

**RADIO VAULT SPACE APPLICATION****Non-State Users****TD 312 (Rev. 10/13)****TD-312: GENERAL INFORMATION & INSTRUCTIONS**

The State of California owns and or operates telecommunications facilities at numerous locations throughout the State for use by State agencies requiring radio communications. Space at these facilities is made available to other than State of California users when it is surplus to the State's requirements

The State must review, manage and engineer any proposed installations. Once a new, renewal or modification TD-312 application has been received by CAL FIRE and is reviewed administratively, it is forwarded to the Public Safety Communications Office (PSCO) for technical analysis. A study will be performed to determine the impact of the application on the existing users at the site. Based on the study, the technical analysis will include specific recommendations to CAL FIRE. If serious technical difficulties are found and cannot be remedied, -PSCO will recommend to CAL FIRE to cancel the TD-312 application. Should this occur, CAL FIRE will compare the amount of work performed by the state to the application fee paid. If warranted, state will issue a partial refund.

In cooperation with the applicant, the State will attempt to meet all users' operational requirements.

Any subsequent labor time or material costs required for site engineering, antenna or combining system upgrades, or technician labor will be borne by the applicant at the PSCO current rates.

Applicants will be notified by CAL FIRE of the amount due prior to work being performed. No further processing of the application will take place until a written approval of these expenses, and payment, is received from the applicant.

NOTE: Modification of site-master antenna or combining systems may NOT be done by a tenant. Such modifications must be designed by -PSCO engineering and installed by PSCO-approved technician resources.

PRIOR TO ADDITION OR DELETION of any transmitting or receiving frequencies, antennas or equipment, submittal of this application and all related fees is required for **ALL** non-State users (*including new, pending, previous and current tenancy/occupancy*). Approval is required by CAL FIRE **prior** to the proposed changes taking place in the facility

After filling out the attached application, sign the form on Page 6, and include the appropriate application fee. The following checklist will assist you in submitting all required items:

COMPLETE AND SIGNED APPLICATION

- ☒ Applicant SIGNATURE on Page 7
(page 8 is the first page of the technical application, pages 1-5 contain instructions and restrictions)
- ☒ Pages 6 – 7, Request and Contact Info
- ☒ Pages 8 – 10, Technical Data sheets
- ☒ Attach additional information sheets as needed

REQUIRED FEES technical analysis fee is required with TD-312 submittal.

- ☐ **CATEGORY: 2-way RF, Telemetry** ☐ \$2,500 Technical Analysis
- ☒ **CATEGORY: Commercial Cellular, Wireless Internet, Broadcasters, Microwave** ☒ \$5,000 Technical Analysis

LEASE SERVICES REQUIRED

- ☐ New Lease
- ☐ Renewal
- ☒ Amendment

LEASE DOCUMENT REQUESTED

- ☒ Tower and Vault
- ☐ Tower
- ☐ Vault
- ☐ Ground Lease
- ☐ Other _____

TRANSMITTAL

Deliver **completed and signed** application with application fee to:

California Department of Forestry and Fire Protection
Technical Services Section, Towers and Vaults Unit
Attn: LORINA PISI
P.O. Box 944246
Sacramento, CA 94244-2460

Make checks payable to:
California Department of Forestry and Fire Protection

All requested information must be supplied to have this application processed. Failure to do so will result in the application being returned for resubmission, complete with an additional non-refundable application fee. Processing time will also be delayed accordingly.

Please attach separate sheets for any remarks or special comments required.

CAL FIRE TELECOMMUNICATION LEASING POLICY

Space Availability

As space is often limited at these facilities, State of California agencies are always given first priority. Non-state applicants will be considered in the following order:

1. Public Emergency Services Providers
2. Non-state governmental entities
3. Public utilities
4. Private sector

Application Fees

Application fees for standard processing costs appear in the checklist on page 1 for each type of user. If any unusual additional costs are identified, such as the need for on-site testing, pre-payment will be required.

Lease Rates

The California Constitution prohibits the gift of state funds, therefore, unless a radio vault lease is for public emergency services, lease rates will be established based on current market rates determined by the Real Property Services Section (RPSS) of the California Department of General Services (DGS). The lease format will be the RPSS/CAL FIRE standard telecommunication lease.

Facility Upgrades

It shall be understood by all applicants that the State is NOT obligated to upgrade any facility to accommodate any lessee. Any improvement required prior to the entry shall be the sole financial responsibility of the lessee. The lessee shall be notified in writing of the upgrades required to accommodate their installation, and payment for these upgrades must be arranged prior to the installation of any such equipment. Any said improvements, including the installation or modification of site-master antenna, combining or power systems, shall remain the property of the State agency unless otherwise stipulated in the lease. **NOTE:** This excludes the actual radio transmitting and receiving equipment, as well as individual antennas installed for the sole use of the lessee and not part of a master-site arrangement.

The TD-312 application consists of "Application" sheets and "Technical Data" sheets. Please complete, sign, and return the Application and Technical Data sheets to make a formal application. Please note for **New Applicants** that the information on the "Technical Data Sheets" shall reflect what the applicant desires to install at the facility. For **Existing Tenants**, that the information on the "Technical Data Sheets" shall reflect the tenants installed equipment and equipment changes (new installations, removals, etc.). Upon completion of engineering analysis of the application, the tenant's actual installation requirements may require some design changes to ensure the integrity of the State's telecommunications operational requirements. This required design criteria will be outlined in writing and incorporated as a condition of the lease agreement.

TECHNICAL REQUIREMENTS FOR STATE-CONTROLLED SITES

The following are the maximum radio frequency power outputs for radio equipment in State-controlled facilities:

RADIO SERVICE	FREQUENCY RANGE	MAXIMUM TRANSMITTER POWER OUTPUT TO ANTENNA
FM Broadcast	88-108 MHz	500 watts
Television Broadcast	54-72 MHz, 76-88 MHz, 174-216 MHz, 470-806 MHz	500 watts
AM Broadcast	535-1705 kHz	10 watts
VHF Low Band	28-54 MHz	120 watts
VHF Mid Band	72-76 MHz	50 watts
VHF High Band	136-174 MHz	150 watts
UHF Band	406-512 MHz	150 watts
800/900 Band	806-952 MHz	125 watts
Microwave	952-960 MHz	20 watts
Microwave	1850-6875 MHz	20 watts
Microwave	6875-40,000 MHz	10 watts

The following additional standards must be adhered to for any installation at a State-controlled site:

1. Each transmitter at the site must be identified with an approved and completed "FCC ID tag" along with the name and phone number of the person responsible for the operation of that transmitter.
2. Control stations and "inverted pairs" on FCC-designated repeater channels will generally not be allowed at a site.
3. Only FCC type-accepted transmitters, designed for use in a high-RF, multi-user environment will be allowed to be installed at a site. All equipment shall be installed and operated in accordance with the site lessor's authorization and approval.
4. Transmitters and receivers will be combined and/or multi-coupled to the maximum extent possible, consistent with the specific system performance requirements of the lessee. A one-time "site assessment" cost may be incurred.
5. All systems NOT connected to the lessor's combining network must be installed to comply with site standards, require lessor's prior engineering approval and meet the following minimum requirements:
 - a) Each transmitter shall have a protective isolator, harmonic filter and band-pass cavity (BPC) which meets the minimum attenuation levels listed in Table I. The isolator and harmonic filter shall precede the BPC in the transmit path;
 - b) Notch-type duplexers must include a BPC meeting the requirements in Table I in the transmit leg prior to the duplexer input port;
 - c) Additional filters, BPC's, isolators and other hardware may be required at the lessee's expense to correct site problems as a result of the lessee's installation;
 - d) RF cabling between pieces of equipment within a rack shall be of double-shielded or solid outer conductor variety, such as RG-214, RG-142 or RG-400 cables. NOTE: In general, cabling supplied within a manufacturer's piece of equipment is sufficient to meet this requirement. In some circumstances, however, it may become necessary to modify the equipment to meet the special needs of the site;

- e) RF cabling between racks of equipment in a vault, including cables to and from combining equipment and antenna feedthrough ports, shall be of the solid outer conductor variety. In general, all receive lines within the vault shall be 1/4" diameter, such as Andrews FSJ1-50B or equivalent; all transmit lines within the vault shall be 1/2" diameter, such as Andrews FSJ4-50B or equivalent. All feedlines outside the vault, such as between the antenna pigtail and the lightning arrestor plate, shall be at least 1/2" diameter solid-shield cable equivalent to Andrews LDF4-50A HELIAX;
- f) RF connectors on transmit cables shall be Type "N" wherever possible unless the particular piece of manufacturer's equipment has another type of connector installed. RF connectors on receive cables MAY be Type "BNC", although Type "N" is highly recommended. Again, if the manufacturer's equipment has another type of connector installed, this type of connector is acceptable for that junction;
- g) Tiewraps designed for external use, such as the Panduit "76" series TEFZEL cable tie, or another insulated clamp or strap shall be used to secure transmission lines to towers and/or cable ladders. Rubber "donut"-type hangers such as those manufactured by Microflect are also acceptable to be used to secure transmission lines. **Metal clamps, "wraplock", "Band-It" ties, or similar metal strapping for attaching feedlines to a mounting structure is prohibited at State facilities.** If the facility has a wood-pole structure for mounting antennas, the use of utility pipe clamps or conduit clamps is permitted for fastening the feedline to the structure;
- h) State telecommunications facilities are generally designed to accommodate equipment housed in 7'6" tall open frame relay racks, such as the Chatsworth model 46050-505 rack. Racks shall be fastened to the floor with an approved anchor, and connected to an overhead cable tray via an approved method, such as via a length of Chatsworth 11450-001 framing channel and using "J-bolt" kits. A rack elevation diagram is attached to illustrate how equipment will be housed in the 7'6" rack. Complete/return this diagram with the application form;
- i) Most State telecommunications sites have extensive lightning and surge protection systems installed, including lightning arrestor mounting panels. All transmission lines must enter and exit the vault via one of these entry panels using the approved method outlined in the technical requirements of the lease document;
- j) All equipment installed in a State telecommunication site must be connected to the site's ground system. Generally, a ground pigtail will be supplied in the cable tray above the equipment rack. All connections to the ground system must be made via compression fittings or bolted joints. "Split-bolt" connectors are unacceptable as junctions;
- k) All antenna mounts shall be hot-dip-galvanized, and all mounting hardware shall be either hot-dip-galvanized or stainless-steel. Electro-galvanized or plated material for mounting of antennas is not permissible. The use of aluminum for mounting cross-arms or cross-over plates is allowed. At sites where wood pole structures are used, it is not permitted to drill holes through the poles to mount antennas or cross-arms. The only acceptable method of mounting an antenna to such a structure is via a "collar" that clamps around the entire circumference of the pole, sandwiching the pole inside. Such a collar must also be hot-dip-galvanized in construction and use galvanized or stainless-steel hardware.

