



A NEW FACILITY FOR THE CENTRAL VERMONT COMMUNICATIONS CENTER

Project Plan 2018

ABSTRACT

A dispatching project plan highlighting the issues necessary for the development of a new dispatching facility.

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The Business Need – The Why?

The Central Vermont Public Safety Authority (CVPSA) Board strives to articulate the need for operational and technological changes in the functioning of public safety services that are pro-active and can be implemented to prevent a future crisis. The creation of a single site for all dispatching services in central Vermont is such a goal. The benefits of consolidating dispatching are highlighted below.

- Start nucleus for creating a county wide efficient public safety system.
- It would put Central Vermont in position for State level regional dispatching talks and consideration which have been occurring at the Legislature.
- New technologies and fully staffed 24/7 dispatch would greatly improve delivery of services.
- Create space to augment communication during emergencies; such as, floods or fires.
- Significant factor in dispatcher recruitment and retention and advancement opportunities.
- Staff coordination would be greatly enhanced.
- Once a core system is in place there are more options for improving public safety.
- With a capacity increase more towns will want to be part of the system as costs will decline.
- New system and different management will liberate towns from past service disputes.
- Standardized policy and procedures will reduce confusion between the two centers and the people and entities they serve.

There is no immediate crisis, however there are substantial concerns. Currently dispatching is provided by Barre City, which also provides its own police and fire dispatching plus fire dispatch to several neighboring towns, Barre Town which contracts with Lamoille County for police and fire, Montpelier which dispatches its own fire and police services and contracts to provide fire and medical dispatching for many surrounding towns. Communications frequencies are cluttered, interrupting talking often; including Quebec taxi providers who sometimes “walk over” central Vermont emergency dispatching, as do other Vermont dispatching operations. Meanwhile, the State dispatches for Northfield and Berlin. In both Barre and Montpelier there are times when a single dispatcher is on duty, so an unforeseen crisis with one person could cripple dispatching. Dispatchers in the two Cities are not trained in the same protocols for operations or record keeping. None of the local services have computer aided dispatching (CAD) which enables a person in a dispatch center to easily view and understand the status of all units being dispatched. CAD consists of a suite of software packages used to initiate public safety calls for service, dispatch, and maintain the status of responding resources in the field so that the dispatcher has an opportunity to handle calls-for-service as efficiently as possible. Only investments in new technology and consistent training can improve dispatching services.

Recently Capital Fire Mutual Aid System (CFMAS) representing 29 towns in Central Vermont has joined CVPSA in hopes of finding a long-term solution to its needs for a stable system not dependent on

periodic contracts with Montpelier, while Montpelier in turn would prefer working in a long-term partnership with CFMAS to permit investments in personnel and equipment. All CVPSA members see more hope for Federal Grant support for region wide dispatching and almost none for individual towns. CFMAS values the quality of service provided by Montpelier and urgently seeks a single dispatching site to provide improved services.

For many years Central Vermont public safety policy makers have identified the perils of the current patchwork of services and financing of operations, as well as the need for a public body to provide oversight for such functions. City Councils, and managers, rarely devote much time to review of dispatch or police functioning, - some estimates being less than 15 minutes a year of public discussion. CVPSA has not been able to develop data showing any specific malfunctions of personnel or equipment that demand immediate change to avoid a crisis, and there may not be any. However, under the current arrangement managers and dispatchers themselves have incentives not to reveal problems. Doing so may erode public confidence in the services being provided, possibly lead to libelous situations, or create hostility between staff members. These factors strongly support creation of a single site for dispatching supported by a public body that can respond with guidance to the public on emergent problems.

Creating the foundation for additional regionalized efforts is a major benefit of consolidating dispatch services. A dispatch center that provides an impartial service for all first responders, that is governed by a neutral body looking out for the interests of public safety and maximizes available personnel in a way that provides consistent dispatch staffing will be the ground work that leads to other efforts. This type of service should also be attractive to other communities in an environment where free dispatching from the State in the future is uncertain. Providing service to additional communities will cause costs to decrease for all.

CVPSA has recognized the best practices of a dispatching center should always include the use of modern technology and have two dispatching positions available. This determination has led CVPSA to include projected capital enhanced costs in the two communications budgets for the Cities. **This will level the “cost playing field” between CVPSA and the Cities resulting in a 5% decrease in costs over a 5-year period.**

The Future – What can be!

“Change is the law of life. And those who look only to the past or present are certain to miss the future.” John F. Kennedy

A new facility, embracing a regional approach to dispatching all emergency service providers in Central Vermont, will lead the way for adding other communities to this service. The future with a properly staffed center, delivering exceptional service using the current technology can attract other communities to be a part of this service.

Working together, we can solve multiple problems. Out dated radio systems, lack of a computer aided dispatching system, lack of properly staffed dispatching positions and poor cellular service are all problems that a regional governance body can help improve.

The future market for dispatching services may include the Randolph Police Department, Northfield Police Department, Waterbury Police Department, Berlin Police Department and the emergency services in Barre Town. Cost is a significant impediment to bringing some of these communities into a regional dispatching center. Currently the Vermont State Police provides dispatching services for free. There cost model cannot sustain itself.

During last years (2018) Vermont General Assembly session attention was given to the inequitable costs for dispatching. The legislature created a bill requiring a study be conducted on costs for dispatching services and the concept of creating regional centers. While, this bill was vetoed by the Governor, future discussion of this issue will resume.

Central Vermont needs to position itself, for these continued talks and future efforts by moving towards a regional center. Central Vermont could become a State funded regional center if the State moves in this direction. Without a new center, Central Vermont may get left behind having to fund their individual dispatching functions.

A single dispatching center will also continue to highlight the radio problems that exists today. The CVPSA as a governing body can help encourage interest and funding of a simulcast radio system that will improve fire department communication but also improve dispatching. CVPSA can also help promote the need for better cellular coverage and broadband services for emergency service providers in rural Washington County. Together we can make these changes.

It is doubtful the individual Cities can have an impact on these types of changes because of their focus on providing services to their own communities.

The economies of scale that will be achieved by accepting additional communities into the dispatch center will lower costs for everyone. Listed below is projection of additional costs that could be achieved if expansion were to occur.

	<u>FY 21</u>	<u>FY 22</u>	<u>FY 23</u>	<u>FY 24</u>
PROJECTED REVENUE:				
Future PSAP/Dispatching ¹				90,000
New - Unidentified	128,125	130,688	133,301	135,967
New - Barre Town PD/Fire/Medical	215,000	219,300	223,686	228,160
New - Berlin PD	141,834	144,671	147,564	150,515
	484,959	494,658	504,551	604,642

Capital improvements must be considered for the long term. Radio and telecommunications improvements planning must be initiated. It will take consider time to garner the support for some of the items identified below.

Description	One Time Cost	Annual Cost
Simulcast Radio System	\$1,600,000	
Simulcast Radio System Maintenance (17% annually)		\$272,000
CAD system and GIS Mapping	\$125,000	
CAD system and GIS Mapping Maintenance		\$21,250
New Facility	\$1.6M - \$2.5M	

The radio simulcast project will take minimum of two- years to plan and garner support. More information can be found in Appendix D.

CVPSA’s vision of one agency, one culture, with many parts, providing exceptional individualized community service can only be realized by taking the first step.

¹ **Future** PSAP/Dispatching means the development of a “public safety answering point” (911 call handling center) and the future possibility of a State funded regional dispatching center.

Executive Summary – New Facility Plan

This plan involves moving the dispatching services provided by the Montpelier Police Department and the Barre City Police Department into a new leased facility. The two options that have been explored, leasing space and buying/building a new facility. A collapsing Barre City’s dispatch into the Montpelier dispatch center was explored but dismissed. Barre City did not want to participate in this option and concern over a reduced staffing model caused CVPSA to abandon this idea. The CVPSA Board believes the leasing model is the preferred way of moving forward.

Cost

The following cost model is the projected costs to both Cities showing the costs under the CVPSA operated center versus what the Cities would pay on their own. The “Net Costs” is the cost to taxpayers.

