Schenectady County

Model for a Unified Communications Center

SUBMITTED: December 11, 2008

FINAL REPORT

NYSTEC

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Table of Contents

Executive Summary

The New York State Technology Enterprise Corporation (NYSTEC) is engaged with Schenectady County, New York on a study exploring options to the County's emergency dispatch operations. Recognizing that there are inherent operational and fiscal inefficiencies in maintaining multiple emergency dispatch centers, Schenectady County commissioned this study to determine the feasibility of establishing a centralized dispatch operation that could handle service calls from multiple municipalities and agencies.

Background and Process

Schenectady County currently has five Public Safety Answering Points (PSAPs), operated by municipal police agencies, which were established in 1995 with the implementation of enhanced 911 service. At that time, consolidation was considered; however, it was decided that the most expeditious path would be to upgrade existing police communications centers to PSAPs capable of dispatching all emergency service agencies within their own jurisdictions. Although this configuration has worked reasonably well, it segregates emergency response by jurisdiction and requires greater resources (personnel, supervisory, and equipment) than would a more consolidated system.

In 2007, the County, the City, the five towns and two villages submitted an application for funding through the New York State Shared Municipal Services Incentive Program to study the feasibility of central dispatch. The effort was successful and through funds obtained Schenectady County engaged NYSTEC to conduct this central dispatch feasibility and implementation study.

Since there is no single model for a consolidated dispatch center, the County directed NYSTEC to thoroughly investigate the needs and desires of all municipalities and agencies and base consolidation recommendations on meeting local requirements within a "best practice" framework. NYSTEC conducted numerous presentations and site visits in an effort to gather inputs from all interested parties. Either directly or indirectly, NYSTEC consultants met with and captured needs from virtually every law enforcement, fire, EMS and other public safety agency in Schenectady County. NYSTEC also regularly participated in a forum with elected officials representing all Schenectady County municipalities.

Key Findings

A number of call answering and central dispatch service models were researched and explored with the key stakeholders. Through the community process, a consensus emerged for creation of a Unified Communications Center (UCC) which would receive all emergency calls and dispatch all emergency service agencies throughout the County. The police chiefs, currently operating municipal PSAPs, and the fire chiefs advocated a centralized dispatch center to improve coordination of information and mutual aid service. Based upon this consensus, NYSTEC created a UCC model with size and staffing based upon call volume and functionality, developed an operating budget, identified capital equipment needs and provided facility site requirements.

Benefits of a Unified Communications Center include the following:

- **Improved Public Safety** – The UCC will improve public safety by better focusing emergency response efforts and resources now and in the future. It will also be a significant first step toward consolidating related systems such as radios and CAD as these systems are upgraded or replaced.
- **Improved Operational Efficiency** – The UCC will improve interoperability among emergency response agencies, standardize protocols, and result in better situational awareness.
- **More Efficient Use of Resources** – The UCC model staffs eight call taker/dispatchers and one supervisor per shift as opposed to the current structure, which requires twelve between the existing PSAPs. A UCC also reduces the number of dispatcher consoles from 18 to 12, which will reduce future equipment upgrade and maintenance costs. A stable supervisory structure, standardized training, and a promotional ladder promise to improve morale and reduce personnel turnover.
- **Greater Cost Effectiveness** – The annual operational cost of the UCC (exclusive of equipment startup and facility debt service costs) is estimated to be less than the total that would be spent by Schenectady County and the municipalities. Future grant funding is recommended to be targeted at the equipment and facility needs of the project.

Proposed Operational Model

Creation of a Unified Communications Center will improve public safety and reduce dispatch expense in Schenectady County. The following framework emerged through the study process:

- **Shared Services Model** – Schenectady County will have general responsibility for the operation of the UCC. Each of the participating municipalities would contract with Schenectady County to provide the services for its community.
- **Long-term contract** of 20 years or more is needed to assure UCC continuity and consistency.
- **Policy advisory committee** composed of chief elected officials and a **technical advisory committee** of police chiefs, fire chiefs and other public safety personnel will ensure that the UCC meets its mission while being responsive to the needs of all municipalities and emergency service agencies.
- **Labor** – Staff of the UCC will be county employees under the proposed model.
- **Maintenance of Effort Cost Sharing Model** – The proposed cost sharing model, which apportions municipal contributions based upon their 2008 adopted budget for PSAP expense, is designed to create cost savings for all municipalities that currently support dispatch operations. Municipalities not currently paying for dispatch services will pay flat fee amounts increased incrementally over a multi-year period.

Study Background and Approach

Schenectady County, the City of Schenectady, the Towns of Rotterdam, Niskayuna, Glenville, Princetown, and Duanesburg, and the Villages of Scotia and Delanson are jointly interested in evaluating the feasibility and cost-effectiveness of centralizing emergency dispatch functions. Enhanced 911 capabilities have been in place since 1995, with each municipal police agency agreeing to dispatch police, fire, and Emergency Medical Services (EMS) within their respective jurisdictions.

At the present time there are five public safety answering points (PSAPs) in use in Schenectady County. These PSAPs are operated by the City of Schenectady, Town of Rotterdam, Town of Glenville, Town of Niskayuna, and, from its location in the Town of Princetown, the New York State Police. Over time, this de-centralized arrangement has posed challenges resulting in operational inefficiencies, primarily in information sharing. The municipalities have reached a consensus to explore improvement options and to look specifically at the feasibility of a central dispatch center. The overall goals of this multi-jurisdictional initiative are improved public safety, cost savings and efficiency.

In 2007, this inter-municipal consortium applied for and received $100,000 in New York State Shared Municipal Services Initiative grant funding to study the feasibility of centralizing emergency dispatch functions. Schenectady County, as lead agency, let a request for proposals, interviewed prospective consulting firms, and contracted with NYSTEC for this study.

Timeline

This study and report is the product of nearly a year's worth of analysis, fact-finding, facilitation among various shareholders and shared decision making. The following timeline reflects major milestones and deliverables.

December 2007

Project Kick-Off – The study kicked off in December 2007 with a presentation to the Technical Advisory Group, a multi agency group of public safety professionals.

January 2008 – May 2008

Analyze Existing PSAP Systems - Current PSAP operations throughout Schenectady County were examined. Budgetary and staffing figures were compiled and analyzed.

NYSTEC worked with many local agencies in gathering data for the central dispatch study. Visits to existing dispatch centers, including visits during various shifts, were conducted to see firsthand current procedures and operations. Activities completed for the analysis of current operations included:

- Site visits to the City of Schenectady, Niskayuna, Glenville, Rotterdam and State Police Princetown dispatch centers
- Interviews with municipal chiefs of police

- Interviews with other law enforcement officials
- Interviews with fire and EMS agency representatives
- Interviews with working dispatchers
- Interviews with County communications and emergency management personnel
- Meetings with elected officials
- Compilation of communications center data
- Gathering of operational, management, and governance model information
- Research on possible operational configurations, governance models, and management structures.

January 2008 – May 2008 — Best Practices – Concurrent with the fact-finding, NYSTEC compiled a Best Practices document. Best Practices serve as a benchmark and guideline upon which to base a new/revised PSAP operation.

May 2008 — Model Summary – Based on input gathered from the fact finding, a number of PSAP models were constructed. These high-level outlines provided conceptual blueprints upon which to base the final consolidated PSAP. These models were presented and ultimately, with input from shareholders, a Unified Communications Center (UCC) was selected as the best option for the county.

