

## **Non-Interference Compliance**

Regarding Facility id 151372

Channel 252

### **Description of Exhibit 12 Contents**

This exhibit demonstrates that the proposed facility complies with contour overlap and interference protection provisions in all of the applicable rule sections and that this application for a construction permit is in full compliance with 47 C.F.R. § 74.1204.

**Let it be noted that should any actual real world interference occur, the applicant acknowledges that it will promptly suspend operation of this translator in accordance with 47 C.F.R. § 74.1203.**

Page 2 of this exhibit is an explanation of the method used to demonstrate compliance with contour overlap and interference provisions based on 47 C.F.R. § 74.1204(d), which states:

*[A]n application otherwise precluded by this section will be accepted if it can be demonstrated that no actual interference will occur due to intervening terrain, lack of population or such other factors as may be applicable.*

Page 3 contains a tabulation of the vertical radiation pattern of the proposed antenna and the minimum ground clearance of the interfering contour based on this pattern.

Pages 4 through 6 include a plot and a tabulation of the vertical radiation pattern for the proposed antenna provided by the antenna manufacturer.

Page 7 of this exhibit contains the tabulated data from the interference analysis, which shows all stations whose protected contours come within 50 km of the 34 dBμ F(50,10) contour of the proposed translator. These tabulated values were calculated using data from the FCC's CDBS files and 30 arc second terrain data. The column labeled "Adj" shows the number of channels difference between the entry and the proposed translator. The column labeled "Dist" shows the distance in km. The column labeled "Overlap" shows the area of contour overlap in square kilometers.

Page 8 of this exhibit is a portion of a USGS 1:24,000 scale 7.5 minute quadrangle at full scale with the calculated area of interference overlaid. The sheet includes the quadrangle name and measurement scale at the bottom-left corner (note: "Mt" refers to meters). The area of interference was calculated using the free space equation and 120 radials.

Page 9 of this exhibit is a high resolution aerial photo of the vicinity surrounding the proposed translator's tower site provided by the U.S. Geological Survey's National Aerial Photography Program. It has been included to provide clarification of the nature of the buildings in the vicinity.

### Compliance with 47 C.F.R. § 74.1204(d)

All authorized second and third adjacent stations with which the proposed translator has contour overlap are tabulated below. Column four show the station's signal level at the proposed translator's tower site, and column five gives the minimum value within the entire standard interfering contour of the proposed translator (100 dBμ for most classes, 94 for class B, 97 for class B1). The minimum second or third adjacent F(50,50) contour within the proposed translator's standard interfering contour was used to calculate the proposed translator's actual "worst-case" interfering contour.

