

COPY

**Critical Infrastructure Monitoring System
(CIMS)**

Submitted

By

Smiths Detection-LiveWave

smiths detection
bringing technology to life

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4/27/2007

April 27, 2007

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Dear Adam,

Smiths Detection is pleased to submit the enclosed document and related materials in response to the City of Boston's Critical Infrastructure Monitoring System (CIMS) – Request for Proposals (RFP) dated March 19, 2007.

Our proposed system will seamlessly network advanced CCTV surveillance and recording functions, from secure data transfer to support operations - enabling multi-jurisdictional interoperability for security staff, first responders and area law enforcement to receive and transmit data in real-time during both standard operations and in emergency situations. In addition, this proposal details how the network can be expanded as needed in the future to include additional capabilities such as video analytics, radiological, explosive and chemical sensors.

The Team assembled for this proposal consists of well respected and experienced local companies, most of whom have worked closely together on the successful Phase 1 deployment of CIMS for the City of Boston and on other related projects. This effort has provided us with thorough experience, knowledge and understanding of the technical requirements outlined in this RFP, as well as the various stakeholder's and their operational needs.

We appreciate the opportunity to bid on this critical program and are confident we have the right Team and capabilities to meet the needs of the City and all the key stakeholders in the region. We also welcome the opportunity to brief you and your colleagues to provide more details on our technical approach or to address any questions you may have. Please contact me at any time to discuss further.

Thank you for your interest and consideration.

Sincerely,



Peter Mottur
President
401-862-2029 mobile
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**SECTION II: INSTRUCTIONS FOR PREPARATION AND
SUBMITTAL OF PROPOSAL****Criteria**

Was the Offeror's proposal delivered to the City prior to the deadline for receipt of proposals and in accordance with the instructions in the Public Notice?

☒ Yes ☐ No

Does the Offeror's proposal conform to the RFP requirements in all respects?

☒ Yes ☐ No

Did the Offeror submit separate, sealed price and Non-Price Proposals as required by law and this RFP?

☒ Yes ☐ No

Are all copies of the Non-Price Proposal exact duplicates of the original (INCLUDING APPENDICIES)?

☒ Yes ☐ No

Are all copies of the Price Proposal exact duplicates of the original?

☒ Yes ☐ No

Has the Offeror reviewed and does the Offeror unconditionally agree to accept and enter into a contract governed by Form CM 11, City of Boston/County of Suffolk Standard Contract General Conditions?

☒ Yes ☐ No

Does the Offeror's proposal included full and complete responses to Section III 1.2 B, titled "Company Qualifications, Personnel, and Team Experience"?

☒ Yes ☐ No Where? Section and/or Page #: Section B Pgs 14-96

Has an authorized representative of the Offeror signed and returned each of the following forms as part of its Non-Price Proposal?

Minimum Evaluation Criteria – Signature required;

Form CM 9: Contractor Certification – Signature required;

Form CM 6: Certificate of Authority (for Corporations only) – Signature required;

CB Form #7: Non-Collusion Certificate – Signature required;

CB Form #8: State Tax Return Certificated – Signature required; and

☒ Yes ☐ No Where? Section and/or Page #: Appendix A

Does the Offeror agree to be the primary contractor for the purposes of services delivered under any contract entered into pursuant to this RFP?

☒ Yes ☐ No

**SECTION II: INSTRUCTIONS FOR PREPARATION AND
SUBMITTAL OF PROPOSAL**

If awarded a contract, does the Offeror accept responsibility for and unconditionally agree to provide all services in full compliance with the Statement of Work and requirements set forth in this RFP?

[☒] Yes [] No

Are all proposal costs broken down and completed as set forth in Section III and IV of this RFP titled "Price Proposal"?

[☒] Yes [] No

Is the proposal offered at an all-inclusive fixed price in strict accordance with the requirements set forth in Sections III and IV of this RFP titled "Price Proposal"?

[☒] Yes [] No

Is the Offeror financially solvent (i.e., currently not bankrupt and currently not considering filing for bankruptcy protection)?

[☒] Yes [] No

Has the Offeror demonstrated experience in the homeland security sector by presenting successful outcomes from at least two (2) previous homeland security-related contracts?

[☒] Yes [] No

Has Offeror demonstrated experience with management of complex projects with multiple deadlines and deliverables?

[☒] Yes [] No

Has Offeror included as members of the project team individuals who have been involved in developing and installing interoperable camera systems for more than five (5) years and who have successfully completed at least five (5) projects?

[☒] Yes [] No Where? Section and/or Page #: *Section B 14-96*

Has Offeror listed all public and private sector clients it (or, if appropriate, its subcontractor[s]) has(ve) worked with over the past five (5) years?

[☒] Yes [] No Where? Section and/or Page #: *Section B 14-96*

Has Offeror provided at least two (2) references capable of commenting substantively on the Offeror's work in the realm of developing and installing interoperable camera systems in accordance with Section IV?

[☒] Yes [] No Where? Section and/or Page #: *Section B-3 51-54*

Has Offeror provided at least one (1) and up to five (5) client referenced where the Offeror was lead in producing an interoperable camera system in accordance with Section IV?

[☒] Yes [] No Where? Section and/or Page #: *Section B 14-96*

**SECTION II: INSTRUCTIONS FOR PREPARATION AND
SUBMITTAL OF PROPOSAL**

Has Offeror submitted a project workplan and schedule with the Plan of Services that illustrates the project structure through the duration of the effort?

[☒] Yes [] No

Where? Section and/or Page #: Drawings Tables

In its Workplan, has Offeror highlighted all substantive differences (+/- five [5] calendar days) between timeline guidelines set forth in Section IV and its proposed project timelines?

[☒] Yes [] No

Where? Section and/or Page #: Drawings Tables

Has Offeror reviewed and understood all Attachments on file at the Mayor's Office of Emergency Preparedness?

[☒] Yes [] No

Did Offeror attend Offeror's Conference?

[☒] Yes [] No


Is Offeror capable of complying with reporting requirements outlined in Section IV?

[☒] Yes [] No

Signature

The Offeror's authorized representative shall sign on the line provided here, certifying that the responses provided by the Offeror to these Minimum Evaluation Criteria are provided without modification, qualification, or limit.

SIGNED UNDER THE PAINS AND PENALTIES OF PERJURY

x 
Signature

4/25/07
Date

Peter Matter
Name

President
Title

Smiths Detection. LiveWave
Company Name

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Overview

Smiths Detection is pleased to submit this document in response to the City of Boston's Critical Infrastructure Monitoring System (CIMS) – Request for Proposals (RFP) dated March 19, 2007. This proposal describes a dynamic and advanced security network connecting the Boston Police Department to all designated station locations using high bandwidth carrier grade wireless systems as outlined in the RFP.

The Smiths Detection Team (the "Team") is proposing an integrated CCTV Management System to meet the requirements outlined in the CIMS RFP and is committed to providing the stakeholders with a "benchmark" solution that is more flexible, more robust, more secure, more scalable and more cost effective than any of the competition. Importantly, this proposed solution utilizes proven components and systems that are commercially available today and are ready to be deployed immediately. We believe our Team has a firm grasp of the security challenges facing the stakeholders and are confident the competitive advantages presented meet the needs and concerns of the region.

The system will seamlessly network advanced CCTV surveillance and recording functions, from secure data transfer to support operations - enabling multi-jurisdictional interoperability for security staff, first responders and area law enforcement to receive and transmit data in real-time during both standard operations and in emergency situations. In addition, this proposal details how the network can be expanded as needed in the future to include additional capabilities such as video analytics, radiological, explosive and chemical sensors.

Team's Experience & Commitment

The Team assembled for this proposal consists of well respected and experienced local companies, most of whom have worked closely together on Phase 1 of CIMS for the City of Boston and on other related projects. The members are as follows:

Company	Role	Responsibilities	Location
Smiths Detection Inc.	Prime Contractor	Program Management, CCTV software & hardware, support services.	Middletown, RI
StoneCrop Technologies	Subcontractor	Wireless design and network engineering, service and support.	Pembroke, MA
JF White/Sonet Electric	Subcontractor	Site installations, on-site maintenance & support.	Charlestown, MA
Sullivan & McLaughlin	Subcontractor	Site installations, on-site maintenance & support.	Boston, MA
TRC Engineers	Subcontractor	Professional design services, stamped engineering drawings.	Boston, MA

Our Team's work successfully deploying Phase 1 of the CIMS Program has provided us with thorough experience, knowledge and understanding of the technical requirements outlined in this RFP, as well as the various stakeholder's and their operational needs. However, we recognize that the RFP calls for certain software functionality that our products do not currently offer. After careful review, we have determined that our currently available software and systems provide approximately 85% compliance with the outlined specification. In reviewing our competitor's products, we doubt that any can currently meet even 85% technical compliance.

Regardless, we are willing to provide 100% technical compliance and will guarantee our software and related systems if awarded the contract for Phase 2 of CIMS. These additional features or capabilities will be provided free of charge prior to contract completion. We are fully confident in our ability to meet or exceed the requirements set forth in the RFP and provide the City and the Region with unmatched capabilities, performance and service. We also believe that our Team's experience and qualifications are unmatched for this type of project and will be needed to effectively deploy this type of complex integrated security solution.

Smiths Detection understands that the best solution for long term security operations is to utilize proven technologies and integrate "cutting edge" prototypes very carefully. Technologies that did not exist a few years ago are now fully accepted security tools, yet new systems just out of the lab are often overwhelmed in real-life applications. It is the role of Smiths Detection and the Team to advise the key stakeholders and implement today's "state of the art" technologies while providing a scalable system to integrate tomorrow's promises. Smiths Detection plans to continue our existing partnership with the City of Boston, offering our expertise and experience to deliver the best solution now that is also scalable to support the emerging technologies of the future.

The City of Boston and the key stakeholders have the unique opportunity to continue to be a leader in the implementation of wide area metropolitan security and emergency evacuation assurance operations by choosing the Smiths Detection Team for its CIMS Program. As proposed, this is not an "out-of-the-box" solution but a solution tailored to meet the specific needs of the key stakeholders. It requires a sophisticated team to design, implement and deploy a complex mixture of technologies that are needed for efficient and practical day-to-day operations. Despite this customization, Smiths Detection is proposing the latest proven technologies to ensure simple and secure operation. These attributes ensure the end users will have a highly scalable and secure network personalized to meet regional needs, and flexible enough to respond to the demands of high tempo public safety operations.

Our collective Team's experience, and our commitment to creating a safer world by integrating the best security technologies and systems, will position the City of Boston as both a leader and a role model for the entire Nation.

About Smiths Detection

Smiths Detection is a global leader in technologically advanced security solutions with approximately 2000 employees and annual revenues of over \$780 million. Over 50% of these revenues are derived from US DoD, Government, and First Responder customers. Smiths Detection is the largest integrator of baggage inspection systems, with an installed base of more than 25,000 X-ray systems and 7,500 explosive trace detection ETD systems worldwide to date. Smiths Detection is a subsidiary of Smiths Group plc, with over \$6.7 billion in sales annually and 31,000 thousand employees worldwide. Smiths Detection North America is a US Corporation based in Edgewood, Maryland and is part of Smiths Detection, one of four operating divisions of Smiths Group.

Smiths Detection-LiveWave, based in Rhode Island, is a leading provider of security and surveillance solutions for mission critical applications, developing interoperable intrusion detection software and providing engineering and integration services for enterprise-level physical security applications. Smiths Detection-LiveWave's FirstView® IP video management system is scalable to support thousands of cameras, sensors and users securely through standards-based web browsers, PCs and mobile handhelds.

FirstView System

The key advantages of the proposed FirstView® solution are:

INTEROPERABLE – *can be easily used by multiple agencies/authorities in real time*

- Web enabled – *no proprietary software* required to view the system
- Configurable hierarchy of users, roles and permissions for enhanced Interoperability

SCALABLE – *easy to upgrade, expand and add new technologies & sub-systems*

- Entirely IP-based networked system
- Distributed server architecture for maximum flexibility and scalability

SECURE – *data is secure, no breaches of security using the Internet*

- Secure local or remote management of all assets using SSL with AES encryption. From suspicious activity in remote locations to emergency egress route monitoring, each threat needs to be reviewed and verified by the key stakeholder's security personnel in an efficient yet reliable manner.
- The overall security solution must be simple and intuitive to operate with low false positive rates. If an alarm is triggered, the operator may only have moments to make critical assessments and initiate the appropriate response. This ability to inform the user in real time greatly enhances security operations and the capacity to fully inform emergency response teams during crisis management situations or law enforcement applications.
- Since notification can include cell phones, pagers and personal digital assistants (PDAs), as well as workstation consoles and email, security personnel are not required to remain in a traditional guard station watching any number of monitors. Additionally, because they can actually view the situation in real time, security personnel can determine what extent of response is necessary.

The Smiths Detection Team is pleased to propose an advanced security solution that arms the operators on the job with the tools they need to make informed decisions from a widely dispersed collection of security devices.



Figure 1: JUNE 2005 - President Bush views FirstView® system at the U.S. National Counterterrorism Center (NCTC) during a tour by Interim Director John Brennan. Established in January 2005, the NCTC provides the FBI and CIA terrorism related information that is shared on a real-time basis.

At the heart of the system is the Smiths Detection software, FirstView®. The software provides situational awareness of layered sensor networks to authorized users, supporting early detection and reporting from thousands of camera/sensor feeds. This open architecture system supports a wide range of robotic visible and thermal camera packages, sensors, digital video recorders, and traditional CCTV equipment from leading manufacturers, providing more flexibility, more scalability and more efficiently than the competition.

FirstView is a web application based system enabling interoperability among command and control personnel that can extend to other stakeholders to securely connect to expansive networks of live and archived video feeds for the purpose of integrated incident management. Through its hierarchical management system, users are assigned security levels allowing security operators or emergency management personnel to share data with authorized agencies via standard PC's and wireless handheld devices over TCP/IP connections. Whether transmitted by fiber or wireless connections, the networked camera and sensor feeds can be distributed to authorized users without requiring any proprietary hardware or software – just a standard PC with a web browser. All of this is encrypted using Secure Socket Layer (SSL) in the browser.

The FirstView Concept of Operations (ConOps) is specifically tailored to the objectives of the key stakeholders, consisting of recording and encoding of data from networked CCTV cameras over a dedicated high bandwidth wide area network (WAN). The primary technology components include fixed & pan tilt zoom (PTZ) IP cameras and recording devices. It is important to understand that these sensors are synergistic when integrated into the FirstView Command and Control software and can be expanded as necessary.

➤ CIMS Command and Control

Each head-end node will be an independently administered part of the whole system with its own workstation PC. These PCs come with triple 20" LCD displays and are connected to the network, enabling local users to view cameras, maps, alarm data, live and recorded footage from their station. These locations (one per head-end) will serve as local security operations centers. The systems will primarily monitor the local cameras and alarms at the local station but can also be nominated as a contingent Command Center, should the need arise at any time.

However, via FirstView's distributed server architecture, these workstations can instantly access data from other locations with the proper user authentication. These sensors can be displayed in multiple views, all according to the permissions and roles assigned to the user. Each user can create their own customized displays based on their personal layout preferences or mission assignment. This information is stored in a database collective managed by FirstView Enterprise Servers and is accessible from any authorized user on the network. Multiple levels of hierarchical control block non authorized users and impose viewing limits for entry level security or restricted rights personnel.

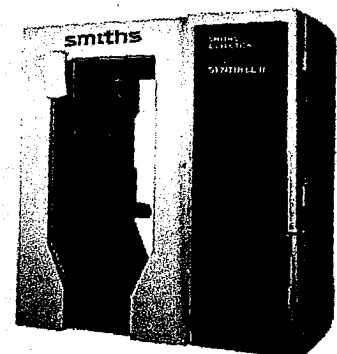
This allows each station to operate independently of the other units if preferred, yet at the Boston PD Command Center, the FirstView system provides monitoring of any alert or viewing of any camera's video source anywhere on the network. This flexibility will allow the Mayor's Office of Emergency Preparedness (MOEP) the ability to readily support redundant monitoring stations or instant access by First Responders in the event of an incident or crisis.

Sensor Integration

At the core of the FirstView system is the integration of video cameras and sensors. The old days of security personnel watching a bank of monitors have passed. Studies have shown that after 20 minutes, a guard watching 16 cameras will miss obvious activity. It is the role of leading security companies, like Smiths Detection, to offer solutions that minimize operator overload, minimize false alarms, yet maximize security coverage in the most cost effective and reliable manner.

Other Future Sensor Integration

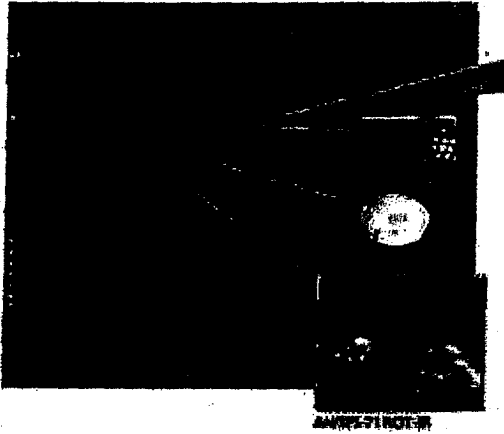
As the world's leading security sensor manufacturer, Smiths Detection offers a wide range of advanced detection technologies and services no other company is capable of supplying. Currently deployed for major transit systems, infrastructure and military applications are real-time chemical, rad, explosive and narcotic trace detection sensors. These network ready devices could be easily added to the CIMS system, permanently or temporarily, for additional capabilities as and when required.



Specialized Camera Systems & Intelligence

The FirstView software is designed to integrate with multiple camera manufacturers to not only integrate with legacy systems, but to also support specialized cameras and optics for enhanced surveillance and tracking. Currently, Smiths Detection has customers utilizing thermal, active, passive & active infrared (IR) and covert camera systems.

The unique and patented variable speed pan/tilt/zoom control features of the FirstView software allows accurate tracking of objects and, when integrated with ground based radar, can automatically lock onto an object that breaches a restricted zone for hands free tracking.



As an example, ground based radar has been deployed with Raytheon at several military sites to automatically track vessels. Virtual trip-wires or zones can be easily created in sensitive areas and will trigger instant pop-up alarms when crossed.

A variety of 3rd party video analytics can also be added to the FirstView system using our pluggable architecture, such as object tracking, left object detection and intelligent video motion detection algorithms.

FirstView Background

As security systems have migrated to IP (Internet Protocol) technology, more and more cameras and sensors are able to communicate over standard networks. Many traditional CCTV companies quickly created proprietary software to access and view live or archived video. This software is typically required on each PC to view the video using a client/server architecture. In the event that the PC becomes disabled or the security center is evacuated, the system would be unusable - without the software, no video and no alarms. In addition, most of these CCTV companies only “networked” the recorders, creating a confusing array of 16 channel systems that operated separately and were difficult to access, manage and scale.

In 1999, LiveWave, Inc. started addressing this scalability problem very differently by developing a fully web application based software Command & Control system called FirstView. Like a password protected and secure version of “Google” for your security assets, FirstView acts like a web portal for authorized users to connect and manage virtually unlimited cameras, sensors, data and users from a standard web browser on any networked PC. In 2005, Smiths Detection recognized LiveWave’s unique technologies and strong customer base and acquired the company.

Today, Smiths Detection offers the only true web application based solution for enterprise level security systems. For CIMS, this core distributed server architecture is the foundation for the system. For the end user, all they need is a password to view alarms, observe video, and control cameras. For advanced security applications, this is the critical feature providing not only situational awareness, but synchronized awareness – the ability to allow security personnel to share the “situation” in real-time using any type of PC or network connection - thus providing better analysis and faster response.