June 2008 – November 2008 — Prepare Draft Report – A draft report was compiled and highlights from the report were shared with various shareholders such as police chiefs, fire administrators, the Schenectady County Committee on Intergovernmental Cooperation and others. Key decision points were made during this process which led to the finalization of this report.

December 2008 — Final Report/Final Presentation – Upon submission and distribution of this report, NYSTEC and others will provide final presentation of the proposed solution and respond to questions.

Decision Making/Facilitation

NYSTEC contractors worked with Schenectady County staff to keep key stakeholders informed of the study's progress. The effort was to be inclusive, capturing as much input and information as possible. In addition to the fact finding described above, progress reports and key findings were shared during the following:

Regular Updates – NYSTEC staff met with County Legislative Committee Chairs and staff and on a regular basis to keep them abreast of discussions, meetings and general feedback received from public safety officials.

Formal Meetings – NYSTEC staff updated the Schenectady County Manager's Office on an ad hoc basis with regards to overall structure of the UCC, facility options, policy issues and cost sharing models. Members from the Schenectady County Committee on Intergovernmental Cooperation sometimes sat in on these discussions.

Presentations – NYSTEC and County staff presented a summary update on the report to the Schenectady County Fire Advisory Board. Informal updates were provided to law enforcement on an ad hoc basis.

Schenectady County Committee on Intergovernmental Cooperation – NYSTEC and Schenectady County staff provided milestone updates to this body, comprised of elected officials representing all county municipalities, on a regular basis. During these meetings NYSTEC helped facilitate navigation through key decision points which emerged as the analysis of centralizing dispatch operations progressed. Core decisions regarding UCC structure, cost-sharing, staffing and labor were made during these meetings. Driving issues resolved by the Committee on Intergovernmental Cooperation were:

- Utility – The Committee concurred that a UCC would provide Schenectady County with improved public safety, lower costs and a strong basis for greater cooperation among municipalities.
- Structure – Based on data provided by NYSTEC and the input of stakeholders interviewed by NYSTEC, the Committee concurred that a fully functional UCC that took public safety calls and dispatched personnel was the best option for the county.
- Governance – Based on practicalities of a countywide function, Schenectady County was proposed as the entity to operate the UCC with advisory committees of county/municipal representatives and public safety representatives helping to create and steer UCC operations.
- Cost Sharing – Upon reviewing various cost sharing models, the Committee concurred that maintenance of effort was the preferred model for sharing costs.
- Grants – The Committee strongly encouraged the pursuit of grants to underwrite development of a UCC.

Recommendations mentioned throughout this report were guided by the Schenectady County Committee on Intergovernmental Cooperation and its members representing every county municipality.

Analysis of Existing Operations

At the current time five public safety answering points (PSAPs) exist in Schenectady County. These are located in the City of Schenectady; the Towns of Rotterdam, Niskayuna, and Glenville; and the Town of Princetown, where the New York State Police man a state-run PSAP. NYSTEC visited each of these facilities to interview staff, collect data, and observe operations.

Participating Agencies

Personal interviews, surveys and related information gathering were completed with the following agencies. Some were approached individually, others as part of a consortium or other representative body. Currently, no agreement formal or informal has been established with any of the agencies below. However, should Schenectady County consolidate its dispatch, the following agencies would comprise its utilization.

Law Enforcement

Town of Glenville
Town of Niskayuna
Town of Rotterdam
Village of Scotia
City of Schenectady
County Sheriff
State Police[1]

EMS

Duanesburg VAC
Rotterdam EMS
Esperance
ALS: Niskayuna #1, Schenectady Fire Department, Rotterdam Police.
Mohawk Ambulance Service – call transfer for MAS dispatch.

Fire

Delanson
Duanesburg
Mariaville
Quaker Street
Alplaus
East Glenville
Scotia
Beukendaal
West Glenville
Thomas Corners
Glenville Hill
Glenville District 4
Niskayuna Consolidated 1
Niskayuna District 2
Stanford Heights
Plotterkill
Rotterdam Junction
Rotterdam
Carman
Pattersonville
Pine Grove
South Schenectady
Schonowe
Stratton ANG FD
City of Schenectady

Other Emergency Services Organizations

Schenectady County Office of Emergency Management
Schenectady County Office of Fire Coordinator
Schenectady County E-911 Communications
Schenectady County Public Health Department
Schenectady County Auxiliary Police

[1] E-911 call taking/dispatch only. Dispatch procedures will need to be established with the State Police.

Existing PSAP Findings

The five PSAPs answered a total of 75,024 wireless and wire line E-911 calls and over 291,000 7-digit calls in 2007. Appendix A provides a chart detailing the available call volume data by municipality.

The City of Schenectady answers more than 72% of all 911 calls in the county. This figure includes answering 60% of all wire line E-911 calls and answering *all* wireless 911 calls for the entire county. Wireless calls answered by the city for dispatching in other jurisdictions are subsequently patched through to the appropriate agency for response. As the wireless answering point for all of Schenectady County, the city PSAP is required to meet New York State E-911 Board standards. These standards are not yet mandatory for traditional wire line PSAPs in New York State. The city is the only one of the four municipally run PSAPs which meets these standards.

The outlying suburban areas of Niskayuna, Glenville and Rotterdam account for 52% of the population and 26% of the total 911 call volume: Glenville 11%, Rotterdam 9%, and Niskayuna 6%. Wire line call volume for the towns of Duanesburg and Princetown comprise approximately 2% of total county E-911 call volume. Overall, however, 911 calls comprise just 20.5% of all calls to PSAPs in Schenectady County with 7-digit, usually non-emergency calls constituting the remaining 79.5% of PSAP calls in the county.

Some municipal PSAPs offer services for residents beyond call taking and dispatch. For example, the towns of Glenville and Rotterdam offer service windows staffed by dispatch personnel while Rotterdam and Niskayuna answer private alarm calls through their dispatch centers.

Appendix B provides an overview by PSAP as to the current staffing, protocols and equipment.

A total of 52 full-time-equivalent (FTE) dispatchers are working for the four municipal PSAPs. The city of Schenectady employs 20 full-time dispatchers, including dispatch-supervisors, plus one full-time director. Rotterdam employs 11 full-time dispatchers plus one dispatch-supervisor while Glenville employs 11 full-time dispatchers and Niskayuna 9 full-time dispatchers. Employment figures for full-time dispatchers are based upon budgeted positions; vacancies are not uncommon. In reviewing PSAP employment data it was determined that countywide turnover of 6-7 dispatchers per year is normal.

The adopted 2008 budgets for the county and its municipalities total a countywide figure of $4,318,160 for dispatch operations. This does not include amounts spent by the New York State Police for the fee-free dispatch operations it provides the towns of Duanesburg and Princetown nor amounts spent by the Schenectady County Sheriff's Office in having its regular staff answer a small number of dispatch calls.

