MARSAND, INC.
Matthew A. Sanderford, Jr., P.E.

ENGINEERING STATEMENT

In support of a request for

Modification of Construction Permit

For Digital Channel 39

KSCE-DT El Paso, TX

50 kW ERP 557 m HAAT

PURPOSE

MARSAND, INC. has been retained by Channel 38 Christian Television (KSCE), permittee of KSCE-DT, CH39 of El Paso, TX, to prepare this engineering statement in support of a Modification of Construction Permit (CP). The Federal Communications Commission (Commission) allotted Channel 39 as the paired digital television (DTV) channel for KSCE analog channel 38. A Construction Permit (CP) exists (BPEDT-20000426AAL) with an ERP of 50 kW and HAAT of 557m. A request for STA to operate at a reduced height and power at a new location was filed and granted in October of 2003 (BMDSTA-20031030AHG). This proposal seeks to establish full power digital service at this new location.

DISCUSSION

KSCE was granted an STA in October of 2003 in order to establish initial digital service to the community. The original allotment and subsequent CP were based upon building out digital service on a tower whose structure was later determined to be inadequate to support the proposed loading. The STA granted in October of 2003 moved the digital service less than 2 miles to an existing, multiple use tower (FCC ASRN 1202400). This application proposes to build out the digital service to full power at this site. The ERP and HAAT do not exceed those specified in the DTV Table of Allotments. The antenna pattern was chosen to match as closely as possible the pattern used when determining the allotted channel

for KSCE. The calculated FCC(50,90) 48 dBu coverage contour would encompass the principal community, El Paso, TX, entirely as shown in **Figure 1**.

CONCLUSION

The proposed facility will not exceed the ERP or HAAT of the reference ERP and HAAT and will be within 3.1 miles of the reference site operating on the assigned DTV channel. An environmental statement accompanies this application and shows no significant environmental impact. The proposed coverage does encompass the principal community. Notifications have been filed, and the antenna structure in use has been registered by the Commission. Therefore, it is respectfully requested that this checklist, instant application be granted by the Commission.