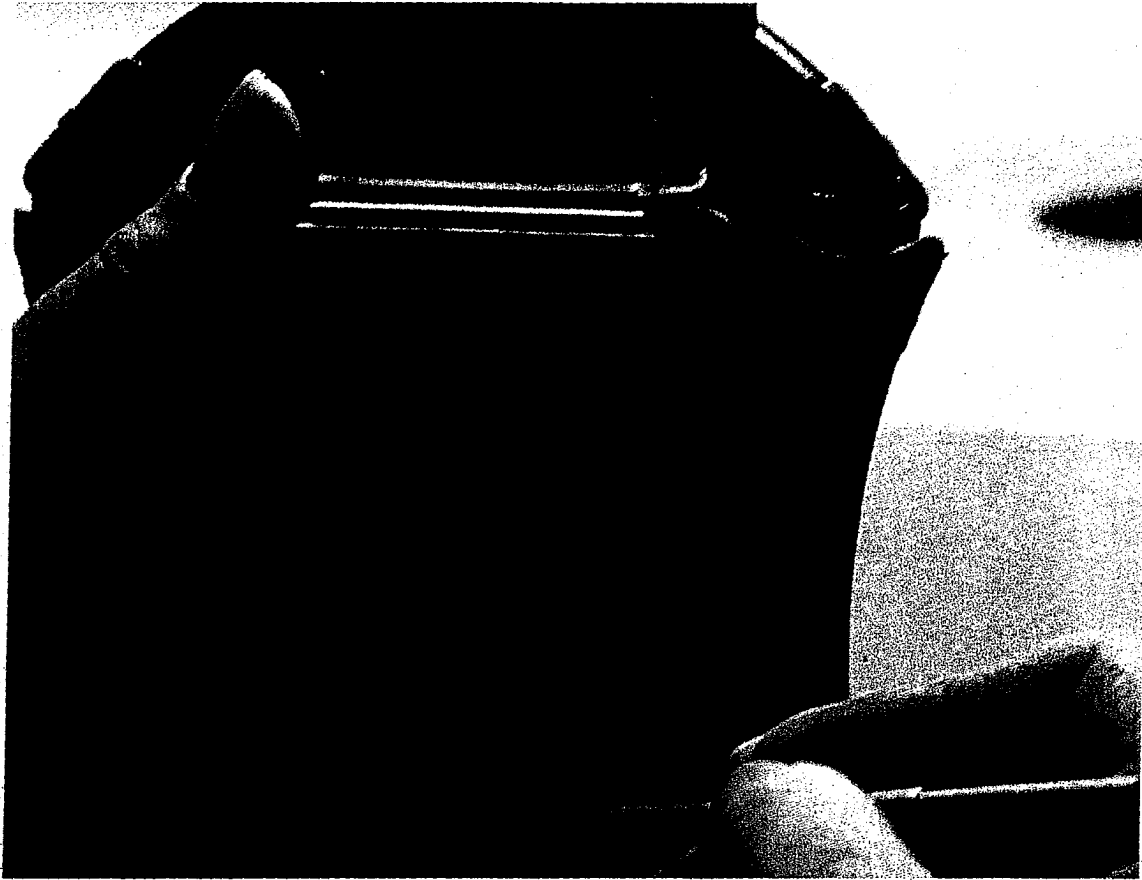


Figure 2: Security Officer uses hand held PDA to access and control remote CCTV cameras

FirstView Case Study 1:

"Synchronized Awareness" U.S. Secret Service (January 2005)

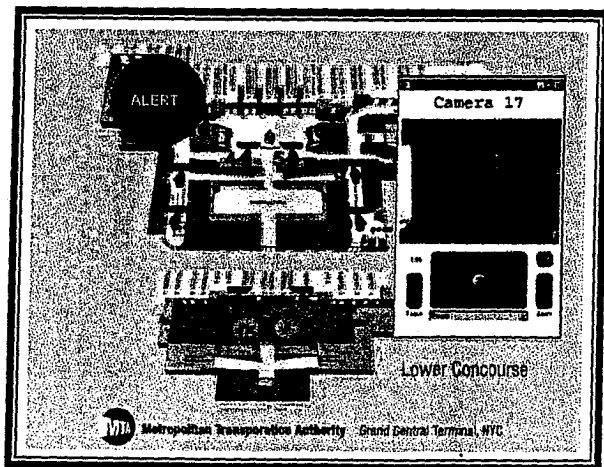
For the 2005 United States Presidential Inauguration, FirstView systems were deployed in Washington, DC. As crowds gathered to view the parade, reports reached the Command Center that a large group of angry protestors were gathering. Soon, the more than 70 agencies covering the incident from locations all around the region logged in and were viewing the images live via a secure network connection. In a matter of minutes, a detective recognized the protester in the "green hat" and knew trouble was eminent. Through "synchronized awareness" – the riot police showed up in force and disrupted a potentially violent protest.



FirstView Case Study 2:

"Remote Command Center" U.S. Democratic and Republican National Conventions (July/August 2004)

In July and August 2004, the United States Department of Homeland Security's Federal Protective Service (FPS) used FirstView to network hundreds of cameras from critical buildings, strategic locations and mobile vehicles near the convention sites. Command centers in Boston, NYC and Washington, DC monitored the cameras 24/7, as did the local police departments and U.S. Secret Service. A remote mobile command center was set up outside of the City and served as the alternate command center – all without any special software or hardware for authorized clients to use. In addition, all video and sensor data was available on wireless handheld devices carried by authorized agents.



FirstView Case Study 3:

“Interoperable Video Communications” New York City Mass Transit (August 2004)

In August 2004, FirstView was installed in a major New York City Transit Station with multiple cameras and real-time chemical agent sensors. Argonne National Laboratory (a U.S. Department of Energy Laboratory) developed specialized software to analyze the chemical sensor data. The FirstView system linked all of the cameras and digital video recorders as part of an overall Command & Control and management system.

Throughout the terminal are secure network connections for first responders, special police operations (detective bureau) and two alternate command centers for operational redundancy. In addition, “fireman jacks” – hardened, locked boxes in key staging areas around the facility allow the New York City Fire Department (NYFD) to access the video and sensor data in the event of an incident. The operations plan allows the NYFD to arrive on scene and, using a standard PC laptop, plug-in, log-on and view any potential threat before they send first responders into the terminal.

For the key stakeholders, this synchronized awareness has become an important feature for security operations. The FirstView software provides the flexibility to distribute the data to authorized users. For day-to-day operations, this allows each station to operate as a standalone system or with the proper password connect to any sensor on the network, and instantly create alternate command centers as needed since the system functionality becomes transparent to any networked location. Whether it is 1600 cameras or 16,000, 1000 access points or 50,000, the FirstView software will be able manage and display the critical data for security operations using a simple and intuitive interface.

Depending on the permissions of the user, different views can be displayed for different levels of security personnel. From map interfaces, to a virtual multiplexer, to auto pop-ups on alarm, the FirstView software provides a flexible and graphical user interface (GUI) that requires minimal training to operate.

FirstView Technical Competitive Advantages:

- The software acts as a universal client for cameras and other devices – eliminating proprietary hardware controllers for specific device manufacturers
- More than 45 protocols are currently supported allowing integration with legacy cameras, digital video encoders, DVRs and a variety of sensor systems.
- There is no practical limit to the number of sensors and users Web browser-based accessibility using standard PCs and IP networks supporting SSL with AES and III DES encryption
- Support for new or legacy CCTV equipment and multiple device protocols. Includes functions for PTZ control and extreme camera systems, including thermal imaging, vandal proof and submersible marine camera's
- The system provides management tools to define class of users and limit the delivery and access to information using FirstView's hierarchical user management system. Low latency video distribution and camera control over IP networks (under 60ms) with support for video data scaling, compression and frame rate adjustments for low bandwidth connections.
- Variable speed PTZ camera control for precision based object tracking with optional video analytics algorithms for video motion detection, left object detection and auto tracking
- Utilizes several industry standard video codecs including M-JPEG, MPEG-4 and DivX up to 4CIF resolutions
- Wireless handheld PC/PDA access to camera network's real-time video and PTZ controls available for mobile applications
- Full screen software multiplexer displays with intuitive drag & drop of any networked camera feed or device (1, 4, 9, 16, 32), video sequencer and video decoding for NTSC outputs
- Variety of high-quality video storage options (DAS/NAS/SAN) with both on-site and off-site recording and access includes playback via standard Windows Media Player
- Embedded SNMP system/device monitoring capabilities with real-time notifications via email
- System supports over 1,000 simultaneous users of real time video on Enterprise Server. Distributed server architecture offers support for thousands of video and sensor channels
- Open architecture and scalability ensures flexible and rapid engineering of complementary technologies for solution deployments using a modular design and industry standards

Video Encoder/Server/Recorder Solutions

FirstView's- digital video surveillance systems create a baseline management tool for video distribution and control from remote cameras and sensors. These systems support a wide range of robotic camera packages, chemical/biological/radiation sensors, digital video encoders/recorders, and traditional CCTV equipment from leading manufacturers. FirstView enables interoperability among users to view video and control cameras in real-time on standard PCs and wireless mobile handheld devices.

The FirstView System Will...

The proposed FirstView system will provide the key stakeholders with a suite of supported sensor systems "out-of-the-box," ensuring the best possible security system immediately upon installation. Since the FirstView system is based upon open standards, future integration of new sensor technologies is straightforward, ensuring the growth and adaptability over the lifecycle of the system. Scalability is a particular strength of the FirstView system: installed systems currently exceed thousands of sensors (and continue to grow).

The proposed FirstView web browser interface will automatically present the correct user experience appropriate to access level or situation. This means that the interface can change according to client hardware (PDA reports versus desktop PC interaction), operator access level (security guard versus administrator), or situation alert level. All of these configurations can be specified (and later modified) at the system level and then automatically deployed to the client systems via the server-managed browser interface. There is also NO CHARGE to add user accounts or client PC workstations.

The FirstView system will provide high quality streaming video and smooth device control. Each channel in the system is uniquely configurable to best suit requirements and infrastructure capabilities (e.g., network bandwidth) and provides a suite of capabilities: e.g., encoding video at a variety of resolutions, streaming video at up to 30 frames per second, a variety of video codecs (MJPEG and MPEG-4 are the two most common selected from the suite provided).

The FirstView system will provide total flexibility over streaming and recording of any asset within the database collective system. Recording capabilities exceed those provided by conventional digital video recorders by adding an extreme level of flexibility. Each connection (for example, a human operator or a recording channel on the DVR) can be individually configured to connect to any streaming channel within the collective system. All video passes over the TCP/IP network, eliminating any "end run" connections from cameras to DVRs, and can be statically or dynamically configured (e.g., CIF resolution at slower frames per second in non-alert mode, and 4CIF at full speed in alert mode).

The FirstView system will provide user configurable alert definitions and automatic responses using a straightforward rule-based system. Examples of these configurable parameters include but are not limited to: alert condition-specific streaming resolution and frame rate, recording of alert channels, automatic control of PTZ assets, email and PDA reports to first responder personnel.

The FirstView System Will Not...

The proposed FirstView system will not require proprietary client hardware, nor will it require manual installation of client software at each operator console. The server-managed browser interface eliminates the configuration management nightmare normally faced by IT departments in a traditional client-server system. **There is also NO software licensing required for the client PCs or users.** The FirstView system will not be a research prototype. The FirstView system will be based on robust, proven components, tested and approved in both military and civilian large-scale security applications.

The FirstView system will not “lock in” the key stakeholders to a particular sensor or camera vendor. For example, FirstView currently supports more than 45 unique camera protocols: the flexibility of the software architecture allows additional camera or sensor protocols to be supported on an as-needed basis at a minimal engineering cost. As a result, the key stakeholders will be free to balance economics with capabilities, ensuring the best possible combination throughout the lifecycle of the system.

SECTION A

See Attachment A for These Documents

SECTION B

B-1

FORM 1

PROPOSER'S GENERAL BUSINESS INFORMATION

State on this form your general business information including design firm, work break-down, and financial information. Use additional sheets as necessary.

Organization Information

A. Statement Submitted By: Douglas E. Tuthill

Name of Organization: Smiths Detection Inc.

Name of Individual: Douglas E. Tuthill

Title: Director of Operations

Address: Tech Plaza IV
88 Silva Lane, Suite 250
Middletown, RI 02842

Telephone No.: 401-848-7678

Name & Telephone No. of Contact
Person if other than above: N/A

B. How will proposal be submitted? Single Entity

If a Joint Venture, each participant in such Joint Venture must submit all the information that is required for a single entity.

For a single entity, the firm must be qualified to perform general contracting and design and have a Certificate of Authorization to provide professional services.

C. License Information:

TRC Engineers LLC

Name	Description	State	License	Year
William Hanlon	Professional Engineer	Massachusetts	#39118-E	1995
Chris McDermott	Site Professional	Massachusetts	#1955	2006
	Professional Engineer	New Hampshire	#10812	2003

D. Proposed Design Consultants

for Architectural: TRC Engineers, LLC

Structural: TRC Engineers, LLC

Electrical: TRC Engineers, LLC

Communications: TRC Engineers, LLC

E. *Provide Hourly Rate Fee Schedule for the design work including rates for Subconsultants listed above. The rates in the fee schedule are to be all inclusive of, but not limited to, direct labor costs, overhead, profit, bonds/insurance, consumables, B&O Tax, permits and any other costs associated with performing the work.*

Hourly Rate Fees shall be provided for all positions anticipated for work on the design, including but not limited to: Project Manager, System Designer, CAD Technician, Electrical Engineer, Architect, Structural Engineer, Mechanical Engineer, and Administrative Support.

Smiths Detection-LiveWave (SDLW) Hourly Rate Fees

9000 Series		SDLW Services	Commercial Price	GSA Price/discount	
9001	LW-INT	Installation, Project Management, Training (per hour)	\$125.00	\$107.05	15%
9002	LW-ENG	Engineering & Integration (per hour)	\$185.00	\$158.44	15%
9003	LW-DEV	Custom Development (per hour)	\$225.00	\$192.70	15%
9004	LW-MTN	Annual Software Maintenance (upgrades & support)	12%	10%	

TRC Hourly Rate Fees

Title	Hourly Rate
Principal-in-Charge	\$180 / hr
Professional Engineer	\$160 / hr
Senior Designer / Engineer	\$150 / hr
Designer / Engineer	\$130 / hr
Field Technician / Surveyor	\$ 90 / hr
CADD Technician	\$ 75 / hr

General Contractor Hourly Rate Fees**Telecommunications Hourly Rate Schedule**

Labor Category	Straight Time	Time & One Half	Double Time
General Foreman	\$78.34	\$105.02	\$131.70
Foreman	\$73.88	\$98.33	\$122.78
Technician	\$69.47	\$91.71	\$113.95

Electrical Hourly Rate Schedule

Labor Category	Straight Time	Time & One Half	Double Time
General Foreman	\$101.82	\$137.41	\$173.00
Foreman	\$95.89	\$128.53	\$161.16
Journeyman	\$89.93	\$119.58	\$149.23

Network Engineering Hourly Rate Schedule

Labor Category	Straight Time	Overtime & Weekends
Sr. Network Engineer	\$150.00	\$225.00

- F.** *Indicate what work described in Section V of this RFP you plan on performing with your own forces and what work you plan on subcontracting to another firm.*

Smiths Detection: Systems and software engineering, network video recorders hardware/software, video encoders and servers hardware/software, training, and project management, maintenance and support services.

Subcontractor personnel and equipment:

1. Stonecrop Technologies, LLC of Pembroke, MA will provide network connectivity services for CIMS. These services include the design, installation, configuration, monitoring and maintenance of all devices directly related to the transmission of data for the CIMS.
2. JF White/Sonet Electric of Charlestown, MA and Sullivan & McLaughlin Companies of Boston, MA will perform the site installations and on-site maintenance services.
3. TRC Engineering, LLC of Boston, MA will perform engineering and design work.

FORM 1
PROPOSER'S GENERAL BUSINESS INFORMATION

G. Has your firm ever failed to complete any construction contract awarded to it? **No**

If yes, describe the circumstances on a separate piece of paper.

H. In the last five years, has your firm ever failed to substantially complete a contract in a timely manner? **No**

If yes, describe the circumstances on a separate piece of paper.

I. Identify prior contracts that contained stated goals for MBE/WBE participation and how such goals were met or exceeded:

Contract	Stated Goals	Actual % Obtained	Comments
None/N/A			

FORM 1
PROPOSER'S GENERAL BUSINESS INFORMATION

Financial Information

A. Can your Organization provide a Performance and Payment Bond for the full amount required? **Yes**

Indicate approximate total bonding capacity: **Final Contract Value**

Indicate the name of the Surety
company you propose to use:

Westchester Fire Insurance Company

Agent name:

Carolyn E. Wheeler

Address:

9129 Cross Park Drive
Suite 101
Knoxville, TN 37923

Phone Number:

(865) 769-7739

Attach a letter from your Surety documenting your ability to submit the required Bond.

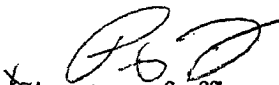
See Attachment B for the Insurance Letter

FORM 1
PROPOSER'S GENERAL BUSINESS INFORMATION

Certification

- A. I hereby certify that the information submitted herewith, including attachments, is true to the best of my knowledge and belief.

Smiths Detection-LiveWave


(Signature of officer of Proposer)

Peter Mottur

(Type or print name of officer of Proposer)

President

(Type or print title of officer of Proposer)

4/25/2007

FORM 2
SUBCONTRACTOR LIST

*Provide names of all subcontractors Proposer intends to use if awarded Contract.
Use additional sheets as necessary.*

Subcontractor Name: **StoneCrop Technologies, LLC**

Address: 300 Oak Street, Suite 840
Pembroke, MA 02359

Phone No.: (917) 475-4100

Contact: Douglas Stringer

Work to be Subcontracted: Stonecrop Technologies, LLC of Pembroke, MA will provide network connectivity services for CIMS. These services include the design, installation, configuration, monitoring and maintenance of all devices directly related to the transmission of data for the CIMS.

Subcontractor Name: **J.F. White Contracting Co.**

Address: 30 Bunkerhill Industrial Park
Charlestown, MA 02129

Phone No.: (617) 242-6569

Contact: Mike Rocca

Work to be Subcontracted: Installation of the cameras, power, encoders, poles (where necessary), cabling, conduit, on-site maintenance and support services.

Subcontractor Name: **TRC Engineers, LLC**

Address: 31 Milk Street, Suite 1104,
Boston, MA 02109

Phone No.: (617) 350-3406

Contact: Christopher R. McDermott, P.E.

Work to be Subcontracted: Engineering and Design Services.

Subcontractor Name: **Sullivan & McLaughlin Companies**

Address: 74 Lawley Street
Boston, MA, 02122-3608

Phone No.: 617 474 0500 ext 275

Contact: Mr. Tom Burke

Work to be Subcontracted: Installation of the cameras, power, encoders, poles (where necessary), cabling, conduit, on-site maintenance and support services.

B-2

FORM 3

PROPOSER'S EXPERIENCE STATEMENT

State on this form the number of years your business has provided networked video camera systems. Identify the projects (minimum of three, maximum of nine) supported with video surveillance systems of the scope and complexity comparable to the project presently being undertaken by the City of Boston. Provide all information described in

Section IV that is to be included in Section B-2. Use additional sheets as necessary.

Qualifying projects shall have been in satisfactory operation with the equipment furnished for a period of at least 6 months.

Proposer's years of experience in video surveillance systems:

8 yrs for Smiths Detection-LiveWave

5 yrs for StoneCrop Technologies

20 yrs for JF White

40 yrs for Sullivan McLaughlin

20 yrs for TRC

Smiths Detection-LiveWave has been developing IP based video solutions for over 6 years, and the FirstView® system is currently on Version 6.x. Smiths Detection-LiveWave has had significant experience as a leading IP video systems and solutions provider to several of the largest US based transit systems including the MBTA, WMATA and MTA NY. Currently, we are finalizing contracts with other major transit systems, as well as involvement to expand the MTA NY system with Metro North, LIRR and NJT. Smiths Detection-LiveWave has been sole source justified by the Department of Homeland Security (DHS) and Argonne National Laboratory for its video system as part of the PROTECT chemical sensor detection Program for U.S. transit systems. Other clients include the USSS, ICE/FPS, DoD, and several police depts. including the Boston PD, LAPD, DC Metro PD and Detroit PD. Smiths Detection-LiveWave systems are undergoing DoD DITSCAP certification and have received approval from DHS for meeting its AES encryption standards.

In November, 2005, Smiths Detection recognized LiveWave's unique technologies and strong customer base and acquired the Company. LiveWave is now a wholly owned subsidiary of Smiths Detection Inc. dba Smiths Detection-LiveWave.

Smiths Detection develops and sells their own Command & Control software and utilizes commercial off-the-shelf (COTS) PC components for its servers and workstations. Smiths Detection is a factory authorized reseller for many third party components such as cameras and PC's.

