

MICROWAVE DECOMMISSIONING & NEW INSTALLATION

**FIRE HOUSE #2, WATSONVILLE, CA
AND
MOUNT MADONNA, MORGAN HILL, CA**

PROJECT #23C1-003

*Volume #02 Plans - Specifications - Scope - Photographs - Other
CUPCAA Supporting Docs*



**COUNTY OF SANTA CRUZ, CALIFORNIA
GENERAL SERVICES DEPARTMENT
November 21, 2022 *Date Prepared***

PROPOSALS DUE:

Wednesday , December 21 – 2:30 P.M.

PRE-BID CONFERENCE:

Tuesday, December 6, 2022 – 11:00 A.M.

LOCATION:

“Virtual” Teams Meeting

For use in connection with Santa Cruz County standards and the 2019 California Building Code.



TABLE OF CONTENTS

This CUPCCAA Project is supported by specific documents enumerated in the “Table of Contents” below:

- A. Engineered Drawings – ***Site Plan and Equipment Layout***
- B. Technical Specifications
- C. Supplemental Conditions
- D. Existing Condition Photographs
- E. Scope of Work
- F. Preliminary / Milestone Project Schedule
- G. Other Documents

Project Scope of Work:

The County, as a core milestone in the development and delivery of a project, did conduct a site assessment and in conjunction met with the occupants of the facility and/or space to discuss the needs, wants, and expectations. From this site meeting discussion, the “**scope of work**” was drafted and refined to aid the Bidder in understanding parameters of the project and establishing the Bid to execute the expected work.

Project Supplemental Conditions:

These are project clarifications that help the Contractor to gain comfort with the site conditions and support the project intent. The Supplemental Conditions are weighted equally in significance to that of the County General Conditions Terms & Conditions and project Specifications.

Project Existing Condition Photographs:

The County has provided existing condition photographs in advance of a site visit for the purpose of formulating questions to focus observations during the mandatory pre-bid site visit. This will better prepare the Contractor to identify, mitigate, and manage their risk as well that of the county.

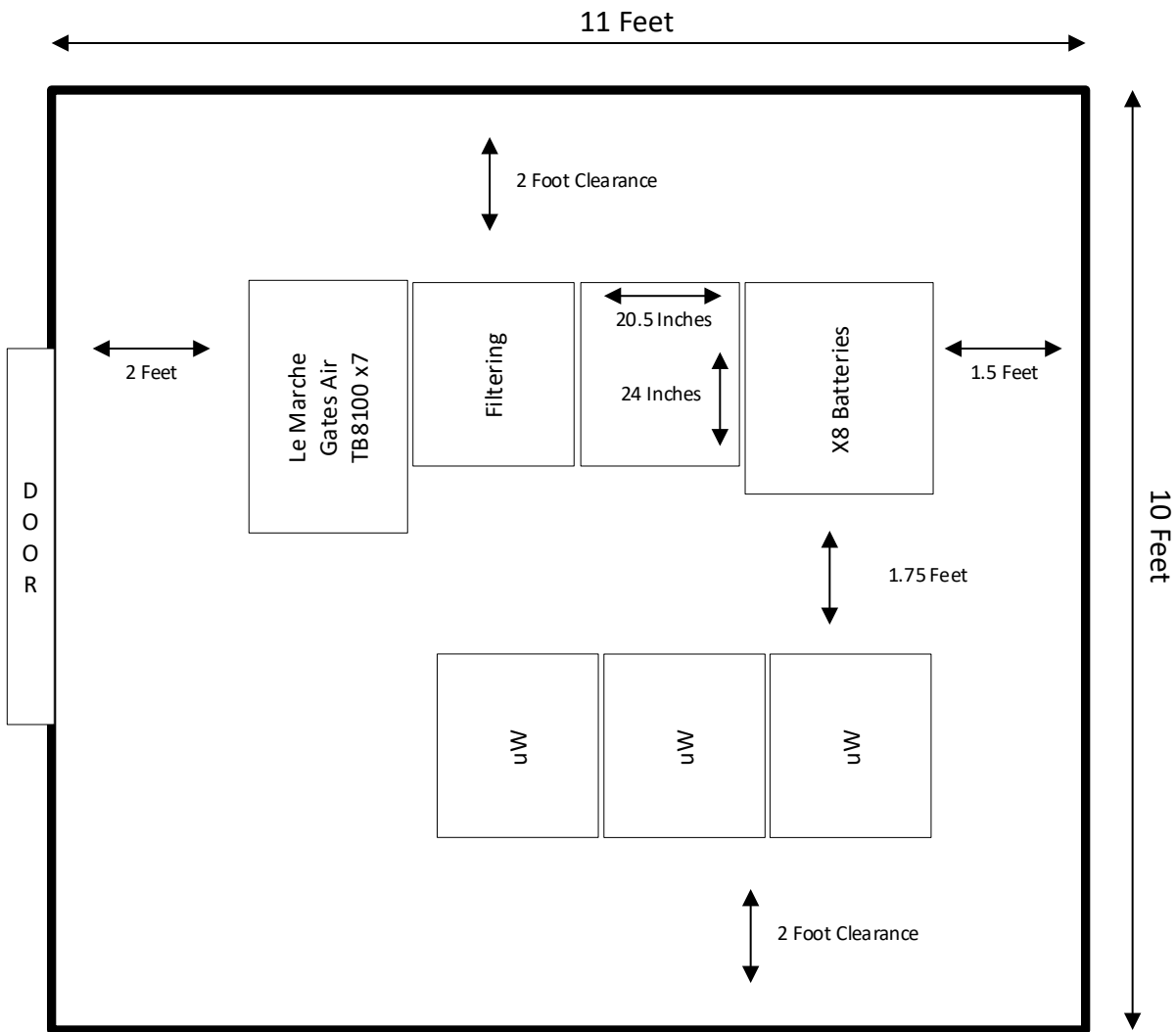
Preliminary / Milestone Project Schedule:

The County has prepared either a “**Preliminary or Milestone Project Schedule**”. This schedule shall be considered by the Bidder to establish expected duration to execute the work. At the “**Notice of Award**” (NOA) the Bidder will be asked to begin preparing the “**Baseline Project Schedule**” for formal submission and review by the County. This Schedule will be submitted and reviewed within the first ten (10) days of receiving the NOA.



