

TECHNICAL EXHIBIT
DTV MAXIMIZATION APPLICATION
STATION KTVU(DT)
OAKLAND, CALIFORNIA
CH 44 1000 KW (MAX-DA) 512 M

Technical Narrative

This Technical Exhibit supports an application for digital television (DTV) station KTVU(DT) for its "maximized" DTV operation at Oakland, California. This application requests a construction permit (CP) for KTVU(DT) digital television operation on channel 44 at Oakland with a directional effective radiated power of 1000 kilowatts. KTVU(DT) intends to use a Dielectric TUM-C5SP-14/60H-2-T-R transmitting antenna for digital operation.

Proposed Facilities

Station KTVU(DT) proposes to operate DTV channel 44 from its authorized DTV construction permit facility. The antenna height above average terrain for the channel 44 DTV operation will be 512 meters. The proposed KTVU(DT) effective radiated power exceeds the Commission's *Appendix B* allocated maximum effective radiated power in some azimuthal directions for KTVU(DT).¹ Therefore, an allocation study was completed to ensure no prohibited interference would occur.

¹ See Seventh Report And Order And Eighth Further Notice Of Proposed Rule Making in the Matter of Advanced Television Systems and their Impact Upon the Existing Television Broadcast Service, MB Docket 87-268, Released August 6, 2007; Adopted August 1, 2007.

The proposed DTV transmitter site will be located at the authorized KTVU(DT) site. Therefore, the proposed site location is:

37° 45' 19" North Latitude
122° 27' 06" West Longitude

A sketch of antenna and pertinent elevations are included as Appendix A.

Appendix B contains the vertical and horizontal plane radiation pattern for the proposed antenna system.

Figure 1 is a map showing the proposed DTV predicted coverage contour and the associated DTV appendix B Noise-Limited coverage contour. The extent of the contours have been calculated using the normal FCC prediction method. The Oakland city limits were derived from information contained in the 2000 U.S. Census of Population and Housing.

Maximum DTV Effective Radiated Power and HAAT

The proposed KTVU(DT) effective radiated power and antenna height above average terrain exceeds that permitted by Section 73.622(f)(8) of the Commission Rules. However, the proposed KTVU(DT) service area of 29,571 square kilometers is less than that of another station in the market, KPIX-DT, which serves 36,730 square kilometers. Therefore, pursuant to 73.622(f)(5), as the proposed

KTVU(DT) service area remains equal to or less than that of the largest station in the market, the proposed effective radiated power and antenna height above terrain is allowed to exceed the limits defined in Section 73.622(f)(8).

Population Served

The herein proposed KTVU(DT) "maximized" facility is predicted to serve 6,488,829 persons, post-transition based upon the 2000 Census. KTVU(DT)'s associated Appendix B facility is predicted to serve 6,336,000 persons. Therefore, the herein proposed KTVU(DT) facility would serve more than 100% of KTVU(DT)'s Appendix B population.

Allocation Considerations

The proposed KTVU(DT) Channel 44 facility meets the requirements of Section 73.623 of the FCC Rules concerning predicted interference to other Appendix B DTV allotments. Longley-Rice interference analyses were conducted pursuant to the requirements of the FCC Rules; OET Bulletin No. 69; and published FCC guidelines for preparation of such interference analyses. The Longley-Rice interference analyses were conducted using the software developed by du Treil, Lundin & Rackley, Inc. based on the FCC published software routines.² Stations selected for analysis were determined pursuant to the distance requirements outlined in the FCC DTV Processing Guidelines Public Notice. The results of the interference

² The duTreil, Lundin & Rackley, Inc. DTV interference analysis program is based on the program and procedures outlined by the FCC in the Sixth Report and Order; subsequent Memorandum Opinion and Order; and FCC OET Bulletin No. 69. A nominal grid size resolution of 2 km was employed.

analyses for the proposed KTVU(DT) facility are summarized herein at Figure 3. As indicated therein, the proposed facility will meet the 0.5% criterion outlined in the FCC Rules and published guidelines with respect to all considered stations³, except to the Licensed facility of KCSM-TV on DTV channel 44 at San Mateo, California. KTVU is pursuing an interference agreement with KCSM should such prove necessary depending upon whatever post-transition facilities KCSM proposes.

Radiofrequency Electromagnetic Field Exposure

The proposed KTVU(DT) facilities were evaluated in terms of potential radiofrequency electromagnetic field exposure at ground level to workers and the general public. The radiation center for the proposed KTVU(DT) antenna is located 288 meters above ground level. The maximum effective radiated power is 1000 kilowatts. A "worst case" downward relative field value of 0.15 is assumed for the antenna's downward radiation. The calculated power density at a point 2 meters above ground level is 0.0217 mW/cm². This is less than 5 percent of the Commission's recommended limit of 0.44 mW/cm² for channel 44 for an "uncontrolled" environment.

³ Interference analysis results reflect the net change in interference to a given station considering the interference predicted to occur from all other stations (i.e. "masking") including the allotment facility for KTVU(DT). This properly reflects the net interference change for determining compliance with the FCC 0.5% *de minimis* standard.

Access to the transmitting site is restricted and appropriately marked with warning signs. As this is a multi-user site an agreement between the stations will control access. In the event that workers or other authorized personnel enter restricted areas or climb the tower, appropriate measures will be taken to assure worker safety with respect to radio frequency radiation exposure. Such measures include reducing the average exposure by spreading out the work over a longer period of time, wearing "accepted" RFR protective clothing and/or RFR exposure monitors or scheduling work when the stations are at reduced power or shut down. The proposed KTVU(DT) operation appears to be otherwise categorically excluded from environmental processing.

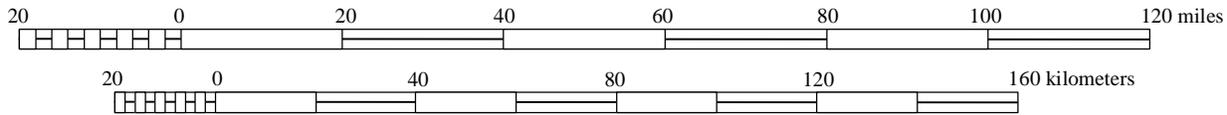
It is noted that this statement only addresses the potential for radiofrequency electromagnetic field exposure. All other aspects of the environmental processing analysis will be or already have been provided to the FCC by the tower owner.

Charles Cooper

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201 Fletcher Avenue
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941.329.6000

June 12, 2008

Figure 1



PREDICTED COVERAGE CONTOURS

STATION KTVU(DT)

OAKLAND, CALIFORNIA

CH 44 1000 KW (MAX-DA) 512 M

du Treil, Lundin & Rackley, Inc Sarasota, Florida

Figure 2

TW Census data selected 2000
Post Transition Data Base Selected /export/home/cdbs/pt_tvdb.sff

TV INTERFERENCE and SPACING ANALYSIS PROGRAM

Date: 06-12-2008 Time: 09:22:50

Record Selected for Analysis

KTVU USERRECORD-01 OAKLAND CA US
Channel 44 ERP 1000. kW HAAT 516. m RCAMSL 00542 m
Latitude 037-45-19 Longitude 0122-27-06
Status APP Zone 2 Border
Dir Antenna Make usr Model KTVU Beam tilt N Ref Azimuth 0.
Last update Cutoff date Docket
Comments
Applicant

Cell Size for Service Analysis 0.5 km/side

Distance Increments for Longley-Rice Analysis 1.00 km

Facility does not meet maximum height/power limits
Channel 44 ERP = 1000.00 HAAT = 516.

Table with 4 columns: Azimuth (Deg), ERP (kW), HAAT (m), 41.0 dBu F(50,90) (km). Rows show values for various azimuth angles from 0.0 to 315.0.

Evaluation toward Class A Stations

No Spacing violations or contour overlap to Class A stations

Class A Evaluation Complete

Proposed facility OK to FCC Monitoring Stations

Proposed facility OK toward West Virginia quiet zone

Figure 2

Proposed facility OK toward Table Mountain

Proposed facility is beyond the Canadian coordination distance

Proposed facility is beyond the Mexican coordination distance

Proposed station is OK toward AM broadcast stations

Start of Interference Analysis

Table with 4 columns: Channel, Proposed Station Call, City/State, ARN. Row 1: 44, KTVU, OAKLAND CA, USERRECORD01

Stations Potentially Affected by Proposed Station

Table with 7 columns: Chan, Call, City/State, Dist(km), Status, Application, Ref. No. Lists affected stations like KCSM-TV, KRXI-TV, KBCW, K46DR.

Analysis of Interference to Affected Station 1

Analysis of current record

Table with 5 columns: Channel, Call, City/State, Application, Ref. No. Row 1: 43, KCSM-TV, SAN MATEO CA, BLEDT, -20030822AFZ

Stations Potentially Affecting This Station

Table with 7 columns: Chan, Call, City/State, Dist(km), Status, Application, Ref. No. Lists stations like KHSL-TV, KGMC, KTVU.

