

City of Waltham of Waltham City CLERK'S OFFICE

Jeannette A. McCarthy Mayor Mayor Mi: 17

RECORDED

September 21, 2017

TO: The City Council

RE: Transfer Request - Police/Fire Radio System Upgrade

Dear Councillors:

I respectfully request a transfer of \$371,751.00 to fund the repairs and upgrade to our current Police/Fire radio system.

FROM:

Stabilization Fund-General

#250-135-7405-5205

\$371,751.00

TO:

Wires-Radio System

#001-245-5800-6422

\$371,751.00

Attached is a copy of a letter dated September 12, 2017 that was received from the Wires Director, Tim Kelly. Mr. Kelly, Chief MacPherson and Chief Ciccone will be available to answer questions concerning this request.

Sincerely,

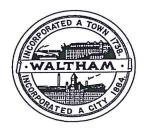
Jeannette A. McCarthy

JĂM/ccb Enclosures

CC:

Tim Kelly

Chief MacPherson Chief Ciccone



CITY OF WALTHAM MASSACHUSETTS

WIRES DEPARTMENT

INSPECTOR OF WIRES Timothy P. Kelly TKELLY@CITY.WALTHAM.MA.US

SR. WIRE INSPECTOR George A. Martin GMARTIN@CITY.WALTHAM.MA.US MEMBER
I.A.E.I.
MUNI. ELEC. INSP. ASSOC.
OF M.A. R.I.
N.F.P.A.
I.M.S.A.

September 12, 2017

Mayor,

I respectively request the sum of \$371,750.06 to repair and upgrade our current Public Safety Radio System (Police and Fire).

We currently have (2) Radio sites down and are experiencing Communication issues on both the Police and Fire frequencies.

It is my understanding that the current radio components have 5 years life expectancy; we are currently on 8th year.

Myself and both the Police and Fire Chief will be available for any questions.

Sincerely

Timothy P Kelly Inspector of Wires

RECEIVED
SEP 1 8 2017
MAYOR'S OFFICE

Waltham Tait Information

Cities with similar issues:

Weymouth
Marblehead
Hull
Hingham
Middleboro

Recommendations:

Phase 1 Immediate: Replace microwave and switches for connectivity

- Brandeis Site to Prospect Site Currently Down
- Brandeis Site to PD/FD Tower Currently Down
- Brandeis Site to Winter Street Site Currently Down
- Install updated monitoring software Currently None on system

Phase 2 Urgent: Replace remaining microwave at sites

- PD/FD Tower to Bentley Site Currently intermittent operation
- Winter Street Site to Prospect Site Currently intermittent operation
- Prospect Site to NE School Site Currently intermittent operation
- Prospect Site to PD/FD tower Currently intermittent operation
- Brandeis Equipment Cabinet Stability and environmental Issues
- Remote Site Environmental Monitoring Currently None on system
- Tait Firmware Infrastructure Upgrade

Phase 3 Long Term

- Upgrade Tait infrastructure to factory approved simulcast
- Eliminate proprietary equipment in system

 Replace Dispatch Console and Fire Station Alerting System with public safety grade solution



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Technologies, Inc.5 Whitmore Rd. Revere, MA 02151 P (781) 289-3000 F (781) 289-7300 www.allcomm1.com

City of Waltham
Attn: Tim Kelly
119 School Street
Waltham, MA 02451
Microwave Backhaul System
With Network Switches
8/23/2017

SIAE, All Outdoor, Carrier Grade Licensed Microwave System, with GPS Synced Backhaul Network

