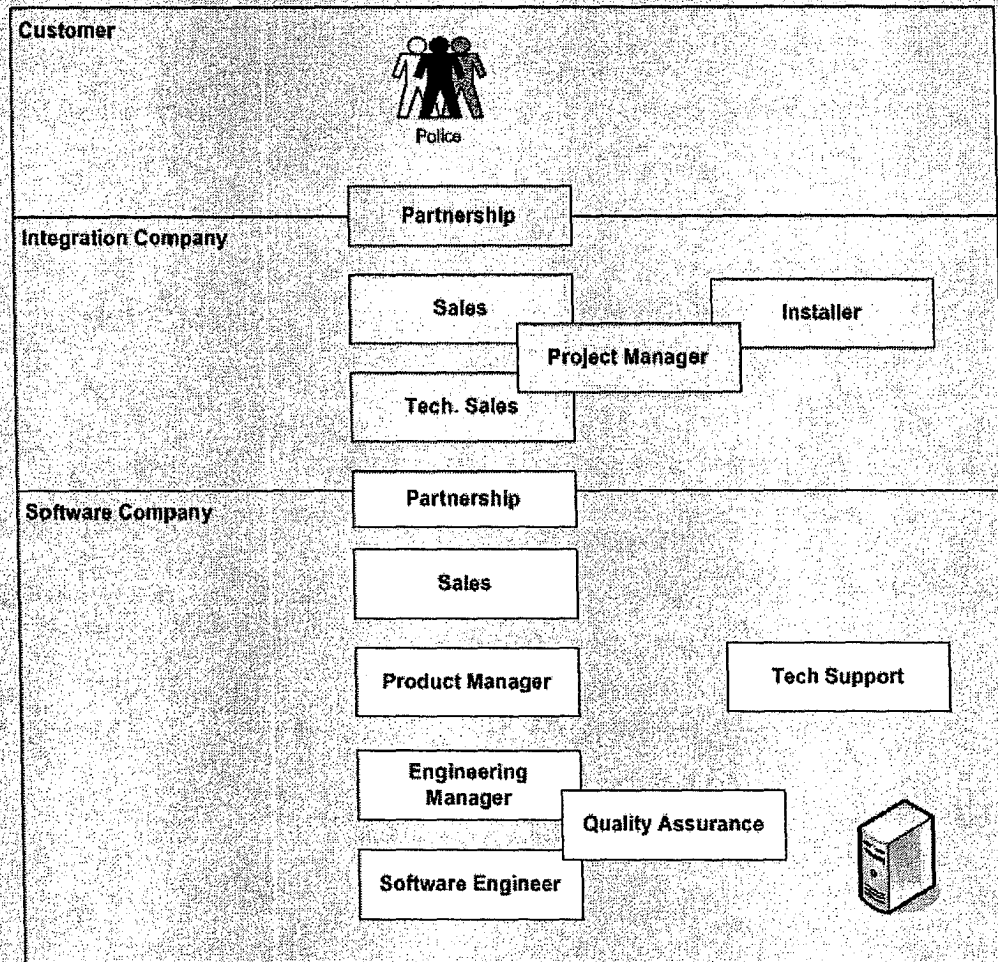


# Engineering Approach

## Smiths Detection

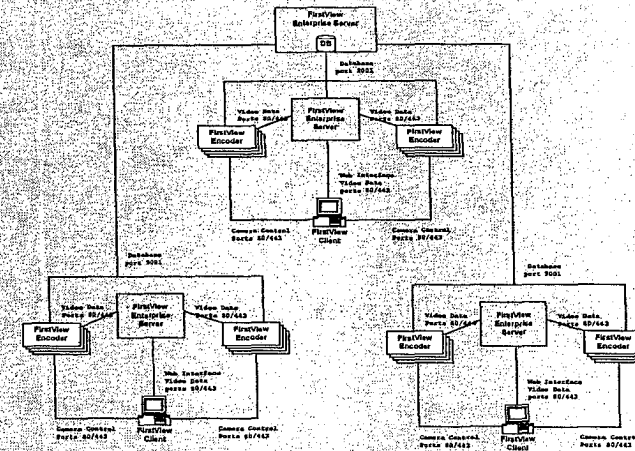
- Direct to Government integrators
- Budget driven
- Retail Software Company
- Long product cycles  
Not project driven
- Offshore development



# Expanding the System

## New Feature Development

- Use the best of existing technology
- Create an expandable platform
- Constantly refine the platform based on real customer feedback



# Server Collective for Expansion

## A Distribution of Servers

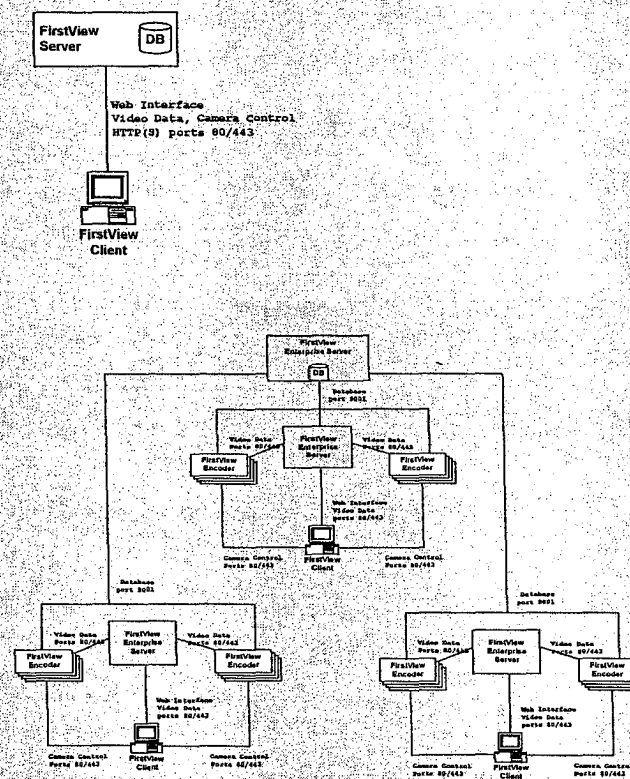
- Can be a single server or multiple
- WMATA has ~60 servers

## Centralized Authentication

- Currently backed by DB

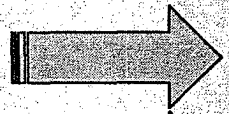
## Database as Resource Registry

- Registers Server and the 'Units'
- Currently also Unit Configuration
- Image and Recordings are Indexed in DB  
DB Data is stored locally





## Service & Support



User and Administrator Training and System Documentation



Online Support through FirstView system



Will provide rapid support with our offices located in Rhode Island, as well as support from our new office located in Boston



