

Final Report

**THE EDWARD J. COLLINS, JR.
CENTER FOR PUBLIC MANAGEMENT**

**MCCORMACK GRADUATE SCHOOL
OF POLICY AND GLOBAL STUDIES**

University of Massachusetts Boston
100 Morrissey Boulevard
Boston, MA 02125-3393
P: 617.287.4824
www.collinscenter.umb.edu

EVALUATION OF THE TAUNTON EMERGENCY COMMUNICATIONS CENTER & REGIONALIZATION OPTIONS

Final Report

CITY OF TAUNTON, MASSACHUSETTS

December 31, 2021



Table of Contents

Executive Summary	2
Introduction	4
Methodology.....	4
Current Dispatch Environment.....	5
SEMRECC Site Assessments.....	10
Cost Analysis	12
Research & Planning.....	20
Recommendations	24
Appendix A: Regional Emergency Communication District.....	25
Appendix B: Definitions	26

Executive Summary

The City of Taunton requested from the State 911 Department a Study to determine the Feasibility of joining the Southeast Massachusetts Regional Emergency Communications Center (SEMRECC). The State 911 Department authorized the Edward J. Collins, Jr. Center for Public Management to conduct the Study as part of its inter-governmental services agreement (ISA) to aid the State 911 Department in its PSAP regionalization and RECC Development efforts.

The study included investigating the technical, operational, and cost requirements for such a move. The Center's methodology included interviews, site surveys, and document research. A descriptive summary of SEMRECC is as follows:

The **Southeast Massachusetts Regional Emergency Communications Center (SEMRECC)** is in a former AT&T Building at 100 High Rock Road in Foxborough, Massachusetts by Fall 2020. AT&T sold the building to the District for a nominal fee of \$10.00. This 32,000 SF building with 208-foot radio tower on-site is a hardened facility, designed to be resistant to a nuclear attack. The first floor is 18,000 SF and has a 10,000 SF portion outfitted as the dispatch center, which includes 10 dispatch positions and space for 26 positions.

Interviews

The interviews revealed that there was a desire among Taunton public safety leaders to enhance their 911 dispatch services. They believed that the **strengths or potential benefits** of regionalization of emergency call-taking and dispatching services would provide:

- Professional dedicated civilian dispatch call takers
- Cost savings
- Enhanced infrastructure
- Surge of calls capability
- Emergency Medical Dispatch Capability in the SEMRECC
- Return Fire fighters to FD Operations to be in compliant with NFPA standards
- Adequate RECC staffing
- Redundancy in systems, including radio.

Current Dispatch Services

The Taunton Dispatch Center - Public Safety Answering Point (PSAP) is located at the Taunton Fire Department Headquarters at 50 School Street and overseen by the Taunton Fire Department. Both Fire and Police Personnel staff the Dispatch Center. Emergency calls are received by Fire personnel and dispatched for Fire Service calls or transferred to American Medical Response (AMR) for Medical Services calls and for Police Related calls for service are then transferred to the Police personnel in the same room for dispatching services. The Center has restricted space, outdated equipment and utilize full time police officers and fire fighters as dispatch personnel. The Center's layout, equipment and infrastructure do not meet today's standards for emergency communications centers.

SEMRECC

SEMRECC is in a former AT&T Building at 100 High Rock Road in Foxborough, Massachusetts by Fall 2020. AT&T sold the building to the District for a nominal fee. This 32,000 SF building and a 208-foot radio tower on-site was designed to be resistant to a nuclear attack. There is 18,000 SF on the first floor that has a 10,000 SF portion of the floor outfitted as the footprint of the dispatch center that includes ten (10) dispatch positions and space for twenty-six (26) positions.

Benefits provided for the participating communities:

- Robust staffing, which includes (6) six to (7) seven dispatchers and supervisors on each shift.
- Certified Advanced EMD Dispatchers;
- Regional data sharing and analytics;
- Regional approach to radio system planning;
- Robust physical security and cybersecurity posture;
- Hosted CAD and RMS;
- Pre-incident planning assistance, including capabilities for aerial drone photography;
- 911 wireless direct with enhanced mapping and geolocation capabilities in addition to NG911;
- Major incident and event planning and response support;
- Increased PSAP, call taking, and dispatching efficiency;
- Decreased and stabilize cost to community with a substantial return on investment;
- Ability to reduce employee count, healthcare costs, retirement and OBRA liabilities;
- Mobile data integration and data usage for public safety tactical operations;
- Provision of emergency management dispatchers who have completed Tactical Emergency Response Training.
- Dedicated Training and Quality Assurance staff.

Recommendations

Based upon the data collected and the analysis conducted for the RECC options, the following Recommendations are made:

1. Consolidate Taunton into SEMRECC;
2. Develop an outreach program for Taunton residents and businesses regarding the upcoming planned consolidation;
3. Develop a plan to assess the administrative and security needs for the Taunton Police and Fire Departments.;
4. Utilize established operational policies of the SEMRECC to ensure appropriate resources are provided in a timely manner and to negotiate any need changes. Develop a transition training plan for any changes to current dispatch policies for police, and fire personnel ; and
5. Assist SEMRECC in seeking State 911 RECC Developmental Grant Funding to aid the transition and integration.

Introduction

The City of Taunton requested from the State 911 Department a Study to determine the Feasibility of joining the Southeast Massachusetts Regional Emergency Communications Center (SEMRECC). The State 911 Department authorized the Edward J. Collins, Jr. Center for Public Management to conduct the Study as part of its inter-governmental services agreement (ISA) to aid the State 911 Department in its PSAP regionalization and RECC Development efforts.

The Collins Center was established in 2008 in the McCormack Graduate School of Policy and Global Studies to further the public service mission of the University of Massachusetts Boston and assist municipalities in implementing best practices, often through the use of data analytics. The Center provides technical assistance to municipalities and state agencies on all aspects of public management.

