Dane County Contract Addendum Cover Sheet

DOA:

Date In:

9/12/23

Date Out:

Res 147 significant

Controller, Purchasing, Corp Counsel, Risk Management

Dept./DivisionPublic Safety CommunicationsVendor NameRACOMBrief Addendum Title/DescriptionReplacement/Update of DaneCom Microwave system and six batteries for radio tower sites.Vendor MUNIS # 26968Addendum Term 08/01/2023-12/31/2023Amount (\$)\$ 1,407,502.40	1911B						
Brief Addendum Title/Description Replacement/Update of DaneCom Microwave system and six batteries for radio tower sites. Vendor MUNIS # 26968 Addendum Term 08/01/2023-12/31/2023 Amount (\$) \$ 1,407,502.40							
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six batteries for radio tower sites. Amount (\$) \$ 1,407,502.40							
Department Contact Information Vendor Contact Information							
Department Contact Information Vendor Contact Information Contact Luis Bixler Contact Tim Romanelli							
Phone # 608-267-2507 Phone # 800-722-6643							
Email bixler.luis@countyofdane.com Email timothy.romanelli@racom.net	<u> </u>						
Purchasing Officer Megan Rogan							
Purchase Order – Maintenance or New PO							
	3,823.40						
PU# 20230648 Org: CPPUBSAF Obj: 58222 Proj: \$ 238,67							
No PO Maintenance Needed – this addendum does not change the dollar amount of the contract	act.						
New PO / Req. Submitted Org: Obj: Proj:							
□ Req# Org: Obj: Proj:							
Budget Amendment							
A Rudget Amendment has been requested via a Funds Transfer or Resolution. Upon addendum	n approval						
and budget amendment completion, the department shall update the requisition in MUNIS accordingly.							
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Goldade, Michelle

From: Goldade, Michelle

Sent: Tuesday, September 12, 2023 4:33 PM

To: Hicklin, Charles; Rogan, Megan; Gault, David; Lowndes, Daniel

Cc: Stavn, Stephanie; Oby, Joe

Subject: Contract #14911B

Attachments: 14911B.pdf

Tracking:	Recipient	Read	Response
	Hicklin, Charles	Read: 9/12/2023 4:36 PM	Approve: 9/12/2023 4:36 PM
	Rogan, Megan		Approve: 9/15/2023 8:13 AM
	Gault, David	Read: 9/12/2023 4:34 PM	Approve: 9/14/2023 4:45 PM
	Lowndes, Daniel	Read: 9/13/2023 8:16 AM	Approve: 9/13/2023 8:16 AM
	Stavn, Stephanie	Read: 9/13/2023 9:10 AM	
	Oby, Joe		

Please review the contract and indicate using the vote button above if you approve or disapprove of this contract.

Contract #14911B

Department: Public Safety Communications

Vendor: RACOM Corporation

Contract Description: Addendum to replace/update DaneCom Microwave System and six batteries at radio tower sites

(Res 147)

Contract Term: 8/1/23 – 12/31/23 Contract Amount: \$1,407,502.40

Michelle Goldade

Administrative Manager
Dane County Department of Administration
Room 425, City-County Building
210 Martin Luther King, Jr. Boulevard
Madison, WI 53703

PH: 608/266-4941 Fax: 608/266-4425 TDD: Call WI Relay 711

Please Note: I currently have a modified work schedule...I am in the office Mondays and Wednesdays and working remotely Tuesdays, Thursdays and Fridays in accordance with COVID 19 response guidelines.

1	2023 RES-147
2	
3 4	AMENDMENT TO RACOM RADIO CONTRACT TO INCLUDE MICROWAVE AND REPLACEMENT OF SIX RADIO TOWER SITE BATTERIES
5	
6 7 8 9 10 11	Dane County Public Safety Communications (PSC) utilizes RACOM, a L3 Harris National Center of Excellence provider to maintain and monitor the DaneCom radio system. As part of maintaining the health and functionality of the DaneCom radio system, both the Microwave system and six batteries that provide emergency electrical during a power outage need to be replaced. This contract amendment introduces the already budgeted items of the Microwave and Battery replacement(s) into the existing RACOM contract.
12 13 14 15	NOW, THEREFORE, BE IT RESOLVED that the Dane County Board of Supervisors does authorize a contract amendment to Dane County Contract #14911 with the total cost being \$1,407,502.40 and that the County Executive and County Clerk are authorized to execute the agreement.
16	



DANE COUNTY CONTRACT ADDENDUM #14911B

Revised 01/2022

THIS ADDENDUM, made and entered into effective as of the date by which both parties hereto have executed this document, by and between the County of Dane (hereinafter referred to as "County") and RACOM (hereinafter, "Provider").

WITNESSETH:

WHEREAS Provider and County, by a separate document (hereinafter, the "Master Agreement"), Dane County Contract # 14911, have previously entered into a contractual relationship pursuant to which Provider provides Radio System Maintenance, and

WHEREAS County and Provider wish to amend the Master Agreement in order to upgrade the current Nokia MDR8000 Microwave Radios to the Aviat IRU600 Microwave Radios per the attached scope of work, and to replace site batteries for UPS per the attached site list.