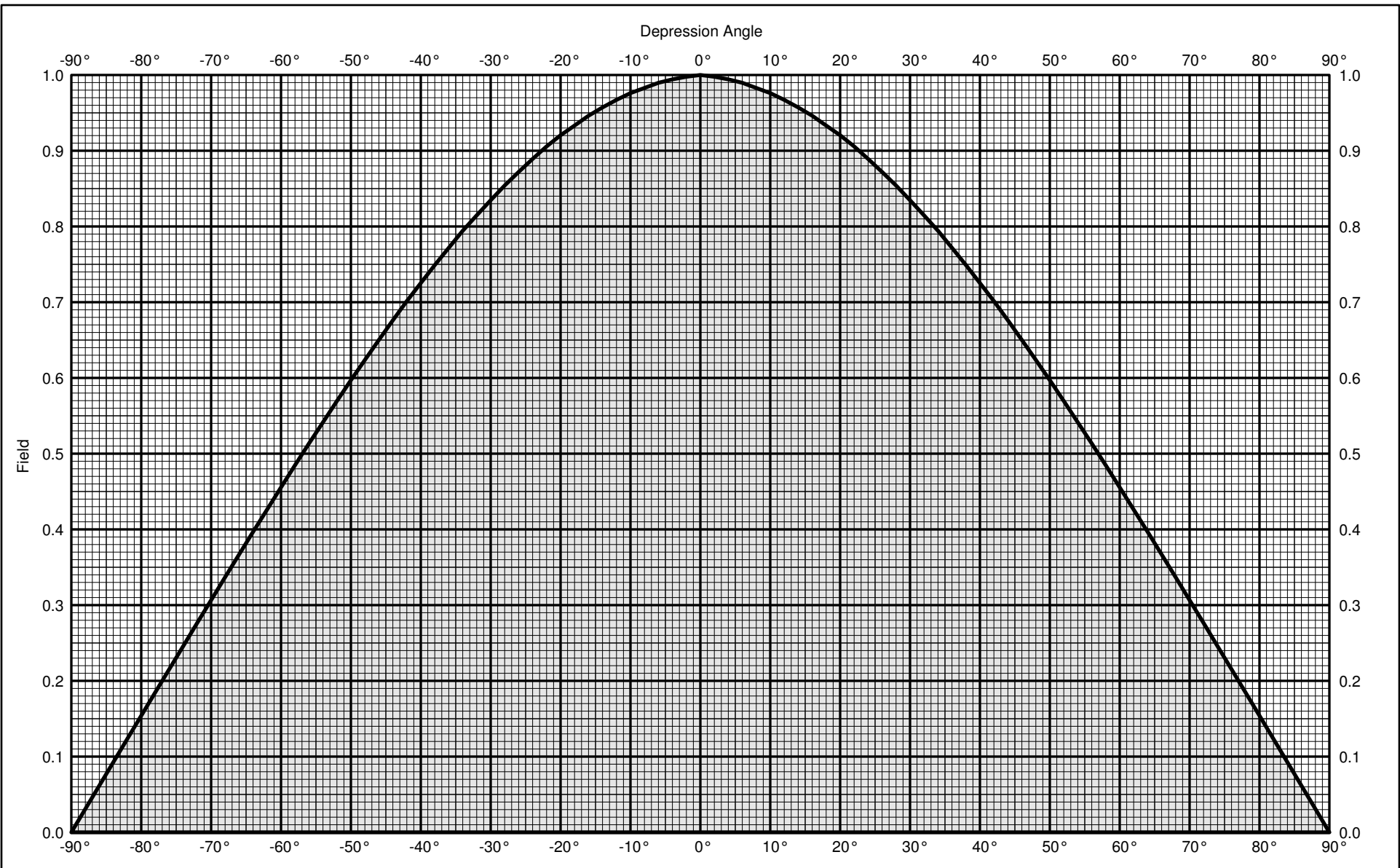
<b>Application_id</b>	<b>File Number</b>	<b>Callsign</b>	<b>Contour at Tower</b>	<b>Min. Contour</b>
265644	BLH19980408KB	KMGV	62.8	62.7
Minimum F(50,50) Contour of Adjacent Station within Proposed Translator's Standard Interfering Contour				<b>62.7</b>

FCC 02-244 at Section II.A.5 states that "when demonstrating that 'no actual interference will occur due to . . . other factors,' pursuant to Section 74.1204(d), an applicant may use the undesired-to-desired signal ratio method." The undesired-to-desired ratio for second and third adjacent stations required by § 74.1204(a) is 40 dB. Since the minimum protected contour strength within the proposed translator's standard interference contour is **62.7 dBμ**, this makes the proposed translator's worst-case interfering contour **102.7 dBμ**. By the free-space equation, this contour is calculated to extend a maximum of **72.7 m** from the transmit antenna.

