ENGINEERING EXHIBIT

Incentive Auction Channel Reassignment

Application for Digital Television Station Construction Permit

prepared for

Esteem Broadcasting of California LLC
KCVU(DT) Paradise, CA
Facility ID 58605
Ch. 17 180 kW 431 m

Esteem Broadcasting of California LLC ("Esteem") is the licensee of digital television station KCVU, Channel 20, Facility ID 58605, Paradise, CA. *Esteem* herein proposes construction of the KCVU post-auction facility on Channel 17. Reassignment of KCVU from Channel 20 to Channel 17 was specified in the *Incentive Auction Closing and Channel Reassignment Public Notice* (*"CCRPN"*, DA 17-317, released April 13, 2017).

The proposed Channel 17 operation will employ a new antenna system to be side-mounted on the KCVU tower in lieu of the existing Channel 20 antenna. The tower structure corresponds to FCC Antenna Structure Registration number 1049506. No change to the overall structure height will result.

The proposed antenna is an elliptically polarized directional Dielectric model TFU-12DSB-C (75.6 percent vertical polarization). *Esteem* proposes to operate KCVU with an effective radiated power ("ERP") of 180 kW at 431 meters antenna height above average terrain ("HAAT"). The maximum horizontally polarized ERP is 180 kW and the maximum vertically polarized ERP is 136 kW. The vertically polarized component will not exceed the horizontally polarized component at any azimuth. The directional antenna's azimuthal patterns are depicted in Figures 1 and 1A for horizontal and vertical polarization, respectively. The antenna's elevation pattern is depicted in Figure 2.

A map is supplied as Figure 3 which depicts the standard predicted coverage contours. This map includes the location of Paradise, KCVU's principal community. As demonstrated thereon, the proposed facility complies with §73.625(a)(1) as the entire principal community will be encompassed by the 48 dBμ contour.

Along some azimuths the proposed noise limited service contour ("NLSC") extends beyond that of the *CCRPN* parameters of 160 kW ERP and 449 meters HAAT.[1] The proposal complies with §73.3700(b)(ii) as described in the following.

The *CCRPN* facility specifies the directional antenna pattern corresponding to the KCVU's licensed Channel 20. The antenna manufacturer cannot provide the exact pattern on the new channel due to the change in frequency and corresponding mechanical limitations of antenna construction. The directional pattern proposed herein replicates the reassignment pattern as closely as possible. The proposal results in a slightly larger coverage contour in some directions in an attempt to achieve the *CCRPN* coverage contour. Due to the difference in directional pattern, KCVU qualifies under §73.3700(b)(ii)(A) for a contour extension due to the loss of coverage area resulting from the new channel assignment.

Interference study per FCC OET Bulletin 69[2] shows that the proposal complies with the 0.5 percent limit of new interference caused to pertinent nearby post-auction full service and Class A television stations and reassignments as required by §73.616. The interference study output report is provided as Table 1. This satisfies §73.3700(b)(ii)(C) for the proposed NLSC extension.

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[1]The proposal reflects a change in coordinates and ground elevation from the licensed and reassignment KCVU parameters, due to a modification of the Antenna Structure Registration by the tower owner. The antenna height above ground is reduced by one meter. The proposed KCVU antenna HAAT is recalculated to be 430.6 meters, based on FCC 30 meter terrain data developed by OET.

[2]FCC Office of Engineering and Technology Bulletin number 69, *Longley-Rice Methodology for Evaluating TV Coverage and Interference*, February 6, 2004 ("OET-69"). This analysis employed the FCC's current "TVStudy" software with the default application processing template settings, 2 km cell size, and 1 km terrain increment. Comparisons of various results of this computer program (run on a Mac processor) to the FCCs implementation of TVStudy show excellent correlation.

The amount of NLSC extension does not exceed one percent in any direction. Figure 4 supplies a coverage contour comparison of the proposed KCVU facility to the reassignment facility's contour and a one percent extension distance of the reassignment facility's contour. Here, the contour level is adjusted with the dipole factor to match FCC application processing. Table 1's results also demonstrate that the proposed contour is within the baseline contour plus one percent. Therefore the proposed contour extension complies with §73.3700(b)(ii)(B).

The proposed KCVU facility's terrain-limited population provides a 100.2 percent match of the *CCRPN* baseline facility, as detailed in the following table. The OET Bulletin 69 report summary in Table 1 also concludes that the proposed service area population is more than 95 percent of the baseline population.

Terrain Limited Population - Match of Reassignment

Population Summary (2010 Census) OET Bulletin 69: TVStudy	Reassignment Parameters	Proposed
Within Noise Limited Contour	627,880	628,559
Not affected by terrain losses	614,055	615,346
Match of Reassignment	---	**100.21%**

The nearest FCC monitoring station is 248 km distant at Livermore, CA. This exceeds by a large margin the threshold minimum distance specified in §73.1030(c)(3) that would suggest consideration of the monitoring station. The site is not located within the areas requiring coordination with "quiet" zones specified in §73.1030(a) and (b). The site location is beyond the border areas requiring international coordination. There are no authorized AM stations within 3 kilometers of the site.