			December to December 180 and 181 400UT to control December 1	1			
	Qty	Nomenclature	Brandeis to Prospect Microwave Link 18GHZ *Currently Down* Description	l lini	it Price	Te	otal Price
	1	AP18-2E-LNK	SIAE ALFOPIus 18GHz,100Mb, Link		6,950.00	\$	6,950.00
	2	UPG-AP-ACM	SIAE ACM ALFOPIUS SWLicense	Š	225.00		450.00
	2	UPG-AP-PHC	SIAE ALFOPIus SW Lic to enable Packet Header	\$	450.00		900.00
	2	UPG-AP-100-400	SIAE ALFO Plus SW Licence, 100 to 400 Mb	\$	450.00		900.00
	2	SIAE-S03653	SIAE POE Injector (AC/DC) for ALFOPIus	\$	209.30	\$	418.60
	2	ANT-18GHZ-12-SP	18 GHz Antenna, 1ft, Single Pole SIAE Direct Mount	\$	450.00	\$	900.00
	2	368792	Transtector Systems, Inc Power over Ethernet Surge Protector	\$	175.50	\$	351.00
	4	493736	Ground Kit for Corrugated Cat5e	\$	16.83		67.32
	2	342691	Superior Essex OSP Copper Clad Cat5E	\$	301.00		602.00
	1	FREQCORD	Frequency Coordination Support	\$	617.05		617.05
	1	FCC	FCC Application Support	\$	123.05		123.05
	1	PCN	Schedule K Form 601 Construction Notification	\$	85.00		85.00
	1	TOWERLBR HDWR	Tower Work Tower Hardware		4,760.00	\$	4,760.00
	24	SVC2017	Set-up and Programming/Staging at ALL-COMM	\$	1,000.00	\$	1,000.00 2,604.00
	32	SVC2017	Installation	Š	108.50		3,472.00
	32	3402017	ilistaliation	*	100.50	ð	3,472.00
			Sub-Total			\$	24,200.02
			Brandeis to PD/FD Tower Microwave Link 18GHZ *Currently Down*				
	Qty	Nomenclature	Description	Uni	t Price	To	tal Price
-	1	AP18-2E-LNK	SIAE ALFOplus 18GHz,100Mb, Link		5,950.00	\$	6,950.00
	2	UPG-AP-ACM	SIAE ACM ALFOPIUS SWLicense	\$	225.00	\$	450.00
	2	UPG-AP-PHC	SIAE ALFOPlus SW Lic to enable Packet Header	\$	450.00	\$	900.00
	2	UPG-AP-100-400	SIAE ALFO Plus SW Licence,100 to 400 Mb	\$	450.00	\$	900.00
	2	SIAE-S03653	SIAE POE Injector (AC/DC) for ALFOPIus	\$	209.30		418.60
	2	ANT-18GHZ-12-SP	18 GHz Antenna, 1ft, Single Pole SIAE Direct Mount	\$	450.00		900.00
	2	368792	Transtector Systems, Inc Power over Ethernet Surge Protector	\$	175.50	\$	351.00
	4	493736	Ground Kit for Corrugated Cat5e	\$	16.83	\$	67.32
	2	342691	Superior Essex OSP Copper Clad Cat5E	\$	301.00	\$	602.00
	1	FREQCORD	Frequency Coordination Support	\$	617.05	\$	617.05
	1	FCC	FCC Application Support	\$	123.05		123.05
	1	PCN TOWERLBR	Schedule K Form 601 Construction Notification Tower Work	\$ 4	85.00 1.760.00	\$	85.00 4.760.00
	1	HDWR	Tower Hardware		1,000.00	\$	1,000.00
	24	SVC2017	Set-up and Programming/Staging at ALL-COMM	\$ '	108.50	\$	2,604.00
	32	SVC2017	Installation	Š	108.50	Š	3,472.00
	-	0.02017		•			
			Sub-Total		ļ	\$ 4	24,200.02
			Brandeis to Winter Microwave Link 11 Ghz. *Currently Down*				
	Qty	Nomenclature	Description		Price		tal Price
	1	AP11-2E-LNK	SIAE ALFOPlus 11GHz,100Mb, Link		,950.00	\$	6,950.00
	2	UPG-AP-ACM	SIAE ACM ALFOPIus SWLicense SIAE ALFOPIus SW Lic to enable Packet Header	\$	225.00 450.00	\$	450.00 900.00
	2	UPG-AP-PHC UPG-AP-100-400	SIAE ALFOPIUS SW Lic to enable Packet Header SIAE ALFO Plus SW Licence, 100 to 400 Mb	\$	450.00	Š	900.00
	2	SIAE-S03653		\$	209.30	Š	418.60
	2	ANT-11GHZ-24-SP		\$	450.00	Š	900.00
	2	368792		\$	175.50	Š	351.00
	4	493736		\$	16.83	Š	67.32
	2	342691			301.00	Š	602.00
	1	FREQCORD	Frequency Coordination Support		617.05	\$	617.05
	1	FCC	FCC Application Support	\$	123.05		123.05
	1	PCN		\$		\$	85.00
	1	TOWERLBR	Tower Work		,760.00		4,760.00
	1	HDWR			,000.00	\$	1,000.00
	24	SVC2017					2,604.00
:	32	SVC2017	Installation	\$	108.50	\$	3,472.00
			Sub-Total	Page	1 of 4 [\$ 2	24,200.02

