

Steven Goodkind, P.E.
Director of Public Works

Patrick Buteau
*Assistant Director
Parking & Fleet Services*



645 Pine Street Suite A
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(802) 863-0450 (T.T.Y) For Hearing Impaired
pbuteau@ci.burlington.vt.us

MEMORANDUM

To: Board of Finance
From: Patrick Buteau, Asst. Director DPW 
Date: September 6, 2012
Subject: FCC Mobile Radio Frequency Mandate

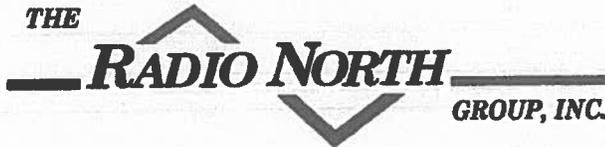
The Department of Public Works has a mobile radio network for its fleet vehicles with a base unit on the Redstone Tower. The FCC has mandated that all Public Safety and Industrial/Business licensees using 25 kHz VHF and UHF radios systems migrate to minimum 12.5 kHz efficiency by January 01, 2013.

The Department of Public Works falls within those mandates and as such have solicited quotes for the necessary upgrades to comply with this mandate. The quotations cover the base unit and antenna on Redstone Tower and two base units at the Pine Street location.

We don't believe we will need to buy new radios for the vehicles at this time as most can be reprogrammed and those that can't will be replaced and moved on a seasonal basis depending on the equipment being used.

Staff is requesting Finance Board approval to purchase the necessary upgrades from Radio North at a cost of \$12,466.

Assistant CAO Rich Goodwin indicated that this upgrade could be funded through the City's annual capital borrowing.



MOTOROLA SOLUTIONS



Budgetary Quote

Radio Solutions Channel Partner

12 Gregory Drive, Suite 4 - South Burlington, Vermont 05403 -
 John.P@RadioNorthGroup.com

Quote ID: AAAQ4218
 Created On: 4/25/2012
 Last Modified On: Apr 25, 2012

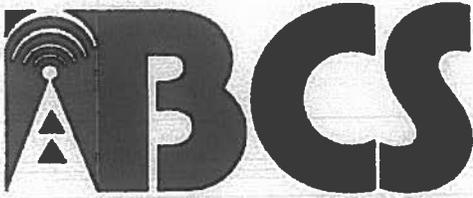
Prepared For:	Sales Representative:
Rob Green Burlington DPW - Equipment 645 Pine Street Burlington, VT 05401 rgreen@ci.burlington.vt.us Phone: 802-864-0166 Fax: Terms: Net 30 Ship via: UPS	John K. Pheeny President 800-762-8974 John.P@RadioNorthGroup.com

Line	Equipment Summary	Qty	Unit Price	Ext. Price
PRIMARY BASE UPGRADE FOR NARROWBAND				
1	Motorola MTR3000 base radio. Continuous duty, high power, DMR digital capable, upgradeable to repeater for two time slot operation, GPS and text messaging capable. Radio has RF preselector. Programming and installation is included.	1	\$7,481.00	\$7,481.00
2	New 5DB gain base antenna with new 7/8" cable, connectors and jumpers.	1	\$1,655.00	\$1,655.00
3	Installation of antenna, cables and jumpers. Includes rental of bucket truck.	1	\$2,000.00	\$2,000.00
4	Add lightning protection to your ground.	1	\$250.00	\$250.00
5	Motorola MC1000 deskset to replace existing DC control units at DPW - uses tone control.	2	\$540.00	\$1,080.00
6	Optional: Battery backup system with charging and revert.	0	\$2,300.00	\$0.00
7	Optional: 12 volt - 75AH batteries.	0	\$200.00	\$0.00

OBJECT:

- 1.) To replace 1980's model General Electric base radio to meet FCC's Jan 1, 2013 mandate for narrowband.
- 2.) To provide future use of DMR digital radio platform.
- 3.) To provide repeater upgrade capability to eliminate leased phone line to water tower.