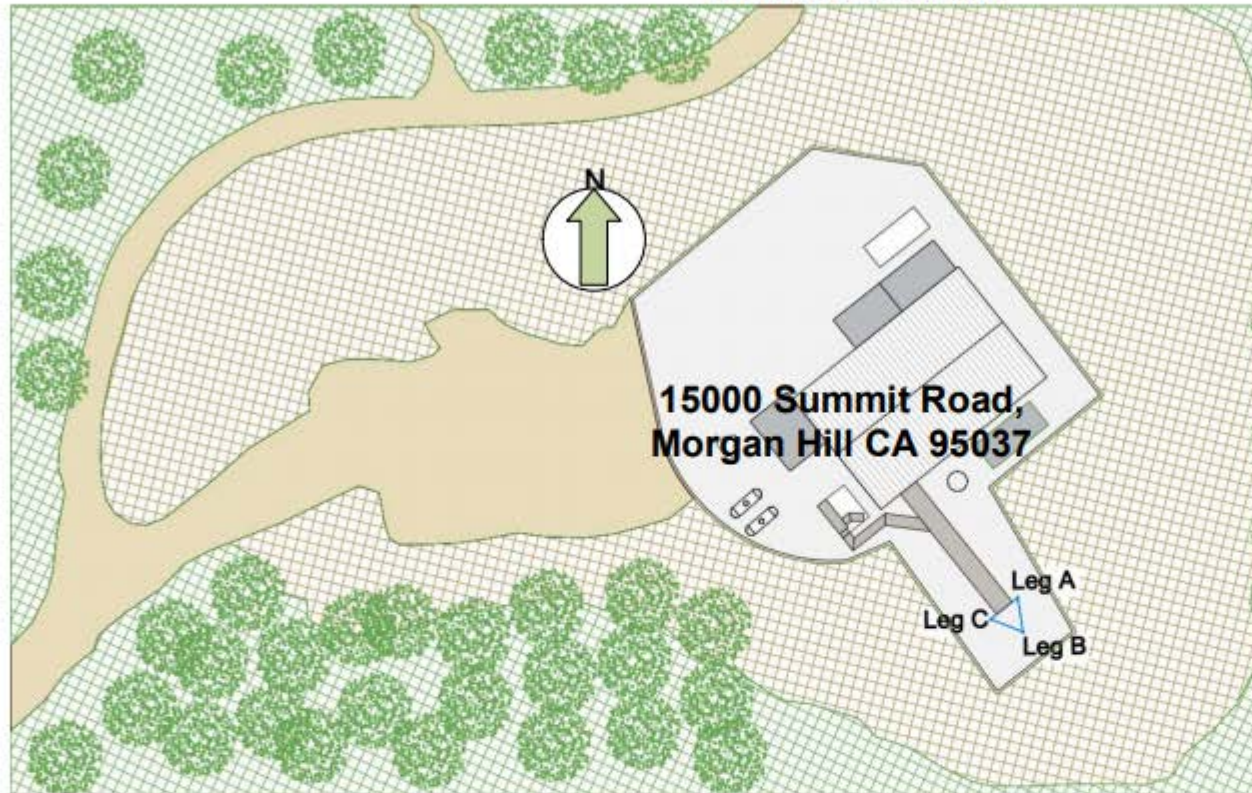
ENGINEERED DRAWINGS

EXHIBIT “A”

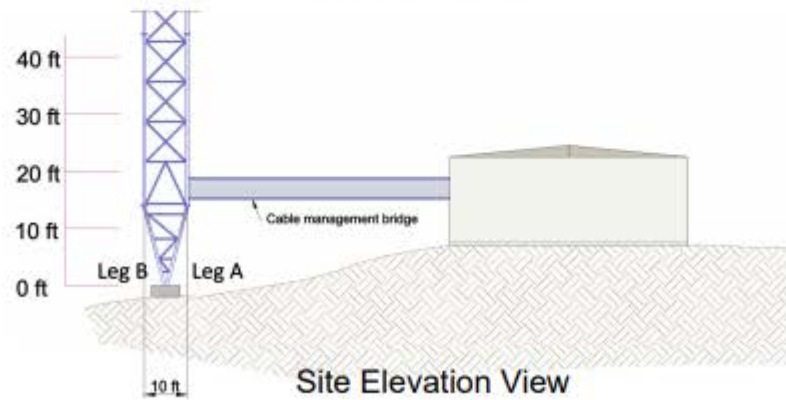


Etheric Networks

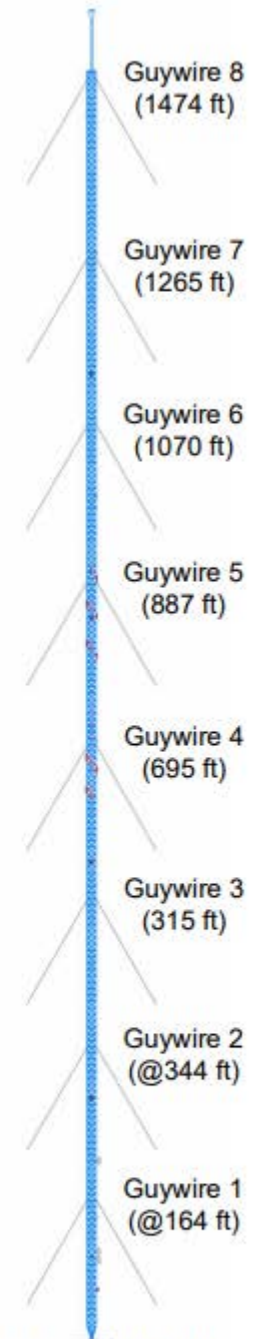
BS20 Mount Madonna
Elevation and Plan view