		PD/FD Tower to Bentley Microwave Link 18GHZ	1			
Qty	Nomenclature	Description	۱,	Unit Price	Т	otal Price
1	AP18-2E-LNK	SIAE ALFOplus 18GHz,100Mb, Link	\$		\$	6,950.00
2	UPG-AP-ACM	SIAE ACM ALFOPIus SWLicense	\$	225.00	\$	450.00
2	UPG-AP-PHC	SIAE ALFOPIus SW Lic to enable Packet Header	\$	450.00	\$	900.00
2	UPG-AP-100-400	SIAE ALFO Plus SW Licence,100 to 400 Mb	\$		\$	900.00
2	SIAE-S03653	SIAE POE Injector (AC/DC) for ALFOPIus	\$		\$	418.60
2	ANT-18GHZ-12-SP	18 GHz Antenna, 1ft, Single Pole SIAE Direct Mount	\$	450.00		900.00
2	368792	Transtector Systems, Inc Power over Ethernet Surge Protector	\$	175.50	\$	351.00
4	493736 342691	Ground Kit for Corrugated Cat5e Superior Essex OSP Copper Clad Cat5E	\$	16.83 301.00		67.32 602.00
1	FREQCORD	Frequency Coordination Support	\$	617.05		617.05
i	FCC	FCC Application Support	\$	123.05		123.05
1	PCN	Schedule K Form 601 Construction Notification	\$	85.00		85.00
1	TOWERLBR	Tower Work	\$	4,760.00	\$	4,760.00
1	HDWR	Tower Hardware	\$	1,000.00	\$	1,000.00
24	SVC2017	Set-up and Programming/Staging at ALL-COMM	\$	108.50	\$	2,604.00
32	SVC2017	Installation	\$	108.50	\$	3,472.00
		Sub-Total			\$	24,200.02
		Sub-10tal			3	24,200.02
04	Name and Advisor	Winter to Prospect Microwave Link 18GHZ	١.	Init Dele-	-	atal Duis-
Qty 1	Nomenclature AP18-2E-LNK	Description SIAE ALFORIUS 18GHz.100Mb, Link	\$	Unit Price 6,950.00	\$	otal Price 6,950.00
2	UPG-AP-ACM	SIAE ACM ALFOPIUS 18GHZ,100MB, LINK SIAE ACM ALFOPIUS SWLicense	\$	225.00	\$	450.00
2	UPG-AP-PHC	SIAE AUTOPius SW Lic to enable Packet Header	\$	450.00	Š	900.00
2	UPG-AP-100-400	SIAE ALFO Plus SW Licence,100 to 400 Mb	\$	450.00	Š	900.00
2	SIAE-S03653	SIAE POE Injector (AC/DC) for ALFOPIus	\$	209.30	Š	418.60
2	ANT-18GHZ-12-SP	18 GHz Antenna, 1ft, Single Pole SIAE Direct Mount	\$	450.00	\$	900.00
2	368792	Transtector Systems, Inc Power over Ethernet Surge Protector	\$	175.50	\$	351.00
4	493736	Ground Kit for Corrugated Cat5e	\$	16.83	\$	67.32
2	342691	Superior Essex OSP Copper Clad Cat5E	\$	301.00	\$	602.00
1	FREQCORD	Frequency Coordination Support	\$	617.05	\$	617.05
1	FCC	FCC Application Support	\$	123.05	\$	123.05
1	PCN	Schedule K Form 601 Construction Notification	\$	85.00	\$	85.00
1	TOWERLBR	_ Tower Work	\$	4,760.00	\$	4,760.00
1	HDWR	Tower Hardware	\$	1,000.00	\$	1,000.00
24 32	SVC2017 SVC2017	Set-up and Programming/Staging at ALL-COMM Installation	\$	108.50 108.50	\$	2,604.00 3,472.00
02	3402011	nistalidation	۳	100.00	•	0,472.00
		Sub-Total		[\$	24,200.02
		Prospect to NE School Microwave Link 18GHZ				
Qty	Nomenclature	Description Description		Init Price		otal Price
1 2	AP18-2E-LNK UPG-AP-ACM	SIAE ALFOPIUS 18GHz,100Mb, Link SIAE ACM ALFOPIUS SWLicense	\$	6,950.00 225.00	\$	6,950.00 450.00
2	UPG-AP-ACM UPG-AP-PHC	SIAE ACM ALFOPIUS SWLICENSE SIAE ALFOPIUS SW Lic to enable Packet Header	\$	450.00	\$	900.00
2	UPG-AP-100-400	SIAE ALFO Plus SW Licence, 100 to 400 Mb	\$	450.00	\$	900.00
2	SIAE-S03653	SIAE POE Injector (AC/DC) for ALFOPIus	Š	209.30	Š	418.60
2	ANT-18GHZ-12-SP	18 GHz Antenna, 1ft, Single Pole SIAE Direct Mount	\$	450.00	Š	900.00
2	368792	Transtector Systems, Inc Power over Ethernet Surge Protector	\$	175.50	\$	351.00
4	493736	Ground Kit for Corrugated Cat5e	\$	16.83	\$	67.32
2	342691	Superior Essex OSP Copper Clad Cat5E	\$		\$	602.00
1	FREQCORD	Frequency Coordination Support	\$		\$	617.05
1	FCC	FCC Application Support	\$		\$	123.05
1	PCN	Schedule K Form 601 Construction Notification	\$	85.00	\$	85.00
1	TOWERLBR	Tower Work Tower Hardware	\$	4,760.00	\$	4,760.00 1,000.00
1 24	HDWR SVC2017	Tower Hardware Set-up and Programming/Staging at ALL-COMM	\$	1,000.00 108.50	\$	2,604.00
32	SVC2017	Installation	\$	108.50	\$	3,472.00
				_		
		Sub-Total		200	\$	24,200.02
			ra	age 2 of 4		