Human Exposure to Radiofrequency Electromagnetic Field (Environmental)

The proposed operation was evaluated for human exposure to RF energy using the procedures outlined in the Commission's OET Bulletin Number 65. Based on OET-65 equation (10), and considering 10 percent antenna relative field in downward elevations (pattern data shows relative field does not exceed 10 percent at angles 20 to 90 degrees below the antenna), the calculated signal density near the tower at two meters above ground level attributable to the proposed facility is 7.8 $\mu W/cm^2$, which is 2.4 percent of the general population/uncontrolled maximum permitted exposure limit ("MPE"). This is below the five percent threshold limit

described in §1.1307(b) regarding sites with multiple emitters, categorically excluding the applicant from responsibility for taking any corrective action in the areas where the proposal's contribution is less than five percent.

The general public will not be exposed to RF levels attributable to the proposal in excess of the FCC's guidelines. RF exposure warning signs will continue to be posted. With respect to worker safety, the applicant will coordinate exposure procedures with all pertinent stations and will reduce power or cease operation as necessary to protect persons having access to the site, tower, or antenna from RF electromagnetic field exposure in excess of FCC guidelines. This exhibit is limited to the evaluation of exposure to RF electromagnetic field. No increase in structure height is proposed.

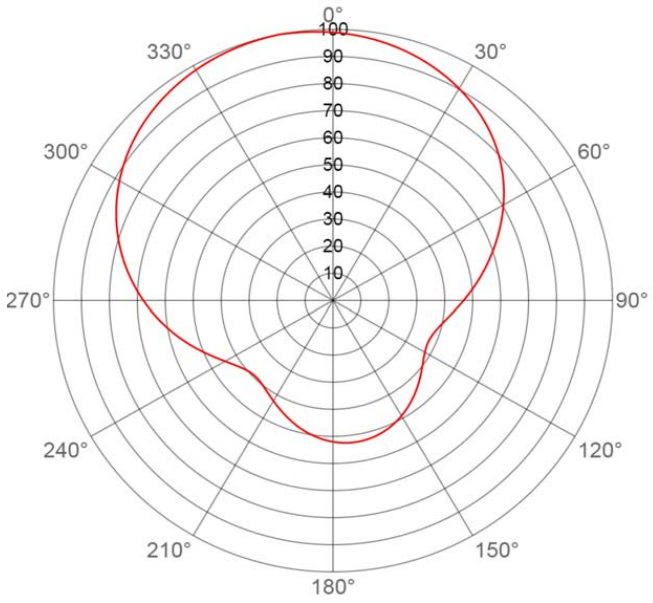
List of Attachments

Figure 1, 1A	Antenna Azimuthal Pattern
Figure 2	Antenna Elevation Pattern
Figure 3	Proposed Coverage Contours
Figure 4	Proposed Contour Expansion
Table 1	OET Bulletin 69 Interference Study
Form 2100	Saved Version of Engineering Sections from FCC Form at Time of Upload

Chesapeake RF Consultants, LLC
Joseph M. Davis, P.E. July 1, 2017
207 Old Dominion Road Yorktown, VA 23692 703-650-9600

Dielectric®

Location: Paradise, CA
Customer: Esteem Broadcast
Generated by DASP



Horizontal Polarization
AZIMUTH PATTERN

Exhibit No.	
Date	**24 Feb 2017**
Call Letters	**KCVU**
Channel	**17**
Antenna Type	**TFU-12DSB-C**
Location	**Paradise, CA**
Customer	**Esteem Broadcast**
Gain	**2.1 (3.22 dB)**
	Calculated
Drawing #	**DSB-C**

Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value
0	1.000	36	0.924	72	0.696	108	0.425	144	0.424	180	0.527	216	0.444	252	0.452	288	0.733	324	0.939
1	0.999	37	0.920	73	0.687	109	0.420	145	0.428	181	0.528	217	0.440	253	0.459	289	0.741	325	0.942
2	0.998	38	0.916	74	0.679	110	0.414	146	0.432	182	0.528	218	0.437	254	0.465	290	0.748	326	0.946
3	0.997	39	0.912	75	0.670	111	0.410	147	0.437	183	0.528	219	0.433	255	0.472	291	0.755	327	0.949
4	0.996	40	0.907	76	0.662	112	0.405	148	0.441	184	0.527	220	0.430	256	0.479	292	0.763	328	0.952
5	0.995	41	0.903	77	0.653	113	0.401	149	0.445	185	0.527	221	0.426	257	0.487	293	0.770	329	0.955
6	0.995	42	0.898	78	0.645	114	0.396	150	0.449	186	0.526	222	0.423	258	0.494	294	0.777	330	0.958
7	0.994	43	0.893	79	0.637	115	0.393	151	0.453	187	0.525	223	0.419	259	0.502	295	0.784	331	0.960
8	0.993	44	0.889	80	0.628	116	0.389	152	0.457	188	0.524	224	0.416	260	0.510	296	0.791	332	0.963
9	0.992	45	0.884	81	0.620	117	0.386	153	0.461	189	0.523	225	0.413	261	0.517	297	0.798	333	0.965
10	0.990	46	0.878	82	0.611	118	0.383	154	0.465	190	0.522	226	0.410	262	0.525	298	0.804	334	0.968
11	0.989	47	0.873	83	0.603	119	0.381	155	0.469	191	0.520	227	0.407	263	0.533	299	0.811	335	0.970
12	0.988	48	0.868	84	0.595	120	0.378	156	0.472	192	0.518	228	0.405	264	0.541	300	0.818	336	0.972
13	0.986	49	0.862	85	0.587	121	0.377	157	0.476	193	0.517	229	0.402	265	0.549	301	0.824	337	0.974
14	0.985	50	0.857	86	0.579	122	0.375	158	0.480	194	0.515	230	0.400	266	0.557	302	0.830	338	0.976
15	0.983	51	0.851	87	0.571	123	0.374	159	0.483	195	0.512	231	0.398	267	0.565	303	0.837	339	0.978
16	0.981	52	0.845	88	0.563	124	0.373	160	0.487	196	0.510	232	0.396	268	0.573	304	0.843	340	0.980
17	0.980	53	0.839	89	0.555	125	0.373	161	0.490	197	0.508	233	0.395	269	0.581	305	0.849	341	0.982
18	0.978	54	0.833	90	0.547	126	0.373	162	0.493	198	0.505	234	0.394	270	0.590	306	0.855	342	0.983
19	0.976	55	0.826	91	0.539	127	0.374	163	0.497	199	0.503	235	0.393	271	0.598	307	0.860	343	0.985
20	0.973	56	0.820	92	0.532	128	0.375	164	0.500	200	0.500	236	0.393	272	0.606	308	0.866	344	0.986
21	0.971	57	0.813	93	0.524	129	0.376	165	0.502	201	0.497	237	0.394	273	0.614	309	0.872	345	0.988
22	0.969	58	0.806	94	0.517	130	0.378	166	0.505	202	0.494	238	0.395	274	0.622	310	0.877	346	0.989
23	0.966	59	0.799	95	0.510	131	0.380	167	0.508	203	0.491	239	0.396	275	0.630	311	0.882	347	0.990
24	0.964	60	0.792	96	0.502	132	0.382	168	0.510	204	0.488	240	0.398	276	0.638	312	0.887	348	0.991
25	0.961	61	0.784	97	0.495	133	0.385	169	0.513	205	0.484	241	0.400	277	0.646	313	0.892	349	0.993
26	0.958	62	0.777	98	0.488	134	0.387	170	0.515	206	0.481	242	0.403	278	0.654	314	0.897	350	0.994
27	0.955	63	0.769	99	0.481	135	0.390	171	0.517	207	0.477	243	0.406	279	0.663	315	0.902	351	0.995
28	0.952	64	0.761	100	0.474	136	0.394	172	0.519	208	0.474	244	0.410	280	0.671	316	0.907	352	0.995
29	0.949	65	0.754	101	0.468	137	0.397	173	0.520	209	0.470	245	0.414	281	0.679	317	0.911	353	0.996
30	0.946	66	0.746	102	0.461	138	0.401	174	0.522	210	0.467	246	0.419	282	0.686	318	0.916	354	0.997
31	0.942	67	0.737	103	0.455	139	0.404	175	0.523	211	0.463	247	0.423	283	0.694	319	0.920	355	0.998
32	0.939	68	0.729	104	0.448	140	0.408	176	0.524	212	0.459	248	0.429	284	0.702	320	0.924	356	0.998
33	0.935	69	0.721	105	0.442	141	0.412	177	0.525	213	0.455	249	0.434	285	0.710	321	0.928	357	0.999
34	0.932	70	0.713	106	0.436	142	0.416	178	0.526	214	0.452	250	0.440	286	0.718	322	0.932	358	0.999
35	0.928	71	0.704	107	0.430	143	0.420	179	0.527	215	0.448	251	0.446	287	0.725	323	0.935	359	0.999

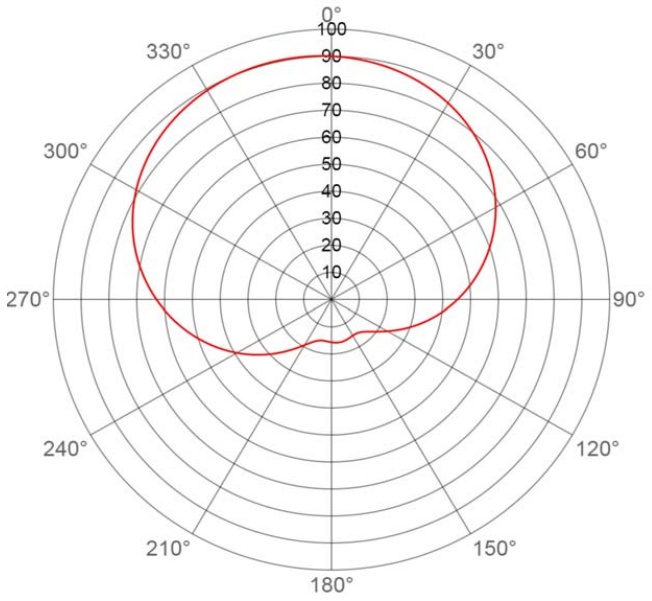
Azimuthal plot is properly oriented
Tabulated data must be rotated 350°

Chesapeake RF Consultants, LLC
Radiofrequency Consulting Engineers
Digital Television and Radio

Figure 1
Antenna Azimuthal Pattern
Horizontal Polarization
KCVU(DT) Paradise, CA
Facility ID 58605
Ch. 17 180 kW 431 m

prepared for
Esteem Broadcasting of California LLC

July, 2017



Vertical Polarization
AZIMUTH PATTERN

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Antenna Type	**TFU-12DSB-C**
Location	**Paradise, CA**
Customer	**Esteem Broadcast**
Gain	**2.1 (3.22 dB)**
	Calculated
Drawing #	**DSB-C**

Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value
0	0.905	36	0.855	72	0.675	108	0.397	144	0.173	180	0.160	216	0.175	252	0.400	288	0.679	324	0.858
1	0.904	37	0.852	73	0.668	109	0.389	145	0.170	181	0.160	217	0.178	253	0.408	289	0.686	325	0.861
2	0.904	38	0.849	74	0.661	110	0.381	146	0.167	182	0.160	218	0.181	254	0.416	290	0.693	326	0.864
3	0.904	39	0.846	75	0.654	111	0.374	147	0.165	183	0.160	219	0.185	255	0.424	291	0.699	327	0.866
4	0.904	40	0.842	76	0.647	112	0.366	148	0.163	184	0.159	220	0.189	256	0.432	292	0.706	328	0.869
5	0.903	41	0.839	77	0.640	113	0.358	149	0.161	185	0.159	221	0.193	257	0.441	293	0.712	329	0.871
6	0.903	42	0.835	78	0.633	114	0.350	150	0.159	186	0.159	222	0.198	258	0.449	294	0.719	330	0.874
7	0.903	43	0.831	79	0.625	115	0.343	151	0.157	187	0.159	223	0.202	259	0.457	295	0.725	331	0.876
8	0.902	44	0.828	80	0.618	116	0.335	152	0.156	188	0.158	224	0.207	260	0.465	296	0.731	332	0.878
9	0.901	45	0.824	81	0.610	117	0.328	153	0.155	189	0.158	225	0.212	261	0.473	297	0.737	333	0.880
10	0.901	46	0.820	82	0.603	118	0.320	154	0.154	190	0.157	226	0.218	262	0.481	298	0.743	334	0.882
11	0.900	47	0.815	83	0.595	119	0.313	155	0.154	191	0.157	227	0.223	263	0.489	299	0.749	335	0.884
12	0.899	48	0.811	84	0.588	120	0.305	156	0.153	192	0.156	228	0.229	264	0.497	300	0.755	336	0.886
13	0.898	49	0.807	85	0.580	121	0.298	157	0.153	193	0.156	229	0.235	265	0.505	301	0.760	337	0.887
14	0.897	50	0.802	86	0.572	122	0.291	158	0.153	194	0.156	230	0.241	266	0.513	302	0.766	338	0.889
15	0.896	51	0.798	87	0.565	123	0.284	159	0.153	195	0.155	231	0.247	267	0.521	303	0.771	339	0.890
16	0.895	52	0.793	88	0.557	124	0.277	160	0.153	196	0.155	232	0.253	268	0.529	304	0.777	340	0.892
17	0.894	53	0.788	89	0.549	125	0.270	161	0.153	197	0.154	233	0.260	269	0.537	305	0.782	341	0.893
18	0.893	54	0.783	90	0.541	126	0.264	162	0.153	198	0.154	234	0.266	270	0.545	306	0.787	342	0.894
19	0.892	55	0.778	91	0.533	127	0.257	163	0.154	199	0.154	235	0.273	271	0.553	307	0.792	343	0.896
20	0.890	56	0.773	92	0.525	128	0.251	164	0.154	200	0.154	236	0.280	272	0.561	308	0.797	344	0.897
21	0.889	57	0.767	93	0.517	129	0.244	165	0.154	201	0.154	237	0.287	273	0.568	309	0.801	345	0.898
22	0.887	58	0.762	94	0.509	130	0.238	166	0.155	202	0.154	238	0.294	274	0.576	310	0.806	346	0.899
23	0.885	59	0.756	95	0.501	131	0.232	167	0.155	203	0.154	239	0.301	275	0.584	311	0.810	347	0.900
24	0.884	60	0.751	96	0.493	132	0.227	168	0.156	204	0.154	240	0.308	276	0.592	312	0.815	348	0.900
25	0.882	61	0.745	97	0.485	133	0.221	169	0.156	205	0.155	241	0.315	277	0.599	313	0.819	349	0.901
26	0.880	62	0.739	98	0.477	134	0.215	170	0.157	206	0.156	242	0.323	278	0.607	314	0.823	350	0.902
27	0.878	63	0.733	99	0.469	135	0.210	171	0.157	207	0.157	243	0.330	279	0.614	315	0.827	351	0.902
28	0.876	64	0.727	100	0.461	136	0.205	172	0.158	208	0.158	244	0.338	280	0.622	316	0.831	352	0.903
29	0.873	65	0.721	101	0.453	137	0.200	173	0.158	209	0.159	245	0.346	281	0.629	317	0.835	353	0.903
30	0.871	66	0.715	102	0.445	138	0.196	174	0.159	210	0.161	246	0.353	282	0.637	318	0.838	354	0.904
31	0.869	67	0.708	103	0.437	139	0.191	175	0.159	211	0.162	247	0.361	283	0.644	319	0.842	355	0.904
32	0.866	68	0.702	104	0.429	140	0.187	176	0.159	212	0.164	248	0.369	284	0.651	320	0.845	356	0.904
33	0.864	69	0.695	105	0.421	141	0.183	177	0.160	213	0.167	249	0.377	285	0.658	321	0.849	357	0.904
34	0.861	70	0.689	106	0.413	142	0.179	178	0.160	214	0.169	250	0.385	286	0.665	322	0.852	358	0.904
35	0.858	71	0.682	107	0.405	143	0.176	179	0.160	215	0.172	251	0.392	287	0.672	323	0.855	359	0.905

