



Proposal

New Communications Division Facility Services

March 23, 2023

City of Fayetteville 911 Communications, North Carolina



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Introduction Letter

March 23, 2023

Lisa Reid
911 Manager
City of Fayetteville 911 Communications
467 Hay Street
Fayetteville, NC 28301

Re: Proposal for New Communications Division Facility Services

Dear Ms. Reid:

Mission Critical Partners, LLC (MCP) appreciates the opportunity to provide this proposal to the City of Fayetteville 911 Communications (City), to provide public-safety operational and technical management of its move into a new public safety answering point (PSAP) facility.

MCP has deep experience working on facility projects in North Carolina, providing our services to multiple counties and municipalities throughout the state. A sample list of the projects we have supported follows:

North Carolina Facility/Technology Project Experience			
• Alamance County	• Durham, City of	• Jackson County	• Rockingham County
• Bertie County	• Franklin County	• Lincoln County	• Sampson County
• Burke County	• Graham County	• Martin County	• Swain County
• Caldwell County	• Greene County	• Mitchell County	• Tyrrell County
• Chatham County	• Halifax County	• Pasquotank County	• Union County
• Clay County	• Haywood County	• Pender County	• Wayne County
• Columbus County	• Henderson County	• Polk County	
• Dare County	• Hyde County	• Richmond County	
• Duplin County	• Iredell County	• Rocky Mount, City of	

MCP’s Hands-On Approach

It’s critical to ensure your project is covered across all areas of the constantly evolving public safety communications landscape. **MCP serves as a vendor-independent agent** with considerable experience with government management agencies at all levels.

Facility projects require an in-depth knowledge of the requirements for mission-critical, **purpose-built** facilities, as well as next-generation public safety technologies. Between these requirements and the necessary steps to support them, we know a project like yours typically lasts 24-30 months—a timeframe that depends on any number of potential obstacles, and variables, such as architect selection and supply chain delays.

MCP has provided a scope of work that **allows us to undertake the management and challenges that come with your project**, beginning with facility programming, providing 911 systems subject matter expertise to the architectural firm, through systems and technology testing and ultimately a successful cutover of staff and systems.

By working with MCP, the **City of Fayetteville 911 Communications will have peace of mind** knowing that your once-in-a-generation PSAP project will be managed by a firm with direct experience.

Leaders in Public Safety Facility Projects

We know this is an important initiative for the City, and we understand the complexity of managing the project. It's vital that the City is set up to sustain its emergency response and operational workflows, as well as keep up with emerging technologies and best practices.

More than that, MCP knows that quality performance and knowledgeable execution are paramount for the City. As leaders in the public safety industry, we're ready to focus on your goals and **align the City with a trusted partner—one that has the expertise necessary to support the City in reaching its long-term vision.**

With MCP, the City will find:

- 1. The largest, most experienced team with a dedicated facilities division:** The City can trust MCP to keep to the agreed-upon schedule.
- 2. A local office in Raleigh and a locally based project team:** The City can rely on MCP to be mere hours away to support your needs, including Craig Schulz as Project Manager.
- 3. A deep bench of resources at your fingertips:** The City will have access to our North Carolina-based team, as well as our entire staff of experts to assist with any issue that comes up during the project.
- 4. A successful track record in planning, designing, implementation, and cutover support:** Our similarly scoped projects are recent, with our references right next door to the City.

MCP is prepared to serve the City by assisting you with achieving optimal delivery of emergency communications services—**because the mission matters.** If you have any questions regarding the information submitted, please contact me at 919.869.4013 or via email at ChrisFaircloth@MissionCriticalPartners.com.

On behalf of our entire team, we stand behind the City of Fayetteville 911 Communications to serve as your partner and your advocate.

Sincerely,

Mission Critical Partners, LLC



Chris Faircloth
Client Services Director

Your Mission Matters

At MCP, Our Mission Is Simple: To Improve Emergency Response and Justice Outcomes

We are committed to working collaboratively with you to implement successful solutions for your networks, data, and operations. More than just a consultant, we act as trusted advisors to our clients, striving to deliver value, efficiency, and fresh ideas—all while mitigating risk. We are solely focused on the public safety, justice, healthcare and critical communications sectors, and what makes us different is our holistic perspective. A leading provider of data integration, consulting, network and cybersecurity services, our vision is to transform the mission-critical communications and public-sector networks and operations into integrated ecosystems.

More importantly, we stand behind the significance of the work our clients do and how critical their missions are—not just for their organizations, but because their communities are counting on them. While we are proud to have the largest, most experienced team of specialized experts in the industry, our greatest pride comes from applying this expertise to work side by side with our clients to implement the best possible solutions—because the mission matters.

By the Numbers



Since 2009, MCP has supported 3,200+ projects for 1,300+ public-sector and critical communications agencies



We serve clients in 48 states and 95% of the nation's largest metropolitan areas



Our staff consists of 200+ subject-matter experts, each with an average of 25 years of experience, dedicated to supporting our clients and their missions



We create significant project cost savings for our clients—often 15%, sometimes more



More than 90% of our clients remain with us from project to project

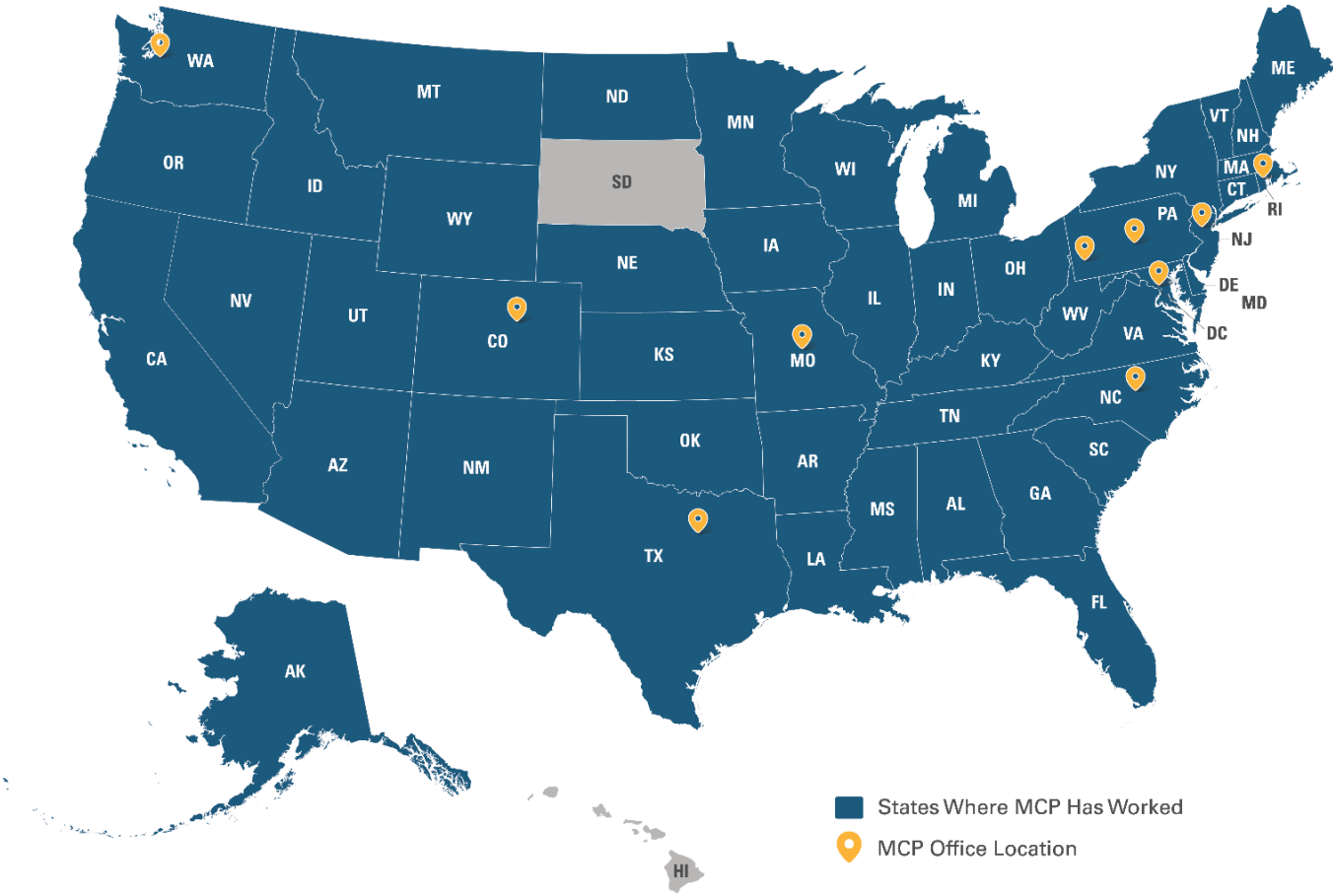


BECAUSE
THE MISSION
MATTERS

Nationwide Expertise, Local Insight

Turning Client Goals into Reality

With satellite offices, subject-matter experts, and project managers located across the country, MCP can deliver the right team, with the right experience and expertise, to every client, anywhere in the country.



Corporate Headquarters

690 Gray's Woods Blvd., Port Matilda, PA 16870
Phone: 888-862-7911

Mission Critical Partners Branch Offices

Denver, Colorado Silver Spring, Maryland Jefferson City, Missouri

Summit, New Jersey Raleigh, North Carolina Cranberry Township, Pennsylvania

Providence, Rhode Island Southlake, Texas Seattle, Washington

We're Committed to Putting our Clients First

Partnering with a firm that brings an independent, objective perspective to every engagement is a top priority of our clients. We stand behind our commitment to always put the fundamental interests of our clients first.

From our inception, vendor-neutrality is a value that underpins every aspect of what we do. Our goal is to determine the most favorable solution for our clients based on their unique requirements, budget, governance structure, operations, and existing technologies. We provide a holistic perspective regarding the entire mission-critical communications ecosystem, free of bias or favoritism to any specific product or service provider. Our recommendations always are based solely on the value and the benefit provided to the client.

For clients, this approach means more control and greater visibility into the systems they ultimately are responsible for operating and maintaining, and—more importantly—a successful project that improves outcomes.

Board of Directors



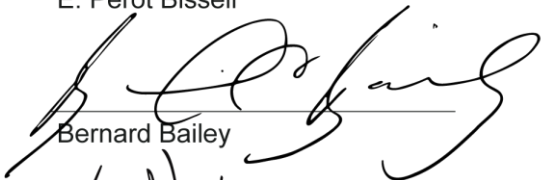
R. Kevin Murray




Robert Chefitz



E. Perot Bissell



Bernard Bailey



Darrin J. Reilly



Nola Joyce

The background is a solid blue color with a pattern of light blue hexagons and small white dots. Some hexagons are connected by thin lines, and some have small circles at their vertices. The overall effect is a technical or scientific aesthetic.