2	Nomenclature AP18-ZE-LNK UPG-AP-ACM UPG-AP-ACM UPG-AP-HC UPG-AP-100-400 SIAE-S03653 INT-18GHZ-12-SP 368792 493736 342691 FREQCORD FCC PCN TOWERLBR HDWR SVC2017 SVC2017	Description SIAE ALFOplus 18GHz,100Mb, Link SIAE ACM ALFOplus SWLicense SIAE ALFOPlus SW Lic to enable Packet Header SIAE ALFO Plus SW Licence,100 to 400 Mb SIAE POE Injector (AC/IDC) for ALFOPlus 18 GHz Antenna, 1ft, Single Pole SIAE Direct Mount Transtector Systems, Inc Power over Ethernet Surge Protector Ground Kit for Corrugated Cat5e Superior Essex OSP Copper Clad Cat5E Frequency Coordination Support FCC Application Support Schedule K Form 601 Construction Notification Tower Work Tower Hardware Set-up and Programming/Staging at ALL-COMM Installation		175.50 16.83 301.00 617.05 123.05 85.00 4,760.00 1,000.00 108.50	**********	0tal Price 6,950.00 450.00 900.00 900.00 418.60 900.00 351.00 67.32 602.00 123.05 85.00 4,760.00 1,000.00 2,604.00
2 2 2 2 A 2 2 4 4 2 1 1 1 1 1 1 1 1 1 2 2 4 3 3 2 2 2 2 3 2 3 3 2 3 3 3 3 3 3	UPG-AP-ACM UPG-AP-PHC UPG-AP-100-400 SIAE-S03653 NT-18GHZ-12-SP 368792 493736 342691 FREQCORD FCC PCN TOWERLBR HDWR SVC2017 SVC2017	SIAE ACM ALFOplus SWLicense SIAE ALFOPlus SW Lic to enable Packet Header SIAE ALFOP Plus SW Licence, 100 to 400 Mb SIAE POE Injector (AC/DC) for ALFOPlus 18 GHz Antenna, 1ft, Single Pole SIAE Direct Mount Transtector Systems, inc Power over Ethernet Surge Protector Ground Kit for Corrugated Cat5e Superior Essex OSP Copper Clad Cat5E Frequency Coordination Support FCC Application Support Schedule K Form 601 Construction Notification Tower Work Tower Hardware Set-up and Programming/Staging at ALL-COMM Installation		225.00 450.00 450.00 450.00 450.00 450.00 175.50 16.83 301.00 6 617.05 123.05 85.00 4,760.00 1,000.00 108.50	************	450.00 900.00 900.00 418.60 900.00 351.00 67.32 602.00 617.05 123.05 85.00 4,760.00 1,000.00 2,604.00
2	UPG-AP-PHC UPG-AP-100-400 SIAE-S03653 INT-18GHZ-12-SP 368792 493736 342691 FREQCORD FCC PCN TOWERLBR HDWR SVC2017 SVC2017	SIAE ALFOPlus SW Lic to enable Packet Header SIAE ALFO Plus SW Licence,100 to 400 Mb SIAE POE Injector (AC/IDC) for ALFOPlus 18 GHz Antenna, 1ft, Single Pole SIAE Direct Mount Transtector Systems, line Power over Ethernet Surge Protector Ground Kit for Corrugated Cat5e Superior Essex OSP Copper Clad Cat5E Frequency Coordination Support FCC Application Support Schedule K Form 601 Construction Notification Tower Work Tower Hardware Set-up and Programming/Staging at ALL-COMM Installation		450.00 450.00 209.30 450.00 175.50 16.83 301.00 6 617.05 123.05 8 85.00 4,760.00 1,000.00 100.50	************	900.00 900.00 418.60 900.00 351.00 67.32 602.00 617.05 123.05 85.00 4,760.00 1,000.00 2,604.00
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2 A 2 4 4 2 1 1 1 1 1 1 2 3 2 2 4 3 8 X46(3) 8 X46(3) 8 Sum	NT-18GHZ-12-SP 368792 493736 342691 FREQCORD FCC PCN TOWERLBR HDWR SVC2017 SVC2017	18 GHz Antenna, 1ft, Single Pole SIAE Direct Mount Transtector Systems, line Power over Ethemet Surge Protector Ground Kit for Corrugated Cat5e Superior Essex OSP Copper Clad Cat5E Frequency Coordination Support FCC Application Support Schedule K Form 601 Construction Notification Tower Work Tower Hardware Set-up and Programming/Staging at ALL-COMM Installation		450.00 175.50 16.83 301.00 617.05 123.05 85.00 4,760.00 1,000.00 108.50	*********	900.00 351.00 67.32 602.00 617.05 123.05 85.00 4,760.00 1,000.00 2,604.00
2 4 2 1 1 1 1 1 1 1 1 1 1 2 2 4 3 3 2 2 4 3 3 X 3 8 Sum	368792 493736 342691 FREQCORD FCC PCN TOWERLBR HDWR SVC2017 SVC2017	Transtector Systems, Inc Power over Ethernet Surge Protector Ground Kit for Corrugated Cat5e Superior Essex OSP Copper Clad Cat5E Frequency Coordination Support FCC Application Support Schedule K Form 601 Construction Notification Tower Work Tower Hardware Set-up and Programming/Staging at ALL-COMM Installation		175.50 16.83 301.00 617.05 123.05 85.00 4,760.00 1,000.00 108.50	*****	351.00 67.32 602.00 617.05 123.05 85.00 4,760.00 1,000.00 2,604.00