Design/Construction Contracts Completed <i>Smiths Detection-LiveWave</i>	Number of Cameras	Date Operational	Number of Wireless Antennas	Percent of Work Performed by Own Forces
Project Name: Boston MOEP Phase I-a	19	12/ 2006	32	70%
Design/Build: Y <input checked="" type="checkbox"/> N <input type="checkbox"/>				
Owner Name: Boston Mayor's Office of Emergency Preparedness (MOEP)				
Design Engineer Name: Douglas Stringer/Patrick Hay				
Reference Contact Phone No. (917) 705-5301/(401) 848-7678				
License Number: N/A				
Location/Description: Boston, Everett, Revere, Chelsea. This project is a multi-jurisdictional interoperable network designed to allow each of the participating municipalities to share video.				
Project Reference Name/Title: Adam Wehrenberg, City of Boston				
Project Reference Phone No: (617) 590-9800				
Contract Price: \$947,000 Prime Contractor <input checked="" type="checkbox"/> General Contractor <input type="checkbox"/>				

Design/Construction Contracts Completed <i>Smiths Detection-LiveWave</i>	Number of Cameras	Date Operational	Number of Wireless Antennas	Percent of Work Performed by Own Forces
Project Name: Boston MOEP Phase I-b	25	On-Going	32	70%
Design/Build: Y <input checked="" type="checkbox"/> N <input type="checkbox"/>				
Owner Name: Boston Mayor's Office of Emergency Preparedness (MOEP)				
Design Engineer Name: Douglas Stringer/Patrick Hay				
Reference Contact Phone No. (917) 705-5301/(401) 848-7678				
License Number: N/A				
Location/Description: This is a City of Boston traffic management and emergency evacuation route system to monitor key intersections.				
Project Reference Name/Title: Adam Wehrenberg, City of Boston				
Project Reference Phone No: (617) 590-9800				
Contract Price: \$1,250,000 Prime Contractor <input checked="" type="checkbox"/> General Contractor <input type="checkbox"/>				

Design/Construction Contracts Completed <i>Smiths Detection-LiveWave</i>	Number of Cameras	Date Operational	Number of Wireless Antennas	Percent of Work Performed by Own Forces
Project Name: U.S. Navy VPMS	82	2003-2007	164	50%
Design/Build: Y <input checked="" type="checkbox"/> N <input type="checkbox"/>				
Owner Name: Jeff Johnson, Program Manager DoD Technology				
Design Engineer Name: Christopher Doan (3eTI)				
Reference Contact Phone No. (301) 944-1389				
License Number: N/A				
Location/Description: Naval Academy (USNA), Dahlgren NSWC, Indian Head (NSWC). This is a port security, counter-terrorism and counter-drug program for security initiative. Program has been operational since February 2003. Full scale deployment of base and port security surveillance camera network started during third quarter of 2004 using PTZ cameras over a DoD certified wireless network infrastructure (FIPS 140-2 NIST validated). Real-time digital video and camera control is accessible by authorized personnel using PCs and wireless handhelds. Additional funding was awarded in the FY2005 Defense Appropriations Bill.				
Project Reference Name/Title: Jeff Johnson/CIO, US Navy				
Project Reference Phone No: (540) 653-8522				
Contract Price: \$4,700,000 Prime Contractor <input checked="" type="checkbox"/> General Contractor <input type="checkbox"/>				

Design/Construction Contracts Completed <i>Smiths Detection-LiveWave</i>	Number of Cameras	Date Operational	Number of Wireless Antennas	Percent of Work Performed by Own Forces
Project Name: Federal Protective Service	97	2004/2005	33	70%
Design/Build: Y <input checked="" type="checkbox"/> N <input type="checkbox"/>				
Owner Name: Federal Protective Service (FPS) NCR/NYC/NER				
Design Engineer Name: Douglas Stringer				
Reference Contact Phone No. (917) 705-5301				
License Number: N/A				
Location/Description: Boston, New York City, Washington D.C. In May 2004, Smiths Detection-LiveWave received a contract from the Federal Protective Service (FPS), which is part of the U.S. Department of Homeland Security's (DHS), U.S. Immigration and Customs Enforcement (ICE), to upgrade its video surveillance systems at several Federal buildings in the Boston area prior to the Democratic National Convention (DNC). LiveWave's technology effectively leveraged FPS' existing CCTV cameras and network enabled them with FirstView and high bandwidth wireless links, to serve as an effective "force multiplier" allowing the FPS security team to remotely access and control their current CCTV systems from anywhere while providing critical inter-agency support in the event of a threat or incident. The success of the DNC deployment led to an immediate contract for LiveWave to perform a similar solution for FPS at the Republican National Convention (RNC) in New York. Despite tight deadlines and intense pressure from multiple government agencies, LiveWave effectively				

designed and implemented a robust solution that met all of the complex technical requirements. Based on these successes, the Company was again contracted by FPS's National Capital Region (NCR) for the 2005 Presidential Inauguration to provide a similar system deployed in Boston and New York.

Project Reference Name/Title: Eric Johnson, FPS Region 1

Project Reference Phone No: (617) 565-7134

Contract Price: \$1,5000,000
(Multiple Awards)

Prime Contractor ☒ General Contractor ☐

Design/Construction Contracts Completed <i>Smiths Detection-LiveWave</i>	Number of Cameras	Date Operational	Number of Wireless Antennas	Percent of Work Performed by Own Forces
Project Name: Port Security Communications Network (PSCN)	9	8/2006	10	70%
Design/Build: Y <input checked="" type="checkbox"/> N <input type="checkbox"/>				
Owner Name: Rhode Island Department of Environmental Management (RIDEM)				
Design Engineer Name: Timberline Construction Corporation				
Reference Contact Phone No. (617) 822-1000				
License Number: N/A				
Location/Description: Narragansett Bay, RI. This project was funded by a Department of Homeland Security grant (Information Technology and Evaluation Program) and was completed in March 2006. Smiths built a communications network for Narragansett Bay for video, voice, and sensor data for port security operations and tracking of hazardous cargo vessels. The system is used by multiple local, state and federal agencies including the RI DEM, EMA, State Police, USCG, US Navy and several area first responders.				
Project Reference Name/Title: Frank Floor/Lieutenant RIDEM				
Project Reference Phone No: (401) 222-6800				
Contract Price: \$856,000		Prime Contractor <input checked="" type="checkbox"/> General Contractor <input type="checkbox"/>		

Design/Construction Contracts Completed <i>Smiths Detection-LiveWave</i>	Number of Cameras	Date Operational	Number of Wireless Antennas	Percent of Work Performed by Own Forces
Project Name: Everett VPMS	9	8/2005	18	100%
Design/Build: Y <input checked="" type="checkbox"/> N <input type="checkbox"/>				
Owner Name: Everett Police Department				
Design Engineer Name:				
Reference Contact Phone No. (401) 848-7678				
License Number: N/A				
Location/Description: Everett, MA. In February 2004, LiveWave was awarded a Port Video Surveillance System contract for the City of Everett, MA as the prime contractor. This project was funded by a US Department of Homeland Security/ TSA Port Security Grant, as part of the Mayor's Collaborative program and includes numerous cameras in and around the port.				
Project Reference Name/Title: Pat Johnston/Sergeant Everett Police Department				
Project Reference Phone No: (617) 905-3747				
Contract Price: \$250,000 Prime Contractor <input checked="" type="checkbox"/> General Contractor <input type="checkbox"/>				

Design/Construction Contracts Completed <i>Smiths Detection</i>	Number of Cameras	Date Operational	Number of Wireless Antennas	Percent of Work Performed by Own Forces
Project Name: Metropolitan Transportation Authority (MTA) New York	17	8/2005	18	100%
Design/Build: Y <input checked="" type="checkbox"/> N <input type="checkbox"/>				
Owner Name: Metropolitan Transportation Authority (MTA) New York				
Design Engineer Name: Doug Tuthill				
Reference Contact Phone No. (401) 848-7678				
License Number: N/A				
Location/Description: New York City. This program was for an advanced digital video surveillance network and chemical sensor system for a New York City transportation system. Similar to the WMATA and MBTA projects, this is a complete video security solution operating with chemical agent detectors, providing first responders and emergency management personnel with video communications in the event of an alarm. LiveWave managed sub-contractors installing a fiber-optic and wireless backbone to link the system's real-time video, CCTV control and sensor data to disparate locations.				
Project Reference Name/Title: Ron Masicana, Deputy Police Chief, MTA				
Project Reference Phone No: (212) 878-1147				
Contract Price: \$350,000 Prime Contractor <input checked="" type="checkbox"/> General Contractor <input type="checkbox"/>				

Design/Construction Contracts Completed TRC Engineers	Number of Cameras	Date Operational	Number of Wireless Antennas	Percent of Work Performed by Own Forces
Project Name: Port of Houston	149	May 2005	81 & 14*	35%
Design/Build: Y <input checked="" type="checkbox"/> N <input type="checkbox"/>				
Owner Name: Port of Houston				
Design Engineer Name: Dominick Carlucci				
Reference Contact Phone No. (949) 341-0373				
License Number: N/A				
Location/Description: <p>The Port of Houston is a 25 mile-long (40 km) complex including not only public facilities, but the private facilities of 150+ companies. It is the largest port in the US in terms of foreign waterborne commerce, second in tonnage (190 million tons), and the sixth largest in the world. In 2003, 6,301 vessel calls were recorded at the port. Consistently a leader among US ports in the adoption of new standards of business and operations, the Port of Houston was the first port in the US to receive ISO 14001 compliance.</p> <p>TRC won a publicly competitive bid to provide extensive master plan design and engineering consulting services to Port of Houston for a new port-wide security initiative. This multi-year project includes not only analyzing the port's existing operations and determining needed upgrades, but the construction, installation, and deployment of those upgrades.</p> <p>Specifically, TRC has conducted a Threat and Vulnerability Assessment, Master Planning, Port Infrastructure Physical and Electronic Security System Design (CCTV and Access Control), Security Emergency Response Plan, Supplemental Security Vulnerability Assessment, and a Design Basis Threat Matrix. In particular, TRC has performed a comprehensive facilities-assessment of threats, vulnerabilities and the security environment that characterizes existing security policies, assets and protection features, and defined expected threats, criticality and consequences of the port facility.</p>				
Project Reference Name/Title: Russell Whitmarsh, Security Department Manager				
Project Reference Phone No: (713) 670-3612				
Contract Price: \$12 million Prime Contractor <input checked="" type="checkbox"/> General Contractor <input type="checkbox"/>				

* 81 for cameras and 14 CISCO Wireless Bridges for Network Backbone

Design/Construction Contracts Completed TRC Engineers	Number of Cameras	Date Operational	Number of Wireless Antennas	Percent of Work Performed by Own Forces
Project Name: Integrated Security System – Los Angeles, CA	~350	June 2005	N/A*	100%
Design/Build: Y <input type="checkbox"/> N <input checked="" type="checkbox"/>				
Owner Name: City of Los Angeles Command Center				
Design Engineer Name: David Skusek, TRC				
Reference Contact Phone No. (949) 341-0373				
License Number: N/A				
<p>Location/Description:</p> <p>TRC helped the City of Los Angeles develop a wide area integrated security system and secure its critical properties. The original intent included securing 31 critical properties, providing engineered plans and specifications; bidding and negotiation assistance; security system analysis; and vulnerability assessment. To date approximate 10 facilities have been placed on-line. TRC took a multi-tiered approach to deliver this integrated system. For each site, we began with a vulnerability assessment to determine the criticality and probability of security threats. We then developed countermeasures to mitigate the identified risks.</p> <p>As part of the project, TRC provided a comprehensive security system analysis. This was used as the basis for developing engineering plans and specifications for the complete design and ergonomic upgrade of the Central Security Command Center. This state-of-the-art system incorporates existing security systems with new technology and permits the real-time monitoring of alarms and the assessment of activities in critical areas, via video and audio, of all city properties.</p> <p>The primary component of the Command Center operation is the Command and Control System (CACS) software overlay that provides a single user interface for the various systems that comprise the security system. These systems include the Alarm and Access Control System, Digital Video Network, Intercommunications Systems and Central Station Alarm Receiver. The CACS provided a single user interface to provide command and control functions for the underlying systems. Operators were capable of acknowledging alarms, opening doors, controlling cameras and answering intercom calls without ever leaving the CACS graphical user interface. The Command Center was configured with two ergonomically design operator work station with three 20" LCD displays as well as a video wall consisting of six 50" DLP displays. The video wall was configured as a virtual desktop for each of the operator workstations. This provided the capability to display information in a large format display for observation of operational personnel without interfering with the security operator's functions. This allowed command personnel to view all information related to an event to quickly assess the event and determine the proper response to the event.</p>				
Project Reference Name/Title: City of Los Angeles Command Center				
Project Reference Phone No: (213) 978-4674				
Contract Price: \$14 million				
Prime Contractor <input checked="" type="checkbox"/> General Contractor <input type="checkbox"/>				

FORM 4
LOCATION OF NEAREST SERVICE AND SUPPORT CENTER

Provide the location of nearest service and support center that will be providing full system warranty maintenance as defined herein.

Company Name: StoneCrop Technologies, LLC

Address: 300 Oak Street, Suite 840

City/State/Zip: Pembroke, MA 02359

Phone No.: (917) 705-5301

Contact Person: Douglas Stringer, CEO

Description of Service(s) Offered: Stonecrop Technologies, LLC of Pembroke, MA will provide network connectivity services for CIMS. These services include the design, installation, configuration, monitoring and maintenance of all devices directly related to the transmission of data for the CIMS.

Proximity in miles to Boston: 20 Miles

Qualifications and Experience: Stonecrop Technologies LLC (Stonecrop) is a Massachusetts-based technology service business that provides state-of-the-art network communication systems and wireless-related services to a national client base that includes both private businesses and governmental entities.

Company Name: Sonet Electric (JF White Contracting Co.)

Address: 30 Bunkerhill Industrial Park

City/State/Zip: Charlestown, MA 02129

Phone No.: (617) 242-6569

Contact Person: Mike Rocca

Description of Service(s) Offered: Sonet Electric will provide on-site response and maintenance for the camera/encoder installations.

Proximity in miles to Boston: 2 miles

Qualifications and Experience:

TSA Hi-SOC – Logan International Airport

Client: Transportation Security Administration

Contractors: Unisys, Essex Newbury North

Responsible for all electrical, data and telecommunications work at Logan Airport included in the High Speed Connectivity (Hi-SOC) statement deployed throughout the U.S. to improve Transportation Security Administration connectivity and communications.

Completion: On-going

Boston Homeland Security – Boston Multiple Sites

Client: City of Boston

Construction Manager: Smiths Detection-LiveWave

Installation and wiring of security cameras and systems in various urban outdoor locations

Completion: On-going

MBTA South Station Finishes

Client: MBTA

Contractor: J.F.White Contracting Co.

Renovation of existing station included installation and/or relocation of lighting, fire alarm and security systems for lobby level, red line and silver line. All work was performed with minimal impact to public as the station was kept open during construction.

Completion: September 2006

Newton Wellesley Hospital Security

Client: Newton-Wellesley Hospital

Contractor: Surveillance Specialties

Installation and wiring of security system in new wing along with relocation of existing card readers

Completion: December 2006

MBTA Quincy Center Station/Parking Garage CCTV Installation

Client: MBTA

Contractor: Sonet Electrical Systems

Installation and wiring of security equipment interfacing with Live Wave software for real time viewing via the Internet

Completion: May 2005

Logan International Airport Baggage Screening

Client: Vanderlande Industries and FKI Logistics

Performed electrical work to upgrade four baggage handling rooms designed to meet the new "Home Land Security" FAA regulations without disrupting the daily operation of the existing system.

Completion: August 2003

Boston Homeland Security - Boston

Client: City of Boston

Construction Manager: Smiths Detection-LiveWave

Installation and wiring of security cameras and systems in various Boston area buildings

Completion: April 2006

Logan International Airport Raytheon X-Ray Project

Client: Raytheon

GC: Essex Newbury North

Installation of new state of the art X-Ray for United Airlines Baggage Area

Completion: March 2002

Landmark Center CCTV and Access Control

Client: Blue Cross Blue Shield

Contractor: Surveillance Specialties

Provided wiring for the installation of new access control system and CCTV in occupied office area of Blue Cross Blue Shield.

Completion: September 2005

Company Name: TRC Engineers, LLC
Address: 31 Milk Street, Suite 1104
City/State/Zip: Boston, MA 02109
Phone No.: (617) 350-3406
Contact Person: Chris McDermott, P.E.

Description of Service(s) Offered: TRC's multidisciplinary staff of over 2,600 individuals includes seasoned, senior professionals with proven experience and innovative ideas to deal with today's complex security concerns. TRC's experts offer an unsurpassed breadth of talent and experience in the following design and engineering areas:

- Technology Systems
- Command and Control
- System Integration and Interoperability
- Crime Prevention through Environmental Design
- Basis for Design

Proximity in miles to Boston: 0

Qualifications and Experience:

TRC Engineers, LLC. is a subsidiary of TRC (NYSE:TRR), a \$370 million corporation with 100 offices throughout the United States, that provides technical, financial, risk management, and construction services to industry and U.S. government clients. TRC provides a broad range of security, safety, engineering and environmental services to the nation's critical infrastructures and institutions, including, but not limited to, municipalities, energy, transportation systems, healthcare, water and wastewater systems, commercial airports, colleges, bridges, chemical plants, corporate headquarters, museums and historical landmarks.

TRC has unmatched security knowledge in security master planning and technology design engineering; threat, vulnerability and risk analysis; and program and policy development. That expertise, coupled with our familiarity with relevant government agencies and industry best practices, positions us as a qualified team to perform security consultative services for the City of Boston's Critical Infrastructure Monitoring System project.

TRC's team of security experts, design engineers, industry-practiced construction manager, operational planners, and product and technology specialists can deliver a higher rate of return on your security investment.

Select Experience and Reference**Port of Houston Authority, Texas**

The Port of Houston is a 25 mile-long (40 km) complex including not only public facilities, but the private facilities of 150+ companies. It is the largest port in the US in terms of foreign waterborne commerce, second in tonnage (190 million tons), and the sixth largest in the world. In 2003, 6,301 vessel calls were recorded at the port. Consistently a leader among US ports in the adoption of new standards of business and operations, the Port of Houston was the first port in the US to receive ISO 14001 compliance.

TRC won a publicly competitive bid to provide extensive master plan design and engineering consulting services to Port of Houston for a new port-wide security initiative. This multi-year project includes not only analyzing the port's existing operations and determining needed upgrades, but the construction, installation, and deployment of those upgrades.

Specifically, TRC has conducted a Threat and Vulnerability Assessment, Master Planning, Port Infrastructure Physical and Electronic Security System Design (CCTV and Access Control), Security Emergency Response Plan, Supplemental Security Vulnerability Assessment, and a Design Basis Threat Matrix. In particular, TRC has performed a comprehensive facilities-assessment of threats, vulnerabilities and the security environment that characterizes existing security policies, assets and protection features, and defined expected threats, criticality and consequences of the port facility.

Security Consulting for Rochester Gas & Electric – Rochester, NY

Our work for Rochester Gas & Electric is ongoing and includes security consulting related to their \$110 million facilities renovation and expansion project. The project will also include

design and engineering of security upgrades at a dozen facilities. TRC to date has developed a comprehensive security plan in compliance with regulatory guidelines and stakeholder requirements. The comprehensive plan includes a code of conduct, training requirements, communication protocols, background screening, physical security standards, emergency management, business continuity, contractor security requirements, cyber security standards and instructions on protecting sensitive security information. The project to date has been executed on time and on budget.

Integrated Security System – Los Angeles, CA

TRC is helping the City of Los Angeles develop a wide area integrated security system and secure its critical properties. We are actively securing 31 critical properties, providing engineered plans and specifications; bidding and negotiation assistance; security system analysis; and vulnerability assessment.

TRC took a multi-tiered approach to deliver this integrated system. For each site, we began with a vulnerability assessment to determine the criticality and probability of security threats. We then developed countermeasures to mitigate the identified risks.

As part of the project, TRC provided a comprehensive security system analysis. This was used as the basis for developing engineering plans and specifications for the complete design and ergonomic upgrade of the Central Security Command Center. This state-of-the-art system incorporates existing security systems with new technology and permits the real-time monitoring of alarms and the assessment of activities in critical areas, via video and audio, of all city properties.

To facilitate implementation, TRC performed an evaluation of security system products and manufacturers through interviews and on-site product demonstrations. This resulted in the selection of citywide standards for security protection.

New York Power Authority –Security Assessment Services Contract at all NYPA Facilities

TRC was just awarded a five-year contract to provide Security Assessment Services at all upstate and downstate NYPA Facilities. The contract is in the beginning stages. The proposed scope of services includes all forms of physical, operational and technological security measures and countermeasures for various physical security surveys, threat assessments, risk analyses, and finding reporting.

Company Name: Smiths Detection-LiveWave

Address: Tech Plaza IV
88 Silva Lane, Suite 250

City/State/Zip: Middletown, RI 02842

Phone No.: (401) 848-7678

Contact Person: Patrick Hay

Description of Service(s) Offered: Smiths Detection-LiveWave (SDLW) is qualified to write, modify, repair, and replace hardware/software for the FirstView system. SDLW will coordinate the response for any desired change or repair by dispatching a member of the team, based upon response time, closest to the affected site.

