

TECHNICAL EXHIBIT
AMENDMENT TO PENDING
APPLICATION FOR DTV CONSTRUCTION PERMIT
IN SUPPORT OF ITS POST-TRANSITION FACILITY
STATION KGMB(DT)
HONOLULU, HAWAII
CH 22 40 KW (MAX-DA) 629 M

Technical Narrative

This Technical Exhibit supports an amendment to the pending application for digital television (DTV) station KGMB(DT) for its final DTV operation at Honolulu, Hawaii.¹ This application requests a construction permit (CP) for a digital television operation on channel 22 at Honolulu with a directional antenna and an effective radiated power (ERP) of 40 kilowatts.² KGMB(DT) intends to use a Dielectric TUA-BP3SP-6/18M-1-S directional transmitting antenna for digital operation.

Proposed Facilities

Station KGMB(DT) proposes to operate on DTV channel 22 from station KFVE's analog transmitter site located at *Mauna Kapu*. The antenna height above average terrain for the channel 22 DTV operation is 629 meters. The proposed non-directional ERP level of 40 kilowatts will not result in the herein proposed noise-limited contour extending beyond its proposed *Appendix B* allocated maximum

¹ See FCC File Number: BMPCDT-20080317AGC.

² KGMB-DT has requested that Appendix B be modified to show its post-transition operation on Channel 22 in lieu of Channel 9.

effective radiated power in any azimuthal direction over
land.

The proposed DTV transmitter site will be located at KFVE(TV)'s licensed analog transmitter site. Therefore, the proposed site location is:

21° 24' 03" North Latitude
158° 06' 10" West Longitude

A sketch of antenna and pertinent elevations are included as Figure 2.

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

Figure 3 is a map showing the DTV predicted coverage contour and the associated proposed *Appendix B* noise-limited coverage contour. The extent of the contour has been calculated using the normal FCC prediction method. The Honolulu city limits were derived from information contained in the 2000 U.S. Census of Population and Housing.

FCC Monitoring Station

The proposed KGMB-DT transmitter site is located 11.1 kilometers (6.9 miles) away from the *Waipahu, Hawaii* FCC monitoring station. The KGMB-DT facility is designed to provide the necessary protection to the monitoring station.

Based upon discussions with FCC staff, the maximum permitted field at the *Waipahu* monitoring station for KGMB-DT on Channel 22 is 69.57 mV/m, or 96.8 dBu. The proposed KGMB-DT maximum effective radiated power is 6.2 kilowatts toward the monitoring station, 102.5 degrees azimuth true at a horizontal plane depression angle of 4.1 degrees. Using the free-space propagation model, the predicted KGMB-DT field strength at the monitoring station is 94 dBu, which is below the maximum permitted field strength of 96.8 dBu.

Pre-Transition Allocation Considerations

The proposed KGMB(DT) operation meets the FCC's interference standards to pertinent analog (NTSC) and DTV assignments using the procedures outlined in the FCC's OET-69 Bulletin and a 1 kilometer grid cell size as shown by the analysis provided in Figure 4. The proposed KGMB(DT) operation complies with the FCC's "de minimis" interference policy with respect to pertinent Class A TV assignments.

The proposed operation complies with the current Freeze on contour extension as it will not extend coverage beyond the currently authorized noise-limited contour for KGMB (see Figure 3).

Post-Transition Allocation Considerations

The proposed KGMB(DT) operation meets the FCC's interference standards to pertinent DTV Appendix B allotments using the procedures outlined in the FCC's OET-69 Bulletin and a 1 kilometer grid cell size as shown by

the analysis provided in Figure 5. The proposed operation complies with the current Freeze on contour extension, as it will not extend coverage beyond the proposed KGMB DTV Appendix B facility (see Figure 3).

Population Served

The herein proposed KGMB(DT) facility is predicted to serve 799,888 persons, post-transition based upon the 2000 Census. KGMB(DT)'s associated proposed Appendix B facility is predicted to serve 784,973 persons. Therefore, the herein proposed KGMB(DT) facility would serve greater than 100% of KGMB(DT)'s Appendix B population. **The OET-69 studies were conducted using cell size of 1.0 km/side and distance increments for Longley-Rice analysis of 0.5 km.**

Radiofrequency Electromagnetic Field Exposure

The proposed KGMB(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 KGMB(DT) antenna is located 49 meters above ground level. The maximum effective radiated power is 40 kilowatts. A "worst case" relative field value of 0.1 is assumed for the antenna's downward radiation. The calculated power density at a point 2 meters above ground level is 0.006 mW/cm^2 . This is less than 5 percent of the Commission's recommended limit of 0.347 mW/cm^2 for channel 22 for an "uncontrolled" environment.

Access to the transmitting site is restricted and appropriately marked with warning signs. As this will be 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.

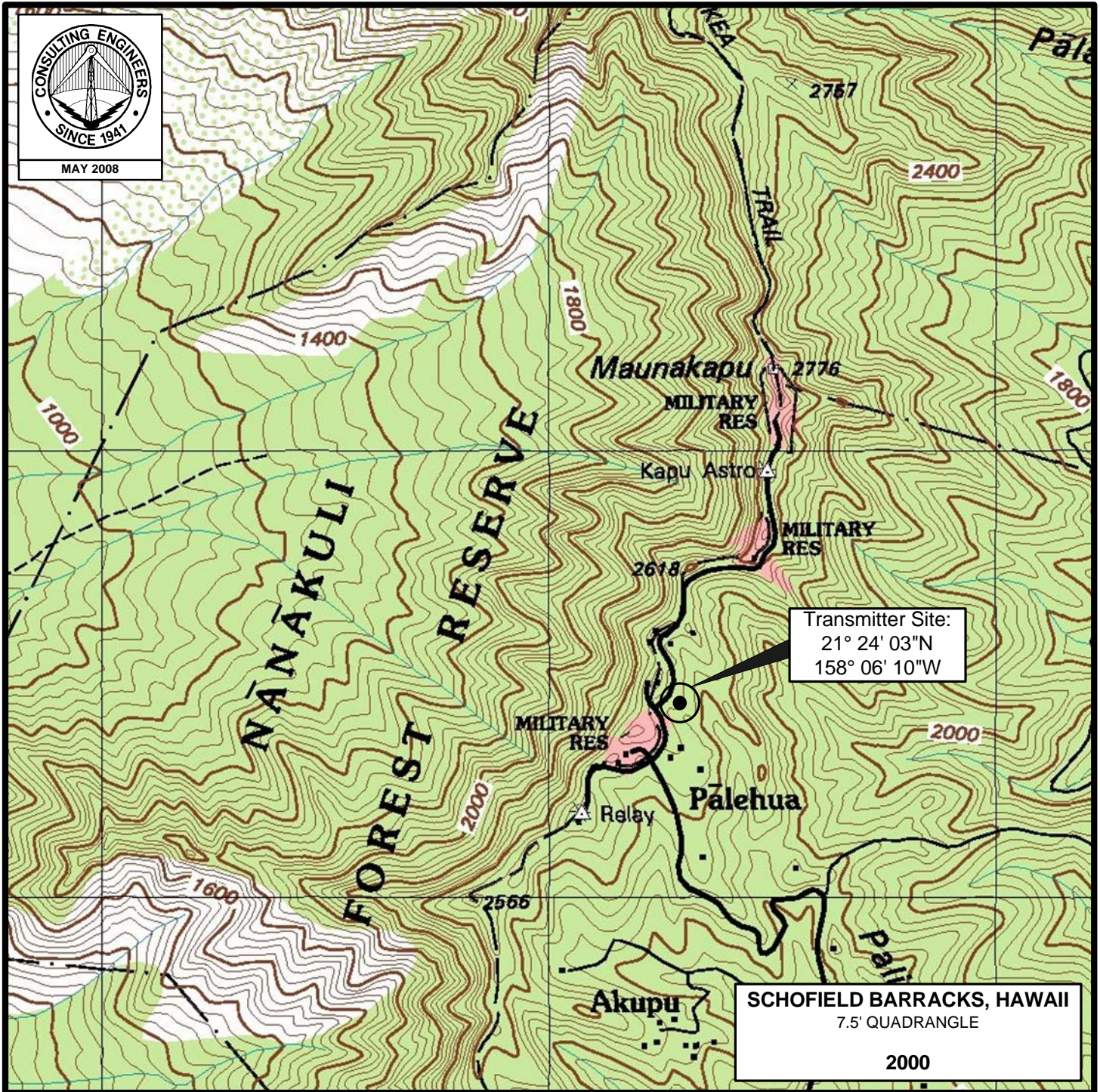
It is noted that this statement only addresses the potential for radiofrequency electromagnetic field exposure. All other aspects of the environmental processing analysis will be or already have been provided to the FCC by the tower owner.