4 2 1 1 1 1 1 1 1 1 1 1 2 4 3 2 2 4 3 3 X 8 Sum	493736 342691 FREQCORD FCC PCN TOWERLBR HDWR SVC2017 SVC2017	Ground Kit for Corrugated Cat5e Superior Essex OSP Copper Clad Cat5E Frequency Coordination Support FCC Application Support Schedule K Form 601 Construction Notification Tower Work Tower Hardware Set-up and Programming/Staging at ALL-COMM Installation		16.83 301.00 617.05 123.05 85.00 4,760.00 1,000.00 108.50	******	67.32 602.00 617.05 123.05 85.00 4,760.00 1,000.00 2,604.00
2 1 1 1 1 1 1 1 1 1 2 4 3 3 2 2 ty 2ty 2ty 3	342691 FREQCORD FCC PCN TOWERLBR HDWR SVC2017 SVC2017	Superior Essex OSP Copper Clad Cat5E Frequency Coordination Support FCC Application Support Schedule K Form 601 Construction Notification Tower Work Tower Hardware Set-up and Programming/Staging at ALL-COMM Installation		301.00 617.05 123.05 85.00 4,760.00 1,000.00 108.50	5555555	602.00 617.05 123.05 85.00 4,760.00 1,000.00 2,604.00
1 1 1 1 1 1 1 1 1 1 2 2 4 2 3 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	FREQCORD FCC PCN TOWERLBR HDWR SVC2017 SVC2017	Frequency Coordination Support FCC Application Support Schedule K Form 601 Construction Notification Tower Work Tower Hardware Set-up and Programming/Staging at ALL-COMM Installation		617.05 123.05 85.00 4,760.00 1,000.00 108.50	555555	617.05 123.05 85.00 4,760.00 1,000.00 2,604.00
1 1 1 1 1 1 1 1 2 2 4 3 3 2 2 2 2 5 2 5 2 5 2 5 2 5 2 5 2 5 2	FCC PCN TOWERLBR HDWR SVC2017 SVC2017	FCC Application Support Schedule K Form 601 Construction Notification Tower Work Tower Hardware Set-up and Programming/Staging at ALL-COMM Installation		123.05 85.00 4,760.00 1,000.00 108.50	\$ \$ \$ \$ \$	123.05 85.00 4,760.00 1,000.00 2,604.00
1 1 1 24 32 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	PCN TOWERLBR HDWR SVC2017 SVC2017	Schedule K Form 601 Construction Notification Tower Work Tower Hardware Set-up and Programming/Staging at ALL-COMM Installation		85.00 4,760.00 1,000.00 108.50	\$ \$ \$ \$	85.00 4,760.00 1,000.00 2,604.00
1 1 24 32 32 2ty 8 X466 3 X 8 Sum	TOWERLBR HDWR SVC2017 SVC2017	Tower Work Tower Hardware Set-up and Programming/Staging at ALL-COMM Installation		4,760.00 1,000.00 108.50	\$	4,760.00 1,000.00 2,604.00
1 24 32 32 2ty 8 X46 3 X 8 Sum	HDWR SVC2017 SVC2017	Tower Hardware Set-up and Programming/Staging at ALL-COMM Installation	9	1,000.00	\$	1,000.00 2,604.00
24 32 2ty 8 X46 3 X 8 Sum	SVC2017 SVC2017	Set-up and Programming/Staging at ALL-COMM Installation		108.50	\$	2,604.00
2ty 8 X460 3 X 8 Sum	SVC2017	Installation				
2ty 8 X46 3 X 8 Sum			\$	108.50	\$	
8 X46 3 X 8 Sum	s	Sub-Total				3,472.00
8 X46 3 X 8 Sum					\$	24,200.02
8 X46 3 X 8 Sum		Extreme Networks-High Availabity Network				
3 X 8 Sum	Nomenclature	Description		Unit Price		otal Price
8 Sum	0-G2-24t-GE4-Base	Extreme Networks Summit Switches	\$			20,424.00
	(460-G2-TM-CLK	Timing Module for SyncE	\$		\$	1,671.60
16 Sumr	nmit Fan Module FB	Fan Module for Summit X460	\$			1,321.60
	mit 300W AS PSUXT	AC Power Supply Modules for Redundant	Ş	324.60	-	5,193.60
	ord 10A,NEMA 5-15P	Power Cords	Ş	8.40	\$	134.40
	e Lic from Edge Lic	Extreme XOS Advanced Core License Upgrade	\$			13,417.60
	nit X460 Ntwrk Timing	Extreme XOS Network Timing Pack for Summit X460-G2 PTP	\$			4,457.60
	DOBASE-LX SFP HI	1000BASE LX-SFP MMF 220& 550 meters SMF 10Km LC Com	\$			2,228.80
	OBASE ZX-SFP, Hi	1000BASE ZX-SFP MMF 220& 550 meters SMF 70Km LC Com	\$			4,474.40
	NMS 10 Devices	Network Management, mDevices/100THIN APS	\$		\$	4,192.20
1	ExSVCSPT	EW Software Subscription/Factory Support	\$		\$	4,168.00
7	HDWR	MISC Hardware Installation Support Parts	\$			1,575.00
72	MOA5901	Cat6A patch cable- 7'	\$			402.48
32	MOA11259	Cat6A patch cable- 14'	\$			229.76
1	DelISOHO	SONICWALL 01-SSC-0217 Dell SonicWALL SOHO Gen 6 OSP Firewall appliance	\$			331.48
7	CBLMGMT	Cable Management	\$		\$	3,150.00
40	SVC2017	Network Design, Staging	\$			4,340.00
40	SVC2017	Programming, Installtion on Site, Optimization, Network Interface	\$	108.50	\$	4,340.00
Sub-Total \$ 76,0					76,052.52	