TABLE ONE

FREQUENCY BAND	ISOLATOR REVERSE ISOLATION	BPC ATTENUATION AT FREQUENCY FROM CARRIER
28-54 MHz	15 dB	20 dB at \pm 500 kHz
72-76 MHz	25 dB	20 dB at \pm 600 kHz
136-174 MHz	50 dB	25 dB at \pm 200 kHz
406-470 MHz	50 dB	15 dB at \pm 1 MHz
806-952 MHz	50 dB	20 dB at \pm 2 MHz

Application Sheets are used to gather the appropriate administrative information to process the TD-312. These sheets must be completed, signed and accompanied with the Technical Data Sheets.

Applicant: County of Monterey
 (organization name)
1590 Moffett Street
 (address)
Salinas, CA, 93905
 (city, state, zip)
831-796-1463
 (telephone number)
PaxtonS@co.monterey.ca.us
 (email address)

In accordance with the attached Technical Data Sheet(s), application is hereby made to:

- ☐ Establish New Lease
- ☒ Modify/Amend Lease (describe specific changes):
 (attach additional sheet if more space is required)

Upgrade existing Microwave system to King City. Replace existing
rectifier and battery bank. Install new Microwave system to Pinball.
Obtain rack space #23 for site monitoring equipment

- ☐ Renew lease with modification as stated:
 (attach additional sheet if more space is required)
- _____

- ☐ Renew lease (no changes, technical sheets must be completed)
- ☐ Lease _____ square feet

For vault space and related antenna space at Calandra Lookout Monterey County (Williams)

_____ (site name)

Power requirements for operations of communications equipment are:

- ☒ Commercial and emergency power
- ☐ Commercial power only
- ☐ No power required.

NOTE: Some radio vault facilities provide commercial and emergency power to each rack space without exception, and the tenant will be charged accordingly.

Person responsible for lease negotiations and submission of this application:

Steve Paxton

(name)

1590 Moffett Street

(address)

Salinas, CA, 93905

(city, state, zip)

831-796-1463

(telephone number)

PaxtonS@co.monterey.ca.us

(email address)

Billing Information:

Applicant: **Kathy Wells, ITD Finance Manager**

(name)

1590 Moffett Street

(address)

Salinas, CA, 93905

(city, state, zip)

831-796-1490

(telephone number)

wellska@co.monterey.ca.us

(email address)

It is understood that if any subsequent on-site testing is required, it will be charged to the lessee at the current rate determined by the State. In addition, any required engineering or technician labor charges or parts procurement expenses, plus a program management fee, will be re-billed to the lessee at the current rates being charged by the State. Prior to these charges being incurred, a written estimate and acceptance document will be forwarded to the applicant for review and signature.

Applicant: _____

By: _____

Title: _____

Date: _____

Receipt of a non-refundable application fee in the amount of \$_____ is hereby acknowledged.

STATE OF CALIFORNIA

By: _____

Date: _____

NOTE: A fee will be required when this agreement is renewed for a new term or when changes are made to an existing agreement and the preparation of a new lease agreement is required.

TECHNICAL DATA SHEETS

Data submitted on the Technical Data Sheets is used by the PSCO engineers to perform a study to determine the impact of the application on the existing users at the site. Please complete these sheets in its entirety and provide required information. Existing tenants must reflect the tenants installed equipment and equipment changes (new installations, removals, etc.).

Site Name: **Calandra Lookout**Date: **February 16, 2021**County: **Monterey**

The following technical data is submitted in conjunction with a request for vault space.

If this is a land lease application for Cellular, applicant must provide plot plans, construction drawings and a written description of proposed land use.

Person responsible for technical operation of this station (person who can provide technical details):

Brian Landacre

(name)

855 East Laurel Drive Building D

(address)

Salinas, CA, 93905

(city, state, zip)

831-796-1262

(telephone number)

Date equipment desired to be in operation: **June 1, 2021**

(It should be noted that, due to engineering priorities, this application may require up to one (1) full year to process.)

Equipment is to operate in the **Part 101** Radio Service.FCC callsign of this installation: **WQNP858**. (Include a copy of the FCC license)

Type of operation: ☐ Base Station ☐ Mobile Relay ☒ Microwave Station
☐ Other

Amount of rack space required to house equipment (in inches): **84 inches or 1 rack**

(NOTE: Unless otherwise authorized, all electronic equipment is to be mounted in 7'6" aluminum open-frame relay racks and fastened to the site's earthquake bracing and cable ladder system. One rack occupies 2' by 2' of floor space.)

Additional space desired to mount cavities, duplexers, batteries, etc.:

☐ Wall Space ☐ Floor Space _____ (HxWxD, inches)
☒ Rack Space ☐ Additional space not required

Space for battery facilities required, if any, including charger:

☐ Wall Space ☐ Floor Space _____ (HxWxD, inches)
☒ Radio Rack ☐ Not required

Maximum power consumption: TRANSMIT: 600 Watts RECEIVE: 400 Watts at

Voltage: ☐ 110 Volts AC ☐ 12 volts DC ☒ 48 volts DC☒ Other **Add 3- 30 amp circuits AC panel AM**

EQUIPMENT DATA

New Tenant: Provide data for each piece of equipment to be installed in each vault space and identify as **New (N)**.

Existing Tenant: Provide data for each piece of equipment currently installed and identify as **Existing (E)**. If adding or removing equipment; identify the appropriate action **New (N)**, **Removing (R)**.

FREQUENCY INFORMATION: CELLULAR APPLICANTS MUST PROVIDE SPECIFIC CHANNELS TO BE USED (NOT THE BAND). IF SPECIFIC FREQUENCIES HAVE NOT BEEN PROVIDED THE APPLICATION WILL BE RETURNED.

Be sure to include a system block diagram on the page furnished for that purpose. Duplicate this page as required to show all equipment desired to be installed:

TRANSMITTER #1 Power output 500 W

Frequency(s) 770.11875	Existing (E) Removing (R) New (N)
Make and Model: Harris Master V Chan 1 700 MHz System	E

RECEIVER #1

Frequency(s) 800.11875	Existing (E) Removing (R) New (N)
Make and Model: Harris Master V Chan 1 700 MHz System	E

TRANSMITTER #2 Power output 500 W

Frequency(s) 771.13125	Existing (E) Removing (R) New (N)
Make and Model: Harris Master V Chan 2 700 MHz System	E

RECEIVER #2

Frequency(s) 801.13125	Existing (E) Removing (R) New (N)
Make and Model: Harris Master V Chan 2 700 MHz System	E

TRANSMITTER #3 Power output 500 W

Frequency(s) 771.83125	Existing (E) Removing (R) New (N)
Make and Model: Harris Master V Chan 3 700 MHz System	E

RECEIVER #3

Frequency(s) 801.83125	Existing (E) Removing (R) New (N)
Make and Model: Harris Master V Chan 3 700 MHz System	E

TRANSMITTER #4 Power output 500 W

Frequency(s) 773.68125	Existing (E) Removing (R) New (N)
Make and Model: Harris Master V Chan 4 700 MHz System	E

RECEIVER #4

Frequency(s) 803.68125	Existing (E) Removing (R) New (N)
Make and Model: Harris Master V Chan 4 700 MHz System	E

TRANSMITTER #5 **Power output 50 W**

Frequency(s) 859.9625	Existing (E) Removing (R) New (N)
Make and Model: Tait TB8100 Data Channel 800 MHz system	E

RECEIVER #5

Frequency(s) 814.9625	Existing (E) Removing (R) New (N)
Make and Model: Tait TB8100 Data Channel 800 MHz system	E

TRANSMITTER #6 **Power output 50 W**

Frequency(s) 857.5125	Existing (E) Removing (R) New (N)
Make and Model: Motorola Quantar Voice Channel 800 MHz System	E

RECEIVER #6

Frequency(s) 812.5125	Existing (E) Removing (R) New (N)
Make and Model: Motorola Quantar Voice Channel 800 MHz System	E

TRANSMITTER #7 **Power output 10 W**

Frequency(s) 453.2375	Existing (E) Removing (R) New (N)
Make and Model: Harris Master III Link to Table Mountain	E

RECEIVER #7

Frequency(s) 458.2375	Existing (E) Removing (R) New (N)
Make and Model: Harris Master III Link to Table Mountain	E

TRANSMITTER #8 **Power output 10 W**

Frequency(s) 453.1000	Existing (E) Removing (R) New (N)
Make and Model: Harris Master III Link to Anderson Peak	E

RECEIVER #8

Frequency(s) 458.1000	Existing (E) Removing (R) New (N)
Make and Model: Harris Master III Link to Anderson Peak	E

TRANSMITTER #9 **Power output 100 W**

Frequency(s) 154.0250	Existing (E) Removing (R) New (N)
Make and Model: Harris Master III VHF Law Analog Channel	E

RECEIVER #9

Frequency(s) 159.0900	Existing (E) Removing (R) New (N)
Make and Model: Harris Master III VHF Law Analog Channel	E

TRANSMITTER #10 **Power output 100 W**

Frequency(s) 155.6250	Existing (E) Removing (R) New (N)
Make and Model: Harris Master III VHF Fire Analog Channel	E

RECEIVER #10

Frequency(s) 158.8500	Existing (E) Removing (R) New (N)
Make and Model: Harris Master III VHF Fire Analog Channel	E

TRANSMITTER #11 **Power output 100 W**

Frequency(s) 150.9950	Existing (E) Removing (R) New (N)
Make and Model: Motorola Quantar Public Works	E

RECEIVER #11

Frequency(s) 155.2950	Existing (E) Removing (R) New (N)
Make and Model: Motorola Quantar Public Works	E

TRANSMITTER #12 **Power output 100 W**

Frequency(s) 463.1000	Existing (E) Removing (R) New (N)
Make and Model: Motorola Quantar Med 5 Channel	E

RECEIVER #12

Frequency(s) 468.1000	Existing (E) Removing (R) New (N)
Make and Model: Motorola Quantar Med 5 Channel	E