Overview of a Proposed Unified Communications Center

After careful examination of the operations, procedures, and staffing at the five existing PSAPs, NYSTEC determined that the consolidation of emergency dispatch operations in Schenectady County would result in improved public safety, operational efficiencies and municipal cost savings. Upon reviewing existing PSAP operations throughout the county, NYSTEC analysts compiled three options for consideration:

1. **Unified Communications Center** – Schenectady County and local governments form a unified communications center (UCC) receiving all E-911 wire line and wireless calls along with selected seven digit telephone calls. The UCC would also perform all radio dispatch functions for law enforcement, fire, and EMS.
2. **Centralized Call Taking** – In this model, Schenectady County and the local governments form a similar UCC that would receive all E-911 wire line and wireless calls. Incoming calls would be sent to the local law enforcement dispatch center via the existing Hi Tech computer aided dispatch (CAD). The UCC would also perform countywide dispatch of fire, EMS, city police, sheriff and state police units. Since local PSAPs would no longer receive E-911 wire line and wireless calls, it is very likely that local PSAPs could reduce staff to a single radio dispatcher.
3. **Hybrid** – The third option is a combination of the above two options. Given that some municipalities would want to participate and others may not, a hybrid of the two models was explored.

Following review of the options and with the recommendations of local police chiefs and municipal leaders, Schenectady County and its municipalities opted to move forward with option 1, the Unified Communications Center. Upon this decision, NYSTEC worked with county and municipal officials in identifying and, to the extent possible, working through the steps necessary to create a UCC.

General Description

A countywide UCC would receive all emergency 911 calls (both wired and wireless) placed in Schenectady County as well as all 7-digit telephone calls currently made to local first responder agencies. The UCC would dispatch all law enforcement, fire, and EMS services throughout the county. The UCC would also be responsible for transferring and receiving transferred 911 calls for fire/EMS dispatch to out-of-county PSAPs or to commercial EMS providers. A UCC would also allow more seamless public safety coordination with adjacent counties, towns, and state and federal agencies as required.

It should be noted that the New York State Police will not dispatch or take 911 calls from its Princetown barracks effective 2010/2011. These dispatch operations for the State Police, serving the towns of Duanesburg and Princetown, are slated to be removed from Schenectady County and likely placed in suburban Albany County. There is a desire by all local municipalities to keep Schenectady County public safety call taking and dispatching within Schenectady County. A snapshot of a centralized Unified Communications Center is as follows:

UCC Overview

- A Unified Communications Center (UCC) would receive all emergency 911 calls (both wired and wireless) and all 7-digit telephone calls.
- Dispatches all law enforcement, fire, and EMS services throughout the county.
- Transfers and receives transferred 911 calls for fire/EMS dispatch to out of county PSAPS or to commercial EMS providers.
- Provide coordination with adjacent counties, towns, NYS, and federal agencies as required.
- Centralizes all call taking and dispatch in Schenectady County.
- Annual wire line and wireless 911 calls would number 75,000 with annual 7-digit calls estimated at 291,000.

Primary Benefits of a UCC

- Improved public safety in Schenectady County by unifying all wired and wireless 911 and 7-digit calls into a single operating center:
    - A consistent unified approach to dispatching and coordination from participating municipalities that meets New York State E-911 Board standards.
    - Lower long-term costs and easier long-term equipment upgrades.
    - Existing dispatch centers relieved of staffing, functions, and maintenance of a communications center.
    - Real time resource coordination of all police, fire, and EMS will improve public safety response times and cross-jurisdictional event response.
- Long-term economies of scale (staff, equipment, training).
- Financial analysis indicates savings: negligible in first year; approximately $100,000 annually beginning in year two; likely higher in later years as equipment is replaced.

Conversations with elected officials and first responder personnel also uncovered the need for enhanced integration of emergency services, particularly regarding communications. Creation of a centralized dispatch center would likely provide a foundation for future collaborations concerning emergency communications in Schenectady County.

Primary Challenges in Creating a UCC

- Local governments could perceive a loss of control of dispatch.
- Regional coordination and collaboration among many players can be difficult.
- Some municipalities have communications staff do "double duty" as both dispatcher and administrative assistant, clerical support etc. If communication functions are consolidated in a UCC, local PSAP managers will have to find new work for the clerk/dispatcher or replace the staff member should he/she leave.
- A UCC could be perceived as being staffed by dispatchers without 'local' knowledge.
- Current radio systems configurations must be addressed in the design of UCC effectiveness.

Administrative/Governance Structure

Several different ideas were studied related to the administrative and governance structure of the UCC. Models for UCC operations included:

- A shared services model in which local municipalities contract with Schenectady County for delivery of central dispatching services;
- Creation of a special countywide district that taxes landowners for UCC costs;
- Direct county takeover of all dispatch functions in Schenectady County with all costs borne by county taxpayers.

Governance Structure
Consensus was reached to move forward under the shared services model whereby Schenectady County is the operator of the UCC and local municipalities contract with the county for provision of emergency service call answering and dispatching throughout Schenectady County.

County government would have the responsibility for the ownership, management, operation, systems maintenance and repair, staff training and education of the Schenectady County Unified Communications Center. UCC staff would be county employees.

Two additional levels of oversight are recommended for the UCC:

1. Policy (Executive) Advisory Committee- A high-level board or committee responsible for policy, fiscal and regulatory affairs. Comprised of un-paid appointees representing the public.
2. Technical (Operational) Advisory Committee - An operational "management group" that sets standard operating procedures, acts as a conduit to the agencies served and directs more day-to-day operations. Comprised of police officers, fire officers and other 'end-users' of the UCC.

Policy Advisory Committee – comprised of elected officials
A UCC policy advisory committee comprised of the chief elected official or his/her designee from each of the participating municipal jurisdictions, including the county, is recommended. Under the shared services model, a policy advisory committee would be comprised of elected officials from the City of Schenectady, Schenectady County, and Towns of Rotterdam, Glenville, Niskayuna, Duanesburg, and Princetown.

The UCC Policy Advisory Committee would assist in the establishment of the UCC goals, review and advise on any material changes in recommended operations, staffing, budget development, contract amendments, cost sharing changes or any other matter relevant to this agreement.

Technical Advisory Committee – comprised of Law Enforcement, Fire, EMS and other working/uniformed officials
A UCC technical advisory committee comprised of the UCC Director, Deputy Director, each police chief, the City Fire Chief and 2 representatives of the Fire Advisory Board is also recommended. The UCC Technical Advisory Committee would assist in the development and enhancement of the

call answering and dispatching protocols, procedures and systems, recommend service levels and standards, and identify and address operational issues.

The technical advisory committee provides structure for the Executive Director to fashion a service that meets the needs of its constituency and a formal forum where police chiefs, fire officers, and other public safety representatives can voice their needs and requirements.

Participation in the UCC technical advisory committee would be unpaid, and would be assumed to be among the employee's regularly assigned duties and responsibilities from his or her local agency. Members must have a stated ability to meet monthly or ad-hoc under the direction of the UCC Executive Director.

Length of the Agreement

A long-term agreement is necessary to ensure the fiscal stability and viability of a UCC. An agreement of 20 years, which would assure UCC continuity and consistency as well as match long-term debt service obligations, was suggested as the basis for consideration by the Intergovernmental Committee. Memorandums of Agreements (MOA) among the municipalities would establish mission and scope, cost sharing formulas and other policy standards.

