</td>
<td>ARMER</td>
<td>ARMER</td>
<td>D</td>
<td>INITIAL ASSIGNMENT FOR LAW ENFORCEMENT/TACTICAL OPERATIONS—EXPAND AS NECESSARY</td>
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<td></td>
</tr>
<tr>
<td>4</td>
<td>TACTICAL</td>
<td>STAC5 (or next available STAC)</td>
<td>EMS</td>
<td>ARMER</td>
<td>ARMER</td>
<td>D</td>
<td>INITIAL ASSIGNMENT FOR EM/TACTICAL OPERATIONS—EXPAND AS NECESSARY</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>TACTICAL</td>
<td>STAC6 (or next available STAC)</td>
<td>FIRE</td>
<td>ARMER</td>
<td>ARMER</td>
<td>D</td>
<td>INITIAL ASSIGNMENT FOR FIRE/TACTICAL OPERATIONS—EXPAND AS NECESSARY</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**SPECIAL INSTRUCTIONS**

*COML:*

*AGENCY:*

*PHONE:*

*EMAIL:*

The convention calls for frequency lists to show four digits after the decimal place, followed by either an "N" or a "W", depending on whether the frequency is narrow or wide band. Mode refers to either "A" or "D" indicating analog or digital or "M" indicating mixed mode. All channels are shown as if programmed in a control station, mobile or portable radio. Repeater and base stations must be programmed with the Rx and Tx reversed. (MESP Version 1.0, 11/2015)
METROPOLITAN EMERGENCY SERVICES BOARD

Meeting Date: September 9, 2020
Agenda Item: 5A. Approval of Amendment No. 5 to State/MESB/CenturyLink 9-1-1 Contract
Presenter: Eggimann

RECOMMENDATION
Staff recommend the Board approve Amendment No. 5 to the State of Minnesota/CenturyLink/MESB contract for 9-1-1 services.

BACKGROUND
Traditionally, the MESB has been a party to a three-way contract for 9-1-1 services between the 9-1-1 service provider, the State of Minnesota, and the MESB for the 9-1-1 service in the metropolitan area. The State is responsible for the monthly recurring costs associated with the 9-1-1 network and the 9-1-1 location database. The MESB and the PSAPs are responsible for one-time costs associated with changes to the 9-1-1 system they initiated.

In November 2016, the MESB approved and executed the State T-730 contract for 9-1-1 services, with the MESB, State of Minnesota and CenturyLink as parties.

ISSUES & CONCERNS
The original T-730 contract document was a two-year contract expiring November 30, 2018, with three one-year extension options. It is the MESB and State’s intent to exercise the third of the three one-year extensions, which will extend the contract to November 30, 2021. This is the last extension permitted under the contract and will require a new RFP for 9-1-1 service to be issued to replace this existing contract.

The contract amendment was reviewed by Board Counsel, who had no issues with it.

FINANCIAL IMPACT
None to MESB. The MESB and PSAPs will continue to be responsible for one-time charges for any change and the State of Minnesota will continue to may all monthly recurring charges.

MOTION BY:
SECONDED BY:
MOTION: PASS/FAIL
July 13, 2020

Rhonda Kriss
Qwest Communications Company, LLC
d/b/a CenturyLink QCC
200 South 5th Street, Floor 20
Minneapolis, MN 55402

Dear Ms. Kriss:

The following documents are enclosed for you to complete and return:

- Amendment No. 05 to SWIFT Contract No 116669, Release No. T-730.

  Using the DocuSign process, please sign the attached amendment and route back to the State by August 14, 2020

- Diverse spend reporting is required. Please send the information detailed in the attached Viva Welcome Letter to support@starsmp.com within two (2) businesses days. The Viva Company will send you a link by email to the portal, with log-in information, portal guidance manual, and information on accessing the training video. More information on the State's Tier 2 program is attached herein.

If the Amendment is not properly executed it will be returned to you. Upon receipt of the properly executed document, and after signatures are obtained from the appropriate State authorities, a copy of the completed Amendment will be sent to your company.

If you have any questions, please feel free to contact me.

Sincerely,

Kaleigh Stevens
Buyer

Enclosures
AMENDMENT NO. 05 TO CONTRACT NO. 116669 RELEASE NO. T-730

THIS AMENDMENT is by and between the State of Minnesota, acting through its commissioner of Administration ("State"), and Qwest Communications Company, LLC, d/b/a CenturyLink QCC, 200 South 5th Street, Floor 20, Minneapolis, MN 55402 ("Contract Vendor").

WHEREAS, the State has a Contract with the Contract Vendor identified as Contract No. 116669, November 30, 2016 through November 30, 2020 ("Contract"), to provide Telecom: Next Gen 911 Network; and

WHEREAS, Minn. Stat. § 16C.03, subd. 5, affords the commissioner of Administration, or delegate pursuant to Minn. Stat. § 16C.03, subd. 16, the authority to amend contracts; and

WHEREAS, the terms of the Contract allow the State to amend the Contract as specified herein, upon the mutual agreement of the Office of State Procurement and the Contract Vendor in a fully executed amendment to the Contract.

NOW, THEREFORE, it is agreed by the parties to amend the Contract as follows:

1. That Contract No. 116669 is extended through November 30, 2021, at the same prices, terms, and conditions.

2. The following clause is hereby incorporated as the last clause of the State of Minnesota General Terms, Conditions, and Specifications:

Diverse Spend Reporting. If the total value of your Contract may exceed $500,000, including all extension options, you must track and report, on a quarterly basis, the amount paid to diverse businesses both: 1) directly to subcontractors performing under the Contract, and 2) indirectly to diverse businesses that provide supplies/services to your company (in proportion to the revenue from this Contract compared to your company’s overall revenue). When this applies, you will be set up in a free portal to help report the Tier 2 diverse spend, and the requirement continues as long as the contract is in effect.

This Amendment is effective beginning December 1, 2020, or upon the date that the final required signatures are obtained, whichever occurs later, and shall remain in effect through contract expiration, or until the Contract is canceled, whichever occurs first.

Except as herein amended, the provisions of the Contract between the parties hereto are expressly reaffirmed and remain in full force and effect.

REMAINDER OF PAGE LEFT INTENTIONALLY BLANK
SIGNATURE PAGE TO FOLLOW
IN WITNESS WHEREOF, the parties have caused this Amendment to be duly executed intending to be bound thereby.

<table>
<thead>
<tr>
<th>1. CENTURYLINK COMMUNICATIONS, LLC.</th>
<th>4. DEPARTMENT OF PUBLIC SAFETY ENCUMBRANCE VERIFICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Contractor certifies that the appropriate person(s) have executed this Amendment on behalf of the Contractor as required by applicable articles, bylaws, resolutions, or ordinances.</td>
<td>Individual certifies that funds have been encumbered as required by Minn. Stat. §§ 16A.15 and 16C.05.</td>
</tr>
<tr>
<td>By: [Signature]</td>
<td>Signed: [Signature]</td>
</tr>
<tr>
<td>Title: [Signature]</td>
<td>Date: [Date] Order No. [Order No.]</td>
</tr>
<tr>
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<table>
<thead>
<tr>
<th>2. ATTORNEY FOR METROPOLITAN EMERGENCY SERVICES BOARD</th>
<th>5. DEPARTMENT OF PUBLIC SAFETY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attorney: Approved as to form.</td>
<td>By: [Signature]</td>
</tr>
<tr>
<td>By: [Signature]</td>
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<thead>
<tr>
<th>3. METROPOLITAN EMERGENCY SERVICES BOARD</th>
<th>6. OFFICE OF STATE PROCUREMENT</th>
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</thead>
<tbody>
<tr>
<td>By: [Signature]</td>
<td>By: [Signature]</td>
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<tr>
<td>Title: [Signature]</td>
<td>Title: Acquisition Management Specialist</td>
</tr>
<tr>
<td>Date: [Date]</td>
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<table>
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<tr>
<th>7. COMMISSIONER OF ADMINISTRATION</th>
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</thead>
<tbody>
<tr>
<td>Or delegated representative.</td>
<td>By: [Signature]</td>
</tr>
<tr>
<td>By: [Signature]</td>
<td>Date: [Date]</td>
</tr>
</tbody>
</table>

Persons with a hearing or speech disability may contact us by dialing 711 or 1.800.627.3529. Amendment No. 5 to Contract No. 116669, Release No. T-730.
Diverse Spend Reporting Instructions

Dear CenturyLink Communications, LLC,

The State of Minnesota is committed to diversity and inclusion in public procurement. If the total value of your Contract, including all extension options, exceeds $500,000, we request that you track and report, on a quarterly basis, the amount paid to diverse businesses both: 1) directly to subcontractors performing under the Contract, and 2) indirectly to diverse businesses that provide supplies/services to your company (in proportion to the revenue from this Contract compared to your company’s overall revenue). If you comply with the above State requirements, you will be set up in a free portal to help report the said above spend and the requirement will continue as long as the contract is in effect.

Your SWIFT Contract, number 116669, has been identified as a contract with reporting requirements. Please send the following information to support@starsmp.com. Within two (2) business days they will send you a link by email to the portal, with log-in information, portal guidance manual and information on accessing the training video.

<table>
<thead>
<tr>
<th>Legal Company Name:</th>
<th>CenturyLink Communications, LLC f/k/a Qwest Communications Company, LLC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Doing Business As- Name (if different than legal name):</td>
<td>CenturyLink Communications, LLC f/k/a Qwest Communications Company, LLC</td>
</tr>
<tr>
<td>SWIFT Contract No.</td>
<td>116669</td>
</tr>
<tr>
<td>Federal Tax ID:</td>
<td>04-6141739</td>
</tr>
<tr>
<td>Corporate Address:</td>
<td>100 CenturyLink Drive</td>
</tr>
<tr>
<td>Corporate City:</td>
<td>Monroe</td>
</tr>
<tr>
<td>Corporate State</td>
<td>Louisiana</td>
</tr>
<tr>
<td>Corporate Zip:</td>
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<tr>
<td>Company Email:</td>
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<tr>
<td>Primary Contact Name:</td>
<td>Mialisa Blake</td>
</tr>
<tr>
<td>Primary Contact Email</td>
<td><a href="mailto:Mialisa.b.blake@centurylink.com">Mialisa.b.blake@centurylink.com</a></td>
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</tbody>
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Once you are a registered user, please set up your contract in the portal. You will be able to access State of MN approved/certified suppliers from within the tool to add them as your subcontractors for a contract. If you have a supplier that is not available from the existing list, please follow the process for setting up each diverse subcontractor and supplier associated with this contract. This includes direct spend with diverse subcontractors, and also includes “indirect spend,” which is the proportion of spend your company pays to diverse suppliers for items like office supplies, utilities, materials, cleaning services, and so on, that can be related back to your contract with the State.

Please contact the State of Minnesota Office of Equity in Procurement, procurement.equity@state.mn.us if you have questions about using the portal, how subcontractors and suppliers are designated as diverse small businesses, and how quarterly reporting is used and monitored.

Persons with a hearing or speech disability may contact us by dialing 711 or 1.800.627.3529
Amendment No. 5 to Contract No. 116669, Release No. T-730
7-30-20

To: Rhonda Kriss

I approve the Amendment #5 to SWIFT Contract No. 116669, Release No. T-30 referenced as OMR-182501 dated 7-30-2020; and as the Designator, I designate you, the Designee, to manually sign the documents on my behalf today, 7-30-2020.

Your Legal Name

Your Signature
On Behalf of Stephen Arneson
Manager, Offer Management

Please include a copy of this Designation, along with the applicable documents, in the files.

Regards,
Stephen Arneson
CenturyLink
262-641-4131
METROPOLITAN EMERGENCY SERVICES BOARD

Meeting Date: September 9, 2020
Agenda Item: 5B. Approval of Contract with State of Minnesota and Inteliquent for 9-1-1 Ingress Services

Presenter: Eggimann

RECOMMENDATION
Staff recommend the Board approve the contract between the State of Minnesota/Inteliquent/MESB contract for 9-1-1 ingress services.

BACKGROUND
Traditionally, the MESB has been a party to a three-way contract for 9-1-1 services between the 9-1-1 service provider, the State of Minnesota, and the MESB for the 9-1-1 service in the metropolitan area. The State is responsible for the monthly recurring costs associated with the 9-1-1 network and the 9-1-1 location database. The MESB and the PSAPs are responsible for one-time costs associated with changes to the 9-1-1 system they initiated.