Summary of 5 Year Net Costs AS IS and To BE with CVPSA Lease Option						
Fiscal Years	FY20	FY 21	FY 22	FY 23	FY 24	5 Year Total
BARRE CITY'S CVPSA NET COST (To Be)	771,190	647,550	669,556	692,749	712,105	3,493,150
Barre City Net* Costs - What it has, does and will cost. (AS IS)	772,771	690,526	711,228	732,829	755,433	3,662,788
Percentage Decrease - As IS vs To BE	0%	-6%	-6%	-5%	-6%	-5%
MONTPELIER 'S CVPSA NET COST (To Be)	397,280	318,943	329,781	341,205	356,457	1,743,666
Montpelier Net* Costs - What it has, does and will cost. (AS IS)	427,120	336,450	348,173	360,546	373,662	1,845,951
Percentage Decrease - As IS vs To BE	-7%	-5%	-5%	-5%	-5%	-5%

*** Assumes Capital Costs for new technology and ongoing software support for both Cities and CVPSA.**

**Summary of 5 Year Gross Operating Costs for CVPSA New Facility
using the lease Options**

New Facility Option - Summary Costs	FY 19	FY 20	FY 21	FY 22	FY 23	FY 24	5 Year Total
LEASING A NEW FACILITY - CVPSA Recommendation (TO BE)		1,668,790	1,476,820	1,519,872	1,564,899	1,610,938	7,737,239
GROSS TOTALS - Each City Operating Dispatch (As IS)		1,700,212	1,537,303	1,579,936	1,624,320	1,670,659	8,112,430
Today's Actual Combined Total	1,450,872						
Savings		(31,422)	(60,483)	(60,064)	(59,421)	(59,721)	(271,110)
Percentage Decrease - As IS vs To BE		-2%	-4%	-4%	-4%	-4%	-5%

This cost models above indicates a cost reduction of 5% both in gross operating costs and net costs to the Cities can be achieved. Further information on this cost model can be found in Section 13 “Budget Appropriation and Assessment”. **Important to note in these “AS IS” budgets is a cost to each community for the purchase of Computer Aided Dispatch System (CAD)².**

Operational Issues

Operationally CVPSA will assume all responsibilities for dispatching services. The staff will be transitioned to be employees of CVPSA, a collective bargaining agreement will be negotiated, and payroll, human resources and financial management will be assumed by the Authority. Additional funds have been planned that will allow for equalizing difference in pay between the two Cities. Also, it is the intent of CVPSA to honor the seniority of each dispatcher and credit them for time served as a dispatcher in either City. This model is highlighted by operating the new center based on how the centers are operated today and growing and changing the center over time. Once the new center is fully operational and staff have adapted to the new change other changes associated with new policy and procedures and performance measures will be instituted. Along with potentially a new radio system and a computer aided dispatch system this center will evolve into a state of the art dispatching service.

² A definition of CAD can be found at https://en.wikipedia.org/wiki/Computer-aided_dispatch, video of CAD <https://www.youtube.com/watch?v=-6YDkAMgyno>

The CVPSA will cause the facility to be renovated as necessary to perform public safety dispatching services. Additional equipment positions will be purchased to not only meet the needs of the new facility but to ensure that dispatching can be accomplished out of Montpelier. A hosted phone system will be installed that meets the needs of not only dispatching but connecting back to the individual fire/EMS and police departments.

Leasing a facility is the quickest way to assume responsibility for dispatching. Acquiring a new facility will take considerably more time and require hiring an architect familiar with NSPA 1221 standards to design such a facility. This will add more costs to the project.

This plan also does not include the costs to each City for maintaining an open staffed police department (keeping the lights on). Removal of dispatching staff will create a void in the individual police departments ability to maintain a 24-hour open facility.

Time Line

The project time line is dependent upon which phases of this plan is implemented. A CAD is not necessary to get started with merging the staff into one site, but it must be part of an overall new facility plan. For the purposes of this exercise CVPSA is using the recommendation of a leased facility. The start date will be when the City Councils provide the authority to proceed. The time line will not be indicated in hard dates but in months to completion. The first month is the authorization date. A detailed task list can be found in appendix D of this document. A summary is below.

Lease facility, purchase equipment, train staff, negotiate a CBA and move equipment.
Time Required: 1 – 9 months

Purchase and implement a new Computer Aided Dispatch System (CAD)
Time Required: 1 – 19 Months

Linking the above projects together can reduce the overall time by 4 months. This means the total maximum time line required for both projects is 24 Months.

Improvements in the radio system will require more time. While radio improvements are necessary for improved communications between dispatch and the fire service this project should be viewed as a separate initiative from merging of the dispatch functions.

Purchase a new simulcast radio system
Time Required: 3 – 5 Years



Central Vermont Public Safety Authority

"Together is Better"



STRATEGIC PROJECT AND BUDGET PLAN FOR THE CVPSA COMMUNICATIONS CENTER

1. Objective

The Authority will exist for only one purpose and will have but one management goal: to enable central Vermont Communities to be safer from crime, fire, and medical emergencies through thoughtful, technologically sophisticated, communications and response between providers and community.

The specific objectives of this plan are:

1. To enhance dispatcher's situational awareness of public safety activities in the central Vermont area, improve professional development and, improve working conditions.
2. To create a communication system that is efficient, delivering a uniform level of service.
3. To improve the radio system.
4. To incorporate technological improvements within the communication system.
5. To create a service level that is based on national best practices for dispatching services with input from appropriate public safety entities.
6. To create enough redundancy within the dispatch system so that continuity of operations can always be achieved.
7. To combine the current staff of the current Barre City and City of Montpelier dispatch centers into one center so the workload can be shared. Equipment positions can be staffed in a way so that multiple personnel are on duty at the same time.
8. To combine the human resources of the current Barre City and City of Montpelier dispatch centers into a single bargaining unit which will be recognized by the CVPSA, and to negotiate a single successor collective bargaining agreement ("CBA") to the current CBA's existent between the Barre City and its dispatchers and the City of Montpelier and its dispatchers.

2. Concept of Operation and Plan

The current dispatching centers will consolidate into one center under the management and direction of the Central Vermont Public Safety Authority. There will be a communications manager and one supervisor in the newly formed center. Initially, the center is expected to operate in the same manner, using the same type of equipment as they do now.

Work shall be done to train staff and implement common policies and procedures necessary to deliver a common service.

Four equipment (EQ) positions shall be implemented with an additional supervisor's position. The 13 staff shall be allocated in a manner such that a minimum of two equipment positions shall be staffed always

and a third EQ position shall be staff for up to 12 hours per day. Staffing levels and workloads will be evaluated to ensure the proper amount of EQ positions are filled to meet the workload demands.

An advisory board will be formed as necessary and required by law enforcement policy (FBI APB Security Policy) to guide service delivery of dispatching to the member public safety agencies and the partners.

The concept of this plan involves the following;

- Hold Community listening sessions to determine what the community's feel about consolidating dispatching service. Completed.
- Seek input from and offering membership into CVPSA to Capital Fire Mutual Aid System, Inc. Completed.
- Determine the costs/ availability of facilities within the greater Montpelier/Berlin/Barre City area.
- Develop a written plan.
- Seek "notice to proceed" from the City Councils.
- Secure a facility.
- Resolve labor/management issues.
- Develop a moving plan.
- Secure building and create a redundant dispatching service.
- Train staff.
- Form an advisory board.
- Establish a cut over process ensuring all systems work.
- Phase in a cut over process, bring one dispatch center over at a time.

3. Name

The Members hereby agree, to provide the services as described herein, and to create an entity to be known as the "Central Vermont Public Safety Dispatch Center" (the CV Dispatch Center).

4. Input into Operations

Input from appropriate public safety entities will be received by the Board and management regarding the dispatch service delivery. It will also be necessary to execute the necessary management and control agreement with the Vermont Department of Public Safety/Vermont Crime Information Center to ensure the police departments continue to receive the criminal justice information necessary to perform their jobs.

5. Financial Liability

The financial obligations of the CVPSA and the Members shall not commence until the effective date for transferring operational authority to CVPSA. This ceding authority document, operation plan and budget plan shall be the formal request for the legislative bodies to vote on ceding such authority to the CVPSA. This requirement is consistent with 901§ 54 (b) "Ratification" of the Central Vermont Public Safety's Charter. CVPSA shall assume direction and management responsibility for dispatching services after a vote to do so is received along with an operational budget.