Labor and Staffing

Existing and Proposed Staffing

Currently, 52 full-time supervisors/dispatchers are employed throughout Schenectady County. Based on call volume and standard staffing ratios, the proposed UCC is estimated to require 38 dispatchers and 5 supervisors for operation, plus a director, deputy director, and one clerical staff member (see staffing model below). A study of attrition rates shows that cumulative countywide turnover of 6-7 dispatchers per year is the norm. Therefore, optimal UCC staffing should be achieved within 18 months after migration to the UCC.

As it is likely extra staffing will be necessary to maintain operations during the transition phase, it is recommended that staffing levels not be significantly reduced from current levels prior to opening of the UCC.

The UCC model is expected to increase operational effectiveness by staffing dedicated shift supervisors. Most current PSAP shifts do not have supervisors; in those that do, supervisors are routinely used as working supervisors in which they also serve in a dispatcher capacity. This dual-role reduces the ability of supervisors to train and guide staff during normal operations and serves to reduce overall organizational effectiveness. The proposed UCC staffing model alleviates this problem by providing one dedicated supervisor per shift and staffing adequate numbers of dedicated dispatchers, thus allowing shift supervisors to supervise.

The UCC staffing model recommends dispatch staff be allocated as follows: one city police dispatcher, one city fire dispatcher, one dispatcher for town police/county sheriff/state police, one town fire dispatcher, and two to four call takers per shift. This model takes into account the higher call volume found in the City of Schenectady while also recognizing the sometimes more intensive, cross-jurisdictional calls originating from the towns which require geographic knowledge now possessed by town dispatchers. All dispatchers and supervisors will be able to take calls and handle dispatch duties for all jurisdictions within Schenectady County.

Position	Qty	Description
Director	1	Overall UCC responsibilities; develops budget, initiates policy, enacts mission as provided by the UCC Management Group.
Assistant Director	1	Assumes responsibility in absence of Director; oversees hiring, training and regulatory matters
Secretary	1	Administrative support.
Shift Supervisor	5	Primary responsibility is ensuring staffing for the UCC, overseeing call taking and dispatch operations.
Dispatcher II	21	Operation of call-taking and dispatch consoles.
Dispatcher I	17	Operation of call-taking consoles.

Staffing by Shift

Shift	Dispatcher I	Dispatcher II	Supervisor
1	4	4	1
2	4	4	1
3	2	4	1
RF*	1.7	1.7	1.7
Total	17	21	5

*RF – rating factor, a standard for determining total number of staff required after factoring in vacation, sick time, training time, and related 'off work' time.

Consoles/Positions

Type of Console	Full-Time Operational	Standby/Supervisor
E911/7-digit call-taking positions (Dispatcher I)	5	1
E-911/7-digit call-taking positions with radio dispatch (Dispatcher II)	6	1

Labor Representation

The Civil Service Employees Association, Inc. (CSEA) provides union representation to dispatch employees in the City of Schenectady, Town of Glenville, and Town of Rotterdam. Employees in the Town of Niskayuna are not represented by a labor union. To centralize dispatch operations in the UCC, the County of Schenectady would have to engage in a functional consolidation that would include negotiating with current municipal PSAP employees in a collective bargaining arrangement.

Physical Plant

Many factors are involved in determining the best site for a UCC. Among the most important are proper sizing, adequate security, safety from hazards such as flooding, and, for cost considerations, existing site control. The UCC facility requires approximately 5,300 square feet. Appendix C provides a detailed breakdown of the space requirements. Potential sites are currently being explored as candidates for a UCC. Below is a list of some requirements for a UCC facility.

Requirement	Description	Importance
Total Square Feet	Overall size of the facility; 5300-plus square feet is ideal.	High
Flood Plain	Ideally, a structure should be far above the flood plain.	High
Public Water	Is public water available?	High
Grounding	The building should be easily grounded, electrically.	High
Secure from Intrusion	Facility should already have security in place, or it should be easily built-in.	High
Dual End/Telco	Is the facility located so that more than one Telco POP services it?	Medium
Fencing	Exterior fencing around the facility.	Medium
Parking	Parking is needed for two shifts.	Medium
Municipal Sewer	Can municipal sewer be hooked up easily?	Medium
Dual Commercial Power	Can more than one commercial provider provide power?	Medium
Internal Wiring/Distribution	Can internal technologies be easily wired? Is there overhead space, floor channels, etc?	Medium
Hazards	Facility should be located away from chemical plants, propane tanks, etc.	Medium
Accessibility	Can the facility meet ADA requirements easily or moderately easily?	Medium
Tower Space/Height	Can the facility hold a radio antenna?	Medium
Natural Gas	Can the facility be serviced by natural gas as a back up?	Low

Equipment

In meetings with county officials, local officials, and first responder personnel the purpose of a UCC was sometimes misunderstood. A proposed UCC would be a dispatching operations solution, not a broader communications operation solution. Therefore, it is necessary to establish lines of demarcation for equipment expense and maintenance before entering into an agreement to create a UCC.

The UCC would be responsible for the acquisition, installation, and maintenance of common equipment necessary to receive telephonic emergency calls and to dispatch the appropriate emergency service agency within any participating municipality. In performing the above, the UCC would also be responsible for meeting the New York State 911 Board's minimum requirements for a Public Safety Answering Point (PSAP), as set forth in 21 NYCRR Part 5203.

Equipment costs associated with a singular municipality should continue to be borne by that municipality. This category includes but is not limited to:

- Radio Systems – The UCC would cover expenses associated with being able to transmit dispatch instructions on a municipal radio system; however the radio system infrastructure, base stations, mobiles and portables will continue to be a municipal responsibility.

- Computer Aided Dispatch (CAD) Systems – The UCC would be responsible for CAD equipment necessary for dispatch purposes at the UCC. Agency specific CAD equipment, including terminals connected to the UCC system, would be paid for by the municipal agency. The existing Hi Tech Computer Aided Dispatch system can be retained and used at the UCC. Local law enforcement agencies can also accommodate CAD and there is a provision for an optional Records Management System.

- Administrative Telephone Systems – To the extent that the UCC is required to answer administrative telephone lines for a municipal agency, the cost for those lines will be paid for by the municipal agency.

Most existing dispatching equipment will not be usable in the new UCC. Estimated costs for new call-taking and dispatching equipment are included in Appendix F.

Interoperability

This section overviews the interoperability needs of the Unified Communications Center. It is not an engineering/technical review.

"Interoperability" implies the sharing of mission critical information among jurisdictions. Interoperability among agencies includes law enforcement, fire, or EMS or between different services. Interoperability can be viewed as two types: interoperability within the UCC and interoperability in the field among first responders.

Interoperability in the UCC

Inside the UCC, interoperability and the sharing of information among jurisdictions will occur as a procedural occurrence as all communication occurs in a single center. For example, in a law enforcement incident where a subject crosses boundaries (e.g., town lines), adjacent law enforcement responders will be notified at the same time. In a fire or EMS call, automatic mutual aid and pre-planned responses would be coordinated from a single point. Information sharing among law enforcement, fire, and EMS would also be coordinated based on mutually agreed protocols by the UCC policy advisory committee.

Interoperability in the Field

Currently, some law enforcement agencies in Schenectady County cannot talk directly to one another since they have different types of radios, are on different bands, etc. The UCC however, could provide interoperability among users via a console patch. For specific incidents, a console patch can be created to provide unit to unit (car to car) interoperability between dissimilar law enforcement radio systems. The console patch can combine two or more systems into a common channel. Participating law enforcement agencies will have connectivity available to their systems.