In November 2016, the MESB approved and executed the State T-730 contract for 9-1-1 services, with the MESB, State of Minnesota and CenturyLink as parties.

ISSUES & CONCERNS
As part of the transition from legacy E9-1-1 services to Next Generation (NG) 9-1-1 services, this contract will cover services related to the connectivity and protocol conversion for all telecommunications service provider 9-1-1 calls into the 9-1-1 system. This ingress service will enable a transition to NG9-1-1 core services, when that vendor is chosen, without requiring the telecommunications service providers to modify or change their connectivity to the 9-1-1 system.

This 9-1-1 system ingress contract with Inteliquent has a three-year term with the provision to extend the contract for up to 24 additional months.

The contract amendment was reviewed by Board Counsel, offered a few changes to the contract, as show in the meeting materials. These changes were sent to the Minnesota Department of Administration on Monday, August 24; as of this writing, no word has been received regarding the acceptance of those changes. Staff will provide an update at the September Board meeting.

FINANCIAL IMPACT
None to MESB. The MESB and PSAPs will continue to be responsible for one-time charges for any change and the State of Minnesota will continue to may all monthly recurring charges.

MOTION BY:
SECONDED BY:
MOTION:
PASS/FAIL
This Contract is between the State of Minnesota, acting through its Commissioner of Administration ("State") and Inteliquent whose designated business address is 2490 Junction Place #300, Boulder, CO 80301 ("Contractor"). State and Contractor may be referred to jointly as "Parties."

Recitals

1. State issued a solicitation identified as Telecom: Next Gen 911 Services, Event 2000009930 on August 26, 2019 for Ingress network technology needs and to support Next Generation 9-1-1 services for the State of Minnesota. This network will interface with a core network and an ESInet network to supply E9-1-1 voice & data services across Minnesota. ("Solicitation");
2. Contractor provided a response to the Solicitation indicating its interest in and ability to provide the goods or services requested in the Solicitation; and
3. Subsequent to an evaluation in accordance with the terms of the Solicitation and negotiation, the Parties desire to enter into a contract.

Accordingly, the Parties agree as follows:

Contract

1 Term of Contract

1.1 Effective date. September 01, 2020 or the date the State obtains all required signatures under Minn. Stat. § 16C.05, subd. 2, whichever is later. The Contractor must not begin work under this Contract until this Contract is fully executed and the Contractor has been notified by the State’s Authorized Representative to begin the work.

1.2 Expiration date. August 31, 2023 or until all obligations have been satisfactorily fulfilled, whichever occurs first. The contract may be extended for up to an additional 24 months in increments as determined by the State, through a duly executed amendment.

1.3 Contract Use. This Contract is not exclusive and shall not be construed as guaranteeing a minimum or maximum amount of usage.

2 Contractor’s Duties

The Contractor shall perform all duties described in this Contract to the satisfaction of the State.

3 Representations and Warranties

3.1 Under Minn. Stat. §§ 15.061 and 16C.03, subd. 3, and other applicable law the State is empowered to engage such assistance as deemed necessary.
3.2 Contractor warrants that it is duly qualified and shall perform its obligations under this Contract in accordance with the commercially reasonable standards of care, skill, and diligence in Contractor’s industry, trade, or profession, and in accordance with the specifications set forth in this Contract, to the satisfaction of the State.

3.3 Contractor warrants that it possesses the legal authority to enter into this Contract and that it has taken all actions required by its procedures, by-laws, and applicable laws to exercise that authority, and to lawfully authorize its undersigned signatory to execute this Contract, or any part thereof, and to bind Contractor to its terms.

4. Time
The Contractor must comply with all the time requirements described in this Contract. In the performance of this Contract, time is of the essence.

4.1 Payment.

4.1.1 Invoices. The State will promptly pay the Contractor after the Contractor presents an itemized invoice for the goods received or services actually performed, and the State’s Authorized Representative accepts the invoiced goods or services. Invoices must be submitted timely and according to the following schedule:

4.1.2 Conditions of payment. All services delivered by the Contractor under this Contract must be performed to the State’s satisfaction and in accordance with all applicable federal, state, and local laws, ordinances, rules, and regulations including business registration requirements of the Office of the Secretary of State. The Contractor will not receive payment for work found by the State to be unsatisfactory or performed in violation of federal, state, or local law.

5. Compensation and Conditions of Payment

5.1 Compensation. The State will pay for performance by the Contractor under this Contract in accordance with the breakdown of costs as set forth in Exhibit D which is attached and incorporated into this Contract.

5.2 Conditions of Payment. All duties performed by the Contractor under this Contract must be performed to the State’s satisfaction and in accordance with all applicable federal, state, and local laws, ordinances, rules, and regulations including business registration requirements of the Office of the Secretary of State. The Contractor will not receive payment for work found by the State to be unsatisfactory or performed in violation of federal, state, or local law.

6. Authorized Representative

6.1 The State’s Authorized Representative is Matt Hassenstab, Acquisition Management Specialist, Matt.Hassenstab@state.mn.us, or his/her successor or delegate, and has the responsibility to monitor the Contractor’s performance.

6.2 Contractor’s Authorized Representative. The Contractor’s Authorized Representative is Ray Paddock, Vice President of Government Markets Business Development at the following business address and telephone number: 2490 Junction Place #300, Boulder CO, 80301 or his/her successor. If the Contractor’s Authorized Representative changes at any time during this Contract, the Contractor must immediately notify the State.

7. Exhibits
The following Exhibits are attached and incorporated into this Contract. In the event of a conflict between the terms of this Contract and its Exhibits, or between Exhibits, the order of precedence is first the Contract, and then in the following order:

Exhibit A: Contract Terms
1. Inteliquent

_The Contractor certifies that the appropriate person(s) have executed the Contract on behalf of the Contractor as required by applicable articles, bylaws, resolutions, or ordinances._

| Print name: | Print name: |
| Signature: | Signature: |
| Title: Date: | Title: Date: |

2. Attorney for Metropolitan Emergency Services Board

_In accordance with Minn. Stat. '16C.03, Subd. 3._

| Print name: | Print name: |
| Signature: | Signature: |
| Title: Date: | Title: Date: |

3. Metropolitan Emergency Services Board

_As delegated to The Office of State Procurement_

| Print name: | Print name: |
| Signature: | Signature: |
| Title: Date: | Title: Date: |

4. Department of Public Safety

| Print name: | Print name: |
| Signature: | Signature: |
| Title: Date: | Title: Date: |

5. Office of State Procurement

_In accordance with Minn. Stat. '16C.03, Subd. 3._

| Print name: | Print name: |
| Signature: | Signature: |
| Title: Date: | Title: Date: |

6. Commissioner of Administration

_As delegated to The Office of State Procurement_

| Print name: | Print name: |
| Signature: | Signature: |
| Title: Date: | Title: Date: |
Exhibit A: Contract Terms

1. Prompt Payment and Invoicing.

1.1 Prompt Payment. The State will pay the Contractor pursuant to Minn. Stat. § 16A.124, which requires payment within 30 days following receipt of an undisputed invoice, or merchandise or service, whichever is later. Terms requesting payment in less than 30 days will be changed to read “Net 30 days.” Notwithstanding the foregoing, the State may pay the Contractor in advance for purchases as allowed pursuant to Minn. Stat. §16A.065.

The payment for each order will only be made for goods received or services actually performed that have been accepted by the ordering entity, and meet all terms, conditions, and specifications of the Contract and the ordering document.

1.2 Invoicing. The invoice must be in the same format as the sample invoice form approved as [Exhibit D, Supplement 1] with the Contract, unless an alternative format is approved in writing by the State Authorized Representative, or delegate. See Exhibit D, Supplement 1 for a list of minimum invoice requirements.


2.1 Assignment. The Contractor may neither assign nor transfer any rights or obligations under this Contract without the prior consent of the State and a fully executed assignment agreement, executed and approved by the authorized parties or their successors.

2.2 Amendments. Any amendment to this Contract must be in writing and will not be effective until it has been executed and approved by the authorized parties or their successors.

2.3 Waiver. If the State fails to enforce any provision of this Contract, that failure does not waive the provision or its right to enforce it.

2.4 Contract Complete. This Contract contains all negotiations and agreements between the State and the Contractor. No other understanding regarding this Contract, whether written or oral, may be used to bind either party.

3. Termination.

3.1 Termination for Breach. If the Contractor fails to perform according to the contract terms and conditions, the State is authorized to immediately cancel the Contract or purchase order, or any portion of it, and may obtain replacement goods or services and charge the difference of costs to the defaulting Contractor. In the event of default, the State reserves the right to pursue any other remedy available by law. A Contractor may be removed from the vendors list, suspended or debarred from receiving a Contract for failure to comply with terms and conditions of the Contract, or for failure to pay the State for the cost incurred on the defaulted Contract.

3.2 Termination for Insufficient Funding. The State may immediately terminate this Contract if it does not obtain funding from the Minnesota Legislature, or other funding source; or if funding cannot be continued at a level sufficient to allow for the payment of the services addressed within this Contract. Termination must be by written notice to the Contractor. The State is not obligated to pay for any services that are provided after notice and effective date of termination. However, the Contractor will be entitled to payment, determined on a pro rata basis, for services satisfactorily performed to the extent that dedicated funds are available. The State will not be assessed any penalty if the Contract is terminated because of the decision of the Minnesota Legislature, or other funding source, not to appropriate funds. The State must provide the Contractor notice of the lack of funding. This notice will be provided within a reasonable time of the State’s receiving notice.
4. **Force Majeure.**

Neither party shall be responsible to the other or considered in default of its obligations within this Contract to the extent that performance of any such obligations is prevented or delayed by acts of God, war, riot, disruption of government, or other catastrophes beyond the reasonable control of the party unless the act or occurrence could have been reasonably foreseen and reasonable action could have been taken to prevent the delay or failure to perform. A party relying on this provision to excuse performance must provide the other party prompt written notice of the inability to perform and take all necessary steps to bring about performance as soon as practicable.

5. **Indemnification.**

5.1 In the performance of this Contract, the Indemnifying Party must indemnify, save, and hold harmless the State, its agents, and employees, and the Metropolitan Emergency Services Board ("Board") from any claims or causes of action, including attorney's fees incurred by the State or the Board, to the extent caused by Indemnifying Party's:

- Intentional, willful, or negligent acts or omissions; or
- Actions that give rise to strict liability; or
- Breach of contract or warranty.

The Indemnifying Party is defined to include the Contractor, Contractor's reseller, any third party that has a business relationship with the Contractor, or Contractor's agents or employees, and to the fullest extent permitted by law. The indemnification obligations of this section do not apply in the event the claim or cause of action is the result of the State's sole negligence. This clause will not be construed to bar any legal remedies the Indemnifying Party may have for the State's failure to fulfill its obligation under this Contract.

5.2 Nothing within this Contract, whether express or implied, shall be deemed to create an obligation on the part of the State or the Board to indemnify, defend, hold harmless or release the Indemnifying Party. This shall extend to all agreements related to the subject matter of this Contract, and to all terms subsequently added, without regard to order of precedence.

6. **Governing Law, Jurisdiction, and Venue.**

Minnesota law, without regard to its choice-of-law provisions, governs this Contract. Venue for all legal proceedings out of this Contract, or its breach, must be in the appropriate state or federal court with competent jurisdiction in Ramsey County, Minnesota.

7. **Contract Use by State Agencies.**

To the extent applicable, the Contract does not prohibit state agencies from using their delegated purchasing authority to procure similar goods and services from other sources.

8. **Warranty.**

The Contractor warrants to the ordering entity that materials and equipment furnished under the Contract will be free from defects not inherent in the quality required or permitted, and that the work will conform to the requirements of the contract. Work not conforming to these requirements, including substitutions not properly approved and authorized in writing may be considered defective. The Contractor's warranty excludes remedy for damage or defect caused by abuse, modifications not executed by the Contractor, improper or insufficient maintenance, improper operation, or normal wear and tear and normal usage. If requested, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment used.

All installation materials and labor shall be guaranteed for a period of one (1) year following the date of final acceptance. During the first year following acceptance, the Contractor shall, upon notification by the ordering entity of any malfunctions, make necessary repairs, including labor, travel, and materials, at the Contractor's expense.
9 Foreign Outsourcing of Work Prohibited.
All services under this contract shall be performed within the borders of the United States. All storage and processing of information shall be performed within the borders of the United States. This provision also applies to work performed by all subcontractors.