6. Provision of the Central Vermont Public Safety Dispatch Center

CV Dispatch Center

The CV Dispatch Center, operating out of a single center, shall provide direct services to Members and partners.

When necessary, the CV Dispatch Center personnel shall receive direction from recognized police and fire supervisors as necessary to carry out the service in an emergency.

7. Responsibilities of the CVPSA

The Board of Directors of the CVPSA shall oversee and direct the creation of the CV Dispatch Center as an operational entity, including all matters pertaining to its furnishings, operating equipment and operational policies and procedures except as otherwise noted herein, in accordance with the provisions and requirements of the Annual Operational Plan and Budget. All CV Dispatch Center staff shall be employees of the CVPSA. The CVPSA Board of Directors, through its Director of Public Safety or other senior manager, shall have sole responsibility and authority to oversee, direct, manage and supervise the operations of the CV Dispatch Center, and to hire, set the compensation for, supervise, discipline and terminate all CV Dispatch staff in accordance with all labor agreements.

8. Responsibility of Members

The Members shall make available the dispatch facilities located within their cities, so dispatch redundancy can be achieved in the event of a system failure or other disaster. Members shall work to appropriate the necessary funds to operate the Center(s). The members agree to work with the CVPSA to ensure that equipment is maintained in a manner that allows for the continued operation of the centers. Costs for repair and maintenance shall be paid first by the CVPSA based on the budget provided by the members. Cost overruns shall be identified, and payment shall be negotiated by the CVPSA and the Members.

Assets and equipment currently owned by the Members shall remain owned by the Members and transferred or moved to meet the needs of the dispatching center. When an asset reaches its end of life and needs to be replaced it shall be replaced at the expense and direction of the CVPSA.

9. Records and Reports

The CVPSA Board of Directors shall ensure the creation and maintenance of complete records of all meetings, decisions, directives, policies, procedures, operations, financial transactions, and all other records and reports pertinent to the business of the CV Dispatch Center. All records shall be maintained in accordance with the requirements of Vermont's Access to Public Records Law, Title 1 V.S.A. § 316. The CVPSA Board of Directors shall include in its annual report information summarizing the activities operations and finances of the CV Dispatch Center during the prior fiscal year. The operations of the CV Dispatch Center shall be included in the CVPSA annual audit.

10. Management of the CV Dispatch Center

The Executive Director shall provide administrative and management services to the center and report to the CVPSA Board of Directors. A communications manager and a supervisor shall oversee the day to day supervision of the dispatching function.

11. Annual Operating Plan and Budget

The CVPSA Board of Directors shall deliver to the Member legislative bodies the “Annual Operating Plan and Budget” for the next fiscal year in accordance with the time requirements and manner as outlined in the CVPSA Charter 901§ 28, Budget Appropriation and Assessment.

The Annual Operating Plan and Budget shall delineate all anticipated revenue and costs. Including the number, classifications and compensation of CV Dispatch Center staff, all anticipated non-labor expenses and a list of capital expenditures.

Material deviations from the plan and budget for reasons of emergencies, or otherwise, shall be reported to the legislative bodies of the Member Cities in a timely manner which shall consider the need, if necessary, to amend the plan and budget.

12. Apportionment of Costs

The Members, City of Barre and the City of Montpelier, shall share all costs of the CV Dispatch Center based on a workable formula created by combining a “readiness” component with a “service fee” (a demand for service) component. The population of each community provides the best metric for the readiness component. A 34% of the total dispatching costs will assessed for the readiness component and 66% of the total costs will assessed for the service fee or calls for service component. Initial costs shall be apportioned among the parties based on this formula minus any revenue generated by their contracting partners. However, to initiate this funding concept accurate calls for service must be collected. This will take three years. In the meantime, a cost formula based on “net costs” will be used.

Current debt such as pension liability debt, and employee accrued leave liability shall be the responsibility of the Members to determine how it is paid. The CVPSA will be responsible for all debts associated with employees after the personnel become employed by the CVPSA.

For the first 5 years revenue that would have been credited to the two dispatch centers will continue to be credited to the respective Cities. Thus, reducing their costs.

13. Budget Appropriation and Assessment

The CVPSA shall annually assess on each Members its proportionate share of the net costs of operating the CV Dispatch Center in accordance with the annual budget approved by the CVPSA Board of Directors. The approved budget shall be submitted for review and comment by the member legislative bodies. The budget for operating the CV Dispatch Center along with the operational budget of the CVPSA shall be presented to the voters of the Members community in

accordance with the CVPSA Charter Chapter 901 § 28(b)(1), Budget Appropriation and Assessment.

The below estimates of costs indicate there will be a savings under a CVPSA New Facility Dispatching Center.

Summary of 5 Year Net Costs Showing the Projected As Is (No consolidated dispatch) of Each City Providing Their Own Dispatching									
Fiscal Years	FY 17	FY 18	FY 19	FY20	FY 21	FY 22	FY 23	FY 24	5 Year Total
Barre City Net* Costs For There Own Dispatch	571,976	595,752	603,458	772,771	690,526	711,228	732,829	755,433	3,638,383
Montpelier Net* Costs For There Own Dispatch	292,138	304,777	289,517	427,120	336,450	348,173	360,546	373,662	1,825,884
Total Revenue Received				500,321	510,328	520,534	530,945	541,564	2,603,691
Total Gross Operating Costs Each City Would Spend on there Own Dispatch				1,700,212	1,537,303	1,579,936	1,624,320	1,670,659	8,112,430
Summary of Gross Operating Costs between what the Cities would spend on their own vs under a consolidated CVPSA model.									
Projected Gross Operating Costs Each City Would Spend on there Own Dispatch				1,700,212	1,537,303	1,579,936	1,624,320	1,670,659	8,112,430
Projected Gross Operating Costs for CVPSA Regional Dispatching				1,668,790	1,476,820	1,519,872	1,564,899	1,610,938	7,841,319
Savings				31,422	60,483	60,064	59,421	59,721	271,110
Summary of 5 Year Net Costs Showing the Costs under a CVPSA Consolidated Dispatch Model									
Barre City Net* Costs Under CVPSA Consolidation				771,190	647,550	669,556	692,749	712,105	3,493,150
Montpelier Net* Costs Under CVPSA consolidation				397,280	318,943	329,781	341,205	356,457	1,743,666
Total Revenue Received				500,321	510,328	520,534	530,945	541,564	2,603,691
				1,668,790	1,476,820	1,519,872	1,564,899	1,610,126	7,840,507
Projected Net Costs for CVPSA Regional Dispatching				1,168,469	966,493	999,338	1,033,954	1,069,374	
Projected Gross Costs for CVPSA Regional Dispatching				1,668,790	1,476,820	1,519,872	1,564,899	1,610,938	7,841,319
Savings				31,422	60,483	60,064	59,421	59,721	271,110
* Assumes Capital Costs of a new CAD and on going software support for both Cities and CVPSA beginning in FY 20.									

The first section of the above chart shows the net costs to each City if they do nothing (AS IS) and continue to operate their own dispatching centers.

The second section from the above chart shows the cost difference between the gross operating costs of an AS IS model versus a consolidated CVPSA model. Notice the costs are less.

The last section illustrates the net costs to the Cities under a consolidated CVPSA operated dispatch center. Notice that a savings of approximately \$271,110 can be achieved. The CVPSA model begins to contain dispatching costs. **Again, this potential savings is based on the assumption that CAD**

software³ will be purchased by each dispatch center if no consolidation occurs. This cost projection does not include the costs for keeping the police departments staffed in the evenings.

This cost sharing formula used to determine each City's net costs under a consolidated CVPSA dispatching model is derived from taking each City's projected net costs as a percentage of the total net costs. The percentage breakdown is 67% the first year for Barre City and 66% per year in the 2nd, 3rd and 4th year. Montpelier's percentage breakdown is 33% the first year and 34% per year in the 2nd, 3rd and 4th year. The three-year average of known net costs (FY 17-FY 19) indicated the average percent of net costs between the Cities was 66.59% for Barre City and 33.25% for Montpelier. The percentages have been slightly altered to equalize the outcome savings, making each City receive a 5% savings over a 5-year period.