Charles Cooper

du Treil, Lundin & Rackley, Inc.
201 Fletcher Avenue
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May 14, 2008

Figure 1



PROPOSED TRANSMITTER SITE

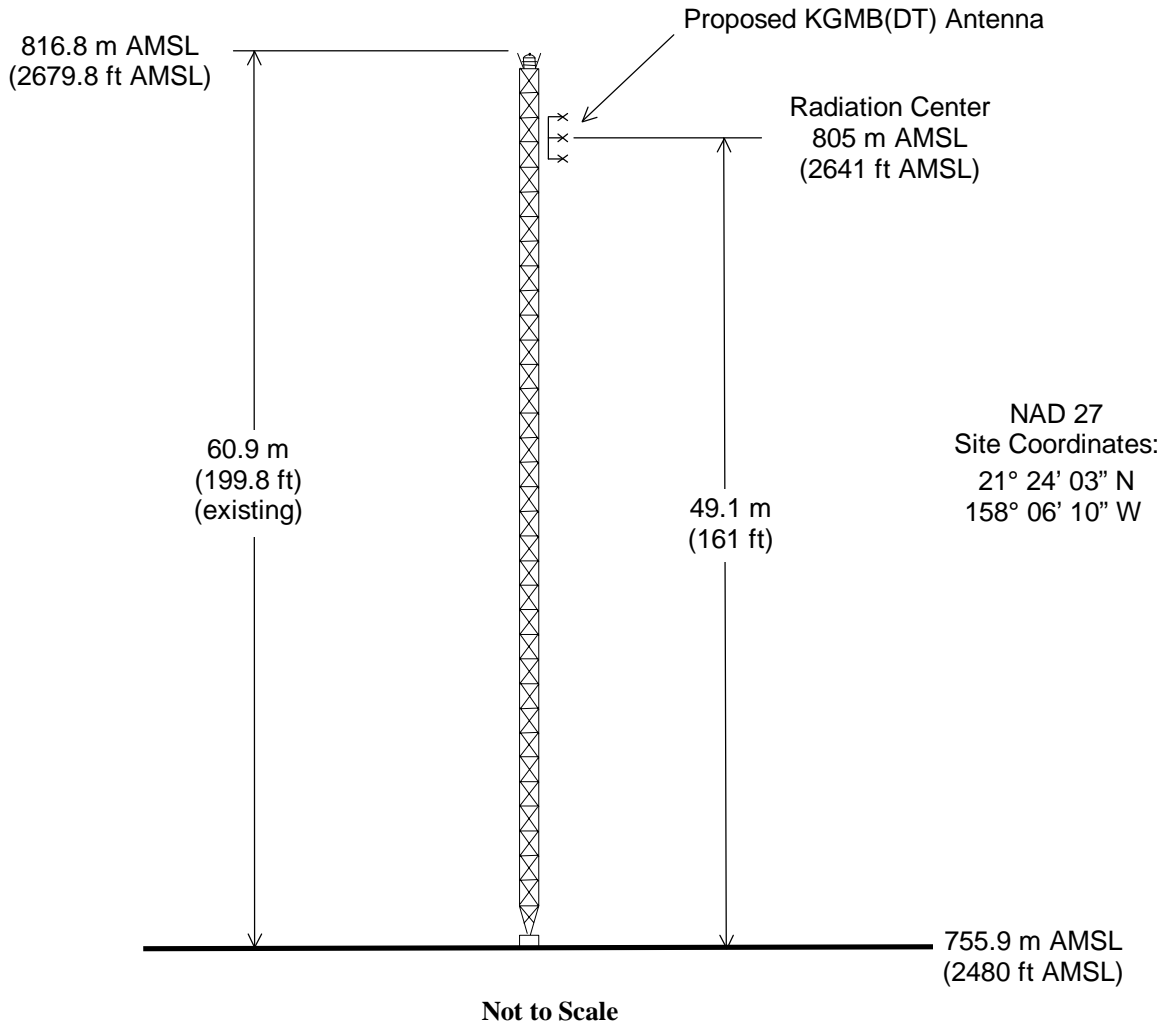
DTV STATION KGMB(DT)
HONOLULU, HAWAII

CH 22 40 KW (MAX-DA) 629 M

du Treil, Lundin & Rackley, Inc. Sarasota, Florida



ASRN: 1007114



ANTENNA AND SUPPORTING STRUCTURE

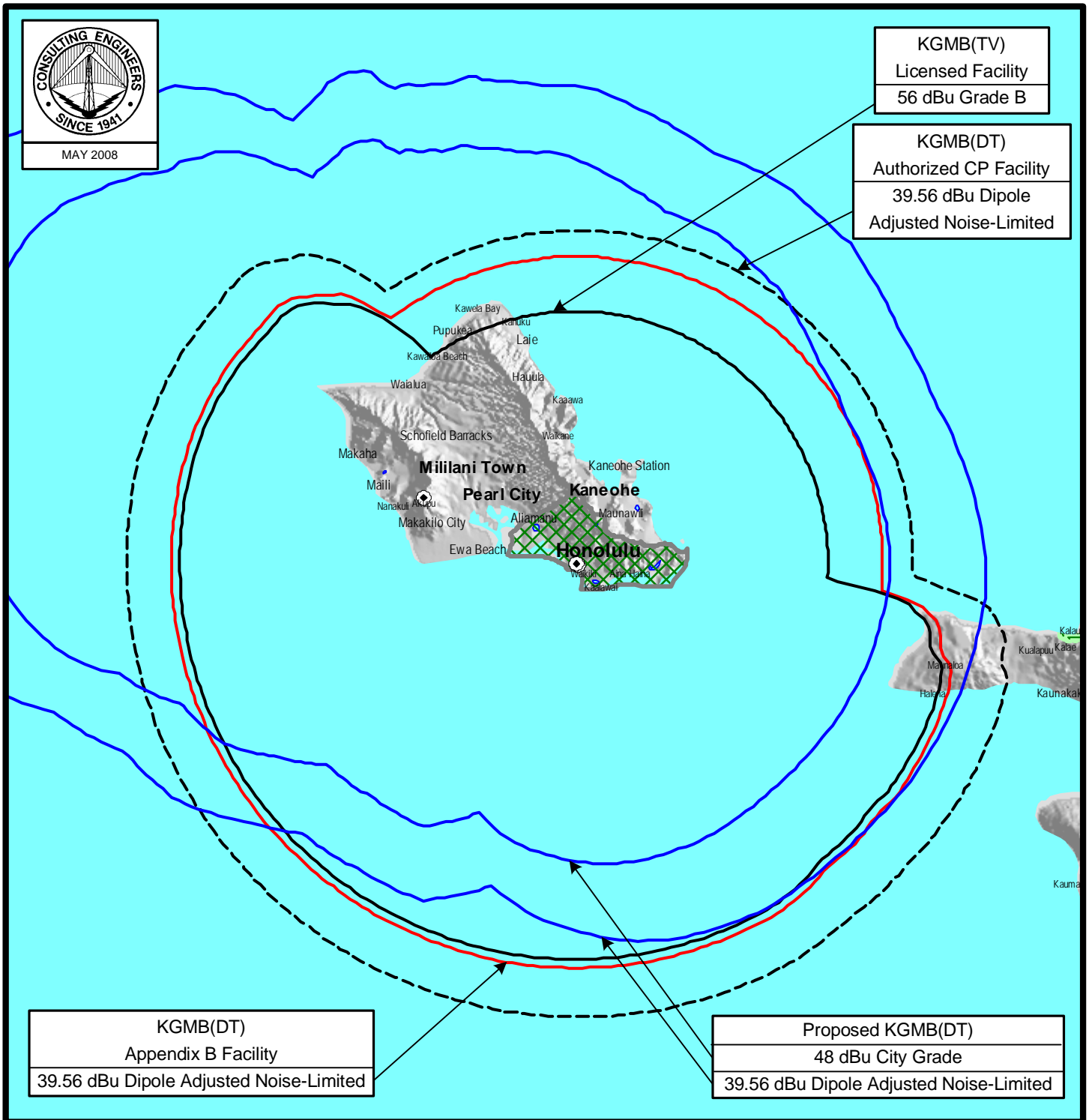
DTV STATION KGMB(DT)

HONOLULU, HAWAII

CH 22 40 KW (MAX-DA) 629 M

du Treil, Lundin & Rackley, Inc. Sarasota, Florida

Figure 3



The image displays two horizontal number lines. The top number line is labeled 'miles' at the right end and has major tick marks at intervals of 10, from 0 to 90. The bottom number line is labeled 'kilometers' at the right end and has major tick marks at intervals of 10, from 0 to 130. Both lines have smaller tick marks at intervals of 5 units. The lines are drawn such that the 0 marks are aligned, and the 90-mile mark is aligned with the 130-kilometer mark, illustrating the conversion factor of 1.6 km per mile.