Toll Free Smiths Detection 24 Hour Support

**Level 1:** Support Engineer phone support

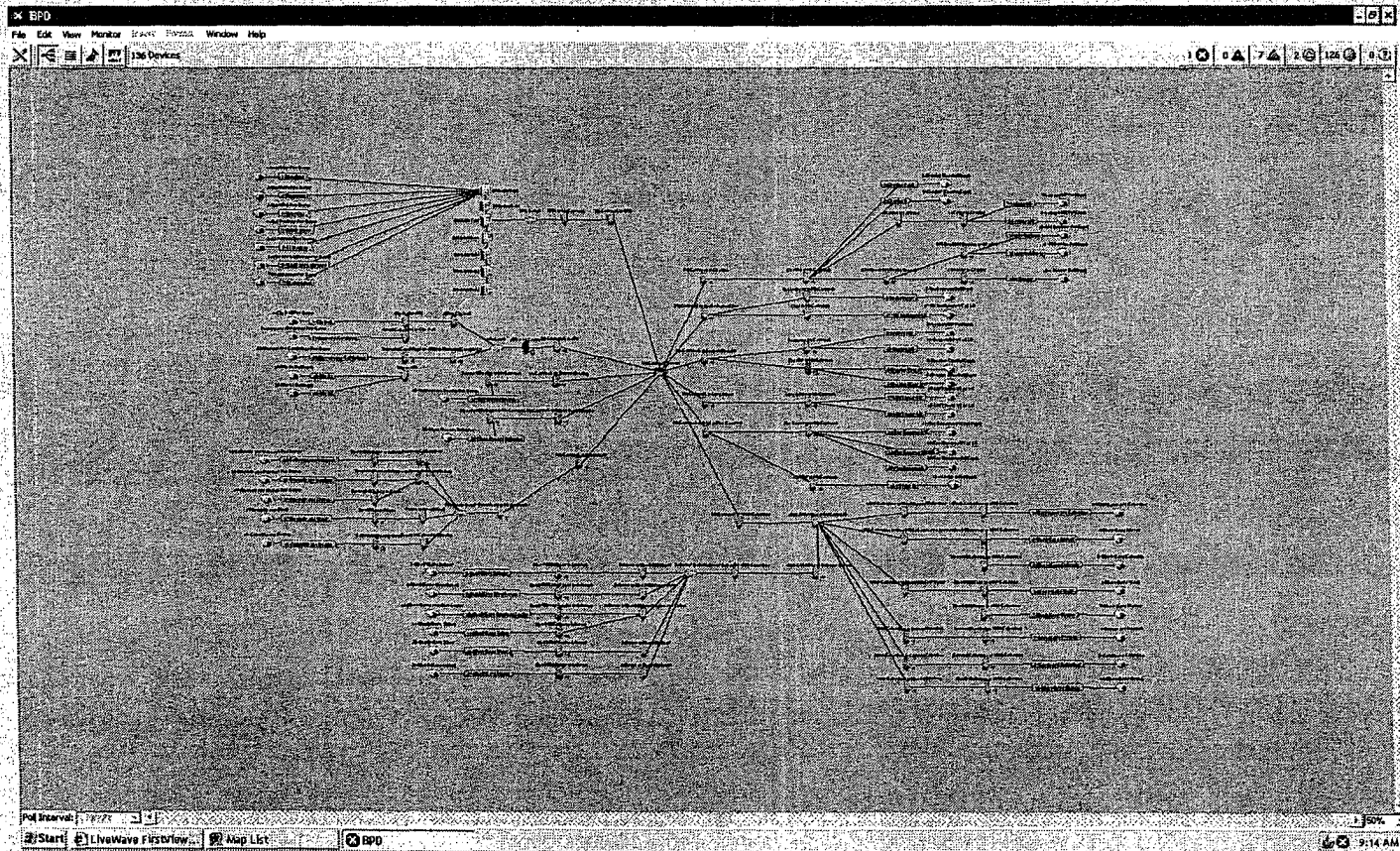
**Level 2:** Support Engineer provides service through network access

**Level 3:** Support Engineers escalates to field engineer

**Level 4:** Program Manager contacted to coordinate on-site support

# Service & Support

- Real-time system monitoring will be available to the Customer and Smiths Detection
- System monitoring capable of providing visual, email, and mobile alerts to users



smiths detection

## Summary

- **Experienced Team Providing Best of Breed Technologies**
- **Offering Fully Integrated Security Solutions that are:**
  - INTEROPERABLE**
    - Web enabled – no proprietary software required to view the system
    - Configurable hierarchy of users, roles & permissions for interoperability
  - SCALABLE**
    - Entirely IP-based networked system
    - Distributed server architecture for maximum flexibility and scalability
  - SECURE**
    - Secure local or remote management of all assets
    - SSL with AES encryption up to 256 bit
- **System Training Courses**
- **Comprehensive Maintenance and Support Packages**

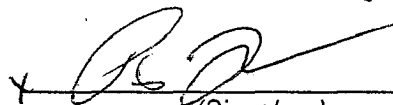
Critical Infrastructure Monitoring System  
PRICE PROPOSAL SHEET

Complete all pages of this document in ink. An authorized representative of the Proposer must sign this form in ink.

- 1. Having carefully examined the Contract Documents entitled Critical Infrastructure Monitoring System Project, the undersigned offers to furnish all the labor, material and other services necessary to provide the Goods and Services required by and in strict accordance with these Documents and the implied intent thereof, for the rates (price) listed on the following pages.
- 2. Taxes: This proposal does not include State of Massachusetts or local sales tax.
- 3. Withdrawal: This proposal will not be withdrawn within ninety (90) days after the actual date of the opening thereof.
- 4. Proposer agrees, if this proposal is accepted, to enter into a Contract with the City in the form of the Contract contained in the RFP Documents and to begin the work ten (10) days after date of notice of award.

DATED this 25<sup>th</sup> day of APRIL, 2007.

PROPOSER: Smiths Detection - Live Wave

BY:  Peter Mather  
(Signature) (Print Name of Signer)

PRINT NAME: Smiths Detection - Live Wave

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

PHONE (401) 848-7678 Zip Code: 02847

FAX number (if available): (401) 846-7077



**Critical Infrastructure Monitoring System**

**PRICE PROPOSAL SHEET**

1. Detailed cost breakdown information with this proposal shall include unit pricing and extensions. In case of discrepancy between the two, the unit price(s) shall govern.
2. Unit price(s) shall include freight and delivery. Freight/delivery shall not be an "add-on" cost.
3. Prices shall not include State of Massachusetts sales or local retail tax.
4. Payment Terms: Prompt Payment Discount \_\_\_% \_\_\_ days (not less than 30 days); Net \_\_\_ days (not less than 30 days).
5. Total System Cost, which includes all design, equipment and services for a turnkey system that is fully operational, should be reflected in the table below.

Item	Costs
A. Digital Video Recording System (DVRS) (attach detailed breakdown to proposal)	\$ <u>1,080,246.30</u>
B. Video Transmission Equipment (attach detailed breakdown to proposal)	\$ <u>N/A</u>
C. Wireless Local Area Network (WLAN) (attach detailed breakdown to proposal)	\$ <u>2,095,725.45</u>
D. Other Costs (attach detailed breakdown to proposal)	\$ <u>166,025.00</u>
E. Total System Cost (A through D above)	\$ <u>3,341,996.75 *</u>

\*Use this amount to compute amount for Proposal Guarantee and Performance Bond/Letter of Credit.

Proposal Guarantee = Total System Cost X 5%

Performance Bond/Letter of Credit = Total System Cost X 100%



**Critical Infrastructure Monitoring System**

**PRICE PROPOSAL SHEET**

6. Option Pricing: The City reserves the right to exercise its option at its discretion for up to six (6) months after Award of Contract at the prices stated. See Section IV for more information on options.