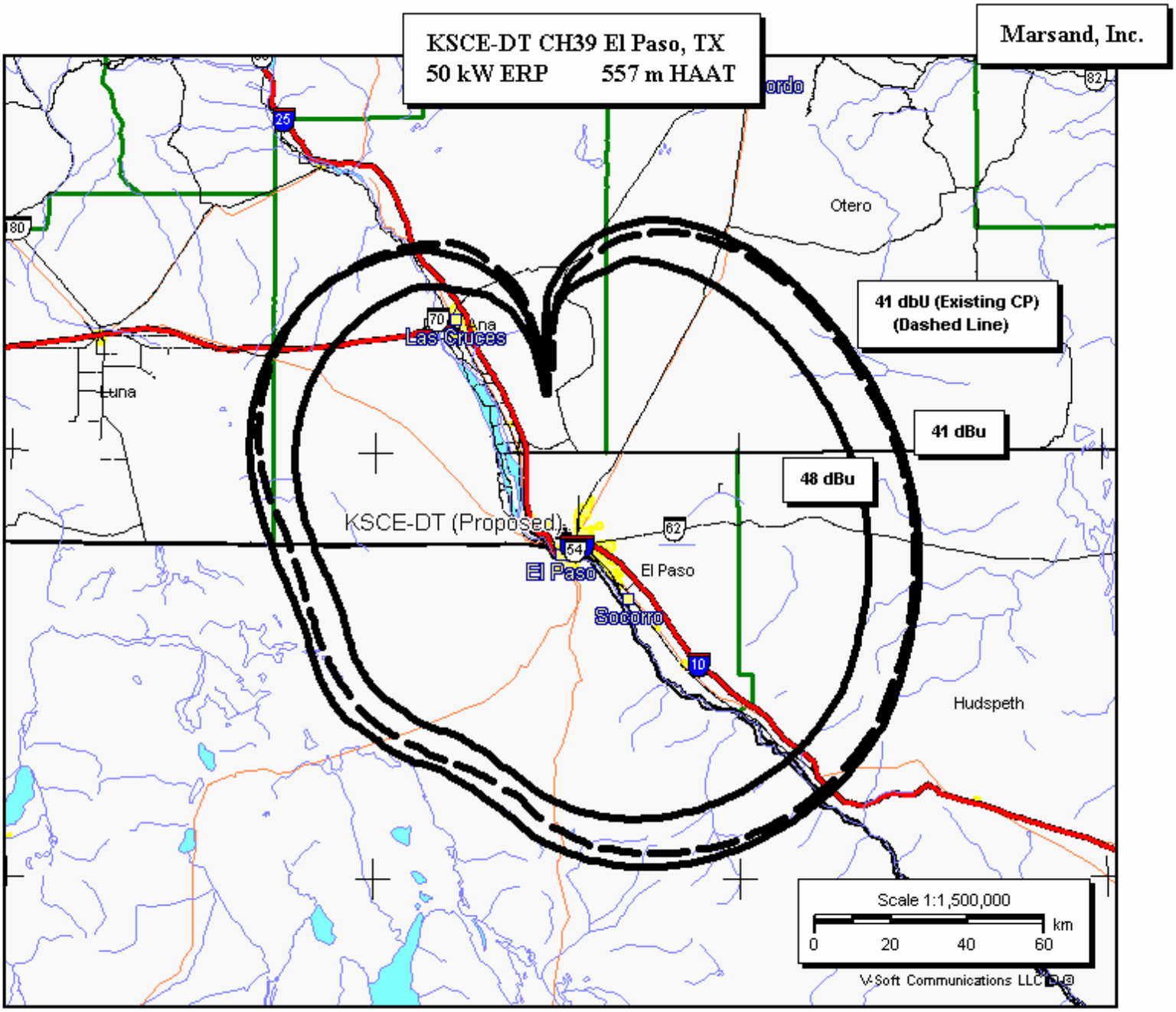

KSCE-DT CH39 El Paso, TX
50 kW ERP 557 m HAAT
Marsand, Inc.
41 dbU (Existing CP)
(Dashed Line)
41 dBu
48 dBu
KSCE-DT (Proposed)
Las Cruces
El Paso
Socorro
Otero
Hudspeth
Luna
Scale 1:1,500,000
km
0 20 40 60
V-Soft Communications LLC

Figure 1

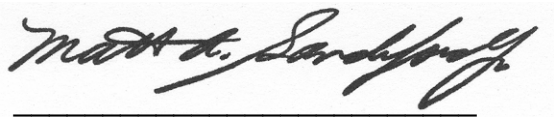
DECLARATION

Matthew A. Sanderford, Jr., P.E., declares and states that he is a graduate Electrical Engineer with a Bachelor of Science Degree in Electrical Engineering from the University of Texas at El Paso, a Licensed Professional Engineer in the State of Texas, and his qualifications are known to the Federal Communications Commission, and that he is President of MARSAND, INC., a Registered Professional Engineering firm in the State of Texas, and that firm has been retained by Channel 38 Christian Television, to perform the engineering support as contained in this report.

All facts contained herein are true of his own knowledge except where stated to be on information or belief provided by Channel 38 Christian Television, and as to those facts, he believes them to be true.