NOW, THEREFORE, in consideration of the above premises and the mutual covenants of the parties hereinafter set forth, the receipt and sufficiency of which is hereby acknowledged by each party for itself, the parties do agree as follows:

- The Master Agreement shall remain in full force and effect unchanged in any manner by this addendum except as changes are expressly set forth herein. This addendum shall control only to the extent of any conflict between the terms of the Master Agreement and this addendum.
- 2. The Master Agreement, and any amendment or addendum to it, may be executed and transmitted to any other party by legible facsimile reproduction or by scanned legible electronic PDF copy, and utilized in all respects as, an original, wet-inked manually executed document. Further, the Master Agreement and any amendment or addendum thereto, may be stored and reproduced by each party electronically, photographically, by photocopy or other similar process, and each party may at its option destroy any original document so reproduced. All parties hereto stipulate that any such legible reproduction shall be admissible in evidence as the original itself in any judicial, arbitration or administrative proceeding whether or not the original is in existence and whether or not such reproduction was made by each party in the regular course of business. This term does not apply to the service of notices under the Master Agreement, or any subsequent amendment or addendum.
- 3. PROVIDER shall upgrade the current Microwave Radios per the attached scope of work and spreadsheet with detailed list of equipment and replace site batteries for UPS per the attached list which identifies the sites and equipment to be installed at each location. The total cost of this combined project is \$1,407,502.40.

14911B 1

Site Battery Replacements for UPS - \$238,679.00 Microwave System Upgrade - \$1,168,823.40 **IN WITNESS WHEREOF,** the parties, by their respective authorized representatives, have set their hands and seals as of the dates set forth below.

FOR PROVIDER:

MICHAEL MILLER *NAME* *TITLE* PIKSIDANT		S/14/23 Date

FC	OR COUNTY:	
Joseph T. Parisi Dane County Executive		Date
Scott McDonell		Date
Dane County Clerk		Date



201 West State Street Marshalltown, IA 50158 800-722-6643 Fax 641-752-0674 www.racom.net Proposal Prepared for:

Address
City
Madison

State & Zip Code
County
Prone/FAX
Contact Name
Contact E-mail

Dane County, Wisconsin

210 Martin Luther King Jr Blvd Room 109
Madison
WI 53703-3345
Uname Kevin Fosso
Kevin Fosso
Contact E-mail
Fosso@countyofdane.com

TEM	QTY	PART NO.	DESC	sal Title ***	UNIT	EXTENDED
1	<u> </u>	TAILT NO.			\$ -	\$ -
•			Microwave System Upgrade:		######	
			Upgrade (11)Nokia MDR8000 Microwave radios to	the Aviat IRU600 Microwave Radios	\$ -	\$ -
			Install new microwave link, Brigham to Bluemound		\$ 54,800.0	
			See Scope of Work for Detailed Project Description		\$ -	\$ -
			Includes 3 year warranty (warranty starts at factory	shipment)	\$ -	\$ -
			Includes 3 year ProVision Support	· · · ·	\$ -	\$ -
			Includes Spares - see scope for detailed list		\$ -	\$ -
					\$ -	\$ -
			Upgrade Symphony Console SSD to Version 2 driv	res	\$ 1.0	0 \$ -
	41		KIT, HARD DRIVE, 240GB SSD, SDP 2.0 (25% off	f L3H list per contract)	\$ 1,125.0	0 \$ 46,125.
			Installation, configuration, imaging, project manage	ment	\$ 61,200.0	0 \$ 61,200.
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					Total Equipment Price	
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erm	Terms	of Purchase	e: 50% due at time of proposal			al \$ 1,168,823.
			oon final acceptance	Tax Rate		es \$ -
	Purcha		Jon mai acceptance		Shippi	ng
					I ota	1 4 1 168 823

ystem Description:	
Proposal Presented By: Tim Romanelli	Date: 6/9/2023
Proposal Accepted By:	Date:



Dane County, WI Microwave System Upgrade

RACOM Statement of Work

Project: Dane County, WI, Microwave System Upgrade

Scope:

Upgrade the Nokia MDR8000 Microwave radios to the Aviat IRU600 Microwave Radios.

Description:

The project comprises a quantity of 11 microwave paths in Dane County, WI. The network topology is a 7-path microwave ring with 2 microwave spurs. All paths that are part of a ring configuration are designed with non-standby (NSB) microwave radios. All paths that are not part of a ring configuration are designed with monitored hot-standby (MHSB) microwave radios.

All paths are designed with the Aviat IRU600 all indoor radio.

Path Studies will be performed at each site to ensure there are no obstructions that would impact reliability predictions. Recommendations will be made if any paths are deemed insufficient.