Total scenarios = 6

Result key: 1
Scenario 1 Affected station 1
Before Analysis

Figure 2

Results for: 43A CA SAN MATEO BLEDT 20030822AFZ LIC
 HAAT 428.0 m, ATV ERP 536.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	6837281	27110.0
not affected by terrain losses	6251882	21870.6
lost to NTSC IX	0	0.0
lost to additional IX by ATV	70745	758.5
lost to ATV IX only	70745	758.5
lost to all IX	70745	758.5

Potential Interfering Stations Included in above Scenario 1

43A CA CHICO	BPCDT	20070124AKD	CP
43A CA CLOVIS	DTVPLN	DTVP1527	PLN

After Analysis

Results for: 43A CA SAN MATEO BLEDT 20030822AFZ LIC
 HAAT 428.0 m, ATV ERP 536.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	6837281	27110.0
not affected by terrain losses	6251882	21870.6
lost to NTSC IX	0	0.0
lost to additional IX by ATV	104261	964.9
lost to ATV IX only	104261	964.9
lost to all IX	104261	964.9

Potential Interfering Stations Included in above Scenario 1

43A CA CHICO	BPCDT	20070124AKD	CP
43A CA CLOVIS	DTVPLN	DTVP1527	PLN
44A CA OAKLAND	USERRECORD01		APP

The following station failed the de minimis interference criteria.
 44D CA OAKLAND USERRECORD01
 ERP 1000.00 kW HAAT 516.0 m RCAMSL 542.0 m
 Antenna usr KTVU

Due to interference to the following station and scenario: 1
 43D CA SAN MATEO BLEDT 20030822AFZ
 ERP 536.00 kW HAAT 428.0 m RCAMSL 459.0 m
 Antenna CDB 0000000044617

Percent new interference from proposal: 0.5422 to BLEDT 20030822AFZ

Result key: 2
 Scenario 2 Affected station 1
 Before Analysis

Results for: 43A CA SAN MATEO BLEDT 20030822AFZ LIC
 HAAT 428.0 m, ATV ERP 536.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	6837281	27110.0
not affected by terrain losses	6251882	21870.6
lost to NTSC IX	0	0.0
lost to additional IX by ATV	70745	758.5
lost to all IX	70745	758.5

Figure 2

lost to ATV IX only 70745 758.5
 lost to all IX 70745 758.5

Potential Interfering Stations Included in above Scenario 2

43A CA CHICO	BPCDT	20070124AKD	CP
43A CA CLOVIS	BPCDT	20080313ACH	CP

After Analysis

Results for: 43A CA SAN MATEO BLEDT 20030822AFZ LIC
 HAAT 428.0 m, ATV ERP 536.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	6837281	27110.0
not affected by terrain losses	6251882	21870.6
lost to NTSC IX	0	0.0
lost to additional IX by ATV	104261	964.9
lost to ATV IX only	104261	964.9
lost to all IX	104261	964.9

Potential Interfering Stations Included in above Scenario 2

43A CA CHICO	BPCDT	20070124AKD	CP
43A CA CLOVIS	BPCDT	20080313ACH	CP
44A CA OAKLAND	USERRECORD01		APP

The following station failed the de minimis interference criteria.
 44D CA OAKLAND USERRECORD01
 ERP 1000.00 kW HAAT 516.0 m RCAMSL 542.0 m
 Antenna usr KTVU

Due to interference to the following station and scenario: 2
 43D CA SAN MATEO BLEDT 20030822AFZ
 ERP 536.00 kW HAAT 428.0 m RCAMSL 459.0 m
 Antenna CDB 0000000044617

Percent new interference from proposal: 0.5422 to BLEDT 20030822AFZ

Result key: 3
 Scenario 3 Affected station 1
 Before Analysis

Results for: 43A CA SAN MATEO BLEDT 20030822AFZ LIC
 HAAT 428.0 m, ATV ERP 536.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	6837281	27110.0
not affected by terrain losses	6251882	21870.6
lost to NTSC IX	0	0.0
lost to additional IX by ATV	147182	965.1
lost to ATV IX only	147182	965.1
lost to all IX	147182	965.1

Potential Interfering Stations Included in above Scenario 3

43A CA CHICO	DTVPLN	DTVP1526	PLN
43A CA CLOVIS	DTVPLN	DTVP1527	PLN

Figure 2

After Analysis

Results for: 43A CA SAN MATEO BLEDT 20030822AFZ LIC
 HAAT 428.0 m, ATV ERP 536.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	6837281	27110.0
not affected by terrain losses	6251882	21870.6
lost to NTSC IX	0	0.0
lost to additional IX by ATV	180698	1166.2
lost to ATV IX only	180698	1166.2
lost to all IX	180698	1166.2

Potential Interfering Stations Included in above Scenario 3

43A CA CHICO	DTVPLN	DTVP1526	PLN
43A CA CLOVIS	DTVPLN	DTVP1527	PLN
44A CA OAKLAND	USERRECORD01		APP

The following station failed the de minimis interference criteria.
 44D CA OAKLAND USERRECORD01
 ERP 1000.00 kW HAAT 516.0 m RCAMSL 542.0 m
 Antenna usr KTVU

Due to interference to the following station and scenario: 3
 43D CA SAN MATEO BLEDT 20030822AFZ
 ERP 536.00 kW HAAT 428.0 m RCAMSL 459.0 m
 Antenna CDB 0000000044617

Percent new interference from proposal: 0.5490 to BLEDT 20030822AFZ

Result key: 4
 Scenario 4 Affected station 1
 Before Analysis

Results for: 43A CA SAN MATEO BLEDT 20030822AFZ LIC
 HAAT 428.0 m, ATV ERP 536.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	6837281	27110.0
not affected by terrain losses	6251882	21870.6
lost to NTSC IX	0	0.0
lost to additional IX by ATV	147182	965.1
lost to ATV IX only	147182	965.1
lost to all IX	147182	965.1

Potential Interfering Stations Included in above Scenario 4

43A CA CHICO	DTVPLN	DTVP1526	PLN
43A CA CLOVIS	BPCDT	20080313ACH	CP

After Analysis

Results for: 43A CA SAN MATEO BLEDT 20030822AFZ LIC
 HAAT 428.0 m, ATV ERP 536.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	6837281	27110.0

Figure 2

not affected by terrain losses	6251882	21870.6
lost to NTSC IX	0	0.0
lost to additional IX by ATV	180698	1166.2
lost to ATV IX only	180698	1166.2
lost to all IX	180698	1166.2

Potential Interfering Stations Included in above Scenario 4

43A CA CHICO	DTVPLN	DTVP1526	PLN
43A CA CLOVIS	BPCDT	20080313ACH	CP
44A CA OAKLAND	USERRECORD01		APP

The following station failed the de minimis interference criteria.
 44D CA OAKLAND USERRECORD01
 ERP 1000.00 kW HAAT 516.0 m RCAMSL 542.0 m
 Antenna usr KTVU

Due to interference to the following station and scenario: 4
 43D CA SAN MATEO BLEDT 20030822AFZ
 ERP 536.00 kW HAAT 428.0 m RCAMSL 459.0 m
 Antenna CDB 0000000044617

Percent new interference from proposal: 0.5490 to BLEDT 20030822AFZ

Result key: 5
 Scenario 5 Affected station 1
 Before Analysis

Results for: 43A CA SAN MATEO BLEDT 20030822AFZ LIC
 HAAT 428.0 m, ATV ERP 536.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	6837281	27110.0
not affected by terrain losses	6251882	21870.6
lost to NTSC IX	0	0.0
lost to additional IX by ATV	53882	645.6
lost to ATV IX only	53882	645.6
lost to all IX	53882	645.6

Potential Interfering Stations Included in above Scenario 5

43A CA CHICO	BLCDT	20060315AEZ	LIC
43A CA CLOVIS	DTVPLN	DTVP1527	PLN

After Analysis

Results for: 43A CA SAN MATEO BLEDT 20030822AFZ LIC
 HAAT 428.0 m, ATV ERP 536.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	6837281	27110.0
not affected by terrain losses	6251882	21870.6
lost to NTSC IX	0	0.0
lost to additional IX by ATV	87398	853.5
lost to ATV IX only	87398	853.5
lost to all IX	87398	853.5

Potential Interfering Stations Included in above Scenario 5

Figure 2

43A CA CHICO BLCDT 20060315AEZ LIC
43A CA CLOVIS DTVPLN DTVP1527 PLN
44A CA OAKLAND USERRECORD01 APP

The following station failed the de minimis interference criteria.

44D CA OAKLAND USERRECORD01
ERP 1000.00 kW HAAT 516.0 m RCAMSL 542.0 m
Antenna usr KTVU

Due to interference to the following station and scenario: 5

43D CA SAN MATEO BLEDT 20030822AFZ
ERP 536.00 kW HAAT 428.0 m RCAMSL 459.0 m
Antenna CDB 0000000044617

Percent new interference from proposal: 0.5408 to BLEDT 20030822AFZ

Result key: 6
Scenario 6 Affected station 1
Before Analysis

Results for: 43A CA SAN MATEO BLEDT 20030822AFZ LIC
HAAT 428.0 m, ATV ERP 536.0 kW

Table with 3 columns: POPULATION, AREA (sq km), and loss categories (within Noise Limited Contour, not affected by terrain losses, lost to NTSC IX, lost to additional IX by ATV, lost to ATV IX only, lost to all IX).