TRANSMITTER #13 **Power output 113 W**

Frequency(s) 170.2625	Existing (E) Removing (R) New (N)
Make and Model: High Sierra MCWRA Alert 2 Rain Data System	E

RECEIVER #13

Frequency(s) 170.2625	Existing (E) Removing (R) New (N)
Make and Model: High Sierra MCWRA Alert 2 Rain Data System	E

TRANSMITTER #14 **Power output 10 W**

Frequency(s) 453.6375	Existing (E) Removing (R) New (N)
Make and Model: Motorola MTR3000 RF link to Pinball	E

RECEIVER #14

Frequency(s) 458.6375	Existing (E) Removing (R) New (N)
Make and Model: Motorola MTR3000 RF link to Pinball	E

TRANSMITTER #15 **Power output 10 mW**

Frequency(s) 6625.0000	Existing (E) Removing (R) New (N)
Make and Model: Aviat IRU600 Microwave to King City	R

RECEIVER #15

Frequency(s) 6725.0000	Existing (E) Removing (R) New (N)
Make and Model: Aviat IRU600 Microwave to King City	R

TRANSMITTER #16 **Power output 7 W**

Frequency(s) 6625.0000	Existing (E) Removing (R) New (N)
Make and Model: Aviat IRU600 Microwave to King City	N

RECEIVER #16

Frequency(s) 6785.0000	Existing (E) Removing (R) New (N)
Make and Model: Aviat IRU600 Microwave to King City	N

TRANSMITTER #17 **Power output 1 W**

Frequency(s) 10895.0000	Existing (E) Removing (R) New (N)
Make and Model: Aviat IRU600 Microwave to Pinball	N

RECEIVER #17

Frequency(s) 11385.0000	Existing (E) Removing (R) New (N)
Make and Model: Aviat IRU600 Microwave to Pinball	N

ANTENNA DATA

New Tenant: Provide data for each antenna to be installed at this vault facility and identify as **New (N)**.

Existing Tenant: Provide data for each antenna currently installed and identify as **Existing (E)**. If adding or removing an antenna; identify the appropriate action **New (N)**, **Removing (R)**.

Antenna number	Make and Model	Length or M/W dish size	Gain (dBd) (dBi for M/W)	Azimuth (relative to true north)	*Height desired (feet)	Existing (E) Removing (R) New (N)
42	Andrew UHP6-59WB (Position 65-1)	6'	39.9 dBi	339.163	65'	R
41	Andrew PAR6-65B (Position 30-1)	6'	38.8 dBi	339.163	30'	R
43	Sinclair SD235-HF2PALDF(DO2) (Position 40-3.5)	17'	5.5 dBd	360	40'	E
14	Sinclair SRL310C8 (Position 100-4)	10'	11 dBd	330	100'	E
8	DBSpectra DS7E12F36U-D (Position 80-4)	24'	12 dBd	360	80'	E
44	Andrew DB810E-PS (Position 19-4)	14.7'	12 dBd	360	19'	E
13	Telewave ANT850F6 (Position 100-3)	4.7'	6 dBd	360	100'	E
12	Telewave ANT850F6 (Position 20-3)	4.7'	6 dBd	360	20'	E
1	Laird Y4503 Directional Yagi (Position 20-1.5)	1.2'	7.1 dBd	92	20'	E
1	Laird Y4503 Directional Yagi (Position 20-2.5)	1.2'	7.1 dBd	158	20'	E
1	Laird Y4503 Directional Yagi (Position 20-4.5)	1.2'	7.1 dBd	294	20'	E
1	SC-476-HL PIM (Position ICE-BRIDGE)	2.1'	7.1 dBd	360	ICE-BRIDGE	E
N42	Commscope USX6-6W (Position 70-1)	6'	38.8 dBi	339.091	70'	N
N5	Commscope USX6-11W (Position 57-2)	6'	43.6 dBi	158.95	57'	N

* For VHF antennas, show desired height to base of antenna support. For microwave dishes, show desired height to center of radiating element.

AUXILIARY EQUIPMENT DATA

For each transmitter, receiver, or combination, supply the following:

Make and model of cavity(s), filter(s), isolator(s), duplexer(s), etc., desired to be installed at this site. Please indicate the desired location where these items are to be mounted in the vault. Be sure to include these elements on the system block diagram on the page provided for that purpose.

RACK #11 (NO CHANGE)	
EXISTING - SINCLAIR MDL#TJ4234 TX COMBINER WITH HIGH Q BANDPASS CAVITY FILTERS WITH DUAL LOW-LOSS ISOLATORS	MST 800 MHZ RACK MOUNT TRANSMIT COMBINING MOUNTED IN RACK #11. SEE RACK ELEVATIONS SHEET T-4
EXISTING - EMR CORP RECEIVE MULTICOUPLER MDL#26108-1/P-5C	MST 800 MHZ RACK MOUNT RECEIVE DISTRIBUTION MOUNTED IN RACK #11. SEE RACK ELEVATIONS SHEET T-4

RACK #12 (NO CHANGE)	
EXISTING - DBSPECTRA MDL#DSCC75-07D CERAMIC TRANSMIT COMBINER	NGEN 700 MHZ RACK MOUNT TRANSMIT COMBINING MOUNTED IN RACK #12. SEE RACK ELEVATIONS SHEET T-4
EXISTING - DBSPECTRA MDL#DBSMCP RX MULTICOUPLER W/TTA ATS7TMD30-R	NGEN 700 MHZ RACK MOUNT RECEIVE DISTRIBUTION MOUNTED IN RACK #12. SEE RACK ELEVATIONS SHEET T-4

RACK #13 (NO CHANGE)	
EXISTING - RFS MDL#663-6A-1 UHF DUPLEXER	UHF LINK RADIO TO ANDERSON PEAK. SEE RACK ELEVATIONS SHEET T-3
EXISTING - RFS MDL#663-6A-1 UHF DUPLEXER	UHF LINK RADIO TO TABLE MOUNTAIN. SEE RACK ELEVATIONS SHEET T-3
EXISTING - RFS MDL#663-6A-1 UHF DUPLEXER	UHF LINK RADIO TO PINBALL. SEE RACK ELEVATIONS SHEET T-3
EXISTING - EMR CORP RX MULTICOUPLER MDL# 24108-1/P-5	NGEN ANALOG OVERLAY RX DISTRIBUTION. THIS SYSTEM IS FED OFF A PORT ON THE STATE'S RECEIVE DISTRIBUTION SYSTEM. SEE RACK ELEVATIONS SHEET T-3

RACK #14 (1/2 RACK) (NO CHANGE)	
EXISTING - SINCLAIR MDL#TJ2214 TX COMBINER CAVITY-FERRITE TYPE WITH DUAL ISOLATORS	NGEN ANALOG OVERLAY RACK MOUNTED TX COMBINING. OCCUPIES HALF OF RACK #14. SEE RACK ELEVATIONS SHEET T-3

RACK #21 (PROPOSED CHANGES)	
EXISTING - AVIAT IRU600 6 GHZ MICROWAVE	PROPOSED TO BE UPGRADED. SEE PROPOSED RACK ELEVATIONS SHEET T-5
EXISTING - ADTRAN TSU600	T1 MUX TO DSO - NO CHANGES. SEE PROPOSED RACK ELEVATIONS SHEET T-5
PROPOSED - AVIAT IRU600 11GHZ MICROWAVE	PROPOSED NEW LINK TO PINBALL. SEE PROPOSED RACK ELEVATIONS SHEET T-5
EXISTING - AVIAT POWER SUPPLY AND BATTERY BANK	PROPOSED TO BE UPGRADED. SEE PROPOSED RACK ELEVATIONS SHEET T-5
EXISTING - MRWPCA RAIN DATA	PROPOSED NEW LOCATION IN RACK #23. SEE PROPOSED RACK ELEVATIONS SHEET T-5
EXISTING - MED 5 QUANTAR	PROPOSED NEW LOCATION IN RACK #23. SEE PROPOSED RACK ELEVATIONS SHEET T-5
EXISTING - PUBLIC WORKS QUANTAR	PROPOSED NEW LOCATION IN RACK #23. SEE PROPOSED RACK ELEVATIONS SHEET T-5

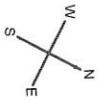
RACK #23 (PROPOSED CHANGES)	
PROPOSED - ICT POWER DISTRIBUTION UNIT	PROPOSED NEW PDU. SEE PROPOSED RACK ELEVATIONS SHEET T-5
PROPOSED - ASENTRIA SITEBOSS S550	PROPOSED NEW SITE MONITORING UNIT. SEE PROPOSED RACK ELEVATIONS SHEET T-5
LOREX CAMERA SYSTEM	PROPOSED NEW CAMERA SYSTEM. SEE PROPOSED RACK ELEVATIONS SHEET T-5
POWER CONVERTERS	PROPOSED NEW POWER CONVERTERS. SEE PROPOSED RACK ELEVATIONS SHEET T-5
MRWPCA RAIN DATA	PROPOSED NEW LOCATION (FROM RACK #21). SEE PROPOSED RACK ELEVATIONS SHEET T-5
MED 5 QUANTAR	PROPOSED NEW LOCATION (FROM RACK #21). SEE PROPOSED RACK ELEVATIONS SHEET T-5
PUBLIC WORKS QUANTAR	PROPOSED NEW LOCATION (FROM RACK #21). SEE PROPOSED RACK ELEVATIONS SHEET T-5

SYSTEM BLOCK DIAGRAM:

Please provide a block diagram of the proposed installation at this radio vault facility. Be sure to include all elements of the system, including transmitters, receivers, power sources, antennas, protective devices, telephone lines, multiplex circuits, etc. Use additional sheets if necessary. Refer to the attached example if desired. Please be sure to label the operating frequency of each piece of equipment in the system, as appropriate.