A disadvantage of console patches is that they become disruptive. Combining two or more busy law enforcement channels into a common channel can result in overloading, congestion, and inefficiencies. Disruptions like this can be avoided by establishing clear Standard Operating Procedures for the use of console patches (i.e., for emergency use only, not day-to-day talk).

Mohawk Ambulance has the capability to communicate with the City of Schenectady Fire Department using the UHF fire radio system. This capability could be used countywide where Mohawk is the EMS transport provider. Interoperability could also be achieved with Mohawk Ambulance if there was an agreement to establish connectivity between the Mohawk Ambulance radio system and the UCC. As with the dissimilar law enforcement radio systems a console patch could be used for interoperability.

Community based EMS providers can utilize the County UHF fire radio system for dispatch and communications.

Connectivity

This section overviews the connectivity from the UCC to the municipalities' existing Land Mobile Radio (LMR) Systems. Connectivity refers to how the UCC will transmit and receive signals from the field.

The UCC would be connected to agencies' existing LMR systems via leased telephone circuits, fiber, microwave, or radio frequency control stations. Municipalities and UCC planners would need to determine which method of connectivity would best serve existing systems.

Law Enforcement

Law enforcement radio systems are fragmented. The City, Sheriff, State Police, and Rotterdam use conventional VHF HB systems. The Town of Glenville uses a conventional 800 MHz system. The Town of Niskayuna uses an 800 MHz trunked radio system. Direct radio communications between the VHF HB and the 800 MHz systems is not possible. Direct radio communications between the conventional and trunked 800 MHz systems is not possible.

Fire System

All fire departments in the County use the Countywide UHF fire radio system. Using a single point of dispatch and communications will facilitate coordination. There is the assumption that the UHF fire radio system infrastructure will not change.

Redundancy

This section overviews the need for the Unified Communications Center to have available redundancy plans in the event of a catastrophic disaster like fire, weather or other natural or man-made disasters.

Redundancy Fundamentals

Redundancy plans should support the following features:

- Provisions for a two tiered back up system - short term and long term.
- Seamless failover so that no E-911 calls or user communications are lost.
- Back up with adequate telephone, secure broadband, and radio connectivity with public safety LMR systems.
- Adequate number of call taker and dispatch positions.
- Facilities for managers and operational staff.

Short Term – First Instance Redundancy

Currently, the City of Schenectady ensures that no 911 calls are unanswered by way of an agreement with Rotterdam; this is called a default. If the City's 911 center is non-functional, calls are automatically routed to Rotterdam. Similar agreements are in place throughout Schenectady County PSAPs.

A UCC redundancy plan would ensure that under no circumstance would 911 calls go unanswered nor would radio communications between first responders and dispatchers be lost. The short term redundancy solution would be used until the in-county redundancy facility is activated and staffed.

The policy advisory committee would help create the agreements to establish a redundancy plan. The committee would partner with adjacent county PSAPs to develop mutual cooperative agreements to provide redundant services to each other in the event that one of the PSAPs suffers a catastrophic failure. LMR connectivity, E-911 trunks, paging and alerting, logging recorders, CAD, and adequate numbers of console positions and operators would need to be mutually agreed upon. Rapid staff augmentation to the secondary PSAP would be necessary. The E-911 network would need to be configured so that if circuits are disrupted calls will automatically be routed to the redundant PSAP.

Long Term – In-County Redundancy

If the UCC is out of service for more than several hours, a redundant in-county communications center will need to be activated and staffed. It is likely that a current PSAP could act in this role.

Basic requirements include:

- Adequate space for consoles, operators, administration, and equipment
- Console positions, E-911 telephone equipment, instant recall and logging recorders, CAD, and seven digit telephone system
- Power – both primary and back-up
- Connectivity – primary and back-up E-911 trunks, radio connectivity with LMR systems, and access to broadband for CAD and New York Statewide Police Information Network (NYSPIN).
- Security – UCC and facility security including parking lots and storage areas
- Adequate number of call taker and radio dispatcher positions
- Staff facilities such as restrooms and minimal kitchen
- The in-county redundancy center should be located away from the primary UCC

UCC Budgetary Estimates

The 2008 adopted dispatching budgets for the city of Schenectady, towns of Glenville, Niskayuna, and Rotterdam, and Schenectady County (E-911 communications budget) total $4,318,160 (see Appendix D.)

Below are total cost estimates for a Unified Communications Center, including operational costs and debt service for facility and equipment. Appendix E provides detailed estimates for the personnel, OTPS, facility and equipment components of the budget, respectively. In 2008 dollars, expected year one operating costs for a centralized UCC are estimated at approximately $3,990,000; clearly more cost effective than the decentralized system. Preliminary estimates for new facility and equipment annual debt service costs total $375,000. With debt service, the total cost for year one would be $4,365,000.

UCC Cost Summary	**Year 1 (in 2008 $)**	**Year 2 (in 2008 $)**
Personnel Services	$3,470,000	$3,320,000
OTPS	$520,000	$520,000
UCC Operations Cost	**$3,990,000**	**$3,840,000**
Lease/Facility Debt Service (Physical Plant)	$140,000	$140,000
Equipment Debt Service	$235,000	$235,000
UCC Cost Including Debt Service	**$4,365,000**	**$4,215,000**

In year two, operating costs for a Unified Communications Center are expected to fall by approximately $150,000 (in constant dollars) as optimal staffing levels are achieved. The year two operating budget is estimated at $3,840,000 without debt service and $4,215,000 including debt service expenses. Inclusive of debt service, this provides approximately $100,000 in annual savings for Schenectady County and its municipalities.

Additional cost savings should also be realized beginning in years five and beyond. A centralized UCC would allow efficiencies of scale for equipment replacement and provide lower costs than if local municipalities continue to dispatch independently. In other words, short-term savings are slight; mid- to long-term savings are modest-to-good.

The possibility of grant funding, the effects of which were not included in UCC cost estimates, would result in greater savings. New York State municipal consolidation grants, similar to the grant which funded this study, are also available to help mitigate UCC capital costs and transitional personnel costs.

Cost Sharing Structure

There are many criteria upon which to base a cost sharing structure. Discussions with various stakeholders indicated key concerns were: predictability for participants, no big winners or losers, and fairness. Preliminary analysis resulted in three criteria emerging as possibilities upon which to allocate costs for the Unified Communications Center:

- Population – Municipalities contribute based on population, as per the 2000 Census count.
- Call Volume – Municipalities contribute based on usage, or number of 911 calls currently being received at their PSAPs.
- Maintenance of Effort – Municipalities contribute based on current investment so that no particular municipality is overly apportioned or under apportioned relative to current investment.

After analysis of the possible factors, a model based on maintenance of effort appeared to best meet the concerns of participating stakeholders. A model based on call volume became difficult to develop because accurate data was not available for all municipalities. Not all municipalities retain data on 7-digit calls and data by municipalities on the number of wireless calls was not available. Population became difficult to relate to service activity and costs.

Municipal Cost Sharing Synopsis

County of Schenectady The County of Schenectady collects a 911 surcharge, all of which is dedicated to emergency response activities. Approximately 90% of these revenues would be applied to the UCC operating budget with approximately 10% set aside to support ongoing and future equipment repair and replacement costs. The estimated revenues currently available to support the maintenance and operation of the UCC are $470,000 annually.