Proximity in miles to Boston: 71 miles

Qualifications and Experience: SDLW has been developing IP based video solutions for over 6 years, and the FirstView system is currently on Version 6.x. SDLW has had significant experience as a leading IP video systems and solutions provider to several of the largest US based transit systems including the MBTA, WMATA and MTA NY. Currently, we are finalizing contracts with other major transit systems, as well as involvement to expand the MTA NY system with Metro North, LIRR and NJT. SDLW has been sole source justified by the Department of Homeland Security (DHS) and Argonne National Laboratory for its video system as part of the PROTECT chemical sensor detection Program for U.S. transit systems. Other clients include the USSS, ICE/FPS, DoD, and several police depts. including the Boston PD, LAPD, DC Metro PD and Detroit PD. SDLW systems are undergoing DoD DITSCAP certification and have received approval from DHS for meeting its AES encryption standards.

In November, 2005, Smiths Detection recognized LiveWave's unique technologies and strong customer base and acquired the Company. LiveWave is now a wholly owned subsidiary of Smiths Detection Inc. dba Smiths Detection-LiveWave.

Recent Relevant Qualifications

Smiths Detection-LiveWave's customers represent the most important decision-making bodies and end users in federal and state governments, the military, police, and the private sector. Currently, the Company is performing the following contracts that utilize its FirstView systems for secure distribution and management of video and sensor data across IP networks:

Federal Protective Service ("FPS") – Department of Homeland Security

In May 2004, LiveWave received a contract from the Federal Protective Service (FPS), which is part of the U.S. Department of Homeland Security's (DHS), U.S. Immigration and Customs Enforcement (ICE), to upgrade its video surveillance systems at several Federal buildings in the Boston area prior to the Democratic National Convention (DNC). FPS provides law enforcement

and security services to over one million tenants and daily visitors to all Federally owned and leased facilities nationwide. FPS focuses directly on the interior security of the nation and the reduction of crimes and potential threats to Federal facilities throughout the nation. LiveWave's technology effectively leveraged FPS' existing CCTV cameras and network enabled them with FirstView and high bandwidth wireless links, to serve as an effective "force multiplier" allowing the FPS security team to remotely access and control their current CCTV systems from anywhere while providing critical inter-agency support in the event of a threat or incident.

The success of the DNC deployment led to an immediate contract for LiveWave to perform a similar solution for FPS at the Republican National Convention (RNC) in New York. Despite tight deadlines and intense pressure from multiple government agencies, LiveWave effectively designed and implemented a robust solution that met all of the complex technical requirements. Based on these successes, the Company was again contracted by FPS's National Capital Region (NCR) for the 2005 Presidential Inauguration to provide a similar system deployed in Boston and New York.

Washington Metropolitan Area Transit Authority ("WMATA")

The WMATA project is an excellent example of a LiveWave video solution. Started in September 2002 in partnership with Argonne National Laboratory, this Department of Homeland Security Program presently incorporates hundreds of channels of digital video servicing numerous subway train stations across the D.C. Metropolitan area. This program, known as PROTECT, was designed to monitor multiple train stations in real-time and provide a comprehensive early warning detection and response solution to multiple agencies and jurisdictions.

LiveWave's FirstView and VirtualPerimeter technologies provide the key visual components for WMATA and are used in conjunction with chemical sensors for real-time incident verification. These sensors provide feedback to a flow modeling program that determines the spread of contamination and recommends appropriate response methods with the dispersion of toxic materials. LiveWave has worked to integrate Argonne National Laboratory's emergency management system with existing cameras in any subway system. This video communications system allows first responders, police/fire personnel and incident officials to better evaluate, coordinate and respond to any crisis situation. The system streamlines operations and dramatically reduces response times which, in turn, saves lives.

LiveWave FirstView encoders and servers stream over 600 video signals spread over multiple stations with local and remote PTZ control, device management, recording playback, and system setup. Information booths are equipped with touch screen monitors for local video and control for immediate situational awareness. Remote control and monitoring is conducted from the Operations Command Center or by authorized users on the network. In addition, external jacks were provided to the Washington DC Fire Department for incident command from above ground locations.

The system's network video architecture for WMATA was designed by LiveWave and incorporates multiple legacy cameras systems (digital and analog). Currently, all LiveWave servers and encoders offer the end user a comprehensive view of any camera, from any location using a secure and standard web-browser. The interface allows for the management of all video sources form a single web interface and can be scaled to thousands of cameras and multiple graphical displays.

Massachusetts Bay Transportation Authority ("MBTA")

A program for advanced digital video surveillance network and chemical sensor system for the Boston subway system. Similar to the WMATA project, this is also a complete video security solution operating with chemical agent detectors, providing first responders and emergency management personnel with video communications in the event of an alarm. This project started in September 2003. LiveWave managed sub-contractors installing a fiber-optic backbone to link the system's real-time video, CCTV control and sensor data to disparate locations.

Recently, LiveWave's products have also been specified as an approved digital video surveillance system in the MBTA's Automated Fare Collection System contract, a major expansion project. This includes the upgrade of video cameras, encoders, DVRs and the Command & Control display screens to include video feeds in multiple full screen monitors for station monitoring. The IP video feeds are controlled by a local operator who selects the views for the multiple monitors – giving the Command & Control center the look and feel of a traditional CCTV multiplexer system, yet maintaining the flexibility of network video over IP for infinite scalability.

Metropolitan Transportation Authority – New York ("MTA")

This program was for advanced digital video surveillance network and chemical sensor system for a New York transportation system. Similar to the WMATA and MBTA projects, this is also a complete video security solution operating with chemical agent detectors, providing first responders and emergency management personnel with video communications in the event of an alarm. This project started and was completed in August 2004 for the Republican National Convention. LiveWave managed sub-contractors installing a fiber-optic and wireless backbone to link the system's real-time video, CCTV control and sensor data to disparate locations.

Currently, the system is monitored by the MTA Police from four networked viewing stations. This allows differing operational objectives to share the video resources for investigations and incident awareness. In addition, street-level Fireman's Jacks will be installed for first responders and the overall system is in the process of being expanded.

Dahlgren and Indian Head Naval Surface Warfare Centers

This is a port security, counter-terrorism and counter-drug program for security initiative (DoD directed appropriation from FY 2004 Defense Appropriations Bill). The system has been operational since February 2003. Full scale deployment of base and port security surveillance camera network started was completed in the third quarter of 2004 using PTZ cameras over a DoD certified wireless network infrastructure (FIPS 140-2 NIST validated). Real-time digital video and camera control is accessible by authorized personnel using PCs and wireless handhelds. Additional funding was awarded in the FY2005 and 2006 Defense Appropriations Bills.

U.S. Secret Service

LiveWave was contracted to provide their wireless mobile FirstView RoverCam® systems on Secret Service vehicles for the 2005 Presidential Inauguration. These systems were integrated as turn-key packages including rugged vehicle mounted robotic camera systems, notebook computers running FirstView's Video Encoder/Mobile Digital Video Recorder, along with video displays, vehicle computer stands, and a variety of wireless options for real-time networked video distribution.

Raytheon – Project Athena

Contracted by Raytheon's Integrated Defense Systems group to provide the video surveillance systems for Project Athena. LiveWave developed and installed the video system for a radar fusion solution for advanced port security applications. The system provides auto camera PTZ tracking capabilities with FirstView servers linked with real-time radar data for vessel monitoring and tracking. The first started in August 2004 and has now been successfully deployed in other operational sites for the DoD.

City of Everett, MA

In February 2004, LiveWave was awarded a Port Video Surveillance System contract for the City of Everett, MA as the prime contractor. This project has been funded by a Department of Homeland Security/ TSA Port Security Grant, as part of the Mayor's Collaborative program and includes numerous cameras in and around the port.

State of Rhode Island

In September 2005, Smiths Detection-LiveWave was awarded a contract from the State of RI to engineer and deploy an innovative Port Security Wireless Communications Network. This project has been funded by a Department of Homeland Security grant (Information Technology and Evaluation Program) and will be completed in March 2006. The objective was to build a communications network for Narragansett Bay for video, voice, and sensor data for port security operations and tracking of hazardous cargo vessels. The system is now used by multiple local, state and federal agencies including the RI DEM, EMA, State Police, USCG, US Navy and several area first responders.

Company Name: Sullivan & McLaughlin Companies

Address: 74 Lawley Street

City/State/Zip: Boston, MA, 02122-3608

Phone No.: 617 474 0500 ext 275

Contact Person: Mr. Tom Burke

Description of Service(s) Offered: Sullivan & McLaughlin will provide the following services for the Critical Infrastructure Monitoring System; highly trained and experienced manpower for telecommunications, electrical and network engineering work. In addition, Sullivan & McLaughlin will provide warehouse-staging services for materials specific to the project and also access to state of the art testing equipment and tools. As part of the services offered, Sullivan & McLaughlin will provide access to a fleet of vehicles such as bucket trucks, boom trucks and fiber Optic Mobile Lab Vehicles.

Proximity in miles to Boston: 0 Miles

Sullivan & McLaughlin Companies Company Profile

- Been in business for over forty years – Telecommunications group was established in 1991
- Largest telecommunications contractor in Massachusetts
- 90 technicians trained and experienced to efficiently and effectively manage the state's telecommunications/data infrastructure needs
- Fleet of 96 vehicles

Over the past four decades, Sullivan & McLaughlin Companies, commonly known as SullyMac, has grown to become a leading electrical and telecommunications construction contractor in a highly competitive marketplace. With 425 employees Sullivan & McLaughlin Companies now ranks as the fourth largest electrical contractor in New England. The success of our business is directly attributed to the professionalism, competency and depth our staff. Our dedicated team can provide full support in engineering, documentation, project management, and field expertise. We deliver quality performance through teamwork on each and every job site. Through this pride and level of commitment, we continue to build on our reputation as one of the New England's most valued and effective contractors.

Three divisions constitute 'Team SullyMac' and they include the Electrical Division, Telecommunications/Technology Division and Service Division. The unique and dynamic mix

of Sullivan & McLaughlin Companies' capabilities in the electrical, technology and service fields has built a firm where our abilities have no end and our potential has no limits.

Our team can execute massive, high profile construction projects just as easily and with as much commitment, as we can respond to a client's emergency service call needed for mission critical equipment and operations. Our size and experience gives us the reach to work in downtown Boston or manage a project out in the Berkshires. Sullivan & McLaughlin Companies has working agreements with IBEW Local 103 (Boston), IBEW Local 223 (Brockton), and IBEW Local 96 (Worcester).

Our company, from top to bottom, has one goal in mind – to excel in their work. The quality workmanship and unfounded sense of commitment are evident in all that we do. The following is a brief description of our three divisions.

Telecommunication/Technology Division

Our strengths in the telecommunications/data infrastructure field spans from the design to the installation of communications networks and infrastructure, data center construction, outside plant construction, wireless network implementation, state-of-the art fiber optics, premise wiring projects and emergency response. Sullivan & McLaughlin engineers and technicians have also entered and excelled in many other facets of the technology marketplace. Sullivan & McLaughlin's Telecommunications Group has expertise in the network and physical security field, audio visual sector, wireless applications, network engineering, and VoIP services. Together as a team, our technicians design, build, secure and service systems for a long standing list of customers. Many of Sullivan & McLaughlin's technicians have worked on projects for state Agencies and entities over the past five years. They have developed a valuable working knowledge of these facilities and developed positive working relationships with the customers we have served.

Electrical Division

Forty years of experience and achievement has led Sullivan & McLaughlin's Electrical Division to new heights. This group of individuals does not intimidate easily and it has prevailed when challenged by even the most daunting tasks, projects and deadlines. Determination, competency, character is the bedrock of the division's success and achievements. Our skills and experience provide us with the reach to become a leader in the marketplace. Their capabilities and accomplishments range from design, engineering, and construction of some of Boston's most prominent buildings; including massive construction of a multi-building campus facility and the creation of a multi-region transit system. This group can take on, manage and execute all phases of an electrical project. Their expertise includes: tenant improvement, generators, switch gear, high voltage, smart build systems, and substations. The electrical field demands highly capable, confident, and safety conscious individuals on each and every project. Our team meets those requirements each time they walk on a job site.

Service Division

The client list for the Service Division says it all. Citizens Bank, the Boston Red Sox, Honeywell, State Street Corporation, Arnold Worldwide, Massachusetts Institute of Technology have all come to know us and have called on our team to ensure that their operations and facilities run 24X7. The Service group understands that mission critical equipment and facilities must be fully functioning and that the slightest interruption could make or break a business. It is because of this knowledge that Sullivan & McLaughlin's Service Division has gained so much respect and appreciation for what we do. We can save the day and do on many occasions. We service our clients' electrical, telecommunications and security needs. Our responsiveness, capabilities and sensitivity are rare. Our customers depend on us to be there at a moment's notice. And because we are, we have built a number of long standing, loyal relationships with our customers.

Company Mission Statement

This company was founded and built on commitment, competency and a 'can do' attitude. Our fundamental mission now is to continue these traditions by growing an organization that has the debt and resources of a larger construction company and the unstoppable 'can do' spirit of a start up.

We are committed to building an organization that provides opportunity to those employees who commit themselves towards this mission and assist in delivering exceptional performance and value to our electrical and communications contractors.

Company Equipment List

Vehicles	Quantity
• Fiber Optic Mobile Lab Vehicles	2
• Bucket Trucks	6
• Boom Truck	1
• Digger Derrick	1
• Box Trucks	11
• ¾ Ton Vans	37
• Pickup Trucks	30
• Rack Body Vehicles	4
• Engineer Vehicles (SUV's)	2
Fusion Splicers	
• Sumitomo Type 63 Mass Fusion Splicer	2
• Siecor M90 Fusion Splicer with Lid System	4

OTDR's

- GN Nettest CMA 4000 with 1310/1550/1625 nm Module 2
- GN Nettest CMA 5000 with 1310/1550/1625 nm Module 1
- Laser Precision TD 1000 with 1310/1550 nm Module (singlemode) 2
- Laser Precision TD 1000 with 850/1300 nm Module (multimode) 1
- Corning 1310/1550 1300/850 1
- Fluke OptiFiber 850/1300 1310/1550 with Power Meter 1

Miscellaneous Test Equipment

- Microtest Omni Scanner Test Unit Ethernet Category 3/5/5E/6 8
- Fluke DTX-1800 Cable Analyzer 6
- Acterna T. Berd 307 DS3/DS1/DS0 Communications Analyzer 2
- Tektronix 1503C MTDR Metallic Label Tester 1
- F.O. Traffic Identifier 1
- Infrared Thermal Camera 1

Other

- Confined Space Retrieval Unit 4
- Gas Oxygen Detectors 2
- Trailers 8

FORM 5

WORK ON HAND/PROPOSALS SUBMITTED

List your ongoing contracts that are in construction/design and any proposals/bids you have submitted for other jobs. Use additional sheets as necessary.

Smiths Detection-LiveWave Work-On Hand

Work on Hand	Number of Cameras	Scheduled Completion Date	Number of Wireless Antennas	Total Contract Price
Project Name: Thai Airways (Integrated Airport Security System)	1000+	Jun. 2007	-	\$10,000,000
Design/Build: Y <input checked="" type="checkbox"/> N <input type="checkbox"/>				
Owner Name: Thai Airways				
Design Engineer Name: Smiths Detection Asia Pacific (SDAP)				
Reference Contact Phone No.				
Location/Description: Bangkok, Thailand. Smiths Detection was awarded the Thai Airways project to network access control, intelligent video, perimeter security, X-Ray, and video surveillance around five of the new buildings at the new Bangkok International Airport (Suvarnabhumi). Employees will be able to intelligently review the fused data at a main command and control center as well as from remote locations.				
Project Reference Name/Title: Jon Cooper				
Project Reference Phone No: (401) 848-7678				
Amount of Proposer's Contract: \$1,200,000		Prime Contractor <input checked="" type="checkbox"/> General Contractor <input type="checkbox"/>		

Work on Hand	Number of Cameras	Scheduled Completion Date	Number of Wireless Antennas	Total Contract Price
Project Name: Queensland Rail	450	2009	-	\$3,800,000
Design/Build: Y <input checked="" type="checkbox"/> N <input type="checkbox"/>				
Owner Name: Queensland Rail, Queensland Australia				
Design Engineer Name: Smiths Detection Asia Pacific (SDAP)				
Reference Contact Phone No.				
Location/Description: Smiths Detection-LiveWave has bid to replace the existing video encoders and recorders with the IP based FirstView system, utilizing the existing legacy camera network.				
Project Reference Name/Title: Jayson Page				
Project Reference Phone No: 61 404 886 463				
Amount of Proposer's Contract: \$3,800,000 (USD)		Prime Contractor <input checked="" type="checkbox"/> General Contractor <input type="checkbox"/>		
Work on Hand	Number of Cameras	Scheduled Completion Date	Number of Wireless	Total Contract Price

			Antennas	
Project Name: WMATA	432	2008	-	\$1,200,000
Design/Build: Y <input checked="" type="checkbox"/> N <input type="checkbox"/>				
Owner Name: Washington Metropolitan Area Transit Authority				
Design Engineer Name: Doug Tuthill				
Reference Contact Phone No. (401) 932-5045				
Location/Description: Smiths Detection-LiveWave has bid to replace the existing video encoders and recorders with the IP based FirstView system, utilizing the existing legacy camera network.				
Project Reference Name/Title: William (Bill) Taylor				
Project Reference Phone No: (202) 962-2815				
Amount of Proposer's Contract: \$1,200,00		Prime Contractor <input checked="" type="checkbox"/> General Contractor <input type="checkbox"/>		

Work on Hand	Number of Cameras	Scheduled Completion Date	Number of Wireless Antennas	Total Contract Price
Project Name: New York MTA	35	Aug. 2007	-	\$3,200,000
Design/Build: Y <input checked="" type="checkbox"/> N <input type="checkbox"/>				
Owner Name: New York Metropolitan Transit Authority				
Design Engineer Name: Jay Soto (SD-LW)				
Reference Contact Phone No. (732) 422-6539				
Location/Description: Smiths Detection-LiveWave was awarded a contract from MTA-NY to expand the PROTECT early warning detection and response solution in two major transportation hubs in New York City.				
Project Reference Name/Title: Jay Soto				
Project Reference Phone No: (732) 422-6539				
Amount of Proposer's Contract: \$3.2 M		Prime Contractor <input checked="" type="checkbox"/> General Contractor <input type="checkbox"/>		

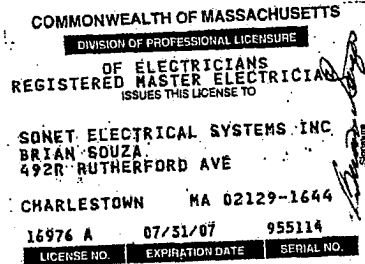
TRC Work On-Hand

Work on Hand	Number of Cameras	Scheduled Completion Date	Number of Wireless Antennas	Total Contract Price
Project Name: Security Consulting	120	2008	12	\$350,000
Design/Build: Y <input checked="" type="checkbox"/> N <input type="checkbox"/>				
Owner Name: Rochester Gas & Electric				
Design Engineer Name: TRC's Dominick Carlucci, James Black, and Mathew Hess				
Reference Contact Phone No. (949) 341-0373				
Location/Description: Our work for Rochester Gas & Electric is ongoing and includes security consulting related to their \$110 million facilities renovation and expansion project. The project will also include design and engineering of security upgrades at a dozen facilities. TRC to date has developed a comprehensive security plan in compliance with regulatory guidelines and stakeholder requirements. The comprehensive plan includes a code of conduct, training requirements, communication protocols, background screening, physical security standards, emergency management, business continuity, contractor security requirements, cyber security standards and instructions on protecting sensitive security information. The project to date has been executed on time and on budget.				
Project Reference Name/Title: Jay Coates, Staff Investigator				
Project Reference Phone No: (585) 724-8740				
Amount of Proposer's Contract: \$350,000 Prime Contractor <input type="checkbox"/> General Contractor <input checked="" type="checkbox"/>				

Work on Hand	Number of Cameras	Scheduled Completion Date	Number of Wireless Antennas	Total Contract Price
Project Name: Security Assessment Program	~250	2012	TBD	\$1 million
Design/Build: Y <input type="checkbox"/> N <input checked="" type="checkbox"/>				
Owner Name: New York Power Authority				
Design Engineer Name: TRC's Dominick Carlucci, Keith Kushner, James Black				
Reference Contact Phone No. (949) 341-0373				
Location/Description: TRC was just awarded a five-year contract to provide Security Assessment Services at all upstate and downstate NYPA Facilities. The contract is in the beginning stages. The proposed scope of services includes all forms of physical, operational and technological security measures and countermeasures for various physical security surveys, threat assessments, risk analyses, and finding reporting.				
Project Reference Name/Title: William Broderick, PE – Director, Civil and Structural Engineering				
Project Reference Phone No: (914) 681-6455				
Amount of Proposer's Contract: \$1 million Prime Contractor <input checked="" type="checkbox"/> General Contractor <input type="checkbox"/>				

License Information:

Sonet Electrical



The Commonwealth of Massachusetts
Department of Public Safety
One Ashburton Place, Rm 1301
Boston, Ma 02108-1618

License: SEC SYS CONTRACTOR LICENSE
Number: SS CO 000898 Expires: 08/13/2007

Birthdate: 08/13/1957
Restricted To: 00

BRIAN SOUZA
30 BUNKHILL INDUSTRIAL PK
CHARLESTOWN, MA 02129

Tx. no: 255.0
Keep top for receipt and change of address notification.