Methodology

The Collins Center adhered to the following methodology in collecting and analyzing data and information from the existing 911 PSAP services in Taunton in order to assess the feasibility of Taunton joining the Southeastern Massachusetts Regional Emergency Communications Center (SEMRECC)

Methods for collecting information relied on interviews, on-site assessments, and document review. The process was as follows:

- Kick-Off meeting with the principals from Taunton
- On-site visits which included interviews with site chiefs and other designated personnel
- Collection of relevant data from each RECC site, including:
 - Equipment used
 - Staffing levels
 - Capacity/ability to accommodate Taunton
 - Research/planning
 - Taunton’s proposed financial contribution to RECC
 - Call volume
 - Additional administrative benefits
- Analysis and preparation of the report
- Review of draft report with the Taunton Public Safety Team
- Completion of final report

Current Dispatch Environment

City of Taunton, Massachusetts

The Taunton Dispatch Center - Public Safety Answering Point (PSAP) is located at the Taunton Fire Department Headquarters at 50 School Street and overseen by the Taunton Fire Department. Both Fire and Police Personnel staff the Dispatch Center. Emergency calls are received by Fire personnel and dispatched for Fire Service calls or transferred to American Medical Response (AMR) for Medical Services calls and for Police Related calls for service are then transferred to the Police personnel in the same room for dispatching services.

The Dispatch Center is equipped with four console positions. Both Police and Fire personnel staff two personnel per shift for a total of four Dispatch personnel at the consolidated dispatch each shift. The Police Department also staffs one additional police officer at Police Headquarters for a total of five city-wide dispatch personnel on duty for each shift. This officer also communicates with walk in traffic and monitors the cell block area. Recently, the Police Department has found due to the number of people walking into the Police Department and calling into the Department on the administrative phone lines for non-emergency calls that there is a need to add one additional officer on the day shift, Monday through Friday. The space being used at the Fire headquarter for the PSAP was found to be quite confining and the equipment being utilized is outdated and is not up to the standards of a 911 Emergency Communications Center.

The Taunton Dispatch Center Budget for FY2022 is \$2,026,149. The Taunton metrics that impact their call taking and dispatching services are as follows:

Taunton Metrics	Year	#
Population	2020	59,408
Total 911 Call Volume	2020	22,918
Total Calls for Service	2020	32,664

Interviews

Interviews were conducted with the Taunton Police and Fire Chiefs, as well as other police and fire personnel. The interviews provided detailed information regarding their insight of their communication center, as well as regional dispatch centers in general, and they provided recommendations to include in an effective transition process should Taunton chose to join a regional emergency communications center. Both chiefs exhibited a strong focus on the communities that they serve, as well as a desire to provide high-quality emergency communication services to the residents of Taunton. Both were knowledgeable of the needs of Taunton and provided a history of the development of emergency dispatch services provided by the City. A summary of the information gathered from the interviews is as follows.

The **strengths or potential benefits** of regionalization of emergency call-taking and dispatching services include:

- Professional dedicated civilian dispatch call takers
- Cost savings
- Enhanced infrastructure
- Surge of calls capacity
- Emergency Medical Dispatch Capability in the SEMRECC
- Return Fire fighters to FD Operations to be in compliant with NFPA standards
- Adequate RECC staffing
- Redundancy in systems, including radio.

The **weaknesses or concerns** of regionalization include:

- Taunton Fire needs two separate radio frequencies, one for operations and one for Fire Ground.
- Oversight and remoteness
- Social-economic differences
- Dispatch protocols differences for city and towns
- Command control
- Lack of local knowledge
- Warrant management

Interviewees identified certain areas and made **recommendations important for successful integration** of Taunton into SEMRECC. They are:

- Information flow
- Lots of pre-transition training
- Transparency
- Involvement with PD and FD personnel
- Seamless and smooth implementation
- Public Information with the community
- Dedicated liaison/resolve issues
- Governance to include Taunton representation
- Include Tribal agreement
- Include Brewster (BMR) Ambulance
- Deal with alarm companies (20% of calls)
- Require redundancy of systems

Leadership

Leadership is a critical factor in the successful consolidation or outsourcing of any services important to the mission of public safety agencies. This requires the skills to collaborate with their staff and the community to manage the change process. In the course of the interviews, the project team found the Police and Fire Chiefs have the necessary leadership skills to successfully undertake this transition. They have recognized the benefits of such a transition and have offered recommendations to improve the prospects of the transition process. Their key focus was always on the mission of their departments and the needs of the community.

Technology Information

Final Report

Taunton Technology Elements	Notes/Comments								
Radio System									
1. Manufacturer	Motorola								
2. Frequencies	<table border="0"> <tr> <td>Police:</td> <td>Fire:</td> </tr> <tr> <td>1)486/483.0625</td> <td>1) 456/453.7000</td> </tr> <tr> <td>2)485/482.6375</td> <td>2) 486/483.3000</td> </tr> <tr> <td>3)487/484.7875</td> <td></td> </tr> </table>	Police:	Fire:	1)486/483.0625	1) 456/453.7000	2)485/482.6375	2) 486/483.3000	3)487/484.7875	
Police:	Fire:								
1)486/483.0625	1) 456/453.7000								
2)485/482.6375	2) 486/483.3000								
3)487/484.7875									
3. Age and Conditions	All transmitters and receivers and are less than 3 years old. Excellent condition.								
4. Interoperability a. municipality wide b. Regional	a) None b) PD: BAPER / FD: Bristol County Control								
5. System Coverage (Gaps)	Some portable issues on 300-500 block of Winthrop St due to loss of tower								
6. Tower Sites	<ol style="list-style-type: none"> 1) Orchard St Water Tank, Raynham – Transmitter site 2) Dana Street cell tower, Taunton – Transmitter site 3) Revolutionary Drive water tank, Taunton 4) Taunton High School, Taunton 5) Constitution Drive, cell tower, Taunton 6) Glebe Street, water tank, Taunton 7) 201 Alfred Lord Blvd, cell tower, Taunton 								
7. Fiber	All stations and all radio sites are connected via leased dark fiber.								
8. Number, age and make of mobiles	Police: 14 Motorola XTL 2500, 10+ years old 40 Motorola APX 6500, 0-4 years old Fire: 9 CDM 1250 and 7 - 05s, all between 6 and 12 years old Sent message to FD for that information.								
9. Number, age and make of portables	Police: 91 Motorola XTS 1500, approx. 10 years old 120 APX 6000 radios, 5 or less years old (waiting for new consoles to complete transfer of XTS to APX) Fire: 74 APX 4000, all less than 8 years old								
Information Technology CAD/RMS	Current, IMC; in process of implementing ProPhoenix								
Dispatch Number of positions Number of 911 positions Administrative phone system Citywide fiber	5 (3 PD, 2 FD) (1 is physically at PD; 4 at FD) 4 Public Safety wide IP based phone system There is a city-wide ring as well as a public safety ring. PS is set to connect to city, but not vice versa.								
Radio system Maintenance Provider	Cyber Communications								