Potential Interfering Stations Included in above Scenario 6

43A CA CHICO BLCDT 20060315AEZ LIC
43A CA CLOVIS BPCDT 20080313ACH CP

After Analysis

Results for: 43A CA SAN MATEO BLEDT 20030822AFZ LIC
HAAT 428.0 m, ATV ERP 536.0 kW

Table with 3 columns: POPULATION, AREA (sq km), and loss categories (within Noise Limited Contour, not affected by terrain losses, lost to NTSC IX, lost to additional IX by ATV, lost to ATV IX only, lost to all IX).

Potential Interfering Stations Included in above Scenario 6

43A CA CHICO BLCDT 20060315AEZ LIC
43A CA CLOVIS BPCDT 20080313ACH CP
44A CA OAKLAND USERRECORD01 APP

The following station failed the de minimis interference criteria.

44D CA OAKLAND USERRECORD01

Figure 2

ERP 1000.00 kW HAAT 516.0 m RCAMSL 542.0 m
Antenna usr KTVU

Due to interference to the following station and scenario: 6

43D CA SAN MATEO BLEDT 20030822AFZ
ERP 536.00 kW HAAT 428.0 m RCAMSL 459.0 m
Antenna CDB 0000000044617

Percent new interference from proposal: 0.5408 to BLEDT 20030822AFZ

Worst case new IX 0.5490% Scenario 3

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Analysis of Interference to Affected Station 2

Analysis of current record

Channel Call City/State Application Ref. No.
43 KCSM-TV SAN MATEO CA DTVPLN -DTV1529

Stations Potentially Affecting This Station

Table with 6 columns: Chan, Call, City/State, Dist(km), Status, Application Ref. No. Lists stations like KHSL-TV, KGMC, KTVU, and OAKLAND CA.

Total scenarios = 6

Result key: 7
Scenario 1 Affected station 2
Before Analysis

Results for: 43A CA SAN MATEO DTVPLN DTV1529 PLN
HAAT 428.0 m, ATV ERP 536.0 kW

Table with 3 columns: POPULATION, AREA (sq km), and loss categories (within Noise Limited Contour, not affected by terrain losses, lost to NTSC IX, lost to additional IX by ATV, lost to ATV IX only, lost to all IX).

Potential Interfering Stations Included in above Scenario 1

43A CA CHICO BPCDT 20070124AKD CP
43A CA CLOVIS DTVPLN DTV1527 PLN

After Analysis

Figure 2

Results for: 43A CA SAN MATEO DTVPLN DTVP1529 PLN
 HAAT 428.0 m, ATV ERP 536.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	6837281	27110.0
not affected by terrain losses	6251882	21870.6
lost to NTSC IX	0	0.0
lost to additional IX by ATV	104261	964.9
lost to ATV IX only	104261	964.9
lost to all IX	104261	964.9

Potential Interfering Stations Included in above Scenario 1

43A CA CHICO	BPCDT	20070124AKD	CP
43A CA CLOVIS	DTVPLN	DTVP1527	PLN
44A CA OAKLAND	USERRECORD01		APP

The following station failed the de minimis interference criteria.
 44D CA OAKLAND USERRECORD01
 ERP 1000.00 kW HAAT 516.0 m RCAMSL 542.0 m
 Antenna usr KTVU

Due to interference to the following station and scenario: 1
 43D CA SAN MATEO DTVPLN DTVP1529
 ERP 536.00 kW HAAT 428.0 m RCAMSL 459.0 m
 Antenna CDB 0000000044617

Percent new interference from proposal: 0.5422 to DTVPLN DTVP1529

Result key: 8
 Scenario 2 Affected station 2
 Before Analysis

Results for: 43A CA SAN MATEO DTVPLN DTVP1529 PLN
 HAAT 428.0 m, ATV ERP 536.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	6837281	27110.0
not affected by terrain losses	6251882	21870.6
lost to NTSC IX	0	0.0
lost to additional IX by ATV	70745	758.5
lost to ATV IX only	70745	758.5
lost to all IX	70745	758.5

Potential Interfering Stations Included in above Scenario 2

43A CA CHICO	BPCDT	20070124AKD	CP
43A CA CLOVIS	BPCDT	20080313ACH	CP

After Analysis

Results for: 43A CA SAN MATEO DTVPLN DTVP1529 PLN
 HAAT 428.0 m, ATV ERP 536.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	6837281	27110.0
not affected by terrain losses	6251882	21870.6
lost to NTSC IX	0	0.0

Figure 2

lost to additional IX by ATV 104261 964.9
 lost to ATV IX only 104261 964.9
 lost to all IX 104261 964.9

Potential Interfering Stations Included in above Scenario 2

43A CA CHICO	BPCDT	20070124AKD	CP
43A CA CLOVIS	BPCDT	20080313ACH	CP
44A CA OAKLAND	USERRECORD01		APP

The following station failed the de minimis interference criteria.
 44D CA OAKLAND USERRECORD01
 ERP 1000.00 kW HAAT 516.0 m RCAMSL 542.0 m
 Antenna usr KTVU

Due to interference to the following station and scenario: 2
 43D CA SAN MATEO DTVPLN DTVP1529
 ERP 536.00 kW HAAT 428.0 m RCAMSL 459.0 m
 Antenna CDB 0000000044617

Percent new interference from proposal: 0.5422 to DTVPLN DTVP1529

Result key: 9
 Scenario 3 Affected station 2
 Before Analysis

Results for: 43A CA SAN MATEO DTVPLN DTVP1529 PLN
 HAAT 428.0 m, ATV ERP 536.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	6837281	27110.0
not affected by terrain losses	6251882	21870.6
lost to NTSC IX	0	0.0
lost to additional IX by ATV	147182	965.1
lost to ATV IX only	147182	965.1
lost to all IX	147182	965.1

Potential Interfering Stations Included in above Scenario 3

43A CA CHICO	DTVPLN	DTVP1526	PLN
43A CA CLOVIS	DTVPLN	DTVP1527	PLN

After Analysis

Results for: 43A CA SAN MATEO DTVPLN DTVP1529 PLN
 HAAT 428.0 m, ATV ERP 536.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	6837281	27110.0
not affected by terrain losses	6251882	21870.6
lost to NTSC IX	0	0.0
lost to additional IX by ATV	180698	1166.2
lost to ATV IX only	180698	1166.2
lost to all IX	180698	1166.2

Potential Interfering Stations Included in above Scenario 3

43A CA CHICO	DTVPLN	DTVP1526	PLN
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Figure 2

43A CA CLOVIS DTVPLN DTVP1527 PLN
 44A CA OAKLAND USERRECORD01 APP

The following station failed the de minimis interference criteria.
 44D CA OAKLAND USERRECORD01
 ERP 1000.00 kW HAAT 516.0 m RCAMSL 542.0 m
 Antenna usr KTVU

Due to interference to the following station and scenario: 3
 43D CA SAN MATEO DTVPLN DTVP1529
 ERP 536.00 kW HAAT 428.0 m RCAMSL 459.0 m
 Antenna CDB 0000000044617

Percent new interference from proposal: 0.5490 to DTVPLN DTVP1529

Result key: 10
 Scenario 4 Affected station 2
 Before Analysis

Results for: 43A CA SAN MATEO DTVPLN DTVP1529 PLN
 HAAT 428.0 m, ATV ERP 536.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	6837281	27110.0
not affected by terrain losses	6251882	21870.6
lost to NTSC IX	0	0.0
lost to additional IX by ATV	147182	965.1
lost to ATV IX only	147182	965.1
lost to all IX	147182	965.1

Potential Interfering Stations Included in above Scenario 4

43A CA CHICO DTVPLN DTVP1526 PLN
 43A CA CLOVIS BPCDT 20080313ACH CP

After Analysis

Results for: 43A CA SAN MATEO DTVPLN DTVP1529 PLN
 HAAT 428.0 m, ATV ERP 536.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	6837281	27110.0
not affected by terrain losses	6251882	21870.6
lost to NTSC IX	0	0.0
lost to additional IX by ATV	180698	1166.2
lost to ATV IX only	180698	1166.2
lost to all IX	180698	1166.2

Potential Interfering Stations Included in above Scenario 4

43A CA CHICO DTVPLN DTVP1526 PLN
 43A CA CLOVIS BPCDT 20080313ACH CP
 44A CA OAKLAND USERRECORD01 APP

The following station failed the de minimis interference criteria.
 44D CA OAKLAND USERRECORD01
 ERP 1000.00 kW HAAT 516.0 m RCAMSL 542.0 m
 Antenna usr KTVU

Figure 2

Due to interference to the following station and scenario: 4
 43D CA SAN MATEO DTVPLN DTVP1529
 ERP 536.00 kW HAAT 428.0 m RCAMSL 459.0 m
 Antenna CDB 0000000044617

Percent new interference from proposal: 0.5490 to DTVPLN DTVP1529

Result key: 11
 Scenario 5 Affected station 2
 Before Analysis

Results for: 43A CA SAN MATEO DTVPLN DTVP1529 PLN
 HAAT 428.0 m, ATV ERP 536.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	6837281	27110.0
not affected by terrain losses	6251882	21870.6
lost to NTSC IX	0	0.0
lost to additional IX by ATV	53882	645.6
lost to ATV IX only	53882	645.6
lost to all IX	53882	645.6