Site Plan View



Site Elevation View



Tower elevation View



Title: Network Design Document Etheric Networks Engineering Department BS20 Mt.Madonna

Rev:8

Created: 8/29/2016 By: AK Revised: 5/11/20



TECHNICAL SPECIFICATIONS
EXHIBIT "B"
(Not Applicable)



SUPPLEMENTAL CONDITIONS

EXHIBIT “C”



County of Santa Cruz

GENERAL SERVICES DEPARTMENT

FACILITIES MAINTENANCE & PROJECT OPERATIONS

1110 EMELINE AVENUE, SANTA CRUZ, CA 95060-4073

SUPPLEMENTAL & SPECIAL CONDITIONS

PROJECT #23C1-003

The Supplemental Conditions enumerated below shall be applicable to the noted Project above and shall be enforced by County Facilities Maintenance & Project Operations with the support of County Risk Management and Counsel.

1. Contractor (Bidder) **MUST** ensure ALL Workers onsite are wearing Safety PP&E which will include Hardhats, orange or bright green safety vests, steel toed shoes, jeans or other applicable work pants, appropriate work shirt preferably with the Contractor name written on said shirt, safety glasses, and safety gloves, ear protection, etc. when applicable.
2. Contractor (Bidder) **MUST** abide by COVID 19 Compliance regulations if and when enforced. If enforced, while walking to and from the work site or outside the work site during the day said Contractor shall ensure all Crew have and wear proper face coverings. While in the work zone area Contractor can remove face coverings if Contractor policy permits.
3. Contractor (Bidder) **is required** to submit a **"Bid Bond"** during the Bid Phase of this project if the value of the Project exceeds \$25,000.
4. The successful Contractor (Bidder) **is required** to obtain and submit a **"Payment & Performance"** Bond for 100% of the project Bid Value. A **"Performance Bond"** is required if the value of the project exceeds \$10,000. A **"Payment Bond"** is required if the value of the project exceeds \$25,000. **Payment and Performance Bonds** are required to be submitted with the Bid. These will be requested of the apparent successful Bidder during Post Bid proceedings.
5. This project will be registered with the Department of Industrial Relations (DIR) and assigned a DIR # if the project value exceeds \$25,000. County General Services Department (GSD) will issue that # to the successful Contractor (Bidder).
6. Contractor (Bidder) shall start work at 7:00 am and cleanup the work site daily beginning at 3:30 pm. Contractor (Bidder) shall be offsite by 4:30pm unless authorized to work overtime. *Project Work Hours can be deviated if the Sponsoring Department and End Users agree on the work schedule change proposed by the Contractor (Bidder).*
7. Materials and equipment shall be staged accordingly as discussed with the Sponsoring Department.
8. Contractor (Bidder) shall define the required staging and laydown area(s) required for the duration of the project. Area shall be adequately delineated, and proper signage installed if applicable.
9. The successful Contractor (Bidder) **SHALL** collaborate with **ALL** applicable County Departments and Representatives to include Facilities Maintenance & Project Operations.
10. Contractor (Bidder) shall maintain a safe site and comply with OSHA Regulations.



County of Santa Cruz

GENERAL SERVICES DEPARTMENT

FACILITIES MAINTENANCE & PROJECT OPERATIONS

1110 EMELINE AVENUE, SANTA CRUZ, CA 95060-4073

11. Contractor (Bidder) is obligated to comply with applicable building codes and county ordinances.
12. Contractor (Bidder) is responsible for the project schedule which includes a baseline, monthly progress updates, and look ahead schedules throughout the project duration.
13. Change Conditions shall be discussed in advance of Contractor (Bidder) submitting any **"Proposed Change Order"** to Facilities Maintenance & Project Operations. ALL **"Proposed Change Orders"** MUST be submitted with applicable supporting documentation.
14. Contractor (Bidder) shall, at appropriate project intervals, schedule Facilities Maintenance & Project Operations to conduct a scope specific building inspection ensuring means & methods performance meets code requirements. The county is exempt from permitting and therefore typical inspection services by an Agency at predetermined times in the execution of the work is not performed by a building inspector but by skilled and/or licensed Facilities Staff.
15. Facilities Maintenance & Project Operations will inspect (observe) the quality and progress of the Contractor (Bidder) work at irregular intervals.
16. Contractor (Bidder) shall use the County **"Progress Payment Schedule of Values"** when submitting for payment. Payments can be submitted at agreed upon intervals during the project. Progress Payment Applications MUST be submitted to GSDFacilities@santacruzcounty.us with copy to Justine Leonard at Justine.Leonard@santacruzcounty.us and prior to submitting a formal Progress Payment Application the Contractor (Bidder) shall submit a "Pencil Draft" copy to the assigned Facilities Maintenance & Project Operations Building Project Manager and Field Facilitator for review and comment.
17. Contractor (Bidder) is required by the County to pay both "Prevailing Wages" and ensure a "Living Wage" is paid to all who work on this project.
18. Contractor (Bidder) is required to submit Certified Payroll with all submitted invoices and/or payment applications to the DIR with a verification of submission attached to the submitted payment application.
19. Contractor (Bidder) will carry a current and in good standing State of California Contractors License for the work performed.
20. Contractor (Bidder) MUST be a registered Vendor of the County of Santa Cruz and have in possession prior to submitting a Bid or after award and before starting a Vendor #.
21. Contractor (Bidder) shall submit applicable certificates of insurance (COI).
22. Contractor (Bidder) will review and execute an Independent Contracting Agreement (ICA) when issued by County General Services Department (GSD) or be issued a Purchase Order (PO). Both bind the Contractor (Bidder) and County to the documents and terms and conditions of the project.
23. Project warranty on material and labor shall be extended to the County by the Contractor (Bidder) during closeout of the project. Warranty on labor and materials shall be separately defined.
24. Taxes (if applicable) shall be included in the Contractor (Bidder) Bid.