DPS-CAL 0 SOM-0405-PC0898

TRC Engineers LLC

Name	Description	State	License	Year
------	-------------	-------	---------	------

William Hanlon	Professional Engineer	Massachusetts	#39118-E	1995
Chris McDermott	Site Professional	Massachusetts	#1955	2006
	Professional Engineer	New Hampshire	#10812	2003

See Attachment C for TRC Engineers LLC's Commonwealth of Massachusetts Certification and Licensing.

See Attachment D for TRC Smiths Detection-LiveWave's Commonwealth of Massachusetts Certification and Licensing.

Sullivan and McLaughlin

8/6/06 ISSUE DATE		FC18977
F-2 F-4 ECC CLASS OF LICENSE	8/6/07 EXP DATE	
JOHN MCLAUGHLIN 74 LAWLEY ST BOSTON MA 02122		
REMARKS		

Dig Safe Call Center
(888) 344-7233

**CITY OF BOSTON
BOARD OF EXAMINERS**

Lic. No FC18977

**MAYOR
THOMAS M. MENINO**



**BOARD OF EXAMINERS
ALEXANDER H MACLEOD AIA
T F SCOTT DARLING III
PATRICK TRACY**

THIS CERTIFIES JOHN MCLAUGHLIN		
IS FULLY LICENSED TO TAKE CHARGE OF WORK UNDER PROVISIONS OF THE ACTS OF 1938 CHAPTER 479 AS AMENDED		
F-2 F-4 ECC Class of Lic	8/6/06 Date Issued	8/6/07 Exp Date



The Commonwealth of Massachusetts
Department of Public Safety
One Ashburton Place, Rm 1301
Boston, Ma 02108-1618

License: SEC SYS CONTRACTOR LICENSE

Birthdate: 07/17/1965

Number: SS CO 000829 Expires: 07/17/2008

Restricted To: 00

Sullivan & McLaughlin Companies, Inc.
MICHAEL MURRIN
74 LAWLEY SY
BOSTON, MA 02122

Tr. no: 265.0

Keep top for receipt and change of address notification.

DPS-CA1 534-04/05-PC0006



The Commonwealth of Massachusetts

DEPARTMENT OF PUBLIC SAFETY

License: SEC SYS CONTRACTOR

Number: SS CO 000829

Birthdate: 07/17/1965

Expires: 07/17/2008

Tr. no: 265.0

Restricted: 00

MICHAEL MURRIN
74 LAWLEY SY
BOSTON, MA 02122

Thomas A. Kelly
Commissioner

DIG SAFE CALL CENTER: (888) 344-7233

COMMONWEALTH OF MASSACHUSETTS
DIVISION OF PROFESSIONAL LICENSURE
OF ELECTRICIANS
REGISTERED MASTER ELECTRICIAN
 ISSUES THIS LICENSE TO

SULLIVAN & MCLAUGHLIN COMPANIES
JOHN G MCLAUGHLIN
74 LAWLEY ST

DORCHESTER MA 02122-3608

17341 A 07/31/07 968445

LICENSE NO.	EXPIRATION DATE	SERIAL NO.
--------------------	------------------------	-------------------

Fold, Then Detach Along All Perforations

COMMONWEALTH OF MASSACHUSETTS
DIVISION OF PROFESSIONAL LICENSURE
OF ELECTRICIANS
AS A REG JOURNEYMAN ELECTRICIAN
 ISSUES THIS LICENSE TO

JOHN MCLAUGHLIN
74 LAWLEY STREET

DORCHESTER MA 02122-3608

13411 E 07/31/07 968446

LICENSE NO.	EXPIRATION DATE	SERIAL NO.
--------------------	------------------------	-------------------

Fold, Then Detach Along All Perforations

MASSACHUSETTS

DRIVER'S LICENSE

DATE OF BIRTH **CLASS** **REST** **HEIGHT** **SEX**

01-25-2009 **D** **6-02** **M**

MCLAUGHLIN
JOHN G
132 KING CAESAR RD
DUXBURY, MA
02332-3816

John G. McLaughlin

B-3

Relevant References

Argonne National Laboratory
Dr. Tony Policastro, Program Manager
9700 South Cass Avenue, Building 900
Argonne, IL 60439-4832
(630) 252-3235

City of Pittsburgh, Office of the Mayor
Emergency Management Agency
Ray Demichiei, Deputy Director, WMD Coordinator
City-County Building
414 Grant Street, Room 541
Pittsburgh, PA 15219
(412) 255-2633

Federal Protective Service – New England Region
US Immigration & Customs Enforcement
Department of Homeland Security
Eric Johnson, Electronic Systems Unit
Tip O'Neil Federal Building
Boston, MA 02222
(617) 565-7134

Massachusetts Bay Transportation Authority
Brian Canniff, Project Manager
Signals and Communications Improvement
500 Arborway
Jamaica Plain, MA 02130
(617) 222-3844

Metropolitan Transportation Authority
Ron Masicana, Deputy Police Chief
347 Madison Ave
New York, NY 10017
(212) 878-1147

United States Navy
Dahlgren Division, Naval Surface Warfare Center
Jeff Johnson, Program Manager DoD Technology
17320 Dahlgren Road
Dahlgren, VA 22448-5100
(540) 653-8522

Washington Metropolitan Area Transit Authority
Lt. George Burns
Counter-Terrorism Coordinator
600 Fifth Street
Washington, DC 20001
(202) 409-1354

Washington Metropolitan Area Transit Authority ("WMATA")

The WMATA project is an excellent example of a Smiths Detection-LiveWave video solution. Started in September 2002 in partnership with Argonne National Laboratory, this Department of Homeland Security Program presently incorporates hundreds of channels of digital video servicing numerous subway train stations across the D.C. Metropolitan area. This program, known as PROTECT (Program for Response Options and Technology Enhancements for Chemical/Biological Terrorism), was designed to monitor multiple train stations in real-time and provide a comprehensive early warning detection and response solution to multiple agencies and jurisdictions.

Smiths Detection-LiveWave's FirstView and VirtualPerimeter technologies provide the key visual components for WMATA and are used in conjunction with chemical sensors for real-time incident verification. These sensors provide feedback to a flow modeling program that determines the spread of contamination and recommends appropriate response methods with the dispersion of toxic materials. Smiths Detection-LiveWave has worked to integrate Argonne National Laboratory's emergency management system with existing cameras in any subway system. This video communications system allows first responders, police/fire personnel and incident officials to better evaluate, coordinate and respond to any crisis situation. The system streamlines operations and dramatically reduces response times which, in turn, saves lives.

Smiths Detection-LiveWave FirstView encoders and servers stream approximately 640 video signals spread over multiple stations with local and remote PTZ control, device management, recording playback, and system setup. Information booths are equipped with touch screen monitors for local video and control for immediate situational awareness. Remote control and monitoring is conducted from the Operations Command Center or by authorized users on the network. In addition, external jacks were provided to the Washington DC Fire Department for incident command from above ground locations.

The system's network video architecture for WMATA was designed by Smiths Detection-LiveWave and incorporates multiple legacy cameras systems (digital and analog). Currently, all Smiths Detection-LiveWave servers and encoders offer the end user a comprehensive view of any camera, from any location using a secure and standard web-browser. The interface allows for the management of all video sources from a single web interface and can be scaled to thousands of cameras and multiple graphical displays.

Massachusetts Bay Transportation Authority ("MBTA")

A program for advanced digital video surveillance network and chemical sensor system for the Boston subway system. Similar to the WMATA project, this is also a complete video security solution operating with chemical agent detectors, providing first responders and emergency management personnel with video communications in the event of an alarm. This project started in September 2003. Smiths Detection-LiveWave managed sub-contractors installing a fiber-optic backbone to link the system's real-time video, CCTV control and sensor data to disparate locations.

Recently, Smiths Detection-LiveWave's products have also been specified as a digital video surveillance system in the MBTA's Hub Station Program, a major expansion project. This includes the upgrade of the Command & Control display screens to include all Smiths Detection-

LiveWave video feeds in multiple full screen monitors for station monitoring. The IP video feeds are controlled by a local operator who selects the views for the multiple monitors – giving the Command & Control center the look and feel of a traditional CCTV multiplexer system, yet maintaining the flexibility of network video over IP for infinite scalability.

Metropolitan Transportation Authority – New York (“MTA”)

This program was for advanced digital video surveillance network and chemical sensor system for a New York transportation system. Similar to the WMATA and MBTA projects, this is also a complete video security solution operating with chemical agent detectors, providing first responders and emergency management personnel with video communications in the event of an alarm. This project started and was completed in August 2004 for the Republican National Convention. Smiths Detection-LiveWave managed sub-contractors installing a fiber-optic and wireless backbone to link the system’s real-time video, CCTV control and sensor data to disparate locations.

Currently, the system is monitored by the MTA Police from four networked viewing stations. This allows differing operational objectives to share the video resources for investigations and incident awareness. In addition, street-level Fireman’s Jacks will be installed for first responders. Plans are currently in place to harden and expand the system.

Federal Protective Service (“FPS”) – Department of Homeland Security

In May 2004, Smiths Detection-LiveWave received a contract from the Federal Protective Service (FPS), which is part of the U.S. Department of Homeland Security’s (DHS), U.S. Immigration and Customs Enforcement (ICE), to upgrade its video surveillance systems at several Federal buildings in the Boston area prior to the Democratic National Convention (DNC). FPS provides law enforcement and security services to over one million tenants and daily visitors to all Federally owned and leased facilities nationwide. FPS focuses directly on the interior security of the nation and the reduction of crimes and potential threats to Federal facilities throughout the nation. Smiths Detection-LiveWave’s technology effectively leveraged FPS’ existing CCTV cameras and network enabled them with FirstView and high bandwidth wireless links, to serve as an effective “force multiplier” allowing the FPS security team to remotely access and control their current CCTV systems from anywhere while providing critical inter-agency support in the event of a threat or incident.

The success of the DNC deployment led to an immediate contract for Smiths Detection-LiveWave to perform a similar solution for FPS at the Republican National Convention (RNC) in New York. Despite tight deadlines and intense pressure from multiple government agencies, Smiths Detection-LiveWave effectively designed and implemented a robust solution that met all of the complex technical requirements. Based on these successes, the Company was then contracted by FPS’s National Capital Region (NCR) for the 2005 Presidential Inauguration to provide a similar system deployed in Boston and New York.

Dahlgren and Indian Head Naval Surface Warfare Centers

This is a port security, counter-terrorism and counter-drug program for security initiative (DoD directed appropriation from FY 2004 Defense Appropriations Bill). Pilot program has been operational since February 2003. Full scale deployment of base and port security surveillance camera network started during third quarter of 2004 using PTZ cameras over a DoD certified

wireless network infrastructure (FIPS 140-2 NIST validated). Real-time digital video and camera control is accessible by authorized personnel using PCs and wireless handhelds. Additional funding was awarded in the FY2005 Defense Appropriations Bill.

U.S. Secret Service

Smiths Detection-LiveWave was contracted to provide their wireless mobile FirstView RoverCam systems on Secret Service vehicles for the 2005 Presidential Inauguration. These systems were integrated as turn-key packages including rugged vehicle mounted robotic camera systems, notebook computers running FirstView®'s Video Encoder/Mobile Digital Video Recorder, along with video displays, vehicle computer stands, and a variety of wireless options for real-time networked video distribution.

Raytheon – Project Athena

Contracted by Raytheon's Integrated Defense Systems group to provide the video surveillance systems for Project Athena. Smiths Detection-LiveWave developed and installed the video system for a radar fusion solution for advanced port security applications. The system provides auto camera PTZ tracking capabilities with FirstView servers linked with real-time radar data for vessel monitoring and tracking. Phase I started in August 2004 and Phase II began in June 2005.

CIMS Hierarchy and Management

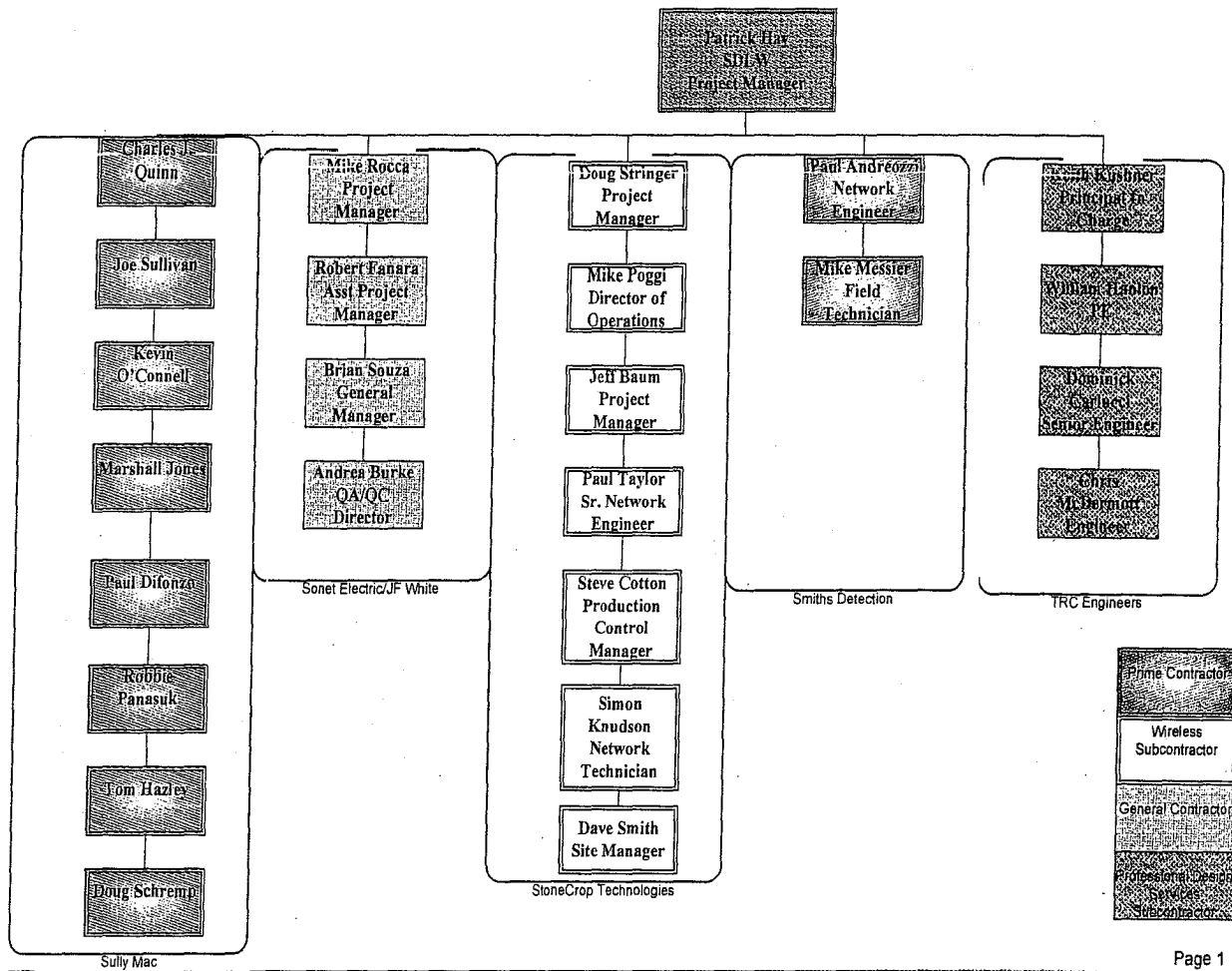
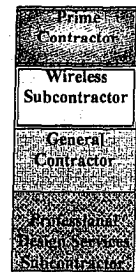
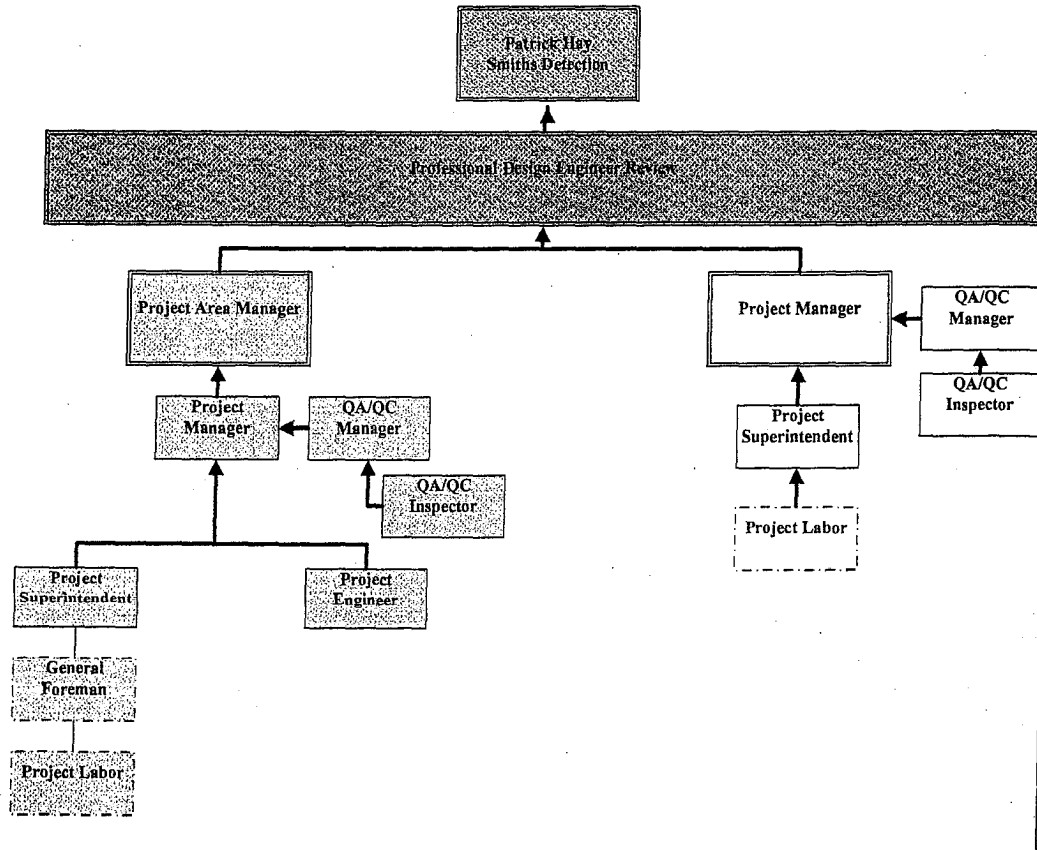


Figure 3: Organization Chart

Quality Control Organization and Flow Chart



Page 1

Figure 4: Quality Control Organization Chart

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Quality Control

REV.0 DATED April 5, 2007

PREPARED BY: Name
QA/QC MANAGER

POLICY STATEMENT

Smiths Detection commits its management and field staff to the proper implementation and documentation of the Quality Control Manual. We acknowledge our responsibility for a quality project and state that it is our intention to fully comply and to document the policies as indicated in our Quality Control Manual.

The management of Smiths Detection recognizes the personnel performing functions affecting quality require sufficient authority and organizational freedom. This freedom provides the framework to identify problems, initiate, recommend and provide solutions, and to verify implementation of solutions to those problems. Furthermore the empowered personnel can control further processing, delivery or installation of an unsatisfactory condition until proper dispositioning has occurred.

The undersigned retains overall authority for the administration of this program. The assigned Project Manager is responsible for all manufacturing and installation aspects. Control of the QC Program is assigned to the QA/QC Manager. Although it is the QA/QC Manager's responsibility to assure complete compliance with the requirements established herein, it is everyone's responsibility to adhere to the requirements in order to achieve the highest quality level possible.

When problems or differences of opinion on quality cannot be resolved within the line organizations, these problems shall be brought to the attention of the undersigned for final resolution.

The management of Smiths Detection is firmly committed to the Quality Control practices and requirements detailed herein. Total participation of all personnel is required.

Name

SECTION 1 ORGANIZATION AND RESPONSIBILITIES

Purpose: The purpose of this section is to outline management positions on and off the jobsite and to explain how they interact with the Quality Control Program.