Potential Interfering Stations Included in above Scenario 5

43A CA CHICO BLCDT 20060315AEZ LIC
 43A CA CLOVIS DTVPLN DTVP1527 PLN

After Analysis

Results for: 43A CA SAN MATEO DTVPLN DTVP1529 PLN
 HAAT 428.0 m, ATV ERP 536.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	6837281	27110.0
not affected by terrain losses	6251882	21870.6
lost to NTSC IX	0	0.0
lost to additional IX by ATV	87398	853.5
lost to ATV IX only	87398	853.5
lost to all IX	87398	853.5

Potential Interfering Stations Included in above Scenario 5

43A CA CHICO BLCDT 20060315AEZ LIC
 43A CA CLOVIS DTVPLN DTVP1527 PLN
 44A CA OAKLAND USERRECORD01 APP

The following station failed the de minimis interference criteria.
 44D CA OAKLAND USERRECORD01
 ERP 1000.00 kW HAAT 516.0 m RCAMSL 542.0 m
 Antenna usr KTVU

Due to interference to the following station and scenario: 5
 43D CA SAN MATEO DTVPLN DTVP1529
 ERP 536.00 kW HAAT 428.0 m RCAMSL 459.0 m
 Antenna CDB 0000000044617

Percent new interference from proposal: 0.5408 to DTVPLN DTVP1529

Figure 2

Result key: 12
 Scenario 6 Affected station 2
 Before Analysis

Results for: 43A CA SAN MATEO DTVPLN DTVP1529 PLN
 HAAT 428.0 m, ATV ERP 536.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	6837281	27110.0
not affected by terrain losses	6251882	21870.6
lost to NTSC IX	0	0.0
lost to additional IX by ATV	53882	645.6
lost to ATV IX only	53882	645.6
lost to all IX	53882	645.6

Potential Interfering Stations Included in above Scenario 6

43A CA CHICO	BLCDT	20060315AEZ	LIC
43A CA CLOVIS	BPCDT	20080313ACH	CP

After Analysis

Results for: 43A CA SAN MATEO DTVPLN DTVP1529 PLN
 HAAT 428.0 m, ATV ERP 536.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	6837281	27110.0
not affected by terrain losses	6251882	21870.6
lost to NTSC IX	0	0.0
lost to additional IX by ATV	87398	853.5
lost to ATV IX only	87398	853.5
lost to all IX	87398	853.5

Potential Interfering Stations Included in above Scenario 6

43A CA CHICO	BLCDT	20060315AEZ	LIC
43A CA CLOVIS	BPCDT	20080313ACH	CP
44A CA OAKLAND	USERRECORD01		APP

The following station failed the de minimis interference criteria.
 44D CA OAKLAND USERRECORD01
 ERP 1000.00 kW HAAT 516.0 m RCAMSL 542.0 m
 Antenna usr KTVU

Due to interference to the following station and scenario: 6
 43D CA SAN MATEO DTVPLN DTVP1529
 ERP 536.00 kW HAAT 428.0 m RCAMSL 459.0 m
 Antenna CDB 00000000044617

Percent new interference from proposal: 0.5408 to DTVP1529 DTVP1529

Worst case new IX 0.5490% Scenario 3

#####

Figure 2

Analysis of Interference to Affected Station 3

Analysis of current record

Channel	Call	City/State	Application Ref. No.
44	KRXI-TV	RENO NV	BLCDT -20060707ACZ

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
43	KHSL-TV	CHICO CA	158.0	CP	BPCDT -20070124AKD
43	KHSL-TV	CHICO CA	158.0	PLN	DTVPLN -DTVP1526
43	KHSL-TV	CHICO CA	158.0	LIC	BLCDT -20060315AEZ
44	KTVU	OAKLAND CA	299.3	PLN	DTVPLN -DTVP1566
44	KTVU	OAKLAND CA	299.3	APP	USERRECORD-01

Proposal causes no interference

#####

Analysis of Interference to Affected Station 4

Analysis of current record

Channel	Call	City/State	Application Ref. No.
44	KRXI-TV	RENO NV	DTVPLN -DTVP1588

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
43	KHSL-TV	CHICO CA	158.0	CP	BPCDT -20070124AKD
43	KHSL-TV	CHICO CA	158.0	PLN	DTVPLN -DTVP1526
43	KHSL-TV	CHICO CA	158.0	LIC	BLCDT -20060315AEZ
44	KTVU	OAKLAND CA	299.3	PLN	DTVPLN -DTVP1566
44	KTVU	OAKLAND CA	299.3	APP	USERRECORD-01

Proposal causes no interference

#####

Analysis of Interference to Affected Station 5

Analysis of current record

Channel	Call	City/State	Application Ref. No.
45	KBCW	SAN FRANCISCO CA	BLCDT -20020709AAQ

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
44	KTVU	OAKLAND CA	0.0	PLN	DTVPLN -DTVP1566
45	KUVI-TV	BAKERSFIELD CA	419.5	CP	BPCDT -20080328AIU
45	KUVI-TV	BAKERSFIELD CA	419.5	PLN	DTVPLN -DTVP1603
46	KQCA	STOCKTON CA	101.5	LIC	BLCDT -20060623AAM
46	KQCA	STOCKTON CA	101.5	PLN	DTVPLN -DTVP1638
44	KTVU	OAKLAND CA	0.0	APP	USERRECORD-01

Figure 2

Total scenarios = 2

Result key: 13
Scenario 1 Affected station 5
Before Analysis

Results for: 45A CA SAN FRANCISCO BLC DT 20020709AAQ LIC
HAAT 446.0 m, ATV ERP 400.0 kW
POPULATION AREA (sq km)
within Noise Limited Contour 6782687 26272.3
not affected by terrain losses 6195485 21055.4
lost to NTSC IX 0 0.0
lost to additional IX by ATV 173696 1267.0
lost to ATV IX only 173696 1267.0
lost to all IX 173696 1267.0

Potential Interfering Stations Included in above Scenario 1

46A CA STOCKTON BLC DT 20060623AAM LIC

After Analysis

Results for: 45A CA SAN FRANCISCO BLC DT 20020709AAQ LIC
HAAT 446.0 m, ATV ERP 400.0 kW
POPULATION AREA (sq km)
within Noise Limited Contour 6782687 26272.3
not affected by terrain losses 6195485 21055.4
lost to NTSC IX 0 0.0
lost to additional IX by ATV 193391 1389.7
lost to ATV IX only 193391 1389.7
lost to all IX 193391 1389.7

Potential Interfering Stations Included in above Scenario 1

46A CA STOCKTON BLC DT 20060623AAM LIC
44A CA OAKLAND USERRECORD01 APP

Percent new IX = 0.3271%

Result key: 14
Scenario 2 Affected station 5
Before Analysis

Results for: 45A CA SAN FRANCISCO BLC DT 20020709AAQ LIC
HAAT 446.0 m, ATV ERP 400.0 kW
POPULATION AREA (sq km)
within Noise Limited Contour 6782687 26272.3
not affected by terrain losses 6195485 21055.4
lost to NTSC IX 0 0.0
lost to additional IX by ATV 173696 1267.0
lost to ATV IX only 173696 1267.0
lost to all IX 173696 1267.0

Potential Interfering Stations Included in above Scenario 2

46A CA STOCKTON DT VPLN DTVP1638 PLN

Figure 2

After Analysis

Results for: 45A CA SAN FRANCISCO BLC DT 20020709AAQ LIC
HAAT 446.0 m, ATV ERP 400.0 kW
POPULATION AREA (sq km)
within Noise Limited Contour 6782687 26272.3
not affected by terrain losses 6195485 21055.4
lost to NTSC IX 0 0.0
lost to additional IX by ATV 193391 1389.7
lost to ATV IX only 193391 1389.7
lost to all IX 193391 1389.7

Potential Interfering Stations Included in above Scenario 2

46A CA STOCKTON DT VPLN DTVP1638 PLN
44A CA OAKLAND USERRECORD01 APP

Percent new IX = 0.3271%

Worst case new IX 0.3271% Scenario 1

#####

Analysis of Interference to Affected Station 6

Analysis of current record
Channel Call City/State Application Ref. No.
45 KBCW SAN FRANCISCO CA DT VPLN -DTVP1605

Stations Potentially Affecting This Station

Chan Call City/State Dist(km) Status Application Ref. No.
44 KTVU OAKLAND CA 0.0 PLN DT VPLN -DTVP1566
45 KUVI-TV BAKERSFIELD CA 419.5 CP BPCDT -20080328AIU
45 KUVI-TV BAKERSFIELD CA 419.5 PLN DT VPLN -DTVP1603
46 KQCA STOCKTON CA 101.5 LIC BLC DT -20060623AAM
46 KQCA STOCKTON CA 101.5 PLN DT VPLN -DTVP1638
44 KTVU OAKLAND CA 0.0 APP USERRECORD-01