The Towns of Princetown and Duanesburg Currently, the towns of Duanesburg and Princetown incur no expense for dispatch operations. In discussions with elected officials, it has been made evident that it is unlikely these municipalities can absorb the full cost of partnership in a single year. A flat fee, phased-in approach over a multi-year period emerged as the most likely scenario for these two towns to participate in the UCC.

The City of Schenectady and the Towns of Glenville, Rotterdam and Niskayuna These municipalities presently pay for their own PSAP operations. A cost sharing formula which spreads UCC savings proportionately among these four municipalities, based upon each municipality's 2008 adopted budget PSAP expense, is recommended. The actual, contracted annual payments for UCC services each year will be inflated by typical cost increases reflecting salary, other than personnel cost increases and fringe benefit increases.

It is recommended that the Maintenance of Effort methodology be adopted as the cost sharing mechanism with the inclusion of specific time frames, perhaps at five-year intervals, for participants to re-examine this cost sharing formula. A five year time frame allows for maximum realization of UCC operational efficiencies and provides a sufficient period for UCC data collection and analysis. Regular cost sharing formula reconsiderations such as the five-year re-examination could be included within the long-term UCC contract.

Implementation Plan

Transitioning to a Unified Communications Center requires an implementation plan, providing for policy, management, administrative, and physical migration to the UCC. For purposes of this report, NYSTEC recommends a five phase approach:

1. Site Acquisition
2. Site Development – Construction
3. Site Development – Technical
4. Transition
5. On-boarding/Switchover

Site Acquisition
Upon the auspices of a UCC Steering Committee, the formal search for a site would be initiated. Using an agreed upon decision-making process, the committee completes a formal checklist to select a site. Once selected, this phase moves to actual procurement.

Site Development – Construction
Readying the site to be a UCC requires a scoping statement. This list of requirements details the specific physical plant upgrades/modifications required at the facility in order to "make it" a UCC. The scoping statement forms the basis for the County to develop bid specifications to outsource the construction work.

Typical exterior work includes: landscaping, parking, lighting, security provisions (fencing), fuel supply and backup generator installation. Likely interior renovations include: call-taking/dispatch construction, equipment rooms, office space, storage space, restrooms and locker rooms, lighting, floor and wall treatments (sound deadening), cable chases, power systems, HVAC and grounding systems.

Once released through normal procurement vehicles, the committee reviews responses, scores each proposal and ultimately makes an award. Typically, this is a good point to select a project manager or clerk of the works to oversee construction. Among the project manager's first responsibilities would be establishing a review cycle for the construction.

Site Development – Technical
Running parallel with the Construction phase, a Technical Development phase occurs. The construction phase focuses on physical plant requirements like HVAC, interior construction, exterior construction, etc. Technical development focuses on the specific communications and IT needs of the UCC. The phase begins with developing a list of technical equipment. Often, NYS Office of General Services contract pricing is available. Bid specifications and/or requests for proposals would be released, accepted and reviewed, ultimately with a contract(s) awarded, and installation can begin.

Transition

A transition plan must be developed that allows: the hiring and on-boarding of UCC staff, testing of all UCC systems, adoption of a communications plan with municipal stakeholders and creation of a redundancy plan in the event of a system failure. Tasks would include:

- Memorandums of Understanding (MOU) – Participating governments execute MOUs defining responsibilities, participation, governance, cost sharing agreements, and other understandings.
- Establish advisory committees – As established in the MOU, policy and operational advisory committees are established and begin functioning.
- Standard Operating Procedures – As soon as the decision is made to move forward with consolidation the UCC director and operational advisory committee must begin developing standard operating procedures and policies. Decisions regarding policy could affect equipment installation.
- Equipment and systems installation – Close coordination among vendors is required. Some of the technical systems rely on several vendors to coordinate activities. Equipment and systems must be identified and procured early, space and infrastructure required to support the equipment must be in place, and secure storage of staged equipment must be maintained. Connectivity between the UCC and public safety radio systems must be arranged and tested.
- Systems testing and acceptance – All systems must be thoroughly tested through an Acceptance Test Plan which defines operability, parameters, and related functionality.
- Develop call taker/dispatcher/management/administrative staff hiring criteria – The director, working with appropriate county personnel and UCC advisory staff, will need to develop job descriptions for call-takers, dispatchers, supervisors, and management/administrative staff.
- Hire staff – there exists within the PSAPs in Schenectady County a sufficient number of public safety communicators to staff the UCC. Working in the UCC will be very busy. Potential UCC staff will need to be informed about mission and expectations. A thorough review and interview process will need to be developed and implemented.
- Train staff – trained staff is key to the success of the UCC. While most of the current public safety communicators have some training, all UCC communicators will need to be re-trained on procedures, policy, equipment, and systems. Sufficient time and funding must be allocated for staff training.

On-boarding/Switchover

The final implementation phase is a continuation of Transition but allows for the actual operation of the UCC to begin. Skeleton crews of the new UCC call-takers and dispatchers will operate a shadow operation in sync with the existing dispatch operations. Following evaluation and quality control, the skeleton crew will begin to actually dispatch. Tasks would include:

- Notification of agencies for cut over. Client agencies need to be kept apprised of schedules and timetables. The current PSAPs will need sufficient time to brief law enforcement staff on UCC policy and procedures. Local provisions for service windows will need to be finalized.
- Conduct quarterly evaluations to determine compliance and resolve issues. Even with careful planning unexpected issues will need to be addressed. Some issues can be resolved by the director and client agencies, other will need a policy review. A formal feedback process needs to be in place both in the near and long term.

Appendix A

Call Data (2007)

Data was compiled by personal interviews, reviews of call logs and related information provided by the municipalities. All wireless 911 calls are answered by the City of Schenectady then routed to the responding agency. This raises call volume for the City.

Schenectady County E-911 PSAP Call Data							
	City of Schenectady	**Rotterdam**	**Niskayuna**	**Glenville**	**NYSP: Duanesburg/ Princetown**	**Sheriff**	**Totals**
Population (2000)	61,821	28,316	20,295	28,183	7,940		
Agencies dispatched	City Police, City Fire	Town Police, Fire, EMS	Town Police, Fire, EMS	Town Police, Fire, EMS	NYSP, Fire, EMS in parts of Duanesburg & Princetown	Countywide - serves court papers, supports probation dept.	
Annual wire-line E-911 calls (2007)	24,986	5,269	3,847	6,797	780		41,679
Annual wireless E-911 calls (2007)	29,225	1,528	751	1,361	490		
Total wire-line and wireless E-911 calls (2007)	54,211	6,797	4,598	8,158	1,270		75,034
Hi wire-line E-911 calls month (2007)	2,423	485	369	151	88		3,516
Hi wireless E-911 calls month (2007)	3,005	157	79	380	55		3,676
Annual seven digit calls (2007)	151,200	35,171	35,112	69,654			291,137
Annual police calls for service (2007)	85,213	21,256	10,802	16,000			133,271
Annual fire calls for service (2007)	4,583	616	66	3,300			8,565
Annual EMS calls for service (2007)	8,550	890	1,808				11,248
Service Window (2007)	N/A	See note	N/A	15,573	N/A	N/A	
Alarm Calls (2007)	N/A	1,200	6,000	N/A	N/A	N/A	