- A. The Project Manager reports to the Project Area Manager and is directly responsible for:
 - 1. Labor Relations
 - 2. Corporate Safety Policy
 - 3. Quality Assurance-including adherence to all project documents
 - 4. Overall execution of the contract.
- B. The Superintendent reports to the Project Manager and is responsible for supervising the construction project and field staff including, but not limited to:
 - 1. Labor Relations
 - 2. Implementation of Corporate Safety Policy
 - 3. Compliance with project specifications, policies and procedures
 - 4. Oversight of all field operations
 - 5. Coordination of equipment and supervision of all construction activities
- C. The Project Engineer reports to the Project Manager and is responsible for the specific project including, but not limited to:
 - 1. Review all submittals for compliance with contract documents.
 - 2. Initiate field requests/notices for design changes.
 - 3. Assure that record drawings are completed and transmitted to the Client as required
 - 4. Initiate procurement orders
 - 5. Assure that design work performed by engineering is subjected to the applicable design control measures.
 - 6. Review shop drawings, field drawings, fabrication drawings and construction drawings prepared by subcontractors, vendors, suppliers and fabricators.

7. Assist QCM with the disposition of all nonconformance reports.
- D. The Quality Assurance/ Quality Control Manager reports directly to the Project Manager. The QA/QC Manager's sole duty is to manage and administer the Quality Control Program. The duties and responsibilities of the QA/QC Manager include, but are not limited to:
1. Developing, updating, approving and controlling the Quality Control Program.
 2. Ensuring that contractor and subcontractor inspection test personnel meet the qualification requirements delineated in the contract documents; and that QC personnel have no direct responsibility for performance of the work/activity being verified; and are independent from that portion of the organization responsible for production.
 3. Interfacing/communicating with other management personnel to identify problems which affect quality (e.g., Project Manager, Project Engineer, Project Superintendent, OR, etc.); and to initiate, recommend or provide solutions to quality problems; and verify implementation of solutions.
 4. Ensuring that inspections and verification of tests are being performed, documented and maintained in accordance with the contract documents.
-
5. Providing advance notifications, if necessary, in accordance with the frequency required by the contract documents.
 6. Ensuring that all personnel that are responsible for implementing various aspects of the Quality Control Manual have received training in the requirements of the Quality Control Manual.
 7. The Q.C.M. has the responsibility and the authority to stop or reject any segment of work or delivery of materials/equipment which does not comply with the contract documents and for directing the removal and/or replacement of any defective work, materials or equipment.
 8. The QA/QC Manager will interface with the suppliers' Q.C.M. to coordinate submittals required for tests, instructions, procedures, etc.
- E. The Quality Control Inspector reports directly to the Quality Control Manager and is responsible for the specific project including, but not limited to:
1. Performing, reporting and documenting results of receipt, storage, in process and final inspections, field tests in accordance with the applicable sections of the Q.C.P. and contract documents; and for performing and documenting the results

of re-inspections, or re-testing of unsatisfactory condition or non-conformance after they have been corrected to comply with the contract documents.

SECTION 2

QUALITY CONTROL PROGRAM

Purpose: This section describes in general the scope of the Quality Control Program including documentation and quality affecting procedures.

- A. To achieve the Q.C. requirements outlined in the contract documents, the following criteria will be implemented as a Quality Control Program.
1. Perform or supervise the performance of all required inspections and verifications of tests to ensure full compliance with contract documents. Inspection plans will be developed on an as needed basis to verify and document these inspections and tests.

Off-site Quality Control will be monitored through the submittal process and shop tests. Subcontractors and suppliers will work and fabricate in accordance with approved shop drawings.
 2. Perform receipt and storage/protective maintenance inspections of material and equipment to verify compliance with the contract documents.
 3. Identify, report and document all deficiencies and verify that any remedial action taken to correct the work has been performed.
 4. Certify that all materials, equipment and services to be incorporated on the project comply with the contract documents.
 5. Maintain and control all pertinent documents as required by the Quality Control Manual.

SECTION 3 PROCUREMENT CONTROL

Purpose: This section describes how procurement documents are submitted and reviewed for approval with emphasis on Quality Control applicability.

- A. Procurement documents, prior to issuance to subcontractors and suppliers will be reviewed by the Project Engineer and the QC Manager to verify that they reflect the correct drawings, technical specifications, quality requirements, inspection and test requirements, administrative and reporting requirements that must be complied to by subcontractors and suppliers.
- B. Procurement documents will also reflect that work performed by the contractors/suppliers is subject to inspection and/or testing by our Q.C. staff as well as others on behalf of the client during manufacturing, fabrication, testing, installation or before shipment; and indicates that if any item, work, material and/or equipment does not meet the contract documents will be rejected or returned as appropriate.

Suppliers will be required to provide a list of instructions and procedures pertinent to the material/equipment or service being procured, as applicable.

Subcontractors and suppliers will be informed that shop drawings developed by them must satisfy contract drawings and specification requirements. All work will be performed in accordance with approved shop drawings.

- C. When required, shop drawings will be submitted and resubmitted until approval is received by the client.
- D. The Quality Control Manager is responsible for:
 - 1. Establishing a receiving area and assuring that all receiving operations are complete prior to the equipment or material being moved to storage or permanent placement.
 - 2. Receiving all incoming permanent equipment and material to assure their orderly receipt and proper storage.
 - 3. Providing appropriate segregated storage area for nonconforming items.
 - 4. Providing the Project Manager with legible documents i.e. C of C or CMTRs which ever are required.
 - 5. The QCM in conjunction with the engineers and the Client shall perform all receiving inspection activities and record the results on the MRIR form, which is included in the Exhibit section of this manual. Receipt inspections are required as a minimum for all materials that require C of C's and CMTR's. These material

certs should be attached to the MRIR.

6. Verifying that all items are properly marked and/or labeled.
 7. Preparing NCRs on items that have physical damage.
 8. Verifying that all items are handled and stored in accordance with the specification, vendor and/or client requirements.
 9. The QCM will review all procurement documents for quality requirement purposes.
- E. The Project Engineer is responsible for:
1. Monitoring all subcontractor supplied materials for conformance to the specification and subcontract documents.
 2. Reviewing the purchase order, specifications, drawings etc. for conformance.
 3. Reviewing and approving supplier, and subcontractor submittals.

SECTION 4

INSTRUCTIONS AND PROCEDURES

Purpose: This section describes how a set of instructions and procedures affecting quality will be controlled.

- A. When the contract documents require inspections and test procedures to assure that activities affecting quality are described by documented instructions and procedures and these activities are accomplished through implementation of these documents, the QCM shall be responsible for these methods, techniques and procedures.
- B. Typically inspection procedures will be followed and documentation will be completed by the QC Inspector for the following work scopes:
1. Excavation/Backfill
 2. Concrete Preplacement, Placement, Post Placement
 3. Waterproofing/Damp proofing/Caulking
 4. Coatings
 5. Electrical
 6. Instrumentation/Controls

7. Piping (steel, DIP, PCCP)
 8. Welding
 9. Bolting-Rotational Capacity Testing.
 10. Grouting
 11. Structural Steel
 12. Receipt Inspection (MRIR)
 13. Material Storage & Handling
 14. Field Hydro and Leak Testing
- C. Suppliers will be notified before shipping any material that a booklet containing instructions and procedures must accompany shipped material when applicable. The Project Manager will ensure that material and equipment will be erected in accordance with these instructions.

SECTION 5

DOCUMENT AND DESIGN CONTROL

Purpose: This section describes how documents are controlled to ensure that fabrication or work is in accordance with approved drawings.

- A. Any contract items that require submission and approval will be controlled by the Project Engineer and his representative in the following way:
1. The Project Engineer will require subcontractors and suppliers to provide the required designs i.e., shop drawings where applicable. The Project Engineer is responsible for identifying the codes, standards, guides and other information that constitutes the criteria applicable to the work scope. The design shall be checked by an independent source for completeness in that calculations are included, catalog cuts are provided if applicable and a Professional Engineer stamp is affixed if necessary. The design will be performed by a person or organization, using design control procedures that require control over the preparation, review and approval of designs, including independent reviews. The General Contractor (GC) will review the submittal for compatibility, format and confirm both by stamping and signing the cover of the submittal. The Project Engineer will maintain the record drawings as the work progresses with the approved field changes.
 2. Upon return of the submittal the GC will transmit it back to the subcontractor. In the event that a second submittal is needed the subcontractor will be required to revise the drawings accordingly and resubmit. The GC will again review the submittal as discussed above and compare the revisions to the original to make

sure that the proper revisions have been incorporated.

3. All designs will be submitted as specified in the contract drawings as a shop drawing. It will then go through the standard submittal process. When the submittal comes back approved, a copy is sent to the subcontractor. The subcontractor will create working drawings as required and return them to the Project Engineer for review. The working drawings are then checked against the approved drawings before distribution.
4. Prior to any approved drawing, being released to the field personnel they will be stamped with the words, "Approved for Construction".
5. The Project Engineer will maintain a log of all submittals/drawings that have been approved.

B. The Quality Control Manager will maintain files for the control of documents in the following way:

1. All quality control files will be located in the field office independent of the job files.

The QA/QC Manager is responsible for control, updating and distribution of the most current Quality Control Manual.

2. Non-Conformance:
Non-Conforming work will be documented and filed under non-conformance until such time as there is a resolve to the non-conformance.
3. Reference Guides:
All reference and technical guides as required by the contract documents will be maintained.
4. Approved submittals will be maintained in the submittal files.
5. The QCM will be responsible to establish a list of personnel, subcontractors, vendors and consultants who have been issued a set of conformed contract drawings. This list shall include the name of the individual or the company and what sets of drawings were distributed to each. Upon receipt of revised contract drawings the QCM will distribute them to the appropriate parties with a letter requesting that the old drawing be stamped "superseded" and the new drawing added. The old drawing may remain in the set provided it is stamped "superseded".
6. All changes to drawings will be marked directly on the drawing or a log containing the drawing and referenced change document will be maintained.

SECTION 6

CONTROL OF MATERIAL, EQUIPMENT AND SERVICES

Purpose: This section describes the control of material, equipment, and services before, during and after fabrication or shipment takes place.

- A. For any material or equipment needed to perform an intended job, a subcontract, material contract, or purchase order is developed. The Project Engineer has a record of all subcontracts, material contracts and purchase orders on file. The Project Engineer coordinates the shipment of material and equipment. The QA/QC Manager is responsible to ensure that material and equipment is per the contract drawings. The QA/QC Manager may visit the supplier's facility prior to shipment.
- B. For materials requiring special tests, the QA/QC Manager must receive copies of the test results before any shipment to the jobsite is made. When materials are received at the jobsite, a receipt inspection will be performed by the appropriate QC Inspector.
- C. Material or equipment that is stored after delivery must meet the protective maintenance requirements submitted by the manufacturer.
- D. Supplier/Manufacturer's Certificates of Conformance shall be delivered to the contractor prior to or at the time of shipment.

SECTION 7

CONTROL OF SPECIAL PROCESSES

Purpose: This section describes the Quality Control Procedure for coatings and for welding, including Visual Weld, Non-destructive Testing and Qualification of Personnel.

WELDING

- A. When special processes such as welding are required, the GC shall develop or use existing qualified welding procedures.
- B. The QA/QC Manager is responsible to ensure that only qualified welders are used to perform the work and that properly certified personnel are being used to inspect the work.
- C. All welds will be inspected in accordance with the applicable code (ie. ANSI/ASME B31.1, AWS D1.1, AWS D1.5 etc.)
- D. Weld inspection personnel shall monitor the control of welding electrodes and filler metals.
- E. Weld inspection reports will be completed and will be traceable to weld locations.

COATINGS

- A. The QA/QC Manager will verify that coating products are stored in an area where the temperature is monitored and maintained to the temperature limits specified by the manufacturer.
- B. QC will verify that surface preparation is in accordance with the manufacturer's recommendations and contract requirements.
- C. QC will verify prior to the start of coating that the ambient temperature, humidity, and surface temperature are within requirements.
- D. QC will verify that coatings are mixed and applied according to the coating manufacturer's recommendations.
- E. Visual inspection for runs, sags missing paint over spray, and damage will be identified and repaired.
- F. Inspection reports will be prepared to document coating activities.

SECTION 8 INSPECTION AND TEST

Purpose: This section describes the organizations controlling inspection and tests to ensure that quality of the work is as specified in the contract documents.

- A. In process, final inspections, and testing will be performed and documented by qualified personnel in accordance with the applicable Quality Control Procedure. The Q.C. inspector will inspect, witness, and verify that the inspection and testing is being performed in accordance with the contract documents and is responsible for documenting the inspection and test results on the appropriate test or inspection report.
- B. Inspection Phases
 - 1. In Process Inspection: In process Inspection shall be performed as soon as a representative segment of the particular item of work has been accomplished, as determined by the QA/QC Manager. Inspection shall include performance of scheduled tests, inspection of the quality of results for compliance with the contract documents, a review for omissions or dimensional errors, and approval or rejection of the initial segment of work.
 - 2. Final Inspection: At the completion of all work or increments thereof, documents, a final inspection shall be performed. Items not conforming shall be noted. A re-inspection shall be performed to verify that all deficiencies have been corrected.
 - 3. Inspection Test Reports: All inspection reports by independent testing laboratories will be reviewed and received by the QA/QC Manager.
 - 4. All inspections or tests will be performed by personnel independent of those who performed or directly supervised the activity being inspected. The QA/QC Manager is responsible for determining the acceptability of the inspection results or test data and results.
- C. Control of Measuring and Test Equipment
 - 1. Purpose: To ensure that measuring and test equipment (M&TE) used to determine compliance with the contract documents during acceptance inspection and testing is properly controlled, calibrated and adjusted at specific periods to maintain accuracy within necessary limits.
 - 2. Measuring and test equipment must be identified to ensure easy traceability to calibration test data. The name of the equipment and the manufacturer's identification number must be documented. The devices are suitably marked with a sticker stating the date on which they should next be calibrated or certified.

3. Calibration of equipment will be done against standards of higher accuracy. The testing company must submit calibration standards that meet the requirements of nationally recognized standards.

D. Inspection Procedure

1. In process and final inspections of construction activities will be performed by the Q.C. inspector and documented on the appropriate form.

E. Control of Unsatisfactory Work-See Section 9

F. Testing Procedures

1. Log of required tests
2. Responsible people
3. Test forms

G. Reporting Procedure

1. Quality Control Report Logs shall be used by the QA/QC Manager to record any reports that have been generated.

SECTION 9

NON-CONFORMANCE CONTROL

Purpose: This section describes the process for determining Non-conformances, and the procedure for reporting and amending the condition. All NCRs will require MBTA approval.

- A. Definition: "Any item, condition material which deviates from the requirements of the contract documents, (e.g. drawings, specifications codes etc.) and cannot be corrected within the scope of such requirements or otherwise requires an engineering disposition. All personnel are required to identify and report non-conforming conditions.
- B. Procedure:
 - 1. The deficient work and /or items that do not conform as determined during inspection, testing, or as otherwise observed, will be properly identified with paint or a red tag or some other identifying means, where applicable and controlled to prevent their inadvertent use or installation.
 - 2. When required, an NCR providing a recommended disposition by the Project Engineer or QA/QC Manager for the deficient condition will be submitted to the Design Engineer for review. Until final disposition, non-conforming items will be segregated, red-tagged or painted to prevent further processing, installation or use. Non-Conformances will be tracked from the time of initiation until closure by the QA/QC Manager to ensure that non-conforming items are being satisfactorily resolved in a timely manner.
 - 3. When an NCR is written, it shall be recorded on an NCR log. The log will contain the dates the NCR was initiated, dispositioned and closed as well as a description of the deficiency. All unsatisfactory or non-conforming conditions shall be resolved before any pre-operational testing of equipment takes place.
- C. Corrective Action/Preventive Action:

NCRs shall be reviewed for any appropriate corrective or preventive actions.

SECTION 10

QUALITY CONTROL RECORDS

Purpose: This section describes the requirements for and lists those Quality control Records that will be generated and maintained as a result of implementation of the QC Manual.

- A. All Quality Control Records will be generated depending on the work outlined in the specifications. See Section 4 for a list of typical work items that will have records generated.
- B. All subcontractors and material suppliers will perform their own QC, if applicable, and turn their records over to JF White.
- D. All records will be stored in the field office, "Quality Control Files" in an orderly manner, file cabinets, drawing files, drawing racks as applicable.
- E. All records will be adequately filed and clearly labeled to the type, contractor etc.
- F. The following QC records will be turned over to the Client on a periodic basis and sent to the Records Retention Facility in Stoughton at the end of the job. These files will be maintained for a minimum of 3 years in accordance with the record retention policy.

- Record Drawings
- NCR Reports & Log
- Inspection Reports/Checklists & Logs
- Test Reports
- Material Certification Reports

- G. The Project Engineer will develop a filing system that will permit easy retrieval of records from archives

Note: The Project Engineer will be responsible for the following records:

- Original Contract and all associated change orders
- Original Contract Drawings
- Submittal Log
- Permits
- O&M Manuals/Spare Parts Lists
- Warranties and Guarantees
- Correspondence
- Safety & Environmental Records
- Schedules/Payment Records

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FORM 6

KEY PERSONNEL TO BE ASSIGNED, EXPERIENCE AND AREAS OF RESPONSIBILITY

List the employees, including project team leader, who will be assigned to this Contract and their experience and areas of responsibility on the project. Attach a current resume for all assigned personnel who will be performing the requirements of this Contract.

SMITHS DETECTION KEY PERSONNEL

Name	Years of Experience in Construction/Design	Areas of Responsibility
Jon Cooper	20	Director of Engineering (SW)
Patrick Hay	7	Project Manager
Paul Andreozzi	15	Network Engineer
Mike Messier	15	Field Technician

Jon Cooper

Education

City University, London

First Class, Degree B.Sc. Hons. Mechanical Engineering. Specialization: Computer Modeling

Computer Skills and Certifications

Languages: Java, JavaScript, C/C++, HTML, JSP. Design: UML, OOP.
Other Skills: JMF, JNI, SQL, XML, COM, MFC, Platforms: Windows, Linux, IBM MainFrame.

ATL, STL, RMI, J2EE, DirectX.

Areas of Expertise

Jon Cooper is the Director of Engineering at Smiths Detection. He has over twenty years of experience in the development of software systems, much of which has been involved in the transmission and rendering of Video. Prior to joining Smiths Detection, Jon worked for Intel Corporation on the creation Video Conferencing Products. He also spent three years pursuing research and development in the area of digital broadcasting. This work resulted in patent applications and successful trials of data transmission to Home PCs using satellite and terrestrial digital broadcasts. Before concentrating on video systems Jon worked for Banks in the UK and US, both networking and integrating systems, as well as on the encryption and secure transmission of large value financial transactions.

Representative Experience

Smiths Detection-LiveWave Newport, Rhode Island, USA

Experience: Smiths Detection-LiveWave creates digital video network solutions for controllable pan tilt cameras. Jon has worked to create first in-house video streaming software, entirely replacing a third party licensed solution. The video streaming solution is a combination of Java and native C++ code. It uses Microsoft DirectShow to capture and compress video from a variety of capture cards and local TCP/IP sockets to pass the resulting stream to Java. The

video settings can be manipulated using a JNI interface which communicated via COM to the capture component. The core of the original application was written in Java as a SWING application that was migrated to an NT service and then eventually to Web Application that was hosted within Resin. This technology was used in a 200+ camera video security system for the Washington DC Metro subway system, as well as multiple smaller broadcast and security applications. The video solution is also able to distribute video captured from multiple other sources; Pelco DX-7000 DVR, Axis Network Encoders, and PelcoNet Network Encoders. I also completed a prototype to provide a proof of concept implementation for Linux that used Video 4 Linux (V4L).

Each specific camera manufacturer has their own protocol for controlling their camera's functions such as pan, tilt, zoom, iris and in addition to working on video I also wrote code for a number of camera control drivers. The camera control would translate user commands to bytes sent to the camera hardware using RS232/422/485 serial protocols as well as TCP/IP communication.

The video and camera control user clients were written as Java Applets that were served from a Web Application using Java Servlets, JSP, and a SQL database back-end. Given the small size of the software team I wrote code at all levels of the application architecture, from JSP to DirectShow filters. I worked to provide a solution to run our client software on a Microsoft CE wireless hand held PDA device.

In addition to capture and live streaming of video Jon created a recorded video capability within the system. This subsystem takes a video network video source and records it to disk and is used as the basis of a Digital Video Recorder (DVR) product offering. The DVR used windows Active Streaming Format (ASF) to record video to disk, by using ASF we were able to allow random access video playback over the network using standard tools, namely Windows Media Server, and Windows Media Player.