#	Item	Cost
1	Priority Two Cameras: Furnish and install an additional 34 cameras and associated hardware, software, and design services in addition to that required for the baseline CIMS.	\$ <u>1,516,741.05</u>
2	Priority Three Cameras: Furnish and install an additional 36 cameras and associated hardware, software, and design services in addition to that required for the baseline CIMS.	\$ <u>1,486,913.19</u>
3	Boston 30 Cameras: Furnish and install an additional 30 cameras and associated hardware, software, and design services in addition to that required for the baseline CIMS.	\$ <u>1,079,431.11</u>
4	Additional Support: On-site for eight hours per month for 6 months for each of the Project's nine jurisdictions.	\$ <u>6,248.40</u>
5	WLAN upgrade to Redundant T opology: create transmission path redundancy and increase transmission rate to 100Mbps.	\$ <u>426,708.00</u>
6	Hardware and Software Extended Service: Years 2, 3, 4 & 5 services past the initial year warranty. Each year may be individually optioned by the City at the price indicated.	Year 2: \$ <u>216,934.52</u> Year 3: \$ <u>237,195.08</u> Year 4: \$ <u>250,375.36</u> Year 5: \$ <u>263,555.65</u>
7	WLAN System Admin: one-year hardware and software system administration for all nine jurisdictions within the CIMS project.	\$ <u>63,000.00</u>

**Critical Infrastructure Monitoring System**

**PRICE PROPOSAL SHEET**

7. Unit Pricing: The City reserves the right to exercise its option at any time during the installation phase for the addition or deletion of materials at the below calculated costs:

Item	Costs
QTY 1 Camera - PTZ, with lens, mount, sun shield, fan, heater, UPS, encoder	\$ <u>2,490.80</u>
QTY 1 Wireless Point-to-Point (P2P) Radio pair	\$ <u>—</u>
QTY 1 Wireless Point-to-Multipoint (P2MP) Radio pair	\$ <u>N/A</u>
QTY 1 Network Data Switch	\$ <u>845.00</u>
QTY 1 Network Video Recorder (16 Channel)	\$ <u>13,900.81</u>
QTY 1 One TB of Video Storage compatible with NVR	\$ <u>N/A</u>

\* Back bone Licensed Links

21,093.80

UNLicensed Links

4,282.20

Security Sensitive Information - FOR OFFICIAL USE ONLY

Date: April 27, 2007 Quote: MOE#65

To: Adam Wehrenberg  
 Company Mayor's Office of Emergency Preparedness  
 Address Boston City Hall Room 603  
 Address Boston, MA 02201  
 Tel (617) 590-9800  
 Email adam.wehrenberg@cityofboston.gov

Project  
 Critical Infrastructure Monitoring  
 System (CIMS)  
 65 Cameras

I: LiveWave Video Management Systems

Part #	Qty	Item	Description	Rate	Total
3008.00	6	FV-ENT	Enterprise Management Server (1 per location)	\$6,253.45	37,520.70
4008.45	1	FV-NVR-8-4.5T	8 channel, network recorder, 2U rackmount, 4.5TB storage	\$10,980.91	10,980.91
4016.45	7	FV-NVR-16-4.5T	16 channel, network recorder, 2U rackmount, 4.5TB storage	\$13,900.81	97,305.64
7001.00	6	FV-CWS	Client Workstation with Dual LCD Monitors	\$4,345.09	26,070.53
8001.00	6	FV-JS	Joystick with hardware/software drivers	\$900.30	5,401.81
				<b>Sub Total</b>	<b>\$ 177,279.60</b>

II: Camera Equipment

Part #	Qty	Item	Description	Rate	Total
Spectra	65		Bosch IP Camera	\$2,340.00	152,100.00
BBS-PCA-GY	65		Camera Mounting Hardware	\$143.00	9,295.00
	65		NEMA Enclosure	\$260.00	16,900.00
	65		UPS	\$150.80	9,802.00
				<b>Shipping/handling Included in all prices</b>	
				<b>Sub Total</b>	<b>\$ 188,097.00</b>

III: Wireless Hardware

Part #	Qty	Item	Description	Rate	Total
Backbone					
TBD	22		DragonWave Airpair 50	\$21,093.80	\$ 464,063.60
TBD	22		Manual Reboot System	\$507.00	\$ 11,154.00
TBD	22		Radio Mount	\$845.00	\$ 18,590.00
TBD	22		Grounding	\$540.80	\$ 11,897.60
TBD	22		Rack Mount	\$676.00	\$ 14,872.00
TBD	22		UPS Power Supply	\$3,172.00	\$ 69,784.00
TBD	22		Switch	\$845.00	\$ 18,590.00
TBD	7		Router	\$4,758.00	\$ 33,306.00
TBD	22		Miscellaneous	\$676.00	\$ 14,872.00
Site Devices Pole Mount					
TBD	35		Gemini Lite or similar (TBD on Site Survey)	\$4,282.20	\$ 149,877.00
TBD	35		Electrical hardware	\$44.20	\$ 1,547.00
TBD	35		Miscellaneous	\$253.50	\$ 8,872.50
Site Devices Roof Mount					
TBD	20		Gemini Lite or similar (TBD on Site Survey)	\$4,282.20	\$ 85,644.00
TBD	20		Radio Mount	\$845.00	\$ 16,900.00
TBD	20		Grounding	\$280.80	\$ 5,616.00
TBD	20		Electrical hardware	\$1,014.00	\$ 20,280.00
TBD	20		Miscellaneous	\$263.90	\$ 5,278.00
Site to Hub Devices					
TBD	55		Gemini Lite or similar (TBD on Site Survey)	\$4,282.20	\$ 235,521.00
TBD	15		Manual Reboot System	\$507.00	\$ 507.00
TBD	23		Radio Mount	\$845.00	\$ 845.00
TBD	23		Grounding	\$280.80	\$ 280.80
TBD	55		Lighting arrester	\$175.50	\$ 175.50
TBD	23		Rack Mount, Conduit and Power	\$1,267.50	\$ 1,267.50
TBD	55		Miscellaneous	\$263.90	\$ 263.90
				<b>Sub Total</b>	<b>\$ 1,190,004.40</b>

7800K

IV: Additional Equipment

Part #	Qty	Item	Description	Rate	Total
TBD	6		Plasma/LCD Display (42/46")	\$3,120.00	18,720.00
INTMP	9		Intermapper SNMP Diagnostic Software w/remote access	\$1,950.00	17,550.00
Samsung	6		Extra 20" monitor per site	\$323.70	1,942.20
TBD	6		Display mount	357.50	2,145.00
APC	8		Rackmount UPS	1,950.00	15,600.00
				<b>Sub Total</b>	<b>\$ 55,957.20</b>