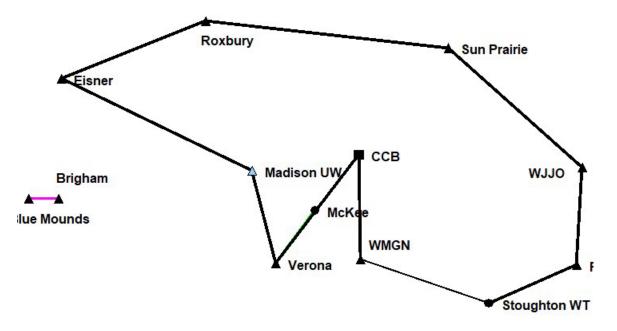


Figure 1: Microwave loop design.



Microwave radios will be replaced at the following sites:

WJJO (Note: This link will be modified to go to CCB instead of Verona – new antenna and

lines required) Sun Prairie

Roxbury

Eisner

Madison UW

Verona

McKee

ССВ

Stoughton WT

Rockdale

A new link will be added between Brigham and Bluemound. T1 to IP modules will be added to the exiting Interplex MUX (Gates Air T1-IP MUX will be used to replicate T1s for the MSTR 3 equipment.)



The Aviat radios will connect via fiber to the existing Nokia 7705 Service Aggregation Router

8 of the microwave paths are designed in the L6 GHz band, 2 of the paths are designed in the U6 GHz band and 1 of the paths is designed in the 11 GHz band.

All of the microwave paths are designed with a fixed modulation of 128 QAM and a data throughput of 163 Mbps.

All paths are designed to provide a minimum 2-way availability of 99.999%.

The existing antennas and lines will be reused. Line Sweeps of existing antenna systems will be performed. Antenna or line problems will be reported with recommendations.

Microwave links will be replaced one at time, with traffic routed in the opposite direction so that no down time on the system should occur.

The existing -48-volt DC plan will be reused.

P25 Tower Site Equipment		Site: WMGN	
Description	Manufacture	Part Number	QTY
Antennas/Combiners/TTA & MultiCoupler			
Antenna - 12.5dBd,Directional; 746-960 MHZ, DIN	Sinclair	SE419-SWBPALDF(D00) R160	0
Antenna, Aurora - 12.5dBd, Directional 746-806Mhz, DIN 220deg	Sinclair	SR4BC-HF4P4LDF(D03-PIP)	0
Antenna, Aurora - 13.5dBd, Bi-Directional 746-806Mhz, DIN	Sinclair	SR4BD-HF4P2LDF(D00-PIP)	0
Antenna - 12dBd, Omni 746-869 MHZ, DIN (PIM-PIP)	dbSpectra	DS7C12P36U-D	0
Antenna Clampset	Sinclair	CLAMP006B	0
Non-Torsion Antenna Mount for 20' Dipole antennas	dbSpectra	DSH3V3N	0
Antenna - 3dB, Omni Dipole 150-160Mhz for Paging	Tessco	DB222-A	0
Antenna - 11.5dBi, Omni Dipole 450-470Mhz for Paging	Tessco	DB420B	0
TX Ceramic Combiner, 4ch	dbSpectra	DSCC85-04DS1 (AC)	0
800Mhz TX window filter same level TX and RX antennas	dbSpectra	MWF8AM-D	0
Tower Top Amplifier NEW	dbSpectra	DS7TMA17C	0
RX Mulit-Coupler NEW	dbSpectra	DSX7PDU08-AC	0
19" 2 Post Equipment rack Silver	Tessco	SB556084XUSL	0
19" rack isolation kit	Tessco	SB254101	0
19" Vertical Rack ground bar kit	Talley	SBVB72K	0
19" 100Amp Dual buss fuse panel 20Amp output	Tessco	NPGMT1125	0
Cable			
RG58A/U coax	Belden	8219	0
1/4" Eupen Hiflex	Eupen	EC1-50-HF	0
LMR-400	Tessco	59520	0
1/2" Eupen Hiflex	Eupen	EC4-50-HF	0
1/2" Eupen Standard	Eupen	EC4-50	0
7/8" Eupen Standard	Eupen	EC5-50A	0
1-1/4" Eupen Standard	Eupen	EC6-50A	0
1-1/4" Eupen Standard	Eupen	EC6-50A	0
Connectors			
Connector, SMA male for RG58A/U	Amphenal	901-9876-RFX	0
Connector, BNC male for RG58A/U	Amphenal	031-320-RFX	0
Connector, BNC type male for 1/4" SuperFlex	CommScope	F1TBM-C	0
Connector, N male crimp for LMR400	Tessco	172102H243	0
Connector, TNC Rightangle male crimp for LMR400	Tessco	EZ-400-TM-RA-X	0
Connector, N straight male for 1/2" Eupen Standard	Eupen	NM50V12	0
Connector, N straight male for 1/2" Eupen Hiflex	Eupen	NM50B12X	0
Connector, N right angle male for 1/2" Eupen Hiflex	Eupen	NM50BL12X	0
Connector, N straight female for 1/2" Eupen standard	Eupen	NF50V12	0
Connector, DIN straight male for 1/2" Eupen standard	Eupen	7/16M50V12N1	0
Connector, DIN right angle male for 1/2" Eupen standard	Eupen	7/16M50VL12	0
Connector, DIN straight male for 1/2" Eupen Hiflex	Eupen	7/16M50B12X	0
Connector, DIN right angle male for 1/2" Eupen Hiflex	Eupen	7/16M50BL12X	0
Connector, DIN female for 7/8" Eupen	Eupen	7/16F50V78N1	0
Connector, N female for 7/8" Eupen	Eupen	NF50V78N1	0
Connector, N female for 1 1/4" Eupen	Eupen	NF50V114N1	0
Connector, DIN female for 1 1/4" Eupen	Eupen	7/16F50V114N1	0
uWave			
Elliptical waveguide 5.85-7.125Ghz	Eupen	EU63	144
6' Parabolic Dish 5.925-6.425GHz 39.0dBi	Tessco	HP6-59RS	0
Elliptical waveguide 5.85-7.125Ghz	Eupen	EU90	0
Connector, uWave EU63 5.85-7.125Ghz	Eupen	EU63PCPR137G	2
Connector, uWave EU90 10.20-11.70Ghz	Eupen	EU90PCPR90G	0
EU63 Flange hardware kit, CPR137	Eupen	HK-CPR137	2
EU90 Flange hardware kit, CPR90	Eupen	HK-CPR90	0
Half-thickness flange gasket, CPR137	Eupen	HGK63	2
Full-thickness flange gasket, CPR137	Eupen	FGK63	0
Half-thickness flange gasket, CPR90	Eupen	HGK90	0