Statement of Services

Project Understanding

Mission Critical Partners (MCP) understands that the City of Fayetteville 911 Communications (City) is ready to move forward with a new location for its 911 Communications Center that is purpose-built and will allow the City to provide a high level of service to its citizens and responding agencies. As such, the team understands that the goal of the process is twofold: first, to conduct a needs assessment and due diligence study of the feasibility of collocating with the Cumberland County's (County) emergency communications, and second, to oversee the design, construction, and technical upfit of the new facility.

The needs assessment will include a structural review, program verification, conceptual test-fit, and budget confirmation of the identified sites for this project. The proposed services include a feasibility study/needs assessment set of tasks for each as described on the following pages. MCP will start with a review of the City's project charter to help identify any missing items that should be captured in the initial cost estimate. Throughout the project, MCP, working with the City and the selected architect, will continue to review pricing, both capital expenditure outlays, as well as operational costs that the City should anticipate throughout. *These ongoing discussions will ensure the City remains on budget and the team remains on task.*

For this project, MCP will utilize our team of subject matter experts (SMEs), as well as sub-contractors (Design Team) for architectural and engineering reviews. Our select group of engineering consultants specializes in mission-critical projects which will benefit you as a client. Mission-critical design, when implemented properly by using known and tested practices, will produce successful and functional facilities. When the facilities are not designed based on industry standards and best practices, the result can include costly corrections and ongoing issues for the public safety authority. Having consultants that are qualified planners and are educated about important factors— such as knowing the proper stand-off distances, technology infrastructure, complex communication systems, facility hardening, flexibility and adaptability of spatial relationships; and how to design redundant systems that are quiet and reliable —results in an overall successful study and a future capital project that is functional and practical for the end users.

Scope of Work

Phase 1: Programming Review and Feasibility Study

Task 1.1: Project Initiation

MCP will conduct a meeting with the project team and stakeholder representatives to:

- Establish mutual acquaintance
- Clarify roles
- Review and align regarding desired outcomes and deliverables
- Tour existing and future sites/facilities
- Determine project goals and milestones

MCP's project manager (PM) will facilitate the meeting. Before the meeting, MCP will review available documentation regarding:

- Current City requirements details
- Documents including budgets, space studies, and other relevant materials

Initiation Meeting Review

- *Project and task milestones*
- *Schedules and deliverables*
- *Project budget*
- *Stakeholder commitment*

The City and MCP will use Task 1.1 to gain a mutual understanding of the City's future vision.

Task 1.2: Program Verification Workshop

A workshop session is convened with appropriate personnel and representatives of the stakeholder community to review the previously developed 911 space programming study conducted in 2015 and identify current space needs through a group programming exercise. The workshop will provide the results needed to assess the current and future space needs of the City, including the ability to review the identified sites. A series of confirmed concept diagrams are developed to describe the relative locations of the various portions of the program. This portion of the document aids the Design Team in understanding the desired adjacencies of the agency's internal functions, as well as the front-of-house/back-of-house relationship critical to the function of a facility that serves as the 911/emergency operations center (EOC).

Task 1.3: Site and Building Facility Assessment – Multiple Sites

The existing site and building assessment will define the exterior surroundings, circulation, parking, traffic patterns, and vulnerabilities to evaluate how the site(s) can be best utilized for the intended purpose. The existing building structure(s) will be analyzed to understand the available space and building components including the life cycle and future functions. The planning team uses the assessment to develop the conceptual site and building plan. The analysis provides the City with a generalized knowledge of the potential use of the site(s) and building for the emergency facility's needs. Our understanding is the City is exploring the possibility of adding two fire stations and co-location with the County.

Task 1.4: Threat Assessment

Task 1.4 will be combined with Task 1.3. A workshop is conducted using a threat assessment matrix to analyze all known risks to the proposed facility and the site(s). Recommendations are developed during this session and the documentation preparation later for the systems analysis identified in Task 1.6, describes best practice solutions to those specific threats. The site-specific information described in Task 1.3 will be utilized for the site-specific portion of this threat assessment.

Task 1.5: Sustainability Workshop

The Design Team will hold a sustainability/Leadership in Energy and Environmental Design (LEED) planning meeting with all stakeholders to identify the various sustainable approaches and techniques that the stakeholder team might adopt for their project. Sustainable systems will be discussed including their order of magnitude, first costs, and operational costs. Various decisions will be made and incorporated based on your particular requirements and goals. Whether or not you desire certification through LEED or some other high-performance standard, it is useful to set operational benchmarks. These concepts will be utilized in the development of the systems analysis in Task 1.6.

Task 1.6: Systems Analysis

- a. The four components, (building, technology, audiovisual [A/V], and furniture) of a mission-critical facility include redundant, survivable, and sustainable building systems specific to the operations of dispatch and EOC facilities.
- b. This includes an assessment of the public safety and enterprise systems that allow communication, the A/V systems to manage and manipulate incoming data, and the furniture to satisfy the ergonomic needs of staff who work 24/7 in the proposed facility.
- c. The Design Team will integrate the technology design as outlined in preliminary recommendations.

- d. A full list of applicable federal, state, and local codes with recommendations to be followed will be identified.
- e. A full set of engineering narratives defining the general needs of a facility of the size and type recommended will be developed, including basic infrastructure requirements (utilities) for connectivity needs. System redundancy and diversity issues are taken into account for the systems described reflecting the threat assessment workshop.

Task 1.7: Concept Building Option Development (Test-Fit)

The next step involves the development of a conceptual design study that meets the overall project goals and project criteria. Options shall be presented to the City for review, discussion, recommendations, and decisions. The Design Team acts as a professional resource during these meetings, presenting unbiased recommendations and comparisons of the differences between the various options. The final decisions and recommendations for the development of the final schematic design concept shall be made by the Design Team and City. The program, set of adjacency diagrams, and concept floor plans are used to develop a budget in Task 1.8.

Task 1.8: Budget Development/Estimate of Preliminary Costs

The program document and concept diagrams form the basis of a budget to be developed. The Planning Team attempts to identify all relevant project costs and delivers a thorough set of cost-estimating worksheets for the City to use as the project develops.

Task 1.9: Schedule Development

The Design Team will develop a schedule identifying critical elements to the timeline for the project including milestones for design, bidding, and construction.

Task 1.10: Report and Presentation

After the study is completed, a draft and a final report will be provided to the City for review. Once the final report is accepted by the City, a presentation to the stakeholders will be provided. All of the work product described in the scope of work is consolidated into a concise Programming and Planning Workbook for the City.



Deliverables:

- Final report with an up-to-date program and plan
- Presentation to stakeholders to review the plan

Phase 2: Architect Selection, Design, and Construction

This phase along with Phase 3 outlines MCP's approach to providing services to the City that will facilitate its design, construction, and eventually the occupation of a new public safety answering point (PSAP). Phases 2 and 3 include our full **program management services**, from architect selection and facility programming, through systems and technology testing and final City approval.

Task 2.1: Architect Selection

MCP will assist the City in selecting an architectural firm, to include the following tasks:

- Prepare a request for qualifications (RFQ) document for the City’s review and publication
- If required, prepare an advertisement for the City’s review and publication
- Assist with a compliance matrix for the RFQ, scoring templates, and shortlist presentation planning
- Facilitate the review of RFQ responses in concert with the City team
- As necessary, coordinate shortlist interviews with the selected firms
- Work with the project architect to ensure a construction estimate is obtained at the schematic design (SD) and construction documents (CD) design phases.
- Guide the City during contractual elements with the selected firm
- Facilitate a design kickoff meeting with the City and the selected firm



Task 2.1 Deliverables:

- Provide a draft RFQ, advertisements, compliance matrix, and scoring documents for architect selection
- Assist with and participate in interviews with shortlisted architects if necessary
- Provide the City with guidance through the selection of an architect

Task 2.2: Space Programming

MCP will support the City and the selected architectural firm to review the space programming study completed in Phase 1 (Feasibility Study). The systems and operations to be supported by the design are important to a purpose-built, 911 facility. MCP will:

- Review with the architectural firm and City team the previous space programming needs of the mission critical public safety facility.
- Work closely with the Design Team to adjust as necessary the specific requirements needed for the PSAP and to confirm the programming meets the anticipated needs of the operations
- Review:
 - Systems and industry standards to be utilized during the design process
 - Backup and redundancy requirements
 - Preliminary space requirements for PSAP operations, technology systems and equipment, demarcations, and other mission critical needs of the new facility

Standards and industry best practices that address the design of this facility type include, but are not limited to:

Standards
<ul style="list-style-type: none"> • American National Standards Institute/Telecommunications Industry Association (ANSI/TIA)-862-B – <i>Structured Cabling Infrastructure Standard for Intelligent Building Systems</i> • ANSI/TIA-942-B – Telecommunications Infrastructure Standard for Data Centers • ANSI/TIA-568-B series – Commercial Building Telecommunications Cabling Standard • ANSI/TIA-607-D – Generic Telecommunications Bonding and Grounding (Earthing) for Customer Premises

Standards

- Building Industry Consulting Service International (BICSI) – Telecommunications Distribution Methods Manual (TDMM)
- Motorola R56® “Standards and Guidelines for Communication Sites”
- National Fire Protection Association (NFPA) 1225, Standard for the Installation, Maintenance, and Use of Emergency Services Communications Systems



Task 2.2 Deliverables:

- Work with the Design Team to review space requirements during programming review session(s)
- Capture high-level technology requirements based on mission-critical systems and integrate them into the equipment and space requirements of the facility
- Work with the architect to include an initial estimate for annual operational costs that would be the responsibility of the City.

Task 2.3: Schematic Design

After the programming review is verified, MCP will:

- Participate in SD discussions with the Design Team
- Provide high-level public safety technology recommendations in compliance with industry standards and best practices
- Offer general facility and building systems recommendations to assure compliance with industry best practices and state/federal standards

The following activities will be included in the SD phase:

- Provide support for the Design Team covering:
 - Structured cabling system (SCS)
 - Grounding system design
 - Network communications and technology systems
 - Audiovisual (A/V)
 - Preliminary technology approach and layouts
- Gather relevant information:
 - Work with end-user organizations to develop recommendations regarding relocation, modification, or replication of required systems
 - Assist in coordination by meeting with end-users, project vendors, engineers, and consultants

System Support

- A/V infrastructure requirements
- Data, power, and cooling needs
- Review of technology systems
- Network, wireless, telephone, and radio needs



Task 2.3 Deliverables:

- Provide SD-level systems design input to the Design Team
- Prepare SD-level technology narrative, as needed, identifying technology equipment needs
- Work with the architect to include an updated project cost estimate at the SD level

Task 2.4: Design Development

With the information gathered during the previous SD tasks, MCP will:

- Work with the Design Team, and provide input into the development of an SCS, network, communications, and A/V system designs for the required systems in the facility
- Provide review and input in the telecommunications system grounding, bonding, lightning protection, and surge/electrical protection in accordance with standards from Motorola R56 and ANSI/TIA-607-D – *Generic Telecommunications Bonding and Grounding (Earthing) for Customer Premises*.