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		System Management PC			
Qty	Nomenclature	Description	Unit Pric	e Total Price	
1	Optiplex5040	DELL Desktop PC OptiPlex 5040 Intel Core i5	\$ 993.		
1	9SIA9DE3SA8406	Cloud Storage Personal NAS	\$ 598.		
1	EPING	Availability Monitoring Software	\$ 250.	00 \$ 250.00	
32	SVC2017	Install, Programming, Set-Up, Optimization On Site	\$ 108.	50 \$ 3,472.00	
		Sub-Total Sub-Total		\$ 5,313.98	
			_		
		HVAC Brandeis Tower			
Qty	Nomenclature	Description	Unit Price		
1	01/00047	DDB Ltd HVAC Unit	\$ 3,198.		
8	SVC2017	Installation on Site	\$ 108.50 \$ 868.00		
	Sub-Total			\$ 4,066.00	
		Sub-Total		\$ 4,000.00	
		Remote Site Environmental Monitoring/Reporting System	_		
Qty	Nomenclature	Description	Unit Price	e Total Price	
6	Enviromux	Enviromental Monitoring Server wTemperature/Humidity Sensors per site	\$ 971.	70 \$ 5,830.20 50 \$ 2,604.00	
24	24 SVC2017 Installation on Site \$				
		Sub-Total		\$ 8,434.20	
		Tait Infrastructure Firmware Upgrade	7		
Qty	Nomenclature	Description	Unit Price	Total Price	
1	FWUPGD	Tait 3.82 FW, SFE Keys*		\$ -	
24	SVC2017	Upgrade Tait Base Station Firmare to Current Revision, Install Licenses-All Sites	\$ 108.5		
60	SVC2017	PM, Alignment of System after Firmware Upgrade	\$ 108.5		
		Sub-Total Sub-Total		\$ 9,114.00	
		*FW Upgrade can only be applied to PD System. FD system uses custom FW and requires			
		Upgrading to Tait ASIP			
		Phase 1 Project Total-Includes Replacement of Currently Broken Microwave and Fiber links to			
	Dhase 1	Radio Sites, Replacement of all Network Switches at Radio Sites, New Management PC System.		\$ 153,966.56	
	Phase 1	Nadio Sites, Replacement of all Network Switches at Nadio Sites, New Management 1 o System.		\$ 133,300.30	
		Phase 2 Project Total-Includes Replacement of Remaining Microwave links, Tait Firmware			
	Phase 2	Upgrade, Environmental Monitoring, Brandels Outdoor Cabinet HVAC Unit		\$ 118,414.28	
	111050 2			in distance of the little dis	
		Phase 1, Phase 2 Combined Total		\$ 272,380.84	
		Delivery within Six-Eight weeks A.R.O.			
		Manufacturers warranty applies.			
		All pricing as per current Massachuseets State Contract FIR04			
		Budget based on currently known parameters, subject to change on final design			
		All required permits, authorizations and licenses to be provided by others. Pricing is valid for 120 days from above date			
		Fricing is valid for 120 days from above date			
			_		
		Standardrize PD Simulcast System to Tait P25 Approved		<u> </u>	
Qty	Nomenclature	Description	Unit Price		
1	HDWR	Site Hardware, RF Jumpers, Interconnect Cabling	\$ 1,000.0		
2	SecureSync	Spectracom Master Osdilator SecureSync	\$ 5,803.0		
##	SVC2017	Configure System to Taitnet P25 Simulcast	\$ 108.5	0 \$ 10,850.00	
		Sub-Total		\$ 23,456.00	
		Sub-10tal		\$ 20,430.00	
		Standardrize FD Simulcast System to Tait ASIP	7		
Qty	Nomenclature	Description	Unit Price	Total Price	
<u> </u>	TTO THO THE TANK OF	Rptr P25 440-480M 100W ACDC12/12			
		TBAS061 & TBAS062 Software License Included			
2	TB9435H3M00000J4BC		\$ 15,633.8	1 \$ 31,267.62	
4	TB9444H2100000J4AC	Base Station - UHF AS-IP Analog Receive Only - (TBAS071 Software License Included)	\$ 5,297.4		
2	SecureSync	Spectracom Master Osdilator SecureSync	\$ 5,803.0		
1	HDWR SVC2047	Site Hardware,RF Jumpers, Interconnect Cabling	\$ 1,000.0		
##	SVC2017	Configure System to Tait ASIP	\$ 108.5	0 \$ 10,850.00	
		Sub-Total		\$ 75,913.22	
				,	
		Phase 3 Project Total-Includes Standardizing PD & FD Simulcast Systems to Tait Approved			
	Phase 3	Systems		\$ 99,369.22	
		Phone 1 Phone 2 Phone 2 Combined Total	Dans 4 - 4 4	¢ 271 750 05	
		Phase 1, Phase 2, Phase 3 Combined Total	Page 4 of 4	\$ 371,750.06	