_____

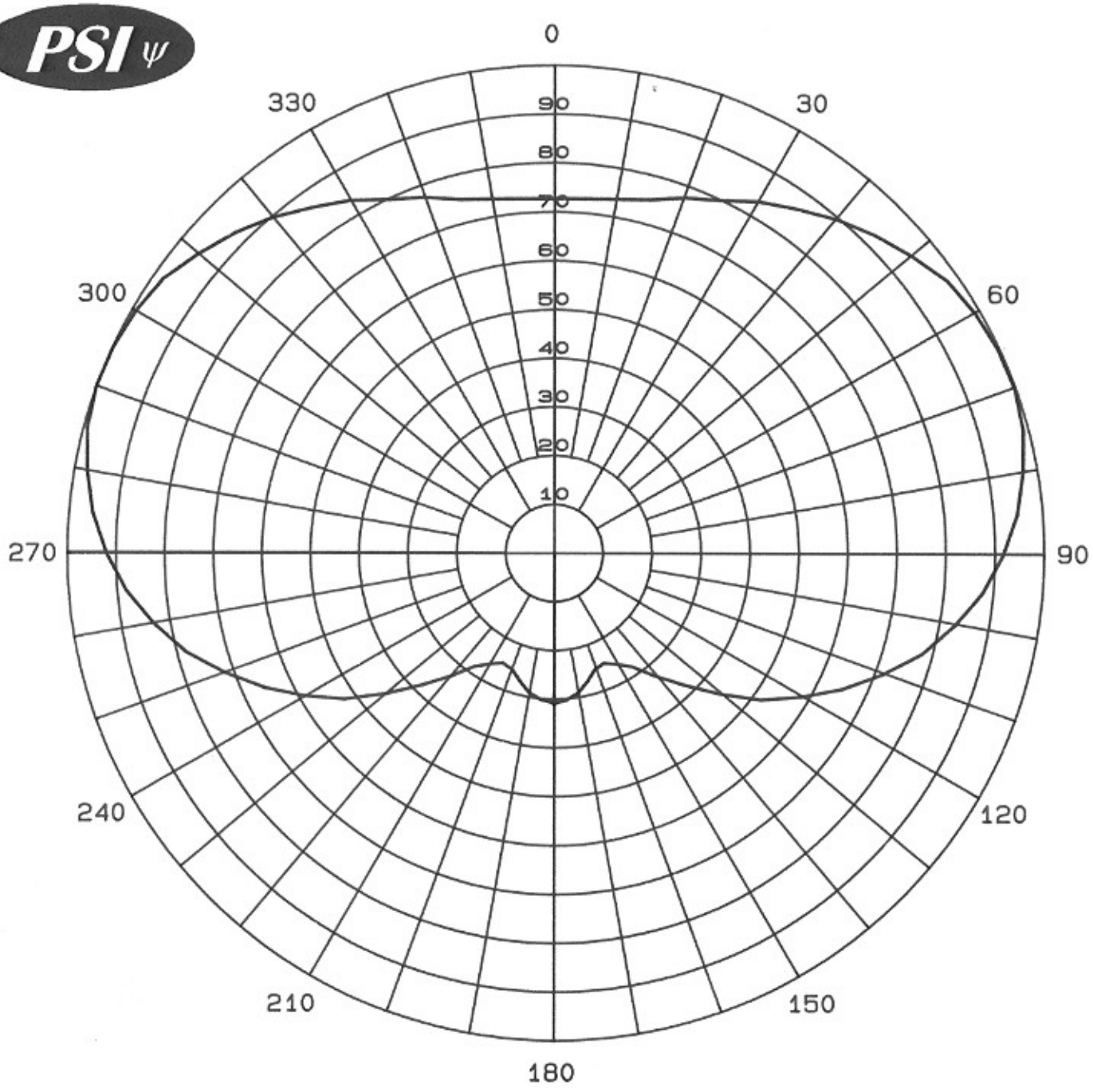
I declare under penalty of perjury that the foregoing is true and correct.



Matthew A. Sanderford, Jr., P.E.
President - MARSAND, INC.

Executed this 29th day of June, 2006
State of Texas

Addendum



Calculated Relative Field
Azimuth Plane Pattern
Antenna: PSIUSMD24AP-38/39
Type: UHF Directional Slot
Channels: 38-39
Peak Gain: 47.39 (16.76 dB)
Pattern: P22806-2A
Station: KSCE

Propagation Systems Inc.
PO Box 113
Ebensburg, PA 15931

PROPAGATION SYSTEMS INC.