**V:Engineering, Integration & Installation**

Part #	Qty	Item	Description	Rate	Total
<b>SD-LiveWave Services</b>					
9001.00	540	LW-PM	Project Management (per hour)	107.05	57,807.00
9001.00	110	LW-INT	Installation (per hour)	107.05	11,775.50
9001.00	120	LW-TRNG	Training (per hour)	107.05	12,846.00
9002.00	400	LW-ENG	Engineering & Integration (per hour)	158.44	63,376.00
9003.00	540	LW-DEV	System Configuration	107.05	57,807.00
<b>General Contractor Site Installation</b>					
1				\$442,975.00	442,975.00
<b>StoneCrop Technologies</b>					
<b>Pole Mount Labor Detail</b>					
			Senior Network Engineer	\$253.50	-
130			Project Manager, Mobilization	\$256.10	33,293.00
130			Wireless Technician, Mobilization	\$169.00	21,970.00
130			Project Manager, On Site	\$256.10	33,293.00
234			Wireless Technicians, On Site	\$169.00	39,546.00
116			Electrician, On Site	\$136.50	15,834.00
156			Police Detail, On Site	\$65.00	10,140.00
40			Network Monitor Technician	\$117.00	4,680.00
<b>Roof Mount Labor Detail</b>					
56			Senior Network Engineer	\$253.50	14,196.00
160			Project Manager, Mobilization	\$256.10	40,976.00
160			Wireless Technician, Mobilization	\$169.00	27,040.00
78			Project Manager, On Site	\$256.10	19,975.80
208			Wireless Technicians, On Site	\$169.00	35,152.00
52			Tower Climbers, On Site	\$162.50	8,450.00
78			Electrician, On Site	\$136.50	10,647.00
13			Network Monitor Technician	\$117.00	1,521.00
<b>Backbone Labor Detail</b>					
132			Senior Network Engineer	\$253.50	33,462.00
176			Project Manager, Mobilization	\$256.10	45,073.60
154			Wireless Technician, Mobilization	\$169.00	26,026.00
44			Project Manager, On Site	\$256.10	11,268.40
352			Wireless Technicians, On Site	\$169.00	59,488.00
66			Tower Climbers, On Site	\$162.50	10,725.00
836			Electrician, On Site	\$136.50	114,114.00
88			Network Monitor Technician	\$117.00	10,296.00
<b>Hub Labor Detail</b>					
65			Senior Network Engineer	\$253.50	16,477.50
32.5			Project Manager, Mobilization	\$256.10	8,323.25
130			Wireless Technician, Mobilization	\$169.00	21,970.00
260			Project Manager, On Site	\$256.10	66,586.00
650			Wireless Technicians, On Site	\$169.00	109,850.00
130			Tower Climbers, On Site	\$162.50	21,125.00
195			Electrician, On Site	\$136.50	26,617.50
65			Network Monitor Technician	\$117.00	7,605.00
<b>TRC</b>					
1				\$166,025.00	166,025.00
<b>Travel Allowance</b>					
56		Per diem		46.00	2,576.00
150		Mileage		65.00	9,750.00
				<b>Sub Total</b>	<b>\$ 1,730,658.55</b>

**Totals**

LiveWave Video Management Systems	\$	177,279.60
Camera Equipment	\$	188,097.00
Wireless Hardware	\$	1,190,004.40
Additional Equipment	\$	55,957.20
Engineering, Integration & Installation	\$	1,730,658.55
<b>Total</b>	<b>\$</b>	<b>3,341,996.75</b>

**Notes:**

Prices do not include state sales tax, miscellaneous fees or import/export duties of any kind.  
 Payment terms are Net 30 days unless otherwise indicated.  
 Smiths Detection reserves the right to modify any terms and/or conditions stated in the above quotation.  
 Documentation of tax-exempt status is required.  
 State sales tax will be charged unless said documentation is provided.  
 Quote subject to Smiths Detection-LiveWave Terms & Conditions

**Prepared By:**

Doug Tuthill  
 Director of Operations  
 Smiths Detection-LiveWave  
 401.932.5045  
 Email: [doug.tuthill@smithsdetection.com](mailto:doug.tuthill@smithsdetection.com)  
 Web Address: [www.smithsdetection-livewave.com](http://www.smithsdetection-livewave.com)



Security Sensitive Information - FOR OFFICIAL USE ONLY

Date: April 27, 2007 Quote: MOEP34

To: Adam Wehrenberg  
Company: Mayor's Office of Emergency Preparedness  
Address: Boston City Hall Room 603  
Address: Boston, MA 02201  
Tel: (617) 590-9800  
Email: adam.wehrenberg@cityofboston.gov

Project  
Critical Infrastructure Monitoring  
System (CIMS)  
Option 1 Priority Group 2  
34 Cameras

I: LiveWave Video Management Systems

Part #	Qty	Item	Description	Rate	Total
4008.45	8	FV-NVR-8-4.5T	8 channel, network recorder, 2U rackmont, 4.5TB storage	\$10,980.91	87,847.25
				<b>Sub Total \$</b>	<b>87,847.25</b>

II: Camera Equipment

Part #	Qty	Item	Description	Rate	Total
Spectra	34		Bosch IP Camera	\$2,340.00	79,560.00
BBS-PCA-GY	34		Camera Mounting Hardware	\$143.00	4,862.00
	34		NEMA Enclosure	\$260.00	8,840.00
	34		UPS	\$150.80	5,127.20
				<b>Sub Total \$</b>	<b>98,389.20</b>

Shipping/handling included in all prices

III: Wireless Hardware

Part #	Qty	Item	Description	Rate	Total
<b>Backbone</b>					
TBD	1		DragonWave Airpair 50	\$21,093.80	\$ 21,093.80
TBD	1		Manual Reboot System	\$507.00	\$ 507.00
TBD	1		Radio Mount	\$845.00	\$ 845.00
TBD	1		Grounding	\$540.80	\$ 540.80
TBD	1		Rack Mount	\$676.00	\$ 676.00
TBD	1		UPS Power Supply	\$3,172.00	\$ 3,172.00
TBD	1		Switch	\$845.00	\$ 845.00
TBD	1		Router	\$4,758.00	\$ 4,758.00
TBD	1		Miscellaneous	\$676.00	\$ 676.00
<b>Site Devices Pole Mount</b>					
TBD	21		Gemini Lite or similar (TBD on Site Survey)	\$4,282.20	\$ 89,926.20
TBD	21		Electrical hardware	\$44.20	\$ 928.20
TBD	21		Miscellaneous	\$253.50	\$ 5,323.50
<b>Site Devices Roof Mount</b>					
TBD	10		Gemini Lite or similar (TBD on Site Survey)	\$4,282.20	\$ 42,822.00
TBD	10		Radio Mount	\$845.00	\$ 8,450.00
TBD	10		Grounding	\$280.80	\$ 2,808.00
TBD	10		Electrical hardware	\$1,014.00	\$ 10,140.00
TBD	10		Miscellaneous	\$263.90	\$ 2,639.00
<b>Site to Hub Devices</b>					
TBD	31		Gemini Lite or similar (TBD on Site Survey)	\$4,282.20	\$ 132,748.20
TBD	8		Manual Reboot System	\$507.00	\$ 4,056.00
TBD	12		Radio Mount	\$845.00	\$ 10,140.00
TBD	12		Grounding	\$280.80	\$ 3,369.60
TBD	31		Lighting arrester	\$175.50	\$ 5,440.50
TBD	12		Rack Mont, Conduit and Power	\$1,267.50	\$ 15,210.00
TBD	31		Miscellaneous	\$263.90	\$ 8,180.90
				<b>Sub Total \$</b>	<b>375,295.70</b>

IV: Additional Equipment

Part #	Qty	Item	Description	Rate	Total
APC	8		Rackmount UPS	1,950.00	15,600.00
				<b>Sub Total \$</b>	<b>15,600.00</b>

V: Engineering, Integration & Installation

Part #	Qty	Item	Description	Rate	Total
<b>SD-LiveWave Services</b>					
9001.00	540	LW-PM	Project Management (per hour)	107.05	57,807.00
9001.00	120	LW-INT	Installation (per hour)	107.05	12,846.00
9001.00	120	LW-TRNG	Training (per hour)	107.05	12,846.00
9002.00	410	LW-ENG	Engineering & Integration (per hour)	158.44	64,960.40
9003.00	540	LW-DEV	System Configuration	107.05	57,807.00