14. Payment of Assessment

The payment for the net annual costs of operating the CV Dispatch Center shall be assessed to each Member in a warrant the Treasurer of the CVPSA issues to each Member's legislative body. This assessment shall be performed annually, on or before July 1 and the assessment is to be paid in a schedule established by the CVPSA Board of Directors all in accordance with the CVPSA Charter Chapter 901 § 31, Collection.

15. Admission of Additional Members

New member municipalities shall be admitted as members of the Central Vermont Public Safety Authority as stipulated in the CVPSA Charter Chapter 901 § 49. This section is not intended to preclude agencies or departments of a municipality from contracting with the Authority for services.

16. Withdrawal

Any Member may withdraw from ceding authority to the CVPSA to administer dispatching services by providing at least one-year written notice and after a vote by their legislative body. A withdrawal by one member effectively dissolves the Central Vermont Public Safety Dispatch Center (CV Dispatch Center) as a system forcing the other municipality to take responsibility to manage and direct their own dispatching center. Contracted partners must choose which dispatch center they will receive services from. Upon the dissolving of the CV Dispatch Center the Member Cities agree to honor any contracted agreements with partner public safety agencies that were negotiated with the CVPSA.

This section is not intended to supersede the CVPSA Charter 901§ 48, withdrawal of a municipality, and does not mean that a Member is withdrawing from the CVPSA.

Any City Manager of a Member that has presented withdrawal notice from the CV Dispatch Center to its appropriate legislative body for action shall immediately notify the other Member(s) and the CVPSA Board of Directors of such pending action.

³ A definition of CAD can be found at https://en.wikipedia.org/wiki/Computer-aided_dispatch, video of CAD <https://www.youtube.com/watch?v=-6YDkAMgyno>

Any pending capital expense, debt, or equipment owned by the CVPSA that is crucial to the operation of a dispatch center shall become the financial responsibility of the individual Members.

The CVPSA and Members agree to collaboratively work together on a withdrawal transitions plan to return dispatching service to where it was before ceding of authority for CVPSA to administer the service occurred.

17. Insurance

The CVPSA Board of Directors shall assume the liability for operating the CV Dispatch Center and shall maintain insurance coverage to cover liabilities incurred by the CV Dispatch Center. The cost for such insurance shall be presented in the Annual Operating Plan and Budget.

18. Fiscal Year

The fiscal year of the CV Dispatch Center shall begin on July 1st and end on the following June 30th.

19. General Provisions

The CVPSA charter is the governing document for all issues relating to the transfer, cost assessment, membership, and operations of public safety services.

20. Operating Standards, Training and Performance Measures

The CV Dispatch Center shall work towards delivering a professional dispatching and communication service that meets, to the extent possible, the training and operating standards of the Association of Public Communication Officials (APCO), applicable NFPA standards or equivalent agency.

To the extent that funding is available, policies and procedures shall be created that meet national best practices regarding public safety dispatch standards. Policies and procedures will be taken from Montpelier and Barre City and merged. New fire dispatch procedures are currently being developed by the Barre City Fire Department. These policies will be taken for endorsement by Capital West. The CV Dispatch Center shall operate delivering a service that meets the service expectations of the contracted partners (customer driven approach to service delivery). Management and staff will work together to review and implement these standards and procedures to determine what is achievable within the CV Dispatch Center. Management and staff shall also work together to develop performance measures for the dispatching function. Base line measures will be established and tracked over time.

21. Operational Implementation Issues

a. Governance

The CVPSA Board of Directors will establish the budget for the new system and work with the City Councils as necessary to ensure the dispatch center operates efficiently and, in a cost, - effective manner. The CVPSA will provide, to the City Councils and taxpayers, yearly budget estimates based on the requirements contained in the CVPSA charter.

To ensure that the Central Vermont Dispatch Center maintains its ability to receive, use and disseminate criminal justice information the necessary management and control agreement will be entered with the Vermont Crime Information Center. The scope of this agreement will include the use of all computers, electronic switches and routers, mobile data computers, and manual terminals which interface directly with VLETS / NCIC will be under the oversight of criminal justice agencies.

b. Leadership and Supervisory Needs

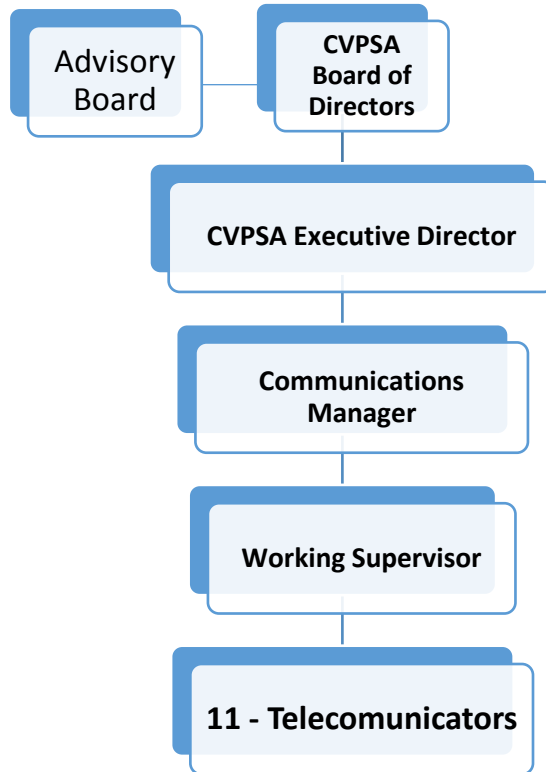
The Central Vermont Public Safety Dispatch Centers will be led on a day to day basis by a Communications Manager. One supervisor shall be appointed to help oversee the operations at the Barre City Communication Center. The Communications Manager shall be an employee of the CVPSA. The CVPSA Executive Director will administer and provide oversight management to the dispatching center and shall be a CVPSA employee. The communications manager shall be responsible for the day to day operation of the center and report to the executive director. The supervisor shall report to the communications manager. Management and supervisory personnel shall be hired by the CVPSA and operate under personnel rules adopted by the CVPSA or a CBA. Staffing shall grow based on the dispatching service growth and/or available funding.

The organizational chart on the next page is an ideal staffing structure. Initially it may be necessary to have the communications manager serve as a working supervisor. While a working supervisor is identified.

c. Staffing

The following is an organizational chart that conceptualizes the startup staff levels of the new system.

Central Vermont Public Safety Dispatch Center
Proposed Structure for FY 20, effective July 1, 2019 (DRAFT)



d. Labor Issues

The CVPSA will look to emulate the labor management model contained in Act 46. As soon as both cities have made the decision to cede authority the CVPSA Board would appoint a negotiations council for negotiating with the future representative of the employees;

The Fraternal Order of Police (FOP) has agreed to establish a new bargaining unit and represent the future employees.

The FOP will gather signatures or take the necessary actions to establish that employees desire to be represented by the FOP. The FOP will then petition the CVPSA to voluntarily recognize it as the employee's representative.

The CVPSA Board would recognize FOP as representative of a new bargaining unit composed of dispatchers from Barre and Montpelier.

CVPSA and FOP would begin negotiating a new contract for the dispatch unit per 21 VSA Chapter 22, Vermont Municipal Labor Relations Act.

The CVPSA Board of Directors intends to manage the transition of the employees to the CVPSA in a manner that is consistent with T. 16 V.S.A. § 1802 (2016 Act 46), Transition of Employees to Newly Created Employer. Specifically, the CVPSA Board will;

- Appoint a negotiating committee,
- Recognize the representatives of the Employees as the authorized individuals to negotiate for the employees,
- Negotiations shall begin as soon as possible after the City Councils authorize the “ceding of authority to begin on a particular date,
- An employee of the Cities who was not a probationary employee shall not be considered a probationary employee of the CVPSA,
- If a new agreement is not ratified by both parties prior to the first day of the transition to employment with the CVPSA then;
 - The parties agree to comply with the existing agreements in place for the employees until a new agreement is reached;
 - The parties agree to the provisions in the respective current contract regarding issues of seniority, reduction in force, layoff, overtime and other operational decisions until a new contract is negotiated. Until a new contract is negotiated only volunteers shall be sought to work in the other dispatch center.
 - On the first day, the employees begin work with the CVPSA, the CVPSA will assume the obligations of existing individual employment contracts, including accrued leaves and associated benefits with the employees of the Cities now employed with the CVPSA.