Total scenarios = 2

Result key: 15
Scenario 1 Affected station 6
Before Analysis

Results for: 45A CA SAN FRANCISCO DT VPLN DTVP1605 PLN
HAAT 446.0 m, ATV ERP 400.0 kW
POPULATION AREA (sq km)
within Noise Limited Contour 6782687 26272.3
not affected by terrain losses 6195485 21055.4
lost to NTSC IX 0 0.0
lost to additional IX by ATV 173696 1267.0
lost to ATV IX only 173696 1267.0

Figure 2

lost to all IX 173696 1267.0

Potential Interfering Stations Included in above Scenario 1

46A CA STOCKTON BLCDT 20060623AAM LIC

After Analysis

Results for: 45A CA SAN FRANCISCO DTVPLN DTVP1605 PLN
 HAAT 446.0 m, ATV ERP 400.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	6782687	26272.3
not affected by terrain losses	6195485	21055.4
lost to NTSC IX	0	0.0
lost to additional IX by ATV	193391	1389.7
lost to ATV IX only	193391	1389.7
lost to all IX	193391	1389.7

Potential Interfering Stations Included in above Scenario 1

46A CA STOCKTON BLCDT 20060623AAM LIC
 44A CA OAKLAND USERRECORD01 APP

Percent new IX = 0.3271%

Result key: 16
 Scenario 2 Affected station 6
 Before Analysis

Results for: 45A CA SAN FRANCISCO DTVPLN DTVP1605 PLN
 HAAT 446.0 m, ATV ERP 400.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	6782687	26272.3
not affected by terrain losses	6195485	21055.4
lost to NTSC IX	0	0.0
lost to additional IX by ATV	173696	1267.0
lost to ATV IX only	173696	1267.0
lost to all IX	173696	1267.0

Potential Interfering Stations Included in above Scenario 2

46A CA STOCKTON DTVPLN DTVP1638 PLN

After Analysis

Results for: 45A CA SAN FRANCISCO DTVPLN DTVP1605 PLN
 HAAT 446.0 m, ATV ERP 400.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	6782687	26272.3
not affected by terrain losses	6195485	21055.4
lost to NTSC IX	0	0.0
lost to additional IX by ATV	193391	1389.7
lost to ATV IX only	193391	1389.7
lost to all IX	193391	1389.7

Potential Interfering Stations Included in above Scenario 2

Figure 2

46A CA STOCKTON DTVPLN DTVP1638 PLN
 44A CA OAKLAND USERRECORD01 APP

Percent new IX = 0.3271%

Worst case new IX 0.3271% Scenario 1

#####

Analysis of Interference to Affected Station 7

Analysis of current record

Channel	Call	City/State	Application Ref. No.
46	K46DR	LAKEPORT CA	BSTA -20061016ADK

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
38	KRON-TV	SAN FRANCISCO CA	102.6	PLN	DTVPLN -DTVP1358
38	KRON-TV	SAN FRANCISCO CA	102.6	APP	BPCDT -20080411AAP
39	KCNS	SAN FRANCISCO CA	102.6	LIC	BLCDT -20060221AES
39	KCNS	SAN FRANCISCO CA	102.6	PLN	DTVPLN -DTVP1395
43	KCSM-TV	SAN MATEO CA	102.6	LIC	BLEDT -20030822AFZ
43	KCSM-TV	SAN MATEO CA	102.6	PLN	DTVPLN -DTVP1529
44	KTVU	OAKLAND CA	102.6	CP	BPCDT -20080408AEQ
44	KTVU	OAKLAND CA	102.6	PLN	DTVPLN -DTVP1566
45	KBCW	SAN FRANCISCO CA	102.6	LIC	BLCDT -20020709AAQ
45	KBCW	SAN FRANCISCO CA	102.6	PLN	DTVPLN -DTVP1605
46	KION-TV	MONTEREY CA	253.1	LIC	BMLCT -19820622KG
46	KQCA	STOCKTON CA	108.6	LIC	BLCDT -20060623AAM
46	KQCA	STOCKTON CA	108.6	PLN	DTVPLN -DTVP1638
46	KAZR-CA	RENO, ETC NV	247.6	LIC	BLTTA -20051114AFU
47	KTLN-TV	NOVATO CA	57.7	CP	BPCDT -19991026ABE
47	KTLN-TV	NOVATO CA	57.7	PLN	DTVPLN -DTVP1668
48	KSPX	SACRAMENTO CA	108.6	LIC	BLCDT -20050110ABB
48	KSPX	SACRAMENTO CA	108.6	PLN	DTVPLN -DTVP1699
49	KSTS	SAN JOSE CA	145.8	LIC	BLCDT -20030507AAT
49	KSTS	SAN JOSE CA	145.8	PLN	DTVPLN -DTVP1730
60	KCSM-TV	SAN MATEO CA	110.5	LIC	BLET -19980730KF
44	KTVU	OAKLAND CA	102.6	APP	USERRECORD-01

Proposed station is beyond the site to nearest cell evaluation distance

#####

Analysis of Interference to Affected Station 8

Analysis of current record

Channel	Call	City/State	Application Ref. No.
46	K46DR	LAKEPORT CA	BLTT -19941103IB

Stations Potentially Affecting This Station

Figure 2

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
38	KRON-TV	SAN FRANCISCO CA	139.9	PLN	DTVPLN -DTVP1358
38	KRON-TV	SAN FRANCISCO CA	139.9	APP	BPCDT -20080411AAP
39	KCNS	SAN FRANCISCO CA	139.9	LIC	BLCDDT -20060221AES
39	KCNS	SAN FRANCISCO CA	139.9	PLN	DTVPLN -DTVP1395
43	KHSL-TV	CHICO CA	140.6	CP	BPCDDT -20070124AKD
43	KHSL-TV	CHICO CA	140.6	PLN	DTVPLN -DTVP1526
43	KHSL-TV	CHICO CA	140.6	LIC	BLCDDT -20060315AEZ
43	KCSM-TV	SAN MATEO CA	139.9	LIC	BLEDT -20030822AFZ
43	KCSM-TV	SAN MATEO CA	139.9	PLN	DTVPLN -DTVP1529
44	KTVU	OAKLAND CA	139.9	CP	BPCDDT -20080408AEQ
44	KTVU	OAKLAND CA	139.9	PLN	DTVPLN -DTVP1566
45	K45AH	UKIAH CA	31.5	LIC	BLTT -19830125IK
46	KION-TV	MONTEREY CA	290.9	LIC	BMLCT -19820622KG
46	K46HI	REDDING CA	186.3	LIC	BLTTL -20040329ABN
46	KQCA	STOCKTON CA	137.1	LIC	BLCDDT -20060623AAM
46	KQCA	STOCKTON CA	137.1	PLN	DTVPLN -DTVP1638
46	KAZR-CA	RENO, ETC NV	251.2	LIC	BLTTA -20051114AFU
47	KTLN-TV	NOVATO CA	94.5	CP	BPCDDT -19991026ABE
47	KTLN-TV	NOVATO CA	94.5	PLN	DTVPLN -DTVP1668
47	K47AL	UKIAH CA	31.5	LIC	BLTTL -19830223IB
48	KSPX	SACRAMENTO CA	137.1	LIC	BLCDDT -20050110ABB
48	KSPX	SACRAMENTO CA	137.1	PLN	DTVPLN -DTVP1699
44	KTVU	OAKLAND CA	139.9	APP	USERRECORD-01

Proposed station is beyond the site to nearest cell evaluation distance

#####

Analysis of Interference to Affected Station 9

Analysis of current record

Channel	Call	City/State	Application Ref. No.
44	KTVU	OAKLAND CA	USERRECORD-01

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
43	KCSM-TV	SAN MATEO CA	0.0	LIC	BLEDT -20030822AFZ
43	KCSM-TV	SAN MATEO CA	0.0	PLN	DTVPLN -DTVP1529
44	KRXI-TV	RENO NV	299.3	LIC	BLCDDT -20060707ACZ
44	KRXI-TV	RENO NV	299.3	PLN	DTVPLN -DTVP1588
45	KBCW	SAN FRANCISCO CA	0.0	LIC	BLCDDT -20020709AAQ
45	KBCW	SAN FRANCISCO CA	0.0	PLN	DTVPLN -DTVP1605

Total scenarios = 2

Result key: 17
 Scenario 1 Affected station 9
 Before Analysis

Results for: 44A CA OAKLAND USERRECORD01 APP

Figure 2

HAAT 516.0 m, ATV ERP 1000.0 kW		
	POPULATION	AREA (sq km)
within Noise Limited Contour	7401896	35273.6
not affected by terrain losses	6488881	29586.8
lost to NTSC IX	0	0.0
lost to additional IX by ATV	52	16.1
lost to ATV IX only	52	16.1
lost to all IX	52	16.1

Potential Interfering Stations Included in above Scenario 1

44A NV RENO BLCDDT 20060707ACZ LIC

Result key: 18
 Scenario 2 Affected station 9
 Before Analysis

Results for: 44A CA OAKLAND USERRECORD01 APP

HAAT 516.0 m, ATV ERP 1000.0 kW		
	POPULATION	AREA (sq km)
within Noise Limited Contour	7401896	35273.6
not affected by terrain losses	6488881	29586.8
lost to NTSC IX	0	0.0
lost to additional IX by ATV	52	16.1
lost to ATV IX only	52	16.1
lost to all IX	52	16.1