General Contractor Site Installation

1		\$231,710.00	231,710.00
	<u>StoneCrop Technologies</u>		
	<b>Pole Mount Labor Detail</b>		
21	Senior Network Engineer	\$253.50	5,323.50
63	Project Manager, Mobilization	\$256.10	16,134.30
63	Wireless Technician, Mobilization	\$169.00	10,647.00
63	Project Manager, On Site	\$256.10	16,134.30
126	Wireless Technicians, On Site	\$169.00	21,294.00
60	Electrician, On Site	\$136.50	8,190.00
84	Police Detail, On Site	\$65.00	5,460.00
20	Network Monitor Technician	\$117.00	2,340.00
	<b>Roof Mount Labor Detail</b>		
26	Senior Network Engineer	\$253.50	6,591.00
39	Project Manager, Mobilization	\$256.10	9,987.90
39	Wireless Technician, Mobilization	\$169.00	6,591.00
48	Project Manager, On Site	\$256.10	12,292.80
104	Wireless Technicians, On Site	\$169.00	17,576.00
30	Tower Climbers, On Site	\$162.50	4,875.00
39	Electrician, On Site	\$136.50	5,323.50
11	Network Monitor Technician	\$117.00	1,287.00
	<b>Backbone Labor Detail</b>		
16	Senior Network Engineer	\$253.50	4,056.00
16	Project Manager, Mobilization	\$256.10	4,097.60
16	Wireless Technician, Mobilization	\$169.00	2,704.00
16	Project Manager, On Site	\$256.10	4,097.60
14	Wireless Technicians, On Site	\$169.00	2,366.00
16	Tower Climbers, On Site	\$162.50	2,600.00
24	Electrician, On Site	\$136.50	3,276.00
8	Network Monitor Technician	\$117.00	936.00
	<b>Hub Labor Detail</b>		
68	Senior Network Engineer	\$253.50	17,238.00
24	Project Manager, Mobilization	\$256.10	6,146.40
68	Wireless Technician, Mobilization	\$169.00	11,492.00
136	Project Manager, On Site	\$256.10	34,829.60
340	Wireless Technicians, On Site	\$169.00	57,460.00
68	Tower Climbers, On Site	\$162.50	11,050.00
102	Electrician, On Site	\$136.50	13,923.00
68	Network Monitor Technician	\$117.00	7,956.00
	<b>TRC</b>		
1		\$166,025.00	166,025.00
	<b>Travel Allowance</b>		
12	Per diem	46.00	552.00
12	Mileage	65.00	780.00
		<b>Sub Total \$</b>	<b>939,608.90</b>

<b>Totals</b>	
---------------	--

	\$	
LiveWave Video Management Systems	\$	87,847.25
Camera Equipment	\$	98,389.20
Wireless Hardware	\$	375,295.70
Additional Equipment	\$	15,600.00
Engineering, Integration & Installation	\$	939,608.90
<b>Total:</b>		<b>\$ 1,516,741.05</b>

**Notes:**  
 Prices do not include state sales tax, miscellaneous fees or import/export duties of any kind.  
 Payment terms are Net 30 days unless otherwise indicated.  
 Smiths Detection reserves the right to modify any terms and/or conditions stated in the above quotation.  
 Documentation of tax-exempt status is required.  
 State sales tax will be charged unless said documentation is provided.  
 Quote subject to Smiths Detection-LiveWave Terms & Conditions

**Prepared By:**  
 Doug Tuthill  
 Director of Operations  
 Smiths Detection-LiveWave  
 401.932.5045  
 Email: [doug.tuthill@smithsdetection.com](mailto:doug.tuthill@smithsdetection.com)  
 Web Address: [www.smithsdetection-livewave.com](http://www.smithsdetection-livewave.com)

**Security Sensitive Information - FOR OFFICIAL USE ONLY**

Date: April 27, 2007 Quote: MOEP36

To: Adam Wehrenberg  
Company: Mayor's Office of Emergency Preparedness  
Address: Boston City Hall Room 603  
Address: Boston, MA 02201  
Tel: (617) 590-9800  
Email: adam.wehrenberg@cityofboston.gov

**Project**  
Critical Infrastructure Monitoring System (CIMS)  
Option 2 Priority Group 3  
36 Cameras

**I: LiveWave Video Management Systems**

Part #	Qty	Item	Description	Rate	Total
4008.45	6	FV-NVR-8-4.5T	8 channel, network recorder, 2U rackmont, 4.5TB storage	\$10,980.91	65,885.44
				<b>Sub Total \$</b>	<b>65,885.44</b>

**II: Camera Equipment**

Part #	Qty	Item	Description	Rate	Total
Spectra	36		Bosch IP Camera	\$2,340.00	84,240.00
BBS-PCA-GY	36		Camera Mounting Hardware	\$143.00	5,148.00
	36		NEMA Enclosure	\$260.00	9,360.00
	36		UPS	\$150.80	5,428.80
				<b>Shipping/handling included in all prices</b>	
				<b>Sub Total \$</b>	<b>104,176.80</b>

**III: Wireless Hardware**

Part #	Qty	Item	Description	Rate	Total
<b>Backbone</b>					
TBD	1		DragonWave Airpair 50	\$21,093.80	\$ 21,093.80
TBD	1		Manual Reboot System	\$507.00	\$ 507.00
TBD	1		Radio Mount	\$845.00	\$ 845.00
TBD	1		Grounding	\$540.80	\$ 540.80
TBD	1		Rack Mount	\$676.00	\$ 676.00
TBD	1		UPS Power Supply	\$3,172.00	\$ 3,172.00
TBD	1		Switch	\$845.00	\$ 845.00
TBD	1		Router	\$4,758.00	\$ 4,758.00
TBD	1		Miscellaneous	\$676.00	\$ 676.00
<b>Site Devices Pole Mount</b>					
TBD	22		Gemini Lite or similar (TBD on Site Survey)	\$4,282.20	\$ 94,208.40
TBD	22		Electrical hardware	\$44.20	\$ 972.40
TBD	22		Miscellaneous	\$253.50	\$ 5,577.00
<b>Site Devices Roof Mount</b>					
TBD	8		Gemini Lite or similar (TBD on Site Survey)	\$4,282.20	\$ 34,257.60
TBD	8		Radio Mount	\$845.00	\$ 6,760.00
TBD	8		Grounding	\$280.80	\$ 2,246.40
TBD	8		Electrical hardware	\$1,014.00	\$ 8,112.00
TBD	8		Miscellaneous	\$263.90	\$ 2,111.20
<b>Site to Hub Devices</b>					
TBD	30		Gemini Lite or similar (TBD on Site Survey)	\$4,282.20	\$ 128,466.00
TBD	9		Manual Reboot System	\$507.00	\$ 4,563.00
TBD	13		Radio Mount	\$845.00	\$ 10,985.00
TBD	13		Grounding	\$280.80	\$ 3,650.40
TBD	30		Lighting arrester	\$175.50	\$ 5,265.00
TBD	13		Rack Mont, Conduit and Power	\$1,267.50	\$ 16,477.50
TBD	30		Miscellaneous	\$263.90	\$ 7,917.00
				<b>Sub Total \$</b>	<b>364,682.50</b>

**IV: Additional Equipment**

Part #	Qty	Item	Description	Rate	Total
APC	8		Rackmount UPS	1,950.00	15,600.00
				<b>Sub Total \$</b>	<b>15,600.00</b>

**V: Engineering, Integration & Installation**

Part #	Qty	Item	Description	Rate	Total
<b>SD-LiveWave Services</b>					
9001.00	540	LW-PM	Project Management (per hour)	107.05	57,807.00
9001.00	160	LW-INT	Installation (per hour)	107.05	17,128.00
9001.00	240	LW-TRNG	Training (per hour)	107.05	25,692.00
9002.00	360	LW-ENG	Engineering & Integration (per hour)	158.44	57,038.40
9003.00	540	LW-DEV	System Configuration	107.05	57,807.00