County of Santa Cruz

GENERAL SERVICES DEPARTMENT

FACILITIES MAINTENANCE & PROJECT OPERATIONS

1110 EMELINE AVENUE, SANTA CRUZ, CA 95060-4073

25. Facilities Maintenance & Project Operations shall provide to the Contractor a "Notice of Substantial Completion" at a time when the majority of the contracted work is completed and a "Punch List" of the work is scheduled. This allows beneficial use by the Department for operational purposes in County affairs.
26. Contractor (Bidder) before receiving "Retention" payment MUST have completed work to include "Punch Items" and formally submitted ALL closeout required materials and/or documents to include Warranty. At such time County will issue a "Notice of Completion".

SPECIAL CONDITIONS:

- A. There are two site locations that require advance notification of work activities to be performed. Contractor Schedule must have differentiating work activities noted.
- B. Contractor is responsible to procure "New Installation" equipment. Reference Exhibit G. Contractor shall expedite the order and communicate timeline for delivery. Contractor is responsible for all freight charges and/or increases in the cost for equipment by the Vendor.
- C. Contractor shall ensure they have the capacity or ability to engineer the new system to include dish connectivity to the Etheric Tower.
- D. Contractor is responsible for all equipment required to set the dish and new equipment.
- E. Commissioning requires in a formal submittal the pre commissioning and commissioning scripts to the County Information Systems Department (ISD) for review and comment.



EXISTING CONDITION PHOTOGRAPHS

EXHIBIT “D”



County of Santa Cruz

GENERAL SERVICES DEPARTMENT

FACILITIES MAINTENANCE & PROJECT OPERATIONS

1110 EMELINE AVENUE, SANTA CRUZ, CA 95060-4073

EXISTING CONDITION PHOTOGRAPHS

PROJECT 23C1-003





County of Santa Cruz
GENERAL SERVICES DEPARTMENT
FACILITIES MAINTENANCE & PROJECT OPERATIONS
 1110 EMELINE AVENUE, SANTA CRUZ, CA 95060-4073

EXISTING CONDITION PHOTOGRAPHS

PROJECT 23C1-003





County of Santa Cruz

GENERAL SERVICES DEPARTMENT

FACILITIES MAINTENANCE & PROJECT OPERATIONS

1110 EMELINE AVENUE, SANTA CRUZ, CA 95060-4073





SCOPING OF WORK

EXHIBIT “E”



County Of Santa Cruz
GENERAL SERVICES DEPARTMENT

FACILITIES MAINTENANCE & PROJECT OPERATIONS
1110 EMELINE AVE, SANTA CRUZ, CA 95060
(831) 454-5251 OR (831) 454-5255

**SANTA CRUZ COUNTY FACILITIES MAINTENANCE &
PROJECT OPERATIONS**

SCOPING DOCUMENT

PROJECT #23C1-003

**MICROWAVE DECOMMISSIONING & NEW
INSTALLATION**

**FIRE HOUSE #2, WATSONVILLE, CA
AND
MOUNT MADONNA, MORGAN HILL, CA**

November 21, 2022

**PURCHASING * ENERGY MANAGEMENT *CONSTRUCTION PROJECT MANAGEMENT *FACILITIES MAINTENANCE
* FLEET SERVICES *EMERGENCY SERVICES *WAREHOUSE SERVICES *CUSTODIAL SERVICES *COUNTY
FIRE SERVICES *COUNTY SAFETY*



FACILITIES MAINTENANCE & PROJECTS OPERATIONS

PURPOSE:

This project is being funded by the County of Santa Cruz Capital Projects Review Committee representing the County Chief Administrative Officer (CAO) to provide a scope of work to decommissioning existing equipment and a tower dish at Watsonville Fire Station #2 then to haul equipment to a storage facility and the dish to a new installation located at Mount Madonna in Morgan Hill, California. The dish shall be installed on the Etheric Tower located on the Mount Madonna site. The demolition of these structures shall be coordinated with all stakeholders.

The County of Santa Cruz Facilities Maintenance & Project Operations a Division of General Services Department (GSD) has developed this project Bid Package specifically in an effort to solicit qualified Contractors to review the supporting documents, participate in the Pre-Bid Job Walks, submit when applicable Pre-Bid RFI's, and compile a "Fair Market" competitive and complete Bid.

The Bidder will execute the work professionally and with an industry expected level of acceptable quality if contracted. The County of Santa Cruz submits this scoping document as a supporting document to Project **23C1-003** Bid Package.

SCOPE OF WORK SUMMARY:

The county approach strategy to this project is in two phases. The first involves the decommissioning of existing equipment located at 370 Airport Blvd, Watsonville, CA and Mt Toro. The second is the installation of new equipment located at 15000 Summit Rd, Morgan Hill, CA.

The successful Bidder (Contractor) shall be responsible to establish a new Microwave site at Mount Madonna, removal of a small Dish at Loma Prieta, and for the removal of the equipment and 3ea Dish at Fire House #2 in Watsonville, CA. Included in the project is the installation of new equipment at the Etheric tower at Mt. Madonna, along with removal of the older equipment at the Watsonville tower site and Mt Toro location, frequency coordination and re-alignment of the Microwave ring at Mt. Madonna, and eliminate the microwave hop at the Watsonville site.

The high-level requirements in execution will include the following:

1. Installation of two new 6 GHZ dishes and one new 11 ghz dish Microwave and related equipment in County shelter at the Etheric tower, and one new 11 ghz dish mounted at Loma Prieta.
2. Alignment of Microwave to include two new 6 GHZ dishes and one new 11 ghz dish mounted at Madonna Etheric tower, 6 ghz Dish at Mt Toro, and eliminate Watsonville tower hub from the ring.