Potential Interfering Stations Included in above Scenario 2

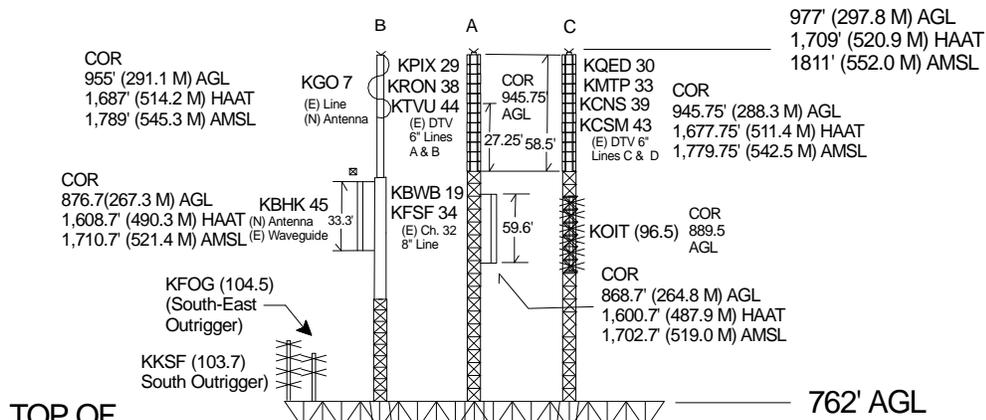
44A NV RENO DTVPLN DTVP1588 PLN

#####

FINISHED FINISHED FINISHED FINISHED FINISHED FINISHED

APPENDIX A

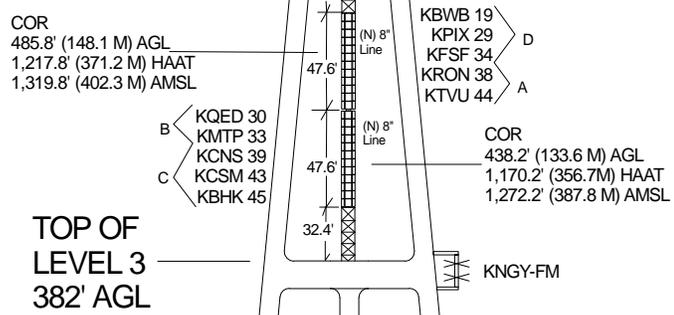
TOWER SKETCH



TOP OF
LEVEL 6
762' AGL

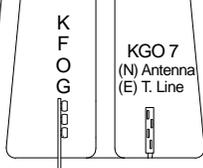
TOP OF
LEVEL 5
657' AGL

LEVEL 4
TOP 557' AGL
BOTTOM 542' AGL



TOP OF
LEVEL 3
382' AGL

TOP OF
LEVEL 2
187' AGL



COR
207.2' (63.2 M) AGL
939.2' (286.3 M) HAAT
1,041.2' (317.4 M) AMSL

NORTH LATITUDE 37° 45' 19.08"
WEST LONGITUDE 122° 27' 06.29"
(1927 DATUM)

SITE ELEVATION
834' (254 M) AMSL
732' (223 M) HAAT

STI	Sutro Tower, Inc. 1La Avanzada St. San Francisco, CA 94131 415-681-8850		
	TITLE Sutro Tower - DTV Antennas Final Configuration		
FILE NAME DTV Main & Aux Final Config 5-27-08			
DATE May 27, 2008		SHEET 1 OF ____	

APPENDIX B

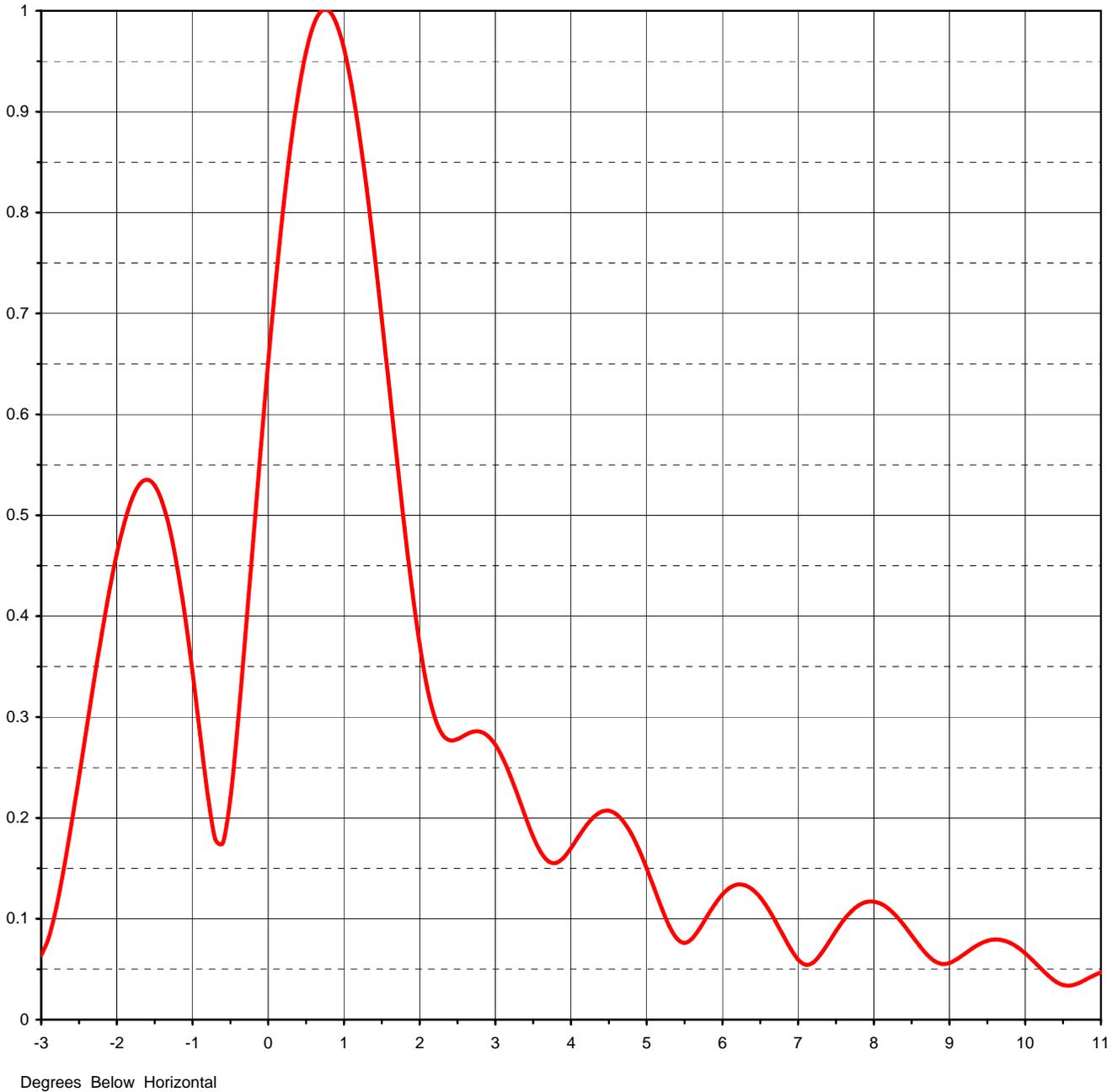
TRANSMITTING ANTENNA
VERTICAL AND HORIZONTAL
PLANE PATTERN



Proposal Number **C-02113** Revision: **2**
Date **20-Feb-08**
Call Letters **KTVU-DT** Channel **44**
Location **San Francisco, CA**
Customer
Antenna Type **TUM-C5SP-14/60H-2-T-R**

ELEVATION PATTERN

RMS Gain at Main Lobe	26.00 (14.15 dB)	Beam Tilt	0.75 deg
RMS Gain at Horizontal	11.10 (10.45 dB)	Frequency	653.00 MHz
Calculated / Measured	Calculated	Drawing #	14U270075