PREDICTED COVERAGE CONTOURS

STATION KGMB(DT)

HONOLULU, HAWAII

CH 22 40 KW (MAX-DA) 629 M

du Treil, Lundin & Rackley, Inc Sarasota, Florida

Figure 4

Census data selected 2000

TV INTERFERENCE and SPACING ANALYSIS PROGRAM

Date: 05-12-2008 Time: 10:55:36

Record Selected for Analysis

KGMB USERRECORD-01 HONOLULU HI US
 Channel 22 ERP 40. kW HAAT 666. m RCAMSL 00805 m
 Latitude 021-24-03 Longitude 0158-06-10
 Status APP Zone 2 Border
 Dir Antenna Make usr Model KGMBDT Beam tilt N Ref Azimuth 0.
 Last update Cutoff date Docket
 Comments
 Applicant

Cell Size for Service Analysis 1.0 km/side

Distance Increments for Longley-Rice Analysis 0.50 km

Facility meets maximum height/power limits

Azimuth (Deg)	ERP (kW)	HAAT (m)	41.0 dBu F(50,90) (km)
0.0	12.056	360.5	70.5
45.0	10.506	559.8	79.7
90.0	30.602	725.1	94.4
135.0	22.755	761.8	92.9
180.0	1.081	749.0	68.6
225.0	0.764	766.8	66.6
270.0	21.609	772.8	92.7
315.0	30.695	631.2	91.3

Evaluation toward Class A Stations

No Spacing violations or contour overlap to Class A stations

Class A Evaluation Complete

Proposed facility is 11.1km from FCC Monitoring station at
 Waipahu HI
 Bearing: 102.5 degrees ERP: 39.04 kW HAAT: 764.2 m
 Field = 90.5 mV/m

Proposed facility OK toward West Virginia quite zone

Figure 4

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

Channel	Proposed Station Call	City/State	ARN
22	KGMB	HONOLULU HI	USERRECORD01

Stations Potentially Affected by Proposed Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
14	KWHE	HONOLULU HI	26.7	APP	BSTA	-20061211ABF
14	KWHE	HONOLULU HI	26.7	LIC	BLCT	-19880506KI
20	KIKU	HONOLULU HI	0.5	LIC	BLCT	-19910806KE
21	KWHM	WAILUKU HI	182.3	LIC	BLCT	-19930526KF
21	KWHM	WAILUKU HI	198.4	APP	BPCDT	-20080411ABY
22	KHBC-DT	HILO HI	366.2	PLN	DTVPLN	-DTV0478
23	KFVE-DT	HONOLULU HI	0.0	PLN	DTVPLN	-DTV0521
26	KAHA-TV	HONOLULU HI	0.7	CP	BPCT	-20031204AAC
26	KAHA-TV	HONOLULU HI	0.7	LIC	BLCT	-19970717KE

Analysis of Interference to Affected Station 1

NTSC Baseline Analysis

Channel	Call	City/State	Application	Ref. No.
14	KWHE	HONOLULU HI	DTVPLN	-NPLN0883

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
14	KWHH	HILO HI	339.7	PLN	DTVPLN	-NPLN0882
15	KOGG	WAILUKU HI	178.8	PLN	DTVPLN	-NPLN0917
18	KHET-DT	HONOLULU HI	2.7	PLN	DTVPLN	-DTV0301
21	KWHM	WAILUKU HI	155.5	PLN	DTVPLN	-NPLN1104
22	KHON-DT	HONOLULU HI	3.3	PLN	DTVPLN	-DTV0479

Results for: 14N HI HONOLULU

	DTVPLN	NPLN0883	PLN
POPULATION	840716	3506.0	
within Noise Limited Contour	760805	3163.7	
not affected by terrain losses	0	0.0	
lost to NTSC IX	1245	7.0	
lost to additional IX by ATV	1245	7.0	
lost to all IX			

Figure 4

Analysis of current record					
Channel	Call	City/State	Application Ref. No.		
14	KWHE	HONOLULU HI	BSTA	-20061211ABF	

Stations Potentially Affecting This Station					
Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
14	KWHH	HILO HI	339.7	LIC	BLCT -19891006KJ
15	KOGG	WAILUKU HI	178.8	LIC	BLCT -19890829KG
17	NEW	MILILANI TOWN HI	26.2	APP	BPRM -20000717AFF
18	KHET	HONOLULU HI	26.7	LIC	BLEDT -20060516ACN
18	KHET-DT	HONOLULU HI	2.7	PLN	DTVPLN -DTVP0301
21	KWHM	WAILUKU HI	155.5	LIC	BLCT -19930526KF
22	KHON-DT	HONOLULU HI	3.3	PLN	DTVPLN -DTVP0479
22	KGMB	HONOLULU HI	26.7	APP	USERRECORD-01

Proposal causes no interference

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Analysis of Interference to Affected Station 2

Analysis of current record					
Channel	Call	City/State	Application Ref. No.		
14	KWHE	HONOLULU HI	BLCT	-19880506KI	

Stations Potentially Affecting This Station					
Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
14	KWHH	HILO HI	339.7	LIC	BLCT -19891006KJ
15	KOGG	WAILUKU HI	178.8	LIC	BLCT -19890829KG
17	NEW	MILILANI TOWN HI	26.2	APP	BPRM -20000717AFF
18	KHET	HONOLULU HI	26.7	LIC	BLEDT -20060516ACN
18	KHET-DT	HONOLULU HI	2.7	PLN	DTVPLN -DTVP0301
21	KWHM	WAILUKU HI	155.5	LIC	BLCT -19930526KF
22	KHON-DT	HONOLULU HI	3.3	PLN	DTVPLN -DTVP0479
22	KGMB	HONOLULU HI	26.7	APP	USERRECORD-01

Proposal causes no interference

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Analysis of Interference to Affected Station 3

NTSC Baseline Analysis					
Channel	Call	City/State	Application Ref. No.		
20	KIKU	HONOLULU HI	DTVPLN	-NPLN1075	

Stations Potentially Affecting This Station					
Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
18	KHET-DT	HONOLULU HI	28.9	PLN	DTVPLN -DTVP0301
19	KIKU-DT	HONOLULU HI	0.0	PLN	DTVPLN -DTVP0348
20	KWHM-DT	WAILUKU HI	181.9	PLN	DTVPLN -DTVP0395
21	KWHM	WAILUKU HI	181.9	PLN	DTVPLN -NPLN1104

Figure 4

22	KHON-DT	HONOLULU HI	29.4	PLN	DTVPLN	-DTVP0479
23	KFVE-DT	HONOLULU HI	0.5	PLN	DTVPLN	-DTVP0521
27	KAH-DT	HONOLULU HI	0.2	PLN	DTVPLN	-DTVP0670
35	KHNL-DT	HONOLULU HI	29.8	PLN	DTVPLN	-DTVP0972

Results for: 20N HI HONOLULU				DTVPLN	NPLN1075	PLN
				POPULATION	AREA (sq km)	
within Noise Limited Contour				876151	12472.7	
not affected by terrain losses				780974	9136.2	
lost to NTSC IX				0	0.0	
lost to additional IX by ATV				27711	13.9	
lost to all IX				27711	13.9	

Analysis of current record					
Channel	Call	City/State	Application Ref. No.		
20	KIKU	HONOLULU HI	BLCT	-19910806KE	

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
17	NEW	MILILANI TOWN HI	0.2	APP	BPRM -20000717AFF
18	KHET	HONOLULU HI	0.5	LIC	BLEDT -20060516ACN
18	KHET-DT	HONOLULU HI	28.9	PLN	DTVPLN -DTVP0301
19	KIKU	HONOLULU HI	0.0	LIC	BLCDT -20030813AAU
19	KIKU-DT	HONOLULU HI	0.0	PLN	DTVPLN -DTVP0348
20	KWHM-DT	WAILUKU HI	181.9	PLN	DTVPLN -DTVP0395
21	KWHM	WAILUKU HI	181.9	LIC	BLCT -19930526KF
21	KWHM	WAILUKU HI	198.0	APP	BPCDT -20080411ABY
22	KHON-DT	HONOLULU HI	29.4	PLN	DTVPLN -DTVP0479
23	KFVE-DT	HONOLULU HI	0.5	PLN	DTVPLN -DTVP0521
27	KAH-DT	HONOLULU HI	0.2	LIC	BLCDT -20061027AGR
27	KAH-DT	HONOLULU HI	0.2	PLN	DTVPLN -DTVP0670
35	KHNL	HONOLULU HI	1.8	LIC	BLCDT -20070220ABH
35	KHNL-DT	HONOLULU HI	29.8	PLN	DTVPLN -DTVP0972
22	KGMB	HONOLULU HI	0.5	APP	USERRECORD-01

Proposal causes no interference

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Analysis of Interference to Affected Station 4

NTSC Baseline Analysis					
Channel	Call	City/State	Application Ref. No.		
21	KWHM	WAILUKU HI	DTVPLN	-NPLN1104	