Full-thickness flange gasket, CPR90	Eupen	FGK90	0
Pressure window, CPR137, EU63	Eupen	PW63FF137	1
Pressure window, CPR90, EU90	Eupen	PW90FF90	0
Dehydrator,100I/H 48VDC TCP/IP Ethernet-SNMP, 3/8" unions	Eupen	281401	0
Gas port fitting, 3/8" tubing	Eupen	87000-06-02	1
Tubing, 3/8" OD PE for Dehydrator per foot	Eupen	3/8 TUBING	10
Txist Flex, EU63, CPR137 ends check catalog for config	Eupen	TF3663GG	1
Txist Flex, EU90, CPR90 ends check catalog for config	Eupen	TF3690GG	0
Hoisting grip, lace-up, EU63	Eupen	HG-64	1
Hoisting grip, lace-up, EU90	Eupen	HG-85	0
Ground kit, Standard, EU63	Eupen	GK-S63	3
Ground kit, Standard, EU90	Eupen	GK-S85	0
Snap-in hanger, EU63, kit 10	Eupen	SH-U63	3
Snap-in hanger, EU90, kit 10	Eupen	SH-U90	0
Cushion hanger assembly for EU63 kit of 5	Eupen	CH-A63-1	1
Cushion hanger assembly for EU90 kit of 5	Eupen	CH-A90-1	0
Misc.	·		
Hoisting grip for LMR400	Tessco	HG400T	0
Pre-laced hoisting grip for 1/2"	Eupen	HG-12L	0
Lace-up hoisting grip for 1/2"	Eupen	HG-12	0
Pre-laced hoisting grip for 7/8"	Eupen	HG-78L	0
Lace-up hoisting grip for 7/8"	Eupen	HG-78	0
Pre-laced hoisting grip for 1 1/4"	Eupen	HG-114L	0
Lace-up hoisting grip for 1 1/4"	Eupen	HG-114	0
1/4" Screw pin shackle for hoisting grips	Tessco	C40053001	0
Polyphaser, 700-2700Mhz 750 watt DIN(F), DIN(M)	Tessco	TSX-DFM-P2-BF	0
Polyphaser, 400-1200 MHz+36VDC NMNF for TTA t/p	Tessco	CGXZ+36NMNF-A	0
Polyphaser, 100-512 MHz NMNF for Paging	Tessco	VHF50HN-MA	0
Polyphaser, 125-1000 MHz NMNF for Paging	Tessco	IS-B50HN-C2-MA	0
Polyphaser, Hardware for N Bulkhead	Tessco	9100-0129	0
Polyphaser, 125-1000 MHz NMNF for Split uWave ODU	Tessco	DT-NFM	0
Polyphaser, 125-1000 MHz NFNF for Split uWave Inside	Tessco	RGT	0
Ground kit for 3/8" LMR400	Tessco	GK-S400TT	0
Ground kit for Eupen 1/2" cable	Eupen	GK-C12	0
Ground Kit for Eupen 7/8" cable	Eupen	GK-C78	0
Ground Kit for Eupen 1 1/4" cable	Eupen	GK-C114	0
Electrical Tape, Type Super 88 3/4" 1 roll	Tessco	88-Super-3/4x66FT	0
Weatherproofing kit	Tessco	WK-99	0
3/8" Cushion Insert for use with 1/2" Snap-In 10 pkg	Eupen	CIN3812	0
1/2" stackable snap-in hangers, 10 pack	Eupen	SH-S12	0
7/8" stackable snap-in hangers, 10 pack	Eupen	SH-S78	0
1 1/4" stackable snap-in hangers, 10 pack	Eupen	SH-S114	0
Stand-off Adapter, 3 way Kit of 10	Eupen	SA-38X	0
Universal round member Support Bracket Kit of 10	Eupen	RM-USBG	0
Banding, 1/2" x 100' Stainless Steal	Eupen	MT-640	0
Banding, 1/2" stainless steel buckle 100 pack	Eupen	MT-641	0
Banding Tool	Eupen	MT-644	0
Snap-in Stand-off Adapters for round members 10 pkg	Eupen	SA-SS200	0
Angle Adapter, with 3/8" tapped holes 10pkg	Eupen	AA-SL	0
Angle Adapter, Universal 10pkg	Eupen	AA-U	0
Threaded Rod Support kit 3/8" x 12" kit of 5	Eupen	TR-SK12-5	0
4" port, BOOTS, ORDER CUSHION SEPARATELY	Eupen	BA-400	1
4.5" port, BOOTS, ORDER CUSHION SEPARATELY	Valmont	B450	0
5" port, BOOTS, ORDER CUSHION SEPARATELY	Eupen	BA-500	0
3/8", CUSHIONS, 2 HOLES	Eupen	SC-38-2	0
1/2", CUSHIONS, 1 HOLES	Eupen	SC-12-1	0
7/8", CUSHIONS, 1 HOLES	Eupen	SC-78-1	0