The CVPSA intends to create an equitable pay system for employees. This will ensure employees who are merged into a CVPSA managed service will receive compensation and benefits equal to what they received when working for the Cities. Seniority will also be carried over into a CVPSA managed service. The collective bargaining process will have to dictate the specifics of pay and benefits and other negotiated employment items.

e. Payroll, Administrative, Financial and Human Relations Needs

The CVPSA plans to implement a software system that will electronically track employees time and process employees pay and benefits.

A software system, such as ADP Payroll Services, will be purchased. This software system along with additional modules to include the Human Resources package will allow for a complete tracking of employee’s time, payroll and benefits. It will be accessible to the employees in real time. The CHRM certified human resource services includes a help desk and an electronic employee handbook along with other features. ADP includes an accounting software at no extra expense.

Two web sites are listed below with further information on this software system.

<https://demos.adp.com/RUN//runComplete.html>

<https://demos.adp.com/RUN//hr411/index.html>

The CV Communications Center will have 13 employees and the executive director. CVPSA believes the executive director, serving in a senior management capacity can manage the human relations function for the employees and meet the payroll needs of the employees. The executive director will also be responsible for the financial aspects of the organization including the accounts payable and receivable. The executive director will administer the needs of the communications center.

f. Facility Space Needs and Costs Estimate

Detailed information regarding space requirements and estimated costs may be found in appendix B.

g. Equipment

Equipment shall be replaced as it nears the end of its life cycle. All equipment will remain owned by the respective City. Any equipment replacement plan in place currently within the Cities shall be adopted by the CVPSA. In the absence of a plan one will be developed.

Any equipment failure shall be fixed and/or repaired in the same manner that provides for the efficient and effective dispatching of emergency service providers. Outside managed services shall be hired to fix radio and dispatch equipment position issues. Also, technology support by an outside business shall also be contracted with to provide computer repairs and necessary updates. The phone system is planned to be a hosted solution through Consolidated Communications.

Emergency equipment malfunctions will be handled in the same manner as it managed today. The costs of repair shall be paid for out of the respective dispatching budgets. The CVPSA and the Cities agree to work together to ensure that all equipment necessary for dispatching is operational, repaired when necessary and costs for such repair shall be paid for out the current budget negotiated for the operation of the dispatch service. In the event of a catastrophic equipment failure where a significant cost is incurred (beyond the available budget) the CVPSA and the Cities shall work together to determine the manner of paying for the repair. For the purposes of this plan equipment and assets are defined as all equipment necessary to operate the dispatch centers and includes but is not limited to; computers (all information technology equipment, hardware, software and servers), telephones, radio (to include consoles and receivers and transmitters) recording devices, and furniture.

h. Radio Connectivity and Costs

Radio systems need to work at the new facility. Burlington Communications (BCS) has provided a cost estimate of \$18,000 for radio and dispatch equipment positions yearly support. A conversion to an E-Lan solution (provided by Consolidated Communications) connecting the numerous radio towers with the dispatch center must be done. CVPSA also needs two base stations one VHF and one UHF for a cost of \$6K per, which is \$12,000.

Radio issues especially with the Fire Departments served through Capital West and dispatched by the Montpelier Police Department require fixing. Many dead zones and “talk over” issues exist. Capital West has been working on this matter for years with limited success. They are in the process of getting new frequencies licensed so the “talk over” issues can be reduced. Obtaining proper licensing through Industry Canada is often problematic. The total anticipated cost of this radio fix, which is called the radio

simulcast project, is expected to be about \$1.3 Million. Finding a source of funding for the radio project is a challenge. This is a separate project from the single site dispatching or any dispatch integration project. The radio system that is in place today works. The problems identified have been problems for years. It is not necessary to fix this radio problem before any integration of dispatching services in Central Vermont occurs. However, it must be recognized that these radio problems cause inefficiencies in dispatching to exist that is often frustrating to dispatchers. Therefore, acknowledgement must be given to work on and try and advance a fix.

i. Phone Requirements and Costs

current thinking is that a hosted phone system is the preferred way of providing a phone system for a new dispatch center. Representatives from Consolidated (Fairpoint) is currently working on developing a cost for a hosted system.

j. Dispatch Equipment Positions

The new dispatching center will require the purchase of three (3) new dispatch equipment positions. Two positions will be removed from Montpelier leaving the supervisor position behind. The new positions will go in the new dispatch center which brings a total of four (4) working equipment positions and a supervisor's position in the center. The approximate costs are anticipated to be \$125,000.

k. Records Management (RMS) and Computer Aided Dispatch (CAD) Systems

Both police departments currently use the Valcour RMS. This system is not a CAD but both departments use portions of the Valcour RMS to meet some of their dispatching needs. Valcour is used by many municipal police departments in Vermont. The developer of Valcour has been in planning for some time to incorporate CAD functionality into the Valcour RMS. However, progress has not occurred with building a CAD. It appears that Valcour may not support creating and interface with other CAD vendors. As both dispatching centers have not been functioning with a CAD a CAD system will not be purchased as part of this planning process. It is recognized that acquiring CAD functionality is important to developing a highly efficient dispatching system. Therefore, the acquisition of a CAD will be a priority if the CVPSA is given the responsibility to manage and direct dispatching.

l. Technology support

Technology support can potentially be provided by the same business as used by the City Montpelier. The Tech Group has been contacted and provided CVPSA with a quote of \$4,500 per year for computer support.

m. Generator Needs

A generator will have to be provided at an expense of approximately \$25,000. it is expected the facility will need a 50KW sized generator to provide enough back up power. It may be possible to obtain a state/federal grant for this purchase. Enough backup systems (power etc..) to operate at the new site must be in place.

22. Continuity of Operations

Currently thought is being given to using the Barre City Public Safety Building as a backup facility. Dispatch Equipment positions currently in use at this location will remain. Another smaller dispatch

equipment position will be purchased to replace the equipment being removed from the Montpelier dispatch center. The Montpelier Police Department needs to be able to provide limited dispatching out of their facility. This would also allow for addition redundancy for the CVPSA Communications Center.

It is the intent of CVPSA to provide the necessary redundant dispatching functions in case a catastrophic event was to eliminate or reduce the services operating out of the new single site. Currently the two existing dispatch services are in a flood plain. It is the intent of CVPSA not to locate a new dispatching site in a flood plain, but we will utilize the existing facilities as back up.