Task 2.4 Deliverables:

- Provide design development (DD)-level systems design support to the Design Team
- Provide input and review the Design Team's diagrammatic DD drawings that provide locations of:
 - Data communications outlets
 - A/V devices
 - Telecommunication systems
 - Data center requirements
 - Outdoor antenna system (tower design is not included)
- Work with the architect to include an updated project cost estimate at the DD level

Task 2.5: Construction Documents

MCP will provide input and review of the development of the CD and specifications from data developed during the DD tasks. MCP will work with the Design Team during the CD design sessions.

Input will be provided for the specifications and associated drawings for the facility and associated supporting systems/equipment.

Specific items which will be considered include the following:

- The level of redundancy incorporated for mission-critical systems

- Horizontal distribution system with high-performance unshielded twisted pair (UTP) copper cabling system supporting voice, data, wireless, and video systems
- Horizontal coaxial system supporting antennas and related broadband systems requirements, as required
- Backbone distribution system fiber optical cabling supporting voice, data, security, radio, and local area network/wide area network (LAN/WAN) communications systems requirements
- Backbone distribution system copper cabling supporting analog voice communications system requirements, as required
- A/V equipment systems requirements
- Facility grounding review
- Bi-directional amplifier/emergency responder radio system (BDA/ERRS) for indoor radio and cell coverage
- Communications needs for the dispatch areas



Task 2.5 Deliverables:

- Provide CD design sessions as specified by the Design Team. MCP's responsibilities include:
 - Assist the mechanical, electrical, and plumbing (MEP) firm regarding dispatch technology requirements
 - Review 50%, 90%, and 100% CD documents, including drawings and specifications, in areas specific to our expertise
- Provide consulting services to assist the architectural firm and the MEP firm in the design of the public safety facilities. MCP will mark up the architectural/MEP drawings based on a review of critical infrastructure that would be needed. MCP will not be providing drawings or specification packages as part of this proposal and any markups will need to be incorporated into the existing MEP drawings by others.
- Work with the architect to include an updated project cost estimate at the CD level
- Review the City's expected annual operational cost estimate

Task 2.6: Bidding

MCP will provide the Design Team with the following support during the bidding process:

- Provide clarification on bid design requirements
- Review substitution requests



Task 2.6 Deliverables:

- Provide written responses to vendor questions

Task 2.7: Construction Administration/Oversight

MCP will provide the Design Team with the following support during the construction of the facility:

- Provide four on-site visits to review construction progress for review of critical infrastructure detailed during the design process to include grounding, bonding, structured cabling, and other critical systems. The on-site reviews will result in written reports to the City, architectural firm, and general contractor.
- Review substitution requests and design clarifications
- Attend construction kickoff meeting
- Review contractor submittals for access control/security, A/V infrastructure, cabling, grounding, raised flooring, uninterruptible power supply (UPS), generator, and others, as specifically applicable to the technology integration of the project
- Review requests for information (RFI), as applicable
- Evaluate construction for adherence to North Carolina 911 (N.C. 911) Board rules
- Attend one on-site construction meeting per month for up to 12 months



Task 2.7 Deliverables:

- Provide written responses to construction RFIs
- Review change order requests for items related to PSAP technology infrastructure
- Review and comment on submittals and shop drawings

Phase 3: Post-Construction Migration Plan for Public Safety Systems

MCP will develop an updated operations and technology migration strategy for the new PSAP. The plan will address the implementation of the new console furniture and the move of existing systems (where appropriate) to attain full functionality with minimal impact on operations.

The migration plan will:

- Incorporate human, technology, and operational factors in maintaining the delivery of service to the public and emergency providers
- Be in a logical, sequential manner and include all strategies, steps, phases, timelines, dependencies, assumptions, risks, and outages
- Include other considerations to ensure the plan can be successfully implemented

It will start with the initial project plan and include the following:

- Procurement schedule
- Construction schedule for the new facility

MCP will work with the City to determine the most accurate date possible for system installation based on the facility readiness date. By establishing that date, MCP will work with the City to define the critical path for the procurement and migration of systems.

MCP recognizes the unique scheduling requirements for each system and subsystem and will prepare the schedule to coincide with facility readiness and will limit the downtime of communications as much as possible.

The cooperation of the City of Fayetteville 911 Communications staff and system providers will be a necessary component of this activity.

MCP will develop the schedule and cutover plan for pre-and post-facility readiness for public safety systems. This schedule includes system and subsystem installation, testing, acceptance, and training (user, administration, maintenance). Before cutover:

- Systems and subsystems at the new site will be verified as operational with network connectivity in place
- Staffing and scheduling of operational positions will be coordinated with the City
- Systems and network cutover will be coordinated with system vendors and the City

Individual task and subtask assignments will be captured and reviewed before cutover. This task, as with many others, requires an extraordinary commitment to communicating by and between MCP, the selected architectural firm, the City, the construction manager, individual vendors, contractors, maintenance staff, etc. MCP is familiar with these requirements and commits to transitioning to the new facility with minimal downtime.



Phase 3 Deliverables:

- Create and maintain a migration/cutover plan and schedule for systems, subsystems, training, and operations
- Identify responsible parties to ensure proper startup, interface, and operationalization at the new facility
- Manage the testing and cutover process

Optional Phase 4: Communications Tower Design, Engineering, and Installation Management:

With most facility projects, a new communications tower is typically a requirement. In addition to our facility services team, MCP has a team dedicated to wireless and tower communication needs. Understanding the City may need services to assist with tower procurement and construction support for the new 911 Communications site, we have outlined our approach as an optional service, should the need arise.

Task 4.1: Requirements Gathering

MCP will gather and evaluate the information necessary to determine the radio tower height, loading, and compound requirements. The height requirements will be determined by evaluating the minimum heights necessary to support reliable microwave connectivity, and by evaluating the amount of vertical antenna space required for the current equipment plus future growth.

To determine the minimum heights necessary for microwave dishes, MCP will conduct microwave path studies which evaluate the microwave path feasibility based on the terrain and assumed obstructions along each microwave path. The effort does not include physical path surveys, which may be required if assumed obstruction heights overlap the microwave paths.

To determine the tower loads, MCP will collect an inventory of all antenna systems to be located on the tower. We will complete scale drawings that identify the placement of antennas on the tower with sufficient spacing antennas to mitigate the potential interference between wireless systems. We will also identify any known requirements for future growth, including the potential for co-location from wireless carriers.

MCP will work with the City to determine any other compound requirements, including any shelter, backup power, or outdoor cabinets that may potentially need to be located adjacent to the radio tower, as this will

determine the size of the fenced area surrounding the tower. Additionally, we will develop drawings that provide a birds-eye view of the compound.

Task 4.2: Technical Specifications and Request for Proposal

MCP will work with the City to develop a specifications package that will be used for the solicitation of bids for the construction of the radio tower. The specifications package will include all requirements necessary for potential vendors to bid competitively for the radio tower work.

The specifications package will include the following elements, at a minimum:

- Loading requirements including tower drawing and list of appurtenances
- Radio tower height requirements
- Capacity for future growth
- TIA 222 references for environmental conditions, including wind and ice
- Radio compound development requirements including compound drawings
- Regulatory requirements for permitting and zoning (MCP assumes these will be provided by the City)
- Radio shelter requirements (if required)
- Backup power requirements (if required)

Once the specifications package is developed, we will work with the City Purchasing Department to facilitate any additional requirements necessary for the completion of the RFP package. Once the RFP is released, we will assist with any questions raised by bidding vendors.

Upon the receipt of proposals, MCP will provide an evaluation of each proposal and assist the City with the evaluation process. Once a vendor has been selected, we will assist with negotiations of a contract for the completion of the work.

Task 4.3: Regulatory Oversight

MCP will oversee the processes for regulatory approval performed by the selected vendor, National Environmental Policy Act (NEPA) requirements, State Historical Preservation Office (SHPO) requirements, and Federal Aviation Administration (FAA) requirements to obtain an antenna structure registration from the Federal Communications Commission (FCC). We will also work with the City to ensure appropriate permits are acquired and all zoning requirements are complied with. MCP assumes all other vendors/contractors on this project will have a direct contractual relationship with the City and will not be subcontracted by MCP.

Task 4.4: Construction Oversight

MCP will oversee and manage the general contractor during the construction process. We will make up to three visits to the City and the site during the critical times of the construction process to determine if the proper standards for site development, grounding system, and tower installation are being adhered to. The three visits also include any necessary meetings with stakeholders. Routine oversight activities will be coordinated via regular project status update calls with the selected contractor.

Upon construction completion, we will review the work, punch list items remaining for completion, and collect as-built documentation and drawings for the City records.

We will conduct a final post-construction inspection and mature the punch list of deficiencies and items to be corrected by the general contractor before the City's final acceptance and release of final payment.

Upon completion of the tower, we will work with an appropriate vendor(s) to ensure the City's radio equipment is properly installed and optimized.

Any drawings that were prepared by MCP and provided as exhibits during procurement will be updated to align with the site and tower, as built.

Additional Services:

The following services are not included in this scope of work:

- Public safety network security assessment and management
- Managing RFPs for public safety technology replacement (if necessary)

Project Team

With more than 200 staff members, MCP's specialized professionals are integral members of our team:

MCP's Specialized Professionals	
<ul style="list-style-type: none"> Former public safety managers Project Management Professionals (PMPs) 	<ul style="list-style-type: none"> Emergency Number Professionals (ENPs) Technology, forensic, and policy specialists

MCP will support this project with 100% internal staff to protect the City from the risk of 1099 staff or subcontractors that could delay project initiation, delivery or create contractual issues over responsibilities.