FACILITIES MAINTENANCE & PROJECTS OPERATIONS

3. Alignment of all remaining Dishes in the system pointed toward Mt Madonna.
4. Frequency coordination needed to remove old site and establish new location at Etheric tower.
5. Removal of equipment from the Watsonville tower and hauled to 701 Ocean Street Santa Cruz, CA.
6. All Dish will be aligned toward Mt Madonna.

Bidder (Contractor) shall be held accountable to provide specific deliverables from the contract.

1. Microwave dishes and equipment as listed in attachment or comparable solutions.
2. All installation of related equipment as noted in the attachment.
3. Removal of equipment at Watsonville site, with removed equipment to be delivered to the County Radio Shop at 701 Ocean Street, Santa Cruz CA to the attention of Fred Berge.
4. Engineering required to align Etheric tower dishes with current ring.
5. Frequency coordination with FCC for new site.

To close out the project the Bidder (Contractor) shall submit all frequency coordination reports and equipment startup results. Bidder (Contractor) shall remove all materials and equipment from the laydown area. The work site shall be clean. All newly installed equipment and/or cabling shall be properly labeled. Any electrical panels touched or added to the project shall be properly labeled.

Contractor shall reference Exhibit F, **“Preliminary Schedule”**. It is inclusive of Bid Package 21TI-035(A) and 21TI-035(B) activities. The schedule shall be used to derive the Bid. Once an apparent best value and lowest responsive Bid is confirmed said Bidder (Contractor) will be required to develop and submit a project **“Baseline Schedule”**.

CLARIFICATION:

- Contractor shall reference Exhibit C for Supplemental Conditions.
- Contractor shall reference Exhibit D Existing Condition Photographs
- Contractor shall start work at 7:00am. Work will stop for clean up at 3:30pm.
- Contractor will be off site by 4:30pm daily unless prior arrangements are made with Facilities Maintenance & Project Operations.
- Contractor shall submit crane pick area location map and crane shop drawing with engineering lift calculations as a formal submittal.
- Contractor shall submit applicable means & methods submittals for review and comment prior to mobilizing and starting execution of the work. These will be enumerated at the Post Bid Meeting with the successful contractor.



FACILITIES MAINTENANCE & PROJECTS OPERATIONS

- Contractor shall coordinate and schedule County Facilities Maintenance & Project Operations to observe and report on executed work to ensure code and county terms and conditions compliance.
- At the conclusion of each workday Contractor shall clean up the project site to ensure the site is safe, secured, clean and orderly. Any cleanup required by Facilities Maintenance & Project Operations or external contract incurred costs can be recovered through deductive change orders to the contractor.

SCHEDULE:

Facilities Maintenance & Project Operations have derived project **“Preliminary Schedule”** for the Bid Phase. (Reference **Exhibit C**)

Prior to start of work the Contractor shall meet with Facilities Maintenance & Project Operations to discuss schedule activities and/or review comments.



PRELIMINARY PROJECT SCHEDULE

EXHIBIT “F”

Not-Provided

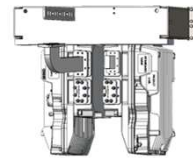
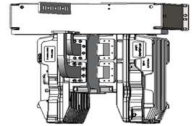


OTHER DOCUMENTS

EXHIBIT “G”