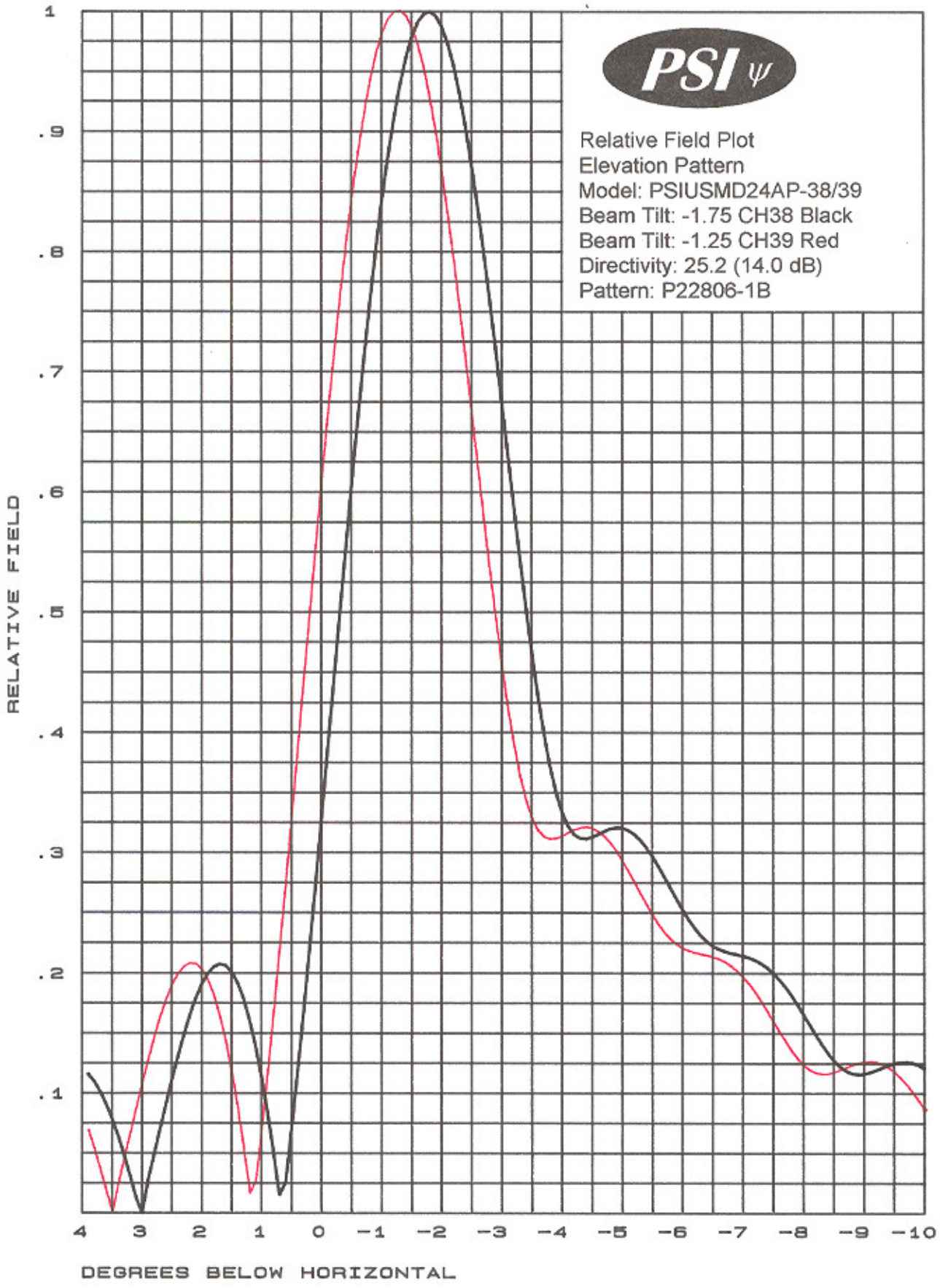
Relative Field Tabulation

Azimuth Pattern: P22806-2A

Antenna Model: PSIUSMD24AP-38/39

Peak Gain: 47.39 (16.76 dBd)