Sub Total	\$12,466.00
Sales Tax	\$0.00
Shipping	\$0.00
Total	\$12,466.00



Burlington Communications
4735 Williston Road, Suite 30
Williston, VT 05495

QUOTE

Quote # **BCSQ4025**
 Date **07/26/12**
 Sales Rep. **Todd**

Phone **802-862-7092**
 Fax **802-860-8178**

Quote To:

Burlington Public Works
Rob Green
PO Box 849
Burlington, VT 05402

Ship To:

Burlington Public Works
Rob Green **802-863-4501**
PO Box 849
Burlington, VT 05402

Quote to Upgrade Base and Antenna System at Redstone Tower Site. Motorola Option

Ln #	Qty	Description	Unit Price	Ext. Price
1		Motorola MTR3000 Base		
2	1	VHF 100 Watt Continuous Duty Base, Motorola MTR3000, with Cabinet, Preselector, and Test Mic	\$8,995.00	\$8,995.00
3	2	Backup Battery, Communications Site Rated	\$245.00	\$490.00
4	1	Antenna, 3dB Gain Antenna Heavy Duty	\$675.00	\$675.00
5	200	Cable - 7/8" Foam, Andrews for UHF Cable Runs	\$5.95	\$1,190.00
6	2	Ground Kit - Coaxial 7/8", Andrews	\$27.00	\$54.00
7	2	Connector - N Female for 1/2" Foam, RFS	\$25.00	\$50.00
8	10	9914 Coaxial Cable for Jumpers	\$1.50	\$15.00
9	4	Connector, N-Male Crimp for 9914	\$8.00	\$32.00
10	1	Lightning Arrestor, 20-1000 MHz, Multiple Strike	\$65.00	\$65.00
11	1	AC Surge Protector, Transtector, SASD, Multiple Strike	\$175.00	\$175.00
12	2	Remote, 4 Freq. Tone Control 2-4 Wire	\$439.00	\$878.00
13	24	Installation Labor for Base, Antenna and Remotes	\$85.00	\$2,040.00
14				
		SubTotal		\$14,659.00
		Sales Tax		\$0.00
		Shipping		\$450.00
		Total		\$15,109.00

*Crane or Bucket Truck Service May be Required: Approximate Cost \$675

PRICES SUBJECT TO CHANGE AFTER 90 DAYS



Burlington Communications
4735 Williston Road, Suite 30
Williston, VT 05495

QUOTE

Phone 802-862-7092
 Fax 802-860-6178

Quote # BCSQ4031
 Date 07/26/12
 Sales Rep Todd

Quote To:
 Burlington Public Works
 Rob Green
 PO Box 849
 Burlington, VT 05402

Ship To:
 Burlington Public Works
 Rob Green
 PO Box 849
 Burlington, VT 05402

802-863-4501

Quote to Upgrade Base and Antenna System at Redstone Tower Site. Kenwood Option

Ln #	Qty	Description	Unit Price	Ext. Price
1		Kenwood Base		
2	1	Kenwood VHF Base	\$1,245.00	\$1,245.00
3	1	110 Watt RF Amplifier	\$2,295.00	\$2,295.00
4	1	Smart Charger Battery Backup Option	\$675.00	\$675.00
5	1	Tone Remote Adapter	\$525.00	\$525.00
6	1	Equipment Enclosure	\$1,295.00	\$1,295.00
7	2	Backup Battery, Communications Site Rated	\$245.00	\$490.00
8	1	Antenna, 3dB Gain Antenna Heavy Duty	\$675.00	\$675.00
9	200	Cable - 7/8" Foam, Andrews for UHF Cable Runs	\$5.95	\$1,190.00
10	2	Ground Kit - Coaxial 7/8", Andrews	\$27.00	\$54.00
11	2	Connector - N Female for 1/2" Foam, RFS	\$25.00	\$50.00
12	10	9914 Coaxial Cable for Jumpers	\$1.50	\$15.00
13	4	Connector, N-Male Crimp for 9914	\$8.00	\$32.00
14	1	Lightning Arrestor, 20-1000 MHz, Multiple Strike	\$65.00	\$65.00
15	1	AC Surge Protector, Transtector, SASD, Multiple Strike	\$175.00	\$175.00
16	2	Remote, 4 Freq. Tone Control 2-4 Wire	\$439.00	\$878.00
17	24	Installation Labor for Base, Antenna and Remotes	\$85.00	\$2,040.00
18				
			SubTotal	\$11,699.00
			Sales Tax	\$0.00
			Shipping	\$450.00
			Total	\$12,149.00

*Crane or Bucket Truck Service May be Required: Approximate Cost \$675

PRICES SUBJECT TO CHANGE AFTER 90 DAYS