Additional Technology Notes

- *Consoles are Motorola 7500, purchased in 2019; install was delayed until week of 11/01/2021.*
- *All transmitters simulcast from both sites.*
- *Radio system had a full buildout of all frequencies between 2018-2020; new transmitters, receivers, cabling, antennas, TX/RX filters and microwave dishes. All sites are redundant microwave and fiber loop, except Alfred Lord, which is a spur on the microwave network, but looped on the fiber network.*
- *We lost a site on Winthrop Lane in 2020 which has had a negative effect on portable radios, not mobiles. Currently trying to negotiate for a different site to replace that.*
- *PD is considering making current channel 2 as the primary, digital, encrypted and leave the existing channel 1 analog as the interoperability channel*
- *PD channel 3 is digital, encrypted and used only by detectives; does not appear on consoles.*

Dispatch Center Administrative Duties

At the request of the project team, the Chief of the Taunton Police and Fire Departments provided list of other administrative or ancillary functions that the dispatchers perform for the Police or Fire Departments or other Town departments. This is quite common with all PSAPs and certain RECCs. A recommendation for all communities that anticipate joining or developing a RECC is that they assess the list and decide which tasks they will keep at their police or fire departments and which they request that it be undertaken by the RECC. Other dispatch duties performed include the following:

- Answering all business calls into the TFD. We have an auto attendant that will route calls to my office, the Fire Prevention Office, the Training Office, etc. but after 5pm and on weekends the Dispatch Center is the only place staffed. If the public desires to speak to a real person, Dispatch is the only office available during those time frames.
- Add and remove radio boxes from service based on the repair work and box testing being done in the City. We have approximately 500 radio boxes in the City.
- Update the seasonal burning line daily, during burning season which is January 15 thru May 1.
- Call back off duty firefighters during major incidents or mutual aid responses. By contract every time an engine leaves the City for mutual aid a spare engine must be backfilled. Because the shift Commander will leave with the apparatus responding to mutual aid the backfill becomes the responsibility of the Dispatchers. During multi-alarm fires they will call in all off duty personnel.
- Responsible for informing the supervisors(the Deputy Chief, Communication Officer) of defective equipment.
- Responsible for contacting the mechanic if he is off duty and we have a problem with our apparatus or equipment.
- Responsible for notifying fire investigators when the shift commander requests one.
- One Police Officer at the Police Station communicates with walk in traffic and monitors the cell block area. Recently, the Police Department has found due to the number of people walking into the Police Department and calling into the Department on the administrative phone lines for non-emergency calls that there is a need to add one additional officer on the day shift, Monday through Friday

In reviewing the tasks, some could belong in the RECC depending on the SEMRECC policy. For those functions that would be transferred to the Police or Fire Departments, consideration should be given to placing those functions in an area that is most effective and efficient for the department and the city. For example, one community that joined a RECC moved the Records Section to the front desk area where the Dispatch area had been, as they identified that the purpose of most of the people who came to the public window was to request a copy of a police report. The community was notified of the hours of operation for the records section. Those administrative duties kept at the Department level should be assessed for the possibility of a technical solution, i.e., an online burn permit process.

SEMRECC Site Assessment

Southeastern Massachusetts Regional Emergency Communications Center (SEMRECC)

SEMRECC is in a former AT&T Building at 100 High Rock Road in Foxborough, Massachusetts by Fall 2020. AT&T sold the building to the District for a nominal fee. This 32,000 SF building and a 208-foot radio tower on-site was designed to be resistant to a nuclear attack. There is 18,000 SF on the first floor that has a 10,000 SF portion of the floor outfitted as the footprint of the dispatch center that includes ten (10) dispatch positions and space for twenty-six (26) positions.

Currently there are twenty (20) full-time dispatchers, four (4) supervisors, and one (1) Operations Section Chief, one (1) Training Section Chief, one (1) Deputy Director and one (1) Executive Director. The FY2021 Budget was \$3M.

The SEMRECC was established in 2017 by Foxborough, Mansfield, Easton, and Norton. The communications center known as the Southeastern Massachusetts Regional Emergency Communications Center (SEMRECC), initiated its operations in the Foxborough Public Safety Facility, providing call-taking and dispatch services for Foxborough and Mansfield in 2018. In 2020, Easton and Norton joined the SEMRECC when it moved into the permanent building in Foxborough. The population of the member communities is 86,738 in the 2020 census. The cost sharing formula is based upon an equal sharing of the cost of the District by community. SEMRECC was established according to the Regional 911 District legislation. See Appendix A for greater definition of a Regional 911 Emergency Communication District.

SEMRECC has an Administrative Board, a Finance Committee, and a working group made up of public safety chiefs. Currently, there is also an Interoperability Group and a Public Information Committee. SEMRECC was established as a Regional Emergency Communication District that allows for input from the member communities input from the Municipalities executive officer and guidance from Police and Fire Chiefs through an Operations Committee. See Appendix A for additional information of a

Benefits provided for the participating communities:

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- Pre-incident planning assistance, including capabilities for aerial drone photography;
- 911 wireless direct with enhanced mapping and geolocation capabilities in addition to NG911;
- Major incident and event planning and response support;

- Increased PSAP, call taking, and dispatching efficiency;
- Decreased and stabilize cost to community with a substantial return on investment;
- Ability to reduce employee count, healthcare costs, retirement and OBRA liabilities;
- Mobile data integration and data usage for public safety tactical operations;
- Provision of emergency management dispatchers who have completed Tactical Emergency Response Training.
- Dedicated Training and Quality Assurance staff.

SEMRECC is interested in adding communities to the center.