10 Delivery.
Contractor is obligated to deliver within the quoted lead times. If delivery is not made within that time frame, the State reserves the right to deem the Contractor in default.

11 Risk of Loss.
The State is relieved of all risks of loss or damage to the goods and equipment during periods of transportation, installation by the Contractor, or while in the possession of the Contractor or its agent.

12 Purchase Orders and Purchasing Cards.
The parties agree that there is no minimum order requirements or charges to process an individual purchase order unless otherwise stated in the Contract. The Purchase Order number must appear on all documents (e.g., invoices, packing slips, etc.).

13 Equipment Specifications.
All equipment must meet the contract specifications and all federal and State safety codes and regulations in effect at the date of manufacture. All equipment must be Original Equipment Manufacturer (OEM) equipment unless otherwise stated in the contract.

14 Items Offered as New.
All products, materials, supplies, replacement parts, and equipment offered and furnished must be new, of current manufacturer production, and must have been formally announced by the manufacturer as being commercially available, unless otherwise stated in this Contract.

15 Subcontracting and Subcontract Payment.

15.1 Subcontracting Allowed. A subcontractor is a person or company that has been awarded a portion of the Contract by Contractor. Only subcontractors that have been approved by the Contract Administrator can be used for this Contract.

After the effective date of the Contract, the Contractor shall not, without prior written approval of the Contract Administrator, subcontract for the performance of any of the Contractor’s obligations that were not already approved for subcontracting when the Contract was awarded. During this Contract, if an approved subcontractor is determined to be performing unsatisfactorily by the Contract Administrator, the Contractor will receive written notification that the subcontractor can no longer be used for this Contract.

The provisions of the Contract shall apply with equal force and effect to all approved subcontractors engaged by the Contractor. Notwithstanding approval by the State, no subcontract shall serve to terminate or in any way affect the primary legal responsibility of the Contractor for timely and satisfactory performances of the obligations contemplated by the Contract.

15.2 Subcontractor Payment. Contractor must pay any subcontractor in accordance with Minn. Stat. § 16A.1245.

16 Data Disclosure.
Under Minn. Stat. § 270C.65, subd. 3 and other applicable law, the Contractor consents to disclosure of its social security number, federal employer tax identification number, and Minnesota tax identification number, already provided to the State, to federal and state agencies, and state personnel involved in the payment of state obligations. These identification numbers may be used in the enforcement of federal and state laws which could result in action requiring the Contractor to file state tax returns, pay delinquent state tax liabilities, if any, or pay other state liabilities.

The Contractor and State must comply with the Minnesota Government Data Practices Act, Minn. Stat. Ch. 13, (or, if the State contracting party is part of the Judicial Branch, with the Rules of Public Access to Records of the Judicial Branch promulgated by the Minnesota Supreme Court as the same may be amended from time to time) as it applies to all data provided by the State under this Contract, and as it applies to all data created, collected, received, stored, used, maintained, or disseminated by the Contractor under this Contract. The civil remedies of Minn. Stat. § 13.08 apply to the release of the data governed by the Minnesota Government Practices Act, Minn. Stat. Ch. 13, by either the Contractor or the State.

If the Contractor receives a request to release the data referred to in this clause, the Contractor must immediately notify and consult with the State’s Authorized Representative as to how the Contractor should respond to the request. The Contractor’s response to the request shall comply with applicable law.


18.1 Definitions. For the purpose of this Section, the following words and phrases have the assigned definitions:

18.1.1 “Documents” are the originals of any databases, computer programs, reports, notes, studies, photographs, negatives, designs, drawings, specifications, materials, tapes, disks, or other materials, whether in tangible or electronic forms, prepared by the Contractor, its employees, agents, or subcontractors, in the performance of this Contract.

18.1.2 “Pre-Existing Intellectual Property” means intellectual property developed prior to or outside the scope of this Contract, and any derivatives of that intellectual property.

18.1.3 “Works” means all inventions, improvements, discoveries (whether or not patentable), databases, computer programs, reports, notes, studies, photographs, negatives, designs, drawings, specifications, materials, tapes, and disks conceived, reduced to practice, created or originated by the Contractor, its employees, agents, and subcontractors, either individually or jointly with others in the performance of this Contract. “Works” includes Documents.

18.2 Ownership. The State owns all rights, title, and interest in all of the intellectual property rights, including copyrights, patents, trade secrets, trademarks, and service marks in the Works and Documents created and paid for under this Contract. The Documents shall be the exclusive property of the State and all such Documents must be immediately returned to the State by the Contractor upon completion or cancellation of this Contract. To the extent possible, those Works eligible for copyright protection under the United States Copyright Act will be deemed to be “works made for hire.” The Contractor assigns all right, title, and interest it may have in the Works and the Documents to the State. The Contractor must, at the request of the State, execute all papers and perform all other acts necessary to transfer or record the State’s ownership interest in the Works and Documents.

18.3 Pre-existing Intellectual Property. Each Party shall retain ownership of its respective Pre-Existing Intellectual Property. The Contractor grants the State a perpetual, irrevocable, non-exclusive, royalty free license for Contractor’s Pre-Existing Intellectual Property that are incorporated in the products, materials, equipment, deliverables, or services that are purchased through the Contract.

18.4 Obligations.

18.4.1 Notification. Whenever any invention, improvement, or discovery (whether or not patentable) is made or conceived for the first time or actually or constructively reduced to practice by the Contractor, including its employees and subcontractors, in the performance of this Contract, the Contractor will immediately give the State’s Authorized Representative written notice thereof, and must promptly furnish the State’s Authorized Representative with complete information and/or disclosure thereon.
18.4.2 Representation. The Contractor must perform all acts, and take all steps necessary to ensure that all intellectual property rights in the Works and Documents are the sole property of the State, and that neither Contractor nor its employees, agents, or subcontractors retain any interest in and to the Works and Documents. The Contractor represents and warrants that the Works and Documents do not and will not infringe upon any intellectual property rights of other persons or entities.

18.4.3 Indemnification. Notwithstanding any other indemnification obligations addressed within this Contract, the Contractor will indemnify; defend, to the extent permitted by the Attorney General; and hold harmless the State and the Board, at the Contractor’s expense, from any action or claim brought against the State or the Board to the extent that it is based on a claim that all or part of the Works or Documents infringe upon the intellectual property rights of others. The Contractor will be responsible for payment of any and all such claims, demands, obligations, liabilities, costs, and damages, including but not limited to, attorney fees. If such a claim or action arises, or in the Contractor’s or the State’s opinion is likely to arise, the Contractor must, at the State’s discretion, either procure for the State the right or license to use the intellectual property rights at issue or replace or modify the allegedly infringing works or documents as necessary and appropriate to obviate the infringement claim. This remedy of the State will be in addition to and not exclusive of other remedies provided by law.

19. Copyright.
The Contractor shall save and hold harmless the State of Minnesota, its officers, agents, servants and employees, and the Board, from liability of any kind or nature, arising from the use of any copyrighted or noncopyrighted compositions, secret process, patented or nonpatented invention, article or appliance furnished or used in the performance of the Contract.

Upon the request of the State of Minnesota, Contractor will irrevocably assign to State any state or federal antitrust claim or cause of action that the Contractor now has or which may accrue to the Contractor in the future, in connection with any goods, services, or combination provided by Contractor under the terms of this Contract.

In the event the term of any order or Professional/Technical Services work order (“Order”) placed under this Contract extends past the termination or expiration of this Contract, the terms and conditions of this Contract shall remain in full force and effect as it applies to such order and will continue in effect for such order until the term of that order expires or the order is cancelled or terminated in accordance with the terms of this Contract.

22. Contractor’s Documents.
Any licensing and maintenance agreement, or any order-specific agreement or document, including any pre-installation, linked or “click through” agreement that is allowed by, referenced within or incorporated within the Contract whenever the Contract is used for a State procurement, whether directly by the Contractor or through a Contractor’s agent, subcontractor or reseller, is agreed to only to the extent the terms within any such agreement or document do not conflict with the Contract or applicable Minnesota or Federal law, and only to the extent that the terms do not modify, diminish or derogate the terms of the Contract or create an additional financial obligation to the State. Any such agreement or document must not be construed to deprive the State of its sovereign immunity, or of any legal requirements, prohibitions, protections, exclusions or limitations of liability applicable to this Contract or afforded to the State by Minnesota law. A State employee’s decision to choose “accept” or an equivalent option associated with a “click-through” agreement does not constitute the State’s concurrence or acceptance of terms, if such terms are in conflict with this section.

Under Minn. Stat. § 16C.05, subd. 5, the Contractor’s books, records, documents, and accounting procedures and practices relevant to this Contract are subject to examination by the State, the State Auditor, or Legislative Auditor, as appropriate, for a minimum of six years from the expiration or termination of this Contract.
24. Usage Reports.
Contractor is required to furnish Contract usage data (usage reports) to the Contract Administrator at the following email address: osp.usagereports@state.mn.us. Contract usage reports must consist of the total dollars spent by the State and other entities, broken down into two categories: State agencies and CPV members. The reporting frequency is at a minimum annually, or as otherwise requested. A final usage report is required at the expiration or termination of the Contract. Failure to provide usage reports may result in contract cancellation. This term survives the expiration or termination of the Contract.

25. Diverse Spend Reporting.
If the total value of the Contract may exceed $500,000, including all extension options, Contractor must track and report, on a quarterly basis, the amount paid to diverse businesses both: 1) directly to subcontractors performing under the Contract, and 2) indirectly to diverse businesses that provide supplies/services to your company (in proportion to the revenue from this Contract compared to Contractor's overall revenue). When this applies, Contractor will register in a free portal to help report the Tier 2 diverse spend, and the requirement continues as long as the Contract is in effect.

26. Publicity and Endorsement.

26.1 Publicity. Any publicity regarding the subject matter of this Contract must identify the State as the sponsoring agency and must not be released without prior written approval from the State’s Authorized Representative. For purposes of this provision, publicity includes notices, informational pamphlets, press releases, information posted on corporate or other websites, research, reports, signs, and similar public notices prepared by or for the Contractor individually or jointly with others, or any subcontractors, with respect to the program, publications, or services provided resulting from this Contract.

26.2 Endorsement. The Contractor must not claim that the State endorses its products or services.

27. Debarment by State, its Departments, Commissions, Agencies, or Political Subdivisions.
Contractor certifies that neither it nor its principals is presently debarred or suspended by the Federal government, the State, or any of the State’s departments, commissions, agencies, or political subdivisions. Contractor’s certification is a material representation upon which the Contract award was based. Contractor shall provide immediate written notice to the State’s Authorized Representative if at any time it learns that this certification was erroneous when submitted or becomes erroneous by reason of changed circumstances.

28. Contingency Fees Prohibited.
Pursuant to Minn. Stat. § 10A.06, no person may act as or employ a lobbyist for compensation that is dependent upon the result or outcome of any legislation or administrative action.

29. Certification of Nondiscrimination (in accordance with Minn. Stat. § 16C.053).
If the value of this Contract, including all extensions, is $50,000 or more, Contractor certifies it does not engage in and has no present plans to engage in discrimination against Israel, or against persons or entities doing business in Israel, when making decisions related to the operation of the vendor’s business. For purposes of this section, "discrimination" includes but is not limited to engaging in refusals to deal, terminating business activities, or other actions that are intended to limit commercial relations with Israel, or persons or entities doing business in Israel, when such actions are taken in a manner that in any way discriminates on the basis of nationality or national origin and is not based on a valid business reason.

The Contractor will comply with the provisions of Minn. Stat. § 181.59.

31. E-Verify Certification (in accordance with Minn. Stat. § 16C.075).
For services valued in excess of $50,000, Contractor certifies that as of the date of services performed on behalf of the State, Contractor and all its subcontractors will have implemented or be in the process of implementing the federal E-Verify Program for all newly hired employees in the United States who will perform work on behalf of the State.
Contractor is responsible for collecting all subcontractor certifications and may do so utilizing the E-Verify Subcontractor Certification Form available at http://www.mmd.admin.state.mn.us/doc/EverifySubCertForm.doc. All subcontractor certifications must be kept on file with Contractor and made available to the State upon request.

32. Affirmative Action Requirements
The State intends to carry out its responsibility for requiring affirmative action by its contractors.