Angle	Relative Field	Power Gain	Gain dB
0	0.728	25.12	14.00
10	0.738	25.81	14.12
20	0.777	28.61	14.57
30	0.835	33.04	15.19
40	0.898	38.22	15.82
50	0.954	43.13	16.35
60	0.992	46.63	16.69
70	1.000	47.39	16.76
80	0.973	44.87	16.52
90	0.918	39.94	16.01
100	0.832	32.80	15.16
110	0.716	24.29	13.86
120	0.584	16.16	12.09
130	0.446	9.43	9.74
140	0.326	5.04	7.02
150	0.259	3.18	5.02
154	0.249	2.94	4.68
160	0.250	2.96	4.72
170	0.289	3.96	5.97
180	0.305	4.41	6.44
190	0.289	3.96	5.97
200	0.250	2.96	4.72
206	0.249	2.94	4.68
210	0.259	3.18	5.02
220	0.326	5.04	7.02
230	0.446	9.43	9.74
240	0.584	16.16	12.09
250	0.716	24.29	13.86
260	0.832	32.80	15.16
270	0.918	39.94	16.01
280	0.973	44.87	16.52
290	1.000	47.39	16.76
300	0.992	46.63	16.69
310	0.954	43.13	16.35
320	0.898	38.22	15.82
330	0.835	33.04	15.19
340	0.777	28.61	14.57
350	0.738	25.81	14.12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Relative Field Plot
Elevation Pattern
Model: PSIUSMD24AP-38/39
Beam Tilt: -1.75 CH38 Black
Beam Tilt: -1.25 CH39 Red
Directivity: 25.2 (14.0 dB)
Pattern: P22806-1B
RELATIVE FIELD
1
.9
.8
.7
.6
.5
.4
.3
.2
.1
4 3 2 1 0 -1 -2 -3 -4 -5 -6 -7 -8 -9 -10
DEGREES BELOW HORIZONTAL

Propagation Systems Inc.

Relative Field Tabulation
Elevation Pattern P22806-1B
Antenna Model: PSIUSMD24AP-38/39
Beam Tilt Channel 39: -1.25 Degree