#	P/N	Description	Final Price	Sum QTY	Total Price	1dir	3dir	2dir, new SITE	2dir	2dir	2dir	Spare parts 5%
						RFU-D-HP AI 6L GHz 2x(1+0), antenna reuse	3dir 2x(1+0) AI RFU-D- HP 6L, all antenna reuse	2x(1+0) 6L, new Ant 2x(1+0SD) 6L, new Ant	2x(1+0SD) AI 6L, 2x(1+0SD) AI 6L, reuse all antennas	2x(1+0nSD) AI 6L, 2x(1+0) AI 11G, reuse all antennas	2x(1+0) AI 11G, 2x(1+0) AI 6L, reuse all antennas	
1.	FibeAir IP-20N					MT. BIELAWSKI	LOMA PRIETA	MT Madonna	MT TORO	PARK DRIVE	701 OCEAN	
	IP-20A-2RU/10-Slot-Base-2x48v	IP-20A-2RU/10-slot base package w/ 2x48v	\$1,550	7	\$10,850		1	1	1	1	1	1
	IP-20 TCC-U	IP-20 TCC-U	\$3,060	13	\$39,780	2	2	2	2	2	2	1
	IP-20-RIC-D	IP-20 Dual Interface Radio Interface Card	\$1,550	25	\$38,750		6	4	4	4	4	1
	IP-20-LIC-STM1/OC3-RST	IP-20 LIC-STM1/OC3 RST	\$1,250	13	\$16,250	1	3	2	2	2	2	1
	IP-20-LIC-X-E4-Elec	IP-20 Extended LIC Eth-4x1GE elec	\$600	7	\$4,200		1	1	1	1	1	1
	IP-20-LIC-T15	IP-20 LIC TDM 16x1/DS1	\$1,100	7	\$7,700	1	1	1	1	1	1	1
2.	IP-20 Activation keys											
	SL-Capacity-150M	SL-Capacity 150M, per carrier	\$188	32	\$6,000	2	6	6	8	6	4	
	SL-ACM	SL-ACM, per carrier	\$88	32	\$2,800	2	6	6	8	6	4	
	SL-MC-ABC	SL-MC-ABC, per carrier	\$75	32	\$2,400	2	6	6	8	6	4	
	SL-Radio-2nd-Rx-Port-Act.	SL-Radio-2nd-Rx-Port-Act.	\$250	8	\$2,000			2	4	2		
	SL-SD	SL-Space Diversity	\$250	16	\$4,000			4	8	4		
	SL-Edge-CET-Node	SL-Edge-CET-Node mode	\$250	6	\$1,500	1	1	1	1	1	1	
	SL-GE-Port	SL-1/2.5 GE port	\$50	12	\$600	2	2	2	2	2	2	
	SL-Main-Card-Redundancy	SL-Main card redundancy	\$375	6	\$2,250	1	1	1	1	1	1	
3.	RFU-D-HP											
	RFU-D-HP-06	RFU-D-HP, Dual TX, 6 GHz, Split, Basic Radio.	\$6,188	21	\$129,938	2	6	4	4	2	2	1
	RFU-D-HP-11	RFU-D-HP, Dual TX, 11 GHz, Split, Basic Radio.	\$6,188	4	\$24,750					2	2	
	FXDHU6-xxxY-CccN-L/H	RFU-D-HP, OCu, U6GHz, Unspecified, 56MHz, Narrow, TH, TL	\$2,931	20	\$58,625	2	6	4	4	2	2	
	FXDH11-xxxY-CccN-L/H	RFU-D-HP, OCu, 11GHz, Unspecified, 56MHz, Narrow, TH, TL	\$2,931	4	\$11,725					2	2	
4.	RF Accessories											
	19 inch Rack, ALM	19" Universal Lab Rack Aluminum	\$464	1	\$464			1				
	PDU/48V 2*25/9K6AX2	Power distr48/2X25/18K6A	\$417	1	\$417			1				
	FXDH-AI-V-MOUNT-1-kit	IP-20C-HP R2/RFU-D-HP OCUs Vertical Mounting Bracket (kit 1) Mount Kit	\$1,119	12	\$13,428	1	3	2	2	2	2	
	FXDH-AI-V-L-Bend-1-06	IP-20C-HP R2/RFU-D-HP OCUs Vertical All-Indoor Short L-Bend Kit, 6 GHz	\$876	10	\$8,760	1	3	2	2	1	1	
	FXDH-AI-V-L-Bend-2-06	IP-20C-HP R2/RFU-D-HP OCUs Vertical All-Indoor Long L-Bend Kit, 6 GHz	\$1,059	4	\$4,236			1	2	1		
	FXDH-AI-V-L-Bend-1-11	IP-20C-HP R2/RFU-D-HP OCUs Vertical All-Indoor Short L-Bend Kit, 11 GHz	\$786	2	\$1,572							
	FXDH-RM-U-Bend-06	FXDH-RM-U-Bend-06	\$225	14	\$3,154	1	3	3	4	2	1	
	FXDH-RM-U-Bend-11	FXDH-RM-U-Bend-11	\$225	2	\$451					1	1	
	FXDH-RM-TERM-06	FXDH-RM-TERM-06	\$79	14	\$1,103	1	3	3	4	2	1	
	FXDH-RM-TERM-11	FXDH-RM-TERM-11	\$79	2	\$158					1	1	
	FXDH-RM-SHORT-06	FXDH-RM-SHORT-06	\$45	24	\$1,080	4	12	4			4	
	FXDH-RM-SHORT-11	FXDH-RM-SHORT-11	\$45	8	\$360				4	4	4	
	WAVEGUIDE-6-4FT	FLEX WG 1.2m 6GHz	\$241	14	\$3,371	1	3	3	4	2	1	
	WAVEGUIDE-11-4FT	FLEX WG 1.2m 11GHz	\$232	2	\$464					1	1	
5.	EWG											
	EWG-6-A	15HP - Elliptical W.G. 5.8-7.125GHz.	\$22	110	\$2,420			110				
	WG-CNT-6L-A	CONNECTOR FIXED TUNED	\$277	6	\$1,659			6				
	AN-42396A-7	Hanger Kit for EWG3, kit of 10	\$19	11	\$204			11				
	Angl-adp-A	Compact Angle Adapter	\$37	11	\$410			11				
	GND-KIT-6-A	GROUNDING KIT FOR 6GHz	\$25	6	\$150			6				
	AN-WG84-63	Waveguide Box, 4, for EWG3	\$37	3	\$110			3				
	WG-PNL-4-PRTS-A	Feed-Through Entry Panel 4 inch (102 mm),4 port	\$71	1	\$71			1				
	PRS-WNDW-137-A	PRESSURE WINDOW	\$65	3	\$196			3				
	OUTDOOR TIES	OUTDOOR TIES 50pcs	\$12	3	\$35			3				
	WEATHERPROOF KIT	WEATHERPROOF KIT FOR SEALING CONNECTORS	\$17	6	\$102			6				
	32T-Fix-WG-2FT-6	3200T WG-Flexible kit 2 FT CPRI37G/ CPRI137G	\$250	3	\$749			3				
	Dhtrr-ETSI-Compact	Dehydrator 120V/48VDC, Delair	\$3,281	1	\$3,281			1				
	Dhtrr-ETSI-8 INST-KIT	Installation kit ETSI 8 outlets	\$130	1	\$130			1				
	Dhtrr-WALL/SHLF KIT	Dehydrator, WALL/SHLF KIT COMPT	\$137	1	\$137			1				
6.	Accessories & Cables											
	CB-L-PWR-OE-OE-16A-2.5m	CABLE,OPEN END TO OPEN END,2.5M,12AWG	\$15	24	\$366	2	6	4	4	4	4	
	CB-L-PWR-DType/OE-40A-2.5m	CABLE,D-TYPE PWR to 2X FERRULE,2.5M,40A,BLACK/RED	\$35	12	\$420		2	2	2	2	2	
	SFP-STM-1-S1.1	SFP STM-1 Module Short Haul 1310nm	\$33	12	\$393	1	3	2	2	2	2	
	OP-SM-CBL-LC-SC-DPLX 5M	Duplex Optic Cable LC-SC 5M 5m	\$15	12	\$180	1	3	2	2	2	2	
	WA-0776-0	CABLE RJ45 TO RJ45 STRAIGHT 2.5M,CAT-5E	\$5	24	\$108	2	6	4	4	4	4	
	IP-20C_DC_Conn_12AWG	CONN.FOR CABLE,TB,1X2.5mm,18A,Screw thread: M3,BLACK	\$3	24	\$72	2	6	4	4	4	4	
	CB-L-GND	GROUND CABLE FOR IDU and ODU	\$6	24	\$150	2	6	4	4	4	4	
	15P-PROT-CBL	E1/T1/Ethernet protection cable	\$8	6	\$45	1	1	1	1	1	1	
	IP10-CBL-16T1-10M	IP10 16 T1 ports cable open 10M	\$55	2	\$110							
	WA-0411-1	IP10-CBL-16T1-MDRLA-RJ45-XD3.5m	\$94	12	\$1,125		3	2	2	2	2	
	NM-0153	IP10-ADAP-RJ45F-E1/T1-XED x8	\$42	24	\$1,008	2	6	4	4	4	4	
	EN-0268-0	IP10-PANEL-32E1/T1-RJ45	\$24	7	\$166	1	2	1	1	1	1	
	Delta AC/DC 19IN 1U 850w	AC/DC,80-300VAC /48VDC 19IN,1U,850W	\$616	1	\$616			1				
	Battery 52A/H, 12Volt	12V / 52AH Battery Block	\$229	4	\$917			4				
	BATTERY SHELF 19in x 21in.	BATTERY SHELF 19in x 21in. 400lbs, BLACK	\$126	1	\$126			1				
7.	NetMaster - SW											
	NM-Basic-Perpetual	Basic package - Perpetual subscription	\$500	32	\$16,000	2	6	6	8	6	4	
8.	Antenna											
	SA-3-6-A	ANT.3FT,5.925-7.125GHz,5P,CPRI37G	\$1,050	1	\$1,050			1				
	DP5A-B3R-8-6W-A	ANT.8FT,5.925-7.125GHz,DP,CPRI37G,ETSI CL3,FCC,RU=26,XPD=33	\$3,900	2	\$7,800							
	A-8-12-STRT-8-TTM-A	Strut Bottom for std antenna 8FT-12FT	\$446	6	\$2,678			6				
	AU-0051-0	STD TERMINATION LOAD PDR70_CPRI37G (WR137)	\$212	2	\$424			2				
	Ant Pol mount 1-3FT	Ant Pol mount 1-3FT	\$198	1	\$198			1				
	Ant Pol mount 8-12FT	Ant Pol mount 8-12FT	\$515	2	\$1,029			2				
SUM for the configuration:						\$37,487	\$92,092	\$94,772	\$74,025	\$69,303	\$64,789	\$15,298