Implementation Steps to Join SEMRECC:

- Taunton submits a letter of intent to the Director of the SEMRECC expressing a desire to join.
- Taunton submits call volume to the SEMRECC.
- The SEMRECC Board approves the inclusion of Taunton in the 911 District.
- The Director of the SEMRECC then
 - Meets with Taunton representative(s) to identify their dispatching needs.
 - Calculate the needed staff for the SEMRECC including Taunton.
 - Develop an overall budget for the SEMRECC.
 - Identify the Taunton cost.
 - Assess the technology needs for Taunton to join the SEMRECC.
 - Prepare a State 911 Development Grant to seek the funds to transition into the SEMRECC:
and
 - Sign an IMA between the SEMRECC and Taunton.

Cost Analysis

1. Taunton Recurring Costs

This analysis covers the current personnel expenses, supplies, and services of the Taunton Public Safety emergency dispatch service comparable to services that would be transferred to any of the RECC options. A breakdown of the FY2022 budgetary expenses for the Taunton Police and Fire Dispatch Services is as follows:

Cost Category	Amount
Personnel (Police and Fire)	\$1,549,326.00
OPEB	\$ 276,823.20
Total Personnel	\$1,826,149.20
Other Expenses	
Service Agreement – IMC -CAD/RMS	\$ 9,329.25
Radio/Pager/Communication Equipment	\$ 50,000.00
Internet Access	\$ 10,000.00
General Office Supplies	\$ 2,500.00
Other Expense Total	\$ 71,829.25
Grand Total	\$ 1,897,978.45

2. Taunton Capital Costs

Taunton is currently responsible for financing, planning, and meeting a replacement schedule for their equipment, which can come at a substantial cost. Operating on a 24/7 schedule places significant demands on emergency communications center equipment. The life cycle of dispatch equipment is as follows:

Equipment	Life Cycle
PCs & Laptops	3 years
Servers & Routers	5 years
Software Upgrades	7 years
Radio Console	7 years
Dispatch Furniture	10 years

The Taunton Police and Fire Departments have identified an area of the city that radio receptions is less than optimal due to the loss of a tower that will need to be reengineered and replaced. The Fire Department has a need for an additional frequency for Fire Ground operations requiring engineering and infrastructure. The current dispatch center layout and equipment is outdated and in need of replacement. For example, the center should consider the following is relevant to the needs of a replacement dispatch center. SEMRECC does meet these requirements but the current center at the Taunton fire Department does not. The current space of the Taunton dispatch center was not designed as a dispatch center.

New 911 centers are becoming information centers of the future, and the following trends and requirements should be factored into the design:

- The need for additional computers
- The need for additional large wall monitors
- The desire to create a comfortable and pleasant environment

- Technology-driven infrastructure needs
- Self-contained HVAC systems
- Grounding and lighting systems crafted to the latest industry standards – not just to code
- Stress reduction design elements
- Bright accent colors, prints, windows, and lighting control options

1998 OSHA and ADA requirements have to be built into console design.

- 1990 ADA ACT
 - Governs access
 - Reach Distances
 - Reach Angles
- 1998 OSHA
 - Minimize workplace injuries
- Both regulations have resulted in boomerang shaped consoles

Consoles and Chairs Ergonomics

- The consoles, chairs and other furniture shall be ergonomically designed, to lessen the chance of repetitive stress injuries. This should include chairs that are fully adjustable for height, back angle and height, and armrest height; consoles adjustable for height (from sitting down to standing up); keyboard rests adjustable for height, angle, and distance from the console.
- The consoles should be designed to allow easy access to all controls without reaching beyond an average arm's length. Terminals and other video displays should be placed an equal distance from the focal point of the console, and that distance should be according to any national standards or available studies. The video terminals should be arranged to allow their horizontal adjustment closer and further away from the dispatcher.

Lighting

- Center lighting circuitry should be arranged to prevent a lighting failure to any large area of the building. Lighting in all areas of the building shall conform to any national standard levels for office areas.
- There should be overall and individual console lighting in the dispatching area. The console lighting should individually be controllable at each console. Consideration should be given to incandescent lighting for the console areas. Overall lighting should be arranged to minimize glare on video display terminals.
- Consideration should be given to the placement of terminals and windows to reduce the amount of glare on the video terminals, or bright window light directly behind the video terminals.

Air Conditioning

- The building air conditioning system should be arranged to provide a sufficient flow of fresh--not recirculated--air to the dispatch area, to filter the air to remove contaminants including pollen, mold, dust, and mildew, and to reduce drafts on employees. Temperature control should be available to authorized personnel, but the range should be limited so it always provides sufficient cooling for electronic equipment in the building.
- Consideration should be given to installing an electronic filtering system for that portion of the air conditioning system that serves the dispatch area, to further filter contaminants from the air. Consideration should be given to a positive pressure air system that keeps outside contaminants out.

Sound Control

- The dispatch area should have some method of sound control for reducing the volume of noise, echoes, and other unwanted artifacts. Methods include acoustic tiles, carpets, wall curtains or other coverings.

Emergency/Secondary Power

- The dispatch center will require an emergency power source during times of power shortages. An adequate generator will be required to immediately power the systems in place at the Regional Emergency

Communication Center to ensure that all calls are being received and appropriate resources dispatched to the incident. The Secondary Power Source shall:

- Consist of one or more standby engine-driven generators installed in accordance with NFPA 70, National Electrical Code, Article 701.
- Utilized upon failure of the primary power and the transfer to the standby source shall be automatic.

Below is a chart of the cost estimates that would allow Taunton to remain as a stand-alone Public Safety Answering Point (PSAP)/dispatch center to meet modern dispatch center requirements and to correct existing problems with the current radio system. The cost amount is spread over a three-year period as projects such as this are not completed in a one-year period.

Community	Type of Equipment	Replacement – 3-year Total Cost	Annual Replacement Cost
Taunton	Redesigned dispatch center with dispatch functional furniture	\$363,000.00	\$121,000.00
	CAD/RMS	\$350,000.00	\$116,666.67
	Radio coverage engineering and equipment	\$1,636,000.00	\$545,333.33
	Total Costs	\$2,349,000.00	\$783,000.00

3. Role of State 911 Department

The State 911 Department is charged with coordinating and effecting the implementation of enhanced 911 service and administering such service in the Commonwealth. In fulfilling this responsibility, the State 911 Department provides the public safety answering points (PSAP) in Massachusetts that serve as the first point of reception of a 911 call with call processing equipment, database, network, and technical support services, training for personnel handling the calls at the PSAPs, and with funding to support the operation of the PSAPs through the administration of an extensive grant program.