Angle	Field	dB	Angle	Field	dB	Angle	Field	dB
-90	0.0010	-60.00	-50	0.0203	-33.85	-10	0.0855	-21.37
-89	0.0010	-60.00	-49	0.0014	-57.31	-9	0.1268	-17.94
-88	0.0009	-60.83	-48	0.0215	-33.35	-8	0.1229	-18.21
-87	0.0018	-54.81	-47	0.0262	-31.63	-7	0.1959	-14.16
-86	0.0029	-50.82	-46	0.0105	-39.61	-6	0.2189	-13.19
-85	0.0041	-47.76	-45	0.0136	-37.31	-5	0.2918	-10.70
-84	0.0056	-45.03	-44	0.0264	-31.58	-4	0.3142	-10.05
-83	0.0074	-42.59	-43	0.0161	-35.88	-3	0.4538	-6.86
-82	0.0094	-40.54	-42	0.0088	-41.12	-2	0.8653	-1.26
-81	0.0112	-39.01	-41	0.0261	-31.68	-1	0.9812	-0.16
-80	0.0129	-37.80	-40	0.0186	-34.59	0	0.6108	-4.28
-79	0.0139	-37.12	-39	0.0073	-42.77	1	0.0700	-23.10
-78	0.0138	-37.21	-38	0.0268	-31.43	2	0.2021	-13.89
-77	0.0124	-38.11	-37	0.0194	-34.25	3	0.1068	-19.43
-76	0.0097	-40.27	-36	0.0080	-41.91	4	0.0844	-21.47
-75	0.0076	-42.41	-35	0.0270	-31.38	5	0.1055	-19.54
-74	0.0103	-39.74	-34	0.0156	-36.13	6	0.0174	-35.18
-73	0.0165	-35.64	-33	0.0144	-36.84	7	0.0850	-21.41
-72	0.0229	-32.81	-32	0.0292	-30.68	8	0.0208	-33.66
-71	0.0271	-31.33	-31	0.0098	-40.13	9	0.0603	-24.39
-70	0.0273	-31.29	-30	0.0227	-32.87	10	0.0430	-27.32
-69	0.0223	-33.04	-29	0.0295	-30.59	11	0.0327	-29.70
-68	0.0127	-37.91	-28	0.0011	-59.49	12	0.0529	-25.53
-67	0.0064	-43.93	-27	0.0298	-30.50	13	0.0030	-50.37
-66	0.0176	-35.10	-26	0.0224	-32.99	14	0.0479	-26.40
-65	0.0276	-31.19	-25	0.0155	-36.22	15	0.0211	-33.53
-64	0.0303	-30.37	-24	0.0350	-29.12	16	0.0324	-29.78
-63	0.0236	-32.53	-23	0.0080	-41.91	17	0.0358	-28.93
-62	0.0092	-40.68	-22	0.0318	-29.95	18	0.0114	-38.89
-61	0.0109	-39.24	-21	0.0291	-30.72	19	0.0409	-27.76
-60	0.0255	-31.88	-20	0.0170	-35.41	20	0.0139	-37.12
-59	0.0305	-30.33	-19	0.0441	-27.11	21	0.0291	-30.72
-58	0.0224	-32.99	-18	0.0111	-39.12	22	0.0303	-30.37
-57	0.0073	-42.77	-17	0.0385	-28.29	23	0.0086	-41.27
-56	0.0182	-34.81	-16	0.0302	-30.41	24	0.0348	-29.16
-55	0.0289	-30.77	-15	0.0327	-29.70	25	0.0155	-36.22
-54	0.0245	-32.20	-14	0.0606	-24.35	26	0.0221	-33.10
-53	0.0071	-42.95	-13	0.0009	-60.83	27	0.0295	-30.59
-52	0.0161	-35.88	-12	0.0745	-22.55	28	0.0010	-60.00
-51	0.0273	-31.29	-11	0.0650	-23.74	29	0.0285	-30.91
						30	0.0211	-33.53

Propagation Systems Inc.

Relative Field Tabulation
Elevation Pattern P22806-1B
Antenna Model: PSIUSMD24AP-38/39
Beam Tilt Channel 38: -1.75 Degree