32.1 Covered Contracts and Contractors. If the Contract exceeds $100,000 and the Contractor employed more than 40 full-time employees on a single working day during the previous 12 months in Minnesota or in the state where it has its principal place of business, then the Contractor must comply with the requirements of Minn. Stat. § 363A.36 and Minn. R. 5000.3400-5000.3600. A contractor covered by Minn. Stat. § 363A.36 because it employed more than 40 full-time employees in another state and does not have a certificate of compliance, must certify that it is in compliance with federal affirmative action requirements.

32.2 General. Minn. R. 5000.3400-5000.3600 implements Minn. Stat. § 363A.36. These rules include, but are not limited to, criteria for contents, approval, and implementation of affirmative action plans; procedures for issuing certificates of compliance and criteria for determining a contractor’s compliance status; procedures for addressing deficiencies, sanctions, and notice and hearing; annual compliance reports; procedures for compliance review; and contract consequences for non-compliance. The specific criteria for approval or rejection of an affirmative action plan are contained in various provisions of Minn. R. 5000.3400-5000.3600 including, but not limited to, Minn. R. 5000.3420-5000.3500 and 5000.3552-5000.3559.

32.3 Disabled Workers. The Contractor must comply with the following affirmative action requirements for disabled workers.

AFFIRMATIVE ACTION FOR DISABLED WORKERS

32.3.1 The Contractor must not discriminate against any employee or applicant for employment because of physical or mental disability in regard to any position for which the employee or applicant for employment is qualified. The Contractor agrees to take affirmative action to employ, advance in employment, and otherwise treat qualified disabled persons without discrimination based upon their physical or mental disability in all employment practices such as the following: employment, upgrading, demotion or transfer, recruitment, advertising, layoff or termination, rates of pay or other forms of compensation, and selection for training, including apprenticeship.

32.3.2 The Contractor agrees to comply with the rules and relevant orders of the Minnesota Department of Human Rights issued pursuant to the Minnesota Human Rights Act.

32.3.3 In the event of the Contractor’s noncompliance with the requirements of this clause, actions for noncompliance may be taken in accordance with Minn. Stat. § 363A.36, and the rules and relevant orders of the Minnesota Department of Human Rights issued pursuant to the Minnesota Human Rights Act.

32.3.4 The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices in a form to be prescribed by the Commissioner. Such notices must state the Contractor’s obligation under the law to take affirmative action to employ and advance in employment qualified disabled employees and applicants for employment, and the rights of applicants and employees.

32.3.5 The Contractor must notify each labor union or representative of workers with which it has a collective bargaining agreement or other contract understanding, that the Contractor is bound by the terms of Minn. Stat. § 363A.36, of the Minnesota Human Rights Act and is committed to take affirmative action to employ and advance in employment physically and mentally disabled persons.
32.4 Consequences. The consequences for the Contractor’s failure to implement its affirmative action plan or make a good faith effort to do so include, but are not limited to, suspension or revocation of a certificate of compliance by the Commissioner, refusal by the Commissioner to approve subsequent plans, and termination of all or part of this Contract by the Commissioner or the State.

32.5 Certification. The Contractor hereby certifies that it is in compliance with the requirements of Minn. Stat. § 363A.36 and Minn. R. 5000.3400-5000.3600 and is aware of the consequences for noncompliance.

33 Equal Pay Certification. If required by Minn. Stat. §363A.44, the Contractor must have a current Equal Pay Certificate prior to Contract execution. If Contractor’s Equal Pay Certificate expires during the term of this Contract, Contractor must promptly re-apply for an Equal Pay Certificate with the Minnesota Department of Human Rights and notify the State’s Authorized Representative once the Contractor has received the renewed Equal Pay Certificate. If Contractor claims to be exempt, the State may require Contractor to verify its exempt status.

34 Hazardous Substances. To the extent that the goods to be supplied to the State by the Contractor contain or may create hazardous substances, harmful physical agents, or infectious agents, as set forth in applicable State and federal laws and regulations, the Contractor must provide the State with Material Safety Data Sheets regarding those substances. A copy must be provided upon request. Goods and containers supplied to the State must be labeled in compliance with state and federal laws, rules, and regulations.

These terms apply to goods supplied under this contract:

34.1 Products Containing Triclosan Banned. The Contractor must comply with Minn. Stat. § 145.945.

34.2 Products Containing Certain Types of Polybrominated Diphenyl Ether Banned. The Contractor must comply with Minn. Stat. § 325E.385-325E.388).


34.4 Products Containing Mercury. The Contractor must comply with Minn. Stat. 116.92.

35 IT Accessibility Standard. Contractor acknowledges and is fully aware that the State of Minnesota (Executive branch state agencies) has developed IT Accessibility Standard effective September 1, 2010. The standard entails, in part, the Web Content Accessibility Guidelines (WCAG) and Section 508 which can be viewed at: https://mn.gov/mnit/government/policies/accessibility/. The Standards apply to web sites, software applications, electronic reports and output documentation, training delivered in electronic formats (including, but not limited to, documents, videos, and webinars), among others. As upgrades are made to the software, products, or subscriptions available through this Contract, the Contractor agrees to develop functionality which supports accessibility. If any issues arise due to nonconformance with the above-mentioned accessibility Standards, the Contractor agrees to provide alternative solutions upon request at no additional charge to the State.

When updates or upgrades are made to the products or services available through this Contract, the Contractor agrees to document how the changes will impact or improve the product’s or service’s accessibility and usability. This documentation, upon request, must be provided to the State in advance of the change, occurring within an agreed upon timeframe sufficient for the state to review the changes and either approve them or request a remediation plan from the Contractor. Contractor warrants that its Products comply with the above-mentioned accessibility Standards and agrees to indemnify, defend, and hold harmless the State against any claims related to non-compliance of Contractor’s Product with the above-mentioned accessibility Standards. If agreed-upon updates fail to improve the product or
service’s accessibility or usability as planned, the failure to comply with this requirement may be cause for contract
cancellation or for the State to consider the Contractor in default.

Pursuant to Minn. Stat. § 16C.145, the Contractor must comply with the following nonvisual technology access
standards to the extent required by law:

- That the effective interactive control and use of the technology, including the operating system applications
  programs, prompts, and format of the data presented, are readily achievable by nonvisual means;
- That the nonvisual access technology must be compatible with information technology used by other individuals
  with whom the blind or visually impaired individual must interact;
- That nonvisual access technology must be integrated into networks used to share communications among
  employees, program participants, and the public; and
- That the nonvisual access technology must have the capability of providing equivalent access by nonvisual
  means to telecommunications or other interconnected network services used by persons who are not blind or
  visually impaired; and
- Executive branch state agencies subject to Section 16E.03, subdivision 9, are not required to include nonvisual
  technology access standards developed under this Section in contracts for the procurement of information
  technology.

These standards do not require the installation of software or peripheral devices used for nonvisual access when the
information technology is being used by individuals who are not blind or visually impaired.

37. Survival of Terms.
The following clauses survive the expiration or cancellation of this Contract: Indemnification; State Audits; Government
Data Practices; Intellectual Property; Publicity and Endorsement; Governing Law, Jurisdiction, and Venue; and Data
Disclosure. Any other Contract term that expressly states or by its nature shall survive, shall survive.
Exhibit B: Insurance Requirements

The Contractor shall maintain insurance to cover claims which may arise from operations under this Contract.

The Contractor shall not commence work under the Contract until they have obtained all the insurance described below and the State of Minnesota has approved such insurance. The Contractor shall maintain such insurance in force and effect throughout the term of the Contract.

All coverages and limits shall remain in force and effect throughout the term of the Contract.

Notice to the Contractor:

The failure of the State of Minnesota to obtain a Certificate of Insurance, for the policies required under this Contract or renewals thereof, or failure of the insurance company to notify the State of the cancellation of policies required under this Contract shall not constitute a waiver by the Owner to the Contractor to provide such insurance.

The Owner reserves the right to immediately terminate the Contract if the Contractor is not in compliance with the insurance requirements and the Owner retains all rights to pursue any legal remedies against the Contractor. All insurance policies must be open to inspection by the State, and copies of policies must be submitted to the State’s authorized representative upon written request.

Notice to Insurer:

The Contractor’s insurance company(ies) waives its right to assert the immunity of the State as a defense to any claims made under said insurance.

Requirements for the Contractor:

The Contractor’s policy(ies) shall be primary insurance to any other valid and collectible insurance available to the State of Minnesota with respect to any claim arising out of Contractor’s performance under this Contract.

If Contractor receives a cancellation notice from an insurance carrier affording coverage herein, Contractor agrees to notify the State of Minnesota within five (5) business days with a copy of the cancellation notice, unless Contractor’s policy(ies) contain a provision that coverage afforded under the policy(ies) will not be cancelled without at least thirty (30) days advance written notice to the State of Minnesota.

The Contractor is responsible for payment of Contract related insurance premiums and deductibles.

If the Contractor is self-insured, a Certificate of Self-Insurance must be attached.

Insurance companies must either (1) have an AM Best rating of A- (minus) and a Financial Size Category of VII or better, and be authorized to do business in the State of Minnesota or (2) be domiciled in the State of Minnesota and have a Certificate of Authority/Compliance from the MN Department of Commerce if they are not rated by AM Best.

The Contractor’s Umbrella or Excess Liability insurance policy may be used to supplement the Contractor’s policy limits to satisfy the full policy limits required by the Contract.

Policy Requirements:

1. Workers’ Compensation Insurance:

Statutory Compensation Coverage. Except as provided below, Contractor must provide Workers’ Compensation insurance for all its employees and in case any work is subcontracted, Contractor will require the subcontractor to
provide Workers’ Compensation insurance in accordance with the statutory requirements of the State of Minnesota, including Coverage B, Employer’s Liability. Minimum limits of liability:

Coverage B - Employer’s Liability $100,000 Bodily Injury by Disease per Employee $500,000 Bodily Injury by Disease Aggregate $100,000 Bodily Injury by Accident

If Minn. Stat. § 176.041 exempts the Contractor from Workers’ Compensation insurance or if the Contractor has no employees in the State of Minnesota, the Contractor must provide a written statement, signed by the authorized signer of the Contract, stating the qualifying exemption that excludes the Contractor from MN Workers’ Compensation requirements.

If during the course of the Contract the Contractor becomes eligible for Workers’ Compensation, the Contractor must comply with the Workers’ Compensation insurance requirements included herein and provide the State of Minnesota with a certificate of insurance.

Evidence of Subcontractor insurance shall be filed with the Contractor.

2. Automobile Liability Insurance:

Auto Liability insurance is only applicable if the contractor, contractor’s employees, or subcontractors will be driving on state property or will be using, owned, hired, or non-owned vehicles to conduct business on behalf of the state.

The Contractor shall maintain insurance to cover liability arising out of the ownership, operation, use or maintenance of all owned, hired and non-owned autos, and in case any work is subcontracted the Contractor will require the subcontractor to maintain Automobile Liability insurance.

A. Minimum Limits of Liability: $2,000,000 - Per Occurrence - Bodily Injury and Property Damage Combined Single Limit

B. Coverages: Owned Automobile Non-Owned Automobile Hired Automobile

Evidence of Subcontractor insurance shall be filed with the Contractor.

3. General Liability Insurance:

The Contractor shall maintain insurance protecting it from claims for damages for bodily injury, including sickness or disease, death, and for care and loss of services as well as from claims for property damage, including loss of use which may arise from operations under the Contract whether the operations are by the Contractor or by a subcontractor or by anyone directly or indirectly employed by the Contractor under the Contract.

A. Minimum Limits of Liability: $2,000,000 - Per Occurrence $2,000,000 - Annual Aggregate $2,000,000 - Annual Aggregate applying to Products/Completed Operations


State of Minnesota Named as an Additional Insured

SPECIAL INSURANCE REQUIREMENTS
1. Professional/Technical, Errors and Omissions:

This policy will provide coverage for all claims the contractor may become legally obligated to pay resulting from any actual or alleged negligent act, error, or omission related to Contractor’s professional services required under the contract.

Contractor is required to carry the following minimum limits:

$2,000,000 – per claim or event

$2,000,000 – annual aggregate

Any deductible will be the sole responsibility of the Contractor and may not exceed $50,000 without the written approval of the State. If the Contractor desires authority from the State to have a deductible in a higher amount, the Contractor shall so request in writing, specifying the amount of the desired deductible and providing financial documentation by submitting the most current audited financial statements so that the State can ascertain the ability of the Contractor to cover the deductible from its own resources.