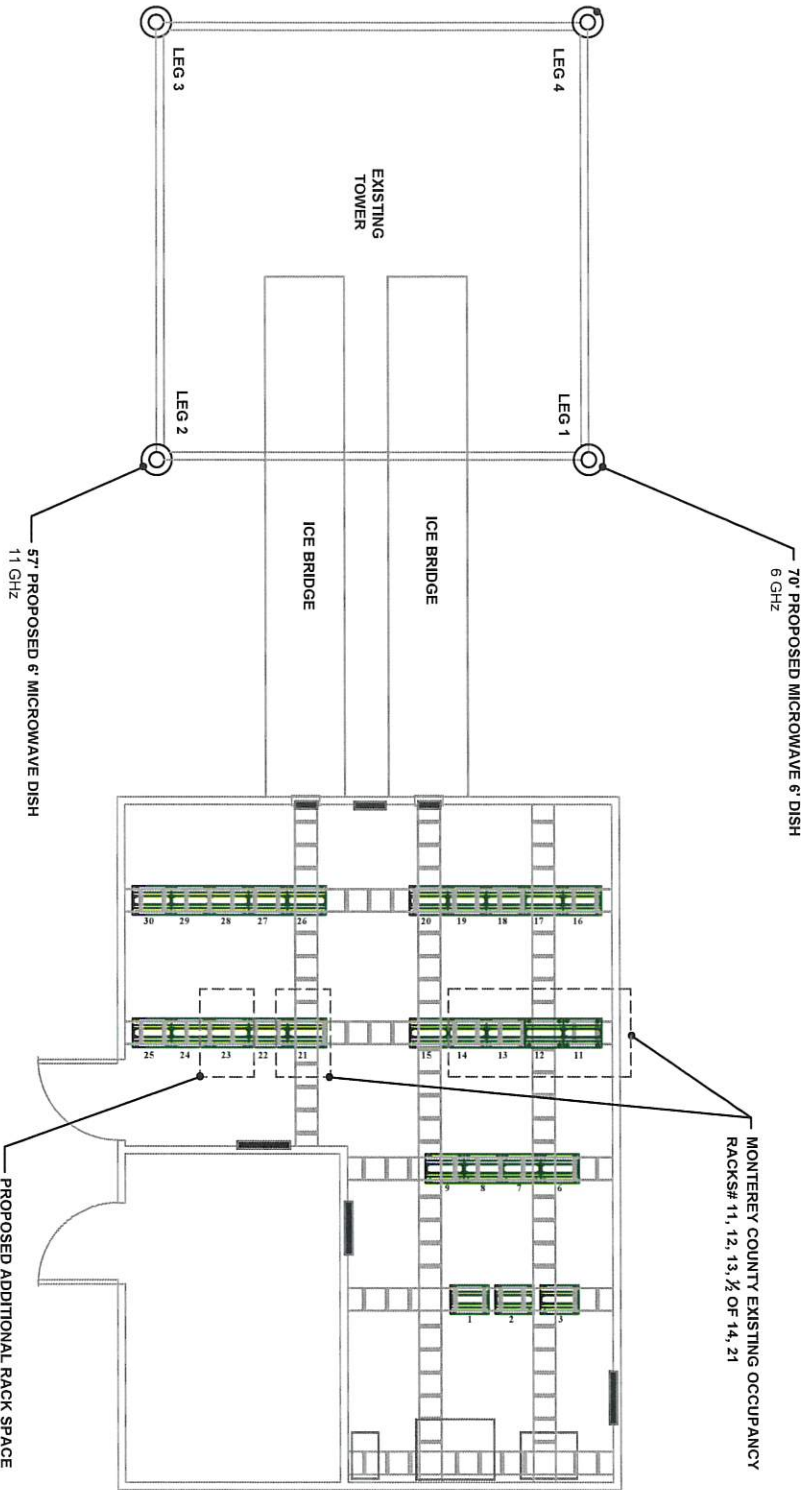
DWG LOCAL: \\Countywide\Radio Comm\Williams Hill\...

THIS DRAWING IS NOT FOR CONSTRUCTION. IT IS INTENDED FOR CONCEPTUAL SCHEMATIC DESIGN PURPOSES ONLY.



**PROPOSED ANTENNA MODIFICATIONS:
ONLY MODIFICATIONS TO COUNTY ANTENNAS
ARE SHOWN ON THIS SITE PLAN**

**FOR INTERNAL
USE ONLY**



DRAWINGS INDEX

- SHEET T-1 SITE PLAN & **PROPOSED** MICROWAVE DISH PLACEMENT
- SHEET T-2 PROPOSED FLOOR PLAN
- SHEET T-3 EXISTING COUNTY RACK ELEVATIONS
- SHEET T-4 EXISTING COUNTY RACK ELEVATIONS DETAILS
- SHEET T-5 **PROPOSED** COUNTY RACK ELEVATIONS
- SHEET T-6 **PROPOSED** TOWER ELEVATIONS
- SHEET T-7 EXISTING CABLING SCHEMATIC FOR 700MHz & 800MHz SYSTEM
- SHEET T-8 ANALOG OVERLAY SYSTEM
- SHEET T-9 EXISTING EQUIPMENT - MED-5
- SHEET T-10 EXISTING EQUIPMENT - PUBLIC WORKS
- SHEET T-11 RAIN DATA REPEATER SYSTEM
- SHEET T-12 EXISTING UHF LINK TO ANDERSON
- SHEET T-13 PROPOSED UHF LINK TO PINBALL
- SHEET T-14 EXISTING UHF LINK TO TABLE MOUNTAIN
- SHEET T-15 EXISTING AVIAT MICROWAVE DETAIL (TO BE UPGRADED)



**INFORMATION TECHNOLOGY
COMMUNICATIONS ENGINEERING**
1500 ALVARADO STREET
SAN JOSE, CA 95126
P: (408) 796-4430
F: (408) 796-4430

DWG No.: 00-RAM-0312-PM
DRAWN BY: D. TOMASINI
CHECKED BY: B. LAMORE
TYPE: TD312 DOCS
SCALE: 1/4" = 1' NO SCALE

REV.	DATE	DESCRIPTION
1	4/24/12	ISSUE FOR SUBMITTAL
2	10/21/12	ADDED FREQ. TO DIGITAL
3	12/7/12	CHANGED MULTICAST SYSTEM FROM VHF TO UHF (W/150KHz)
4	12/23/12	W/150KHz SWAP FROM 150KHz TO 125KHz LINK INSTALL TO LAKES & ANDERSON
5		
6		
7		
8		
9		
10		

**MONTEREY COUNTY
MICROWAVE UPGRADE
AND SITE READINESS
PROJECTS**

PROJECT SITE

**WILLIAMS HILL
[CALANDRA]
20 MILE SOUTH-EAST
OF KING CITY, CA
MONTEREY COUNTY**

**SHEET TITLE
SITE PLAN
&
PROPOSED MICROWAVE
DISH PLACEMENT**

SHEET NUMBER

T-1

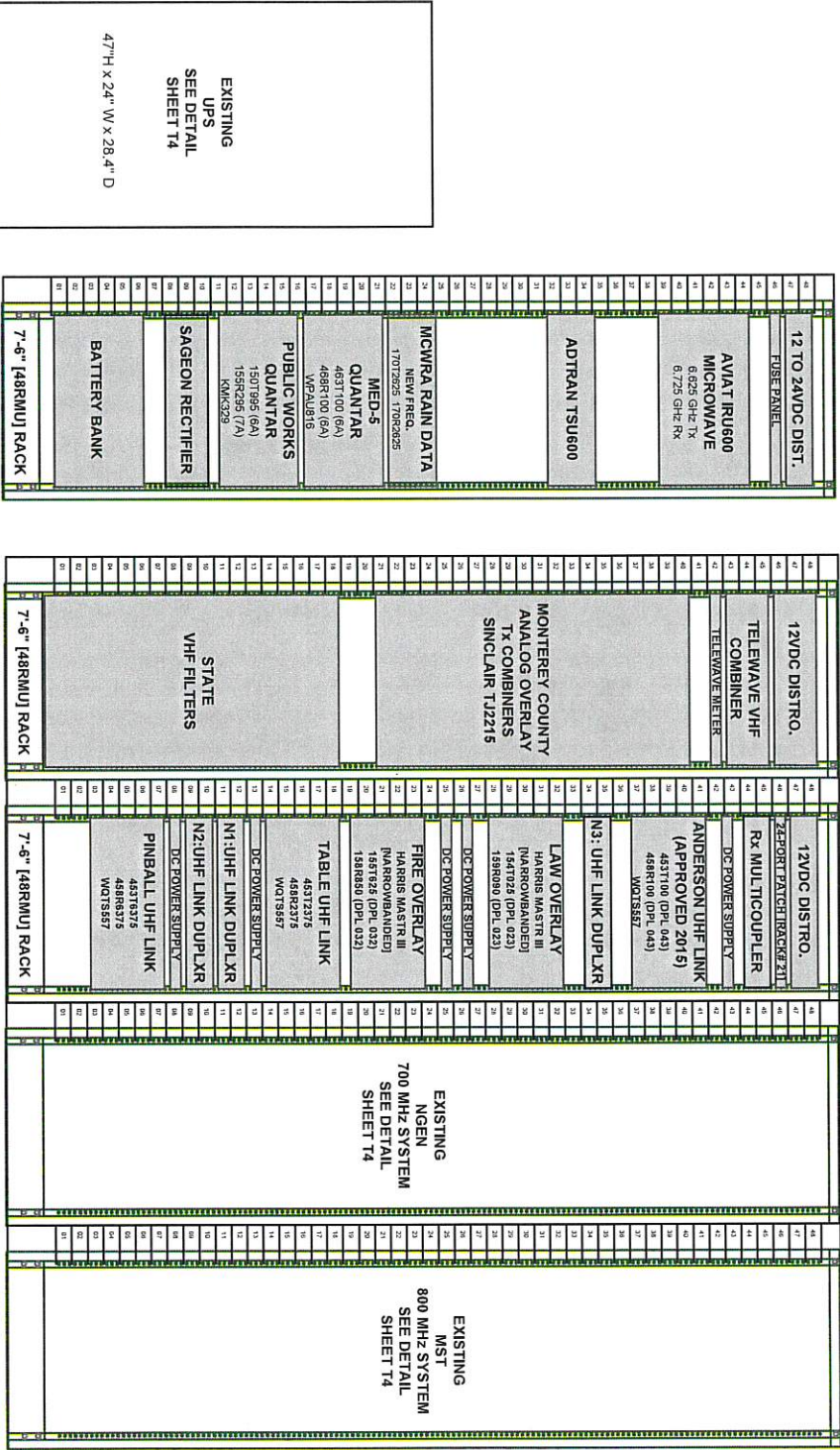


**FOR INTERNAL
USE ONLY**

DWG NO.: 00-FA-MMS-10312_P4	
DRAWN BY: D. TOMASINI	
CHECKED BY: B. LAMORE	
TYPE: 10312 DOCS	
SCALE: 8" = 1' 1/4"	

DWG LOCALE: I:\Countywide\Radio Comm\Williams Hill\...