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
14	KWHH	HILO HI	188.9	PLN	DTVPLN -NPLN0882
14	KWHE	HONOLULU HI	155.5	PLN	DTVPLN -NPLN0883
20	KIKU	HONOLULU HI	181.9	PLN	DTVPLN -NPLN1075
20	KWHM-DT	WAILUKU HI	0.0	PLN	DTVPLN -DTVP0395
21	KHAW-DT	HILO HI	188.9	PLN	DTVPLN -DTVP0433
22	KHBC-DT	HILO HI	188.9	PLN	DTVPLN -DTVP0478
22	KHON-DT	HONOLULU HI	152.5	PLN	DTVPLN -DTVP0479

Figure 4

24	KGMV-DT	WAILUKU HI	24.0	PLN	DTVPLN	-DTVP0564
25	KLEI-DT	KAILUA KONA HI	135.4	PLN	DTVPLN	-DTVP0599
29	KMAU-DT	WAILUKU HI	23.0	PLN	DTVPLN	-DTVP0741
36	KAIH-DT	WAILUKU HI	24.3	PLN	DTVPLN	-DTVP1010

Results for: 21N HI WAILUKU			DTVPLN	NPLN1104	PLN
			POPULATION	AREA (sq km)	
	within Noise Limited Contour		76392	1777.6	
	not affected by terrain losses		76332	1633.9	
	lost to NTSC IX		0	0.0	
	lost to additional IX by ATV		0	0.0	
	lost to all IX		0	0.0	

Analysis of current record					
Channel	Call	City/State	Application Ref. No.		
21	KWHM	WAILUKU HI	BLCT	-19930526KF	

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
14	KWHH	HILO HI	188.9	LIC	BLCT -19891006KJ
14	KWHE	HONOLULU HI	155.5	APP	BSTA -20061211ABF
14	KWHE	HONOLULU HI	155.5	LIC	BLCT -19880506KI
20	KIKU	HONOLULU HI	181.9	LIC	BLCT -19910806KE
20	KWHM-DT	WAILUKU HI	0.0	PLN	DTVPLN -DTVP0395
21	KHAW-DT	HILO HI	188.9	PLN	DTVPLN -DTVP0433
22	KHBC-DT	HILO HI	188.9	PLN	DTVPLN -DTVP0478
22	KHON-DT	HONOLULU HI	152.5	PLN	DTVPLN -DTVP0479
24	KGMV	WAILUKU HI	24.0	CP	BPCDT -19991029AFG
24	KGMV-DT	WAILUKU HI	24.0	PLN	DTVPLN -DTVP0564
24	KGMV	WAILUKU HI	20.6	APP	BMPCDT -20080317ADA
25	KLEI-DT	KAILUA KONA HI	135.4	PLN	DTVPLN -DTVP0599
29	KMAU	WAILUKU HI	24.2	CP	BPCDT -19970808KF
29	KMAU-DT	WAILUKU HI	23.0	PLN	DTVPLN -DTVP0741
36	KAIH-DT	WAILUKU HI	24.3	PLN	DTVPLN -DTVP1010
22	KGMB	HONOLULU HI	182.3	APP	USERRECORD-01

Proposed station is beyond the site to nearest cell evaluation distance

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Analysis of Interference to Affected Station 5

Analysis of current record					
Channel	Call	City/State	Application Ref. No.		
21	KWHM	WAILUKU HI	BPCDT	-20080411ABY	

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
20	KIKU	HONOLULU HI	198.0	LIC	BLCT -19910806KE
20	KWHM-DT	WAILUKU HI	20.6	PLN	DTVPLN -DTVP0395
21	KHAW-DT	HILO HI	169.9	PLN	DTVPLN -DTVP0433
22	KHBC-DT	HILO HI	169.9	PLN	DTVPLN -DTVP0478

Figure 4

22	KHON-DT	HONOLULU HI	168.6	PLN	DTVPLN	-DTVP0479
22	KGMB	HONOLULU HI	198.4	APP	USERRECORD-01	

Proposal causes no interference

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Analysis of Interference to Affected Station 6

DTV Baseline Analysis					
Channel	Call	City/State	Application Ref. No.		
22	KHBC-DT	HILO HI	DTVPLN	-DTVP0478	

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
21	KHAW-DT	HILO HI	0.3	PLN	DTVPLN -DTVP0433
21	KWHM	WAILUKU HI	188.9	PLN	DTVPLN -NPLN1104
22	KHON-DT	HONOLULU HI	336.5	PLN	DTVPLN -DTVP0479
23	KWHH-DT	HILO HI	0.0	PLN	DTVPLN -DTVP0520

Results for: 22A HI HILO			DTVPLN	DTVP0478	PLN
	HAAT	33.0 m, ATV ERP	50.0 kW		
			POPULATION	AREA (sq km)	
	within Noise Limited Contour		69770	1676.4	
	not affected by terrain losses		69717	1674.4	
	lost to NTSC IX		0	0.0	
	lost to additional IX by ATV		0	0.0	
	lost to ATV IX only		0	0.0	
	lost to all IX		0	0.0	

NTSC Baseline Analysis					
Channel	Call	City/State	Application Ref. No.		
02	KHBCTV	HILO HI	DTVPLN	-NPLN0161	

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
02	KHONTV	HONOLULU HI	336.5	PLN	DTVPLN -NPLN0162
03	KGMV	WAILUKU HI	165.2	PLN	DTVPLN -NPLN0221

Results for: 2N HI HILO			DTVPLN	NPLN0161	PLN
			POPULATION	AREA (sq km)	
	within Noise Limited Contour		69770	1676.4	
	not affected by terrain losses		69770	1676.4	
	lost to NTSC IX		0	0.0	
	lost to additional IX by ATV		0	0.0	
	lost to all IX		0	0.0	

Analysis of current record					
Channel	Call	City/State	Application Ref. No.		
22	KHBC-DT	HILO HI	DTVPLN	-DTVP0478	

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
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Figure 4

21	KHAW-DT	HILO HI	0.3	PLN	DTVPLN	-DTVP0433
21	KWHM	WAILUKU HI	188.9	LIC	BLCT	-19930526KF
21	KWHM	WAILUKU HI	169.9	APP	BPCDT	-20080411ABY
22	KHON-DT	HONOLULU HI	336.5	PLN	DTVPLN	-DTVP0479
23	KWHH	HILO HI	7.2	LIC	BLCDT	-20060628AAM
23	KWHH-DT	HILO HI	0.0	PLN	DTVPLN	-DTVP0520
22	KGMB	HONOLULU HI	366.2	APP	USERRECORD-01	

Proposal causes no interference

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Analysis of Interference to Affected Station 7

DTV Baseline Analysis

Channel	Call	City/State	Application Ref. No.
23	KFVE-DT	HONOLULU HI	DTVPLN -DTVP0521

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
22	KHON-DT	HONOLULU HI	29.8	PLN	DTVPLN -DTVP0479
23	KWHH-DT	HILO HI	366.2	PLN	DTVPLN -DTVP0520
24	KG MV-DT	WAILUKU HI	206.0	PLN	DTVPLN -DTVP0564

Results for: 23A HI HONOLULU DTVPLN DTVP0521 PLN
 HAAT 629.0 m, ATV ERP 1000.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	882570	35153.7
not affected by terrain losses	844451	33124.1
lost to NTSC IX	0	0.0
lost to additional IX by ATV	18157	52.8
lost to ATV IX only	18157	52.8
lost to all IX	18157	52.8

NTSC Baseline Analysis

Channel	Call	City/State	Application Ref. No.
05	KFVE	HONOLULU HI	DTVPLN -NPLN0348

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
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Results for: 5N HI HONOLULU DTVPLN NPLN0348 PLN

	POPULATION	AREA (sq km)
within Noise Limited Contour	882570	35153.7
not affected by terrain losses	881575	34732.6
lost to NTSC IX	0	0.0
lost to additional IX by ATV	0	0.0
lost to all IX	0	0.0

Analysis of current record

Channel	Call	City/State	Application Ref. No.
23	KFVE-DT	HONOLULU HI	DTVPLN -DTVP0521

Stations Potentially Affecting This Station

Figure 4

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
22	KHON-DT	HONOLULU HI	29.8	PLN	DTVPLN -DTVP0479
23	KWHH	HILO HI	361.0	LIC	BLCDT -20060628AAM
23	KWHH-DT	HILO HI	366.2	PLN	DTVPLN -DTVP0520
24	KG MV	WAILUKU HI	206.0	CP	BPCDT -19991029AFG
24	KG MV-DT	WAILUKU HI	206.0	PLN	DTVPLN -DTVP0564
24	KG MV	WAILUKU HI	198.4	APP	BMPCDT -20080317ADA
22	KGMB	HONOLULU HI	0.0	APP	USERRECORD-01

Proposal causes no interference

#####

Analysis of Interference to Affected Station 8

NTSC Baseline Analysis

Channel	Call	City/State	Application Ref. No.
26	KA AH	HONOLULU HI	DTVPLN -NPLN1273