Azimuthal plot is properly oriented
Tabulated data must be rotated 350°

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Figure 1A
Antenna Azimuthal Pattern
Vertical Polarization
KCVU(DT) Paradise, CA
Facility ID 58605
Ch. 17 180 kW 431 m

prepared for
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July, 2017

Dielectric®

Location: Paradise, CA
Customer: Esteem Broadcast
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ELEVATION PATTERN

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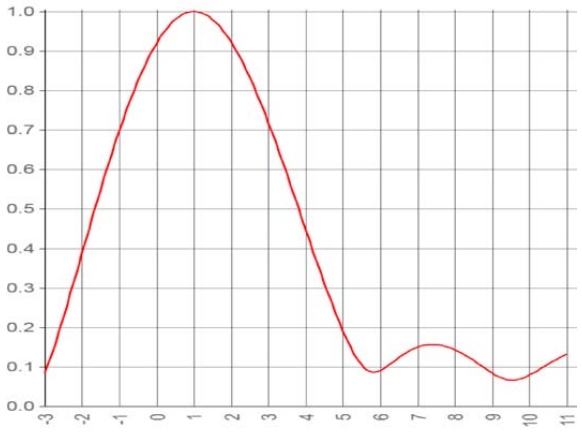
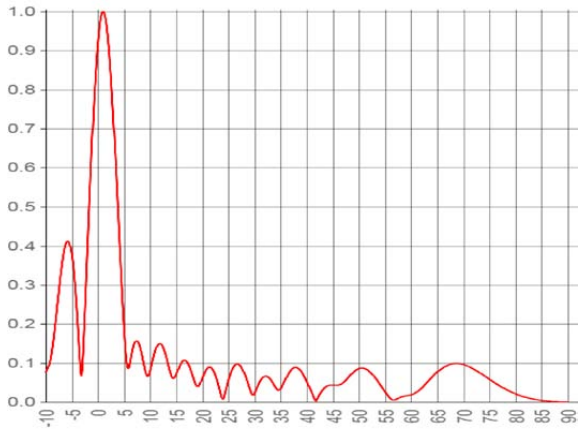
Call Letters	**KCVU**
Channel	**17**
Antenna Type	**TFU-12DSB-C**
Location	**Paradise, CA**
Customer	**Esteem Broadcast**

RMS Gain at Main Lobe	**12.0 (10.79 dB)**	Beam Tilt	**1 Degrees**
RMS Gain at Horizontal	**10.1 (10.06 dB)**	Drawing #	**12B120100**
	Calculated		



Degrees below horizontal



Degrees below horizontal

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10	0.076	10	0.079	30	0.022	50	0.086	70	0.096
-9	0.117	11	0.132	31	0.051	51	0.086	71	0.091
-8	0.221	12	0.149	32	0.066	52	0.078	72	0.084
-7	0.339	13	0.120	33	0.059	53	0.064	73	0.076
-6	0.409	14	0.071	34	0.038	54	0.045	74	0.067
-5	0.379	15	0.070	35	0.034	55	0.026	75	0.058
-4	0.227	16	0.101	36	0.060	56	0.010	76	0.049
-3	0.084	17	0.104	37	0.082	57	0.006	77	0.041
-2	0.385	18	0.074	38	0.089	58	0.013	78	0.034
-1	0.696	19	0.041	39	0.078	59	0.016	79	0.027
0	0.919	20	0.062	40	0.053	60	0.018	80	0.021
1	1.000	21	0.087	41	0.023	61	0.025	81	0.016
2	0.923	22	0.083	42	0.008	62	0.036	82	0.012
3	0.718	23	0.049	43	0.030	63	0.050	83	0.009
4	0.447	24	0.008	44	0.041	64	0.064	84	0.006
5	0.192	25	0.056	45	0.043	65	0.077	85	0.004
6	0.090	26	0.090	46	0.043	66	0.087	86	0.002
7	0.150	27	0.096	47	0.050	67	0.094	87	0.001
8	0.143	28	0.075	48	0.063	68	0.098	88	0.001
9	0.084	29	0.037	49	0.077	69	0.099	89	0.000