EXISTING MONTEREY COUNTY RACK ELEVATIONS AT WILLIAMS HILL



LEGEND:
EXISTING EQUIPMENT (NO WORK)
EXISTING EQUIPMENT (NO WORK)

CURRENT STATE

FOR INTERNAL USE ONLY

THIS DRAWING IS NOT FOR CONSTRUCTION. IT IS INTENDED FOR CONCEPTUAL SCHEMATIC DESIGN PURPOSES ONLY.



INFORMATION TECHNOLOGY
COMMUNICATIONS ENGINEERING
1000 MONTEREY STREET
SALINAS, CA 93905
P: (831) 756-4433
F: (831) 756-6910

DWG NO.: 004-KAMS-10312_R4

DRAWN BY: D. TOMASINI

CHECKED BY: B. LANDACHE

TYPE: 10312 DOCS

SCALE: 1/4" = 1'-0"

REV	DATE	DESCRIPTION
-	-	SEE SHEET T-3 FOR REVISIONS

PROJECT TITLE
MONTEREY COUNTY
MICROWAVE UPGRADE
AND SITE READINESS
PROJECTS

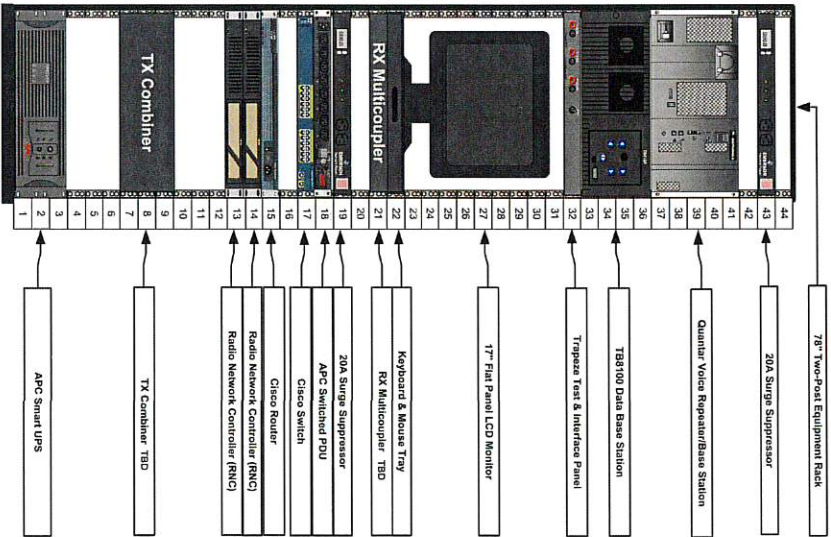
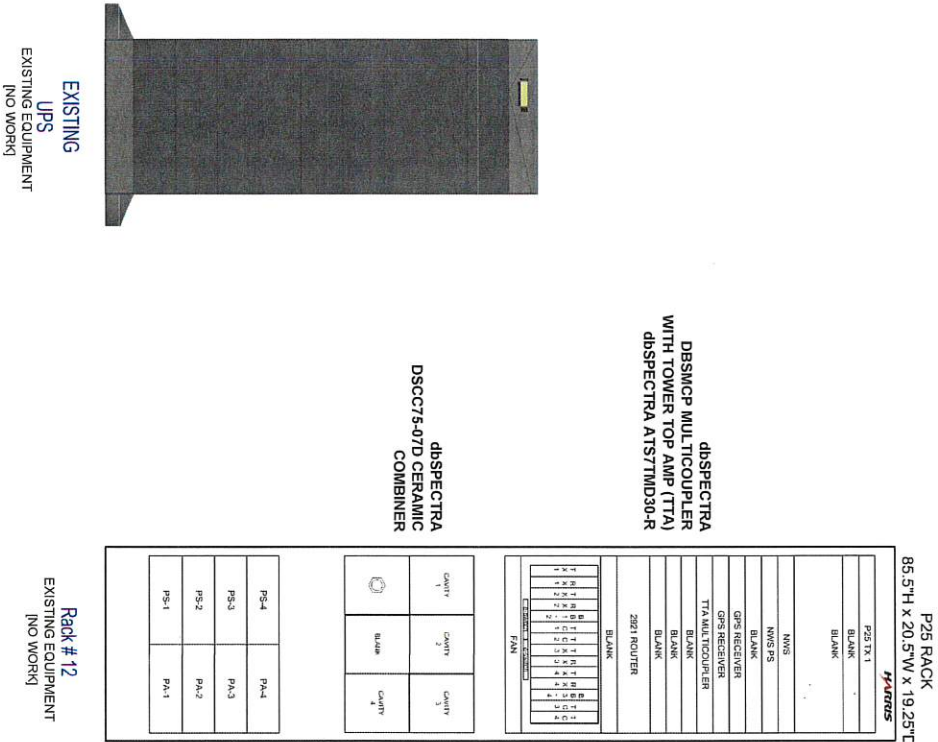
PROJECT SITE
WILLIAMS HILL
ICALANRAI
20 MILE SOUTH-EAST
OF KING CITY, CA
MONTEREY COUNTY

SHEET TITLE
EXISTING
COUNTY
RACK ELEVATIONS

T-3

SHEET NUMBER

DWG LOCALE: ICountywideRadio CommiWilliams Hill.....



INFORMATION TECHNOLOGY
COMMUNICATIONS ENGINEERING
1550 KOPPEL STREET
SALINAS, CA 93005
P (831) 758-9430
F (831) 758-9410

DWG No.: 00-9 W.L.S. 103112 J.H.
DRAWN BY: D. TOMASINI
CHECKED BY: B. LANDACRE
TYPE: TDR12 DOCS
SCALE: 8" x 11" NO SCALE

REV. DATE DESCRIPTION
- - - SEE SHT 1 FOR CHANGES

REV.	DATE	DESCRIPTION
-	-	SEE SHT 1 FOR CHANGES

PROJECT TITLE
MONTEREY COUNTY
MICROWAVE UPGRADE
AND SITE READINESS
PROJECTS

PROJECT SITE
WILLIAMS HILL
(CALANDRA)
20 MILE SOUTH-EAST
OF KING CITY, CA
MONTEREY COUNTY

SHEET TITLE
EXISTING
COUNTY
RACK ELEVATIONS
DETAILS

SHEET NUMBER
T-4

THIS DRAWING IS NOT FOR CONSTRUCTION. IT IS INTENDED
FOR CONCEPTUAL SCHEMATIC DESIGN PURPOSES ONLY.

FOR INTERNAL
USE ONLY

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DWG No.: D09A-AMC-DTJ_04
DRAWN BY : D. TOMASINI
CHECKED BY : B. LAMPARE
TYPE : DTJ's DOCS
SCALE : 8x=11 1/6" = 1'-0"

**MONTEREY COUNTY
MICROWAVE UPGRADE
AND SITE READINESS
PROJECTS**

**WILLIAMS HILL
[CALANDRA]
20 MILE SOUTH-EAST
OF KING CITY, CA
MONTEREY COUNTY**

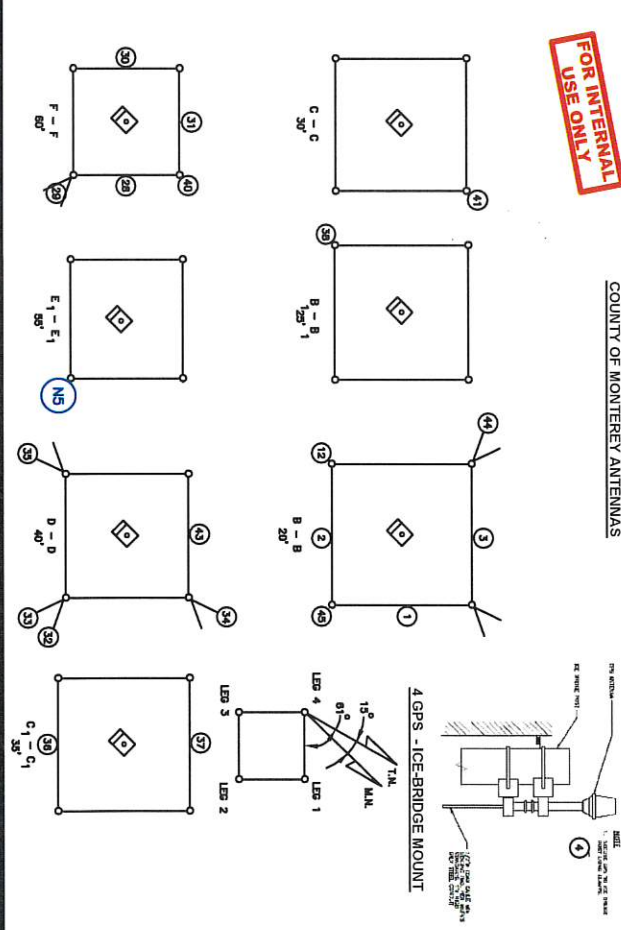
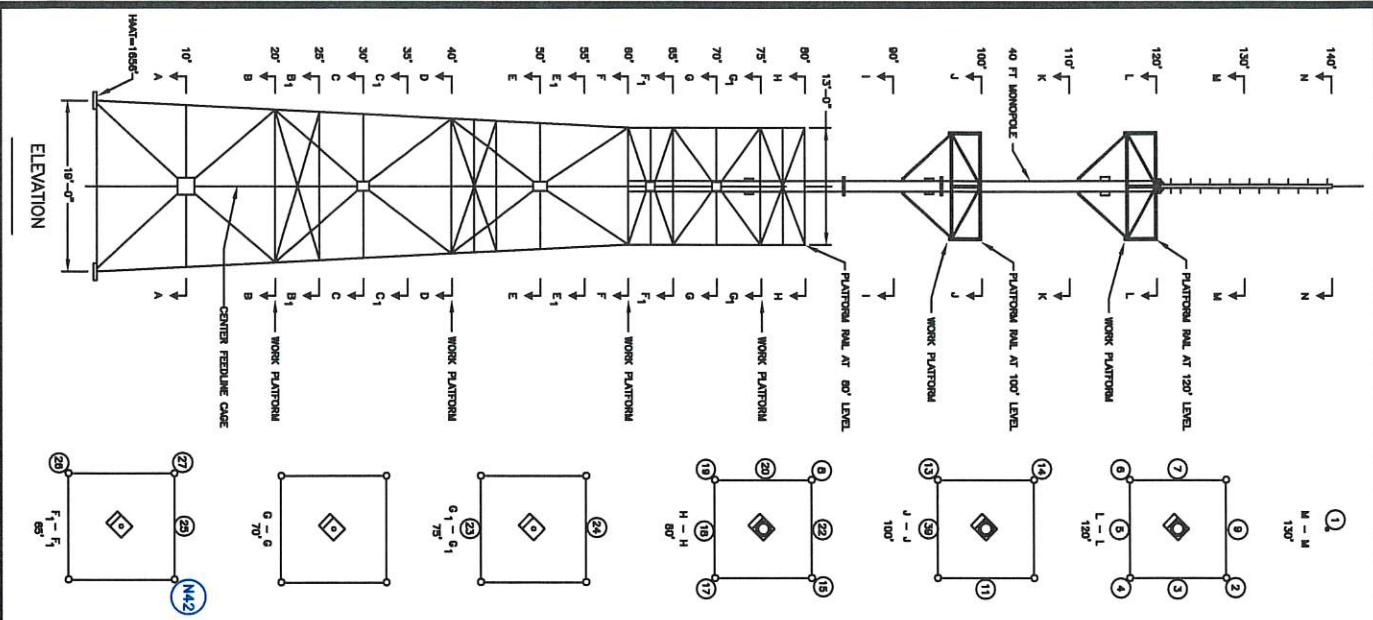
SHEET TITLE
PROPOSED
COUNTY
RACK ELEVATIONS