The State 911 Department has been committed to a more effective and economical 911 system through regionalization of those services. The Massachusetts State 911 Department provides a specific grant program to develop and operate Regional Emergency Communications Centers (RECC). The State 911 website provides guidelines for the application process for these grant programs. Below is a listing of the relevant information for these grants.

Support Grants

Primary PSAPs, regional PSAPs, regional secondary PSAPs, and RECCs are eligible to participate in the Program and are eligible to receive support grant funding. For Fiscal Year 2020, \$23,464,196.00 of the total surcharge revenues of the previous fiscal year shall be allocated to support grant awards and are disbursed according to a formula weighing both 911 call volume and population served.

Incentive Grants

In addition to amounts allocated as part of the above support grant, existing regional PSAPs and RECCs are eligible to receive incentive grant funding through the Program based on the following allocation formula.

- For regional PSAPs serving two municipalities:
0.75 of one percent (1%) of the total surcharge revenues of the previous fiscal year.
- For regional PSAPs serving 3 to 9 municipalities:
a minimum of one½ percent (1.5%) of the total surcharge revenues of the previous fiscal year.
- For regional PSAPs serving ten or more municipalities:
One½ percent (1.5%) of the total surcharge revenues of the previous fiscal year.
- For regional emergency communication centers:
ten percent (10%) of the total surcharge revenues of the previous fiscal year.

Regional Development Grants

Grant funds may be used by grantees only for the permissible categories of use listed within the specific categories set forth below:

- Associated with the provision of enhanced 911 service; and
- Approved by the State 911 Department.

Funds may be used for clerical, administrative, or other costs associated with administration of the Program, provided that funds may not exceed one percent (1%) of the total amount awarded to the Grantee. The services shall be specifically identified with the project, and the Grantee shall provide detailed documentation, to the satisfaction of the State 911 Department, supporting the services (including, without limitation, the time and dollar amount of the services).

The State 911 Department will allow funding for the purchase or lease of equipment, allowable construction items, and allowable structural improvement items and for debt service on equipment, allowable construction items, and allowable structural improvement items, including without limitation, principal and interest payments on loans, notes, and bonds. The State 911 Department will allow grantees to assign lease, debt service, and/or or incremental purchase costs to this grant. However, any and all funding requested under this grant program shall be for goods and/or services received. Funding will not be disbursed for obligations made without receipt of goods/services. The State 911 Department makes no guarantee of funding from year to year and does not assume any obligation, as guarantor or otherwise, under any purchase, lease, or debt instrument.

All technology or telecommunications related goods or services must be compliant with applicable laws, rules, regulations, and standards.

Security Measures Grants

Existing and proposed regional PSAPs and RECCs are eligible to apply for funds for the following allowable items within the transition expenses category:

- Security measures (such as remote cameras, remote printers, and security doors); and
- One-time costs associated with the installation of such security measures.

Equipment Grants

Existing and proposed regional PSAPs, regional secondary PSAPs, RECCs, and the Northampton wireless state police PSAP are eligible to apply for funds for equipment associated with the provision of enhanced 911 service that is not directly provided by the State 911 Department and/or equipment to be used to foster the development and startup of regional PSAPs, regional secondary PSAPs, and RECCs or the expansion or upgrade of existing regional PSAPs and/or regional secondary PSAPs. Allowable items to be funded through this grant include, but are not limited to:

- Radio systems and consoles;
- Computer-aided dispatch;
- Records management systems;
- Fire alarm receiving and alerting equipment; and
- Consultant services in support of equipment.

All radio systems shall comply with EOPSS Statewide Inter-Operability Emergency Communications (SIEC)

Funds for radio systems may be used to defray the costs associated with the acquisition of radio systems used for police, fire, emergency medical services, and/or emergency management communications. See Appendix B for definitions that are used by the State 911 Department and are included in this report.

The approved criteria for the Transition Award is as follows.

State 911 Department – Development Grant Program FY22
Transition Award
<p>Transition award, payable to the entity that operates a regional PSAP or RECC on behalf of the participants, for each PSAP that is decommissioned on or after July 1, 2018, and becomes operational as a participant in such regional PSAP or RECC, in the amount that represents the <i>greater of</i>:</p> <ul style="list-style-type: none">a) the last allocation for the decommissioned PSAP under the State 911 Department Support Grant; orb) the amount of the assessment or charge allocated to such PSAP for the current fiscal year under the terms of the signed inter-municipal agreement or other equivalent agreement governing the operations of the regional PSAP or RECC. <p>Such transition award(s) shall be credited against the obligation of the decommissioned PSAP(s) by the grantee. A decommissioned PSAP may be provided with the credit three (3) times to be applied for in three (3) different grant cycles, or two (2) times to be applied for in two (2) different grant cycles if a transition award was already applied for and awarded in the FY 2020 grant cycle pursuant to grant guidelines in effect at that time.</p> <p>After applying for and being awarded a transition award a total of three (3) times, a decommissioned PSAP may be provided with a credit an additional two (2) times to be applied for in two (2) different grant cycles, but the award will be limited the first time to fifty percent (50%) of the <i>greater of</i>:</p> <ul style="list-style-type: none">a) the last allocation for the decommissioned PSAP under the State 911 Department Support Grant; orb) the amount of the assessment or charge allocated to such PSAP for the current fiscal year under the terms of the signed inter-municipal agreement or other equivalent agreement governing the operations of the regional PSAP or RECC, and limited for the second time to 25% of the greater of<ul style="list-style-type: none">i) the last allocation for the decommissioned PSAP under the State 911 Department Support Grant; orii) the amount of the assessment or charge allocated to such PSAP for the current fiscal year under the terms of the signed inter-municipal agreement or other equivalent agreement governing the operations of the regional PSAP or RECC. <p>Documentation that such credit has been granted in the form of a written acknowledgment from the decommissioned PSAP shall be required prior to reimbursement</p>

4. Projected State 911 Support for RECC for Taunton

The State 911 Department provided its estimate for Support and Incentive Grant funds on a recurring basis for a RECC for SEMRECC that would include the City of Taunton. This estimate was received for this study and is as follows:

FY 2022- SEMRECC - April 12, 2021

Entity	Support	RECC	Total Grant Funding
SEMRECC (Easton, Foxboro, Mansfield, Norton)	\$ 146,147	\$1,208,301	\$ 1,354,448
SEMRECC (Easton, Foxboro, Mansfield, Norton, Taunton)	\$ 399,621	\$2,087,142	\$ 2,486,763

Calculations assume configurations are as noted. Changes to the communities included/excluded will impact funding levels. All estimates are subject to funding availability.