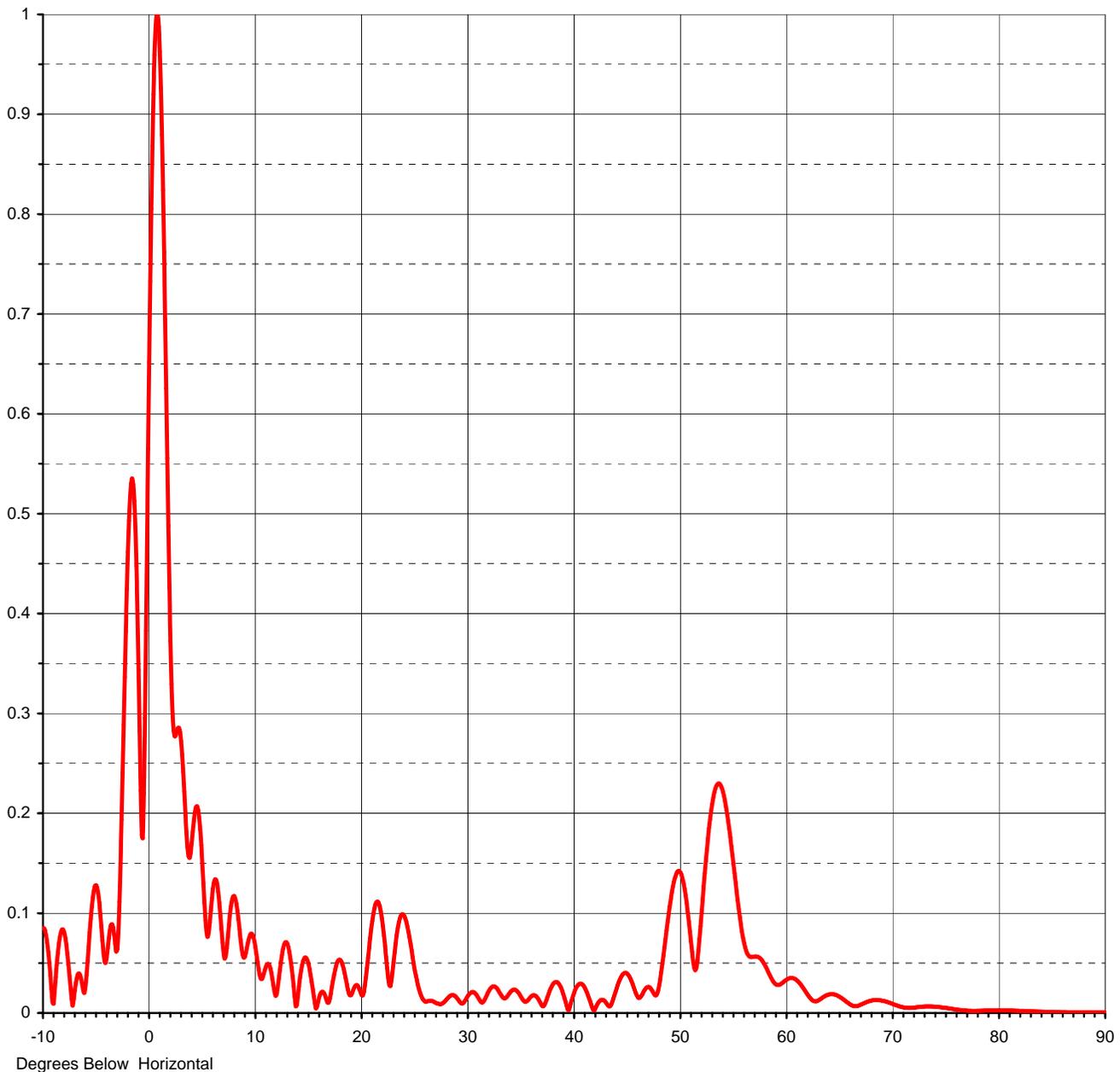




Proposal Number **C-02113** Revision: **2**
Date **20-Feb-08**
Call Letters **KTVU-DT** Channel **44**
Location **San Francisco, CA**
Customer
Antenna Type **TUM-C5SP-14/60H-2-T-R**

ELEVATION PATTERN

RMS Gain at Main Lobe	26.00 (14.15 dB)	Beam Tilt	0.75 deg
RMS Gain at Horizontal	11.10 (10.45 dB)	Frequency	653.00 MHz
Calculated / Measured	Calculated	Drawing #	14U270075-90





Proposal Number **C-02113** Revision: **2**
 Date **20-Feb-08**
 Call Letters **KTVU-DT** Channel **44**
 Location **San Francisco, CA**
 Customer
 Antenna Type **TUM-C5SP-14/60H-2-T-R**

TABULATION OF ELEVATION PATTERN

Elevation Pattern Drawing #: **14U270075-90**

Angle	Field										
-10.0	0.085	2.4	0.277	10.6	0.034	30.5	0.021	51.0	0.082	71.5	0.005
-9.5	0.061	2.6	0.282	10.8	0.036	31.0	0.017	51.5	0.043	72.0	0.005
-9.0	0.009	2.8	0.285	11.0	0.044	31.5	0.011	52.0	0.087	72.5	0.006
-8.5	0.069	3.0	0.273	11.5	0.045	32.0	0.021	52.5	0.152	73.0	0.006
-8.0	0.081	3.2	0.241	12.0	0.017	32.5	0.027	53.0	0.202	73.5	0.007
-7.5	0.037	3.4	0.201	12.5	0.051	33.0	0.022	53.5	0.228	74.0	0.006
-7.0	0.023	3.6	0.166	13.0	0.071	33.5	0.015	54.0	0.225	74.5	0.006
-6.5	0.038	3.8	0.155	13.5	0.046	34.0	0.020	54.5	0.200	75.0	0.005
-6.0	0.026	4.0	0.170	14.0	0.008	34.5	0.023	55.0	0.158	75.5	0.004
-5.5	0.094	4.2	0.192	14.5	0.048	35.0	0.018	55.5	0.113	76.0	0.003
-5.0	0.128	4.4	0.206	15.0	0.052	35.5	0.011	56.0	0.075	76.5	0.003
-4.5	0.086	4.6	0.204	15.5	0.024	36.0	0.016	56.5	0.058	77.0	0.002
-4.0	0.056	4.8	0.184	16.0	0.011	36.5	0.017	57.0	0.056	77.5	0.002
-3.5	0.089	5.0	0.150	16.5	0.021	37.0	0.009	57.5	0.056	78.0	0.002
-3.0	0.064	5.2	0.110	17.0	0.010	37.5	0.013	58.0	0.049	78.5	0.002
-2.8	0.111	5.4	0.080	17.5	0.038	38.0	0.027	58.5	0.038	79.0	0.002
-2.6	0.194	5.6	0.080	18.0	0.053	38.5	0.031	59.0	0.030	79.5	0.002
-2.4	0.289	5.8	0.103	18.5	0.040	39.0	0.022	59.5	0.029	80.0	0.003
-2.2	0.382	6.0	0.124	19.0	0.018	39.5	0.004	60.0	0.033	80.5	0.002
-2.0	0.462	6.2	0.134	19.5	0.027	40.0	0.017	60.5	0.035	81.0	0.002
-1.8	0.516	6.4	0.129	20.0	0.021	40.5	0.028	61.0	0.033	81.5	0.002
-1.6	0.535	6.6	0.111	20.5	0.036	41.0	0.027	61.5	0.028	82.0	0.002
-1.4	0.513	6.8	0.084	21.0	0.084	41.5	0.015	62.0	0.020	82.5	0.002
-1.2	0.447	7.0	0.060	21.5	0.111	42.0	0.003	62.5	0.013	83.0	0.002
-1.0	0.344	7.2	0.057	22.0	0.095	42.5	0.012	63.0	0.012	83.5	0.002
-0.8	0.223	7.4	0.076	22.5	0.045	43.0	0.012	63.5	0.015	84.0	0.001
-0.6	0.175	7.6	0.099	23.0	0.041	43.5	0.007	64.0	0.018	84.5	0.001
-0.4	0.295	7.8	0.113	23.5	0.085	44.0	0.021	64.5	0.019	85.0	0.001
-0.2	0.474	8.0	0.117	24.0	0.099	44.5	0.036	65.0	0.016	85.5	0.001
0.0	0.652	8.2	0.110	24.5	0.082	45.0	0.040	65.5	0.012	86.0	0.001
0.2	0.805	8.4	0.094	25.0	0.049	45.5	0.032	66.0	0.009	86.5	0.001
0.4	0.920	8.6	0.074	25.5	0.024	46.0	0.018	66.5	0.007	87.0	0.001
0.6	0.986	8.8	0.058	26.0	0.012	46.5	0.018	67.0	0.008	87.5	0.001
0.8	1.000	9.0	0.056	26.5	0.012	47.0	0.026	67.5	0.011	88.0	0.001
1.0	0.963	9.2	0.065	27.0	0.011	47.5	0.021	68.0	0.012	88.5	0.001
1.2	0.879	9.4	0.075	27.5	0.009	48.0	0.022	68.5	0.013	89.0	0.001
1.4	0.762	9.6	0.079	28.0	0.012	48.5	0.057	69.0	0.012	89.5	0.001
1.6	0.625	9.8	0.079	28.5	0.018	49.0	0.099	69.5	0.011	90.0	0.001
1.8	0.488	10.0	0.072	29.0	0.016	49.5	0.132	70.0	0.009		
2.0	0.372	10.2	0.059	29.5	0.009	50.0	0.142	70.5	0.007		
2.2	0.299	10.4	0.044	30.0	0.015	50.5	0.124	71.0	0.006		