1 1/4" CUSHIONS 1 HOLES	Eupop	SC-114-1	0
1-1/4", CUSHIONS, 1 HOLES	Eupen	SC-114-1 SC-63-1	1
EU63, CUSHIONS, 1 hole EU90, CUSHIONS, 1 hole	Eupen	SC-90-1	0
·	Eupen	SSIFB2550	0
Flat cable support bracket fits 1-1/2" to 5-1/2" OD pipe	Eupen		
star support brackets,T- BRACKET 1-1/2" - 5-9/16" PIPE	Eupen	SSTB2550	0
6 position waveguide bracket	Valmont	WG6	0
Ice Bridge 10' x 24" 14 gauge with 18' direct burial posts	Valmont	IB24D-216V	0
Ground buss bar 1/4" x 20" x 4" solid copper	Eupen	GB-0420-U	0
Ground buss bar 1/4" x 12" x 4" solid copper no hardware kit	Eupen	GB-0412-NH	0
Ground buss bar 1/4" x 10" x 2" solid copper no hardware kit	Eupen	GB-0210-NH	0
Universal Buss Bar Hardware Kit	Eupen	GB-IT	0
Harger ground clamp	Tessco	213T	0
Port window Trapeze 3 x 6	Eupen	AT-K306-U	0
HD Pipe to Pipe clamp set 1-1/4" to 10" for large taper leg	Valmont	UPC2	0
Universal stiff arm attachment for microwave	Valmont	SAM-U	1
Stiff arm attachment 2-3/8" OD pipe and up to 4-1/2" leg	Talley	MTSSA-B	0
Stiff arm attachment 2-3/8" OD pipe and up to 8-5/8" leg	Talley	MTSSA-BL	0
Heavy Duty Pipe to Pipe Clamp Set 1 1/2" to 3 1/2" pipe	Tessco	BC-30-10	0
Heavy Duty Pipe to Pipe Clamp Set 2 3/8" to 5" pipe	Tessco	BC-35-14	0
Heavy Duty Pipe to Pipe Clamp Set 2 3/8" to 5" pipe dual rod	Tessco	BC-35-14D	0
Heavy Duty Pipe to Pipe Clamp Set 1 1/2" to 3 1/2" pipe	Valmont	SCP10K	0
Welded Pipe to Pipe Clamp Set 1 1/2" to 3 1/2" pipe	Tessco	BB-S10-10	0
Welded Pipe to Pipe Clamp Set 2 3/8" to 5" pipe	Tessco	BB-S20-14	0
4-1/2" Ajustable uwave Mount 0" to 8" leg	Eupen	PM-SU4-63	2
4-1/2" Ajustable uwave Mount 0" to 16" leg	Tessco	PML-SU4-96	0
Galvanized Pipe 2-3/8" OD x 6'	Tessco	MT-651	0
Galvanized Pipe 3-1/2" OD x 6'	Tessco	MT54772	0
Galvanized Pipe 4-1/2" OD x 8'	Tessco	MT-654-96	0
Galvanized Pipe 2-7/8" OD x 84"	Tessco	MT54684	0
Crossover Plate. Bracket 1-1/2" OD pipe to 4-1/2" pipe	Valmont	SCX7-U	0
Crossover Plate. Bracket 2.875" OD pipe to 2.875" pipe each	Tessco	XP-2525	0
Monopole Collar 4 position 12" to 60" pole	Valmont	UQB4	0
Monopole Collar/ Quad collar mount	Sabre	C10110300	0
Monopole Collar/ Tri collar mount	Sabre	C10112300	0
uWave Dish ice shield 4'	Valmount	ISMD4	0
uWave Dish ice shield 6'	Valmount	ISMD6	0
36" Side Arm for tapered tower 4" to 8" leg for VHF Paging	Eupen	PBG3T4	0
36" Side Arm for tapered tower 2" to 5" leg for VHF Paging	Eupen	PBG3T2	0
36" Side Arm for straight tower 2" to 5" leg for VHF Paging	Eupen	PBG3S2	0
36" Antenna Side Arm for VHFPaging	Eupen	S-300	0
48" Antenna Side Arm Standard for UHF Paging	Eupen	S-400	0
48" Antenna Side Arm Heavy Duty for UHF Paging	Eupen	HS400	0
24" Panel Antenna Standoff	Eupen	P200	0
Antenna Side Arm heavy duty 6'	Eupen	HS600	0
Universal tieback 2-3/8" x 12'	Eupen	SA-B12	1
	•		