	<u>General Contractor Site Installation</u>		
1		\$245,340.00	245,340.00
	<u>StoneCrop Technologies</u>		
	<b>Pole Mount Labor Detail</b>		
36	Senior Network Engineer	\$282.75	10,179.00
80	Project Manager, Mobilization	\$285.65	22,852.00
80	Wireless Technician, Mobilization	\$188.50	15,080.00
80	Project Manager, On Site	\$285.65	22,852.00
132	Wireless Technicians, On Site	\$188.50	24,882.00
55	Electrician, On Site	\$152.25	8,373.75
88	Police Detail, On Site	\$72.50	6,380.00
11	Network Monitor Technician	\$130.50	1,435.50
	<b>Roof Mount Labor Detail</b>		
14	Senior Network Engineer	\$282.75	3,958.50
42	Project Manager, Mobilization	\$285.65	11,997.30
42	Wireless Technician, Mobilization	\$188.50	7,917.00
42	Project Manager, On Site	\$285.65	11,997.30
112	Wireless Technicians, On Site	\$188.50	21,112.00
28	Tower Climbers, On Site	\$181.25	5,075.00
42	Electrician, On Site	\$152.25	6,394.50
7	Network Monitor Technician	\$130.50	913.50
	<b>Backbone Labor Detail</b>		
10	Senior Network Engineer	\$282.75	2,827.50
8	Project Manager, Mobilization	\$285.65	2,285.20
6	Wireless Technician, Mobilization	\$188.50	1,131.00
1	Project Manager, On Site	\$285.65	285.65
10	Wireless Technicians, On Site	\$188.50	1,885.00
1	Tower Climbers, On Site	\$181.25	181.25
20	Electrician, On Site	\$152.25	3,045.00
8	Network Monitor Technician	\$130.50	1,044.00
	<b>Hub Labor Detail</b>		
45	Senior Network Engineer	\$282.75	12,723.75
48	Project Manager, Mobilization	\$285.65	13,711.20
80	Wireless Technician, Mobilization	\$188.50	15,080.00
156	Project Manager, On Site	\$285.65	44,561.40
360	Wireless Technicians, On Site	\$188.50	67,860.00
87	Tower Climbers, On Site	\$181.25	15,768.75
120	Electrician, On Site	\$152.25	18,270.00
80	Network Monitor Technician	\$130.50	10,440.00
	<u>TRC</u>		
1		\$81,925.00	81,925.00
	<b>Travel Allowance</b>		
12	Per diem	46.00	552.00
12	Mileage	65.00	780.00
		<b>Sub Total</b>	<b>\$ 936,568.45</b>

<b>Totals</b>
---------------

LiveWave Video Management Systems	\$ 65,885.44
Camera Equipment	\$ 104,176.80
Wireless Hardware	\$ 364,682.50
Additional Equipment	\$ 15,600.00
Engineering, Integration & Installation	\$ 936,568.45
<b>Total</b>	<b>\$ 1,486,913.19</b>

**Notes:**

Prices do not include state sales tax, miscellaneous fees or import/export duties of any kind.  
 Payment terms are Net 30 days unless otherwise indicated.  
 Smiths Detection reserves the right to modify any terms and/or conditions stated in the above quotation.  
 Documentation of tax-exempt status is required.  
 State sales tax will be charged unless said documentation is provided.  
 Quote subject to Smiths Detection-LiveWave Terms & Conditions

**Prepared By:**

Doug Tuthill  
 Director of Operations  
 Smiths Detection-LiveWave  
 401.932.5045  
 Email: [doug.tuthill@smithsdetection.com](mailto:doug.tuthill@smithsdetection.com)  
 Web Address: [www.smithsdetection-livewave.com](http://www.smithsdetection-livewave.com)



**Security Sensitive Information - FOR OFFICIAL USE ONLY**

Date: April 27, 2007 Quote: Boston 00

To: Adam Wehrenberg  
Company Mayor's Office of Emergency Preparedness  
Address Boston City Hall Room 603  
Address Boston, MA 02201  
Tel (617) 590-9800  
Email adam.wehrenberg@cityofboston.gov

**Project**  
Critical Infrastructure Monitoring  
System (CIMS)  
Option 3  
Boston 30

**I: LiveWave Video Management Systems**

Part #	Qty	Item	Description	Rate	Total
4008.45	2	FV-NVR-8-4.5T	8 channel, network recorder, 2U rackmont, 4.5TB storage	\$10,980.91	21,961.81
				<b>Sub Total \$</b>	<b>21,961.81</b>

**II: Camera Equipment**

Part #	Qty	Item	Description	Rate	Total
Spectra	30		Bosch IP Camera	\$2,340.00	70,200.00
BBS-PCA-GY	30		Camera Mounting Hardware	\$143.00	4,290.00
	30		NEMA Enclosure	\$260.00	7,800.00
	30		UPS	\$150.80	4,524.00
				<b>Shipping/handling included in all prices</b>	-
				<b>Sub Total \$</b>	<b>86,814.00</b>

**III: Wireless Hardware**

Part #	Qty	Item	Description	Rate	Total
<b>Backbone</b>					
TBD	1		DragonWave Airpair 50	\$21,093.80	21,093.80
TBD	1		Manual Reboot System	\$507.00	507.00
TBD	1		Radio Mount	\$845.00	845.00
TBD	1		Grounding	\$540.80	540.80
TBD	1		Rack Mount	\$676.00	676.00
TBD	1		UPS Power Supply	\$3,172.00	3,172.00
TBD	1		Switch	\$845.00	845.00
TBD	1		Router	\$4,758.00	4,758.00
TBD	1		Miscellaneous	\$676.00	676.00
<b>Site Devices Pole Mount</b>					
TBD	18		Gemini Lite or similar (TBD on Site Survey)	\$4,282.20	77,079.60
TBD	18		Electrical hardware	\$44.20	795.60
TBD	18		Miscellaneous	\$253.50	4,563.00
<b>Site Devices Roof Mount</b>					
TBD	6		Gemini Lite or similar (TBD on Site Survey)	\$4,282.20	25,693.20
TBD	6		Radio Mount	\$845.00	5,070.00
TBD	6		Grounding	\$280.80	1,684.80
TBD	6		Electrical hardware	\$1,014.00	6,084.00
TBD	6		Miscellaneous	\$263.90	1,583.40
<b>Site to Hub Devices</b>					
TBD	24		Gemini Lite or similar (TBD on Site Survey)	\$4,282.20	102,772.80
TBD	7		Manual Reboot System	\$507.00	3,549.00
TBD	11		Radio Mount	\$845.00	9,295.00
TBD	11		Grounding	\$280.80	3,088.80
TBD	24		Lighting arrester	\$175.50	4,212.00
TBD	11		Rack Mont, Conduit and Power	\$1,267.50	13,942.50
TBD	24		Miscellaneous	\$263.90	6,333.60
				<b>Sub Total \$</b>	<b>298,860.90</b>

**IV: Additional Equipment**

Part #	Qty	Item	Description	Rate	Total
APC	2		Rackmount UPS	1,950.00	3,900.00
				<b>Sub Total \$</b>	<b>3,900.00</b>