23. Appendix A – Operating Budgets

Projected budgets for leasing a new facility for dispatching using all employees and adding equipment positions.							
Account Description	FY 19	FY 20	FY 21	FY 22	FY 23	FY 24	Notes:
ADMINISTRATIVE EXPENSES:							
Executive Director - Part time		70,000	71,400	72,828	74,285	75,770	
Payroll, HR and Financial Services		10,000	10,100	10,300	10,500	10,500	
Facility and Equipment Purchase ****		285,000	57,500	57,500	57,500	57,500	
Sub Total	100,000	365,000	139,000	140,628	142,285	143,770	
Dispatch OPERATING EXPENSES:							
Salary and wages**	748,411	783,379	799,047	815,028	831,328	847,955	20K added in FY 20 and 2% growth
Overtime/part time	136,850	36,850	37,587	38,339	39,106	39,888	
Dental insurance	5,295	5,348	5,402	5,456	5,510	5,565	
FICA / Medicare	69,231	74,077	79,263	84,811	90,748	97,100	7% increase
Health insurance***	185,136	191,060	201,569	212,655	224,351	236,690	3.2% in FY20, 5.5% increase
Flex spending	1,750	1,750	1800	1800	1800	1900	
LT Care insurance	-	-					
Retirement	70,768	76,429	82,544	89,147	96,279	103,981	8% increase
Life insurance	6,795	6,931	7,070	7,211	7,355	7,502	2% increase
Unemployment insurance	1,935	1,935	1,935	1,935	1,940	1,940	
Workers comp insurance*	19,022	3,885	4,002	4,122	4,245	4,373	3% increase
Tuition reimbursement	1,000	1,000	1,000	1,000	1,500	1,500	
Parking fee	1,720	1,800					
Uniforms	2,100	2,100	2,200	2,300	2,400	2,400	
Office supplies	5,300	5,300	5,500	5,500	5,500	5,500	
Postage	50	150	15	150	150	150	
Operating supplies	5,600	5,600	5,700	5,800	5,900	5,900	
Advertising	800	800	800	800	800	800	
Tel, cellular and pager	8,400	8,400	8,400	8,400	8,500	8,500	
Tel, Vlets	8,200	8,200	8,200	8,400	8,400	8,400	
Computer access	8,400	8,400	8,400	8,400	8,500	8,500	
Dues and subscriptions	500	500	500	500	500	500	
Training	10,500	10,000	10,000	10,000	10,000	10,000	
Prop & Liab insurance	5,090	9,785	10,079	10,381	10,692	11,013	3% increase
Equipment repairs and maintenance	26,900	50,000	50,000	50,000	50,000	50,000	
Generator Support - \$25,000							
Technology support - \$7,000							
Radio support - \$18,000							
Sub Total - \$50,000							
Computer replacement	2,500	2,500	2,500	2,800	2,800	2,800	
Copier	1,130	4,500	1,200	1,200	1,200	1,200	
Travel	2,000	2,000	2,000	2,000	2,000	2,000	
Vision	1,110	1,110	1,110	1,110	1,110	1,110	
Pension principal	2,560	-					
Pension interest	11,819	-					5 Year Total
GROSS TOTAL	1,450,872	1,668,790	1,476,820	1,519,872	1,564,899	1,610,938	7,841,319
Revenue	455,858	500,321	510,328	520,534	530,945	541,564	2% increase
Net Total	995,014	1,168,469	966,493	999,338	1,033,954	1,069,374	
Percentage Increase		17.43%	-17.29%	3.40%	3.46%	3.43%	
* Workers comp reduction is based on VLCT PACIF estimate for an estimated payroll of \$863,000 given to CVPSA							
** In FY 19 for Barre the salary and wages include the longevity and holiday for 6 FTE's. This line item includes 6 FTE's.							
***Spending on Health Care Projected to Increase 5.5% Annually Through 2026,							
American Physical Therapy Association, PT in the News, February 20, 2018							
**** Assumes \$35,000 in lease payments and one time costs for equipment at \$125,000 and a new CAD at \$125,000 and on goping costs for CAD at \$22,500.							
NOTE: Montpelier has to determine how to pay for the pension interests they budget for now. Barre City may also need to determine pension buy outs.							
Assumes a \$1000,000 reduction in overtime.							

Costs that would be incurred if the Cities provided their own dispatching are highlighted below.

	Combined Approved FYE 19	Combined Projected FYE 20	Combined Projected FY 21	Combined Projected FY 22	Combined Projected FY 23	Combined Projected FY 24	
OPERATING EXPENSES:							
Salary and wages	748,411	763,379	778,647	794,220	810,104	826,306	
Overtime/part time*	136,850	139,587	142,379	142,379	145,227	151,093	FY21, FY23 2% increase
Dental insurance	5,295	5,348	5,402	5,456	5,510	5,565	
FICA / Medicare	69,231	107,308	113,210	121,135	129,614	132,936	5.5 increase
Health insurance	185,136	191,060	201,569	212,655	224,351	236,690	3.2% in FY20, 5.5% increase
Flex spending	1,750	2,860	2,860	2,860	3,000	2,860	
LT Care insurance	0	0				-	
Retirement	70,768	76,429	82,544	89,147	96,279	103,981	8% increase
Life insurance	6,795	6,931	7,070	7,211	7,355	7,502	2% increase
Unemployment insurance	1,935	2,000	2,000	2,100	2,100	2,100	
Workers comp insurance	19,022	35,000	36,000	37,080	38,192	36,000	3% increase
Tuition reimbursement	1,000	2,000	2,000	2,000	2,000	2,000	
Parking fee	1,720	-	-	1,750	1,780	-	
Uniforms	2,100	2,600	2,600	2,600	2,600	2,600	
Office supplies	5,300	6,153	6,153	6,153	6,300	6,153	
Postage	50	54	54	60	60	54	
Operating supplies	2,100	3,289	3,289	3,300	3,300	3,289	
Advertising	800	836	836	850	850	836	
Tel, cellular and pager	8,400	8,400	8,400	8,400	8,500	8,400	
Tel, Vlets	8,200	8,699	8,699	8,400	8,400	8,699	
Computer access	8,400	8,400	8,400	8,400	8,500	8,400	
Dues and subscriptions	500	522	522	500	500	522	
Training*	10,500	7,500	7,500	10,000	10,000	7,500	
Prop & Liab insurance	5,090	12,700	12,900	13,287	13,686	12,900	3% increase
Equipment repairs and maintenance*	26,900	34,659	34,659	35,352	36,059	34,659	2% increase
Computer replacement*	2,500	2,614	2,614	2,800	2,800	2,614	
Copier	1,130	1,181	1,181	1,200	1,200	1,181	
Travel	2,000	3,137	3,137	2,000	2,000	3,137	
Vision	1,200	1,200	1,200	1,110	1,110	1,200	
Pension principal	2,560	1,333	-			-	
Pension interest	13,280	12,085	12,200	12,300	12,400	12,200	
Capital Expense CAD*		250,000	45,000	45,000	45,000	45,000	
TOTAL	1,348,923	1,697,265	1,533,023	1,579,705	1,628,778	1,666,379	
REVENUE	455,858	500,321	510,328	520,534	530,945	541,564	
Net Cost	893,065	1,196,944	1,022,696	1,059,170	1,097,833	1,124,815	
Year On Year Change		34.03%	-14.56%	3.57%	3.65%	2.46%	

*Capital Expense CAD assumes each City will purchase a CAD.

ASSUMPTIONS MADE FOR THE CREATION OF THIS BUDGET

CAD will need to be purchased by each City at \$125,000 each.

Pension interest continues to be budgeted for by Montpleier.

Benefit increases are shown in the outside column.

Overtime continues to increase at a rate of 2%.

24. Appendix B – Facility Space Needs and Costs Estimate Notes

A facility suitable for operating a communication center must be located. The current dispatching centers operate out of an approximate combined space of 1,000 sq. ft. However, because they are located with police departments the employees have access to locker room areas including showers and workout facilities. A new facility must take into consideration the following space requirements;

- Space for four (4) working dispatch equipment positions and one (1) supervisors dispatch equipment position.
- Kitchen break room
- Conference room
- Training room sufficiently large enough to be converted into an emergency operations center.
- Executive Directors and Manager/Supervisor office
- Storage
- Equipment room
- Locker rooms and bunks.
- Fitness room

The new dispatch center must be an attractive work environment for the employees. It also must be a secure facility.

Consideration should be given to creating a space that will meet the needs of a unified public safety department headquarters. This could be accomplished by ensuring that at a minimum there is sufficient office space for a Director of Public Safety and adequate meeting rooms. It is envisioned that this headquarters would house senior management and the communications center. In the vision for a unified public safety entity offices and services would be localized in the communities they serve.

The following square footage of space is identified for a new facility that could house a unified department headquarters building. ⁴

Number of FTE's (A)	Space Allocation Per FTE (B) Sq. FT.	Space Allocation (A x B) Sq. Ft.
First 5	246	1,230
Next 5	195	975
Additional 4	185	740
Space Envelope:		2,945
Plus Special Purpose Space:		600
Total Gross Space Required (X 1.3)		3,545
Total Gross Space Required (X 1.3)		4,608

⁴Capital Improvement Plan 2007-2011, Estimating Project Costs – Space Planning, City of North Las Vegas

Total Gross area includes general circulation, bathrooms, etc. a multiplier of 1.3 is used to calculate the total gross space.

This space and cost estimate is intended to be a preliminary model for understanding the overall costs involved in moving away from the two current dispatch centers.