ITEM	DESCRIPTION	PART NUMBER	SYSTEM	WJJO	Sun Pra QTY	airie Roxbur QTY	y Eisner QTY	Madis QTY	on U Verona QTY	CCB	WMGN QTY	Stought	on Rockdal QTY	McKee QTY	Blue M	oun Brigha QTY	m
1	Microwave Radio Equipment IRU600 v4 RF Shelf				~										~		
1.102	IRUGOOM RFSEC ASSY MHSB RX UNEQUAL SPLT, IF TR SP-HP 10.5-11 GHL, Filter-non ACCP IRUGOOM RFSEC ASSY 1+0 REPEATER, IF TR SP-HP/EHP L6 GHz, Filter-non ACCP, 60/30 MHz IRUGOOM RFSEC ASSY 1+0 REPEATER, IF TR SP-HP S-8-U6 GHz, Filter-non ACCP	EV206-AMC-AM0-410000 EV205-AML-AEL-416100 EV205-AMT-AMT-410100		2 2 8	0 1 0	0 1 0	0 0 1	0 0 1	0 0 1	1	1	1	1	1	1	0	0
	IRU600 v3/v4 Waveguide Kits																
1.201	Waveguide Extension Kit, IRU600 v3/v4, 6 GHz, Top Shelf in Rack, NP or MHSB, Main Port Waveguide Extension Kit, IRU600 v3/v4, 11 GHz, Top Shelf in Rack, NP or MHSB, Main Port	179-530135-AA101 179-530135-AA121	1		1	0	0	1	1	0		0	0		0	0	0
	Waveguide Extension Kit, IRU600 v3/v4, 11 GHz, 10p Shelf in Rack, NP or MHSB, Main Port Waveguide Extension Kit, IRU600 v3/v4, 6 GHz, Top Shelf in Rack, Repeater Port	179-530135-AA121 179-530135-AA102	1	0	1	1	1	1	1	1		1		1	1	0	U
1.204	Waveguide Extension Kit, IRU600 v3/v4, 11 GHz, Second Shelf in Rack, NP or MHSB, Main Port	179-530135-BB221		1	0	0	0			1					0		0
1.205	EXT BRKT KIT IRU600 2 SHELF	179-530089-001		1	0	0	0	0		1					0		0
	WTM4100 WTM4000 Base License, inc CLI & GUI, IPv4 or IPv6, VLANs, 10Mbps	WZL-BASE		2	0	0	0	0	0	0					0	1	1
1.302	WTM 4100, 18 GHz, T-R 1560MHz, 19260-19700 TX high, A2C+ capable, +/-20 to +/-57V & 802.3bt PoE	W41-18H5-DP2		1	0	0	0	0	0							1	0
1.303	WTM 4100, 18 GHz, T-R 1560MHz, 17700-18140 TX low, A2C+ capable, +/-20 to +/-57V & 802.3bt PoE ANTENNA, 18 GHZ, 0.6 M (2FT), VALULINE, HPLP (RECTANGULAR AND CIRCULAR INTERFACE), DIRECT MOUNT, DIS	W41-18L5-DP2		1	0	0	0	0	0	0	0	0	0	0		0	1
	WTM 4000 Radio Throughput License 100 Mbps	WZF-40100		2												1	1
	WTM 4000 Adaptive Modulation License up to 1024 QAM	WZF-AM1		2	0	0	0	0	0	0					0	1	1
	AOD RADIO POE CABLE, CAT 6, 22AWG, 50M PRE-TERMINATED WITH RJ-45, GLAND PRE-FITTED Outdoor GbE, PoE++ Data Line Surge Protector (ALPU-F140)	037-579724-050		2	0	0	0	0	0	0	0	0	0	0		1	1
	POE INJECTOR, 112W 40 to 72VDC, POWER CORD NOT INCLUDED, USE WITH ALL WTM 4000 (MIT-65G-4856)	045-310107-001		2	0				0	0	0		0	0		1	1
	Intelligent Nodal Unit - Extended (INUe)																
	INUe Shelf e/w Node Controller Card & Fan Shelf INUe Forward Mounting Kit	EXX-000-205 179-530064-001	1		1	1	1	1	1	1		1	1		1		
1.403	Node Protection Card	EXS-002	1	1	1	1	1	1	1	1	1	1	1	1	1		
	RAC 70v2, QPSK-4096QAM, NO XPIC, ACM	EXR-700-002	2		2	2	2	2	2	4		2	2		2		
	Gigabit Ethernet Card (DAC GE3) SFP OPT GIGE 1310nm SMF LC 10KM 0 to 70C	EXD-181-002 079-422656-001	2		2	2	2	2	2	2		2	-		1		
1.407	Protection / Bridging Cable, DAC GE3 to DAC GE3, SFP Direct Fit, 500 mm	037-579461-500		0	0	0	0	0	0	0	0	0	0	0	0		
	Aux Card for Alarm I/O	EXA-001 037-579315-001	1		1	1	1	1	1	1		1	1		1		