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
18	KHET-DT	HONOLULU HI	28.7	PLN	DTVPLN -DTVP0301
19	KIKU-DT	HONOLULU HI	0.2	PLN	DTVPLN -DTVP0348
22	KHON-DT	HONOLULU HI	29.3	PLN	DTVPLN -DTVP0479
23	KFVE-DT	HONOLULU HI	0.7	PLN	DTVPLN -DTVP0521
27	KA AH-DT	HONOLULU HI	0.0	PLN	DTVPLN -DTVP0670
33	KBFD-DT	HONOLULU HI	26.2	PLN	DTVPLN -DTVP0899
40	KITV-DT	HONOLULU HI	28.9	PLN	DTVPLN -DTVP1120
41	KAPA-DT	KANE OHE HI	36.2	PLN	DTVPLN -DTVP1156

Results for: 26N HI HONOLULU DTVPLN NPLN1273 PLN

	POPULATION	AREA (sq km)
within Noise Limited Contour	876151	18568.1
not affected by terrain losses	783847	14664.3
lost to NTSC IX	0	0.0
lost to additional IX by ATV	22481	28.8
lost to all IX	22481	28.8

Analysis of current record

Channel	Call	City/State	Application Ref. No.
26	KA AH-TV	HONOLULU HI	BPCT -20031204AAC

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
18	KHET	HONOLULU HI	0.7	LIC	BLEDT -20060516ACN
18	KHET-DT	HONOLULU HI	28.7	PLN	DTVPLN -DTVP0301
19	KIKU	HONOLULU HI	0.2	LIC	BLCDT -20030813AAU
19	KIKU-DT	HONOLULU HI	0.2	PLN	DTVPLN -DTVP0348
22	KHON-DT	HONOLULU HI	29.3	PLN	DTVPLN -DTVP0479
23	KFVE-DT	HONOLULU HI	0.7	PLN	DTVPLN -DTVP0521
27	KA AH-TV	HONOLULU HI	0.0	LIC	BLCDT -20061027AGR
27	KA AH-DT	HONOLULU HI	0.0	PLN	DTVPLN -DTVP0670
33	KBFD-DT	HONOLULU HI	26.2	PLN	DTVPLN -DTVP0899

Figure 4

```

40 KITV-DT HONOLULU HI      28.9 PLN DTVPLN -DTVPL120
41 KAPA-DT KANEHOE HI      36.2 PLN DTVPLN -DTVPL156
22 KGMB HONOLULU HI         0.7 APP  USERRECORD-01
Proposal causes no interference

```

```
#####
```

Analysis of Interference to Affected Station 9

Analysis of current record

```

Channel  Call      City/State      Application Ref. No.
26      KAAH-TV      HONOLULU HI      BLCT      -19970717KE

```

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
18	KHET	HONOLULU HI	0.7	LIC	BLEDT -20060516ACN
18	KHET-DT	HONOLULU HI	28.7	PLN	DTVPLN -DTVPL0301
19	KIKU	HONOLULU HI	0.2	LIC	BLCDT -20030813AAU
19	KIKU-DT	HONOLULU HI	0.2	PLN	DTVPLN -DTVPL0348
22	KHON-DT	HONOLULU HI	29.3	PLN	DTVPLN -DTVPL0479
23	KFVE-DT	HONOLULU HI	0.7	PLN	DTVPLN -DTVPL0521
27	KAAH-TV	HONOLULU HI	0.0	LIC	BLCDT -20061027AGR
27	KAAH-DT	HONOLULU HI	0.0	PLN	DTVPLN -DTVPL0670
33	KBFD-DT	HONOLULU HI	26.2	PLN	DTVPLN -DTVPL0899
40	KITV-DT	HONOLULU HI	28.9	PLN	DTVPLN -DTVPL1120
41	KAPA-DT	KANEHOE HI	36.2	PLN	DTVPLN -DTVPL1156
22	KGMB	HONOLULU HI	0.7	APP	USERRECORD-01

Proposal causes no interference

```
#####
```

Analysis of Interference to Affected Station 10

DTV Baseline Analysis

```

Channel  Call      City/State      Application Ref. No.
22      KHON-DT      HONOLULU HI      DTVPLN      -DTVPL0479

```

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
21	KWHM	WAILUKU HI	152.5	PLN	DTVPLN -NPLN1104
22	KHBC-DT	HILO HI	336.5	PLN	DTVPLN -DTVPL0478
23	KFVE-DT	HONOLULU HI	29.8	PLN	DTVPLN -DTVPL0521

```

Results for: 22A HI HONOLULU      DTVPLN      DTVPL0479      PLN
HAAT  33.0 m, ATV ERP 1000.0 kW

```

	POPULATION	AREA (sq km)
within Noise Limited Contour	876778	19080.5
not affected by terrain losses	793867	15324.9
lost to NTSC IX	0	0.0
lost to additional IX by ATV	504	1817.6
lost to ATV IX only	504	1817.6

Figure 4

```

lost to all IX      504      1817.6

```

NTSC Baseline Analysis

```

Channel  Call      City/State      Application Ref. No.
02      KHONTV      HONOLULU HI      DTVPLN      -NPLN0162

```

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
02	KHBCTV	HILO HI	336.5	PLN	DTVPLN -NPLN0161
03	KGMV	WAILUKU HI	176.1	PLN	DTVPLN -NPLN0221

```

Results for: 2N HI HONOLULU      DTVPLN      NPLN0162      PLN

```

	POPULATION	AREA (sq km)
within Noise Limited Contour	876778	19080.5
not affected by terrain losses	876483	17553.6
lost to NTSC IX	0	0.0
lost to additional IX by ATV	0	0.0
lost to all IX	0	0.0

Analysis of current record

```

Channel  Call      City/State      Application Ref. No.
22      KGMB      HONOLULU HI      USERRECORD-01

```

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
21	KWHM	WAILUKU HI	182.3	LIC	BLCT -19930526KF
21	KWHM	WAILUKU HI	198.4	APP	BPCDT -20080411ABY
22	KHBC-DT	HILO HI	366.2	PLN	DTVPLN -DTVPL0478
23	KFVE-DT	HONOLULU HI	0.0	PLN	DTVPLN -DTVPL0521

Total scenarios = 1

Result key: 1

```

Scenario 1 Affected station      10
Before Analysis

```

```

Results for: 22A HI HONOLULU      USERRECORD01      APP
HAAT  666.0 m, ATV ERP 40.0 kW

```

	POPULATION	AREA (sq km)
within Noise Limited Contour	876778	22938.0
not affected by terrain losses	799888	19786.0
lost to NTSC IX	0	0.0
lost to additional IX by ATV	0	0.0
lost to ATV IX only	0	0.0
lost to all IX	0	0.0

Potential Interfering Stations Included in above Scenario 1

```
#####
```

FINISHED FINISHED FINISHED FINISHED FINISHED FINISHED

Figure 5

```

Census data selected 2000

Post Transition Data Base Selected
/export/home/cdbs/tvdb.sff_B
TV INTERFERENCE and SPACING ANALYSIS PROGRAM

Date: 05-12-2008    Time: 10:55:54

Record Selected for Analysis

KGMB      USERRECORD-01          HONOLULU          HI US
Channel 22 ERP 40.    kW  HAAT 666. m RCAMSL 00805 m
Latitude 021-24-03 Longitude 0158-06-10
Status APP      Zone 2      Border
Dir Antenna Make usr  Model KGMBDT          Beam tilt N Ref Azimuth 0.
Last update      Cutoff date      Docket
Comments
Applicant

Cell Size for Service Analysis 1.0 km/side

Distance Increments for Longley-Rice Analysis 0.50 km

Facility meets maximum height/power limits

Azimuth      ERP      HAAT      41.0 dBu F(50,90)
(Deg)        (kW)        (m)        (km)
  0.0        12.056      360.5      70.5
 45.0        10.506      559.8      79.7
 90.0        30.602      725.1      94.4
135.0        22.755      761.8      92.9
180.0         1.081      749.0      68.6
225.0         0.764      766.8      66.6
270.0        21.609      772.8      92.7
315.0        30.695      631.2      91.3

Evaluation toward Class A Stations

No Spacing violations or contour overlap to Class A stations

Class A Evaluation Complete

Proposed facility is 11.1km from FCC Monitoring station at
Waipahu      HI
Bearing: 102.5 degrees ERP: 39.04 kW HAAT: 764.2 m
Field = 90.5 mV/m