The maximum horizontal plane of the interfering contour was calculated for 120 radials and plotted on the pertinent portion of a USGS quadrangle (page 8 of this exhibit). However, the field strength of the proposed translator's antenna varies with angle of depression from horizontal. The antenna relative fields are tabulated on the following page at 5 degree increments, starting at 5 degrees below horizontal. Antenna relative field strength data was provided and certified by the manufacturer of the proposed antenna. Using a free-space calculation that neglects any loss due to reflection, the vertical ground clearance of the proposed translator's interference contour has been tabulated. As shown on the following page, the area of interference clears the tower ground level (TGL) by **11.9 m** at the lowest point. The applicant has taken into account USGS quadrangles and relevant aerial photography in stating that no structures, except possibly tower support structures, puncture the area of interference. Hence, in accordance with 47 C.F.R. § 74.1204(d) and the clarification provided by the FCC in the decision *Re: Living Way Ministries* (FCC 02-244), a lack of population has been demonstrated within the area of interference and this application is therefore in full compliance with 47 C.F.R. § 74.1204.

<b>Antenna Manufacturer:</b>	<b>SCA</b>
<b>Antenna Model:</b>	<b>GP-FM</b>
<b>CORAGL:</b>	<b>46 m</b>
<b>Maximum ERP:</b>	<b>0.002 kW</b>
<b>Interfering Contour:</b>	<b>102.7 dBμ</b>
<b>Max Int. Contour Distance:</b>	<b>72.7 m</b>
<b>Min Ground Clearance:</b>	<b>11.9 m</b>

Depression Angle Below Horizontal	Antenna Relative Field	ERP (watts)	Distance to Interfering Contour from Antenna (m)	Horizontal Distance of Interfering Contour from Tower (m)	Vertical Clearance of Interfering Contour above TGL (m)
5	.992	2.0	72.1	71.8	39.7
10	.976	1.9	71.0	69.9	33.7
15	.952	1.8	69.2	66.8	28.1
20	.920	1.7	66.9	62.8	23.1
25	.881	1.6	64.0	58.0	18.9
30	.835	1.4	60.7	52.6	15.6
35	.783	1.2	56.9	46.6	13.4
40	.725	1.1	52.7	40.4	12.1
45	.663	0.9	48.2	34.1	11.9
50	.597	0.7	43.4	27.9	12.8
55	.527	0.6	38.3	22.0	14.6
60	.456	0.4	33.1	16.6	17.3
65	.382	0.3	27.8	11.7	20.8
70	.307	0.2	22.3	7.6	25.0
75	.231	0.1	16.8	4.3	29.8
80	.154	0.0	11.2	1.9	35.0
85	.077	0.0	5.6	0.5	40.4
90	.010	0.0	0.7	0.0	45.3
Minimum Clearance above TGL:					<b>11.9 m</b>



GP-FM Groundplane

Vertical radiation pattern

FM

0.0 dBd (2.15 dBi)

Vertical polarization



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GP-FM Groundplane

FM

0.0 dBd (2.15 dBi )