Organizational Chart

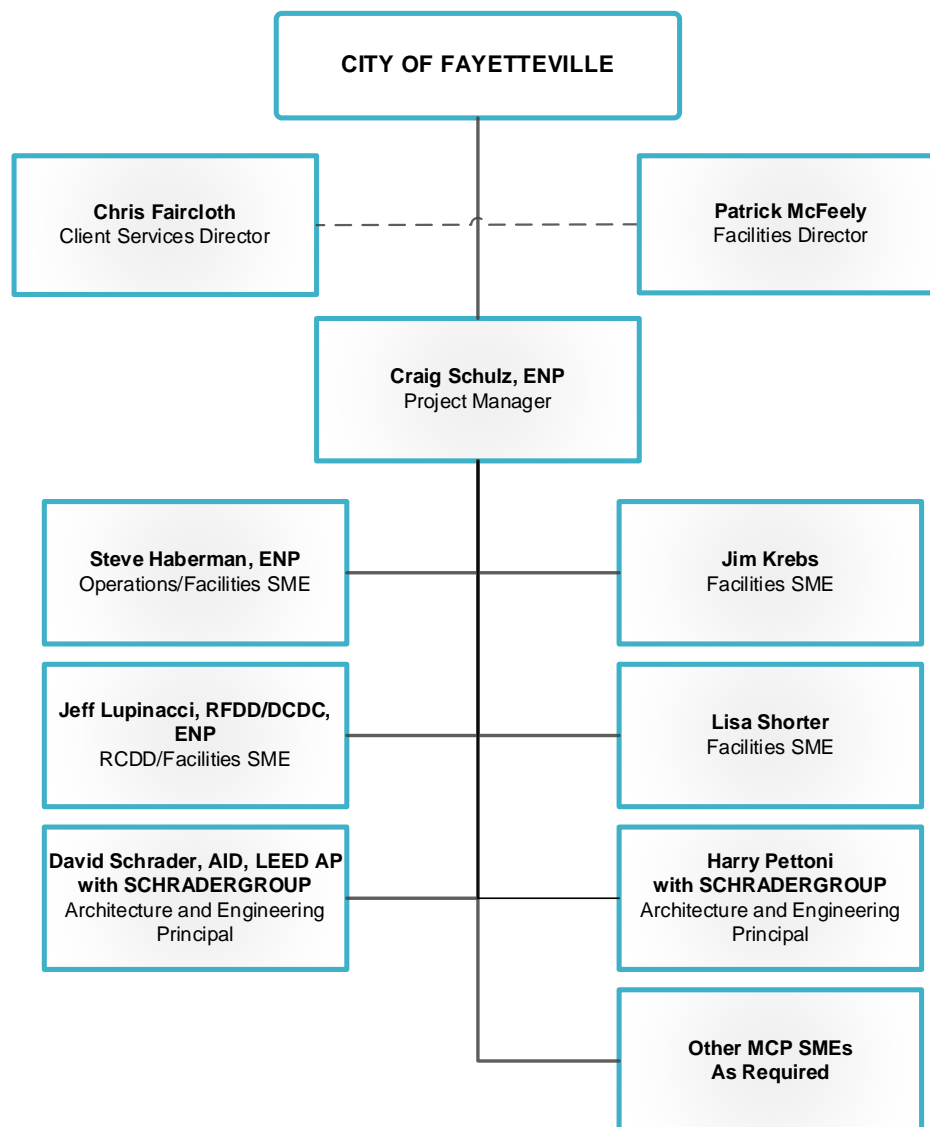


Figure 1: Project Team

Each team member brings a unique skill set and depth of experience in facility projects. Additional resources and subject-matter experts are available also, as we are a full-service firm focused on all aspects of public safety communications.

Resumes

Resumes highlighting our qualifications and experience performing facility projects are included on the following pages.

Chris Faircloth

Client Services Director, South Atlantic Region, Mission Critical Partners

Chris brings extensive public safety industry expertise to state and local government agencies to support the communities they serve. His background encompasses all facets of public safety, including facilities and operations, technology, NG911 and wireless communications. Specifically, Chris brings experience with Next Generation 911 Core Services (NGCS) technical and operational standards, a wide range of technological solutions and expertise that includes LMR, CAD, records management systems and a variety of workforce applications designed to improve operations. Chris' experience includes developing, procuring and implementing a wide variety of public safety projects, including support during the contractual process for agencies in several states. Chris serves as a client manager, supporting client needs.



Representative Experience

State/Regional Experience

- Tennessee Emergency Communications Board (TECB)—Cybersecurity, NG911
- Georgia Emergency Communications Authority (GECA)—NG911
- North Carolina 911 Board—Various projects

City/County Experience

- Manatee County, FL—EMS strategic planning
- Marion County, FL—Consolidation study
- Atlanta, GA—CAD implementation
- Fulton County, GA—CAD services and network monitoring
- Cobb County, GA—911 staffing analysis and facility programming
- Coweta County, GA – CAD Assessment
- Forsyth County, GA—Vendor management and CAD services
- Grady EMS (Atlanta, GA)—EMS operations assessment
- Alamance County, NC—Facility programming
- Caldwell County, NC—Facility design and technology management
- Columbus County, NC—Facility design and grant management
- Polk County, NC—Facility design and technology management
- Carteret County, NC—911 workforce optimization
- Knox County, TN—Regional ESInet and network monitoring solutions
- Nashville Metro Emergency Communication District, TN—Regional ESInet development
- Rutherford County, TN—Regional ESInet design and network monitoring
- Louisa County, VA—Radio system analysis
- Charlottesville-UVA-Albemarle Emergency Communications Center, VA—P25 implementation, workforce optimization and facility programming

Additional Experience

- Expertise in consulting with clients across the entire public safety ecosystem including operations and multiple technology platforms
- Significant work with multiple counties on the procurement process and implementation of 911 call-handling equipment, including multi-PSAP implementations
- Extensive experience in consultation on various PSAP and EOC facility projects working both with public safety entities and architect partners

Industry Experience

23 years

Certifications

B.S., Business Administration, University of North Carolina-Greensboro

Associations

National Emergency Number Association (NENA)

Association of Public-Safety Communications Officials (APCO)

Patrick W. McFeely

Manager of Facilities Design, Mission Critical Partners

Pat is a public safety communications SME who has been engaged in the management and oversight of public safety projects throughout his career. He provides clients with technical expertise in planning, design and integration of EOC facilities, radio systems, alert warning systems, enhanced grounding systems and A/V systems. Pat serves as facilities design manager for MCP's Facilities and Operations market segment, overseeing project execution and growth in this domain. As the program manager for MCP's Chemical Stockpile Emergency Preparedness Program (CSEPP) project, Pat has assisted with the design, construction and systemization of 12 emergency operations and 911 facilities and continues to provide executive- and technical-level support to CSEPP and other state and local agencies.

Representative Experience

Federal Experience

- Department of Homeland Security/Federal Emergency Management Agency (DHS/FEMA) CSEPP—Program manager/lead technical consultant for the planning, design and integration of eight new EOC facilities and two facility redesign and reuse
 - Alabama—Calhoun County, technical integration services for IT
 - Arkansas—Grant and Jefferson counties, technical integration services for radio, grounding and alert warning systems
 - Colorado—Pueblo County and Pueblo Chemical Depot, new EOC
 - Project management and technical oversight for 800 MHz trunk radio system, redesign of Colorado State EOC A/V systems and Pueblo Chemical Depot Chemical Limited Area (CLA) camera surveillance design
 - Kentucky Blue Grass Army Depot—CLA camera surveillance system design and implementation
 - Kentucky—Powell, Rockcastle, Clark, Madison, Lexington-Fayette, Jackson, Garrard and Estill counties
 - Technology design and integration services for new EOCs
 - Project management and technical services for enhanced grounding system, 911 and administrative phones, as well as radio system and alert warning system replacements and upgrades

State/Regional Experience

- Pennsylvania Emergency Management Agency (PEMA)—EOC technology integration services
- North Central Texas Council of Governments (NCT911)—Workforce Solutions RFP for wide area network, internet and Session Initiation Protocol (SIP) trunk phone service

City/County Experience

- Beverly Hills, CA—Siren planning and design
- Malibu, CA—Siren system feasibility design
- Contra Costa Fire Protection District, CA—PSAP staffing study, growth projections and facility space programming study
- North County Dispatch Joint Powers Authority (aka North Comm), CA—PSAP staffing study, growth projections and facility space programming study for Fire Dispatch
- El Paso-Teller County 9-1-1 Authority, CO—PSAP facility space planning study
- Milwaukee County, WI—Facility space planning
- Dare County, NC—A/V design for EOC
- Manatee County, FL—EOC A/V system upgrade design and implementation



Industry Experience

33 years

Education

B.S., Supply Chain and Information Systems, Pennsylvania State University

Certifications

Certified Cisco Network Associates (CCNA), Retired

Microsoft Certified Systems Engineer (MCSE), Retired

Microsoft Certified Trainer (MCT)

Certified Technical Trainer, Chauncey Group (CTT)

Craig W. Schulz, ENP

Facilities Domain Leader, Mission Critical Partners

Craig is a public safety communications SME who has been engaged in the project management and oversight of facilities and technology projects throughout his career. He has overseen the construction of state-of-the-art communications facilities and has been instrumental in the procurement and replacement of public safety technology systems for clients. Craig has hands-on experience in management, security, data center operations and public safety applications. He leverages his organizational and team leadership skills to support mission-critical infrastructure and public safety initiatives.

Representative Experience

City/County Experience

- Alamance County, NC—Facility programming and feasibility study
- Caldwell County, NC—Project management, facility construction and technology integration
- Chatham County, NC—Project management, facility construction and technology integration
- Clay County, NC—Project management, facility construction and technology integration
- Cleveland County, NC— Grant management, project management, facility construction and technology integration
- Cobb County, GA – Facility programming and design
- Columbus County, NC—Grant application preparation
- Dorchester County, SC—Project management, facility construction and technology integration
- Mitchell County, NC—Facility construction and technology integration
- Franklin County, NC—Grant management, project management, facility construction and technology integration
- Graham County, NC—Grant management, project management, facility construction and technology integration
- Greene County, NC—Grant management, project management, facility construction and technology integration
- Horry County, SC—Facility construction and technology integration
- Iredell County, NC—Grant management, project management, facility construction and technology integration
- Lincoln County, NC—Grant management and technology integration
- Pender County, NC—Facility design and technology planning
- Polk County, NC—Grant application assistance, project management, facility construction and technology integration
- Richmond County, NC—Technology integration
- Sampson County, NC—Grant management, project management, facility construction and technology integration
- Wayne County, NC—Grant management, project management, facility construction and technology integration
- Charlotte, NC—Operational, consolidation assessment
- Charleston County, SC—Workforce optimization
- Pitt County, NC—PSAP assessment
- Wake County, NC—Radio system upgrade



Industry Experience

29 years

Certifications

Emergency Number Professional (ENP)

Information Technology Infrastructure Library (ITIL) Certification

National Incident Management System/ Incident Command System (NIMS/ICS)— 100, 200, 700, 800

Associations

National Emergency Number Association (NENA)

Association of Public-Safety Communications Officials (APCO)

Awards

North Carolina NENA President's Award, 2016

North Carolina NENA Communications Support Personnel of the Year, 2009 and 2014

E911 Institute Technician of Year, 2010

Steven M. Haberman, ENP

Senior Technology Specialist, Mission Critical Partners

Steve is a senior technology specialist who brings project management, 911 center and EOC experience, having previously served as a shift commander and communications supervisor. Steve's extensive experience with emergency communications and PSAP technology and operations ensures client success on the projects he supports. His expertise is in applying a holistic understanding of all aspects of public safety, and he leads his teams toward successful outcomes by providing project management and technical support.