The retroactive or prior acts date of such coverage shall not be after the effective date of this Contract and Contractor shall maintain such insurance for a period of at least three (3) years, following completion of the work. If such insurance is discontinued, extended reporting period coverage must be obtained by Contractor to fulfill this requirement.

2. Network Security and Privacy Liability Insurance (or equivalent)

Contractor shall maintain insurance to cover claims which may arise from failure of Contractor’s security resulting in, but not limited to, computer attacks, unauthorized access, disclosure of not public data including but not limited to confidential or private information, transmission of a computer virus or denial of service.

Contractor is required to carry the following minimum limits:

$2,000,000 per occurrence

$2,000,000 annual aggregate

The following coverage shall be included:

State of Minnesota named as an Additional Insured unless the coverage is written under a Professional Liability policy.
Exhibit C: Specifications, Duties, and Scope of Work

NG9-1-1 Call Aggregation Service

Under this Statement of Work (“SOW”) between the State of Minnesota (“Customer”) and Onvoy, LLC d/b/a Inteliquent (“Inteliquent” or “Contractor”), Customer will receive and Contractor will provide NG9-1-1 Call Aggregation Service (as more specifically described below, the “Service” or “Services

1. Certain Definitions. For the purposes of this SOW:

a. “9-1-1 means” a three-digit telephone number to facilitate the reporting of an emergency situation requiring a response by a public safety agency.

b. “9-1-1 Call(s)” include all generally supported media types including audio, teletype (TTY), Real Time Text (“RTT”), and data supported in the National Emergency Number Association (“NENA”) STA-010.

c. Automatic Number Identification (“ANI”) means the telephone number (“TN”) associated with the telephone or other device from which a 9-1-1 Call is placed.

d. Border Control Function (“BCF”) means the NG9-1-1 network element that provides a secure entry into the ESInet for 9-1-1 Calls presented to the network. The BCF incorporates firewall, admission control, and may include anchoring of session and media as well as other security mechanisms to prevent deliberate or malicious attacks on PSAPs or other entities connected to the ESInet.

e. “Demarcation Point” is a mutually-defined boundary dividing one area of responsibility from another. For the purposes of this document it refers to the Ingress Demarcation Point and the Egress Demarcation Point.

f. “Egress Demarcation Point” means the Contractor router hosted at the Customer designated datacenter for delivery of 9-1-1 Calls using SIP. The Customer-designated datacenter may be the NGCS Facilities or datacenters hosting the IP Selective Router(s).

g. Emergency Services IP Network (“ESInet”) means the managed IP network that is used for emergency services communications, and which can be shared by all public safety agencies. It provides the IP transport infrastructure upon which independent application platforms and core services can be deployed, including, but not restricted to, those necessary for providing NG9-1-1 services. ESInets may be constructed from a mix of dedicated and shared facilities. ESInets may be interconnected at local, regional, state, federal, national and international levels to form an IP-based inter-network (network of networks). The term ESInet designates the network, not the services that ride on the network.

h. “IETF” means Internet Engineering Task Force that leads setting of standards for Internet protocols.

i. “Ingress Demarcation Point” means either the (1) TDM POIs or (2) the BCFs that interfaces with the OSPs at the NG9-1-1 Call Aggregation Facilities.

j. Local Exchange Carrier (“LEC”) means a telecommunications carrier (TC) under the state/local Public Utilities Act that provides local exchange telecommunications services.

k. “IP” means Internet Protocol.

l. Legacy Network Gateway (“LNG”) means the NG9-1-1 network element that provides an interface between a non-IP originating network and a NGCS-enabled network.
m. Legacy Selective Router Gateway ("LSRG") provides an interface between a Selective Router and an ESInet, enabling calls to be routed and/or transferred between legacy and next generation 9-1-1 networks. LSRG is a tool for the transition process from legacy 9-1-1 to NG9-1-1.

n. Local Access Transport Area ("LATA") is the geographical areas within which a local telephone company offers telecommunications services.

o. Location Database ("LDB") means the NGCS functional element that contains the physical location of a wireline telephone number or a pANI that provides a query key to find the location of VoIP or wireless telephone numbers. The LDB is a transitional functional element required only until Originating Service Providers (OSPs) provide a full NG9-1-1 session.

p. Mean Opinion Score ("MOS") means a numerical measure of the overall quality of a 9-1-1 Call from 1 (i.e., bad) to 5 (i.e., excellent).

q. NG9-1-1 Location Interwork Function ("LIF") means the functional component of a LNG which is responsible for taking the appropriate information from the incoming signaling (i.e., calling number, ESQK, ESRK, etc.) associated with a 9-1-1 call and using it to acquire location information that can be used to route the 9-1-1 call and to provide location information of the subscriber placing the 9-1-1 call to the PSAP.

r. NG9-1-1 Interwork Function ("NIF") means the functional component of an LNG which provides NG9-1-1 specific processing of a 9-1-1 call not provided by an off-the-shelf protocol interwork gateway.

s. NG9-1-1 Protocol Interwork Function ("PIF") means the functional component of an LNG that interworks and converts Time-division multiplexing (TDM) signaling to Session Initiated Protocol (SIP) messaging in support of 9-1-1 call delivery.

t. "NG9-1-1 Call Aggregation Facilities” means the physical facilities that host the BCF(s) used by the Services to aggregate and deliver calls to the NGCS.

u. NG9-1-1 Core Services ("NGCS") means the base set of services needed to process a 9-1-1 Call on an ESInet. This includes the Emergency Services Routing Proxy (ESRP), Emergency Call Routing Function (ECRF), Location Validation Function (LVF), BCF, LDB, Bridge, Policy Store, and Logging Services, as well as typical IP functions such as Domain Name Service (DNS) and Dynamic Host Configuration Protocol (DHCP). The term NG9-1-1 Core Services includes the services but not the network on which they operate.

v. “NGCS Facilities” means the physical facilities that host the NGCS.

w. Originating Service Provider(s) ("OSP" or “OSPs”) means all telecommunications providers authorized or required by the state of Minnesota to interconnect to the Customer’s NG9-1-1 system for the delivery of 9-1-1 Calls.

x. Points of Interconnection ("POI") means a physical demarcation between an OSP network and a NG9-1-1 system. The POI is used by OSP to interface with and deliver calls to the NG9-1-1 system via TDM or SIP.

y. Pseudo ANI ("pANI") is a telephone number used to support routing of wireless or VoIP 9-1-1 calls. It may identify a wireless cell, cell sector or PSAP to which the call should be routed. Also known as: routing number.

z. Public Safety Answering Point ("PSAP") means a facility equipped and staffed to receive 9-1-1 Calls.

aa. Public Safety-Grade is the term used to describe the requirements associated with engineering the Service and its deployment. The following metrics consist the definition of Public Safety-Grade:

- Reliability: The Service must be designed to result in an overall Service Reliability of 0.99999 as recommended in NENA-INF-016.2-2018, Section 3.4.
Availability: The Service must be designed for sustainability to mitigate downtime and downtime must not exceed five (5) minutes per year, which equates to 99.999% Service Availability, as recommended in NENA-INF-016.2-2018, Section 3.4.

Capacity: The Service must be designed to result in a P.01 grade of service, at an individual OSP level and at an overall system level.

Security: Secure communications must be retained through the following measures where applicable, as recommended in NENA-INF-015.1-2016, Section 3.2:

- Rivest-Shamir-Adleman (RSA)-based public-key cryptography using X.509 certificates to authenticate elements, agencies and agents. Mutual authentication must exist between both ends of a communication.
- An eXtensible Access Control Markup Language (XACML)-based data rights management (DRM) system to control authorization
- Advanced Encryption Standard (AES)-based encryption to provide confidentiality
- Secure Hash Algorithms (SHA)-based, digest-based digital hashing to provide integrity protection
- Dsig-based digital signatures to provide non-repudiation

Network Traffic Restrictions: All data traversing the IP network connections between the NG9-1-1 Call Aggregation Facilities and the Egress Demarcation Points, and subsequent access to that data, is restricted to public safety use only, as required in NENA-STA-010.2-2016, Section 3.7. Commercial and non-public safety data and access is strictly prohibited from sharing bandwidth dedicated between the NG9-1-1 Call Aggregation Facilities and the Egress Demarcation Points.

bb. “Selective Router” means a telephone switching center that receives 9-1-1 calls from OSPs and uses the ANI or pANI to route them to the proper PSAP. Selective Routers are typically operated by the Incumbent LEC, serving a particular PSAP(s). An IP Selective Router is a Selective Router that supports an IP interconnection for either an OSP and/or PSAP.

cce. “Service Activation Date” means the earlier of the calendar date on which (1) Contractor has successfully completed customer approved testing of the Services or service elements, as more fully described in Section 3 below, and has placed them into a production ready state or (2) commencement of beneficial use of the Services or service elements as evidenced by live operational performance. Should Contractor be in a position to conduct system testing of the Services (as described in Section 3 below) and Customer, or Customer's designee, not be able to support system testing of the Services on or before the Target Service Availability Date, then Contractor will complete system testing of the Services to the best of Contractor's ability and submit a completed System Test Report (per Section 3 below) covering the testing that Contractor is able to complete. The acceptance date of this System Test Report will be deemed the Service Activation Date for the Services; provided however, that in no event will the acceptance date of this System Test Report be earlier than the Target Service Availability Date.

d. Session Initiation Protocol (“SIP”) means the protocol specified by the IETF (RFC3261) that defines a method for establishing multimedia sessions over the Internet. Used as the call signaling protocol in VoIP, NENA i2 and NENA i3.

eee. Signaling System #7 (“SS7”) means an out-of-band signaling system used to provide basic routing information and call management functions. Signaling is removed from the voice channel itself and put on a separate data network.

ff. “Target Service Availability Date” means the mutually agreed upon calendar date that is set during the initial phase of the implementation project which sets the planned Service Activation Date for the Services.

gg. “TDM” means Time-division multiplexing interconnectivity using Signaling System 7 (SS7)

hh. “TDM Egress Demarcation Point” means the DS-3 to DS-1 multiplexer located at the facility hosting the Selective Router.
ii. “VoIP Call” means a Voice over Internet Protocol 9-1-1 Call with a potentially foreign NPA/NXX. Use of a foreign NPA/NXX currently precludes the PSAP from retrieving ALI without use of a pANI, except in instances where external databases can be queried.

jj. “Wireless Call” means a 9-1-1 Call made from a wireless device with a potentially foreign NPA/NXX. Use of a foreign NPA/NXX currently precludes the PSAP from retrieving ALI without use of a pANI, except in instances where external databases can be queried.

2. Services Overview. Contractor will provide Services to Customer for the purposes of aggregating 9-1-1 Calls from OSPs. Contractor will provide the ability for all applicable OSPs to order and establish trunks to Services. Contractor will aggregate 9-1-1 Calls delivered by OSPs, perform PIF where applicable, and deliver 9-1-1 Calls to the Egress Demarcation Points. Services includes the following:

• Receive 9-1-1 Calls from OSPs serving subscribers in the State of Minnesota that directly connect to Services at two (2) or more POIs
• Perform PIF for 9-1-1 Calls presented to Services by OSPs using TDM interfaces, as required, to IP utilizing SIP signaling and real time protocol (RTP) media in accordance with NENA and IETF standards and guidelines.
• Deliver 9-1-1 Calls to the Egress Demarcation Points and present signaling and media to the Egress Demarcation Points utilizing IP technologies in accordance with NENA and IETF standards and guidelines.
• As required and on a transitional basis, deliver 9-1-1 Calls to the TDM Egress Demarcation Points and present signaling and media to the TDM Egress Demarcation Points utilizing TDM SS7 technologies in accordance with NENA standards and guidelines.
• Installation, modification and/or augmentation of OSP interconnections to Services as required, including capacity augmentation and protocol changes from TDM to SIP
• Management of OSPs as related to the Services, including overall project management of the OSP migration to the Services, outreach, test and turn-up, and ongoing management.
• Services will encompass all processes and procedures required to ensure the continued operation and reporting of the current state of the Services, as well as notification of events (i.e., maintenance or operationally impacting event).