Above RECC projections are calculated based upon anticipated regional PSAP and RECC configurations for FY 2022. Timelines impacting current project(s) may impact these projections. Allocation amounts are further subject to change in compliance with the following excerpt from the S&I grant guidelines "The percentages in clauses i to iv, inclusive, and the percentages of the total amounts allocated to each grantee eligible within such clauses i through iv may be adjusted by the State 911 Commission to ensure a proper allocation of incentive funds as more regional PSAPs and regional emergency communication centers are added. The amount allocated to a grantee may be adjusted or capped."

Please note funding levels represent a surcharge of \$1.50; Allocations are subject to change at such time as the surcharge is reduced to \$1 on January 1, 2024.

5. Annual cost for Taunton to be a participant in SEMRECC

For this draft report, the Director of SEMRECC has provided the following:

“our projections are at \$1.2-1.6M right now. That will mature as we dive deeper into the program. Also, we are anticipating taking on other communities which should further dilute that number. So, at the end of the 3 years of full grant reimbursement and the 2 years of partial reimbursement, I am hopeful that this figure is reduced further.”

The SEMRECC estimate below is the average of the range of costs.

Taunton	Annual Recurring Costs
Current Costs	\$1,897,978.45
SEMRECC Estimate	\$1,400,000.00
Difference/Savings	\$497,978.45

6. Cost Savings Summary

This table below documents the savings that are anticipated from this cost-sharing effort, as outlined in the previous sections.

Taunton	Annual Savings Amount
Non-Recurring Capital Savings	\$783,000.00
Recurring Cost Savings	\$497,978.45
TOTAL	\$1,289,978.45

Research & Planning

Professionalism of Communications Centers & Emerging Trends

The primary goal of public safety leaders within the Commonwealth and throughout the country is to increase the level of communication services to their communities and to their departments. Prior interviewees recommended that a strength of an RECC is the development of long-term professional dispatch services. Professionalism is a determination of specific practitioners, methods, and performance criteria for a particular profession. The current trend of the 911 communication discipline is strongly focused on standards, best practices, personnel selection, training requirements, and utilization of technology. To enhance professionalism of communications centers requires a better understanding of the current plans to modernize emergency communications services nationwide. The trends are focused on:

- Increased capability to handle data, voice, and video;
- Inter-connect with other communications centers such as traffic management centers to coordinate movement of resources, personnel, equipment, and supplies;
- Enhance the cost effectiveness of human and technical resources;
- The integration of text messaging into our PSAP center operations and personnel training to meet societal trends;
- Challenges of dealing with multiple calls for service to the same events from the transition from wire to wireless communication devices; and
- The increased prevalence of video recording among younger generations.

Geographic Information Systems (GIS)

Nothing is more important to dispatching a call for service than location. The old adage of “Location, Location, Location” cannot be truer than in responding to a Call for Service (CFS). An increasing number of dispatch centers are adding layers of geographic information fire hydrant, hazmat, and critical infrastructures in addition to homes and businesses. It also provides for better routing of resources.

Enhanced Technology

Technology is making the combining of PSAP 911 Centers more cost effective through more robust communications systems, economy of scale in purchasing, establishment of dispatching and resource tracking standards, and increased employee morale through professionalism. Better dispatch systems in the marketplace allow greater ease of pass-off of resource control to Police, Fire, and EMS.

Additionally, strides are being made in the improved ability to communicate with the disabled through telecommunications devices for the hearing impaired, interpreting services for foreign languages, texting for the speaking impaired, and coordinating with local, country, state, and federal planning organizations for standards in address assignments.

Organizations actively improving communications infrastructures and standards development are:

- Massachusetts State 911 Department;
- APCO (Association of Public-Safety Communications Officials);
- NENA (National Emergency Number Association);
- USDOT (US Department of Transportation);
- IETF (Internet Engineering Task Force); and

- TIA (Telecommunications Industry Association).

Personnel Selection and Training Standards

The Massachusetts Communications Supervisors Association (MCSA) provides recommendations for minimum basic training standards for full and part-time public safety telecommunicators or dispatchers in Massachusetts. Those standards include the following elements:

- Standards for telecommunicators for taking 911 calls and dispatching police, fire, and emergency medical services;
- In-service and continuing education standards; and
- Supervisor and center management standards.

FirstNet

In response to the identified problems with the lack of radio interoperability for first responders to the September 11 attacks, the First Responder Network Authority (FirstNet) was created by Congressional action and is being planned and implemented throughout the country. Massachusetts is in the second year of planning this effort. FirstNet is establishing a nationwide, interoperable public safety broadband network dedicated to first responders. In establishing this network, FirstNet is guided by these important principles:

- A public safety-grade network built to meet the needs of our nation's first responders;
- Provide public safety users with true priority access to the network;
- Will harden the network to assist with resiliency during natural disasters, incidents, and man-made threats;
- Will enhance public safety communications by delivering mission-critical data and applications that augment the voice capabilities of today's land mobile radio (LMR) networks;
- Enable local communications management and keep incident commanders in control;
- Be judicious with taxpayer dollars while remaining focused on offering its services to public safety at a compelling cost; and
- Will have effective security controls that protect data and defend against Cyber Threats.

Next Generation 911

Although the 911 system has been an unqualified success story for more than 30 years, changes in the public's use of technology, the saturation of the mobile market, and the spread of Voice over Internet Protocol (VoIP) telephony over broadband are contributing to greater expectations that the current system will need to address. Because text, data, images, and video are increasingly common in personal communications and are critical to future transportation safety, the 911 system will be expected to accommodate highly mobile, dynamic communications modes.