	Aux Card Alarm I/O Cable, HD15 to Stub, 10 Meters NODE SW LICENSE, 200 Mbps TOTAL RADIO PAYLOAD CAPACITY	037-579315-001 EZE-08004	1	0	0	1	1	1	0	0	-	0	-	-	0		
1.411	NODE SW LICENSE, 400 Mbps TOTAL RADIO PAYLOAD CAPACITY	EZE-08006	1	.0	1	1	1	1	1	0	1	1	1	1	1		
	Node Software License: 800 MB Total Node Capacity Node Software License: 1.2 GB Total Node Capacity	EZE-08007 FZF-08008		0	0	0	0	0	0	1	0	0	0	0	0		
	Node Software License: 1.2 GB Total Node Capacity Node Software License: Adaptive Coding & Modulation (ACM)	EZF-02	1		1	1	1	1	1	1	1	1	1	1	1		
1.415	Node Software License: Ethernet OAM w/ G.8032 Ring Protection	EZF-10		0	0	0	0	0	0	0		0	0		0		
	IRU600 600 High power option 1 x RFU IRU600 600 Nodal High power option 2 x RFU	EZF-61 EZF-62		2	0	0	0	0	0	0		0			0		
1.418	IRU600 600 Nodal High power option 4 x RFU	EZF-64		1	0	0	0	0	0	1	0	0	0	0	0		
1.419	ODU 600 Nodal High power option 2 x ODU	EZF-52	,	0	0	0	0	0	0	0	0	0	0	0	0		
	Microwave Racks/Accessories																
	Rack Assembly, 7'0", Aluminum w/ Shipping Crate Rack Assembly, 9'0", Aluminum w/ Shipping Crate	CHT-46353-503 LOC-46353-508		0	0	0	0										
	Circuit Breaker Panel, 6 A Side & 6 B Side Breaker Positions, 10 Blank Covers	179-530307-9910		0	0	0	0										
	Common Breakers & Blanking Plugs per Rack Drawing	COMMON-BREAKERS-RACK		0	0	0	0										
	Rack Ground Bar, 72 Inches Channel Mounting Kit	LOC-TRGBVKIT145872W 020-018475-005	3.	3	0 3	0 3	0 3	3	3	3	3	3	3	3	3		
	Microwave Spares IRU600 v4 Spares																
	RFU, EHP, IRU600v4 IF TR, L6 GHz, 5925-6425 MHz	ERE-AL6-401		1													
2.102	RFU, MP, IRU600v4 IF TR, 10.5-11 GHz, 10500-11700 MHz	ERM-ACC-401		1													
	RFU, MP, IRU600v4 IF TR, 5.8-L6-U6 GHz, 5725-7125 MHz Fan Tray Kit, IRU600 v4 (Two Fan Trays / Kit)	ERM-ATT-401 179-531050-001		1													
	Transmitter Coax RF Switch	131-142718-001		1													
	WTM4100 WTM4000 Base License, inc CLI & GUI, IPv4 or IPv6, VLANs, 10Mbps	WZL-BASE		2													
	WTM 4100, 18 GHz, T-R 1560MHz, 19260-19700 TX high, A2C+ capable, +/-20 to +/-57V & 802.3bt PoE	W41-18H5-DP2		2													
	WTM 4100, 18 GHz, T-R 1560MHz, 17700-18140 TX low, A2C+ capable, +/-20 to +/-57V & 802.3bt PoE	W41-18L5-DP2		2													
	WTM 4000 Radio Throughput License 100 Mbps WTM 4000 Adaptive Modulation License up to 1024 QAM	WZF-40100 WZF-AM1		2													
2.3	Intelligent Nodal Unit - Extended (INUe) Spares																
2.301	Node Controller Card	EXN-005		1													
	INUe Shelf Fan Card Node Protection Card	EXF-101 EXS-002		1													
2.304	RAC 70v2, QPSK-4096QAM, NO XPIC, ACM	EXR-700-002		1													
	Gigabit Ethernet Card (DAC GE3) Aux Card for Alarm I/O	EXD-181-002 EXA-001		1													
2.306	AUX Card for Alarm I/U	EXA-001		1													
	ANTENNA SYSTEMS (RFS) Antennas																
	ANTENNA, 6W GHZ, 1.8M, HP, REMOTE MOUNT, SINGLE POLE, 5.725 - 7.125 GHZ, CPR137G, 145KMPH, 201KMPH	RWS-HP6-6RS		1								1					
4.102	ICE SHIELD FOR 6 FT DISH (ICE-SHIELD6)	NSM-ICE-SHIELD6		1								1					
4.103	ICE SHIELD FOR 3 FT DISH (ICE-SHIELD3)	NSM-ICE-SHIELD3		0												1	