3. Services Detail.

• Contractor shall design, engineer, furnish, provision, test, and maintain the replacement of Customer’s current 9-1-1 call aggregation solution currently in use with the end-state notional design depicted in Figure 1.
  o Contractor shall utilize a minimum of two (2) NG9-1-1 Call Aggregation Facilities.
  o Contractor shall provide two (2) TDM SS7 POI’s in each of the following LATAs: 620, 624, 626, 628 and 636.
  o Contractor shall provide a minimum of two (2) SIP POI’s located at the NG9-1-1 Call Aggregation Facilities.
  o Contractor shall provide redundant and geographically diverse POI’s, such that loss of any POI location will not result in complete loss of connectivity to the Contractor’s service.
  o Contractor shall provide connectivity between the TDM POIs and NG9-1-1 Call Aggregation Facilities such that each TDM POI location in a given LATA is connected to two different NG9-1-1 Call Aggregation Facility.
  o Contractor shall establish IP connectivity from each NG9-1-1 Call Aggregation Facility to the two mutually agreed upon (2) NGCS Facilities. Each NGCS Facility will have IP connections established to two (2) or more NG9-1-1 Call Aggregation Facilities, for a minimum of four (4) IP connections in total.
  o Contractor shall engineer and manage the system to a Public Safety-Grade of service.
  o NG9-1-1 Call Aggregation Facilities will be physically secured, including logging and monitoring of any visitors.
  o Contractor shall work with Customer to establish mutually agreed upon alternate routing to be used when the NGCS is unable to accept 9-1-1 Calls.
Contractor shall provide a service that is highly available, such that a loss of any single interface, component, or facility provided by Contractor will not result in complete loss of connectivity of the Service.

- Contractor shall provide at least two (2) diverse signaling and media paths to an OSP. Contractor shall ensure that each provided path, between the Services Demarcation Points, will not be dependent on a single network or system point of failure.
- For the avoidance of doubt, Contractor is responsible for ensuring network and system diversity between the Ingress Demarcation Points and the Egress Demarcation Points. Contractor is not responsible for the diversity of any network or systems that fall outside of the Services Demarcation Points. However, Contractor will be responsible for (a) ensuring OSP connectivity to the Services is to diverse Ingress Demarcation Points and (b) informing OSPs of their diversity obligations.

Contractor shall provide IP transport, termination and delivery of 9-1-1 Calls to the Egress Demarcation Points, in accordance with the applicable components of the following regulations and standards:

- U.S Code of Federal Regulations, Title 47 – Chapter I – Subchapter A – Part 12 Resiliency, and Redundancy and Reliability of Communications, and any other applicable regulations of the United States Federal Communications Commission (“FCC”) related to the provision or reliability of 9-1-1, E9-1-1, or NG9-1-1 services.
- NENA STA-010 and all current and applicable NENA standards for NG9-1-1.

Contractor shall manage interconnections, administration, and relationships with OSPs.

- Contractor shall provide and manage a project schedule baseline for establishing interconnectivity with the OSPs.
o Contractor shall participate in industry meetings that include Customer, OSPs, PSAPs, and local authorities as required by Customer.

o Contractor shall support interconnection of any current and all new OSPs that provide 9-1-1 service to their end users in Minnesota, at any point in the future for the duration of the SOW.

o Contractor shall interact with OSPs as required to migrate their 9-1-1 Calls to the Services.

o Contractor shall create and maintain an Interconnection Guide, including an Interface Control Document (“ICD”) that describes and governs OSP interconnection to the Services.

o Contractor shall provide recommended concurrent connections, signaling and media bandwidth required to support 9-1-1 Call ingress from OSPs.

o Contractor shall document a Test Plan and Test Procedures that will be used to fully test and validate each OSP’s interconnection to the Services during the OSP implementation phase of the project. Contractor shall provide Test Plan and Test Procedures to Customer in order to obtain mutual agreement. Contractor shall provide the Test Plan and Test Procedures to Customer and Customer will provide written acceptance, or rejection with sufficient detail for Contractor to determine the reason for rejection, within 5 business days of receipt of Contractor Test Plan and Test Procedures from Contractor. If neither acceptance nor rejection is received within 5 business days of Contractor submitting the Test Plan and Test Procedures to Customer, the Test Plan and Test Procedures will be deemed accepted.

o Contractor shall test each OSP’s integration into the Services in compliance with Test Plan and Test Procedures and shall document a Test Report for each OSP which includes all test results.

o Contractor shall execute mutually agreed upon interconnection agreements (“ICAs”) (approved by the Customer as set forth below) with all OSPs in Minnesota to deliver/transport 9-1-1 Calls. The ICAs will govern OSP interconnection to the Services. If Contractor has exhausted commercially best efforts to execute an ICA, and is unable to reach agreement with an OSP, Contractor will seek Customer’s assistance with resolution. No OSP will be allowed to connect to the Services without an ICA.

  - Contractor will include any Minnesota specific 9-1-1 standards or requirements as part of the ICA with each OSP.
  - Contractor shall provide the ICA to Customer and Customer will provide written acceptance, or rejection with sufficient detail for Contractor to determine the reason for rejection, within 10 business days of receipt of ICA from Contractor. If neither acceptance nor rejection is received within 10 business days of Contractor submitting the ICA to Customer, the ICA will be deemed accepted.

o Contractor shall receive 9-1-1 Calls delivered by each OSP directly interconnected with Services at a minimum of two (2) or more POI’s, shall perform PIF as required, and shall present signaling and media to all Egress Demarcation Points. For the avoidance of doubt, Contractor’s Service will be configured to use all available signaling and media paths to the Egress Demarcation Points, but a given call will be presented to a single available Egress Demarcation Point based on routing logic mutually agreed to between Contractor and Customer or Customer’s designee.

o Contractor shall manage the modification and/or augmentation, as required, of OSP interconnections or protocols to the Services.

o It is the OSP’s responsibility to interconnect to Contractor’s POIs. This means that the OSP is responsible for activities and costs required to interconnect their network to Contractor’s POIs. This includes, but is not limited to, activities and costs required to design, procure, and implement TDM or IP network facilities from the OSP’s network to the Contractor’s POIs. Contractor is responsible for all equipment, activities and costs of their POIs. This includes, but is not limited to, all activities and costs required to design, procure, and implement TDM or IP network facilities at the Contractor’s POI’s.

o Contractor shall provide a web portal and phone service for OSPs to report service issues.
• Contractor shall provide the Customer an escalation procedure for any service issues no later than 30 days before first OSP implementation.
• Contractor and Customer shall collaborate to create a mutually agreed upon written plan (“Operations Plan”) no later than 30 days before first OSP implementation. The Operations Plan will include a standard operating procedure for reporting of incidents and mutually agreed upon operational procedures for service communication.
• Contractor shall provide Customer a process to initiate service feature modification and enhancements no later than 30 days before first OSP implementation.
• Contractor shall provide Customer standard forms for change management no later than 30 days before first OSP implementation.
• Contractor shall provide to Customer all relevant data and information within Demarcation Points to support Customer’s regulatory reporting activity.
• Contractor shall provide Customer a single point of contact for on-going program management. A separate 24x7x365 contact will be provided for maintenance and troubleshooting support, to Customer, the interconnected OSPs and any other entity authorized by the Customer.
• Contractor shall comply with all relevant FCC notification requirements, including Code of Federal Regulations, Title 47 – Chapter I – Subchapter A – Part 4 Disruptions to Communications.
• Contractor will provide as-built diagrams in both soft copy and hard copy as reasonably requested by Customer.
• Contractor shall manage and support testing of Services with Customer or Customer’s designee as needed to conduct system testing of the Services, based on test procedures mutually agreed upon between Contractor and Customer. Upon completion of the mutually agreed upon test procedures, Contractor shall provide the completed System Test Report confirming completion of test procedures for Customer’s acceptance. Within 5 business days of receipt of Contractor System Test Report from Contractor, Customer will provide written acceptance, or rejection with sufficient detail for Contractor to determine the reason for rejection, of Contractor System Test Report. If neither acceptance nor rejection is received within 5 business days of Contractor submitting the System Test Report to Customer, the System Test Report will be deemed accepted.
• Contractor will provide a detailed design document covering the overall architecture of the Services (“Detailed Design Document”), as well as any additional relevant information as mutually agreed between the parties. Contractor shall provide the Detailed Design Document to Customer for Customer’s acceptance. Within 5 business days of receipt of the Detailed Design Document from Contractor, Customer will provide written acceptance, or rejection with sufficient detail for Contractor to determine the reason for rejection, of the Detailed Design Document. If neither acceptance nor rejection is received within 5 business days of Contractor submitting the Detailed Design Document, the Detailed Design Document will be deemed accepted.

If Customer provides a rejection notice in connection with any document or procedure requiring Customer’s acceptance as set out above, Contractor will promptly make the revisions it believes are appropriate, and the acceptance process will again be followed, until the document or procedure is accepted.

• Contractor will deploy a pair of routers at each Customer designated facility to serve as the Egress Demarcation Point for Services. Contractor will supply the routers. Customer, or Customer’s supplier, will provide all required space, power (DC power with backup battery), HVAC, UPS backup, security, and remote hands support required to install Contractor’s equipment and for ongoing operation of that equipment. If required, on an interim basis, Contractor will be responsible for any on-site activities required to install and for ongoing operation of Contractor’s equipment in the event Services are implemented prior to Customer’s NGCS being installed. In the event Contractor is responsible for any on-site activities, Customer or Customer’s designee will continue to be responsible, at no cost to Contractor, for arranging and providing all required space, power,
HVAC, UPS backup, and security at Customer designated facilities, and for providing 24x7x365 access to Contractor designated personnel to access Contractor equipment at Customer facilities.

- Customer and/or Customer’s current supplier will take commercially reasonable efforts to support Contractor during the OSP implementation and migration. This includes, but is not limited to, the following:
  - Customer will provide Contractor with a Letter of Authorization ("LOA"), within fifteen (15) business days of contract initiation, giving Contractor authority to work with OSPs and current Selective Router Contractors on behalf of Customer.
  - Customer will provide Contractor with a list of currently implemented OSPs, including NENA company identifier (CIDs) in currently provisioned ALI records and contact names, titles, and phone and email information, within thirty (30) business days after the Effective Date.
  - Customer will provide Contractor with reports that provide current OSP provisioned capacity, historical traffic utilization and call volume as available for each OSP, within thirty (30) business days of Effective Date.
  - Customer will ensure that all network and systems that are required for the successful delivery of 9-1-1 Calls are maintained until such time as all OSPs have been successfully migrated over to the Services and a mutually agreed upon transition period has completed.

- Customer or Customer’s supplier(s) will participate in a mutually agreed upon test and turn-up process with Contractor for the initial deployment, as well as for any changes that may require a change to the Services (i.e., deployment of a new NGCS).

- Customer shall be responsible to provide all direct support and communications to the PSAPs and any Customer stakeholders. Contractor will support Customer regarding inquiries relating to Services, as and when required by Customer, on a remote basis unless otherwise mutually agreed.

- Customer, at its expense, will bear sole responsibility for all aspects of design, operation, and maintenance of Customer’s network and equipment.

- Contractor does not warrant and will not be liable for service elements that fall outside of the scope of the Services (e.g., an outage between the Customer NGCS and the PSAP).

- Customer or Customer’s designee will notify Contractor of NGCS events outside of Contractor’s services which could impact the handoff and delivery of 9-1-1 Calls, in accordance with the definitions and timelines as outlined in Operations Plan.

- Customer or Customer’s designee will notify Contractor of NGCS Maintenance events at least 72 hours in advance for events that may affect the Service.

- All OSP’s requiring connectivity to the Minnesota NG9-1-1 system must establish their interconnections with Contractor at Contractor managed POIs. Customer will not allow or support OSPs connecting to any point of interconnection not defined by or managed by Contractor.

- Contractor shall provide OSPs the ability to interconnect at the POIs defined in this SOW, however, Contractor is allowed to negotiate and interconnect with OSPs at other mutually agreed upon, between Contractor and OSP, POIs at Contractor’s sole discretion, subject to the reasonable approval of the Customer.

**Minimum Service Term.** In order to exercise a renewal option to extend the Minimum Service Term for an additional year, Customer must send written notice to Contractor at least 180 days prior to the end of the then-current Minimum Service Term. At the end of the Minimum Service Term (including any one-year extensions), this SOW will terminate.