```

Figure 5

```

Proposed facility OK toward West Virginia quite zone

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

Channel      Proposed Station
Call         City/State      ARN
22           KGMB          HONOLULU HI      USERRECORD01

Stations Potentially Affected by Proposed Station

Chan  Call      City/State      Dist(km) Status Application Ref. No.
21    KWHM      WAILUKU HI      201.6    LIC    BDTV      -0455
22    KHBC-TV   HILO HI         366.2    LIC    BDTV      -0434
23    KFVE      HONOLULU HI      2.1      LIC    BDTV      -0441

*****

Analysis of Interference to Affected Station 1

Analysis of current record
Channel      Call         City/State      Application Ref. No.
21           KWHM        WAILUKU HI      BDTV      -0455

Stations Potentially Affecting This Station

Chan  Call      City/State      Dist(km) Status Application Ref. No.
22    KHBC-TV   HILO HI         167.8    LIC    BDTV      -0434
22    KGMB      HONOLULU HI      201.6    APP    USERRECORD-01

Total scenarios = 2

Result key: 1
Scenario 1 Affected station 1
Before Analysis

Results for: 21A HI WAILUKU      BDTV      0455      LIC
HAAT 1298.0 m, ATV ERP 53.1 kW
POPULATION      AREA (sq km)
within Noise Limited Contour 171665 30133.4
not affected by terrain losses 146098 28518.4
lost to NTSC IX 0 0.0
lost to additional IX by ATV 0 0.0
lost to ATV IX only 0 0.0

```


Figure 5

lost to all IX 0 0.0

Potential Interfering Stations Included in above Scenario 1

After Analysis

Results for: 21A HI WAILUKU BDTV 0455 LIC
HAAT 1298.0 m, ATV ERP 53.1 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	171665	30133.4
not affected by terrain losses	146098	28518.4
lost to NTSC IX	0	0.0
lost to additional IX by ATV	7	8.0
lost to ATV IX only	7	8.0
lost to all IX	7	8.0

Potential Interfering Stations Included in above Scenario 1

22A HI HONOLULU USERRECORD01 APP

Percent new IX = 0.0048%

Result key: 2
Scenario 2 Affected station 1
Before Analysis

Results for: 21A HI WAILUKU BDTV 0455 LIC
HAAT 1298.0 m, ATV ERP 53.1 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	171665	30133.4
not affected by terrain losses	146098	28518.4
lost to NTSC IX	0	0.0
lost to additional IX by ATV	0	0.0
lost to ATV IX only	0	0.0
lost to all IX	0	0.0

Potential Interfering Stations Included in above Scenario 2

After Analysis

Results for: 21A HI WAILUKU BDTV 0455 LIC
HAAT 1298.0 m, ATV ERP 53.1 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	171665	30133.4
not affected by terrain losses	146098	28518.4
lost to NTSC IX	0	0.0
lost to additional IX by ATV	7	8.0
lost to ATV IX only	7	8.0
lost to all IX	7	8.0

Potential Interfering Stations Included in above Scenario 2

22A HI HONOLULU USERRECORD01 APP

Percent new IX = 0.0048%

Figure 5

Worst case new IX 0.0048% Scenario 1

#####

Analysis of Interference to Affected Station 2

Analysis of current record

Channel	Call	City/State	Application Ref. No.
22	KHBC-TV	HILO HI	BDTV -0434

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
21	KWHM	WAILUKU HI	167.8	LIC	BDTV -0455
23	KWHH	HILO HI	7.2	LIC	BDTV -0435
22	KGMB	HONOLULU HI	366.2	APP	USERRECORD-01

Proposal causes no interference

#####

Analysis of Interference to Affected Station 3

Analysis of current record

Channel	Call	City/State	Application Ref. No.
23	KFVE	HONOLULU HI	BDTV -0441

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
23	KWHH	HILO HI	360.1	LIC	BDTV -0435
24	KGMV	WAILUKU HI	205.4	LIC	BDTV -0456
22	KGMB	HONOLULU HI	2.1	APP	USERRECORD-01

Total scenarios = 2

Result key: 3
Scenario 1 Affected station 3
Before Analysis

Results for: 23A HI HONOLULU BDTV 0441 LIC
HAAT 453.0 m, ATV ERP 5.4 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	858750	7680.4
not affected by terrain losses	775359	6383.9
lost to NTSC IX	0	0.0
lost to additional IX by ATV	0	0.0
lost to ATV IX only	0	0.0
lost to all IX	0	0.0

Potential Interfering Stations Included in above Scenario 1

Figure 5

After Analysis

Results for: 23A HI HONOLULU	BDTV	0441	LIC
HAAT 453.0 m, ATV ERP 5.4 kW			
	POPULATION	AREA (sq km)	
within Noise Limited Contour	858750	7680.4	
not affected by terrain losses	775359	6383.9	
lost to NTSC IX	0	0.0	
lost to additional IX by ATV	1398	87.6	
lost to ATV IX only	1398	87.6	
lost to all IX	1398	87.6	

Potential Interfering Stations Included in above Scenario 1

22A HI HONOLULU USERRECORD01 APP

Percent new IX = 0.1803%

Result key: 4
Scenario 2 Affected station 3
Before Analysis

Results for: 23A HI HONOLULU	BDTV	0441	LIC
HAAT 453.0 m, ATV ERP 5.4 kW			
	POPULATION	AREA (sq km)	
within Noise Limited Contour	858750	7680.4	
not affected by terrain losses	775359	6383.9	
lost to NTSC IX	0	0.0	
lost to additional IX by ATV	0	0.0	
lost to ATV IX only	0	0.0	
lost to all IX	0	0.0	

Potential Interfering Stations Included in above Scenario 2

After Analysis

Results for: 23A HI HONOLULU	BDTV	0441	LIC
HAAT 453.0 m, ATV ERP 5.4 kW			
	POPULATION	AREA (sq km)	
within Noise Limited Contour	858750	7680.4	
not affected by terrain losses	775359	6383.9	
lost to NTSC IX	0	0.0	
lost to additional IX by ATV	1398	87.6	
lost to ATV IX only	1398	87.6	
lost to all IX	1398	87.6	

Potential Interfering Stations Included in above Scenario 2

22A HI HONOLULU USERRECORD01 APP

Percent new IX = 0.1803%

Worst case new IX 0.1803% Scenario 1

#####

Figure 5

Analysis of Interference to Affected Station 4

Analysis of current record			
Channel	Call	City/State	Application Ref. No.
22	KGMB	HONOLULU HI	USERRECORD-01

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
21	KWHM	WAILUKU HI	201.6	LIC	BDTV -0455
22	KHBC-TV	HILO HI	366.2	LIC	BDTV -0434
23	KFVE	HONOLULU HI	2.1	LIC	BDTV -0441

Total scenarios = 1

Result key: 5
Scenario 1 Affected station 4
Before Analysis

Results for: 22A HI HONOLULU	USERRECORD01	APP
HAAT 666.0 m, ATV ERP 40.0 kW		
	POPULATION	AREA (sq km)
within Noise Limited Contour	876778	22895.2
not affected by terrain losses	792270	19727.2
lost to NTSC IX	0	0.0
lost to additional IX by ATV	0	0.0
lost to ATV IX only	0	0.0
lost to all IX	0	0.0