Representative Experience

State/Regional Experience

- North Carolina 911 Board—Annual PSAP assessment support
- New Jersey Office of Homeland Security and Preparedness—Statewide FirstNet support for county first responder and PSAP readiness
- Arizona Department of Administration
 - Statewide FirstNet support for county first responder and PSAP readiness
 - Statewide Broadband Strategic Plan
- Michigan Department of Management, Technology and Budget—Statewide FirstNet support for county first responder and PSAP readiness
- Pennsylvania Emergency Management Agency (PEMA)—Technical support for statewide PSAP inventory of 69 PSAPs
- San Diego State University Police Department/California State University San Marcos—PSAP consolidation feasibility assessment
- Pennsylvania Region 13 Task Force—PSAP technology and project management support

City/County Experience

- Nez Perce County, ID—PSAP consolidation planning
- Boston, MA—Police Department operations assessment
- Butler County, PA—Project manager for radio communications assessment, tower relocation and new P25 800 MHz radio system procurement and implementation
- Lawrence County, PA—Project manager for countywide P25 VHF trunked radio system, broadband network project, along with a new PSAP/EOC construction project
 - Procurement, vendor selection and implementation support
- Cambria County, PA—Radio assessment, procurement and implementation support
- Columbiana County, OH—PSAP consolidation feasibility assessment
- Princeton University, NJ—PSAP assessment and data integration project
- Lorain County, OH—P25 radio assessment and Fire Station Alerting project
- Lake County, IL—PSAP consolidation assessment and new facility technology support
- Fairview Heights/O'Fallon, IL—Project manager and technical support for consolidation and financial impact study for relocation evolving into a consolidated PSAP
- St. Clair County, IL—Emergency Telephone System Board assessment
- Winnebago County, IL—PSAP consolidation assessment
- Elyria, OH—Project manager for radio system upgrades and dispatch center relocation
- Parma, OH—Technical support for PSAP relocation
- Allegheny County, PA—Enhanced 911, PSAP consolidation/relocation project support



Industry Experience

34 years

Education

B.S., Business Administration – Management Information Systems, Indiana University of Pennsylvania

Certifications

Emergency Number Professional (ENP)

National Incident Management System/ Incident Command System (NIMS/ICS)-100, 200, 300, 400, 700, 800

PEMA Basic Certification

Criminal Justice Information Services Security Awareness Training Level 4

Associations

National Emergency Number Association (NENA)

Southwest PA Regional Terrorism Task Force, Communications Committee

James P. Krebs

Senior Technology Specialist, Mission Critical Partners

Jim brings an extensive career in the facility and mechanical and electrical engineering to his projects. He has provided specialized expertise on many mission-critical facility projects ranging in size and scope for federal, regional, county and local clients. Jim's background and skills are leveraged to maintain quality customer service and safety. Jim is an R56 SME.

Representative Experience

National/State/County Experience

- U.S. Department of Homeland Security/Federal Emergency Management Agency (DHS/FEMA) Chemical Stockpile Emergency Preparedness Program (CSEPP)— Technical support for counties in Kentucky, Colorado, Alabama and Washington; including, but not limited to:
 - Grounding specifications per Motorola R56 Standards / National Electrical Code
 - On-site construction inspections; final grounding documents
 - Inspection of exterior and interior construction; mechanical, electrical, plumbing (MEP) and ground system installations
 - As-built drawing updates for grounding systems via AutoCad
 - Tower green site construction oversight, drawings and specifications
 - Oversight for EOC to evaluate and hold accountable contractor's efforts for a full R56 retroactive grounding installation
 - Physical inventory of countywide 800 MHz radio network to include all site infrastructure, microwave, PSAP and portable/mobile radio products for transfer of assets to a special district radio board
 - Completion of published facilities maintenance document and oversight for new facilities maintenance program for the Kentucky CSEPP counties
- MEP and Grounding Technological SME Support—Construction of emergency service centers in counties of Chatham, Clay, Durham, Franklin, Greene, Iredell, Lincoln, Martin, Mitchell, Richmond, Rocky Mount, Sampson, Union, Wake and Wayne, North Carolina
- R56 SME Support—Provided R56 site reviews and/or oversight for the State of Missouri; Rhode Island State Police; CSEPP project; Philadelphia Public Services Building; Washington DC Office of Unified Communications (OUC); Memphis, Tennessee; and various counties within California, Florida, Maryland, New York, New Jersey, North Carolina, Pennsylvania, and South Carolina
- Procurement Support—
 - Development of technical specifications for tower site construction and assistance with oversight and/or implementation of tower site construction
 - Development of RFPs for generator, uninterruptible power supply (UPS), electrical enhancements, site grounding for EOCs and tower sites, tower site civil upgrades, sewer line replacement and elevator replacement
 - Drawing design and/or technical support for alert warning siren systems in California and Kentucky

Additional Experience

- Facilities/Fleet Manager of wireless communications
 - Technology Specialist—Specification writing; ground system design; on-site construction inspections and documentation
- Project Manager
 - Management of subcontractors; liaison between owner, architect and engineers, code officials and laborers
 - Project oversight, building and equipment spatial layout and timeline preparation



Industry Experience

40+ years

Certifications

Motorola R56® Certified
LPI Certified Master
Installer

Training & Experience

Design and Graphics:

Architectural Drawing
AutoCAD; Visio
Engineering Graphics
Optimizing Plant Layouts

Electrical:

Surge Protection Devices
Panel Boards & Controls
Programmable Controllers
Residential & Industrial
Wiring
Liebert UPS System
Cutler Hammer
Distribution Analysis
National Electrical Code
OSHA Lockout/Tagout
Electromechanical
Northern Telecom
Telephone Maintenance
Coax/Ethernet Cable
Termination
ESD Training

Jeffrey Lupinacci, RCDD/DCDC, ENP

Senior Technology Specialist, Mission Critical Partners

Jeff has extensive expertise in communications technologies, data center designs and construction support services. He has experience in conducting needs assessments, determining requirements and meeting customer expectations in diverse projects, with industry certifications, including RCDD, DCDC and ENP. Jeff is a recognized hands-on telecommunications technology specialist working to ensure customer satisfaction, with years of demonstrated successful projects. Areas of specialization include:

- Development of open system structured cabling systems (SCS) designs, including fiber-optic and copper media selection, pathways and spaces, fire-stopping and grounding
- Establishment of design requirements for various systems comprising the PSAP, EOC and data center, including SCS, data networks, power systems, HVAC, grounding, security systems, A/V systems, console furniture and operations
- Consultation, needs assessment, technology systems architecture and planning and feasibility assessment design; development of construction documents, bid specifications and project drawings; project management and installation support; systems testing and commissioning of data centers and SCS
- Wide area network/local area network (WAN/LAN) connectivity, wireless network infrastructure (including Wi-Fi) and distributed antenna systems (DAS)
- Physical and electronic security assessment and design including access control, intrusion detection, video surveillance and recording systems

Representative Experience

State/Regional Experience

- Pennsylvania Emergency Management Agency (PEMA)—Design of telecom, security, DAS and A/V systems cable infrastructure for new headquarters and EOC
- Southeastern Pennsylvania Regional Task Force—Design and implementation of regional ESInet for the transport of emergency services traffic (voice, data, video) and application sharing between PSAPs
- Fort Indiantown Gap, National Guard, PA—Design of SCS in support of data network, security surveillance, access control and perimeter security for new police headquarters

City/County Experience

- Philadelphia, PA—New PSAP design, building infrastructure design support and systems planning support and A/V system design support
- District of Columbia (DC)—SCS, A/V and grounding systems for new facility including console furniture procurement, installation, migration planning and construction support; construction and renovation of primary and backup EOCs
- Memphis/Shelby County, TN—Technical support for multiple PSAP renovations/migrations, A/V system upgrades, UPS replacement, HVAC replacement and coordination of technology systems in multiple new or renovated facilities with architectural/engineering design team and multiple contractors; logging recorder assessment and consolidation feasibility study
- Allegheny County, PA—PSAP feasibility study and facility renovation project design addressing SCS, power, security, console furniture and A/V system
- Rockingham County, NC—New PSAP consolidation facility programming, needs assessment and facility design covering security, telecom systems, SCS, A/V, countywide fiber-optic network, radio tower connectivity, 911 technology and operationalization



Industry Experience

39 Years

Education

B.S. Industrial Technology, Electrical Systems, Central Connecticut State University

Certifications

Registered Communications Distribution Designer (RCDD)

Data Center Design Consultant (DCDC)

Emergency Number Professional (ENP)

CJIS Level 4 Security Awareness Certification

OSHA Training for the Construction Industry

Associations

Building Industry Consulting Service International (BICSI)

National Emergency Number Association (NENA)

Lisa Shorter

Project Manager, Mission Critical Partners

Lisa is passionate about 911 and the men and women who work in centers across the country. She has an eye for customer satisfaction and utilizes her management expertise to finish on time and under budget. Lisa is an innovative, strategic thinker and approaches each challenge with a thoughtful mind and optimistic attitude. Having worked on projects ranging from \$100,000 to more than \$12,000,000, Lisa believes the most successful project leaders are those that are dedicated to more than just the finish line, but also to coordination, collaboration and mission-focused goals from the start.

Representative Experience

City/County Experience

- Pueblo County Sheriff's Office (PCSO), Colorado
 - Hands-on participation in the planning and execution of Pueblo County's multimillion-dollar EOC/Joint Information Center (JIC)/PSAP construction
 - Five years as Director of Pueblo County's PSAP, earning triple accreditation and Colorado 2018 Association of Public-Safety Communications Officials (APCO) Center of the Year by improving staff satisfaction, engagement and retention
 - Primary agency point of contact for multiple life-cycle cost (LCC) replacement projects, including A/V, 911 recorder, field safety equipment, PSAP phone refresh and multiple cycles of PC/printer replacement
 - Significant role in onboarding multiple technologies with a focus on optimizing performance (USDD, Text-2-911, IPAWS, EFD, Swift911, call-taker database) and several other innovations using Google's various platforms
 - Extensive knowledge in 2 CFR Part 200 federal grant compliance, monitoring, fiscal planning and tracking, quarterly reporting, federal application and award processes
 - More than seven years as the agency public information officer and additional years in leadership
 - Author of hundreds of documents including policy, news releases, technical documents, memorandums of understanding, emergency management plans, rubrics and articles
 - Editor for other team members' documents
 - Engagement in various technical discussions to aid in design, analysis, continuity and troubleshooting
 - Experience in Public Utility Commission 911 surcharge applications and other state and federal regulatory forms
 - Responsibility for the implementation of all social media platforms currently utilized by PCSO, as well as the transition to CivicPlus hosted website and employee tracking system, Guarding Tracking



Industry Experience

23 years

Associations

Division of Homeland Security and Emergency Management, Staffing for Adequate Fire and Emergency Response (SAFER) Grant Panel

Runyon Board Secretary

Public Utility Commission Surcharge Applicant

David L. Schrader, AID, LEED AP

Managing Partner, Lead Public Safety Designer and Planner, SCHRADERGROUP

For more than two decades, David Schrader has designed facilities of public interest. Specializing in programming, planning and architectural design for mission-critical and law enforcement facilities, David has significant experience in project types ranging from feasibility studies and master planning to additions, renovations and new facility design. David's design accolades, speaking engagements and publications in the field of design for mission-critical facilities are numerous. Working closely with his clients, David has the ability to create a vision that results in measurable success for the client, the design team, and the public-at-large. "Partnership in design is a key focus of creating a better designed environment for each client."