T-5



**INFORMATION TECHNOLOGY
COMMUNICATIONS ENGINEERING**
1590 MOFFETT STREET
SALINAS, CA 93905
P: (831) 796-6433
F: (831) 759-6910

DWG LOCALE: \Countywide\Radio Comm\Williams Hill...



Antenna #	Make and Model	Length or M/W dish size	Gain (dBi)	Azimuth (relative to true north)	*Height (feet)	Existing (E) Removing (R) New (N)	Description
42	Andrew UHP6-59WB (Position 55-1)	6'	39.3 dBi	339.163	65.0'	2011 (R)	MICROWAVE TO KC
41	Andrew PAR6-55B (Position 30-1)	6'	38.8 dBi	339.163	30.0'	2011 (R)	MICROWAVE TO KC
43	Sindair SD235-HF2PALDF (DO2) (Position 40-3.5)	17'	5.5 dBi	360	40.0'	2012 (E)	OVERLAY Tx
14	Sindair SRL31008 (Position 100-4)	10'	11 dBi	330	100.0'	2001 (E)	MED-CHNL
8	DRSpectra DS7E123BU-D (Position 80-4)	24'	12 dBi	360	80'	2015 (E)	Rx Only 700MHz NGEN
44	Andrew DB810E-PS (Position 19-4)	14.7'	12 dBi	360	19'	2015 (E)	Tx Only 700MHz NGEN
13	Telewave ANT850F6 (Position 100-3)	4.7'	6 dBi	360	100'	2015 (E)	Rx Only 800MHz MST
12	Telewave ANT850F6 (Position 20-3)	4.7'	6 dBi	360	20'	2015 (E)	Tx Only 800MHz MST
1	Laird Y4503 Directional Yagi (Position 20-1.5)	1.2'	7.1 dBi	92	20'	(E)	UHF LINK TBL
2	Laird Y4503 Directional Yagi (Position 20-2.5)	1.2'	7.1 dBi	158	20'	(E)	UHF LINK PNBL
3	Laird Y4503 Directional Yagi (Position 20-4.5)	1.2'	7.1 dBi	294	20'	(E)	UHF LINK ANDN
4	SC-476-IL-PIM (Position ICE-BRIDGE)	2.1'	7.1 dBi	360	ICE-BRIDGE	(E)	GPS ALERT2
N42	COMSCOPE USX6-6W (Position 70-1)	6'	38.8 dBi	339.091	70'	(N)	MICROWAVE TO KCAG
N5	COMSCOPE USX6-6W (Position 57-2)	6'	43.5 dBi	158.95	57'	(N)	MICROWAVE TO PINBALL

PROJECT TITLE

WILLIAMS HILL
ICALANDRAI
20 MILE SOUTH-EAST
OF KING CITY, CA
MONTEREY COUNTY

PROJECT TITLE

MONTEREY COUNTY
MICROWAVE UPGRADE
AND SITE READINESS
PROJECTS

PROJECT TITLE

PROPOSED
TOWER ELEVATIONS

SHEET NUMBER

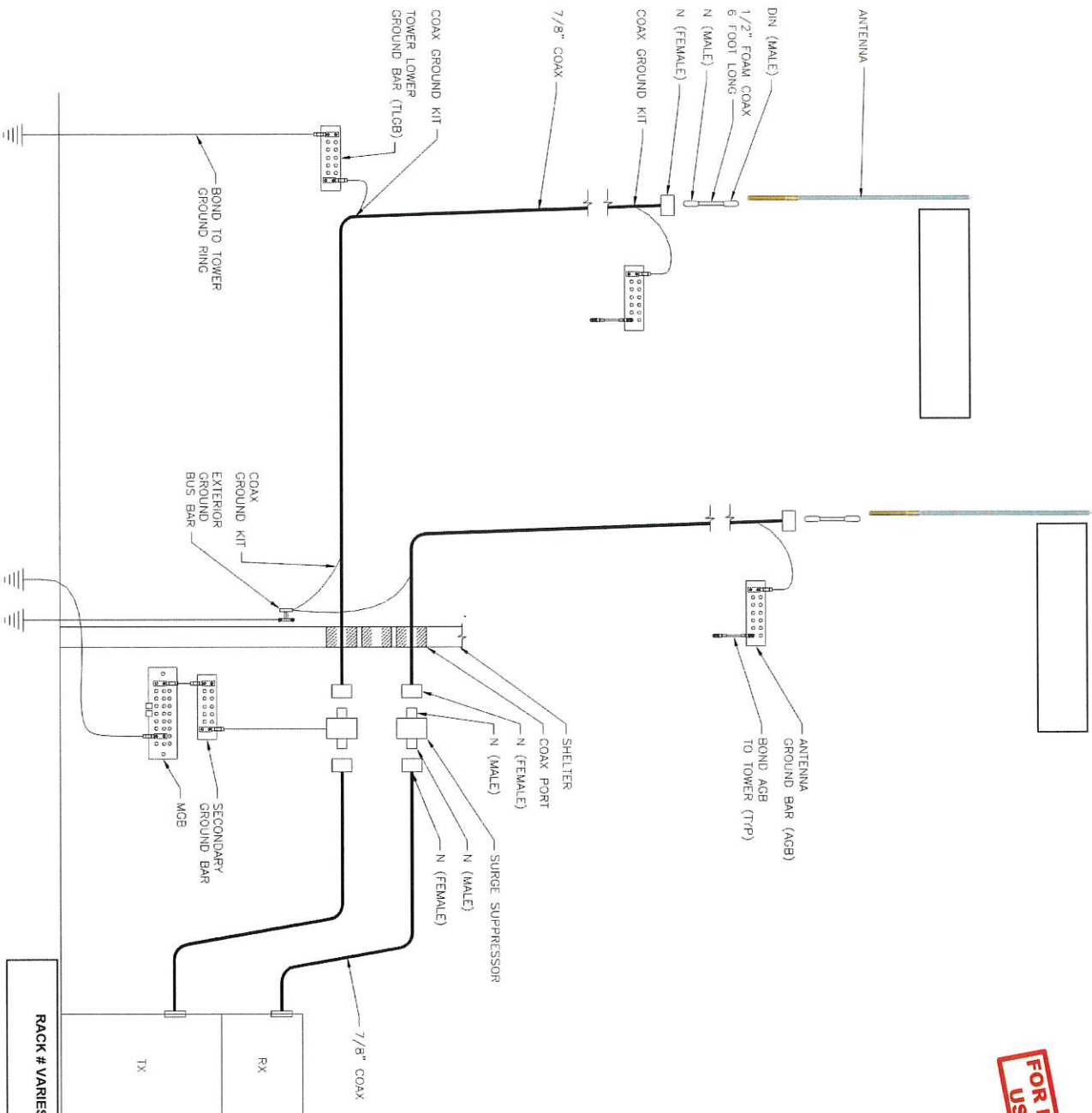
T-6

INFORMATION TECHNOLOGY
COMMUNICATIONS ENGINEERING
17000 S. HIGHWAY 101, SUITE 100
SALINAS, CA 93205
P: (831) 796-4433
F: (831) 796-4810

DWG No.: 00-04-04-05-0012_R4
DRAWN BY: D. TOMASINI
CHECKED BY: B. LANDICRE
TYPE: TD12 DOCS
SCALE: 8x11 1/4" x 10"

REV: DATE DESCRIPTION
1 11/11/11 REVISIONS
2 11/11/11 REVISIONS
3 11/11/11 REVISIONS
4 11/11/11 REVISIONS
5 11/11/11 REVISIONS
6 11/11/11 REVISIONS
7 11/11/11 REVISIONS
8 11/11/11 REVISIONS
9 11/11/11 REVISIONS
10 11/11/11 REVISIONS

DWG LOCALE: \\Countywide\Radio Comm\Williams Hill...



FOR INTERNAL
USE ONLY



INFORMATION TECHNOLOGY
COMMUNICATIONS ENGINEERING
1550 MOFFETT STREET
SAN JOSE, CA 95128
P: (408) 755-6433
F: (408) 755-6970

DWG No.: 00-RA-MWUS-TD012-04
DRAWN BY: D. TOMASINI
CHECKED BY: B. LANDACHE
TYPE: TD012 DOCS
SCALE: 8"x11" NO SCALE

REV.	DATE	DESCRIPTION
-	-	SEE SHIT FOR REVISION

PROJECT TITLE
MONTEREY COUNTY
MICROWAVE UPGRADE
AND SITE READINESS
PROJECTS

PROJECT SITE
WILLIAMS HILL
[CALANDRA]
20 MILE SOUTH-EAST
OF KING CITY, CA
MONTEREY COUNTY

SHEET TITLE
EXISTING CABLING
SCHEMATIC FOR 700MHz
& 800 MHz SYSTEM

SHEET NUMBER
T-7

THIS DRAWING IS NOT FOR CONSTRUCTION. IT IS INTENDED
FOR CONCEPTUAL SCHEMATIC DESIGN PURPOSES ONLY.