Potential Interfering Stations Included in above Scenario 1

FINISHED FINISHED FINISHED FINISHED FINISHED FINISHED

APPENDIX

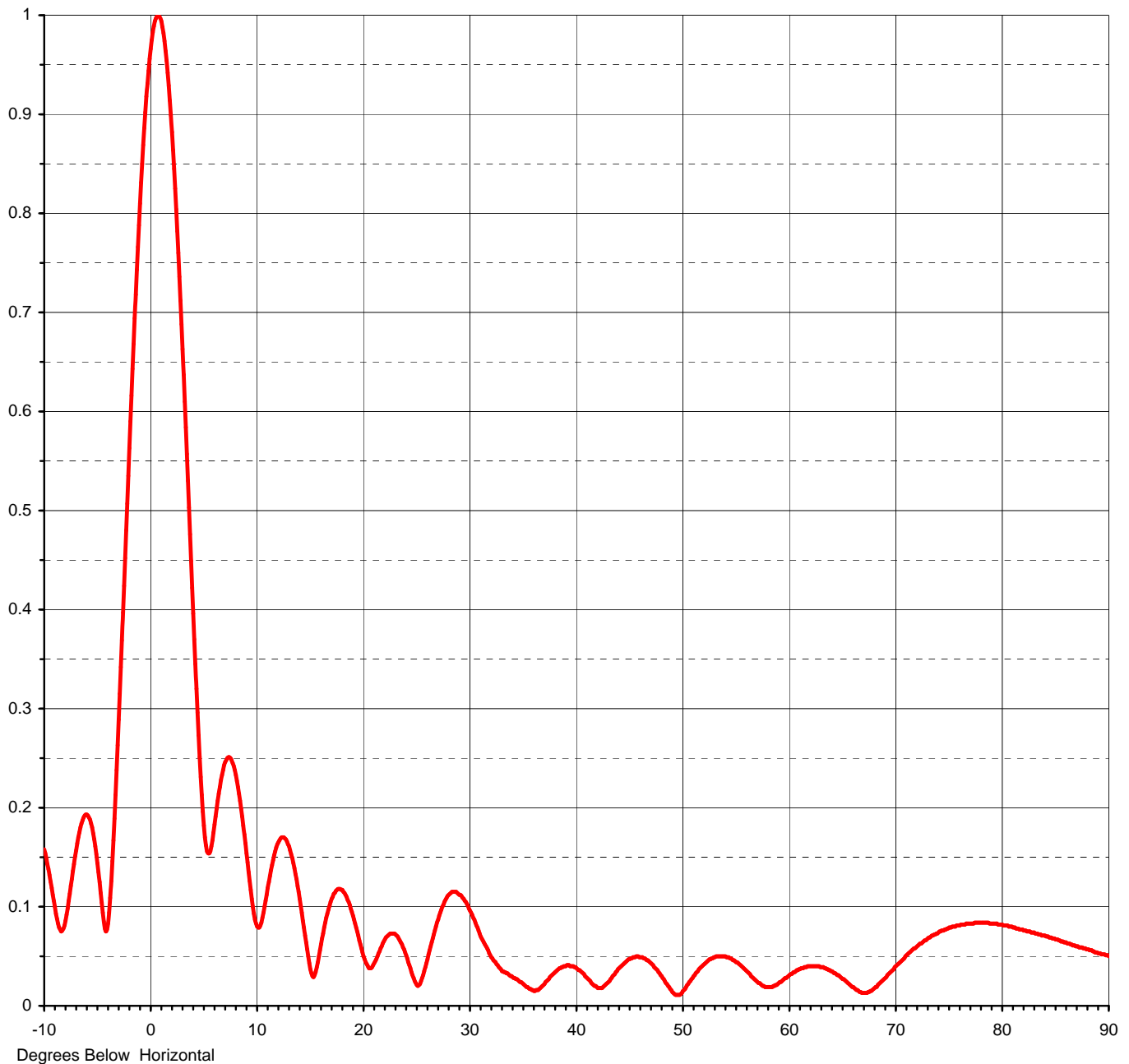
TRANSMITTING ANTENNA VERTICAL AND HORIZONTAL PLANE PATTERN



Proposal Number	C-02093	Revision:	1
Date	2-May-08		
Call Letters	KHET	Channel	22
Location	Oahu, HI		
Customer			
Antenna Type	TUA-BP3SP-6/18M-1-S		

ELEVATION PATTERN

RMS Gain at Main Lobe	12.35 (10.91 dB)	Beam Tilt	0.70 deg
RMS Gain at Horizontal	11.50 (10.61 dB)	Frequency	521.00 MHz
Calculated / Measured	Calculated	Drawing #	06U123075-521-90



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Proposal Number **C-02093** Revision: **1**
Date **2-May-08**
Call Letters **KHET** Channel **22**
Location **Oahu, HI**
Customer
Antenna Type **TUA-BP3SP-6/18M-1-S**

TABULATION OF ELEVATION PATTERN

Elevation Pattern Drawing #: **06U123075-521-90**

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.158	2.4	0.804	10.6	0.089	30.5	0.087	51.0	0.028	71.5	0.056
-9.5	0.132	2.6	0.760	10.8	0.100	31.0	0.073	51.5	0.035	72.0	0.060
-9.0	0.100	2.8	0.712	11.0	0.112	31.5	0.062	52.0	0.041	72.5	0.064
-8.5	0.077	3.0	0.663	11.5	0.142	32.0	0.051	52.5	0.046	73.0	0.068
-8.0	0.086	3.2	0.610	12.0	0.163	32.5	0.044	53.0	0.049	73.5	0.071
-7.5	0.121	3.4	0.557	12.5	0.170	33.0	0.037	53.5	0.050	74.0	0.074
-7.0	0.157	3.6	0.503	13.0	0.163	33.5	0.033	54.0	0.050	74.5	0.076
-6.5	0.184	3.8	0.449	13.5	0.144	34.0	0.030	54.5	0.048	75.0	0.079
-6.0	0.193	4.0	0.396	14.0	0.115	34.5	0.027	55.0	0.045	75.5	0.080
-5.5	0.180	4.2	0.345	14.5	0.079	35.0	0.023	55.5	0.041	76.0	0.081
-5.0	0.144	4.4	0.296	15.0	0.043	35.5	0.019	56.0	0.036	76.5	0.082
-4.5	0.094	4.6	0.251	15.5	0.031	36.0	0.016	56.5	0.030	77.0	0.083
-4.0	0.083	4.8	0.213	16.0	0.056	36.5	0.016	57.0	0.025	77.5	0.084
-3.5	0.167	5.0	0.182	16.5	0.084	37.0	0.021	57.5	0.021	78.0	0.084
-3.0	0.289	5.2	0.162	17.0	0.105	37.5	0.027	58.0	0.019	78.5	0.084
-2.8	0.342	5.4	0.154	17.5	0.116	38.0	0.033	58.5	0.019	79.0	0.083
-2.6	0.397	5.6	0.156	18.0	0.117	38.5	0.038	59.0	0.022	79.5	0.083
-2.4	0.452	5.8	0.167	18.5	0.110	39.0	0.040	59.5	0.026	80.0	0.082
-2.2	0.507	6.0	0.183	19.0	0.095	39.5	0.040	60.0	0.030	80.5	0.081
-2.0	0.563	6.2	0.199	19.5	0.075	40.0	0.039	60.5	0.034	81.0	0.079
-1.8	0.616	6.4	0.214	20.0	0.054	40.5	0.035	61.0	0.037	81.5	0.078
-1.6	0.668	6.6	0.228	20.5	0.040	41.0	0.029	61.5	0.039	82.0	0.076
-1.4	0.718	6.8	0.238	21.0	0.041	41.5	0.023	62.0	0.040	82.5	0.075
-1.2	0.766	7.0	0.246	21.5	0.053	42.0	0.019	62.5	0.040	83.0	0.074
-1.0	0.810	7.2	0.250	22.0	0.065	42.5	0.018	63.0	0.039	83.5	0.072
-0.8	0.850	7.4	0.251	22.5	0.072	43.0	0.023	63.5	0.038	84.0	0.071
-0.6	0.886	7.6	0.248	23.0	0.073	43.5	0.030	64.0	0.035	84.5	0.069
-0.4	0.918	7.8	0.242	23.5	0.066	44.0	0.037	64.5	0.031	85.0	0.067
-0.2	0.944	8.0	0.233	24.0	0.054	44.5	0.042	65.0	0.027	85.5	0.065
0.0	0.966	8.2	0.221	24.5	0.038	45.0	0.047	65.5	0.023	86.0	0.064
0.2	0.983	8.4	0.207	25.0	0.023	45.5	0.049	66.0	0.019	86.5	0.062
0.4	0.994	8.6	0.191	25.5	0.025	46.0	0.049	66.5	0.015	87.0	0.060
0.6	0.999	8.8	0.173	26.0	0.043	46.5	0.048	67.0	0.013	87.5	0.059
0.8	0.999	9.0	0.154	26.5	0.064	47.0	0.044	67.5	0.014	88.0	0.057
1.0	0.994	9.2	0.135	27.0	0.084	47.5	0.038	68.0	0.018	88.5	0.055
1.2	0.982	9.4	0.117	27.5	0.100	48.0	0.031	68.5	0.023	89.0	0.053
1.4	0.964	9.6	0.100	28.0	0.111	48.5	0.023	69.0	0.028	89.5	0.052
1.6	0.942	9.8	0.093	28.5	0.115	49.0	0.016	69.5	0.034	90.0	0.050
1.8	0.914	10.0	0.083	29.0	0.113	49.5	0.011	70.0	0.040		
2.0	0.882	10.2	0.079	29.5	0.108	50.0	0.013	70.5	0.045		
2.2	0.845	10.4	0.081	30.0	0.098	50.5	0.021	71.0	0.051		