If Customer fails to comply with the Minimum Service Term, in addition to paying any amounts incurred prior to the date of termination, Customer will pay to Contractor an amount equal to (a) the average aggregate monthly recurring and usage charges under this SOW multiplied by the number of months remaining in the Minimum Service Term, plus (b) all third party charges if any, for which Contractor is or becomes contractually liable in connection with such failure. Customer agrees that these charges are reasonable.
Support: The Service is monitored and managed by Contractor’s Network Operations Center (NOC). The Contractor NOC is staffed and operational 24 hours per day, 365 days per year, with fully integrated monitoring and management tools. Customer or Customer’s designee will be provided the option of reporting issues with the Service to the Contractor NOC using either phone, email or web portal. Contractor will cooperate with Customer’s existing third-party contract holders who currently provide monitoring from ingress to call delivery at the PSAP. When reporting an issue to the Contractor NOC, Customer agrees to provide Contractor with the following information:

- All relevant information regarding the issue in Customer’s possession that will facilitate triage and resolution of the issue,
- Date and time the issue was initially identified by Customer,
- Impact the issue is having on the Customer and end-users, and
- Contact information and access to the relevant Customer technical contacts who can facilitate triage and resolution of the issue

1.1 Support for the Service will be provided by Contractor to Customer and to any OSP directly connected to the Service. Contractor is not responsible for primary support or direct end-user support for any issues relating to Customer provided equipment, including but not limited to Customer NGCS and any applications or equipment provided by Customer or Customer’s designee to any PSAP. Customer is responsible for providing a support function to interact with and support their end-users and stakeholders and is responsible for all communications to and from their end-users and stakeholders when the issue pertains to Customer-provided applications and equipment.

2. Incident Handling and Response Times. Contractor shall maintain, monitor, and report operational maintenance events, service impacts, material call volume degradations, incidents, or any reported trouble notifications related to the Service to the Customer. While Contractor is responsible for issues and events that occur within the Ingress Demarcation Points and Egress Demarcation Points of the Service, should Contractor become aware of a chronic issue or material degradation that is likely occurring within an OSP’s network, Contractor will use commercially reasonable efforts to inform the OSP of the issue or degradation so that the OSP can take corrective actions to resolve the chronic issue or material degradation.

- Contractor scheduled maintenance events shall be reported by Contractor to Customer at least 72 hours in advance of the event start time. OSP scheduled maintenance events involving systems supporting 9-1-1 Calls in Minnesota that Contractor is notified of will be reported by Contractor to Customer within 72 hours of Contractor becoming aware of the OSP scheduled maintenance event.
- Contractor shall report system impacting or OSP reported impacting events to Customer in accordance with Table 3 below. Initial notification intervals defined in Table 3 below start from the time that Contractor becomes aware that an outage or service degradation has occurred, either through an alarm or opening of a trouble ticket.
- Contractor shall provide a web portal for ticket initiation and status for all Contractor and OSP reported issues.
- Contractor shall be the interface for incident resolution between the Customer and the OSPs.
- Contractor will designate a media contact to be available 24x7 to address inquiries, as requested by Customer, in support of Customer in the event of any Service interruption.
<table>
<thead>
<tr>
<th>Event Type</th>
<th>Event Description</th>
<th>Notification Requirement</th>
</tr>
</thead>
</table>
| Catastrophic | Complete loss of functionality in the Contractor’s Service that results in failed calls and originates entirely within the Demarcation Points of the Services.                                                                 | • Initial notification occurs within 15 minutes of event.  
• Subsequent update occurs 30 minutes after the initial notification and hourly thereafter.  
• Phone, email, and/or other system generated notifications utilized.                                                                                                         |
| Major      | A major degradation of functionality in the Contractor Service which originates entirely within the Demarcation Points of the Services as defined by one of the following:  
  a) one (1) or more POIs are out of service;  
  b) one (1) or more NG9-1-1 Call Aggregation Facilities containing the LNG and BCF are out of service;  
  c) one (1) or more circuits between the POIs and the NG9-1-1 Call Aggregation Facilities are out of service;  
  d) one (1) or more circuits between the NG9-1-1 Call Aggregation Facilities and the Egress Demarcation Points are out of service; or  
  e) failure of equipment or network within the Demarcation Points of the Services that causes a greater than 50% loss of the total circuit capacity from any single OSP. | • Initial notification occurs within 15 minutes of event.  
• Subsequent update occurs 30 minutes after the initial notification and hourly thereafter.  
• Phone, email, and/or other system generated notifications utilized.                                                                                                         |
| High       | A detectable degradation of functionality in the Services which impacts a major component or network element as defined in High Event sub-bullets below, affects (1) multiple OSPs or (2) all calls originating from a single OSP, and originates entirely within the Demarcation Points of the Services;  
  a) one (1) or more POIs are degraded;  
  b) one (1) or more NG9-1-1 Call Aggregation Facilities are degraded;  
  c) one (1) or more circuits between the POIs and the NG9-1-1 Call Aggregation Facilities are degraded; or  
  d) one (1) or more circuits between the NG9-1-1 Call Aggregation Facilities and the Egress Demarcation Points are degraded. | • Initial notification occurs within 30 minutes of event.  
• Subsequent update occurs 30 minutes after the initial notification and hourly thereafter.  
• Phone, email, and/or other system generated notifications utilized.                                                                                                         |
## Event Type

<table>
<thead>
<tr>
<th>Event Type</th>
<th>Event Description</th>
<th>Notification Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard</td>
<td>A detectable degradation not causing a loss of functionality or creating a situation where the system is unable to process anticipated peak call volume. Any trouble that is not defined as Catastrophic, Major, or High.</td>
<td>• Initial notification occurs within 24 hours of event.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Phone, email, and/or other system generated notifications utilized.</td>
</tr>
<tr>
<td>Scheduled Maintenance</td>
<td>Any planned event where a circuit or component is being replaced, worked on, or tested to address an issue not causing a loss of functionality.</td>
<td>• Initial notification at least 72 hours before the maintenance event.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Notification at start and end of a maintenance event.</td>
</tr>
</tbody>
</table>

### 2.1 Root-Cause Analysis

Contractor shall provide to Customer a preliminary root-cause analysis report for all Catastrophic, Major and Federal Communications Commission (“FCC”) reportable service events/issues no later than 5 calendar days after the event has completed and a detailed root-cause analysis no later than 10 calendar days after the event. The report shall include: incident date/time, incident duration, impact by OSP circuit counts (if applicable), 9-1-1 Call counts failed to deliver to Customer (if applicable), calling party number (CPN), final incident description, final root cause analysis, and final solutions for prevention of root cause.

### 2.2 Additional Support Fees

During the course of event identification and resolution, if the fault is outside of Contractor’s direction and/or control and the Customer’s equipment or actions cause Contractor to incur third party costs, Contractor will provide written notice of the incurred costs, and Customer will review for approval of reimbursement. Customer will reimburse the reasonable third-party costs actually incurred.

### 3. Scheduled Maintenance

All maintenance activity must have a detailed Method of Procedure (MOP) with back out procedures. Contractor will provide a high-level outline of the MOP to Customer for any joint maintenance requiring coordination with Customer a minimum of 72 hours prior to planned maintenance activity. All Customer affecting activity is communicated to Customer with a minimum 72 hours advance notice. Scheduled Maintenance will be performed in a manner that maintains the Services ability to process 9-1-1 Calls, however, redundancy of the Services may be impaired during the Scheduled Maintenance window. Scheduled maintenance that may potentially impact the Services will occur in a window during which reduced levels of 9-1-1 Call volume are typically experienced. Contractor will use commercially reasonable efforts to perform Scheduled Maintenance during the following maintenance windows:

- For Contractor initiated Scheduled Maintenance on Service elements that either (a) are dedicated to the Service or (b) interface directly with Customer, or Customer’s designee, network and/or equipment, Scheduled Maintenance will occur during a window of Tuesday through Thursday, 3am to 6am local time.
- For Contractor initiated Scheduled Maintenance on all other Service elements, Scheduled Maintenance will occur during a window of Monday through Thursday, 12am to 6am local time.
- For all third party initiated Scheduled Maintenance (i.e., transport Contractors), Scheduled Maintenance windows provided by the third party will be passed to Customer and typically occur Monday through Thursday, 12am to 6am local time.
• Should Contractor believe that it will be unable to complete a Scheduled Maintenance during the applicable window, then Contractor will notify Customer and Contractor and Customer will mutually agree on an extension of the applicable window.

4. **Service Level Agreement**: Contractor shall use commercially reasonable efforts to maintain the following network performance, system capacities, and performance metrics and service level agreements (“SLA”) defined in Table 4:

Support Table 2

<table>
<thead>
<tr>
<th>SLA</th>
<th>Objective</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Component Network Latency</td>
<td>Achieve a maximum latency of 30ms or less</td>
<td>Measured from (a) the Contractor BCF to the Egress Demarcation Point and (b) between the NG9-1-1 Aggregation Facilities.</td>
</tr>
<tr>
<td>Mean Opinion Score (MOS)</td>
<td>Achieve a MOS of 4.0 or higher</td>
<td>Measured monthly by averaging the MOS score of all calls during the month.</td>
</tr>
<tr>
<td>Packet Loss</td>
<td>Achieve a maximum packet loss of 1% or less</td>
<td>Measured from the SIP POI to the Egress Demarcation Point.</td>
</tr>
<tr>
<td>Network Latency</td>
<td>Achieve a maximum end to end latency of 60ms or less</td>
<td>Measured from the SIP POI to the Egress Demarcation Point.</td>
</tr>
<tr>
<td>Jitter</td>
<td>Achieve a maximum end to end Jitter of 20ms or less</td>
<td>Measured from the SIP POI to the Egress Demarcation Point.</td>
</tr>
<tr>
<td>Network Convergence Time</td>
<td>Achieve a maximum of 54ms or less</td>
<td>Measured from the BCF to the Egress Demarcation Point.</td>
</tr>
<tr>
<td>Mean Time to Repair (MTTR) by Event Type classification:</td>
<td>Achieve the following MTTR by Event Type classification:</td>
<td>Time to restore/report starts from the time that Contractor becomes aware that an outage or service degradation has occurred, either through an alarm or opening of a trouble ticket, and ends at the time the Service is restored such that the Service is functioning and meets applicable service levels. Time to restore/repair is measured and recorded on a per trouble ticket basis. MTTR will be averaged over all incidents within an applicable Event Type classification (per Table 3) during the reporting month.</td>
</tr>
<tr>
<td></td>
<td>- Catastrophic: 2 hours</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Major: 4 hours</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- High: 24 hours</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Standard: 24 hours</td>
<td></td>
</tr>
<tr>
<td>Mean Time Between Failures (MTBF)</td>
<td>Achieve a minimum Network Availability of 99.9999%</td>
<td>MTBF will be calculated monthly based on (1) the total time elapsed and (2) the number of Catastrophic events, as defined in Table 3, that have occurred since the Service Activation Date. Calculation: (Total time elapsed from Service Activation Date) / (Total count of Catastrophic Events)</td>
</tr>
</tbody>
</table>
4.1 **Service Credit**: If Contractor does not meet the Network Availability and/or MOS SLAs in a calendar month, Customer shall be entitled to a Service Credit per the schedule below in Table 5. The Service Credit will be applied to the total monthly recurring Service fees incurred during the calendar month in which the Service outage(s) or impairment(s) occurred. Service Credits will be paid by Contractor to Customer through ACH payment. The parties agree that the Service Credits are the exclusive financial remedy for failures to meet the SLA.

<table>
<thead>
<tr>
<th>Network Availability SLA</th>
<th>MOS SLA</th>
<th>Service Credit in the First Month</th>
<th>Service Credit in the Second and Third Consecutive Months</th>
<th>Service Credit in the Fourth Consecutive Month</th>
</tr>
</thead>
<tbody>
<tr>
<td>100 – 99.999%</td>
<td>4.0 and higher</td>
<td>No Credit</td>
<td>No Credit</td>
<td>No Credit</td>
</tr>
<tr>
<td>99.998% and lower</td>
<td>3.9 and lower</td>
<td>10% of that month’s MRC</td>
<td>20% of that month’s MRC</td>
<td>50% of that month’s MRC</td>
</tr>
</tbody>
</table>

**Executive Dashboard**

1. **Overview**: Contractor will provide Customer and Customer authorized third-party entities with access to an Executive Dashboard through a web portal. The Executive Dashboard will provide Customer with access to reports, network performance information, billing information, and access to the trouble ticketing system.