Patrick Hay

Education

Bachelor Degree in Computer Science
Rhode Island College-Providence, RI

Training in Ocean Engineering including Computer Aided Drafting (CAD)
University of Rhode Island

Representative Experience

Smiths Detection-LiveWave

Project Manager/Director of Operations

Mr. Hay plans and directs all aspects of operational policies, objectives, and initiatives. Develops policies and procedures for operational processes in order to ensure optimization and compliance with established standards and regulations. Additionally, he maintains and monitors the capital expenditure budget and investments for the Operations group.

Provide cross-functional, non-hierarchical leadership to the organization as the project team lead for process improvement initiatives.

Holby Marine Company

General Manager

General Manager responsible for production scheduling, labor supervision, and quality control for all aspects in a marine environment. Created documentation for build process, electrical diagrams, and product development such as attending supplier training and events such as IBEX (International Boat Builders' Exhibition and Conference) annually. Personally handled all dealer and customer service issues. Working in a small company I was also responsible for all office technology and support to all employees, wireless network setup, and web development.

- Re-organization of production to follow set schedule separating glass shop and rigging shops to increase and streamline production. Resulted in 10% increase in production efficiency.
- Implemented new electrical systems to comply with ABYC standards.
- Providing training to employees in fiberglass construction, electrical, and mechanical systems
- Direct interaction with customers to resolve warranty claims.
- Designing and implementing new website, increasing website traffic by 10%.

Amica Mutual Insurance Company

Information Technology

Patrick worked in the Computer Information Systems department working on multiple assignments for a broad variety of departments.

- Involved in programming multiple systems in an insurance environment, using languages such as COBOL, working in a mainframe environment.
- Attended multiple training courses for working in team environments as well as project management training.

Paul J. Andreozzi

CNE, MSCE, MCP, CNA

Education

Associates in Electrical Engineers
Rhode Island School of Electronics

Other Education:

Roger Williams University	2005	Computer Forensics
Bristol Community College	1995-1996	obtained 2(CNA's) and CNE
Roger Williams University	1982-1984	electrical engineering

Professional Education/Certifications

3Com 3 Wizard 1997, ATM through 3Com training, High speed networking through 3com

Areas of Expertise

Mr. Paul Andreozzi has experience in the following general areas:

- Installation and configuration of LAN / WAN including switches / hubs / firewalls / IIS / DNS / DHCP / IM and EMAIL
- Implementation of IDS / IPS systems to detect and resolve network threats
- Installation and configuration of Citrix Metaframe Environments
- Installation and configuration Server farms using SAN technology
- Installation and configuration of ISDN remote access for DOE
- Management of Windows Active directory and deployment of desktops
- Installation and configuration of various backup and recovery software
- Network analysis using packet sniffers and other data collection tools to troubleshoot and identify network issues
- Configuration of DNS, WINS, DHCP, IIS, VPN, VLANS
- Configuring and testing Windows policies and deployment of policies

Representative Experience

Town of Johnston

Manager of Information Systems – Intel System Engineer

Responsible for assessing, recommending, implementing and supporting technology needs for the Police Department, Fire Department and Municipality. Support all aspects of LAN / WAN / Wireless (CDMA), Telecommunications and applications. Ensure that Vendor relations are maintained and licensing for all necessary software is current.

Xerox Connect

Network Design Consultant

Responsible for designing solutions for customers based on their needs and priorities. These designs range from local area networks (LAN) to very complex wide area network (WAN) designs. Also included are project management of server and desktop rollouts, vendor relations and presales.

DecisionOne

Network Specialist

Maintain IBM systems 34, 36, 38 and AS400's and all peripherals. Maintain vendor relations with the telecom vendors for communications into the systems. Managed on-site support and maintenance of Fleet Bank in Providence. Control project rollouts within Bank while maintaining network structure. Managed 10 persons in support of break/fix within the bank infrastructure. Manage and ensure system 24X7 system availability.

Michael Messier

CNE, MSCE, MCP, CNA

Education

Bryant College

BS in Business Administration-Computer Information Systems

Community College of RI

AA-Liberal Arts

Professional Education/Certifications

RCDD – Registered Communication Distribution Designer

Demonstrated proficiency in the design, integration, and implementation of telecommunications transport systems and related infrastructure components; including such components as voice, data and video applications which adhere to National Standards set by EIA/TIA, IEEE, ANSI and other professional telecommunications/engineering agencies.

Specialized Training

Cisco CCNA: Wide Area Networking

Local Area Networking

Network and Data Transfer

OSI Reference Model

Using a Router

BICSI: Intro to Local Area Networks and LAN Cabling Systems
The Role of Structured Wiring in the Development of Intelligent Building
Systems

NEIT: AutoCAD Level One – Operating Systems & Applications

AT&T: Basic PDS Session I and 2
Optical Fiber Testing
Fiber Optic Installation and Splicing
Contract Management

LUCENT: ND3660 – SYSTIMAX SCS
Telessentials Curriculum

SPRINT: Sprint Wiring Management Systems

Areas of Expertise

Mike is a project manager that uses his extensive in-depth knowledge of various networking protocols such as TCP/IP, SNMP, SMTP, etc., copper wire and detailed fiber optic installation and maintenance, and a strong familiarity with IEEE 802.3 Ethernet standards, IEEE 802.5 Token Ring standards, IEEE 802.11a, b, and g wireless technologies, VPNs and EIA/TIA, ANSI governing bodies of standards to meet or exceed the needs of challenging Information Technology solutions.

In recent positions, Mike has acted both in a supervisory capacity and hands-on management of systems installations involving data communication lines and problem resolution for commercial and governmental agencies involving the installation of routers, bridges, switches and hubs. He has been responsible for the successful design, estimation, coordination, installation and implementation of multi-million dollar projects. His responsibility included the completion of several projects involving the successful installation of telecommunications and data infrastructures as well as providing user training in the use and operation of the newly installed, and or upgraded systems.

Mike has demonstrated a very high knowledge and experience level in AT&T and Lucent Technologies systems ranging from small business applications with as few as 20 users to large systems with as many as 1,000+ users involving switching equipment, voice mail application, etc. for companies in single as well as multiple locations. He has worked with regional Bell operating companies to program their services into large PBX's in support of T1, DSL, and ISDN services.

Representative Experience

UNICOM

Project Manager

Supervise and coordinate activities in the installation of Cable Infrastructures, Router, Switches, and Hubs for State and Local Government as well as various large commercial customers for their LAN, WAN, and VLANs.

Xerox Connect

Network Design Consultant

Responsible for designing solutions for customers based on their needs and priorities. These designs range from local area networks (LAN) to very complex wide area network (WAN) designs. Also included are project management of server and desktop rollouts, vendor relations and presales.

DecisionOne

Network Specialist

Maintain IBM systems 34, 36, 38 and AS400's and all peripherals. Maintain vendor relations with the telecom vendors for communications into the systems. Managed on-site support and maintenance for the Fleet Bank project in Providence. Control project rollouts within Bank while maintaining network structure. Managed a team of ten in support of break/fix within the bank infrastructure.

STONECROP TECHNOLOGIES KEY PERSONNEL

Name	Years of Experience in Construction/Design	Areas of Responsibility
Doug Stringer	15	President and CEO
Jeff Baum	6	Stonecrop PM
Mike Poggi	15	Director of Operations
Paul Taylor	10	Sr. Network Engineer
Steve Cotton	2	Production Control Manager
Simon Knudson	4	Network Technician
Dave Smith	23	Site Manager

Doug Stringer: President and CEO – Mr. Stringer will architect and design the network from the ground up and is ultimately responsible for network operation and performance.

Jeff Baum: Stonecrop PM – primary interface between Stonecrop and Smiths Detection. Ensures milestones are being met and overall customer satisfaction.

Mike Poggi: Director of Operations – Manages teams of technicians who configure, install and support all networking equipment, both wired and wireless. Mike's duties will include installation, management of sub-contractors, staging and overall system integration.

Paul Taylor: Sr. Network Engineer – Manages Routing and Switching design, configuration, network security, LAN / WAN troubleshooting and overall network maintenance.

Steve Cotton: Production Control Manager – Manages procurement, configuration and Quality Control for wireless infrastructure.

Simon Knudson: Network Technician – Assists in all aspects of wireless deployments. Simon specializes in RF Site Surveys, installation and antenna alignment.

Dave Smith: Site Manager – Manages the relationship between the building managers and technicians. Mr. Smith will assist with site acquisitions, approval process, building access and permissions.

Douglas Stringer

Douglas Stringer, principal of Stonecrop Technologies, LLC, has over 15 years experience in building both wired and wireless communication networks. Since founding Stonecrop Technologies, LLC in 2001, Stringer's expertise in marketing and network design has led to the contract awards from a wide variety of public and private entities, from regional deployments of AT&T's Fixed Wireless networks, to the design and deployment of wireless facilities for multiple Department of Homeland Security projects such as the 2005 Presidential Inauguration. Other projects Stringer has worked on include the Republican National Convention, CenturyTel, Argonne National Labs, City of Pittsburgh and Trump Properties.

Education: *Ohio Wesleyan University*, B.A. Political Science 1992

Jeffrey Baum

Partner and Vice President of Stonecrop Technologies, LLC, Jeff has six years of Account and Project Management experience. Jeff has successfully managed customer relationships acting as the primary liaison between Stonecrop's technical staff and the end user / customer. Jeff's prior experience includes Account Management for Proxim; Wireless and Network Technician for AT&T Broadband and Comcast.

Education: University of Maryland, B.S. Finance 1989. Colorado Mountain College, AAS Computer Networking 2001

Michael Poggi

Founding Partner and Director of Operations, Mike is certified by most of the major wireless manufacturers, from Orthogon Systems to Redline Communications, Dragonwave Inc to Bridgewave. Mike's operational skills have been at the center of every one of Stonecrop Technologies' successful deployments.

Education: *Denver University*, B.A. 2001

Paul Taylor

Paul has been in the networking field for ten years, including six years involved in all areas of network design for a network of over 1200 remote sites with a core network supporting 1400+ users. Paul's experience includes design and implementation of large-scale Frame Relay networks, Firewall configuration, TCP/IP, all major routing protocols, Sniffer and Spectrum NMS.

Steve Cotton

Steve joined Stonecrop one year ago and has been quick to absorb the intricacies of RF, equipment configuration, installation and troubleshooting. Steve's recently taken on a Project Management role for some of our smaller deployments and has displayed signs of leadership, professionalism and charisma.

Education: St. Lawrence University, B.A. Political Science 2006

Simon Knudsen

Simon's four years with Stonecrop have taken him all over the globe supporting clients with our Rapid Deployment Mobile Communications Platform. In addition, Simon's technical aptitude has been pivotal in site surveys, frequency coordination, equipment selection and engineering challenges such as non-line-of-sight, high noise environments and RF interference.

Education: Herning HF, Kursus, Denmark AAS Computer Science

David Smith

Mr. Smith has been the Project Manager for the installation and upgrade of Intrusion Detection Systems (IDS) for numerous Federal Agency Facilities throughout New England. David is also the Director of Security for the U.S. Naval War College, - U.S. Navy and Joint Forces International Events. He is the Antiterrorism Officer responsible for the planning, coordination, and implementation of Multi-agency security joint operations in the protection of 75 Heads of Foreign Navies and Foreign Military Leaders from a total of 150 countries.

Commander United States Naval Reserve 23 Years.

TRC KEY PERSONNEL

Name	Years of Experience in Construction/Design	Areas of Responsibility
Keith Kushner	34	Principal-in-Charge, QA/QC
William Hanlon, PE	18	Professional Engineer
Dominick Carlucci	18	Senior Engineer
Chris McDermott	12	Engineer

Keith Kushner

Education

Northrop Institute of Technology (EE)
California State University Los Angeles (Fire Administration)

Professional Registrations/Certifications

Certified, AWWARF/Sandia National Laboratories RAM-W Training (Risk Assessment Methodology for Water Surety)

Areas Of Expertise

Mr. Keith Kushner has experience in the following general areas:

- Integrated Security System Master Planning
- Security Master Planning and Program Development
- Electronic Technology and Countermeasures Deployment
- System Commissioning
- Integration of Technological Solutions With Other Elements of the Security Program
- Security Systems Design and Engineering
- Security Threat and Risk Assessments
- Threat/Countermeasure Balancing
- Conceptualization and Development of Customized Solutions
- Expert Witness and Forensic Analysis of Fire/Life Safety and Smoke Control System Design

Representative Experience

Port of Houston Security Improvements, Design and Engineering – Houston, TX (Technical Project Manager)

Mr. Kushner led the client and the design team in the creation of the first fully integrated, region-wide security system platform installed at an American port. The Port of Houston project comprises eleven (11) port facilities located along 52-miles of the Houston Channel. The comprehensive design included the integration of multiple system platforms such as TWIC compliant credentialing, access control, and wireless video surveillance systems, and included a wireless Wide Area Security Information Network and Enterprise Information Management System to share information between port facilities, police departments, the Coast Guard, the Texas Department of Transportation, and other entities throughout the region. Along with in-depth security engineering, the design effort also included the related disciplines of fencing, electrical, civil, information systems, and architectural design. The project included design and construction services for the Port Command Center and all eleven port facilities. The initial

design standards and systems are continuously being expanded by the Port, in a continuing effort to improve the port security posture based on TRC's initial Security Master Plan.

Massachusetts Bay Transportation Authority (MBTA) – Boston, MA (Project Manager)

Mr. Kushner is serving as the Deputy Project Manager for the System Wide Secure Station Initiative (SSSI) portion of the MBTA project. He was responsible for managing and participating in the survey of over 200 subway and above-ground railway and bus stations, determining the extent of the existing security program and electronic systems, and formulating the plan for improving and upgrading electronic security for the entire MBTA system. The plan includes the development of an enterprise security information network that will engage and integrate a multitude of new and legacy technologies, as well as support incident management and information sharing efforts with first responders and other affected entities throughout the region. The plan was accepted by the MBTA without revision, and is currently being used as a primary tool in securing grant funding from the federal government for the implementation of its recommendations.

East River Bridges, Design and Engineering – New York, NY (Project Director)

Mr. Kushner is leading the team to design and develop Electronic Security Protection for the Brooklyn Bridge, Manhattan Bridge, Williamsburg Bridge, and Queensboro Bridge, in the City of New York. These famous bridges will be undergoing security upgrades that will include structural hardening, and a highly sophisticated, integrated package of electronic security systems and detection devices. Systems will include Credentialing (FIPS 2.01 compliant), Access Control, Vehicle Exclusion, Video Surveillance, Intelligent Video Analytics, Intrusion Detection, Emergency Call Stations, and an integrated Command, Control, and Communications platform. As a part of this effort, Mr. Kushner is making extensive use of advanced security technologies, as well as developing new protocols for using existing technologies. The design includes multiple Command and Control sites, incident management software, redundant video recording and management protocols, and a citywide LAN/WAN network infrastructure that will provide fail-safe redundancies to ensure responders are supplied with accurate and current information to support situational awareness.

Specialized Training

- Certified, AWWARF/Sandia National Laboratories RAM-W Training (Risk Assessment Methodology for Water Surety)

Professional Affiliations

- American Waterworks Association (AWWA)
- ASIS International (Formerly American Society for Industrial Security)
- Design Build Industries Association (DBIA)
- National Fire Protection Association (NFPA)
- Security Industry Association (SIA)

William F. Hanlon, PE

Education

B.S., Electrical Engineering, Northeastern University, 1988

Graduate school course work, Power Systems Analysis I, II & III, Northeastern University, 1990

Professional Registrations/Certifications

Professional Engineer, Massachusetts (#39118-E), 1995

Representative Experience

Mr. William F. Hanlon, PE has over 18 years of effective project engineering and design for the electric power industry associated with investor-owned and municipal utility upgrades and additions, hydro and fossil generating facility capital improvements as well as transportation and industrial customer upgrades.

Brewster-Katonah Cable Project. Provide project management and engineering to connect two 46 kV substations located in NYSEG's Westchester County division. The project included planning and detailed engineering associated with a 46 kV aerial cable express and rebuilding the existing 15 kV distribution system along Route 35. Technical input and permitting was required for both DOT road and MTA crossings.

Sithe-Mystic Interconnection Project. Provided project management and engineering to upgrade multiple 345 kV and 115 kV stations on the interconnecting utility's system to accommodate an additional 1600 MW at 345 and 115 kV evenly. The work included complete detailed design of 345kV and 115kV primary electrical GIS and AIS equipment implementation, preparation of protection and control panel and structural material procurement specifications as well as low voltage power and control cabling to the existing utility control rooms. Developed multiple construction contract document submittals to accommodate staged overhead and underground EHV and HV transmission line reconfigurations and additions. Project value for all station and transmission improvements was 70 million.

Sithe-Edgar Interconnection Project. Provided project management and engineering services to upgrade multiple 115 kV stations to accommodate the interconnecting utility's system for an additional 800 MW. Project specific requirements included coordination of new 115 kV transmission line interconnection, addition of a new 115 kV bay addition complete with line terminal exits, low voltage power and control conduit and cabling. Removed and replaced seven 115 kV oil circuit breakers with SF6 breakers. Prepared multiple vendor equipment solicitations for protection and control panel replacements as well as construction bid packages for installing the substation equipment. Project value for all station improvements was 10 million dollars.

South Danvers 115kV/23 kV Rearrangement Project. Provided project management and detailed engineering to re-configure the 115 kV taps from NGRID (B154S and C155S) to the Town. Participated in interconnection negotiations with NGRID and coordinated all outage work with NGRID and Town complete the installation. Project Value for all improvements was approximately 2 million dollars.

Edgar Station Divestiture Project, Weymouth, MA. Provided on-site project engineering to relocate the 110 kV switchyard relay protection and control equipment. Prepared final design

documents for modular control house addition and low voltage power and control cable routing. Project value for all station improvements was 11 million dollars.

Ocean Avenue Substation, Freeport Electric, Freeport, NY. Engineering associated with the 138 kV and 13.8 kV electrical switchyard design associated with the Design-Build contract for the 138/13.8 kV Ocean Avenue Interconnection Substation with LILCO. Duties included equipment layout, low voltage power and control cabling and development of bill of materials for construction packages.

70MW On Site Thermal Power Plant Project - Deer Island - MWRA, Boston, MA. Plant Performed electrical engineering tasks associated with the detail design of the 70MW On Site Thermal Power Plant (OSTPP) EPC. The OSTPP is comprised of two 36.3MVA gas turbines and one 20MVA steam turbine.

13.8 kV Main Switchgear Building/Electrical Utilities - Deer Island - MWRA, Boston, MA. Performed electrical engineering tasks associated with the detail design of the Main Substation and the 15kV power distribution system for Deer Island. Duties included preparation of a complete Engineering, Procurement, and Construction contract (EPC) for the island.

Remote Metering project at 30 Substations, Municipal Electric Utilities Association, NY. Performed preliminary engineering design and field survey for installing remote metering equipment at multiple Niagara Mohawk to municipal interconnection locations.

Municipal Utilities in General, Various Locations. Provided electrical power engineering and design engineering for numerous substation retrofit and expansion projects and distribution line conversions throughout Massachusetts and New York.

Professional Affiliations

- Institute of Electrical and Electronic Engineers

Dominick Carlucci

Education

Q.S., Technologies, Newport Beach, CA, 1998

I.B.E.W., Union Trade School/ Rancho Santiago College, Santa Ana, 1986-1989

Areas Of Expertise

Mr. Dominick Carlucci has experience in the following general areas:

- MCP+I and MCSE Certified
- C-10 Electrical, California State Contractors License
- Design and Layout of Security Systems, Customer Support, Systems Training, Technical Support, Database Administration, and Computer Networking
- (Information Technology) Cisco, IBM, and Dell Client Server Applications
- (Infrastructure) Fiber Optic, WAN, LAN, Wireless
- (Access Control Systems) Infographics (GE), Lenel, Software House, CASI-Rusco, AMAG, Northern, Andover, Continental, Hirsch, DSX
- (Closed Circuit Television Systems) Pelco, Bosch, Phillips/Burle, American

Dynamics

- (Burglar Alarm and Fire Systems) Radionics, Ademco, DMP, Moose, Notifier
- (Digital Video Recording Systems) Verint, Bosch, DVTel, Lenel, Loronix, Integral, Kalatel, Intellex

Representative Experience

Port of Houston Authority, Complete Design/Security System – Houston, TX (Project Manager/Senior Project Engineer)

Mr. Carlucci provided various duties beginning with the initial drawings and design. He specified the equipment, methodology, and the technology to be deployed. Mr. Carlucci provided the documents and construction budgets; and designed, configured, and procured the Network infrastructure equipment including the Servers, Workstations, Network Switches, Network Storage hardware, and software. He reviewed ongoing design drawings with comments and recommendations. Mr. Carlucci coordinated with the various manufacturers for seamless integration of sub-systems. He traveled extensively for client meetings, design efforts, and project closeout. Mr. Carlucci provided technical support on all systems. He was also tasked to provide closeout of projects; including warranty, documentation, technical support, accounting, and contractual issues. Additionally, Mr. Carlucci coordinated the remediation plan for the wireless video system.