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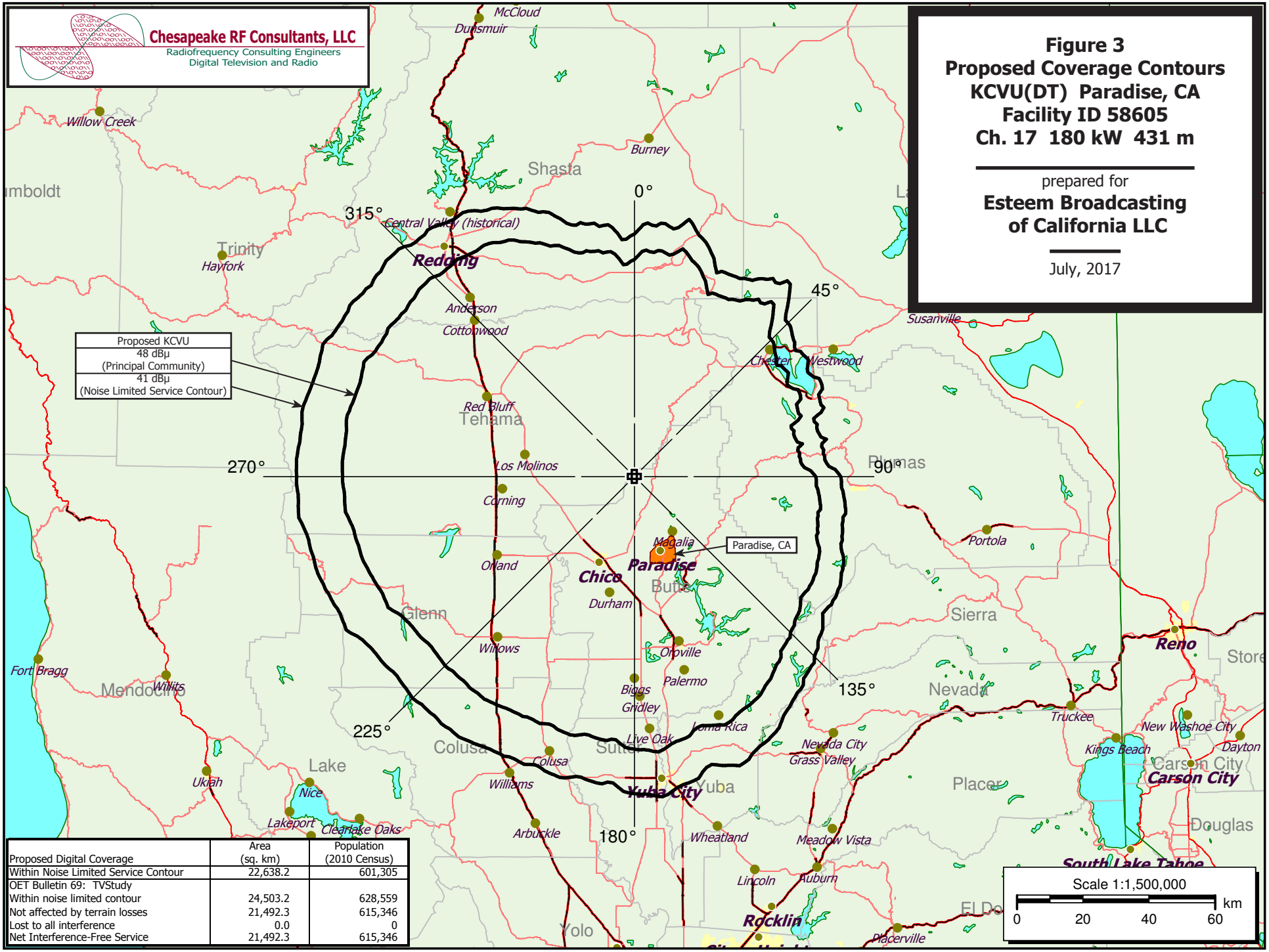
Figure 2
Antenna Elevation Pattern
KCVU(DT) Paradise, CA
Facility ID 58605
Ch. 17 180 kW 431 m

prepared for
Esteem Broadcasting of California LLC

July, 2017



Proposed Digital Coverage	Area (sq. km)	Population (2010 Census)
Within Noise Limited Service Contour	22,638.2	601,305
OET Bulletin 69: TVStudy		
Within noise limited contour	24,503.2	628,559
Not affected by terrain losses	21,492.3	615,346
Lost to all interference	0.0	0
Net Interference-Free Service	21,492.3	615,346