p= u x l
p= u x l
l= 500/48



ITEM	EQUIPMENT LIST DESCRIPTION
1.000	Eclipse Radios
1.001	IRU600v4
1.002	ACU IRU600 MHSB RX UNEQUAL SPLIT 5.8-U6 GHZ V2
1.003	IRU600v4 RFSEC ASSY MHSB/SD TX SWITCH, IF TR SP-HP 5.8-U6 GHz, Filter-non ACCP * HP 30MHz ACM; based on 512QAM 200Mbps
1.004	IRU600v4 RFSEC ASSY MHSB RX UNEQUAL SPLIT, IF TR SP-HP 10.5-11 GHz, Filter-non ACCP * SP 30MHz 512QAM 200Mbps
1.100	WG EXT & EXP KIT
1.101	WG EXT KIT IRU600 V3 6GHZ SH1-PO1, 1+0/MHSB 2 ANT, MHSB/SD
1.102	EXT BRKT KIT IRU600 3 SHELF
1.103	WG EXT KIT IRU600 V3 UNDER V2 11GHZ 1+0/MHSB 1ANT, RPTR(MAIN)
2.000	Eclipse Indoor Unit and Data Cards
2.001	INUe
2.002	ECLIPSE, INTELLIGENT NODE UNIT 2RU, INC IDCE, FAN, NCCV2, HIGH OUTPUT
2.003	NODE PROTECTION CARD, HIGH OUTPUT
2.004	KIT BRACKET 2RU
2.005	Rac Card
2.006	RAC 70, QPSK-4096QAM, NO XPIC, ACM * Every RAC60 and RAC70 comes with the following accessories: (1) Cable, RAC Indoor Jumper, SMA to Type N, 3 m (037-579122-001) (1) CABLE RAC6X TO DAC GE 620MM RJ45 –RJ45, 620mm (037-579518-620)
2.007	AUX Card and Cables
2.008	AUX, ALARM I/O CARD
2.009	ALARM I/O HD15 10M WIREWRAP
2.019	Protected OC-3 Card, DS3 Card and Cables
2.020	DAC 1X155o, 1XSTM1/OC3, MULTIMODE OPTICAL
2.021	SPLITTER SM LC-LC TO SC 2M
2.030	Software and Licenses
2.031	NODE SW LICENSE, 200 Mbps TOTAL RADIO PAYLOAD CAPACITY
2.032	NODE SW LICENSE, 400 Mbps TOTAL RADIO PAYLOAD CAPACITY
2.033	IRU600 600 Nodal High power option 2 x RFU
2.034	IRU600 600 Nodal High power option 4 x RFU
2.035	ADAPTIVE MODULATION NODAL RAC60/6X/60E/6XE/70
2.036	NCM LOOP SWITCH License to support up to 50E1/63T1 TDM circuits
3.000	Rack, Miscellaneous Materials
3.001	RACK ASSY CRATED, 7' CHATSWORTH ALUMINUM, 1 BREAKER PNL W/10 BLANK COVERS AND NO BREAKERS
3.002	Installation Kit, Aluminum Rack, Concrete Floor (AV179-530119-001WA)
3.003	RACK ASSY, NO RACK, NO CRATE, 1 BREAKER PNL W/10 BLANK COVERS AND NO BREAKERS
3.004	COMMON BREAKERS & BLANKING PLUGS PER RACK PER DRAWING
4.000	Fujitsu OC-3 SONET Mux (reusing existing one)
4.001	Fujitsu OC-3 SONET mux (existing one)
4.002	JACKFIELD CHASSIS, EMPTY, MULTIFUNCTION CHASSIS FOR NORTH AMERICA AND EUROPE, DSX-1/DSX-3/FIBER/RJ45 CAT 5E & CAT 6 , 16 MODULE CAPACITY, 19", 3 RU, 5"D, -48 VDC (DFX-9E0002)
4.003	JACKFIELD PLUG-IN MODULE, DSX-1 MODULE, 4 CIRCUITS WITH JACKS, FRONT CROSSCONNECT, REAR WIREWRAP, DUAL MONITOR, -48VDC, LED (DFX-9T1000)
4.004	
4.005	JACKFIELD CHASSIS, EMPTY, DSX-1, MINI-DSX-1/W-1.75X19, 3
4.006	JACKFIELD PLUG-IN MODULE, DSX-1, MINI-DSX-1/WM-1.75X19, DSX-1 MODULE FOR USE WITH COM-300100108033 EMPTY CHASSIS (MINI-DSX-1/W-1.75X19). 8 CIRCUITS (TERMINATIONS) WITH JACKS (MONITOR/IN/OUT), REAR WW CROSSCONNECT, REAR WIREWRAP, NO LED (300100108032)
5.000	DC power system
5.001	48 VDC power (Using existing one)
5.002	New proposed DC power system