FACILITY COSTS

The new facility cost per square foot is estimated to be between \$275 and \$350. Based on the square footage identified above the estimated costs for a new facility is between \$1,267,200 and \$1,612,800.

The square footage to rent a facility is estimated to be approximately \$14 per square foot. The rental model is based usage of the facility just for a communication facility. The overall square footage is reduced to 2,500. This means the approximate costs for rental property would be approximately \$35,000 per year.

In summary the costs for a facility would range from \$35,000 per year to a high end for a capital expense of \$1,612,800.

If a 20-year bond at a 3% interest rate was borrowed for the entire amount of \$1,612,800 the annual repayment cost would be approximately \$108,405 per year for 20 years. Therefore, the potential annual costs for a single site facility would run between \$35,000 and \$108,405 depending on whether they're is a lease or purchase/build of a building. Determining the exact construction or lease costs depends on the estimates received from an architect familiar with public safety buildings.

A request for information (RFI) has been distributed and five (5) responses were received. This RFI is intended to seek information on available locations and potential costs of facilities within the greater Montpelier/Berlin/Barre City area. The RFI validated the cost range mentioned above.

Listed below is a summary of the RFI results.

NAME	LOCATION	SQUARE FOOTAGE AVAILABLE	SPECIAL CONDITIONS	COST
Malone Properties	856 RT 302, Berlin, VT AKA Cherry Hill Plaza	12,000	multi-tenant new construction parcel. Above the flood plain between Montpleier and Barre City. Currently houses Aspen Dental, Miracle Ear and Cricket Wireless	Could purchase this space as a condominium or lease. Lease minimum is 5 years but prefer 10 years. Build out can be 100% paid by developer and amortized over the term of the lease or paid for by CVPSA thus lowering lease.
Stone and Brown Property Management	654 Granger Rd. Berlin, VT	5,000	Municipal water and sewer, ample parking, propane heating units, central air systems. Fiber optic cabling in the building. Meets all of CVPSA initial requirements. Shares building with other tenants including a gym. The property managers are willing to provide the necessary security including a separate entrance to control public traffic.	Willing to structure a lease so CVPSA is only paying for space that is being used. Willing to pay for build out costs. The preliminary price estimate is between \$10 and \$14 per sq. ft. Total using 2,500 SF = \$35,000 per year
Connor Group	367 Rt. 302 Montpelier	fully permitted for a 10,000SF w/58 parking spaces. Willing to lease 5,000 SF. 15 year lease.	Concrete pad for generator. Out of the flood plane. Easily accessible. Municipal water and sewer.	Lease pricing will be very competitive.
Richard Bushey	42 Parker Rd Wilson Industrial Park	6,000SF warehouse w/10,000SF parking lot.	High speed internet, phone, town water and sewer basic electrical package and two bathrooms.	parking lot, insulated building envelope, exterior wall finishes, basic electrical package and two bathrooms. Tenant will provide: Fit up of building. Lease: \$12 SF per year. Water, sewer, electric, heat rubbish, snow removal and lawn care and insurance by tenant. Total = \$72,000 per year plus fit up
Nicholson Holdings, LLC	3122 Airport RD, Berlin, VT	2 Acres with 1,250 SF structure expandable to 2,500 SF	Town water and sewer. Site has redundant power supply, out of flood zone. Multiple routes of entry. Economically viable development for the site. Large enough for future growth.	Purchase for \$450,000. Rent current 1,250 space after \$20,000 fit up is \$1,800 per month, rent additional 1,250 SF space at \$3,800 per month. Total using 2,500 SF = \$67,000 per year

If this project (purchasing/building a new facility) moves forward the next step is to engage an architect to create a design. The NSPA 1221 standards for building a dispatch facility must be taken into consideration with any new dispatch center. The CVPSA is recommending leasing a facility.

25. Appendix C –Radio, Cell & Broadband: Problem, Solution & Plan

a PROBLEM

Crowded frequencies complicate emergency communications. To many locations are without cell coverage and towns do not have broadband services sufficient to operate mobile data terminals in their emergency vehicles.

Vermont’s emergency responders rely on radio communications to talk to each other in critical situations. But clear space on the airwaves are not available to fire and police in Central Vermont. Other Vermont dispatchers as well as French-speaking Canadian taxi cab companies interfere with dispatching in Central Vermont.

Specifically, the fire department members of Capital West, dispatched out of the Montpelier Police Department suffer the greatest amount of interference. According to Scott Bagg, chair of the Capital West Communications Committee, Cap West wants a system that is going to be able to transmit and reach all the towers simultaneously and he wants all the responders, no matter if they are in Cabot or Roxbury, to hear each other and be able to talk to each other through a unified, dedicated system⁵.

Fred Cummings, dispatch supervisor in Montpelier, states too much radio traffic can lead to dispatchers missing transmission and this can have life and death consequences⁶.

In summary, interference from outside agencies including Canadian commercial entities and the interference caused by too many people talking on the radio (talk over) leads to dispatcher frustration and difficulties in providing efficient communications. This problem has existed for some time and must be faced and fixed.

At a meeting with representatives of the Capital Fire Mutual Aid System members they spoke of a lack of adequate cell coverage in many of their towns as being a big problem. The Fire Chief in East Montpelier highlighted the problem advising that he relies heavily on two-way radio communications when dispatched to a call because cell coverage is poor. Reliance on two-radio communications contributes to the overcrowded frequencies and “talk over” problems.

b SOLUTION

Capital Fire Mutual Aid System and their Communications Committee (Capital West) have been working on solutions for radio interference for some time. A proposal for a radio simulcast system was received in January of 2017, costing approximately \$1,223,526.

Simulcast refers to the process of transmitting the same signal from *different tower locations over the same frequency at the same time*. For public safety communications, this typically means multiple towers: configured to transmit the exact same communications, on the exact same frequencies, at precisely the same time. This can result in better coverage of a wide-area or a dense area with higher populous and/or buildings⁷.

⁵ Crowded Radio Frequencies Complicate Emergency Communications, VPR News, December 11, 2015.

⁶ Crowded Radio Frequencies Complicate Emergency Communications, VPR News, December 11, 2015.

⁷ RadioReference.com, <https://wiki.radioreference.com/index.php/Simulcast>

The Capital West Communications Committee agreed that a simulcast radio system is the solution. Two new tower sites, new repeater equipment, new FCC licensing, reprogramming of radios are all part of the solution.

The Barre City Police Department has also expressed the need to improve their radio system by implementing a radio simulcast system. To develop an efficient single site public safety dispatching center all public safety entity's in Central Vermont must be part of simulcast system. Therefore, proper engineering and design must be part of the solution and factored into ongoing planning.

Participating in other groups, such as the Central Vermont Communications Union District and the Public Safety Broadband Commission (FirstNet), will help promote the need for improved services in Central Vermont.

Sharing in the cost for improvements is a critical factor in implementing solutions to these communication problems. A rough cost estimate for acquiring a radio simulcast system for fire departments participating in the Capital West Communications Committee has been prepared. This cost estimate assumes a capital cost of \$1.6 Million dollars, paid back over 20 years at a 3% interest rate. The annual cost based on this assumption is presented below.