The architecture of these communication nodes directly counters the fundamental structure of the current 911 system. To guide and foster a nationwide vision of a 911 system for the 21st Century, the US Department of Transportation (USDOT) is taking a lead role in the research and development needed to bring about a more capable Next Generation 911 (NG 911) system that supports emergency call delivery and a response-based system that maximizes impact across a diverse stakeholder community. Requirements for the technology have been assessed to allow the systems to be developed and implemented nationwide. Each state is currently assessing those requirements and the cost associated with NG 911. A recent update on that progress revealed that the Federal Communications Commission

(FCC) announced that the nation's four largest wireless carriers have agreed to relay text messages to text-enabled 911 centers by May 2014.

Under the agreement announced on December 6th, texters will get an answer, whether their call center is able to receive texts or not. If they cannot get an automated response, telling them to call instead. The FCC advised that people should always call during an emergency if they can. Costs are being analyzed for line and systems upgrades, dispatch center systems, increased call taking/dispatcher time and training. Massachusetts has developed the foundation of the NG-911 system for Massachusetts and is in the process of testing new enhancements for texting 911. The MA Wireless Direct program has been implemented. The NG-911 system will allow 911 call information to be received from mobile texting, video, and web-based information platforms.

Prior 911 Center Consolidation Research

1. Thomas Kennedy and CTC, Inc. managed a research study from 1998 to 2000 for the National Institute of Justice, Office of Science and Technology, regarding a **Multijurisdictional Information Systems Assessment**. After analysis of four hundred systems identified in paper surveys and then conducted an in-depth assessment of 17 diverse systems, including those provided by state, county, city, and regional agencies. The findings of that substantial study, which are very applicable for the development of RECC's, concluded that the attributes of a successful multi-jurisdiction system were as follows:
 - Key **leaders** were identified as the most important reason these systems were successful;
 - **People** issues, not technology issues, were identified as being the most key factor in establishing an effective multi-jurisdictional information system;
 - Managers of all the successful information systems examined were **thinking strategically**; and
 - All of the systems developed **advisory boards** or steering committees to oversee long-term development of the system.

NIJ had the study conducted to identify a technology or process as the key to the success of the multi-jurisdictional system. The Study found that it was people who made the difference.

2. **Minnesota's Governor's Work Group on PSAP Consolidation, A Guidebook for PSAP Consolidation Strategies. 2009.** The Guidebook provides the most detailed document that has been published regarding the needed information regarding the process to consider the regionalization of emergency communication and then to implement the transition phase. An excerpt of the Executive Summary of the Guidebook provided the following:

The evolution of 911 technology and unfavorable economic times have encouraged both state and local governments, and public safety agencies to investigate the concept of shared services or consolidation. The simplest definition of consolidation is the combining of two or more PSAPs into a single facility and/or organization using one of several existing models. Though the consolidation process is often complex and difficult, it can yield substantial improvements in service levels, responder safety, employee retention, and potential cost savings if implemented correctly.

The Phases identified in the Guidebook include:

- Identifying a champion for the project

- Interest building for decision makers
 - Feasibility Study
 - Planning Phase
 - Implementation/Transition Phase
 - Post consolidation Phase (service and technology)
3. The **John J. Heldrich Center for Workforce Development, Rutgers University, New Jersey** completed a comprehensive analysis of New Jersey's E911 system and the experience of other states with consolidation of 911 operations in 2005 - 2006. Key findings from that study were as follows:
- Local Officials in New Jersey and 911 officials from other states cite improved service and public safety as potential benefits of consolidation.
 - There are clear economies of scale in the cost of handling 911 calls.
 - There is potential for improved efficiency through consolidation of PSAPs (Public Safety Answering Points) and PSDPs (Public Safety Dispatch Points) that have a low workload or call volume.
 - Reducing the number of PSAPs and PSDPs has the potential to generate cost savings for state and local government.
 - State policy can influence the direction of 911 consolidation by creating a supportive environment.
4. At the **International Association of Chiefs of Police (IACP) Law Enforcement Information Management (LEIM)** conference in 2012, a presentation was made on Dispatch Consolidation by public safety practitioners based upon the development and operational experience of a large regional emergency communication center in Indiana. The presentation provided that the benefits of a regional emergency communication center included the following:
- Long term cost savings potential
 - Better systems and service model
 - Opportunity to reduce duplication, share costs and focus on core mission (new public sector emphasis)
 - Improved employee retention and growth opportunities for dispatch personnel

The session also identified the challenges, which the presenters identified as:

- Political buy-in (need concept champion)
- Governance structure (key point)
- Cost sharing formulas (key point)
- Perception of a potential loss of control and organizational identity
- Adoption of a shared service model – differences must be resolved so there will be a consistent service provision approach/change management (business rules/protocols).

Recommendations

- 1. Consolidate Taunton into the Southeast Massachusetts Regional Emergency Communications Center (SEMRECC).**
- 2. Develop an outreach program for Taunton residents and businesses regarding the upcoming planned transition to SEMRECC.**

Through a well-planned outreach effort, Taunton can keep residents up-to-date and fully informed of the timeline for the transition into SEMRECC, the rationale for change, and the benefits to them in the form of enhanced services. In the outreach plan, there is a need to encourage community members to utilize the 911 call number for all emergency calls rather than use any of the administrative lines.

- 3. Develop a plan to assess the administrative needs for both the Police and Departments to ensure that contact with walk in traffic is being responsive to the needs of the community. In addition, there is a need to ensure that the cell block area is being monitored for prisoner safety.**
- 4. Work with SEMRECC to learn about the established operational policies and procedures utilized by the Center and to explain the unique circumstances in Taunton that may require a change to ensure appropriate resources are provided in a timely manner. Include the results of the interactions with the SEMRECC into a transition training plan for police and fire personnel.**

Taunton's successful integration into the SEMRECC is contingent on embracing established operating policies and procedures that meet unique needs of the emergency response and public safety agencies in the District, ensuring that the appropriate resources are provided at the time they are needed.