New York Power Authority, Security Assessments – New York, NY (Senior Project Engineer)

Mr. Carlucci is providing engineering for the security assessments and systems design peer review conducted during a five year master consulting agreement with the Authority in order to mitigate security threats and recommend improvements to security systems and operations where appropriate. He is conducting field surveys with the team of multiple facilities including the Niagara Power Project, one of the nation's largest hydroelectric power facilities. Mr. Carlucci conducted physical security surveys, recommendations for upgrades to technology security measures, alternatives, and construction cost estimates associated with these recommendations. He conducted peer review of security systems design; and continues to provide engineering of upgrades at power facilities, recommending drawing revision, and specification changes where appropriate.

Rochester Gas & Electric, Security Plan – Rochester, NY (Senior Project Engineer)

Mr. Carlucci is providing engineering for the design of security systems for eight critical facilities within their \$100+ million system wide expansion projects in compliance with regulatory guidelines and stakeholder requirements. Designs include comprehensive perimeter protection system Engineered security systems including alarm, access control, intrusion detection, video surveillance, digital recording, upgrade, and integration with the main operations headquarters. He also has performed system planning, schematic design, design development, and construction documents. Additionally, Mr. Carlucci provided site surveys for the first two transmission plants.

City of Los Angeles, Bureau of Street Services, Cahuenga Yard – Los Angeles, CA (Project Engineer)

Mr. Carlucci provided security assessment and schematic design. He met with relevant city representatives, security system “stakeholders”, and facility operators to review project scope, objectives, and strategy. Mr. Carlucci also reviewed existing operational procedures, and developed and understanding of the City security and communication requirements. He conduct a site survey; and a review the current facility architectural and engineering plans, specifications, police reports, and other information regarding the site. Mr. Carlucci met with the City security contractor to discuss design layouts installation costs. He surveyed, assessed, and confirmed the conditions, viability, and appropriateness of existing systems and devices, in place. Additionally, Mr. Carlucci prepared a Feasibility Study Report delineating recommendations and options. He also developed schematic level drawings of the recommendations and options for the protection of the facility, including device locations for card readers, door monitoring switches, beam detectors, and CCTV cameras. Mr. Carlucci submitted a report, which described the proposed technology infrastructure, capabilities, and functionality. He also provided preliminary budget estimates for each recommendation, presented the Report for review and comment, and modified the Report based on the review comments.

Christopher McDermott, PE, LSP

Education

B.S., Environmental Engineering, Washington University, St. Louis, Missouri
B.S., Applied Math & Physics, Providence College, Providence, Rhode Island

Professional Registrations/Certifications

Registered Professional Engineer, New Hampshire, 2003 (#10812)
FEMA National Incident Management System
Licensed Site Professional, Massachusetts, 2006 (#1955)

Technical Specialties

Mr. Christopher McDermott, PE, LSP has over 12 years of experience providing security and civil engineering services on a variety of projects for numerous private and public-sector clients. Mr. McDermott specializes in the assessment, design and implementation of security programs and improvements for the transportation sector, with a focus in mass transit. Mr. McDermott has performed threat and vulnerability assessments, prepared mitigation plans, designed security improvements, and assisted in development of security training. He is also proficient in the Department of Homeland Security grant process, having provided assistance to several clients on the DHS Infrastructure Protection Program (IPP).

Representative Experience

Massachusetts Bay Transportation Authority (MBTA) – Secure Station Initiative Project.

Mr. McDermott is currently managing TRC’s security consulting services for the MBTA’s Secure Station Initiative. He is working with STV in the management of the three project phases: Redundant Operations Control Center (ROCC), System-wide Station Security Improvements (SSSI), and Grants. TRC, in a joint venture with STV, Inc., is in the design stages of both the ROCC and SSSI.

Under Mr. McDermott's direction, ROCC phase services include interviews with dozens of department staff to gather pertinent information and design criteria for each of MBTA's critical systems (e.g., train and bus control software, radio, telephone, CCTV, etc.). TRC's SSSI phase services include numerous data gathering sessions, station surveys, and interviews with MBTA staff to determine potential vulnerabilities and improvements. TRC is also performing security assessment surveys of over 120 of MBTA's stations, with the collected data being used to prepare a conceptual design for security improvement recommendations.

In addition, Mr. McDermott has assisted MBTA in obtaining additional grant funds from the Department of Homeland Security. He prepared grant applications and organized project planning sessions to assist MBTA in applying for over \$23 million in FY06 and FY07.

Orange County Transportation Authority (OCTA) – Safety, Operating and Revenue Policies and Procedure Development. Mr. McDermott is a senior engineer on TRC's emergency preparedness and safety program development project for the Orange County Transportation Authority (OCTA) hired TRC to conduct a review of emergency preparedness plans and documents. One object of TRC's review was to consider the consolidation of plans into a single plan that meets the requirements of the plans and directives.

TRC's project goal was to assess the existing plans, which detailed OCTA's operations and emergency response capabilities, and produce a report that summarized the findings and offered recommendations for consolidating the various documents into one integrated and comprehensive plan. Mr. McDermott assisted during the project which included four main tasks: (1) Review Existing Federal, State, and County Plans and Summarize the Findings; (2) Review the Authority's Existing Plans and Summarized the Findings; (3) Develop Recommendations for Consolidating Existing Plans into a New Plan; and (4) Develop Final Project Report

New Jersey Department of the Treasury (NJDOT) - Safety and Security Review Services. Mr. McDermott is a senior engineer for TRC's safety and security auditing project of the New Jersey Transit Newark City Subway (NJT-NCS) and the Delaware River Port Authority – Port Authority Transit Corporation (DRPA-PATCO) for the State of New Jersey Department of Transportation. The safety audits follow Federal regulation 49CFR Part 659 and are required on a triennial basis in order to assess the level of each agency's compliance to their respective approved System Safety Program Plans and Security Plans.

Mr. McDermott has assisted during TRC's safety and security review process, which involves an analysis to determine the need for any update or revision to the respective plans to ensure they comply with the State's System Safety Program Standard, State Oversight Program relevant procedural requirements and the American Public Transportation Association's (APTA) Manual for System Safety Program Plans. All safety elements are being assessed as defined within these documents to evaluate the level of implementation of the safety and security programs for the services provided by NJT-NCS and DRPA-PATCO.

SULLY MAC KEY PERSONNEL

Name	Years of Experience in Construction/Design	Areas of Responsibility
Charles J. Quinn	11	PE/PM
Joe Sullivan	15	Technician/Foreman
Kevin O'Connell	19	General Foreman
Marshall Jones	10	Technician/Foreman
Paul Difonzo	13	Technician/Foreman
Robbie Panasuk	10	Communications Foreman
Tom Hazley	20	Communications Sup.
Doug Schremp	14	Engineer/CTO

CHARLES J. QUINN

A seasoned professional with proven technical and analytical skills, CJ has successfully managed aspects all of the Company's telecommunications work for both public and private customers.

EXPERIENCE SUMMARY

Sullivan & McLaughlin Companies, Inc., Boston, MA

2000 - present

Project Engineer/Project Manager

Puget Sound Naval Shipyard Detachment for US Navy
Engineer

1994 - 2000

As a civilian Department of Defense employee, provided engineering services for all maintenance and upgrade construction of several classes of Amphibious and Fleet Command ships for the U.S. Navy. Generated engineering calculations and produced design documents in a number of CAD, CAM, and dynamic stress distribution and finite element analysis software. Served independently as an on-site technical liaison representing the design team by providing immediate engineering assistance and installation guidance during major ship alteration and drydock construction projects.

Major Projects at Sullivan & McLaughlin:

- Massport Network Modernization Upgrade
- Vandenberg Air Force Base Security
- State Street Bank
- Massachusetts Institute of Technology Broad Institute
- Massachusetts Institute of Technology Phase 3 Fiber Network
- Millennium Pharmaceuticals Wide Area Network
- Concord Municipal Fiber Network
- MBTA System-wide Maintenance and Improvement Project

EDUCATION: Worcester Polytechnic Institute, B.S., Civil Engineering

CERTIFICATIONS: Corning Certification (Design) Sumitomo Design & Installation of FutureFLEX Air Blown Fiber Cabling Systems

JOE SULLIVAN

Joe Sullivan has been one of Sullivan & McLaughlin Companies' most mobile technicians since he joined our team. Joe has primarily worked on our smaller scale service jobs over the past six years. Most recently, he has managed the execution of voice, data and security installations in Staples stores throughout Massachusetts, as well as in New York, New Jersey and Pennsylvania. Joe also led a team of technicians for various projects for Citizens Bank in Rhode Island, Vermont and New York.

EXPERIENCE SUMMARY

Sullivan & McLaughlin Companies, Inc., Boston, MA
Technician / Foreman

1997- present

Major Projects at Sullivan & McLaughlin:

- City of Boston
- Suffolk University
- University of Massachusetts, Lowell
- MCI WorldCom
- Town of Lexington
- Cingular Wireless
- New England Patriots
- Democratic National Convention
- Department of Motor Vehicles
- Children's Hospital

EDUCATION: Graduate of Marshfield High School

Associated Degree in Electronics, Wentworth Institute of Technology
IBEW Local 103

CERTIFICATIONS: Siemon, Ortronics Plus, Berk-Tek, Systimax, AMP, Hubble, Leviton, Panduit, Belden, Chatsworth

KEVIN O'CONNELL

With over 19 years of experience in the field as a technician and foreman, Kevin has served as Foreman on many of Sullivan & McLaughlin Companies projects. He is not afraid of challenges or deadlines. He managed many high profile projects for the Massachusetts Institute of Technology and Massachusetts General Hospital. Kevin led a team of technicians to meet many fast paced projects for the Commonwealth, including two dorms at University of Massachusetts, Lowell.

EXPERIENCE SUMMARY

Sullivan & McLaughlin Companies, Inc., Boston, MA
General Foreman

2004 - present

Mahon Communications, Boston, MA
Technician/Foreman

1988 – 2004

Major Projects at Sullivan & McLaughlin:

- University of Massachusetts, Lowell
- City of Boston
- Massachusetts General Hospital
- Massachusetts Institute of Technology
- Democratic National Convention
- State Street Corporation

EDUCATION

Arlington Catholic High School Graduate
IBEW, Local 103 Four Year Apprentice School

PROFESSIONAL CERTIFICATIONS

Member, IBEW, Local 103

Product Certifications: 3M, Ortronics, Berk-Tek, Panduit, Systimax Installer, Belden, Nordex,

MARSHALL JONES

With over 10 years of experience in the field as a technician and foreman, Marshall has quickly become one of Sullivan & McLaughlin's most valuable employees. Marshall has managed many projects for state and local agencies over the past five years. Marshall has also been instrumental in executing some of our most high profile, fast track projects for many of our Service Accounts. Marshall is an extremely bright and capable technician who has a special way of ensuring that projects are performed with precision over and over again.

EXPERIENCE SUMMARY

Sullivan & McLaughlin Companies, Inc., Boston, MA
Technician / Foreman

2000 - present

Major Projects at Sullivan & McLaughlin:

- Somerville Public Schools
- Citizens Bank
- Massachusetts State Police
- University of Massachusetts, Lowell
- University of Massachusetts, Dartmouth
- Department of Motor Vehicles
- State Street Bank
- Phillips Academy
- Boston Red Sox
- New England Patriots
- Boston University
- Democratic National Convention

PROFESSIONAL CERTIFICATIONS

Member, IBEW, Local 103

Product Certifications: 3M, Ortronics, Berk-Tek, Panduit, Systimax Installer, Belden, Corning, Chatsworth, AMP, Leviton

EDUCATION:

Northeastern University, B.S. in Criminal Justice, 1998

IBEW Local 103

NECA Foreman training

PAUL DIFONZO

With over 13 years in the field as a technician, foreman, and general foreman, Paul is a proven supervisor with hands-on experience and an in-depth understanding of today's communications technology. As General Foreman for Sullivan & McLaughlin's Communications Team at State Street Bank's One Lincoln Street Headquarters project, Paul supervised the installation of over 2.5 million feet of cable, 4,000 voice/data locations, and 28 telecommunications closets with associated risers.

EXPERIENCE SUMMARY

Sullivan & McLaughlin Companies, Inc., Boston, MA
Foreman/General Foreman

1994 - present

Major Projects at Sullivan & McLaughlin:

- University of Lowell
- Massachusetts Bay Transportation Authority
- State Street Bank Corporate Headquarters
- Boston Public Schools
- Citizens Bank Headquarters
- Millennium Pharmaceuticals
- Democratic National Convention
- Massachusetts Port Authority
- Beth Israel Hospital
- Massachusetts Port Authority
- Children's Hospital
- Bingham Dana & Gould
- Harvard Institute of Medicine

Mass. Electric Company

1992 - 1994

Telecom Technician

- State Street Bank

EDUCATION: IBEW Local 103
ConEst Estimating School
NECA Foreman training

CERTIFICATIONS: Siemon, Ortronics Plus, Berk-Tek, Systimax, AMP, Hubble, Leviton, Panduit, Belden

ROBBIE PANASUK

Robbie brings over ten years of experience working exclusively with Fiber Optic Cable. He has fusion and ODTR experience for all manufacturers and types of fiber optic cable. He has installed underground fiber optic systems, as well as aerial systems. Although fiber optics is Robbie's specialty, he has not lost any knowledge or capabilities with installing copper networks as well. Robbie attended ten hour OSHA Safety Course and is CPR certified. His talent is tremendous and he has served as an Instructor for IBEW Local 103 for the past four years.

EXPERIENCE SUMMARY

Sullivan & McLaughlin Companies, Inc., Boston, MA
Communications Foreman

2000 - present

Major Projects at Sullivan & McLaughlin:

- Massachusetts Bay Transportation Authority: Fiber Optic Audit & Upgrade
- Massachusetts Port Authority: Wide Area Expansion
- Massachusetts Institute Of Technology: OSP Installation to over 100 buildings
- Town of Concord
- Democratic National Convention
- Millennium Pharmaceuticals Wide Area Network:
- Suffolk University Metromedia Fiber Networks: Construction of private Fiber Network
- Level (3) Communications: OSP Construction, Splicing, & Testing
- Abovenet Communications
- City of Boston: OSP Construction, Splicing & Testing

PROFESSIONAL CERTIFICATIONS

IBEW Local 103 JATC, Boston, MA

Instructor, 2004 - present

4 Year Communications Apprenticeship School, 2000

Hanover High School, Hanover, MA

Graduated in 1996

Certifications: Corning Certification (Installation), 3M, AMP, Belden, Ortronics Technician, Panduit, Hubble, Siemens, and SumitomoFutureFLEX Air Blown Fiber Installation

SECURITY CLEARANCES

Massport Badge, Logan Airport, 2003 - present

TOM HAZLEY

With over 20 years of experience in the field as a technician, foreman, general foreman and superintendent, Tom has managed some of Sullivan & McLaughlin's most challenging and complex communications projects and consistently proven his ability to complete jobs on time and within budget. He has managed many of the state's large construction projects over the past five years and achieved great success in each of his projects.

EXPERIENCE SUMMARY

Sullivan & McLaughlin Companies, Inc., Boston, MA
Communications Superintendent

1992 - present

Major Projects:

- MBTA 10 Park Plaza Fiber Optic Backbone
- Town of Concord Outside Plant
- Massachusetts Port Authority
- University of Massachusetts, Lowell
- Democratic National Convention
- Town of Hull Public Schools
- City of Cambridge
- Raytheon Outside Plant
- Massachusetts Institute of Technology - Stata Center
- Massachusetts Institute of Technology - outside plant private fiber network
- EMC Corp – outside plant private fiber network
- Suffolk University – outside plant private fiber network

Massachusetts Electric Company
Foreman

Professional Certifications

Licensed D-Type Telecommunications Technician

Licensed Electrician - Massachusetts

Member, Local IBEW-103

Certifications: Systimax, AMP, Ortronics Plus, Hubble, Panduit, Siemons, and NordX/CDT, Belden, Sumitomo FutureFLEX Air Blown Fiber Installation

Doug Schremp

One of the leading network engineers in the industry with over 14 years experience in the Network Design and Network Security disciplines. He has extensive experience designing and building Internet Service Provider and Enterprise Networks and has completed significant projects at all 7 layers of the ISO models. In addition, Doug has designed highly secure and continuous available networks for major commercial and State government institutions.

EXPERIENCE SUMMARY

Sullivan & McLaughlin Companies, Inc., Boston, MA

2004 - present

Engineer/CTO

Predictive Systems

2000 - 2004

Principal Network Engineer

Led the engineering team in multiple projects; redesigned the Operator Services network for an RBOC to upgrade capabilities and implement standards. Managed integration of five separate regional networks into a single national platform. Designed and deployed a VoIP monitoring and management system for a major telecom. Developed new network capacity planning models and systems for a large multi-national ISP backbone network. Provided network performance triage and testing procedures for a major banks Internet banking products.

Unisys

1997 - 2000

Architect Director

Directed Network Security Team for Unisys Global Services. Developed standard services and delivery mechanisms and led development of security monitoring services for Unisys customer base. Additionally, led the Network Consulting team for Unisys Global Customer Services providing the network management and network security solutions.

Major Projects at Sullivan & McLaughlin:

- Umass Lowell
- MassPort
- Criminal History Board
- City of Boston
- Boston Convention and Expo Center

EDUCATION: Swarthmore College, B.S., Engineering, BA Economics 1991
Brown University, MSEE, 1993

CERTIFICATIONS: Cisco CCIE # 4781, CISCO Certified Instructor #9494

Significant Expertise: BGP, OSPF, EIGRP, Routers, Firewalls, Intrusion Detection/Prevention Systems, 802.1x, NAC, Enterprise Security Strategies, Security Operational Processes, LDAP, Unix, RADIUS, Vulnerability Lifecycle Analysis and Management

JF WHITE/SONET ELECTRICAL

Name	Years of Experience in Construction/Design	Areas of Responsibility
Michael S. Rocca	18	PM
Andrea Burke	15	Technician/Foreman

Michael S. Rocca**EDUCATION**

Northeast Regional Vocational High School June 1973

Electrical Program

EMPLOYMENT

2004 – Present

J.F. White Contracting Company, Framingham, MA

Sonet Division: Project Manager/ Estimator

Projects:

South Station Finishes

MBTA Orange Line Fiber Optics for Signal & Communication

Saks 5th Ave Renovation Prudential Center

Boston BPD 25 Phase 1 & 2

1989 – 2004

Tricon Electrical Corp, Wakefield, MA

President

Projects:

Co-Gen # 1 Primary Voltage & Control Wyeth Biopharma

Admissions Center, Brandeis University

Abbott Hall, Phillips Academy

US Datacenters, Marlboro, MA

PROFESSIONAL**AFFILIATIONS**

Massachusetts Masters Electrician Lic# A17300

Massachusetts Journeyman Electrician Lic. # E22701

New Hampshire Masters Electrician Lic. # 8498

Maine Masters Electrician Lic. # MS60018357

AT&T Certified Fiber Optic Splicer

ANDREA BURKE

Education

Concrete Technician License (MCIB) # CT PR 003563 (renewal required 2008)
Certified Welding Inspector, CWI #95100441 (renewed 2007)
Northeastern University, Boston, Massachusetts-B.E.T. in
Mechanical Engineering, 1983
Northeastern University, Boston, Massachusetts-A.S in
Mechanical Engineering, 1981
University of Massachusetts, Amherst, Massachusetts-B.A. 1974

Employment

1994- Present J. F. White Contracting Company,
Framingham, MA

2002-Present QA/QC Director responsible for developing and overseeing the implementation of J. F. White's Quality Control Program on all projects.

1997-2002 Ms. Burke served as Director/Inspector, QAQC, Central Artery project C15A1. Her duties involve complete oversight and maintenance of records for all work-in-progress on a project of \$380 million in value. Steel and concrete placement will be critical in that the elevated expressway must be maintained to traffic at all times during a 7 year, multi-phased construction process. Bechtel/Parsons Brinkerhoff apply the most rigid standards known to the heavy construction industry to this critical work, and Ms. Burke is an approved and beneficial advisor in her capacity as manager.

1994-1997 For the MWRA, Ms. Burke performed her QAQC duties on both the Thermal Power Plant and the Reactor Batteries A & B on Deer Island. Here she was responsible for both the implementation and monitoring of J.F. White Contracting Co's. Quality Control program, as well as all Subcontractors on both projects. She was the inspector on all the required mechanical, civil, structural and welding work. Her records were audited regularly, and her follow-through was never less than ambitious.