Appendix A (continued)	City of Schenectady	Rotterdam	Niskayuna	Glenville	NYSP: Duanesburg/ Princetown	Sheriff
Total of 911 and 7 digit calls	205,411	41,968	39,710	77,812	1,270	
Rate of 911 calls per capita	0.88	0.24	0.23	0.29	0.16	
Rate of seven digit calls per capita	2.45	1.24	1.73	2.47		
Cost per 911 and 7 digit calls	$8.63	$18.31	$14.94	$10.12		
Cost per Capita	$28.66	$27.14	$29.23	$27.94		
Average rate of 911 calls per hour	6.19	0.78	0.52	0.93	0.14	
Busy hour rate of 911 calls per hour	14.85	1.86	1.26	2.24	0.35	
Average rate of seven digit calls per hour	17.26	4.01	4.01	7.95		
Busy hour rate of seven digit calls per hour	41.42	9.64	9.62	19.08		
Number of FTE dispatchers	20.00	11.00	9.00	11.00		
Number of FTE supervisors	1.00	1.00	0.00	0.00		
Rate of police calls for service per capita	1.38	0.75	0.53	0.57		
Rate of fire calls for service per capita	0.07	0.02	0.00	0.12		
Rate of EMS calls for service per capita	0.14	0.03	0.09	0.00		
Percent of 911 and 7 digit workload	72.2%	9.1%	6.1%	10.9%	1.7%	
Total County Population: 146,555 (2000 Census)						

Appendix B

Dispatch Operations

Data was compiled by personal interviews, reviews of call logs and related information provided by the municipalities.

	City of Schenectady	Rotterdam	Niskayuna	Glenville	NYSP: Duanesburg /Princetown	Sheriff
Console equipment	Motorola	Zetron	Zetron	Motorola CenterCom II	Zetron	
Telephone systems	County 911 Equipment				County 911 Equipment	
CAD	HiTech	Admitt	No	Moving to HiTech	No	
RMS	Yes	Yes	No	No	No	
Current staffing	Min 4 - 5 full	Typically 3, Occasionally 1, could be as many as 4	Typically 2, occasionally 1	Typically 2, occasionally 3	Typically 2 per shift - one civilian, one trooper	1 per shift. Does road patrol, jail communications, telephones and other tasks.
Funded positions	1 director; 3 dispatcher-supervisors; 3 dispatcher-trainers; 14 dispatchers; Funding for four part-time positions	1 supervisor 11 dispatchers Limited funding for part-time positions	9 dispatchers	11 dispatchers		Communications position included in budget. Have dispatch designated officers and specialist.
Dispatch protocols	ProQA - Fire/EMS - moving to Police	ProQA - EMS/OJT	OJT		As per fire department/ EMS agency directives	
Training methods	NYS, ProQA				DSP	
Management/ supervision structure	Director - part of PD	Supervisor - part of PD	Patrol officer, part of PD	Sgt/Lt - part of PD	Management by DSP Sgt.	
Compliant with NYS 911 Board Regulations	Yes	No	No	No		

Appendix C

Physical Plant - Square Footage

The following is based on standards used by Schenectady County Office of Facilities.

Central Dispatch Space Utilization Plan					
Offices					
Title	**Qty**	**Workspace Type**	**Sq. Ft.**	**Subtotal**	**Notes**
Director	1	OFF-D	225	225	
Deputy Director	1	OFF-F	160	160	
Secretary	1	WKS-C	80	80	
Supervisor	1	WKS-C	80	80	Comm Ctr
Dispatcher	8	WKS-C	80	640	Comm Ctr
Additional Office	1	OFF-G	125	125	
			Sub Total	**1310**	
Assembly Space					
Conference/Training	1	CON-C	500	500	Incl. 3 Dispatch Wk Stations @ 80 each
			Sub Total	**500**	
Counter/Reception/Waiting					
Reception	1	CTR-A	65	65	
Waiting	1	WTG-B	75	75	
			Sub Total	**140**	
Central Department Equipment Space					
Copy/Fax/Printer	1	EQP-B.1	100	100	
			Sub Total	**100**	
Central Department Storage					
Storage	1		200	200	
Housekeeping	1		125	125	
			Sub Total	**325**	
Special Spaces					
Equipment Room	1		600	600	Incl. Radio, IT, IT workshop, Telephone
Locker Room	2		250	500	Includes Rest Rooms for Staff
Kitchenette	1		80	80	
Break Room	1		250	250	
Restroom	2		64	128	Adjacent to Comm Ctr
			Sub Total	**1558**	
			Net Space Total	**3933**	
			35% Grossing Factor	**1377**	
			Total Gross	**5310**	

Appendix D

Budgeted Costs (2008)

Data was derived from adopted 2008 budgets and, in some instances, in response to inquiries from NYSTEC. The total 2008 budgeted dispatch expense throughout the county is $4,318,160. This total does not include amounts spent by the New York State Police for its dispatching operations in the Town of Princetown.

	City of Schenectady	Rotterdam	Niskayuna	Glenville	NYSP: Duanesburg/ Princetown	County E911 Communications
Personnel Wage and Benefit Costs - 2008 Adopted Budget	$1,651,217	$714,002	$593,196	$718,602		$171,927
OTPS Costs – 2008 Adopted Budget and/or Reported to NYSTEC	$120,800	$54,434	$1,125	$68,829		$224,028
Total Costs (2008)	$1,772,017	$768,436	$594,321	$787,431	$0	$395,955

Appendix E – Operating Expenses

Personnel costs for the UCC in year 1 are estimated at $3.470 million. In year two, following anticipated staff reductions due to normal attrition, personnel costs are estimated drop to $3.320 million in constant dollars. Cost estimates were derived from current salary and benefit information gathered from all Schenectady County municipalities. All figures are in 2008 dollars.

Personnel	Salary	Year 1 Qty	Year 1 Budget (in 2008 $)	Year 2 Qty	Year 2 Budget (in 2008 $)
Director	$85,000	1	$85,000	1	$85,000
Deputy Director/ Systems Director	$78,000	1	$78,000	1	$78,000
Secretary	$30,000	1	$30,000	1	$30,000
Dispatch Supervisor	$45,000	5	$225,000	5	$225,000
Dispatcher II	$42,000	25	$1,050,000	21	$882,000
Dispatcher I	$37,500	21	$787,500	17	$637,500
Shift Differential			$65,000		$40,000
Overtime			$140,000		$260,000
Longevity			$60,000		$55,000
First Year Attrition Offset (3.5 positions)*	$34,000	(3.5)	$ (119,000)		
Total - Salary		**50.5**	**$2,401,500**	**46**	**$2,292,500**
Total – Benefits			**$1,068,500**		**$1,027,500**
Total – Personnel Services			**$3,470,000**		**$3,320,000**

*Analysis shows that normal attrition among existing county PSAPs is approximately 7 positions. For budgetary purposes, this is reflected as -3.5 FTE in the year 1 budget.

Estimated Other than Personnel Service Costs

Contractual costs for the UCC include annual costs for outside services and maintenance of critical equipment. Cost estimates were derived from information provided by all Schenectady County municipalities. All figures are in 2008 dollars.