**V: Engineering, Integration & Installation**

Part #	Qty	Item	Description	Rate	Total
<b>SD-LiveWave Services</b>					
9001.00	540	LW-PM	Project Management (per hour)	107.05	57,807.00
9001.00	40	LW-INT	Installation (per hour)	107.05	4,282.00
9001.00	40	LW-TRNG	Training (per hour)	107.05	4,282.00
9002.00	360	LW-ENG	Engineering & Integration (per hour)	158.44	57,038.40

<u>General Contractor Site Installation</u>			
1		\$183,300.00	183,300.00
	<u>StoneCrop Technologies</u>		
	<u>Pole Mount Labor Detail</u>		
18	Senior Network Engineer	\$253.50	4,563.00
54	Project Manager, Mobilization	\$256.10	13,829.40
54	Wireless Technician, Mobilization	\$169.00	9,126.00
54	Project Manager, On Site	\$256.10	13,829.40
108	Wireless Technicians, On Site	\$169.00	18,252.00
45	Electrician, On Site	\$136.50	6,142.50
72	Police Detail, On Site	\$65.00	4,680.00
9	Network Monitor Technician	\$117.00	1,053.00
	<u>Roof Mount Labor Detail</u>		
12	Senior Network Engineer	\$253.50	3,042.00
36	Project Manager, Mobilization	\$256.10	9,219.60
36	Wireless Technician, Mobilization	\$169.00	6,084.00
36	Project Manager, On Site	\$256.10	9,219.60
96	Wireless Technicians, On Site	\$169.00	16,224.00
24	Tower Climbers, On Site	\$162.50	3,900.00
36	Electrician, On Site	\$136.50	4,914.00
6	Network Monitor Technician	\$117.00	702.00
	<u>Backbone Labor Detail</u>		
3	Senior Network Engineer	\$253.50	760.50
4	Project Manager, Mobilization	\$256.10	1,024.40
3	Wireless Technician, Mobilization	\$169.00	507.00
16	Project Manager, On Site	\$256.10	4,097.60
14	Wireless Technicians, On Site	\$169.00	2,366.00
10	Tower Climbers, On Site	\$162.50	1,625.00
24	Electrician, On Site	\$136.50	3,276.00
8	Network Monitor Technician	\$117.00	936.00
	<u>Hub Labor Detail</u>		
60	Senior Network Engineer	\$253.50	15,210.00
30	Project Manager, Mobilization	\$256.10	7,683.00
120	Wireless Technician, Mobilization	\$169.00	20,280.00
120	Project Manager, On Site	\$256.10	30,732.00
300	Wireless Technicians, On Site	\$169.00	50,700.00
90	Tower Climbers, On Site	\$162.50	14,625.00
120	Electrician, On Site	\$136.50	16,380.00
60	Network Monitor Technician	\$117.00	7,020.00
	<u>TRC</u>		
1		\$57,850.00	57,850.00
	<u>Travel Allowance</u>		
12	Per diem	46.00	552.00
12	Mileage	65.00	780.00
		<b>Sub Total \$</b>	<b>667,894.40</b>

<b>Totals</b>
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LiveWave Video Management Systems	\$ 21,961.81
Camera Equipment	\$ 86,814.00
Wireless Hardware	\$ 298,860.90
Additional Equipment	\$ 3,900.00
Engineering, Integration & Installation	\$ 667,894.40
<b>Total</b>	<b>\$ 1,079,431.11</b>

**Notes:**

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 Quote subject to Smiths Detection-LiveWave Terms & Conditions

**Prepared By:**

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**Smiths Detection-LiveWave**  
Tech Plaza IV  
88 Silva Lane, Suite 250  
Middletown, RI 02842  
Tel: 401-848-7678  
Fax: 401-846-7077

**Security Sensitive Information - FOR OFFICIAL USE ONLY**

Date: April 27, 2007 Quote: Option 4

To: Adam Wehrenberg  
Company Mayor's Office of Emergency Preparedness  
Address Boston City Hall Room 603  
Address Boston, MA 02201  
Tel (617) 590-9800  
Email adam.wehrenberg@cityofboston.gov

**Project**  
Critical Infrastructure Monitoring  
System (CIMS)  
Additional Support

**Engineering, Integration & Installation**

Part #	Qty	Item	Description	Rate	Total
<b>SD-LiveWave Services</b>					
9001.00	48	LW-TRNG	Training (per hour)	107.05	5,138.40
<b>Travel Allowance</b>					
	10	Per diem		46.00	460.00
	10	Mileage		65.00	650.00
				<b>Sub Total \$</b>	<b>6,248.40</b>

**Totals**

Engineering, Integration & Installation	\$	6,248.40
<b>Total</b>	<b>\$</b>	<b>6,248.40</b>

**Notes:**

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State sales tax will be charged unless said documentation is provided.  
Quote subject to Smiths Detection-LiveWave Terms & Conditions

**Prepared By:**

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# smiths detection

bringing technology to life

## Smiths Detection-LiveWave

Tech Plaza IV  
88 Silva Lane, Suite 250  
Middletown, RI 02842  
Tel: 401-846-7676  
Fax: 401-846-7077

### Security Sensitive Information - FOR OFFICIAL USE ONLY

Date: April 27, 2007 Quote: Option 5

To: Adam Wehrenberg  
Company: Mayor's Office of Emergency Preparedness  
Address: Boston City Hall Room 603  
Address: Boston, MA 02201  
Tel: (617) 590-9800  
Email: adam.wehrenberg@cityofboston.gov

**Project**  
Critical Infrastructure Monitoring  
System (CIMS)  
Redundant Star Topology

I: Wireless Hardware					
Part #	Qty	Item	Description	Rate	Total
<b>Backbone</b>					
TBD	5	Radios		\$21,093.80	\$ 105,469.00
TBD	5	Safety Cable		\$26.00	\$ 130.00
TBD	5	Communication Cable		\$439.40	\$ 2,197.00
TBD	5	Manual Reboot System		\$507.00	\$ 2,535.00
TBD	5	Radio Mount		\$845.00	\$ 4,225.00
TBD	5	Grounding		\$540.80	\$ 2,704.00
TBD	5	Rack Mount		\$676.00	\$ 3,380.00
TBD	5	UPS Power Supply		\$3,172.00	\$ 15,860.00
TBD	5	Switch		\$845.00	\$ 4,225.00
TBD	5	Router		\$4,758.00	\$ 23,790.00
TBD	5	Miscellaneous		\$676.00	\$ 3,380.00
TBD	30	Software Radio Upgrade		\$4,758.00	\$ 142,740.00
				<b>Sub Total</b>	<b>\$ 310,635.00</b>

II: Engineering, Integration & Installation					
Part #	Qty	Item	Description	Rate	Total
<b>SD-LiveWave Services</b>					
9001.00	160	LW-PM	Project Management (per hour)	107.05	17,128.00
<b>StoneCrap Technologies</b>					
<b>Pole Mount Labor Detail</b>					
	120		Senior Network Engineer	\$253.50	30,420.00
	44		Project Manager, Mobilization	\$256.10	11,268.40
	39		Wireless Technician, Mobilization	\$169.00	6,591.00
	11		Project Manager, On Site	\$256.10	2,817.10
	88		Wireless Technicians, On Site	\$169.00	14,872.00
	17		Electrician, On Site	\$136.50	2,320.50
	210		Police Detail, On Site	\$65.00	13,650.00
	40		Network Monitor Technician	\$117.00	4,680.00
<b>Travel Allowance</b>					
	56		Per diem	46.00	2,576.00
	150		Mileage	65.00	9,750.00
				<b>Sub Total</b>	<b>\$ 116,073.00</b>
<b>Totals</b>					