Angle	Field	dB	Angle	Field	dB	Angle	Field	dB
-90	0.0010	-60.00	-50	0.0088	-41.12	-10	0.1217	-18.30
-89	0.0010	-60.00	-49	0.0242	-32.31	-9	0.1168	-18.65
-88	0.0011	-59.49	-48	0.0224	-32.99	-8	0.1662	-15.59
-87	0.0020	-54.11	-47	0.0039	-48.09	-7	0.2138	-13.40
-86	0.0029	-50.82	-46	0.0177	-35.03	-6	0.2518	-11.98
-85	0.0038	-48.43	-45	0.0253	-31.94	-5	0.3214	-9.86
-84	0.0045	-46.85	-44	0.0118	-38.55	-4	0.3348	-9.50
-83	0.0052	-45.76	-43	0.0121	-38.33	-3	0.6780	-3.38
-82	0.0053	-45.51	-42	0.0259	-31.73	-2	0.9880	-0.10
-81	0.0050	-46.02	-41	0.0162	-35.80	-1	0.8406	-1.51
-80	0.0045	-46.85	-40	0.0091	-40.83	0	0.3276	-9.69
-79	0.0050	-46.02	-39	0.0267	-31.48	1	0.1158	-18.73
-78	0.0071	-42.95	-38	0.0186	-34.59	2	0.1895	-14.45
-77	0.0108	-39.37	-37	0.0079	-42.07	3	0.0062	-44.14
-76	0.0148	-36.57	-36	0.0262	-31.63	4	0.1215	-18.31
-75	0.0188	-34.52	-35	0.0161	-35.88	5	0.0547	-25.24
-74	0.0212	-33.47	-34	0.0127	-37.91	6	0.0655	-23.68
-73	0.0212	-33.47	-33	0.0291	-30.72	7	0.0691	-23.21
-72	0.0183	-34.74	-32	0.0129	-37.80	8	0.0226	-32.93
-71	0.0121	-38.33	-31	0.0191	-34.38	9	0.0667	-23.52
-70	0.0053	-45.51	-30	0.0303	-30.37	10	0.0115	-38.77
-69	0.0105	-39.61	-29	0.0058	-44.80	11	0.0523	-25.63
-68	0.0197	-34.11	-28	0.0267	-31.48	12	0.0358	-28.93
-67	0.0258	-31.78	-27	0.0267	-31.48	13	0.0279	-31.09
-66	0.0259	-31.73	-26	0.0077	-42.24	14	0.0456	-26.82
-65	0.0189	-34.45	-25	0.0344	-29.27	15	0.0017	-55.56
-64	0.0068	-43.33	-24	0.0171	-35.33	16	0.0421	-27.51
-63	0.0105	-39.61	-23	0.0244	-32.25	17	0.0209	-33.59
-62	0.0229	-32.81	-22	0.0350	-29.12	18	0.0282	-31.00
-61	0.0280	-31.05	-21	0.0038	-48.43	19	0.0373	-28.57
-60	0.0227	-32.87	-20	0.0417	-27.60	20	0.0027	-51.29
-59	0.0094	-40.54	-19	0.0258	-31.78	21	0.0359	-28.90
-58	0.0126	-38.01	-18	0.0264	-31.58	22	0.0194	-34.25
-57	0.0253	-31.94	-17	0.0409	-27.76	23	0.0217	-33.28
-56	0.0267	-31.48	-16	0.0108	-39.37	24	0.0332	-29.58
-55	0.0148	-36.57	-15	0.0606	-24.35	25	0.0029	-50.82
-54	0.0065	-43.72	-14	0.0297	-30.55	26	0.0294	-30.63
-53	0.0223	-33.04	-13	0.0535	-25.44	27	0.0230	-32.75
-52	0.0255	-31.88	-12	0.0792	-22.02	28	0.0112	-39.01
-51	0.0124	-38.11	-11	0.0600	-24.44	29	0.0308	-30.24
						30	0.0127	-37.91

EFFECTIVE RADIATED POWER CALCULATIONS

Call letters:	**KSCE**		Date:	**6/29/2006**	
Location:	**El Paso, TX**				
Channel:	**39**				
Frequency:	**623**	**MHz Mid-Band**			
Antenna:	**PSI PSIUSMD24AP-38/39**				
Transmitter Power Output (TPO):		**1.170**	**kW avg.**	**0.68**	**dBk**
Filter Type:			Loss:		**dB**
Transmission Line:					
	Loss per 100 ft.:	**-0.120**	**dB**		
	Line Length:	**375**	**ft.**		
	Total Line Loss:	**-0.450**	**dB**	**-0.45**	**dB**
Antenna Input Power:		**1.05**	**kW**	**0.23**	**dBk**
Efficiency:	**90.157 %**				
Elevation Antenna Gain -					
Horizontal -					
	Vert. Polarization -		*Gain*		***dB***
	Hor. Polarization -	*1.00*	*Gain*		***dB***
Maximum -					
	Vert. Polarization -		Gain		**dB**
	Hor. Polarization -	25.12	Gain	**14.00**	**dB**
Azimuthal Antenna Gain -					
	Vert. Polarization -		Gain		**dB**
	Hor. Polarization -	1.89	Gain	**2.76**	**dB**
Horizontal ERP -					
	Vertical Polarization:		***kW***		***dBk***
	Horizontal Polarization:	***1.99***	***kW***	***2.99***	***dBk***
Maximum ERP -					
	Vertical Polarization:		**kW**		**dBk**
	Horizontal Polarization:	**50.02**	**kW**	**16.99**	**dBk**