Representative Experience

- Armstrong County, PA
 - Emergency Operations Center, Programming and Planning, New Facility
- Bradford County, PA
 - Public Safety Training and Emergency Operations Center, Programming and Planning
- Centre County Emergency Services, Bellefonte, PA
 - Emergency Services Facility (EOC/911), Programming and Planning, Renovations
- City of Parma, OH
 - E911 Consolidation/Communications Center, Programming and Planning, Adaptation/Renovation
- City of Gaithersburg, MD
 - New Police Department Facility
- Commonwealth of Kentucky, Frankfort, KY
 - Emergency Operations Center Additions, Programming, and Planning
- County of Dare and Town of Manteo, NC
 - Dare-Tyrrell Counties Regional Emergency Communications Center (RECC) and Dare County Emergency Operations Center (EOC), New Facility
- County of Montgomery, Upper Providence, PA
 - Emergency Operations Center, Programming and Planning, Additions and Renovations
- County of Northampton, Nazareth, PA
 - Emergency Management Operations Center, Expansion and New Garage
- County of Wayne, Lyons, NY
 - 911 Communications Center, Backup 911 and EOC Facilities Study
 - 911 Communications Center, Renovation
- Fayetteville-Cumberland County, Fayetteville, NC
 - Emergency Communications Center, Programming and Planning
- Federal Emergency Management Agency/CSEPP Program, Various Locations, KY
 - Programming, Planning, Design and Project Oversight for Seven County Mission Critical Facilities
- Lackawanna County, Jessup, PA
 - Public Safety Center and Emergency Management Center (911), New Facility
- Lexington Fayette County Urban Government, KY
 - Public Safety Center, Third Party Review, Programming, and Planning
- Lubbock Emergency Communication District, Lubbock, TX
 - Backup 911 and Administrative Facility, Programming, and Planning, New Facility



Industry Experience

14 years

Education

Master of Architecture,
University of
Pennsylvania

Bachelor of Architecture
Pennsylvania State
University

BS Architecture
Pennsylvania State
University

Certifications

Registered Architect
Delaware, Florida,
Louisiana, Maryland,
Missouri, New Jersey,
New York, North
Carolina, Ohio,
Pennsylvania, Rhode
Island, Texas, Utah,
Virginia

Associations

American Institute of
Architects
Association of Project
Managers
National Emergency
Number Association
Pennsylvania Society of
Architects
Young Architects Forum

Harry J. Pettoni

Principal, SCHRADERGROUP

Harry J. Pettoni has over two decades of professional architectural and construction experience in the public and private sectors. Mr. Pettoni focuses on strategic planning, marketing, business development, programming, planning, project development and sustainable design.

Mr. Pettoni is focused on improving facilities by creating 21st-century, healthy environments for the end user. He presents at numerous seminars, workshops and forums on various topics throughout Pennsylvania, Maryland, Delaware and New Jersey.

Representative Experience

- Bradford County, PA
 - Public Safety Training and Emergency Operations Center, Programming and Planning
- City of Parma, Parma, OH
 - E911 Consolidation/Communications Center, Programming and Planning, Adaptation/Renovation
- City of Gaithersburg, Gaithersburg, MD
 - New Police Department Facility
- County of Lancaster, Lancaster, PA
 - Courthouse Dome Restoration
- Martin County, Williamston, NC
 - PSAP and Regional Back-up Facility, New Facility
- The following projects were completed while employed by other firms
 - City of Paterson, Paterson, NJ
 - City Fire Department Training Tower, Renovation
 - City Fire Department – Madison Avenue, Interior Renovations
 - Various City Fire Stations, Roof Replacements
 - Traffic Operations Center, Roof Replacement
 - Municipal Complex, Roof Replacement
 - City Parks Renovations – Various Sites
 - Baseball Field, Rehabilitation and Lighting Project
 - Soccer/Football Field, Rehabilitation and New Sprinkler System
 - Numerous Playgrounds, Renovations
- Delaware Department of Corrections, Dover, DE
 - State Firearms Training Facility, Renovation and Modernization
- Passaic County Jail, Paterson, NJ
 - Recreation Roof Deck, Replacement and Restoration
- Passaic County Juvenile Detention Center, Haledon, NJ
 - Existing Facility, Addition
- Passaic County Police Academy, Wayne, NJ
 - New Facility



Industry Experience

22 years

Education

Bachelor of Architecture,
Syracuse University

Associates of Applied
Science, Architectural
and Construction
Technology
State University of New
York

Associations

Green Building
Association of Central
Pennsylvania

Sustainable Building
Industry Council

Businesses for the Bay

The background is a solid dark blue color. It features a pattern of light blue hexagons of various sizes and orientations. Some hexagons are solid, while others are just outlines. Small, light blue dots are scattered throughout the background, some appearing to be at the vertices of the hexagons. The overall aesthetic is clean, modern, and technical.

Experience

Union County, North Carolina

Facility Design and Migration Support



Challenge: Union County (County) planned to construct a new public safety facility that would house its emergency management, fire marshal and emergency communications functions. Space constraints at the County's existing facilities did not allow for adequate future growth for each division and did not provide a cohesive operation across public safety entities.

Solution: Mission Critical Partners was retained by the County and its architectural firm to provide overall project management, support and oversight, grant administration, subject-matter expertise and technology implementation functions for the new facility. MCP's support included:

- Assessing the space for each of the functions
- Reviewing the communications technology to identify systems that could migrate to the new facility, those that needed to be upgraded, and those that needed to be replaced because they had become obsolete or had reached end of life
- Assisting the County with a grant submission to the North Carolina 911 (N.C. 911) Board (the grant request was approved and helped fund a portion of the 911-related items within the facility)
- Working closely with the County during design, construction, and upfit of a more than 24,000-square-foot joint facility
- Providing subject-matter expertise on the design of a resilient public-safety-grade facility with purpose-driven technology elements

The following communications technologies were included in the design, transition, and/or implementation of the new public safety facility:

- N.C. 911 Board Hosted Call Handling/ESInet
- CAD/Mapping
- Logging/Recording
- Radio Console Migration
- Console Furniture
- Data Center/Networks

Key Result: MCP provided numerous recommendations to the County throughout the project's construction phase. Several key recommendations included facility and technology grounding, data center sizing, infrastructure requirements and 911 technology integration. Following a highly orchestrated migration and cutover plan, Union County will cut over to its new 911 facility in the fourth quarter of 2022, with a radio tower construction adjacent to the facility in 2023. MCP will assist the County with post-cutover support and project closeout.

Project Length: 3 years

Project Dates: September 2019 to Present

Solutions Provided:

Facility Design Oversight

Technology Procurement Support

Grant Management Oversight

Transition and Implementation Oversight

Population: 238,267 (2020)

Nearest MSA: Charlotte-Concord-Gastonia, NC-SC

Contacts:

Jim Powell
ADW Architects
704.379.1919
JPowell@ADWArchitects.com

Vicki Callicutt
Emergency Communications
Director
Union County, NC
704.283.3550
vicki.callicutt@unioncountync.gov

Iredell County, North Carolina

Public Safety Answering Point Facility and Technical Implementation



Challenge: Iredell County (County) planned to construct a new public safety facility that would house its emergency medical services, emergency management, fire marshal and emergency communications functions. Space constraints at their existing facility did not allow for growth within the emergency communications area and did not provide a cohesive operation across public safety entities.

Solution: Mission Critical Partners was retained by the County to provide overall project management, grant administration, subject matter expertise, and technology implementation functions for their new facility. MCP's support included:

- Assessment of the space for each of the functions was accomplished
- Review of the communications technology to identify systems that could migrate to the new facility, those that needed to be upgraded, and those that needed to be replaced because they became obsolete or had reached the end of life
- Assisted the County with the submission of a grant to the North Carolina 911 Board
- The grant request was approved and helped fund a portion of the 911 related items within the facility
- Worked closely with the County during the design, construction, and upfit of a more 38,000-square-foot joint facility
- Provided subject matter expertise on the design of a resilient public safety grade facility with purpose-driven technology elements

Communications technologies that were included in the design and implementation:

- North Carolina State 911 Board Hosted Call Handling/ESInet
- CAD/Mapping
- Logging/Recording
- Radio Console Migration
- VHF Radio System Upgrade
- Data Center/Networks

Key Result: MCP provided numerous recommendations to the County throughout the construction phase of the project. A key recommendation was to significantly increase floor space for the emergency communications center because MCP had determined that the original allocation was inadequate, both for current and future needs. Following the highly orchestrated migration and cutover planning, Iredell County cutover to the new 911 facility in July 2019. MCP assisted the County with post-cutover support and project closeout. MCP was also retained to conduct a UHF radio project for the County.

Project Length: 4.25 Years

Project Dates: June 2016 to November 2020

Population: 178,853 (2020)

Nearest MSA: Charlotte-Concord-Gastonia, NC-SC

Contact:

David Saleeby
Construction Project Manager
704.450.1219
david.saleeby@co.iredell.nc.us

City of Durham, North Carolina

PSAP Communications Implementation Support



Challenge: The City of Durham (City) wanted to design and construct a new headquarters complex for its police department. A significant aspect of the project involved planning the new 911 PSAP facility and developing a transition plan. The 911 emergency communications center is co-located within the police department headquarters facility.

The PSAP provides call-taking and dispatching services for the following:

- City of Durham Police Department
- City of Durham Fire Department
- Durham County Emergency Medical Services
- Durham County Sheriff
- Five volunteer fire departments

Solution: Mission Critical Partners was retained to perform specific tasks associated with the implementation of communications technology that will serve the new headquarters' PSAP, working in collaboration with the City and the architectural/engineering firm O'Brien/Atkins.

MCP tasks included:

- Conducting a technology needs assessment to identify the legacy communications systems that needed to be upgraded, replaced, or migrated
- Providing inputs and review services as the facility design specifications were being developed

Key Result: MCP's subject-matter experts provided support and recommendations to O'Brien/Atkins and 911 center staff to assist in designing, specifying, and procuring the various communications systems that were being implemented in the new PSAP. The building was completed at the end of 2018.

Project Length: 3 Years, 9 Months

Project Dates: May 2015 to February 2019

Population: 251,761 (2016)

Nearest MSA: Durham-Chapel Hill

Contact:

Randy Beeman, Director
Durham Emergency
Communications Center
919.560.4500
Randy.Beeman@Durhamnc.gov
[v](#)

Martin County, North Carolina

New Primary 911 Center/Regional Backup 911 Center Program Management, Technology Implementation Oversight



Challenge: Martin County’s (County) primary 911 center/PSAP was in very cramped quarters in the County Courthouse building. The PSAP utilizes a 12-foot by 12-foot room (144 square feet), while its data center is housed in an even smaller room—10 feet by 10 feet (100 square feet). In addition, the various public safety technology systems used in the PSAP were nearing the end of life and needed a technology refresh.

Meanwhile, the State of North Carolina was seeking to establish regional backup PSAPs throughout the state, largely because many counties are too small to justify having their own backup 911 center.