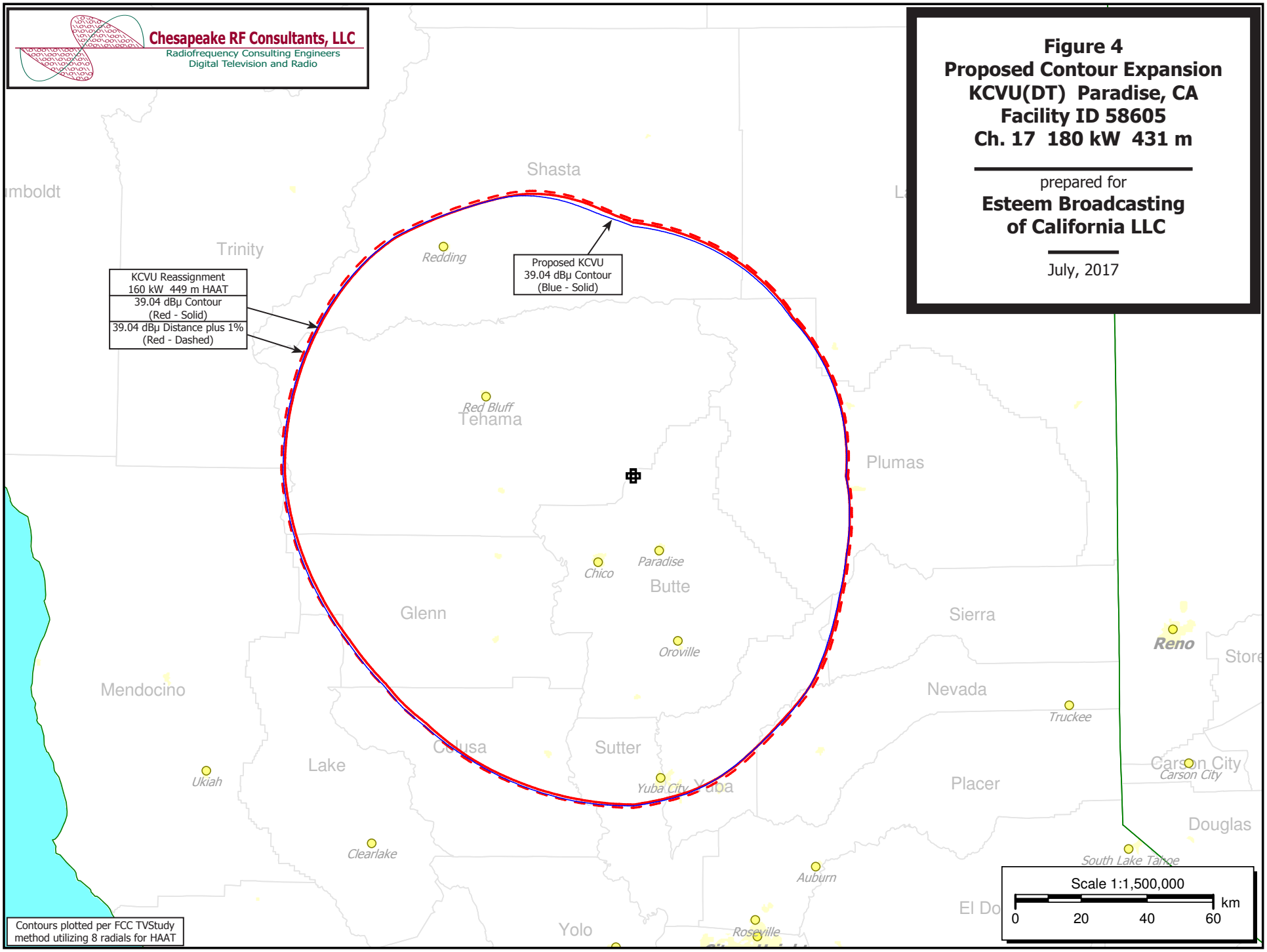

Chesapeake RF Consultants, LLC
Radiofrequency Consulting Engineers
Digital Television and Radio
Figure 4
Proposed Contour Expansion
KCVU(DT) Paradise, CA
Facility ID 58605
Ch. 17 180 kW 431 m
prepared for
Esteem Broadcasting
of California LLC
July, 2017
KCVU Reassignment
160 kW 449 m HAAT
39.04 dBµ Contour
(Red - Solid)
39.04 dBµ Distance plus 1%
(Red - Dashed)
Proposed KCVU
39.04 dBµ Contour
(Blue - Solid)
Shasta
Trinity
Redding
Red Bluff
Tehama
Plumas
Chico
Paradise
Butte
Glenn
Oroville
Sierra
Reno
Mendocino
Nevada
Truckee
Colusa
Sutter
Lake
Ukiah
Yuba City
Yuba
Placer
Carson City
Douglas
Clearlake
South Lake Tahoe
Auburn
Roseville
Yolo
Scale 1:1,500,000
km
0
20
40
60
Contours plotted per FCC TVStudy
method utilizing 8 radials for HAAT

Table 1 KCVU OET Bulletin 69 Interference Study
(page 1 of 2)