Wireless Hardware	\$	310,635.00
Engineering, Integration & Installation	\$	116,073.00
<b>Total</b>	<b>\$</b>	<b>426,708.00</b>

**Notes:**

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Documentation of tax-exempt status is required.  
State sales tax will be charged unless said documentation is provided.  
Quote subject to Smiths Detection-LiveWave Terms & Conditions

**Prepared By:**

Doug Tuthill  
Director of Operations  
Smiths Detection-LiveWave  
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Email: [doug.tuthill@smithsdetection.com](mailto:doug.tuthill@smithsdetection.com)  
Web Address: [www.smithsdetection-livewave.com](http://www.smithsdetection-livewave.com)



**Smiths Detection-LiveWave**  
Tech Plaza IV  
88 Silva Lane, Suite 250  
Middletown, RI 02842  
Tel: 401-848-7678  
Fax: 401-846-7077

**Security Sensitive Information - FOR OFFICIAL USE ONLY**

Date: April 27, 2007 Quote: Option 6

To: Adam Wehrenberg  
Company: Mayor's Office of Emergency Preparedness  
Address: Boston City Hall Room 603  
Address: Boston, MA 02201  
Tel: (617) 590-9800  
Email: adam.wehrenberg@cityofboston.gov

**Project**  
Critical Infrastructure Monitoring  
System (CIMS)  
Extended Service

**Extended Maintenance**

Part #	Qty	Item	Description	Rate	Total
Amount is the stated percentage of the hardware total from all of the options					
			Option Years		
1		3%	Year 1	\$158,113.39	\$ 158,113.39
1		4%	Year 2	\$210,834.52	\$ 210,834.52
1		4.50%	Year 3	\$237,195.08	\$ 237,195.08
1		4.75%	Year 4	\$250,375.36	\$ 250,375.36
1		5%	Year 5	\$263,555.65	\$ 263,555.65
				Sub Total	\$ 1,120,074.00

**Totals**

Extended Maintenance	\$ 1,120,074.00
Total	\$ 1,120,074.00

**Notes:**

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State sales tax will be charged unless said documentation is provided.  
Quote subject to Smiths Detection-LiveWave Terms & Conditions

**Prepared By:**

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Director of Operations  
Smiths Detection-LiveWave  
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Web Address: [www.smithsdetection-livewave.com](http://www.smithsdetection-livewave.com)

**Security Sensitive Information - FOR OFFICIAL USE ONLY**

Date: April 27, 2007 Quote: Q1001-7

To: Adam Wehrenberg  
Company Mayor's Office of Emergency Preparedness  
Address Boston City Hall Room 603  
Address Boston, MA 02201  
Tel (617) 590-9800  
Email adam.wehrenberg@cityofboston.gov

**Project**  
Critical Infrastructure Monitoring  
System (CIMS)  
WLAN Network Administration

I: Engineering, Integration & Installation					
Part #	Qty	Item	Description	Rate	Total
	1		Network System Administration	\$63,000.00	63,000.00
				<b>Sub Total</b>	<b>\$ 63,000.00</b>
Totals					

Engineering, Integration & Installation	\$	63,000.00
<b>Total</b>	<b>\$</b>	<b>63,000.00</b>

**Notes:**

Prices do not include state sales tax, miscellaneous fees or import/export duties of any kind.  
Payment terms are Net 30 days unless otherwise indicated.  
Smiths Detection reserves the right to modify any terms and/or conditions stated in the above quotation.  
Documentation of tax-exempt status is required.  
State sales tax will be charged unless said documentation is provided.  
Quote subject to Smiths Detection-LiveWave Terms & Conditions

**Prepared By:**

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### SDLW Bid Assessment

Item	Bid Page	Comment/Question	Potential \$ Impact	Notes
1	#1 Base	What configuration requires qty 6 Enterprise Management Servers? 5 cities begin wired		Replace Pelco hardware with
2	#1 Base	What configuration requires a qty 8 network recorders?	TBD	SDLW solution?
3	#1 Base	Why is a 4.5TB storage disk required on the 8 channel recorder?	TBD	
4	#1 Base	Site Devices Pole/Roof mounted radios = 55? (35 + 20, however there are 65 cameras in base bid)		
5	#1 Base	Site to Hub Devices = 55 (65 cameras)		See \$ savings from #6
6	#1 Base	Under "Site to Hub Devices", (55) Gemini Lite count is redundant. Radios come in a pair from Motorola called a "hop in a box". This was confirmed with Motorola today. Hence the base quote reflects 110 pairs of Gemini Lite radios, only 65 pairs are required for the 65 cameras to the best of our knowledge	\$471,000	\$193,00 in hardware costs relative to reduction of 110 pairs of radios to 65. Reduction of Stonecrop revised labor estimate by 25% = \$125k. Reduction in TRC by 25% = \$41k. Reduction in GC fee by 25% = \$112k.
7	#1 Base	Intermapper software times 9 copies?	\$7,800	Understand Intermapper currently being installed in Phase
8	#2 Base	\$158 high rate for LW-ENG 400 hours of engineering (industry standard closer to \$135)	\$6,900	
9	#1 Base	Site to Hub, quantity times unit price not carried forward to a correct total	\$80,000	
10	#2 Base	Stonecrop rates excessive, reference sheet two of this workbook.	TBD	
11	#2 Option 1	TRC design fee of \$166 for Option 1 design same as base bid	TBD	Moot point given Option 1 not likely to be selected.
12	General	All Stonecrop rates higher in Option 2 than other estimates	TBD	Moot point given Option 2 not likely to be selected.
13	#1 Base	Why 8 rackmount UPS' in additional equipment?	TBD	
14	#1 Option 3	48 pairs of radios for 30 cameras? TRC fee? Engineering in SDLW portion of Base and Option estimates, Engineering in Stonecrop portion of Base and Option estimates, what engineering is envisioned for TRC? Wireless & Security design engineering fees normally do not exceed 12%	\$221,000	\$77,000 in hardware costs. \$84k in Stonecrop. \$15k in TRC. \$45k in GC.
15	General			
16	#2 Option 3	TRC fee excessive. \$58k for adding 30 cameras in one city?	\$28,000	Reduce to \$30k.

17  
 schedule: no need to get 40% by 12/31/07  
 end date doesn't change.

## BASE BID

Stonecrop	Bid Hours	Bill Rate	Industry Std. Rate	Net Negotiable	
				Savings	Revised cost
Project Manager	1010	\$256	\$110	\$147,460	
Sr. Network Engineer	253	\$253	\$135	\$29,854	
Wireless Technician	2018	\$169	\$100	\$139,242	
Tower Climber	248	\$163	\$90	\$17,980	
Network Montioring Tech	206	\$117	\$80	\$7,622	
Electrician	1225	\$137	\$90	\$56,963	
<b>Total</b>	<b>4960</b>	<b>\$904,373</b>		<b>\$399,121</b>	<b>\$505,253</b>

## OPTION 3

Stonecrop	Bid Hours	Bill Rate	Industry Std. Rate	Net Negotiable	
				Savings	
Project Manager	350	\$256	\$110	\$51,100	
Sr. Network Engineer	93	\$253	\$135	\$10,974	
Wireless Technician	677	\$169	\$100	\$46,713	
Tower Climber	124	\$163	\$90	\$8,990	
Network Montioring Tech	83	\$117	\$80	\$3,071	
Electrician	525	\$137	\$90	\$24,413	
<b>Total</b>	<b>1852</b>	<b>\$337,681</b>		<b>\$145,261</b>	<b>\$192,421</b>