Call Letters: KSCE-DT (Proposed)
File Number: BPEDT20000426AAL
Latitude: 31-48-19 N
Longitude: 106-28-59 W
ERP: 50.00 kW
Channel: 39
Frequency: 623.0 MHz
AMSL Height: 1799.0 m
Elevation: 1708.0 m
HAAT: 557.4 m
Horiz. Antenna Pattern: Directional
Vert. Elevation Pattern: Yes
Electrical Beam Tilt: 1.25

Type of contour: FCC
Location Variability: 50.0 %
Time Variability: 90.0 %
# of Radials Calculated: 360
Field Strength: 41.00 dBuV/m

Primary Terrain: V-Soft 3 Second US Terrain

Bearing (deg)	Distance (km)	HAAT (m)
0.0	70.2	257.4
10.0	81.4	403.6
20.0	87.1	528.4
30.0	88.7	573.7
40.0	88.9	594.3
50.0	89.0	601.6
60.0	89.3	603.2
70.0	90.2	604.1
80.0	91.3	603.2
90.0	92.5	602.0
100.0	93.6	603.2
110.0	94.7	616.0
120.0	96.7	664.9
130.0	96.5	672.6
140.0	95.4	670.6
150.0	93.5	663.7
160.0	90.8	658.9
170.0	87.0	647.8
180.0	81.8	623.6
190.0	74.5	554.2
200.0	69.6	504.3
210.0	68.9	495.9
220.0	71.6	522.5
230.0	73.7	558.5
240.0	73.1	563.2
250.0	71.2	565.2
260.0	72.8	596.4
270.0	76.6	612.3
280.0	81.9	625.6
290.0	86.3	627.7
300.0	89.1	612.3
310.0	90.1	578.1
320.0	88.8	531.7
330.0	84.9	452.9
340.0	77.1	332.9
350.0	60.5	111.6

Average HAAT for radials shown: 556.6 m

Call Letters: KSCE-DT (Proposed)
File Number: BPEDT20000426AAL
Latitude: 31-48-19 N
Longitude: 106-28-59 W
ERP: 50.00 kW
Channel: 39
Frequency: 623.0 MHz
AMSL Height: 1799.0 m
Elevation: 1708.0 m
HAAT: 557.4 m
Horiz. Antenna Pattern: Directional
Vert. Elevation Pattern: Yes
Electrical Beam Tilt: 1.25

Type of contour: FCC
Location Variability: 50.0 %
Time Variability: 90.0 %
# of Radials Calculated: 360
Field Strength: 48.00 dBuV/m

Primary Terrain: V-Soft 3 Second US Terrain

Bearing (deg)	Distance (km)	HAAT (m)
0.0	62.5	257.4
10.0	70.7	403.6
20.0	75.3	528.4
30.0	76.2	573.7
40.0	76.2	594.3
50.0	76.2	601.6
60.0	76.5	603.2
70.0	77.3	604.1
80.0	78.3	603.2
90.0	79.4	602.0
100.0	80.4	603.2
110.0	81.4	616.0
120.0	83.1	664.9
130.0	82.9	672.6
140.0	81.9	670.6
150.0	80.1	663.7
160.0	77.7	658.9
170.0	74.4	647.8
180.0	69.9	623.6
190.0	63.8	554.2
200.0	59.6	504.3
210.0	58.9	495.9
220.0	61.4	522.5
230.0	63.1	558.5
240.0	62.5	563.2
250.0	60.8	565.2
260.0	62.0	596.4
270.0	65.4	612.3
280.0	70.0	625.6
290.0	73.8	627.7
300.0	76.3	612.3
310.0	77.3	578.1
320.0	76.8	531.7
330.0	74.6	452.9
340.0	67.4	332.9
350.0	53.1	111.6

Average HAAT for radials shown: 556.6 m