This sales quotation and any resulting Customer order ("Order") are subject to Aviat Networks standard terms and conditions of sale ("Conditions"), which are available at the following web site: http://www.aviatnetworks.com/media/Files/AVWN_STCS.pdf. However, if an Order is issued under or in connection with an applicable master agreement between Aviat and Customer (an "Existing Agreement"), then the Existing Agreement will govern and control the Order.

1.103	WG EXT KIT IRU600 V3 UNDER V2 11GHZ 1+0/MHSB 1ANT, RPTR(MAIN)
5.003	COMPACT POWER SHELF / FRONT WIRE 120AMP MAX 48V NEGATIVE OUTPUT POLARITY 19" / 2 RU / MID MOUNT / SYSTEM DEPTH 12" INDIVIDUAL AC INPUT (LA, LC OR LT AC CORD) QTY 3 RECTIFIER POSITIONS QTY 2 LOAD BREAKER POSITIONS #10-32 STUDS 5/8 CENTERS QTY 2 LOAD BULK POSITIONS 1/4-20 STUDS 5/8 CENTERS (TOP ACCESS) QTY 2 LVBD BREAKER POSITIONS #10-32 STUD 5/8" CENTER QTY 10 GMT FUSE POSITIONS BRACKETS KIT 19" TO 23" INCLUDED BC CONTROLLER CARD NOT INCLUDED
5.004	CONTROLLER, SYSTEM CONTROLLER WITH ETHERNET, NEXT GENERATION, WITH CLEI, 48 VDC (BC2000-A01-10VC)
5.005	RECTIFIER, V SERIES, HIGH EFFICIENCY, 48VDC, 1120W, 20 AMP DC OUTPUT, 90-264 VAC INPUT, W/ CLEI, MAX AC INPUT 14.6A @90VAC, 7.3A @180VAC (V1000A1-HE)
5.011	PULLER, FOR BULLET BREAKER (BBPULR-01)
6.000	Punch Block
6.001	M66 Punch-Down Block Kit
7.000	Antenna ,Waveguides and Dehydrators
7.001	ANTENNA, U6 GHZ, 1.8 M (6FT), TRUNKLINE, IMP, REMOTE MOUNT, PARABOLIC (STD: WHITE), 6.425-7.125 GHZ, RADOME (STD: WHITE), CPR137G, SINGLE POL., FCC101A, SINGLE PIECE REFLECTOR, 200 KMPH, 190 KMPH (PAD6-65BC1S1R)
7.002	ELLIPTICAL WAVEGUIDE STANDARD, 5.925-7.125 GHZ, BLACK PE JACKET, PER FOOT (EW63-F)
7.003	EW63INSTALL-KIT (ONE KIT PER WAVEGUIDE RUN) (EW63INSTALL-KIT)
7.004	HARDWARE-KIT (ONE KIT PER 100FT)
7.005	WAVEGUIDE BOOT FOR EW63, 4 IN
7.006	WAVEGUIDE CUSHION HANGER, KITS, EW63, 2-HOLE (BAG OF 5 KITS)
7.007	ANTENNA, 11 GHZ, 1.2 M (4FT), PRIMELINE, UHP, HIGH XPD, REMOTE MOUNT, PARABOLIC (STD: WHITE), 10.700-11.700 GHZ, RADOME (STD: WHITE), CPR90G, DUAL POLARIZED, SINGLE PIECE REFLECTOR, CLASS III/FCC101A, 200 KMPH/190 KMPH (UXA4-107DC)
7.008	LOAD TERMINATION, WR-90 (914791)
7.009	ELLIPTICAL WAVEGUIDE STANDARD, 10.2-11.7 GHZ, BLACK PE JACKET, PER FOOT (EW90-F)
7.010	EW90INSTALL-KIT (ONE KIT PER WAVEGUIDE RUN) (EW90INSTALL-KIT)
7.011	HARDWARE-KIT (ONE KIT PER 100FT)
7.012	WAVEGUIDE BOOT FOR EWP90, 4 IN (WGB4-90)
7.013	WAVEGUIDE CUSHION HANGER, KITS, EW90, 3-HOLE (BAG OF 5 KITS)
7.014	Dehydrator and manifold (reusiing existing one)
8.000	Services*
8.001	RADIO INTEGRATION
8.002	VENDOR INTEGRATION
8.003	CONFIG ENG / DOCUMENTATION / DRAFTING
8.004	NETWORK/SYSTEM ENGINEERING
8.005	PROGRAM MANAGEMENT
8.006	TRANSMISSION ENGINEERING: path survey+one site survey
8.007	TRANSMISSION ENGINEERING: Frequency coordination and FCC license
8.008	PROJECT/SITE ENGINEERING
8.009	FIELD INSTALLATION, Radio (including Provision)
8.010	FIELD INSTALLATION, Antenna system
8.011	Equipment Removal - Antenna system