201 West State Street Marshalltown, IA 50158 800-722-6643 Fax 641-752-0674 www.racom.net

PART NO.

ITEM QTY

Proposal Prepared for:

Address 210 Martin Luther King Jr Blvd Room 109

City Madison

State & Zip Code County

Prone/FAX

Contact Name
Contact E-mail

Contact E-mail

Contact F-mail

Contact F-mail

Contact F-mail

Dane County, Wisconsin

210 Martin Luther King Jr Blvd Room 109

MI 53703-33345

WI 53703-33345

Even Fosso

Fosso@countyofdane.com

UNIT

EXTENDED

*** Proposal Title ***

DESCRIPTION

See Spreadsheet for Detailed list of equipment		1	0	Replace Site Batteries for UPS		#########	\$ 238,679.00
				See Spreadsheet for Detailed list of equipment		\$ -	\$ -
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Total Equipment Price \$ 238,679.00 \$ 238,679.00							
Total Equipment Price installation Subtotal Tax Rate Tax Rate Total Equipment Price installation Subtotal Taxes \$ - \$ 238,679.00 Tax Rate Tax							
Terms of Purchase: 50% due at time of proposal acceptance. Tax Rate Total Equipment Price Installation Subtotal Sas,679.00 Sas,679.00 Subtotal Sas,679.00 Tax Rate							
Terms of Purchase: 50% due at time of proposal acceptance. Tax Rate Tax Ra	l				Total Equ		
Terms of Purchase: 50% due at time of proposal acceptance. 50% due upon final acceptance Tax Rate Tax Rate Subtotal Taxes Shipping Total System Description: Proposal Presented By: Date:					rotai Equ		
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UPS Battery Replacement - Equipment/Site List

Qty Eisner	Description	Price	Extended
24	Northstar, 12V, 170Ah Battery	\$ 747.50	\$ 17,940.00
2	Two Explorers, 5 String Battery w/ cables an		\$ 10,764.00
1	Installation, Removal, & Disposal	\$ 13,845.00	\$ 13,845.00
-	incommunicity receives way as 2 is pecun	Sub-Total:	\$ 42,549.00
Rockdale			\$ 1 = ,8 12100
20	Northstar, 12V, 170Ah Battery	\$ 747.50	\$ 14,950.00
1	Two Explorers, 5 String Battery w/ cables an		\$ 5,382.00
1	Installation, Removal, & Disposal	\$ 13,845.00	\$ 13,845.00
-	incommunicity receives way as 2 is pecun	Sub-Total:	\$ 34,177.00
Roxbury			4,
20	Northstar, 12V, 170Ah Battery	\$ 747.50	\$ 14,950.00
1	Two Explorers, 5 String Battery w/ cables an		\$ 5,395.00
1	Installation, Removal, & Disposal	\$ 13,845.00	\$ 13,845.00
	, , , ,	Sub-Total:	\$ 34,190.00
Sun Prairie			, , , , , , , , , ,
20	Northstar, 12V, 170Ah Battery	\$ 747.50	\$ 14,950.00
1	Two Explorers, 5 String Battery w/ cables an		\$ 5,382.00
1	Installation, Removal, & Disposal	\$ 13,845.00	\$ 13,845.00
	, , , ,	Sub-Total:	\$ 34,177.00
UW Tower			,
28	Northstar, 12V, 190Ah Battery	\$ 799.50	\$ 22,386.00
2	Two Explorers, 5 String Battery w/ cables an	\$ 5,382.00	\$ 10,764.00
1	Installation, Removal, & Disposal	\$ 13,845.00	\$ 13,845.00
	•	Sub-Total:	\$ 46,995.00
Verona			
20	Northstar, 12V, 190Ah Battery	\$ 798.20	\$ 15,964.00
1	Two Explorers, 5 String Batteryw/ cables and	\$ 5,382.00	\$ 5,382.00
1	Installation, Removal, & Disposal	\$ 13,845.00	\$ 13,845.00
	•	Sub-Total:	\$ 35,191.00
			,
Additional Services		Site total	\$227,279.00
6	Project Management	\$ 1,300.00	\$ 7,800.00
1	Freight Charges	\$ 3,600.00	\$ 3,600.00
		-	
		Total:	\$238,679.00