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COMMONWEALTH OF MASSACHUSETTS ~ STANDARD CONTRACT FORM



This form is jointly issued and published by the Executive Office for Administration and Finance (ANF), the Office of the Comptreller (CTH) and the Operational Services Division (OSD) as the default contract for all Commonwealth Departments when another form is not prescribed by regulation or policy. Any changes to the official printed language of this form shall be vold. Additional non-conflicting terms may be added by Attachment. Contractors may not require any additional agreements, engagement letters, contract forms or other additional terms as part of this Contract without prior Department approval. Click on hyperlinks for definitions, instructions and legal requirements that are incorporated by reference into this Contract. An electronic copy of this form is available at www.mass.gov/osc under GUICK on hyperlinks for definitions, instructions and legal requirements that are incorporated by reference into this Contract. An electronic copy of this form is available at www.mass.gov/osc under GUICK on hyperlinks for definitions, instructions and legal requirements that are incorporated by reference into this Contract. An electronic copy of this form is available at www.mass.gov/osc under QUICK on hyperlinks for definitions.

CONTRACTOR LEGAL NAME:	COMMONWEALTH DEPARTMENT NAME: Operational Services Division					
(and d/b/a): All-Comm Technologies, Inc.	MMARS Department Code: OSD					
Legal Address: (W-9, W-4,T&C): 5 Whitmore Road	Business Mailing Address: 1 Ashburton Place, Room 1017, Boston, MA 02108					
Contract Manager: Paul Boudreau	Billing Address (if different):					
E-Mail: pboudreau@allcomm1.com	Contract Manager: Betty Fernandez, Strategic Sourcing Services Lead (SSSL)					
Phone: 781-289-3000 Fax: 781-289-7300	E-Mail: Betty,Fernandez@state,ma.us					
Contractor Vendor Code:	Phone: 617 720 3133 Fax: 617 727 4527					
Vendor Code Address ID (e.g. "AD001"): AD001	MMARS Doc ID(s): FIR040000000000000000000					
(Note: The Address Id Must be set up for <u>EFT</u> payments.)	RFR/Procurement or Other ID Number: FIR04					
X NEW CONTRACT	CONTRACT AMENDMENT Enter Current Contract End Date <u>Prior</u> to Amendment: Enter Amendment Amount: \$ (or "no change") AMENDMENT TYPE: (Check one option only. Attach details of Amendment changes.) Amendment to Scope or Budget (Attach updated scope and budget) Interim Contract (Attach justification for Interim Contract and updated scope/budget) Contract Employee (Attach any updates to scope or budget) Legislative/Legal or Other: (Attach authorizing language/justification and updated scope and budget)					
The following COMMONWEALTH TERMS AND CONDITIONS (T&C) has been executed, filed with CTR and is incorporated by reference into this Contract. X. Commonwealth Terms and Conditions Commonwealth Terms and Conditions Commonwealth Terms and Conditions Commonwealth Terms and Conditions						
COMPENSATION: (Check ONE option): The Department certifies that payments for authorized performance accepted in accordance with the terms of this Contract will be supported in the state accounting system by sufficient appropriations or other non-appropriated funds, subject to intercept for Commonwealth owed debts under 815 CMR 9.00. Rate Contract (No Maximum Obligation. Attach details of all rates, units, calculations, conditions or terms and any changes if rates or terms are being amended.) Maximum Obligation Contract Enter Total Maximum Obligation for total duration of this Contract (or new Total if Contract is being amended). \$ PROMPT PAYMENT DISCOUNTS (PPD): Commonwealth payments are issued through EFT 45 days from invoice receipt. Contractors requesting accelerated payments must						
identify a PPD as follows: Payment issued within 10 days 2% PPD; Payment issued within 15 days % PPD; Payment issued within 30 days % PPD. If PPD percentages are left blank, identify reason:agree to standard 45 day cycle statutory/legal or Ready Payments (G.L. c. 29. § 23/); only initial payment (subsequent payments scheduled to support standard EFT 45 day payment cycle. See Prompt Pay Discounts Policy.) BRIEF DESCRIPTION OF CONTRACT PERFORMANCE or REASON FOR AMENDMENT: (Enter the Contract title, purpose, fiscal year(s) and a detailed description of the scope of performance or what is being amended for a Contract Amendment. Attach all supporting documentation and justifications.) Public Safety Equipment & Supplies, Services and Repairs FIR04						
Duration January 1, 2015 through December 31, 2016 with options to renew through December 31, 2020						
ANTICIPATED START DATE: (Complete ONE option only) The Department and Contractor certify for this Contract, or Contract Amendment, that Contract obligations:						
ERTIFICATIONS: Notwithstanding verbal or other representations by the parties, the "Effective Date" of this Contract or Amendment shall be the latest date that this Contract or Amendment shall be the latest date that this Contract or Amendment Start Date specified above, subject to any required provals. The Contractor makes all certifications required under the attached Contractor Certifications (incorporated by reference if not attached herelo) under the pains and enalties of perjury, agrees to provide any required documentation upon request to support compliance, and agrees that all terms governing performance of this Contract and doing usiness in Massachusetts are attached or incorporated by reference herein according to the following hierarchy of document precedence, the applicable Commonwealth Terms and conditions, this Standard Contract Form including the Instructions and Contractor Certifications, the Request for Response (RFR) or other solicitation, the Contractor's Response, and additional negotiated terms, provided that additional negotiated terms will take precedence over the relevant terms in the RFR and the Contractor's Response only if made using the process outlined in 801 CMR 21.07, incorporated herein, provided that any amended RFR or Response terms result in best value, lower costs, or a more cost effective Contract. UTHORIZING SIGNATURE FOR THE CONTRACTOR: Signature and Date Must Be Handwritten At Time of Signature) Paul Boudreau Print Name: Rathleen K. Reilly						
Print Title President .	Print Title: Director of Strategic Sourcing Sawices					

COMMONWEALTH OF MASSACHUSETTS ~ STANDARD CONTRACT FORM



Notary Public Commonwealth of Massachusetts My Commission Expires Nov. 21, 2019

This form is jointly issued and published by the Executive Office for Administration and Finance (ANF), the Office of the Comptroller (CTR) and the Operational Services Division (OSD) as the default contract for all Commonwealth Departments when another form is not prescribed by regulation or policy. Any changes to the official printed language of this form shall be void. Additional non-conflicting terms may be added by Attachment. Contractors may not require any additional agreements, engagement letters, contract forms or other additional terms as part of this Contract without prior Department approval. Click on hyperlinks for definitions, instructions and legal requirements that are incorporated by reference into this Contract. An electronic copy of this form is available at www.mass.gov/osc under OSD Forms.