Chesapeake RF Consultants, LLC
Radiofrequency Consulting Engineers
Digital Television and Radio

```
tvstudy v2.2.2
Database: localhost,  Study: KCVU 180KW PROP,  Model: Longley-Rice
Start: 2017.07.01 15:02:45

Study created: 2017.07.01 15:02:40

Study build station data: LMS TV 2017-06-30 LMSTV

    Proposal: KCVU D17 DT APP PARADISE, CA
 File number: KCVU 180KW
 Facility ID: 58605
Station data: User record
   Record ID: 467
     Country: U.S.

Stations potentially affected:

Call      Chan  Svc Status  City, State              File Number            Distance
KVIQ      D17   DT  LIC     EUREKA, CA               BLCDT20030806ACS       209.5 km
K17JI-D   D17   DC  LIC     FRESNO, CA               BLDTA20130205AAH       415.4
KUVS-DT   D18   DT  LIC     MODESTO, CA              BLCDT20020906ABH       221.9
KRNS-CD   D18   DC  BL      RENO, NV                 DTVBL34577             172.3

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

    Channel: D17
   Latitude:  39 57 42.70 N (NAD83)
  Longitude: 121 42 43.10 W
Height AMSL: 1192.4 m
       HAAT: 430.6 m
   Peak ERP: 180 kW
    Antenna: TFU-12DSB-C 20170224 350.0 deg

39.0 dBu contour:
Azimuth      ERP       HAAT   Distance
  0.0 deg    176 kW   205.4 m   76.3 km
 45.0        122      125.5     68.0
 90.0       40.4      146.6     64.3
135.0       33.1      359.8     79.9
180.0       49.0      645.4     99.6
225.0       28.7      750.6     98.6
270.0       81.0      697.9    106.1
315.0        159      513.4    102.4

Proposal service area is within baseline plus 1.0%
Proposal service area population is more than 95.0% of baseline

Distance to Canadian border: 929.9 km

Distance to Mexican border: 903.2 km

Conditions at FCC monitoring station: Livermore CA
Bearing: 180.9 degrees   Distance: 248.7 km
ERP: 48.7 kW   Field strength: -3.7 dBu, 0.0 mV/m

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:
Bearing: 83.8 degrees   Distance: 1398.3 km

No land mobile station failures found


Study cell size: 2.00 km
Profile point spacing: 1.00 km

Maximum new IX to full-service and Class A: 0.50%
Maximum new IX to LPTV: 2.00%
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Table 1 KCVU OET Bulletin 69 Interference Study
(page 2 of 2)

Chesapeake RF Consultants, LLC
Radiofrequency Consulting Engineers
Digital Television and Radio

Interference to BLCDT20030806ACS LIC, scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	KVIQ	D17	DT	LIC	EUREKA, CA	BLCDT20030806ACS	
Undesireds:	KCVU	D17	DT	BL	PARADISE, CA	DTVBL58605	209.5 km
	KCVU	D17	DT	APP	PARADISE, CA	KCVU 180KW	209.5
	KMTR	D17	DT	LIC	EUGENE, OR	BLCDT20030618AAY	385.0

Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX	
22120.6	137,375	17681.4	126,743	17673.5	126,743	17673.5	126,743	0.00	0.00

Undesired	Total IX	Unique IX, before	Unique IX, after
KCVU D17 DT BL	8.0	0	8.0	0
KCVU D17 DT APP	8.0	0	8.0	0

Interference to BLDTA20130205AAH LIC, scenario 1
Proposal causes no interference.

Interference to BLDTA20130205AAH LIC, scenario 2
Proposal causes no interference.

Interference to BLCDT20020906ABH LIC, scenario 1
Proposal causes no interference.

Interference to DTVBL34577 BL, scenario 1
Proposal causes no interference.

Interference to proposal, scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	KCVU	D17	DT	APP	PARADISE, CA	KCVU 180KW	
Undesireds:	KVIQ	D17	DT	LIC	EUREKA, CA	BLCDT20030806ACS	209.5 km
	KRNS-CD	D18	DC	BL	RENO, NV	DTVBL34577	172.3

Service area		Terrain-limited		IX-free		Percent IX	
24503.2	628,559	21492.3	615,346	21492.3	615,346	0.00	0.00

Channel and Facility Information

Section	Question	Response
Proposed Community of License	Facility ID	58605
	State	California
	City	PARADISE
	DTV Channel	17
Facility Type	Facility Type	Commercial
	Station Type	Main
Zone	Zone	2

Antenna Location Data

Section	Question	Response
Antenna Structure Registration	Do you have an FCC Antenna Structure Registration (ASR) Number?	Yes
	ASR Number	1049506
Coordinates (NAD83)	Latitude	39° 57' 42.7" N+
	Longitude	121° 42' 43.1" W-
	Structure Type	GTOWER-Guyed Structure Used for Communication Purposes
	Overall Structure Height	123.1 meters
	Support Structure Height	122.2 meters
	Ground Elevation (AMSL)	1074.4 meters
Antenna Data	Height of Radiation Center Above Ground Level	118 meters
	Height of Radiation Center Above Average Terrain	430.6 meters
	Height of Radiation Center Above Mean Sea Level	1192.4 meters
	Effective Radiated Power	180 kW

Antenna Technical Data

Section	Question	Response
Antenna Type	Antenna Type	Directional Custom
	Do you have an Antenna ID?	No
	Antenna ID	
Antenna Manufacturer and Model	Manufacturer:	DIE
	Model	TFU-12DSB-C
	Rotation	350 degrees
	Electrical Beam Tilt	1.0
	Mechanical Beam Tilt	Not Applicable
	toward azimuth	
	Polarization	Elliptical
DTV and DTS: Elevation Pattern	Does the proposed antenna propose elevation radiation patterns that vary with azimuth for reasons other than the use of mechanical beam tilt?	No
	Uploaded file for elevation antenna (or radiation) pattern data	

Directional Antenna Relative Field Values (Pre-rotated Pattern)

Degree	V_A (Authorized Value)	Degree	V_A (Authorized Value)	Degree	V_A (Authorized Value)	Degree	V_A (Authorized Value)
0	1.0	**90**	0.547	**180**	0.527	**270**	0.590
10	0.990	**100**	0.474	**190**	0.522	**280**	0.671
20	0.973	**110**	0.414	**200**	0.500	**290**	0.748
30	0.946	**120**	0.378	**210**	0.467	**300**	0.818
40	0.907	**130**	0.378	**220**	0.430	**310**	0.877
50	0.857	**140**	0.408	**230**	0.400	**320**	0.924
60	0.792	**150**	0.449	**240**	0.398	**330**	0.958
70	0.713	**160**	0.487	**250**	0.440	**340**	0.980
80	0.628	**170**	0.515	**260**	0.510	**350**	0.994

Additional Azimuths

Degree	V_A

Construction Permit Certifications

Section	Question	Response
Post-Incentive Auction Expedited Processing	It will operate on the DTV channel for this station as established in the post-incentive auction channel reassignment public notice.	Yes
	It will operate post-incentive auction facilities that do not expand the noise-limited service contour in any direction beyond that established by the post-incentive auction channel reassignment public notice.	No
	It will operate post-incentive auction facilities that match or reduce by no more than five percent with respect to predicted population from those defined in the post-incentive auction channel reassignment public notice.	Yes
	The antenna structure to be used by this facility has been registered by the Commission and will not require re-registration to support the proposed antenna, OR the FAA has previously determined that the proposed structure will not adversely affect safety in air navigation and this structure qualifies for later registration under the Commission's phased registration plan, OR the proposed installation on this structure does not require notification to the FAA pursuant to 47 C.F.R. Section 17.7.	Yes
Environmental Effect	Would a Commission grant of Authorization for this location be an action which may have a significant environmental effect? (See Section 1.1306 of 47 C.F.R.)	No
Broadcast Facility	The proposed facility complies with the applicable engineering standards and assignment requirements of 47 C. F.R. Sections 73.616, 73.622(i), 73.623(e), 73.625, 73.1030, and 73.1125.	Yes