Radio Project Annual Costs	\$109,076.00		Readiness	Dispatching							
			50.000%	50.000%							
			Fire Calls	28.139%	EMS Calls	71.861%					
TOWN / CITY	FIRE				MEDICAL				Budget	Budget	Budget
	Avg Calls	% of Calls	Eq Gnd List	% EqGL	Avg Calls	% of Calls	Eq Gnd List	% EqGL	Readiness	Dispatching	Total
Barre City	574	21.759%	4,699,410	7.888%	2,086	30.963%	4,699,410	9.684%	\$5,005.76	\$15,474.25	\$20,480.01
Berlin	262	9.932%	6,834,530	11.472%	332	4.928%	6,834,530	14.083%	\$7,280.07	\$3,455.53	\$10,735.60
Cabot	68	2.578%	1,532,130	2.572%	190	2.820%	1,532,130	3.157%	\$1,632.01	\$1,500.89	\$3,132.89
E Montpelier/Calais	127	4.814%	3,961,850	6.650%	370	5.492%	4,963,030	10.227%	\$5,028.67	\$2,891.24	\$7,919.91
Marshfield	64	2.426%	1,333,050	2.238%	0	0.000%	0	0.000%	\$343.39	\$372.31	\$715.70
Middlesex	102	3.867%	2,043,370	3.430%	149	2.212%	2,043,370	4.211%	\$2,176.58	\$1,460.16	\$3,636.74
Montpelier	466	17.665%	8,315,700	13.958%	1,381	20.499%	8,315,700	17.136%	\$8,857.80	\$10,744.71	\$19,602.51
Moretown	56	2.123%	2,140,980	3.594%	0	0.000%	0	0.000%	\$551.51	\$325.77	\$877.28
Northfield	136	5.155%	3,259,180	5.471%	820	12.172%	3,259,180	6.716%	\$3,471.64	\$5,561.42	\$9,033.07
Plainfield	74	2.805%	1,150,500	1.931%	177	2.627%	1,150,500	2.371%	\$1,225.50	\$1,460.16	\$2,685.66
Roxbury	22	0.834%	677,430	1.137%	0	0.000%	0	0.000%	\$174.50	\$127.98	\$302.49
Waitsfield/Fayston	117	4.435%	6,894,490	11.573%	0	0.000%	0	0.000%	\$1,775.99	\$680.63	\$2,456.63
Walden	42	1.592%	1,005,990	1.689%	40	0.594%	1,005,990	2.073%	\$1,071.57	\$477.03	\$1,548.60
Washington	47	1.782%	1,019,700	1.712%	88	1.306%	1,019,700	2.101%	\$1,086.17	\$785.35	\$1,871.52
Waterbury/Duxbury	255	9.666%	8,368,760	14.047%	636	9.440%	8,368,760	17.245%	\$8,914.32	\$5,183.29	\$14,097.61
Williamstown	137	5.193%	3,181,850	5.341%	385	5.715%	3,181,850	6.557%	\$3,389.27	\$3,036.68	\$6,425.95
Woodbury/Calais	56	2.123%	2,251,620	3.779%	44	0.653%	1,250,440	2.577%	\$1,589.86	\$581.74	\$2,171.59
Worcester	33	1.251%	904,430	1.518%	39	0.579%	904,430	1.864%	\$963.39	\$418.85	\$1,382.24
	2,638	100%	59,574,970	100%	6,737	100%	48,529,020	100%	\$54,538.00	\$54,538.00	\$109,076

c PLAN

Steps to advance the solutions to these problems:

i. Telecommunications – Broadband and Cellular

- Seek input from the CVPSA member, Capital Fire Mutual Aid System, to determine their interest in working on this issue.
Time Required: 2 Months
- Contact the Central Vermont Communications Union District to determine what if any synergy can be created by working together to bring attention to public safety telecommunication needs.
 - Contract, if necessary with someone, to determine cell phone coverage areas to document areas that need coverage.
Time Required: 1 Month
- Continue to promote the need for increased broadband and cellular coverage in Central Vermont with our Congressional delegation, the Vermont General Assembly and the Governor’s office.
Time Required: On going
- Seek input and/or contract with a firm that can conduct a comprehensive plan for public safety telecommunications planning in Central Vermont.
Time Required: 9 Months

ii. Radio Simulcast Solution

- Seek input from the CVPSA member, Capital Fire Mutual Aid System, to determine their interest in working on this issue.
Time Required: 2 Months, can be combined with task above.
- Travel to each Town and meet with all Select Board members to develop an understanding of the problem and to seek their support in finding a funding solution.
Time Required: 6 – 8 Months
- Continue to seek federal funding for this solution. This task becomes important after visiting with all towns and getting their unified support for a solution to the radio problem. A unified
Time Required: 6 Months
- Consider a sole source solution, which would negate the task above, using Motorola product acquisition. Determine if Motorola can perform the proper engineering design to ensure the purchase, siting and design of additional rad committed understanding of the problem and the need for a solution should bode well in any future grant application.
Time Required: On going.
- Contract with a radio engineering firm to help design a solution that includes all public safety entities in Central Vermont (Cap West and Barre City Police) ensuring all radio system improvements will operate efficiently with the new single site dispatch center.
- Determine if an approximate \$1.2-\$1.6 project should be sole sourced.
Time Required: 3 Months
- Determine if the Burlington Communications proposal can be done in phases and seek appropriate funding for the phases. Implement work as funding is found.
 - Time Required: 7 – 12 Months

The telecommunications planning and radio improvement project is expected to be a minimum **two-year** endeavor to perform the planning and seek funding opportunities necessary to move to implementation.

26. Appendix D - Project Time Lines

The project time line is dependent upon which phases of this plan are implemented. A CAD is not necessary to get started with merging the staff into one site, but it must be part of an overall new facility plan. For the purposes of this exercise CVPSA is using the recommendation of a leased facility. The start date will be when the City Councils provide the authority to proceed. The time line will not be indicated in hard dates but in months to completion. The first month is the authorization date.

Lease facility, purchase equipment, train staff, negotiate a CBA and move equipment.
Time Required: 1 – 9 months

Purchase and implement a new Computer Aided Dispatch System (CAD)
Time Required: 1 – 19 Months

Linking the above projects together can reduce the overall time by 4 months. This means the total maximum time line required for both projects is 24 Months.

Improvements in the radio system will require more time. While radio improvements are necessary for improved communications between dispatch and the fire service this project should be viewed as a separate initiative from merging of the dispatch functions.

Purchase a new simulcast radio system
Time Required: 3 – 5 Years

The following is a list of key tasks that need to be completed for this project(s).

Task Name	Duration in Days	Duration in Months
Notice to Proceed	7	
Tentative Decision on Facility Location	23	
Lease Signed or Renovations Started	38	
Backup Systems in Place - Continuity	102	
Negotiate a CBA	143	
Develop a moving plan	45	
Support Contracts in Place.	73	
Form Advisory Policy Board (APB)	15	
Gather and Review Existing Policies	2	
Update policies and receive staff input	40	
Obtain approval from APB for policies	35	
Develop VCIC Management Control Agreement	20	
Execute Management Control Agreement	3	
Purchase new equipment consoles	74	
Equipment is moved into new location	73	
Install all Technology	77	

Install Radios and Consoles	77	
Install Phones	72	
Develop Mission, Vision and Core Values	11	
Training on Policy, Procedures and Ethics	5	
Staff is trained and ready for cut over testing	1	
Cut Over Testing Occurs	10	
Go-Live Operations Begin for Montpelier	1	
Go - Live Operations Begin for Barre City	1	
Operational Transition Total Time Without CAD	261	8.7
CAD⁸ Acquisition interfacing with Valcour	Days	Months
Procurement Specifications	122	
Procurement Cycle	21	
CAD Deployment	115	
CAD Implementation	95	
Workstation Installation	20	
Interface development	70	
Training and functional testing	90	
System live cutover	30	
Total CAD Acquisition Time	563	18.77

The operational transition to a single site dispatching center and the computer aided dispatch system (CAD) project are linked but the transition does not have to be held up waiting for the CAD to be purchased. The two centers are not operating a CAD now, so they should be able to move into a new center working in the same manner as they do now.

The transition time to move into a new facility will require approximately 9 months (rounded up from 8.7 months) and could be achieved, if a notice to proceed was provided in November 2018, and CVPSA waited until after the budget was approved (March 2019) the operational transition would occur in the time November of 2019.

The acquisition of a CAD will require approximately 19 months (18.77 months) to complete. The CVPSA believes the acquisition of a CAD is a best practice that needs to be implemented along with consolidating the dispatch centers, so work should begin at the same time. Therefore, planning for this acquisition should occur as soon as the budget is approved. Purchase specifications can occur while the transition to a new center occurs. This means 122 days or 4 months can be reduced from the overall projected time of 19 months for CAD acquisitions. A new CAD could be operational sometime in November of 2020.

⁸ A definition of CAD can be found at https://en.wikipedia.org/wiki/Computer-aided_dispatch, video of CAD <https://www.youtube.com/watch?v=-6YDkAMgvno>