Contractual/OTPS	Year 1 (in 2008 $)	Year 2 (in 2008 $)
E911 Equipment Leased Line	$55,000	$55,000
Utilities	$25,000	$25,000
Insurance	$8,500	$8,500
Equipment Repairs/Maintenance (details below)	$254,000	$254,000
Postage	$1,000	$1,000
Dues & Subscriptions	$1,000	$1,000
Mileage Reimbursement	$3,000	$3,000
Cleaning	$10,000	$10,000
Facility Maintenance/Agreements	$10,000	$10,000
Publications	$2,000	$2,000
Office Supplies	$2,500	$2,500
Training - not including labor	$20,000	$20,000
Uniform shirts/headsets	$17,000	$17,000
RapidNotify	$21,000	$21,000
Albany CAD System	$60,000	$60,000
Computer Maintenance	$30,000	$30,000
Total – Contractual/OTPS	**$520,000**	**$520,000**

Equipment Repairs/Maintenance	Annual
UCC CAD Operating Annual Costs	$50,000
Mapping System Maintenance	$50,000
911 System Maintenance (AK)	$45,000
911 Second Tier Maintenance (CML)	$40,000
System Hardware Replacement	$5,000
Consoles/Logging Maintenance	$40,000
Call Taking Protocol System (Pro Q-K)	$24,000
Total – Equipment Repairs/Maintenance	**$254,000**

Appendix F

Capital Costs

The following estimate provides a preliminary capital budget necessary for a 5,300 sq. ft. facility of the size and construction recommended. Given that a site has not been identified, these estimates are preliminary and will depend on the site specifics. Estimated figures were provided by Schenectady County Office of Facilities and are in 2008 dollars. The preliminary facility estimate is approximately $1.8M for new construction.

Item	Unit Cost	Amount
Land Acquisition	$0	
Building Acquisition	$0	
Construction/Renovation (per square foot)	$225	$1,195,000
Site Development		$100,000
Design Contingency	10%	$129,500
Construction Contingency	10%	$129,500
	Sub Total	**$1,554,000**
Architect/Engineering Fee	10%	$155,400
Back-Up Power Generator		$75,000
Fixtures, Furnishings & Equipment		$25,000
	Total Facility Cost	**$1,809,400**

Equipment*	Quantity	Unit Price	Total
Consoles	12	$12,000	$144,000
Console Electronics	12	$50,000	$600,000
Logging Recorder	1	$60,000	$60,000
Audio/Video Recording System	1	$40,000	$40,000
Computer Hardware			
Computers	26	$900	$23,400
Monitors	50	$350	$17,500
Servers	2	$3,900	$7,800
UCC Connectivity	4	$6,000	$24,000
Printers	3	$300	$900
UPS Consoles	12	$300	$3,600
UPS Equipment	2	$1,800	$3,600
UPS Building	1	$20,000	$20,000
Quad Cards	24	$155	$3,720
Modems			$5,000
Routers			$15,000
Misc Racks, etc			$5,000
Net Clock	1	$11,000	$11,000
Furniture			$5,000
Installation			$12,000
Contingency (5%)			$50,000
		Subtotal	**$1,051,520**
Licenses			
CAD Licenses (Cost for additional licenses needed)			$25,200
ProQA Licenses (Cost for additional licenses needed)			$73,140
AQUA (ProQA Quality Assurance)	2	$1,900	$3,800
		Subtotal	$102,140
		Total – Capital Budget	**$1,153,660**

*Costs do not reflect expected savings from economies of scale when equipment requires replacement. Replacement of equipment should begin to occur during years 5-10.

Appendix G

Sample Cost Sharing

The UCC expense for these four municipalities would be derived by allocating proportionately, based on 2008 adopted budget PSAP expense, the amount of UCC operating expense after reduction by the flat fee contributions of Schenectady County, the Town of Duanesburg, and the Town of Princetown. The 2008 dispatch expenses, gathered from adopted municipal budgets and in response to inquiries are as follows:

City of Schenectady	$1,772,017
Glenville	$ 787,431
Rotterdam	$ 768,436
Niskayuna	$ 594,321
Schenectady County	$ 395,955
Princetown	$ 0
Duanesburg	$ 0
Total 2008 budgeted dispatch expense	$4,318,160

- Schenectady County contributes $470,000 consistently toward the UCC operating costs.
- Duanesburg and Princetown contribute flat amounts, increasing incrementally, in years 1 through 5.

The remaining UCC costs are spread proportionately among Rotterdam, Niskayuna, Glenville, and the City of Schenectady based upon their current PSAP expense ratios. All figures are in constant 2008 dollars and include facility debt service, equipment debt service, and no grant funding.

Proposed	**Year 1 (in 2008 $)**	**Year 2 (in 2008 $)**	**Year 3 (in 2008 $)**	**Year 4 (in 2008 $)**	**Year 5 (in 2008 $)**
City of Schenectady	$1,747,979	$1,675,241	$1,670,271	$1,665,302	$1,660,332
Glenville	$776,749	$744,427	$742,218	$740,010	$737,802
Niskayuna	$586,259	$561,863	$560,196	$558,530	$556,863
Rotterdam	$758,012	$726,469	$724,314	$722,159	$720,004
Duanesburg	$19,000	$27,000	$35,000	$43,000	$50,000
Princetown	$7,000	$10,000	$13,000	$16,000	$20,000
Schenectady County	$470,000	$470,000	$470,000	$470,000	$470,000
Total	**$4,365,000**	**$4,215,000**	**$4,215,000**	**$4,215,000**	**$4,215,000**

Appendix H

Grant Opportunities - NYS Local Government Efficiency Grants

The New York State Department of State has announced four 2008-2009 grant opportunities collectively referred to as the Local Government Efficiency (LGE) Grant Program. The LGE program replaces the Shared Municipal Services Incentive (SMSI) Grant Program, which last year provided Schenectady County and its municipalities a $110,000 grant for a feasibility study of centralizing dispatch operations.

Two of the four LGE grants are suited for implementation of a county Unified Communications Center. Each grant carries a submission deadline of January 14, 2009. Grant submissions need supporting municipal resolutions. The two LGE grant opportunities are:

Efficiency Implementation Grant

This program can be used for a few types of project including those "to implement the complete functional consolidation of a municipal service." This grant can be used for joint equipment purchases, capital improvements, transitional personnel costs, and legal/consulting services.

The Efficiency Implementation grant is scored on criteria including cost savings, project need and municipal benefits, self-sufficiency and management capability, and local/regional/state support. In addition, priority points are awarded for applications which:

- Implement the complete functional consolidation of a municipal service; and
- Are submitted by applicants who have successfully completed a SMSI planning grant

The maximum amount of this grant is $200,000 per participating municipality up to a maximum of $1,000,000. This is a competitive grant with statewide funding of up to $9,800,000.

21st Century Demonstration Grant

This program is used to fund projects "associated with a functional consolidation or shared services agreement with great potential to achieve financial savings and to serve as a model for other municipalities." This grant can be used for joint equipment purchases, capital improvements, transitional personnel costs, and legal/consulting services.

The 21st Century Demonstration Grant is scored on criteria including the stimulation of consolidation or regionalism initiatives, cost savings, project need and municipal benefits, self-sufficiency and management capability, and local/regional/state support.

The maximum amount of this grant depends on the type of project. A county UCC project would qualify for a maximum grant of $500,000. This is a competitive grant with statewide funding of up to $8,330,000.