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**FOR INTERNAL
USE ONLY**

[illegible]

**INFORMATION TECHNOLOGY
COMMUNICATIONS ENGINEERING**
1590 MOFFETT STREET
SALINAS, CA 93905
P: (831) 796-6433
F: (831) 759-6910

DWG No.: 00-R-MUMS-TD312_R4
DRAWN BY: D. TOMASINI
CHECKED BY: B. LANDACRE
TYPE: TD312 DOCS
SCALE: B x 11 1/4" = 1'-0"

**MONTEREY COUNTY
MICROWAVE UPGRADE
AND SITE READINESS
PROJECTS**

**WILLIAMS HILL
[CALANDRA]
20 MILE SOUTH-EAST
OF KING CITY, CA
MONTEREY COUNTY**

SHEET TITLE

ANALOG OVERLAY

SYSTEM

87



**FOR INTERNAL
USE ONLY**

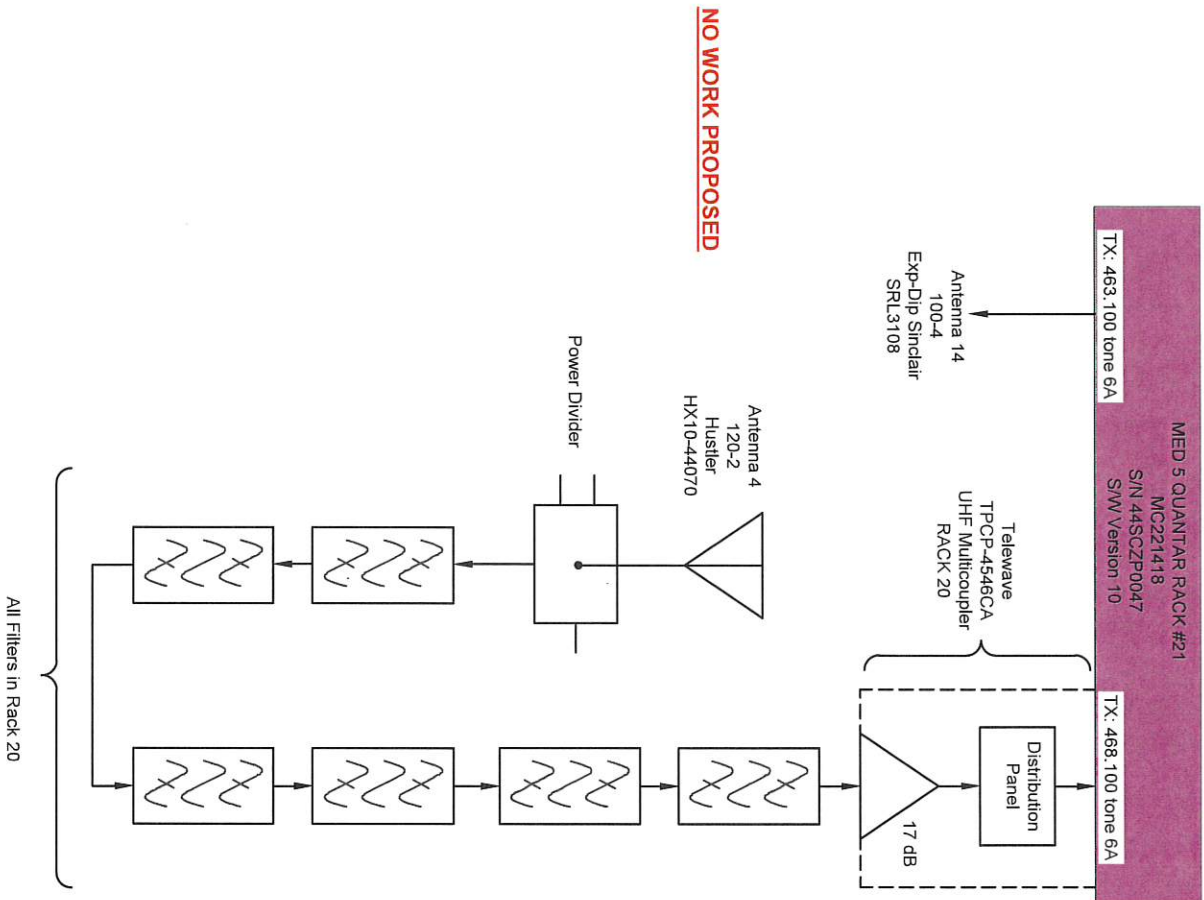
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PROJECT SITE
WILLIAMS HILL
[CALANDRA]
20 MILE SOUTH-EAST
OF KING CITY, CA
MONTEREY COUNTY

SHEET TITLE

**EXISTING EQUIPMENT
PUBLIC WORKS**

T-9



**FOR INTERNAL
USE ONLY**



**INFORMATION TECHNOLOGY
COMMUNICATIONS ENGINEERING**
1590 MOFFETT STREET
SALINAS, CA 93905
P: (831) 796-6433
F: (831) 758-6910

DWG No.:	00-R-MLMS-TD312_R4
DRAWN BY:	D. TOMASINI
CHECKED BY:	B. LANDACRE
TYPE:	TD312 DOCS
SCALE:	8" x 11 1/4" : 1'-0"

[illegible]

**MONTEREY COUNTY
MICROWAVE UPGRADE
AND SITE READINESS
PROJECTS**

WILLIAMS HILL
[CALANDRA]
20 MILE SOUTH-EAST
OF KING CITY, CA
MONTEREY COUNTY

SHEET TITLE
EXISTING EQUIPMENT
MED-5

SHEET NUMBER
T-10

MONTEREY COUNTY WILLIAMS HILL RAIN DATA CONFIGURATION



1

FOR INTERNAL USE ONLY

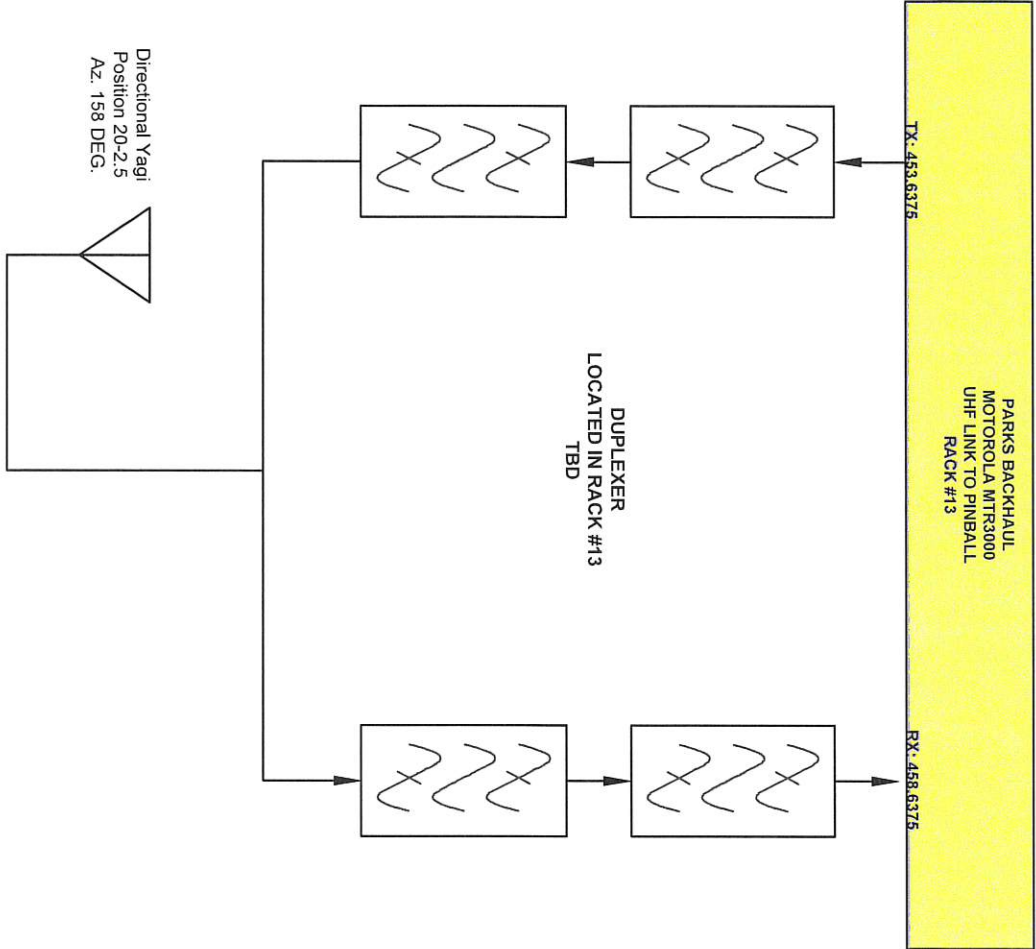
T-1

**FOR INTERNAL
USE ONLY**

T-12

DWG LOCAL: 'CountywideRadio Comm\Williams Hill\...