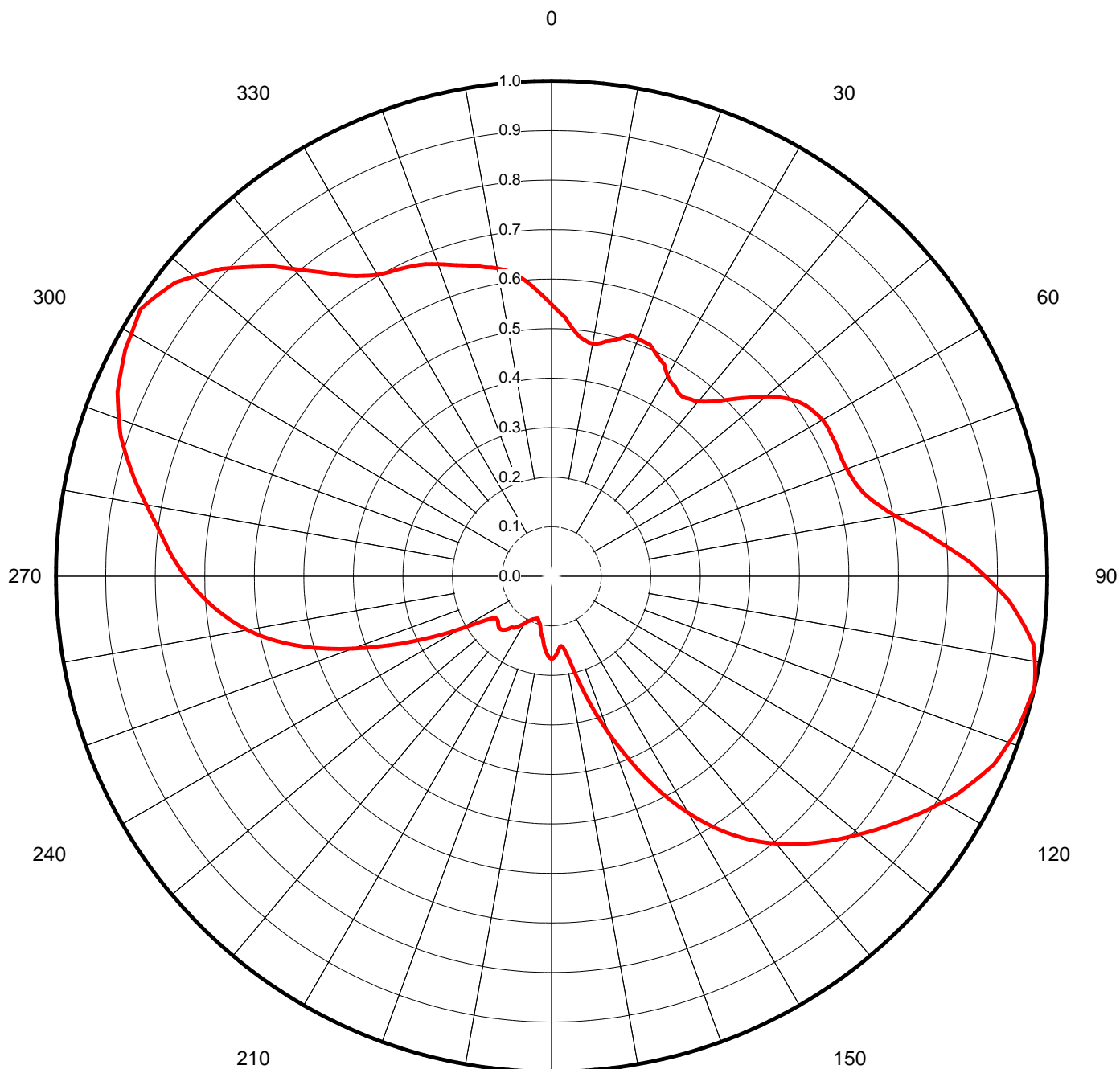
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Proposal Number	C-02093	Revision:	1
Date	2-May-08		
Call Letters	KHET	Channel	22
Location	Oahu, HI		
Customer			
Antenna Type	TUA-BP3SP-6/18M-1-S		

AZIMUTH PATTERN

Gain	2.46	(3.91 dB)
Calculated / Measured		Calculated

Frequency	521.00 MHz
Drawing #	TUA-P3SP-5210





Proposal Number	C-02093	Revision:	1
Date	2-May-08		
Call Letters	KHET	Channel	22
Location	Oahu, HI		
Customer			
Antenna Type	TUA-BP3SP-6/18M-1-S		

TABULATION OF AZIMUTH PATTERN

Azimuth Pattern Drawing #: **TUA-P3SP-5210**

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
0	0.549	45	0.504	90	0.875	135	0.760	180	0.167	225	0.149	270	0.739	315	0.882
1	0.539	46	0.516	91	0.891	136	0.750	181	0.166	226	0.148	271	0.748	316	0.868
2	0.531	47	0.528	92	0.907	137	0.739	182	0.163	227	0.147	272	0.758	317	0.855
3	0.523	48	0.539	93	0.923	138	0.728	183	0.159	228	0.145	273	0.767	318	0.842
4	0.511	49	0.552	94	0.935	139	0.717	184	0.154	229	0.143	274	0.775	319	0.826
5	0.500	50	0.564	95	0.947	140	0.705	185	0.149	230	0.142	275	0.783	320	0.810
6	0.492	51	0.576	96	0.959	141	0.692	186	0.142	231	0.141	276	0.791	321	0.795
7	0.485	52	0.586	97	0.971	142	0.679	187	0.135	232	0.140	277	0.800	322	0.781
8	0.481	53	0.596	98	0.982	143	0.666	188	0.127	233	0.141	278	0.810	323	0.768
9	0.478	54	0.604	99	0.986	144	0.652	189	0.123	234	0.144	279	0.820	324	0.755
10	0.477	55	0.612	100	0.990	145	0.637	190	0.119	235	0.149	280	0.830	325	0.742
11	0.478	56	0.618	101	0.994	146	0.622	191	0.114	236	0.156	281	0.841	326	0.732
12	0.481	57	0.622	102	0.997	147	0.605	192	0.108	237	0.166	282	0.852	327	0.723
13	0.487	58	0.625	103	1.000	148	0.588	193	0.101	238	0.178	283	0.863	328	0.715
14	0.490	59	0.629	104	0.998	149	0.570	194	0.099	239	0.194	284	0.873	329	0.708
15	0.494	60	0.631	105	0.996	150	0.552	195	0.096	240	0.211	285	0.883	330	0.703
16	0.499	61	0.633	106	0.994	151	0.532	196	0.094	241	0.230	286	0.894	331	0.699
17	0.505	62	0.633	107	0.992	152	0.512	197	0.092	242	0.250	287	0.904	332	0.696
18	0.513	63	0.632	108	0.991	153	0.491	198	0.090	243	0.270	288	0.914	333	0.694
19	0.511	64	0.633	109	0.986	154	0.470	199	0.091	244	0.291	289	0.922	334	0.691
20	0.510	65	0.633	110	0.982	155	0.449	200	0.091	245	0.313	290	0.929	335	0.688
21	0.509	66	0.632	111	0.978	156	0.426	201	0.092	246	0.335	291	0.936	336	0.686
22	0.508	67	0.632	112	0.974	157	0.403	202	0.093	247	0.357	292	0.944	337	0.683
23	0.508	68	0.631	113	0.970	158	0.380	203	0.094	248	0.379	293	0.952	338	0.679
24	0.502	69	0.632	114	0.962	159	0.359	204	0.096	249	0.403	294	0.956	339	0.675
25	0.497	70	0.634	115	0.955	160	0.337	205	0.098	250	0.427	295	0.960	340	0.671
26	0.492	71	0.636	116	0.947	161	0.316	206	0.099	251	0.450	296	0.965	341	0.666
27	0.488	72	0.638	117	0.939	162	0.294	207	0.101	252	0.473	297	0.969	342	0.661
28	0.484	73	0.642	118	0.931	163	0.272	208	0.103	253	0.495	298	0.974	343	0.656
29	0.475	74	0.646	119	0.921	164	0.251	209	0.107	254	0.517	299	0.976	344	0.653
30	0.468	75	0.651	120	0.911	165	0.230	210	0.110	255	0.537	300	0.979	345	0.649
31	0.462	76	0.659	121	0.901	166	0.210	211	0.113	256	0.556	301	0.982	346	0.646
32	0.459	77	0.668	122	0.892	167	0.191	212	0.117	257	0.575	302	0.985	347	0.642
33	0.457	78	0.679	123	0.882	168	0.174	213	0.120	258	0.592	303	0.989	348	0.638
34	0.452	79	0.690	124	0.871	169	0.161	214	0.123	259	0.608	304	0.985	349	0.635
35	0.449	80	0.704	125	0.861	170	0.151	215	0.126	260	0.623	305	0.980	350	0.631
36	0.448	81	0.719	126	0.851	171	0.145	216	0.128	261	0.637	306	0.974	351	0.627
37	0.450	82	0.735	127	0.841	172	0.142	217	0.130	262	0.651	307	0.969	352	0.621
38	0.454	83	0.753	128	0.831	173	0.143	218	0.131	263	0.663	308	0.963	353	0.615
39	0.457	84	0.769	129	0.821	174	0.146	219	0.136	264	0.676	309	0.953	354	0.607
40	0.461	85	0.787	130	0.810	175	0.151	220	0.140	265	0.687	310	0.942	355	0.598
41	0.467	86	0.805	131	0.800	176	0.156	221	0.143	266	0.699	311	0.931	356	0.589
42	0.474	87	0.824	132	0.790	177	0.160	222	0.146	267	0.709	312	0.920	357	0.579
43	0.483	88	0.844	133	0.781	178	0.163	223	0.147	268	0.720	313	0.910	358	0.568
44	0.493	89	0.859	134	0.770	179	0.166	224	0.148	269	0.730	314	0.896	359	0.559

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