2. **Details**: The Executive Dashboard will provide the following:
   - Reports on Services as detailed in Table 6 below. Contractor and Customer will collaborate in good faith during the implementation project to determine if mutually agreed upon enhancements to the reports listed in Table 6 below are required (i.e., adding an additional data element(s) to an existing report). If a mutually agreed upon enhancement is required, Contractor will investigate and provide Customer with a projected timeframe for delivery of the enhancement.
- A visual display of Services related network performance and status that is displayed geographically with service impact levels color-coded.
- Customer billing information, including copies of invoices and additional supporting details.
- Access to Contractor’s trouble ticketing system that Customer or Customer designee can use to report incidents, update incidents, and to view all incidents recorded against the Services provided under the SOW, including working notes by the Contractor’s technicians and engineers.
- Administrative functions within the Executive Dashboard, including the assignment and management of users and user permissions.

### Support Table 4

<table>
<thead>
<tr>
<th>Title</th>
<th>Description</th>
<th>Delivery</th>
</tr>
</thead>
<tbody>
<tr>
<td>9-1-1 CDR Search</td>
<td>Ability to search and export Call Detail Records (“CDR”). Ad hoc search capabilities based on date/time range, source/calling telephone number, OSP, ingress trunk group name, egress trunk group name, and call disconnect code. Results return a full detailed CDR that includes call date/time, source/calling telephone number, OSP, ingress trunk group name, egress trunk group name, call disconnect code, and other additional fields.</td>
<td>On demand</td>
</tr>
<tr>
<td>9-1-1 Hourly Summary</td>
<td>A summary report of call counts by OSP, per hour per week</td>
<td>Weekly</td>
</tr>
<tr>
<td>Trunk Group Usage and Details</td>
<td>A detailed report of trunk utilization by OSP and egress trunk groups</td>
<td>On demand</td>
</tr>
<tr>
<td>Trunk Group OM</td>
<td>Monthly report of trunk utilization, busy hour, and trunk outage and maintenance events.</td>
<td>Monthly</td>
</tr>
<tr>
<td>9-1-1 Component Report</td>
<td>A detailed report of component and port utilization</td>
<td>On demand</td>
</tr>
<tr>
<td>9-1-1 Trending</td>
<td>A summary report showing trending of call count by OSP, month over month</td>
<td>Monthly</td>
</tr>
<tr>
<td>OSP Connections</td>
<td>A summary report showing the number of IP and TDM interconnections provisioned on a per OSP basis</td>
<td>Monthly</td>
</tr>
</tbody>
</table>

3. **Training**: Contractor will provide training on the Executive Dashboard and any other Customer-accessible interfaces to the Service as described in Table 7 below.

### Support Table 5

<table>
<thead>
<tr>
<th>Topic</th>
<th>Attendees</th>
<th>Delivery vehicle</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Executive Dashboard User</td>
<td>All users of the Executive Dashboard – Limited to 100</td>
<td>Web Conference</td>
<td>2 sessions, each up to 3 hours in duration</td>
</tr>
<tr>
<td>Executive Dashboard User</td>
<td>All users of the Executive Dashboard – Limited to 25</td>
<td>Onsite</td>
<td>1 session, up to 3 hours in duration</td>
</tr>
<tr>
<td>Executive Dashboard Administrator</td>
<td>All Executive Dashboard Administrators – Limited to 20</td>
<td>Web Conference</td>
<td>1 session, up to 2 hours in duration</td>
</tr>
<tr>
<td>Role</td>
<td>Description</td>
<td>Method</td>
<td>Duration</td>
</tr>
<tr>
<td>------------------------------</td>
<td>-----------------------------------------------</td>
<td>----------------</td>
<td>---------------------------------</td>
</tr>
<tr>
<td>Executive Dashboard Administrator</td>
<td>All Executive Dashboard Administrators – Limited to 20</td>
<td>Onsite</td>
<td>1 session, up to 2 hours in duration</td>
</tr>
<tr>
<td>3rd Party NSOC</td>
<td>3rd Party NSOC staff – Limited to 10</td>
<td>Web Conference</td>
<td>1 session, up to 1 hour in duration</td>
</tr>
<tr>
<td>NGCS Data Center Smart Hands</td>
<td>Data Center technical Staff – Limited to 10</td>
<td>Web Conference</td>
<td>1 session, up to 1 hour in duration</td>
</tr>
</tbody>
</table>
Exhibit D: Pricing

1 Contract Pricing.

1.1 In General. Prices listed take into consideration all inherent costs of providing the requested goods and services. The Contractor agrees to pay any and all fees, including, but not limited to: duties, custom fees, permits, brokerage fees, licenses and registrations, government taxes, overhead, profit, parking permits, proper disposal of materials, insurance payments. The State will not pay any additional charges beyond the price(s) listed, unless otherwise provided for by law or expressly allowed by the Contract. Prices listed within Exhibit D are maximum prices. These maximum prices shall remain firm for the initial term of the Contract. The Price List may not include any additional terms or conditions. A unit price and a total for the quantity must be stated for each item quoted. Prices must be quoted in United States currency. Any increase to Contract pricing requires a duly executed amendment to this Contract. Contractor may provide lower pricing at its discretion without requiring a duly executed amendment to the Contract.

2 Price Schedule(s).

The following price schedule(s) are hereby attached and incorporated into this Exhibit D as follows:

In exchange for the Services, Customer will pay the non-recurring (“NRC”) and monthly recurring (“MRC”) charges set forth in this Exhibit A. The population for the State of Minnesota that will be used to calculate the total MRC charges will be 5,577,487.

<table>
<thead>
<tr>
<th>Year</th>
<th>NRC</th>
<th>MRC</th>
<th>Annual Total (before milestones)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>$1,525,000.00</td>
<td>$301,184.30</td>
<td>$1,826,184.39</td>
</tr>
<tr>
<td>2</td>
<td>$50,000.00</td>
<td>$1,305,131.96</td>
<td>$1,355,131.96</td>
</tr>
<tr>
<td>3</td>
<td>$150,000.00</td>
<td>$970,482.74</td>
<td>$1,120,482.74</td>
</tr>
<tr>
<td>4</td>
<td>$50,000.00</td>
<td>$1,037,412.58</td>
<td>$1,087,412.58</td>
</tr>
<tr>
<td>5</td>
<td>0</td>
<td>$1,037,412.58</td>
<td>$1,037,412.58</td>
</tr>
</tbody>
</table>

NRC charges are billable based on the following:
- NG9-1-1 Aggregation Services: billable as of successful completion of the Milestones listed in Pricing Table 1 below. Target Completion Date for Milestones is subject to change based on written mutual agreement between the Customer and Contractor designated representatives.
- All other NRCs listed in Pricing Table 3 below: billable on the Service Activation Date of each element.

Pricing Table 1

<table>
<thead>
<tr>
<th>Milestone</th>
<th>% NRC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mobilization</td>
<td>10%</td>
</tr>
<tr>
<td>Customer Approved (per Section 3 above) Detailed Design Document Completed</td>
<td>20%</td>
</tr>
<tr>
<td>Ordering of Equipment</td>
<td>20%</td>
</tr>
<tr>
<td>Customer Approved (per Section 3 above) System Testing Completed</td>
<td>25%</td>
</tr>
<tr>
<td>Customer Approved (per Section 3 above) OSP Migration Completed</td>
<td>25%</td>
</tr>
</tbody>
</table>

MRC charges are applied on a statewide population basis and are billable based on the following:
• NG9-1-1 Aggregation Services: billable as of successful completion of the Milestones listed in Pricing Table 2 below. For the purposes of calculating 9-1-1 Call volume where migration activities have completed in Pricing Table 2 below, Contractor will use projected volumes obtained from the OSPs or otherwise mutually agreed upon with Customer. 9-1-1 Call volume will be deemed to have completed migration as of the date that connectivity to the OSPs has been tested and accepted per Section 3 above.
• All other MRCs listed in Pricing Table 3 below: billable on the Service Activation Date of each element.

### Pricing Table 2

<table>
<thead>
<tr>
<th>Milestone</th>
<th>% MRC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service Activation Date of the Services</td>
<td>80%</td>
</tr>
<tr>
<td>Customer Approved (per Section 3 above) OSP Migration Completed for 10% or more of projected 9-1-1 Calls</td>
<td>82%</td>
</tr>
<tr>
<td>Customer Approved (per Section 3 above) OSP Migration Completed for 20% or more of projected 9-1-1 Calls</td>
<td>84%</td>
</tr>
<tr>
<td>Customer Approved (per Section 3 above) OSP Migration Completed for 30% or more of projected 9-1-1 Calls</td>
<td>86%</td>
</tr>
<tr>
<td>Customer Approved (per Section 3 above) OSP Migration Completed for 40% or more of projected 9-1-1 Calls</td>
<td>88%</td>
</tr>
<tr>
<td>Customer Approved (per Section 3 above) OSP Migration Completed for 50% or more of projected 9-1-1 Calls</td>
<td>90%</td>
</tr>
<tr>
<td>Customer Approved (per Section 3 above) OSP Migration Completed for 60% or more of projected 9-1-1 Calls</td>
<td>92%</td>
</tr>
<tr>
<td>Customer Approved (per Section 3 above) OSP Migration Completed for 70% or more of projected 9-1-1 Calls</td>
<td>94%</td>
</tr>
<tr>
<td>Customer Approved (per Section 3 above) OSP Migration Completed for 80% or more of projected 9-1-1 Calls</td>
<td>96%</td>
</tr>
<tr>
<td>Customer Approved (per Section 3 above) OSP Migration Completed for 100% of projected 9-1-1 Calls</td>
<td>100%</td>
</tr>
</tbody>
</table>

2. **Pricing Table.** Pricing for individual service components are listed in Pricing Table 3 below:

### Pricing Table 3

<table>
<thead>
<tr>
<th>Service Component</th>
<th>Minimum Quantity</th>
<th>Pricing Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>NG9-1-1 Aggregation Services</td>
<td>1</td>
<td>None.</td>
</tr>
<tr>
<td>Connectivity to IP Selective Routers</td>
<td>1</td>
<td>Pricing assumes the operator of the IP Selective Router will not charge Contractor for connection and/or assess other fees on Contractor. Should the operator of the IP Selective Router assess fees on Contractor for enabling connectivity, Contractor will pass those fees along to Customer at no mark-up. Includes a total of two (2) IP connections to two (2) IP Selective Routers, one (1) connection to each IP Selective Router. IP connectivity bandwidth not to exceed 100Mbps per connection. Customer may order additional quantities at their discretion.</td>
</tr>
<tr>
<td>Connectivity to Selective Routers</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>-----------------------------------</td>
<td>---</td>
<td></td>
</tr>
<tr>
<td>Pricing assumes the operator of the Selective Router will not charge Contractor for connection and/or assess other fees on Contractor. Should the operator of the Selective Router assess fees on Contractor for enabling connectivity, Contractor will pass those fees along to Customer at no mark-up.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Includes a total of two (2) TDM connections to each Selective Router. TDM connectivity bandwidth not to exceed a DS3 per connection. Customer may order additional quantities at their discretion.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Once installed, MRC charges will apply for a minimum of twelve (12) months from the Service Activation Date for this service element. After twelve (12) months have elapsed, the MRC will continue being billed until the earlier of (1) the calendar date on which the connectivity is disconnected by Contractor or (2) ninety (90) days after the last 9-1-1 Call traversed connectivity.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Connectivity to NGCS</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Includes a total of four (4) IP connections to two (2) NGCS Facilities, two (2) IP connections to each NGCS Facility. Customer’s order of this service element will be dependent upon availability of Customer’s NGCS, therefore, Customer may order this service element at any time during the Minimum Service Term. Customer may order additional quantities if required. Once installed, MRC charges will apply from the Service Activation Date for this service element for the duration of the Minimum Service Term.</td>
<td></td>
</tr>
<tr>
<td>Pricing assumes the operator of the Selective Router will not charge Contractor for connection and/or assess other fees on Contractor. Should the operator of the Selective Router assess fees on Contractor for enabling connectivity, Contractor will pass those fees along to Customer at no mark-up.</td>
<td></td>
</tr>
<tr>
<td>Includes a total of two (2) TDM connections to each Selective Router. TDM connectivity bandwidth not to exceed a DS3 per connection. Customer may order additional quantities at their discretion.</td>
<td></td>
</tr>
<tr>
<td>Once installed, MRC charges will apply for a minimum of twelve (12) months from the Service Activation Date for this service element. After twelve (12) months have elapsed, the MRC will continue being billed until the earlier of (1) the calendar date on which the connectivity is disconnected by Contractor or (2) ninety (90) days after the last 9-1-1 Call traversed connectivity.</td>
<td></td>
</tr>
</tbody>
</table>