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FOR INTERNAL
USE ONLY

SHEET NUMBER
T-13


SHEET TITLE
EXISTING
UHF LINK TO
PINBALL

PROJECT SITE
**WILLIAMS HILL
[CALANDRA]
20 MILE SOUTH-EAST
OF KING CITY, CA
MONTEREY COUNTY**

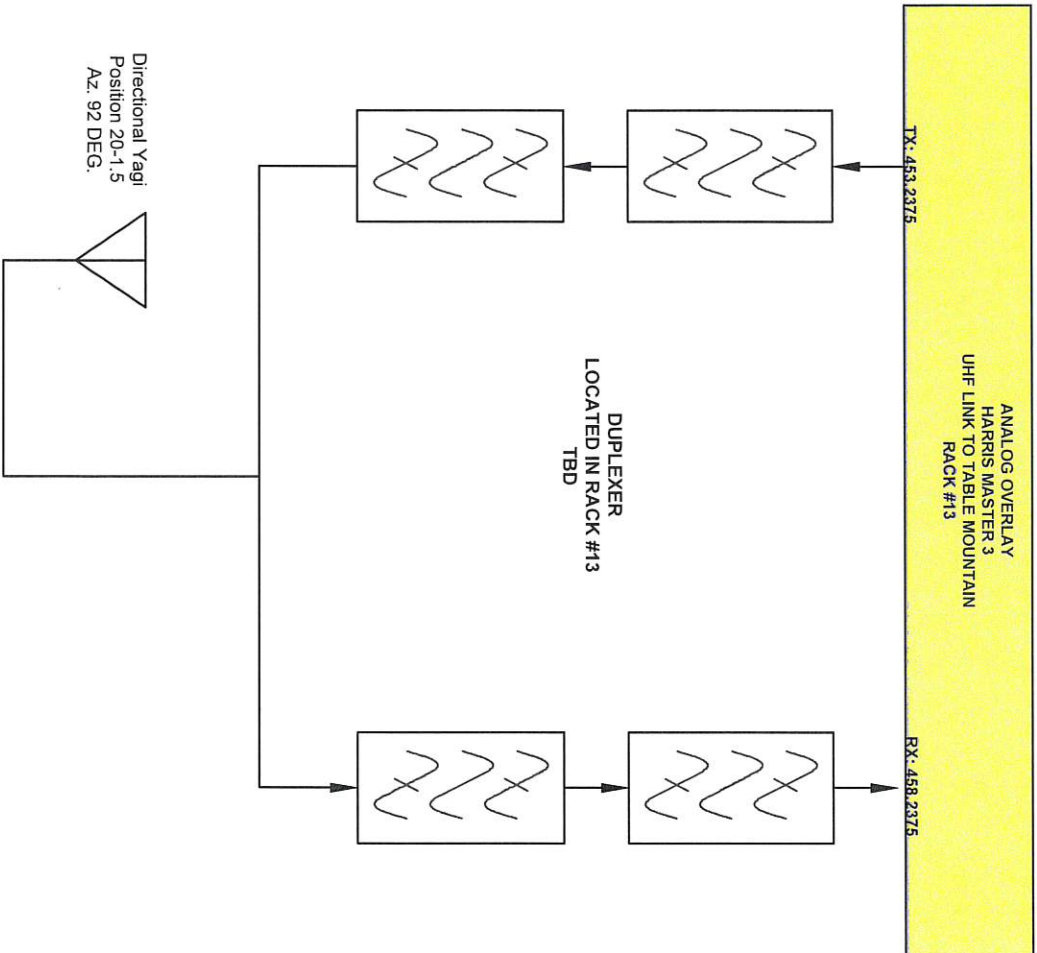
PROJECT TITLE
**MONTEREY COUNTY
MICROWAVE UPGRADE
AND SITE READINESS
PROJECTS**

REV.	DATE	DESCRIPTION
-	-	SEE SHEET FOR DESCRIPTION OF REVISIONS

DWG No.: 00-P4M45-TD312_R4
DRAWN BY: D. TOMASINI
CHECKED BY: B. LANDGRE
TYPE: TD312 DOCS
SCALE: 8"x11 1/4" 1/8"



**INFORMATION TECHNOLOGY
COMMUNICATIONS ENGINEERING**
1501 AVENUE A, SUITE 100
PACIFIC GROVE, CA 93950
P: (831) 796-4433
F: (831) 758-9910



**FOR INTERNAL
USE ONLY**

**INFORMATION TECHNOLOGY
COMMUNICATIONS ENGINEERING**
1590 MOFFETT STREET
SALINAS, CA 93905
P: (831) 798-6433
F: (831) 759-6910

DWG No.: 00-R-MLMS-TD312_R4
DRAWN BY: D. TOMASINI
CHECKED BY: B. LANDACRE
TYPE: TD312 DOCS
SCALE: 3/4" = 1'-0"

[illegible]

**MONTEREY COUNTY
MICROWAVE UPGRADE
AND SITE READINESS
PROJECTS**

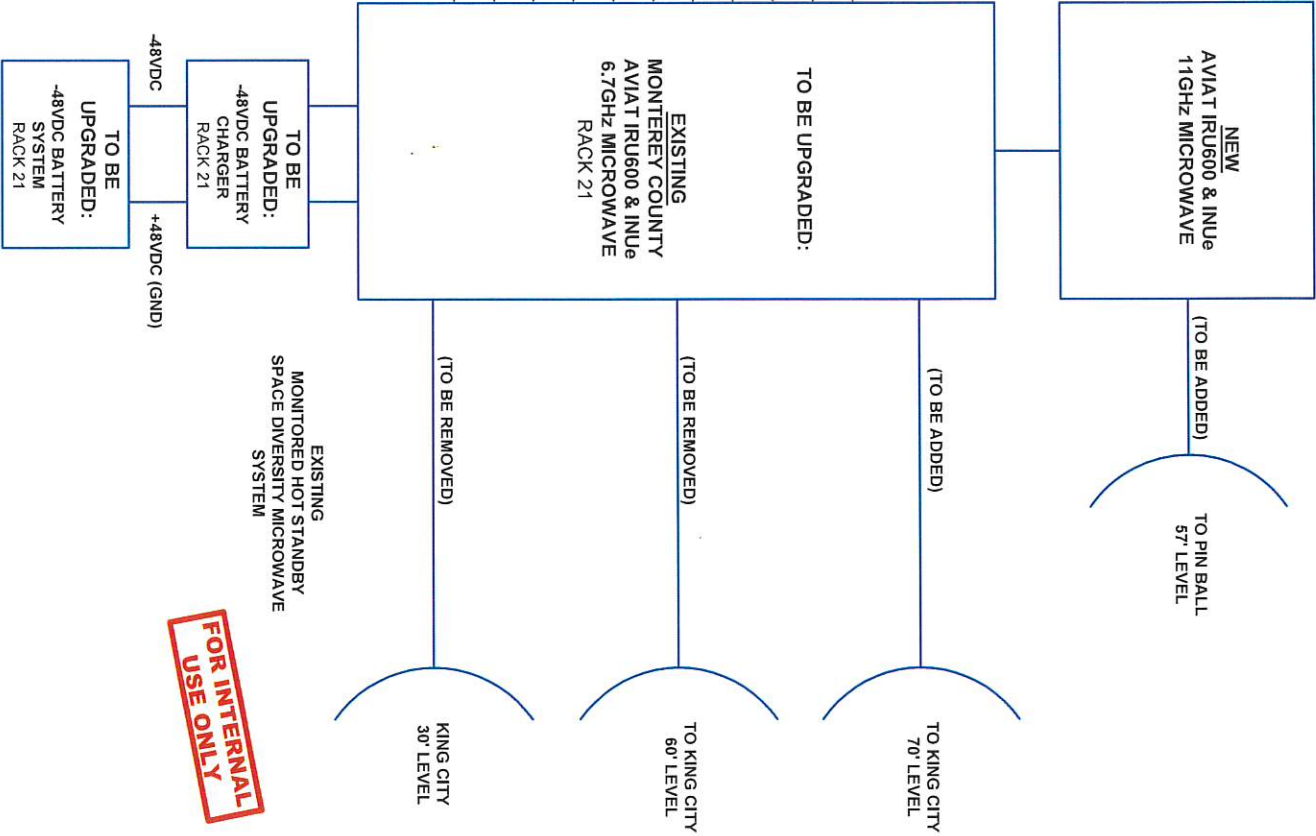
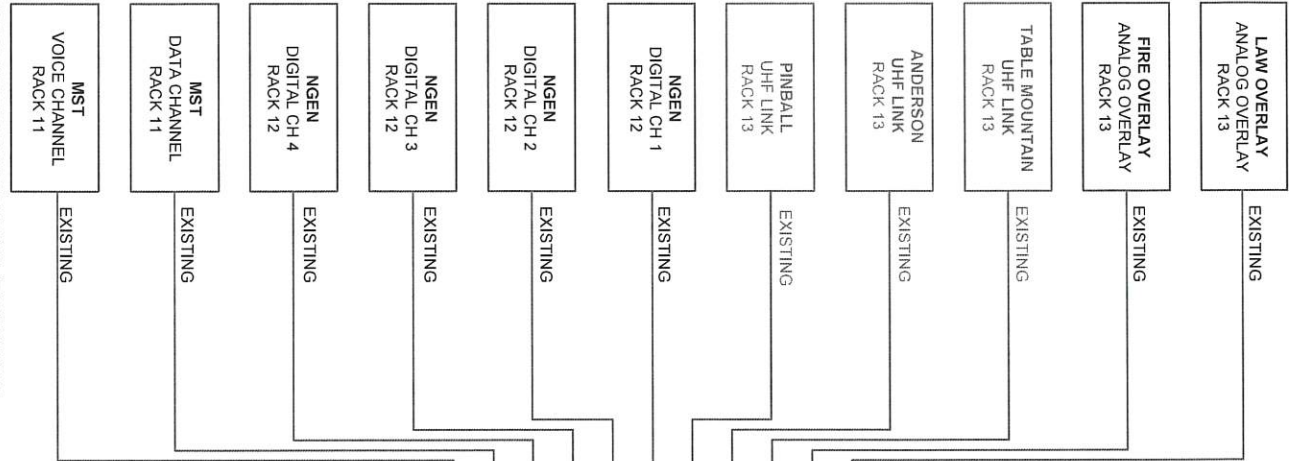
WILLIAMS HILL
[CALANDRA]
20 MILE SOUTH-EAST
OF KING CITY, CA
MONTEREY COUNTY

SHEET TITLE
EXISTING
UHF LINK TO
TABLE MOUNTAIN

T-14

DWG LOCAL: 'CountywideRadio Comm\Williams Hill...

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FOR INTERNAL USE ONLY



INFORMATION TECHNOLOGY
COMMUNICATIONS ENGINEERING
1000 MONTEREY AVENUE
SALINAS, CA 93205
P: (831) 798-6433
F: (831) 798-6910

DWG No.: 00-RK-MC-10312_24
DRAWN BY: D. TOMASINI
CHECKED BY: B. LANDGRE
TYPE: 10312 DOCS
SCALE: 8"=1' 1/2" 1/4"=1'-0"

REV.	DATE	DESCRIPTION
1		REVISION
2		REVISION
3		REVISION
4		REVISION
5		REVISION
6		REVISION
7		REVISION
8		REVISION
9		REVISION
10		REVISION

PROJECT TITLE
MONTEREY COUNTY
MICROWAVE UPGRADE
AND SITE READINESS
PROJECTS

PROJECT SITE
WILLIAMS HILL
[CALANDRA]
20 MILE SOUTH-EAST
OF KING CITY, CA
MONTEREY COUNTY

SHEET TITLE
EXISTING AVIAT
MICROWAVE DETAIL
(TO BE UPGRADED)

SHEET NUMBER
T-15