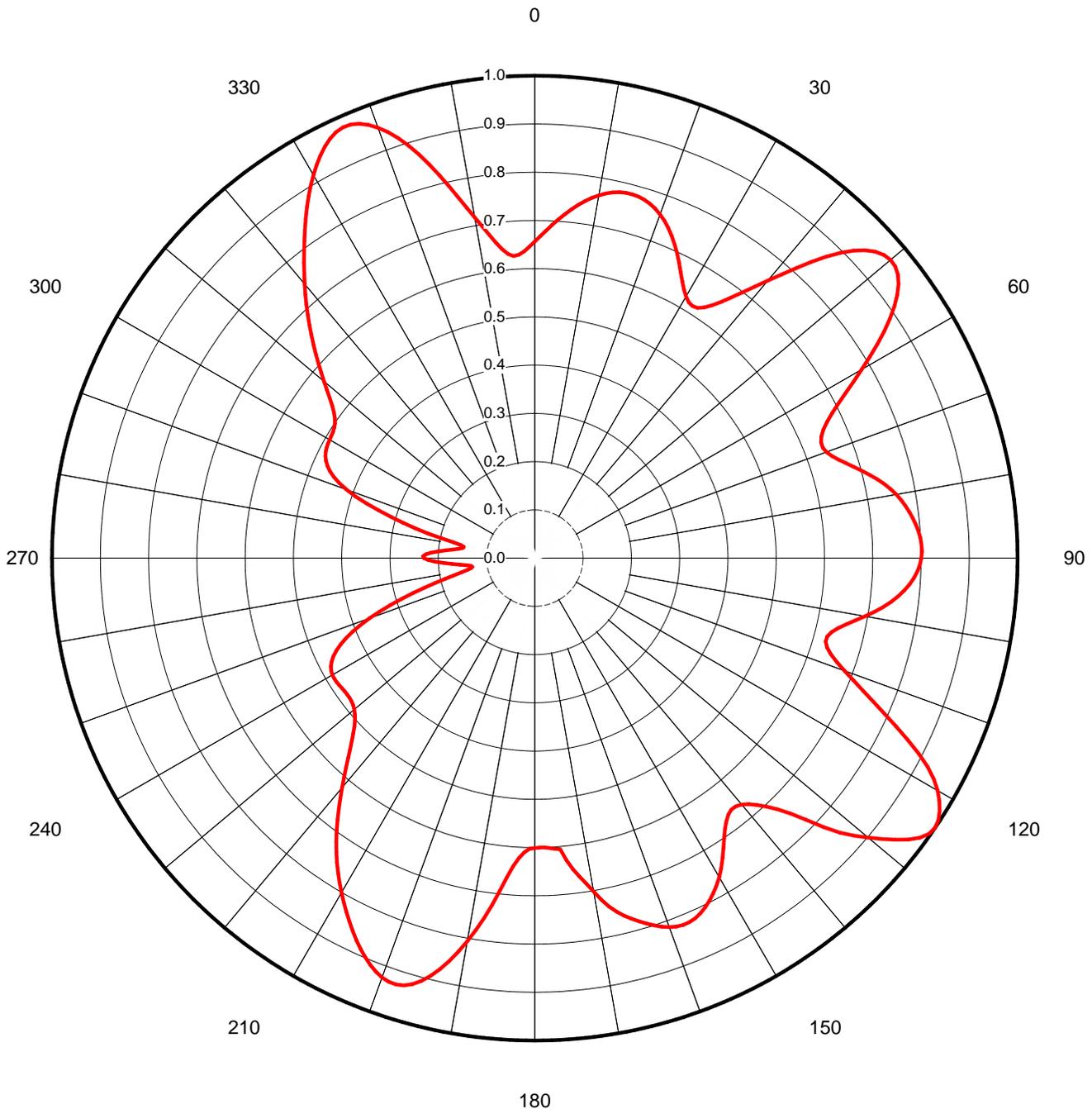


Proposal Number **C-02113** Revision: **2**
Date **20-Feb-08**
Call Letters **KTVU-DT** Channel **44**
Location **San Francisco, CA**
Customer
Antenna Type **TUM-C5SP-14/60H-2-T-R**

AZIMUTH PATTERN

Gain **2.04 (3.10 dB)**
Calculated / Measured **Calculated**

Frequency **653.00 MHz**
Drawing # **TUM-C5SP-6530**





Proposal Number **C-02113** Revision: **2**
 Date **20-Feb-08**
 Call Letters **KTVU-DT** Channel **44**
 Location **San Francisco, CA**
 Customer
 Antenna Type **TUM-C5SP-14/60H-2-T-R**

TABULATION OF AZIMUTH PATTERN

Azimuth Pattern Drawing #: **TUM-C5SP-6530**

Angle	Field														
0	0.656	45	0.895	90	0.801	135	0.748	180	0.601	225	0.536	270	0.230	315	0.654
1	0.668	46	0.918	91	0.797	136	0.724	181	0.602	226	0.522	271	0.231	316	0.672
2	0.680	47	0.936	92	0.793	137	0.704	182	0.610	227	0.511	272	0.226	317	0.689
3	0.692	48	0.949	93	0.786	138	0.689	183	0.622	228	0.501	273	0.215	318	0.707
4	0.704	49	0.958	94	0.778	139	0.676	184	0.640	229	0.494	274	0.201	319	0.724
5	0.716	50	0.962	95	0.768	140	0.667	185	0.664	230	0.488	275	0.186	320	0.742
6	0.727	51	0.961	96	0.757	141	0.662	186	0.693	231	0.484	276	0.171	321	0.759
7	0.738	52	0.954	97	0.743	142	0.662	187	0.724	232	0.482	277	0.159	322	0.776
8	0.747	53	0.943	98	0.729	143	0.666	188	0.753	233	0.481	278	0.151	323	0.794
9	0.756	54	0.928	99	0.712	144	0.675	189	0.781	234	0.480	279	0.149	324	0.812
10	0.764	55	0.909	100	0.694	145	0.687	190	0.807	235	0.481	280	0.156	325	0.830
11	0.770	56	0.887	101	0.676	146	0.701	191	0.831	236	0.482	281	0.172	326	0.848
12	0.775	57	0.863	102	0.659	147	0.717	192	0.854	237	0.483	282	0.198	327	0.866
13	0.778	58	0.836	103	0.645	148	0.734	193	0.874	238	0.484	283	0.227	328	0.884
14	0.780	59	0.809	104	0.633	149	0.750	194	0.892	239	0.485	284	0.256	329	0.901
15	0.781	60	0.782	105	0.627	150	0.764	195	0.907	240	0.484	285	0.283	330	0.917
16	0.779	61	0.755	106	0.627	151	0.776	196	0.918	241	0.482	286	0.310	331	0.932
17	0.777	62	0.729	107	0.633	152	0.787	197	0.926	242	0.478	287	0.338	332	0.945
18	0.772	63	0.706	108	0.645	153	0.797	198	0.929	243	0.472	288	0.367	333	0.957
19	0.766	64	0.685	109	0.662	154	0.805	199	0.929	244	0.464	289	0.393	334	0.967
20	0.758	65	0.668	110	0.683	155	0.812	200	0.925	245	0.453	290	0.415	335	0.974
21	0.749	66	0.654	111	0.707	156	0.817	201	0.918	246	0.440	291	0.434	336	0.977
22	0.738	67	0.645	112	0.733	157	0.820	202	0.909	247	0.425	292	0.449	337	0.976
23	0.726	68	0.640	113	0.762	158	0.820	203	0.899	248	0.407	293	0.461	338	0.971
24	0.712	69	0.639	114	0.793	159	0.818	204	0.887	249	0.387	294	0.470	339	0.962
25	0.697	70	0.643	115	0.825	160	0.814	205	0.874	250	0.364	295	0.477	340	0.949
26	0.681	71	0.651	116	0.859	161	0.808	206	0.860	251	0.339	296	0.482	341	0.934
27	0.665	72	0.661	117	0.892	162	0.801	207	0.846	252	0.314	297	0.486	342	0.915
28	0.650	73	0.674	118	0.921	163	0.792	208	0.831	253	0.288	298	0.488	343	0.894
29	0.637	74	0.687	119	0.945	164	0.783	209	0.816	254	0.262	299	0.490	344	0.871
30	0.626	75	0.701	120	0.963	165	0.774	210	0.801	255	0.236	300	0.491	345	0.845
31	0.619	76	0.714	121	0.978	166	0.764	211	0.785	256	0.212	301	0.492	346	0.818
32	0.616	77	0.727	122	0.989	167	0.752	212	0.769	257	0.190	302	0.493	347	0.791
33	0.619	78	0.740	123	0.997	168	0.738	213	0.752	258	0.171	303	0.495	348	0.765
34	0.627	79	0.751	124	1.000	169	0.721	214	0.735	259	0.155	304	0.499	349	0.740
35	0.640	80	0.760	125	0.997	170	0.702	215	0.717	260	0.142	305	0.506	350	0.717
36	0.656	81	0.768	126	0.986	171	0.684	216	0.698	261	0.134	306	0.514	351	0.696
37	0.677	82	0.776	127	0.969	172	0.667	217	0.679	262	0.131	307	0.526	352	0.676
38	0.700	83	0.782	128	0.948	173	0.650	218	0.659	263	0.133	308	0.539	353	0.658
39	0.724	84	0.787	129	0.925	174	0.630	219	0.640	264	0.142	309	0.554	354	0.643
40	0.751	85	0.792	130	0.901	175	0.606	220	0.621	265	0.155	310	0.570	355	0.633
41	0.779	86	0.796	131	0.877	176	0.604	221	0.602	266	0.172	311	0.586	356	0.628
42	0.809	87	0.800	132	0.851	177	0.602	222	0.584	267	0.190	312	0.603	357	0.630
43	0.839	88	0.801	133	0.817	178	0.600	223	0.567	268	0.207	313	0.620	358	0.636
44	0.868	89	0.802	134	0.780	179	0.600	224	0.551	269	0.221	314	0.637	359	0.645