Contract. An electronic copy of this form is available at www.mass.gov/osc under Guida	nce For Vendors - Forms or www.mass.gov/osd under OSD Forms.					
CONTRACTOR LEGAL NAME: All-Comm Technologies, Inc. (and d/b/a):	COMMONWEALTH DEPARTMENT NAME: Operational Services Division MMARS Department Code: OSD					
Legal Address: (W-9, W-4,T&C): 5 Whitmore Road, Revere, MA 02151	Business Mailing Address: OSD RM-1017, 1 Ashburton Place, Boston, MA 02108-1552					
Contract Manager: Paul Boudreau	Billing Address (if different):					
E-Mail: pboudreau@allcomm1.com	Contract Manager: Anthony Delaney					
Phone: 781-289-3000 Fax:	E-Mail: anthony.delaney@state.ma.us					
Contractor Vendor Code:VC6000174957	Phone: 617-720-3118 Fax:					
Vendor Code Address ID (e.g. "AD001"); AD .	MMARS Doc ID(s): ITT57*					
(Note: The Address Id Must be set up for EFT payments.)	RFR/Procurement or Other ID Number: ITT57					
X Statewide Contract (OSD or an OSD-designated Department) Collective Purchase (Attach OSD approval, scope, budget) Department Procurement (includes State or Federal grants 815 CMR 2.00) (Attach RFR and Response or other procurement supporting documentation) Emergency Contract (Attach justification for emergency, scope, budget) Contract Employee (Attach justification for emergency, scope, budget) Contract Employee (Attach justification for interim Contract and updated scope and budget) Legislative/Legal or Other: (Attach authorizing language/justification, scope and budget) The following Commonwealth Terms and Conditions Commonwealth Terms Commonwealth Terms and Conditions Commonwealth Terms Commonwealth Terms and Conditions Commonwealth Terms						
ANTICIPATED START DATE: (Complete ONE option only) The Department and Contractor certify for this Contract, or Contract Amendment, that Contract obligations:						
X 1. may be incurred as of the Effective Date (latest signature date below) and no obligations have been incurred prior to the Effective Date.						
2. may be incurred as of, 20, a date LATER than the Effective Date , a date PRIOR to the Effective Date , a date PRIOR to the Effective Date below, and the parties agree that payments for any obligations incurred prior to the Effective Date are authorized to be made either as settlement payments or as authorized reimbursement payments, and that the details and circumstances of all obligations under this Contract are attached and incorporated into this Contract. Acceptance of payments forever releases the Commonwealth from further claims related to these obligations.						
CONTRACT END DATE: Contract performance shall terminate as of October 31, 2018, with no new obligations being incurred after this date unless the Contract is properly amended, provided that the terms of this Contract and performance expectations and obligations shall survive its termination for the purpose of resolving any claim or dispute, for completing any negotiated terms and warranties, to allow any close out or transition performance, reporting, invoicing or final payments, or during any lapse between amendments.						
ERTIFICATIONS: Notwithstanding verbal or other representations by the parties, the "Effective Date" of this Contract or Amendment shall be the latest date that this Contract or mendment has been executed by an authorized signatory of the Contractor, the Department, or a later Contract or Amendment Start Date specified above, subject to any required provals. The Contractor makes all certifications required under the attached Contractor Certifications (incorporated by reference if not attached hereto) under the pains and enablies of perjury, agrees to provide any required documentation upon request to support compliance, and agrees that all terms governing performance of this Contract and doing usiness in Massachusetts are attached or incorporated by reference herein according to the following hierarchy of document precedence, the applicable Contractor Massachusetts are attached or incorporated by reference herein according to the following hierarchy of document precedence, the applicable Contractor and doing usiness in Massachusetts are attached or incorporated by reference herein according to the following hierarchy of document precedence, the applicable Contractor and doing usiness in Massachusetts are attached or incorporated by reference herein according to the following hierarchy of document precedence, the applicable Contractor and doing usiness in Massachusetts are attached or incorporated by reference herein according to the following hierarchy of document precedence, the applicable Contractor and doing usiness in Massachusetts are attached or incorporated by reference herein according to the following hierarchy of document precedence, the applicable Contractor and doing usiness in Massachusetts are attached or incorporated by reference herein according to the following hierarchy of document precedence, the applicable Contractor Response, the following hierarchy of document precedence, the applicable Contractor's Response, the following hierarchy of document precedence, the applicable Contractor's Respon						
int Title: President Print Title: AS SOUTH STATE TINA MARIE DISNE						