- 5. Assist SEMRECC in seeking State 911 RECC Developmental Funding to aid the transition of Taunton into SEMRECC to ensure interoperability of communications systems**

Developmental funding is necessary to help implement the changes necessary to connect Taunton to the SEMRECC in a meaningful way. Those elements include the cost of:

- Radio communications interoperability between the RECC and the public safety departments;
- Regional software system for Computer Aided Dispatch (CAD) and Records Management Systems (RMS) currently being used by the RECC;
- Project management; and
- Transitional training.

Appendix A: Regional 911 Emergency Communication District

Regional 911 Emergency Communication Districts are regional government entities as established by Massachusetts legislation. The personnel are employees of the District. A District is governed by an Inter-Municipal Agreement (IMA).

A District provides emergency communication/dispatch services through contractual relationships. The community members of the District bear all of the expenses. Administrative costs, such as Human Resources, Financial, Legal and Technical services are borne by the District through in-house expertise or through outside contracts. See the summary of the enabling legislation for Regional 911 Emergency Communication Districts.

SUMMARY OF SENATE 1199, AN ACT RELATIVE TO REGIONAL 911 EMERGENCY COMMUNICATION DISTRICTS

The purpose of the legislation is to authorize two or more municipalities to enter into an agreement for the purpose of establishing, maintaining, and operating a regional 911 emergency communications center district ("District"). The legislation provides a governance structure that authorizes the formation of the District and that sets forth the way the members may provide for the management of the District, financial terms and conditions of membership, the addition of new member municipalities, and other financial and operational matters.

The legislation provides that, in order to form a District, two or more municipalities may create a District planning committee to study the feasibility of establishing a District. If the planning committee recommends the establishment of a District, it shall propose a written agreement to establish, construct, equip, operate, and maintain the District and shall forward the findings and proposed agreement to the city council and board of selectmen or town council of the participating municipalities for a vote. If a majority of the members of each city council, board of selectmen or town councils vote in the affirmative, the District shall be established in accordance with the proposed agreement.

The legislation provides that the District would be overseen by a Board, and the District agreement shall provide for the terms and conditions of Board membership. The legislation provides that the District shall have a finance advisory subcommittee to approve certain fiscal matters. The District shall be a public employer and a body politic with powers to construct and equip a regional 911 center, purchase land, employ personnel, incur debt, issue bonds, and take other action as set forth in the legislation. The legislation provides for fiscal oversight of the District, including audit and reporting requirements.

The establishment of the District is expected to allow for lower operating and capital costs for the member municipalities. The legislation supports the State 911 Department's goals of fostering and facilitating 911 regionalization efforts.

Appendix B: Definitions

Included in this document are words that have the following meanings as provided by the State 911 Department.

Alternate PSAP: a PSAP that is staffed twenty-four (24) hours a day, seven (7) days a week, three hundred sixty-five (365) days a year to which incoming 911 calls will automatically be rerouted in the event of the inability of the primary PSAP to accept the calls.

Computer Aided Dispatch or CAD: a computer-based system intended to increase the efficiency and accuracy of public safety call handling and dispatching.

Dispatch: upon receipt of a telephone, radio, alarm signal or other request for emergency services, provide a decision as to the proper action to be taken and directly select, identify, and assign specific police, fire, emergency medical resource or resources, or any combination thereof to respond to such request for service.

Enhanced 911 Service: a service consisting of communication network, database and equipment features provided for subscribers or end users of communication services enabling such subscribers or end users to reach a PSAP by dialing the digits 911, or by other means approved by the department, which directs calls to the appropriate PSAPs based on selective routing and provides the capability for automatic number identification and automatic location identification.

Primary PSAP: a PSAP equipped with automatic number identification and automatic location identification displays and is the first point of reception of a 911 call. It serves the municipality in which it is located.

Public Safety Answering Point or PSAP: a facility assigned the responsibility of receiving 911 calls, and as appropriate, directly dispatching emergency response services or transferring or relaying emergency 911 calls to other public or private safety agencies or other PSAPs.

Radio Console: the control panel or interface comprised of hardware, including common control hardware, and software components used to monitor, control, and integrate multiple public safety radios or radio systems by a dispatcher in a PSAP using a common microphone, speaker, and user interface. This does not include any radio system components.

Radio Systems: base station, portable and mobile radios, and related components, including but not limited to, antennas, antenna towers, amplifiers, receivers, and repeaters.

Regional Dispatch: providing dispatch services for two or more public safety departments that serve two or more jurisdictions.

Regional Emergency Communication Center or RECC: a facility operated by or on behalf of 2 or more municipalities or governmental bodies, or combination thereof, as approved by the Department, that enter into an agreement for the establishment and provision of regional dispatch and coordination of emergency services for all such municipalities or governmental bodies including, but not limited to, a regional PSAP that provides enhanced 911 service and police, fire protection, and emergency medical services dispatch, including services provided by a private safety department. The regional PSAP portion of the center shall be equipped with automatic number identification and automatic location identification displays, as approved by the department, and is the first point of reception of a 911 call.

Regional PSAP: a PSAP operated by or on behalf of two or more municipalities or governmental bodies, or combination thereof, approved by the Department, for the operation of enhanced 911 call taking and call transfer activities. A regional PSAP may also be engaged in, by agreement, the dispatching or control of public safety resources serving some or all of the municipalities or governmental bodies that comprise the regional PSAP, including where services are provided by a private safety department. If the regional PSAP serves all such municipalities or governmental bodies for the operation of enhanced 911 call taking and call transfer activities and dispatch services including where some dispatch services are provided by a private safety department, it shall be considered a regional emergency communication center. The regional PSAP shall be equipped with automatic number identification and automatic location identification displays, as approved by the department, and is the first point of reception of a 911 call.

Regional Secondary PSAP: a facility operated by or on behalf of three or more municipalities or governmental bodies, or a combination thereof, approved by the Department, which enter into an agreement for the establishment and provision of regional dispatch and coordination of either police, fire protection or emergency medical services, or any combination thereof. A regional secondary PSAP is equipped with automatic number identification and automatic location identification displays. It receives 911 calls only when transferred from a primary or regional PSAP or on an alternative routing basis when calls cannot be completed to the primary or regional PSAP.