For these reasons, Martin County decided that it needed to build a new PSAP that would also serve as a regional backup facility for Bertie and Pasquotank counties. Mission Critical Partners was hired to support the project.

Solution: Martin County, after receiving a \$4.3 million grant from the North Carolina 911 Board, designed, built, and outfitted with technology a new 5,000-square-foot, state-of-the-art 911 facility. The facility utilized purpose-built public safety grade technology that provided the environment necessary to serve the citizens of Martin County. Some of the technology that was included:

- New call handling equipment (CHE), which was part of the State of North Carolina hosted CHE system
- Redundant network equipment
- Upgrades to the CAD system hardware
- New dispatch console radios
- New call-logging system
- New audiovisual system

MCP is performing the following tasks:

- Overall program management
- Oversight of building design and construction
- Oversight of technology implementation, including performance testing
- Oversight of the cutover from the legacy facility to the new facility

Key Result: MCP worked collaboratively with SchraderGroup Architecture LLC to design the facility with the transition of Martin County to the new facility in October 2019. The facility will become fully operational with Bertie and Pasquotank counties in 2020. MCP continues to provide project management support and oversight during the transition.

Project Length: 5.5 Years

Project Dates: December 2016 to October 2020

Population: 22,644 (2020)

Nearest MSA: Hickory-Lenoir-Morganton, NC

Contact:

Jason P. Steward, MJA ENP
Telecommunications Manager
252.789.4556
jason.steward@martincountync.gov
[gov.com](http://martincountync.gov)

Mitchell County, North Carolina

Regional 911 Backup Center Program Management, Facility/Technology Assessment, Grant Support



Challenge: Mitchell County's (County) primary PSAP was housed in a former Federal Emergency Management Agency (FEMA) trailer that was in poor physical condition. Moreover, the various communications systems used in the PSAP were antiquated and in need of a technology refresh.

Meanwhile, the State of North Carolina (State) had embarked on an initiative to establish regional backup PSAPs throughout the state, largely because many counties are too small to justify having their own backup 911 center.

For these reasons, Mitchell County decided that it needed to build a new PSAP that could also serve as the backup facility for Avery, McDowell, and Yancey counties.

Solution Mission Critical Partners was hired to support the project. In the first phase of the project, MCP conducted assessments of the PSAP's facility, technology, and personnel and delivered a recommendations report. MCP wrote the application the County submitted to secure grant funding.

The second phase began with the County ultimately being awarded \$3,163,310. MCP worked collaboratively with the North Carolina architectural firm Stewart-Cooper-Newell and the County on a facility design.

Other tasks that MCP performed included:

- Overall program management
- Technology procurement support, including the writing of requests for proposals (RFPs) and assisting the County in vendor selection
- Oversight of building construction and technology implementation, including performance testing
- Oversight of the cutover from the legacy facility to the new facility, including the decommissioning of all legacy communications systems

Key Result: The facility reached substantial completion in October 2019, followed by technology implementation. The PSAP cut over to the new facility in May 2020.

Project Length: 4.25 Years

Phase 1: 7 Months

Phase 2: 3.75 Years

Project Dates:

Phase 1 July 2015 to January 2016

Phase 2 November 2016 to July 2020

Population: 14,959 (2020)

Nearest MSA: Hickory-Lenoir-Morganton, NC

Contact:

Mavis Purvis

Finance Director

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Richmond County, North Carolina

E-911 Communications Facility and Consolidation Consultant



Challenge: Richmond County (County) identified the need to improve emergency communications services to the citizens of the county. This involved the consolidation of Richmond County 911, the secondary PSAPs of the Sheriff's Office, the Rockingham Police Department, and the Hamlet Police Department into a new, single-story 9,000 square-foot emergency communications center (ECC) facility. Additionally, the County sought support for a grant funding application for submission to the North Carolina E-911 Board.

Solution: Mission Critical Partners was retained by Richmond County to provide consulting services to assist in the consolidation of dispatch services to create a more effective and efficient delivery of life safety services to county citizens and visitors. MCP assisted in coordinating all activities related to facility design and construction oversight, including:

- Provided a programming study defining the required spaces
- Provided technical reviews during the design phase for raceways, grounding, electrical and mechanical
- Reviewed functional space requirements
- Programming of projected requirements for the consolidated facility to include space for an EOC
- Provided oversight during construction
- Reviewed electrical, grounding, uninterruptible power supply (UPS), generator, and raised flooring installations
- Provided oversight of systems testing of mission critical components

MCP reviewed all available data sets and held interviews with PSAP management to assist in determining program space needs, and identifying statistical data required for analysis of existing call taking and dispatch operations.

Key Result: MCP worked with Richmond County to prepare the grant application for the North Carolina E-911 Board resulting in a grant award of \$6,357,539 to help with funding the consolidation of dispatch services. The new facility went live on June 19, 2018, and will promote more efficient services for citizens and visitors and will provide better safety among first responders as telecommunicators will now have access to the same call information and have the ability to communicate with each other in the same workspace rather than by phone, ensuring the needs of callers and first responders are met promptly.

MCP is currently assisting the County with the procurement of mobile data computers (MDCs) for law enforcement responders, including RFP and RFI development, proposal response review and evaluation, and implementation oversight.

Project Length: 7 Years

Project Dates: February 2015 to Present

Population: 44,759 (2020)

Nearest MSA: Hamlet-Rockingham, NC

Contact:

Bob Smith

Director

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Alexander County, North Carolina

Public Safety Answering Point Assessment



Challenge: Alexander County (County) officials sought an assessment of its PSAP to identify opportunities to improve emergency communications services for its citizens and the first responders who protect them and their property.

Solution: Mission Critical Partners was retained to evaluate the PSAP's current technology and its overall operations, as well as the facility that houses the 911 center. Specifically, MCP evaluated the PSAP's customer premises equipment, CAD system, radio consoles, logging recorder, and GIS; the center's current staffing, quality assurance program, and potential impact of NG911; and future space needs, including the need for a backup facility.

Key Result: MCP delivered a comprehensive report based on its assessment to the County that offered the following key recommendations:

- The PSAP was understaffed and consequently should add both full-and part-time telecommunicators; it should create a "power shift" to handle call volume during the busiest days of the week.
- The County had been approached by neighboring Iredell County—which was in the design stage of a new PSAP—about consolidating operations, which the State of North Carolina encourages. While the County should consider such a scenario—largely because it could bring capital and operational expense savings and allow the County to leverage a deeper personnel resource pool—it should carefully assess all aspects of such an event, particularly those related to governance and funding.
- The current PSAP facility, which is 46 years old, had become obsolete and had no space for needed expansion; consequently, the County should begin to develop plans for a new facility.
- To prepare for NG911, the PSAP needed to take the necessary steps to ensure that its GIS data was compliant with standards and best practices established by the National Emergency Number Association (NENA).
- The PSAP should take steps to enhance its quality assurance/quality improvement program to align it with national standards and best practices.

Project Length: 3 Months

Project Dates: May to July 2016

Population: 37,211 (2016)

Nearest MSA: Hickory–Lenoir–Morganton, NC

Contact:

Richard (Rick) French
County Manager, Alexander
County

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Dare County, North Carolina (Dare, Tyrrell, Hyde counties)

Emergency Operations Center and Regional Operations Center Consolidation

Challenge: Dare, Tyrrell, and Hyde counties, North Carolina, (Counties) realized the need to develop a regional emergency communications center (RECC) and expand regionalized 911 services throughout the three-county region. The Counties needed to determine the technical, operational, governance, and facility feasibility of entering into and implementing a regional emergency communications center project. In addition, the Counties anticipated that the RECC would be co-located with an emergency operations center (EOC) that would be utilized during disaster management functions. The resulting work product would provide sufficient content and quality to be used as a basis for a grant funding application to the North Carolina Enhanced 911 (E911) Board.

Solution: Mission Critical Partners was retained to develop a feasibility study with specific review and recommendations for the technical, operational, governance, and facility components, which are required to establish and implement a regionalized 911 emergency communications service. MCP made site visits to the two public PSAPs operating in the Counties. The site visits allowed MCP to interview stakeholders and create a sustainable solution set of recommendations that would integrate operations from the two Counties into the proposed RECC. The findings of these interviews were analyzed, and a draft report was provided to the Counties for review and input. Based on collaborative efforts between MCP and the Counties, a final report was prepared for submission to the North Carolina E911 Board.

SchraderGroup architects supported the project by providing audiovisual consulting and design services for the design and construction coordination of the PSAP/EOC.

Key Result: The Counties were awarded a grant from the North Carolina E911 Board to implement the RECC program. MCP and the Counties worked on Phase II of the project to administer the completion of and reporting of the grant; provided support for Dare County for RECC/EOC construction administration and integration of technology systems; assisted in procuring and implementing grant-funded technology; supported the commissioning of facility infrastructure and technology systems; and oversaw the transition and migration to the new RECC facility. The project was completed and successfully cut over in May 2017 with MCP providing additional support and assistance to the Counties with post-cutover activities.



Project Length: 2 Years

Project Dates: March 2014 to June 2016

Population: 35,187 (2016)

Nearest MSA: Kill Devil Hills, NC

Contact:

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Henderson County, North Carolina

Project Management for 911 Public Safety Answering Point Relocation and Migration



Challenge: Henderson County (County), located in southwestern North Carolina, has experienced a 12 percent surge in population since 2000. This population growth has been a key factor behind the County's decision to review the existing public safety infrastructure and begin to address the many challenges associated with its outdated system.

Solution: Mission Critical Partners was part of a six-member consulting team that assisted Henderson County specifically in addressing its immediate and long-term PSAP operations and facility needs in the form of a relocation of the County's PSAP to a newly constructed facility.

Phase I of the project included the development of a facility space use and program document and schematic design integrating "Best Practices" with regard to the operating standards of the PSAP. Phase II included telecommunications/technology infrastructure design services, a PSAP technology assessment, and counsel regarding the impact of upgraded PSAP technology on the facility systems.

The MCP team provided overall program management services for the coordination of the PSAP relocation project from design through construction and occupancy. These efforts comprised of five tasks that included:

- Program management services overseeing all administrative aspects of the project
- Assisted in all aspects of the bidding process
- Specification/procurement, award, and installation of PSAP technology and migration into the new facility
- NC 911 Grant Compliance services
- Coordination for the migration of the PSAP to the new location through occupancy

Key Result: Henderson County was provided with a reliable, flexible, state-of-the-art secure facility that transitions the existing PSAP into a new facility with the overall goal of improving the delivery of emergency service to the citizens and visitors of Henderson County.

Project Length: 2 Years

Project Dates: February 2013 to May 2015

Population: 109,719 (2015)

Nearest MSA: Asheville-Brevard, NC

Contact:

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Rockingham County, North Carolina

911 Communications Consolidation/Facility Consulting Services



Challenge: Rockingham County (County) operated and staffed three PSAPs to serve a rural population spread across nearly 600 square miles. The County consolidated all three sites into a new integrated facility to improve the delivery of emergency services to residents, businesses, and visitors of the County.

Solution: As Program Manager for the project, Mission Critical Partners coordinated all activities related to a

turn-key solution for the design, construction, migration, and implementation of the consolidated PSAP facility. Guided by best practices and best value procurement strategy, MCP managed a range of professional services, including:

- Technology integration and programming, including the selection of mission-critical technology and its seamless integration into the new PSAP building
- Development of all requests for proposals related to project equipment; land development and site preparation; geotechnical and environmental services; and architectural and engineering services
- Technology installation and oversight, from circuit planning and equipment installation to testing and system activation
- Risk analyses, monitoring, and management
- Comprehensive staffing plans that maximize the efficiencies of shared services
- Ongoing stakeholder updates and communications
- Overall grant management, oversight, and compliance with local, state, and federal laws and standards
- Staff augmentation to allow for a smooth transition
- Countywide paging system review, recommendations, and procurement documents to improve notification to First Responders within the County

All services were provided on-site to ensure open and clear communication between MCP and County representatives.

Key Result: MCP worked with Rockingham County officials to analyze, evaluate, develop, and implement the state-of-the-art integrated facility with the latest technology.

Project Length: 4 Years

Project Dates: May 2012 to June 2016

Population: 91,898 (2016)

Nearest MSA: Greensboro-High Point, NC

Contact:

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911 Director
336.634.3017
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Burke County, North Carolina

911 Communications Consolidation/Facility Consulting Services



Challenge: In 2010, Burke County (County) retained Mission Critical Partners to develop a plan to evaluate the growing need of the County's public safety stakeholders and their emergency communications needs.

MCP provided the County with a PSAP consolidation assessment report that detailed a fully consolidated, state-of-the-art PSAP. The report was intended to serve as a roadmap for the future development of a consolidated and unified 911 PSAP serving the citizens of Burke County, as well as the County's emergency response professionals.

In 2012, Burke County retained MCP as Program Manager to consolidate four PSAPs (an EOC PSAP, two municipal PSAPs, and a PSAP based at the Burke County Sheriff's Office) into one integrated facility to improve the delivery of emergency services to its citizens and visitors.

Solution: MCP coordinated all activities related to a turn-key solution for the design, construction, migration, and implementation of the consolidated PSAP facility. The primary services included:

- Technology integration and programming, including the selection of mission-critical technology and its seamless integration into the new PSAP building
- Conceptualization of a backup PSAP that meets the NC 911 Board's operating standards and can handle future County needs
- Development of all requests for proposals related to project equipment; land development and site preparation; geotechnical and environmental services; and architectural and engineering services
- Design of a new 10,000 sq. foot consolidated 911 PSAP facility and its technology
- Comprehensive staffing plans that maximize the efficiencies of shared services
- Ongoing stakeholder updates and communications
- Grant management and oversight

These activities complement services that MCP provided to Burke County in 2010 regarding the effectiveness of a PSAP consolidation. The findings from that study are guiding the consolidation effort.

Key Result: MCP and Burke County stakeholders together studied the viability and effectiveness of a PSAP consolidation. The findings from the study guided the consolidation effort. MCP worked closely with Burke County officials to analyze, evaluate, develop, and implement the consolidation recommendations. The new 911 center cutover was completed in 2015. Burke County anticipates the labor and operational cost savings projected in the assessment will be realized, and that service to all County citizens will be enhanced through the benefits that result from a well-executed consolidation initiative.

Project Length: 3 Years

Project Dates: May 2012 to April 2015

Population: 89,548 (2015)

Nearest MSA: Hickory–Lenoir–Morganton, NC

Contact:

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County Manager
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Pricing

Professional services outlined in the scope of work will be provided for a **total fee of \$490,000**. The fee is inclusive of labor and expenses.

Description of Service	Fee
Phase 1: Programming Review and Feasibility Study	\$65,000
Phase 2: Architect Selection, Design, and Construction	\$225,000
Phase 3: Post-Construction Migration Plan for Public Safety Systems	\$200,000
Total	\$490,000
Optional: Communications Tower Design, Engineering, and Installation Management	\$95,000

Mission Critical Partners proposes to deliver services on a per-hour basis based on Houston Galveston Area Council (H-GAC) Purchase Contract #HP08-21, with expenses defined at cost. MCP recognizes that it is responsible for costs related to travel, housing, transportation, communications devices, and computer equipment.

An invoice shall be submitted each month and include the percentage of work performed and expenses incurred relevant to the fee and shall be reviewed and paid within 30 days of receipt.

Any additional services contracted in subsequent years will be performed at MCP's then-current fee schedule. Prior to initiating any such additional work, MCP would require a formal letter of authorization from the City of Fayetteville 911 Communications.

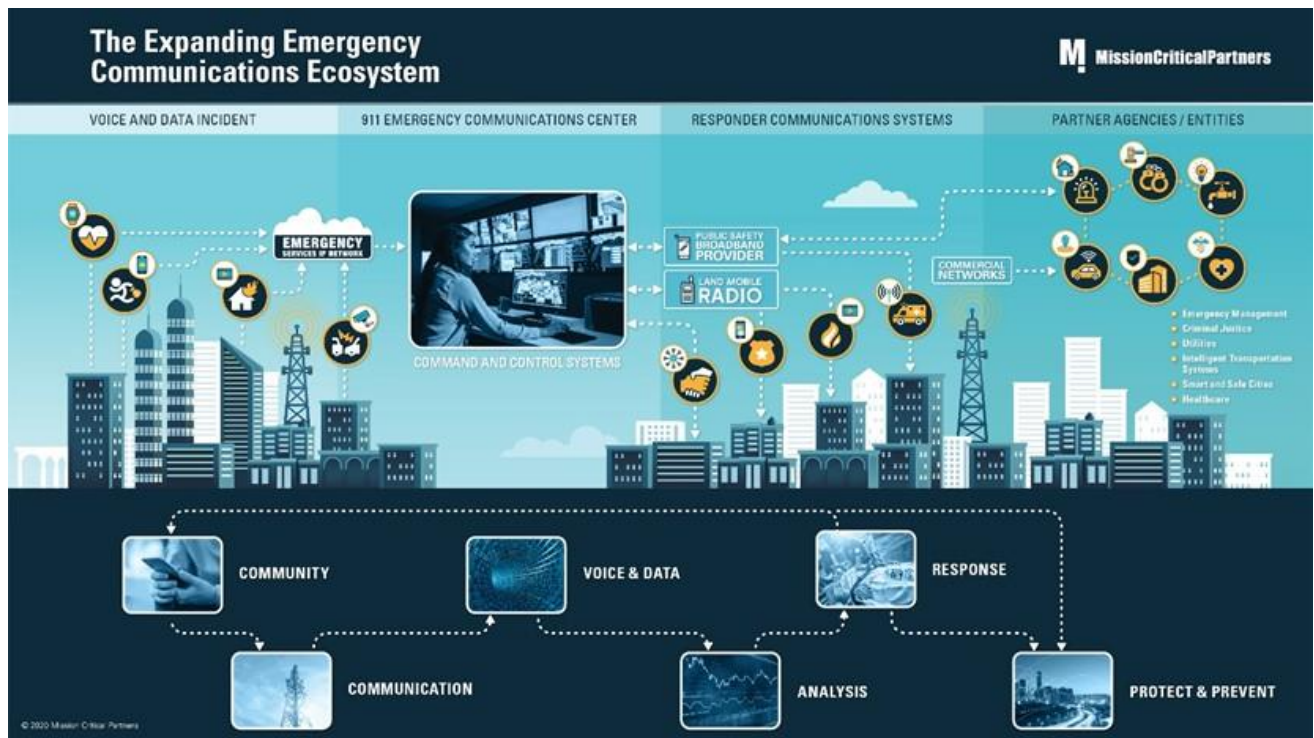
Based on the current MCP understanding of what is to be accomplished, the pricing identified represents an estimate of the work anticipated for the project to be successful. MCP's priority is for this project to be successful for the City of Fayetteville 911 Communications.

Appendix A: The Public Safety Ecosystem and MCP Service Offerings

Since 911's inception in 1968, public safety officials have continued to leverage technology advancements to make emergency response even more efficient and effective. The counterbalance is these advancements occurred in distinct silos that developed within the emergency communications ecosystem (enhanced 911 service, digital land mobile radio networks, and computer-aided dispatch systems).

Today, we stand on the precipice of another technology transformation like the advent of 911 service. As public safety moves through this transformation over the next several years and beyond, it is critical that the agencies begin thinking of the ecosystem as a holistic network, i.e., a network of networks.

The new public safety ecosystem will interconnect on many levels to enable the smooth flow of critical and relevant data to provide emergency responders with the best information to perform their duties.



MCP can provide the public safety, criminal justice, data integration, network and information technology services required to help agencies start thinking of the ecosystem as a single entity, taking into consideration how each piece will interconnect and interact with the others. With MCP's support, agencies will transition from siloed communication environments to realizing significant improvements in emergency-response outcomes.

MCP specializes in transforming mission-critical networks and operations into integrated ecosystems that improve outcomes in the public safety, courts and corrections, healthcare, transportation, and utility markets.



Consulting and Advisory Services

Network and 911 Services

Specialties: Next Generation 911, Emergency Services IP Networks, text-to-911, call-handling equipment, cloud applications

- Assessments, procurement and implementation
- Program and project management
- Geographic information systems planning, design, implementation and administrative services

Operations and Facilities Services

Specialties: computer-aided dispatch, records management, mobile data systems, mission-critical facilities

- Facility planning and construction
- Consolidation and shared services
- Strategic and operations consulting
- Training and professional development
- Technology procurement and implementation
- Continuity of operations planning
- Recruiting and hiring support



Managed Services

SecureHalo Cybersecurity Solutions and Network and IT Services

- Mission-Critical NetInform® Secure cybersecurity assessments
- NetInform discovery of network assets
- Vendor management
- Mission-Critical NetPulse® network and application monitoring
- NetPulse Secure cybersecurity monitoring
- IT support, outsourcing and staff augmentation
- Cybersecurity training

Wireless Communications Services

Specialties: land mobile radio, broadband, microwave, alert and warning systems, fire station alerting systems, FirstNet, bi-directional amplifiers

- Master planning
- Project management
- Technical and operational needs assessments and design
- System procurement and negotiations
- Implementation and construction management
- Testing and validation

Justice, Management, and Technology Services

Specialties: integrated justice, courts, case management, corrections, repositories, and biometric identification systems

- Assessments and data collection
- Strategic planning and governance support
- Business process transformation and systems architecture design
- Financial planning
- Information systems acquisition and procurement
- Implementation and change management support

Data Integration and Analytics

- DataLink™ interface mapping
- Business process mapping and design
- DataSphere™ enterprise integration
- Planning, governance and architecture of data-sharing initiatives
- DataScape™ advanced analytics, powered by machine learning and artificial intelligence
- Alternatives to traditional data migration
- Database management
- Software and application development