Vertical polarization

Vertical radiation pattern

Angle	Field	Rel.dB	dBd	PwrMult	Angle	Field	Rel.dB	dBd	PwrMult
-90	0.010	-40.00	-40.00	0.00	-45	0.663	-3.57	-3.57	0.44
-89	0.015	-36.24	-36.24	0.00	-44	0.676	-3.40	-3.40	0.46
-88	0.031	-30.22	-30.22	0.00	-43	0.689	-3.24	-3.24	0.47
-87	0.046	-26.70	-26.70	0.00	-42	0.701	-3.08	-3.08	0.49
-86	0.062	-24.20	-24.20	0.00	-41	0.713	-2.93	-2.93	0.51
-85	0.077	-22.26	-22.26	0.01	-40	0.725	-2.79	-2.79	0.53
-84	0.092	-20.68	-20.68	0.01	-39	0.737	-2.65	-2.65	0.54
-83	0.108	-19.34	-19.34	0.01	-38	0.749	-2.51	-2.51	0.56
-82	0.123	-18.18	-18.18	0.02	-37	0.760	-2.38	-2.38	0.58
-81	0.139	-17.16	-17.16	0.02	-36	0.772	-2.25	-2.25	0.60
-80	0.154	-16.25	-16.25	0.02	-35	0.783	-2.12	-2.12	0.61
-79	0.169	-15.42	-15.42	0.03	-34	0.794	-2.00	-2.00	0.63
-78	0.185	-14.67	-14.67	0.03	-33	0.805	-1.89	-1.89	0.65
-77	0.200	-13.98	-13.98	0.04	-32	0.815	-1.78	-1.78	0.66
-76	0.215	-13.34	-13.34	0.05	-31	0.825	-1.67	-1.67	0.68
-75	0.231	-12.75	-12.75	0.05	-30	0.835	-1.57	-1.57	0.70
-74	0.246	-12.19	-12.19	0.06	-29	0.844	-1.47	-1.47	0.71
-73	0.261	-11.67	-11.67	0.07	-28	0.854	-1.37	-1.37	0.73
-72	0.276	-11.17	-11.17	0.08	-27	0.863	-1.28	-1.28	0.74
-71	0.291	-10.71	-10.71	0.08	-26	0.872	-1.19	-1.19	0.76
-70	0.307	-10.27	-10.27	0.09	-25	0.881	-1.10	-1.10	0.78
-69	0.322	-9.85	-9.85	0.10	-24	0.889	-1.02	-1.02	0.79
-68	0.337	-9.45	-9.45	0.11	-23	0.897	-0.94	-0.94	0.81
-67	0.352	-9.07	-9.07	0.12	-22	0.906	-0.86	-0.86	0.82
-66	0.367	-8.71	-8.71	0.13	-21	0.913	-0.79	-0.79	0.83
-65	0.382	-8.36	-8.36	0.15	-20	0.920	-0.72	-0.72	0.85
-64	0.397	-8.03	-8.03	0.16	-19	0.927	-0.66	-0.66	0.86
-63	0.411	-7.71	-7.71	0.17	-18	0.933	-0.60	-0.60	0.87
-62	0.426	-7.41	-7.41	0.18	-17	0.940	-0.54	-0.54	0.88
-61	0.441	-7.12	-7.12	0.19	-16	0.946	-0.48	-0.48	0.90
-60	0.456	-6.83	-6.83	0.21	-15	0.952	-0.43	-0.43	0.91
-59	0.470	-6.56	-6.56	0.22	-14	0.957	-0.38	-0.38	0.92
-58	0.485	-6.29	-6.29	0.23	-13	0.962	-0.33	-0.33	0.93
-57	0.499	-6.04	-6.04	0.25	-12	0.967	-0.29	-0.29	0.94
-56	0.513	-5.79	-5.79	0.26	-11	0.972	-0.25	-0.25	0.94
-55	0.527	-5.56	-5.56	0.28	-10	0.976	-0.21	-0.21	0.95
-54	0.541	-5.33	-5.33	0.29	-9	0.979	-0.18	-0.18	0.96
-53	0.555	-5.11	-5.11	0.31	-8	0.983	-0.15	-0.15	0.97
-52	0.570	-4.89	-4.89	0.32	-7	0.986	-0.12	-0.12	0.97
-51	0.583	-4.68	-4.68	0.34	-6	0.990	-0.09	-0.09	0.98
-50	0.597	-4.48	-4.48	0.36	-5	0.992	-0.07	-0.07	0.98
-49	0.610	-4.29	-4.29	0.37	-4	0.994	-0.05	-0.05	0.99
-48	0.624	-4.10	-4.10	0.39	-3	0.996	-0.03	-0.03	0.99
-47	0.637	-3.92	-3.92	0.41	-2	0.998	-0.02	-0.02	1.00
-46	0.650	-3.74	-3.74	0.42	-1	0.999	-0.01	-0.01	1.00
					0	1.000	0.00	0.00	1.00



GP-FM Groundplane  
FM

0.0 dBd (2.15 dBi )

Vertical polarization

Vertical radiation pattern

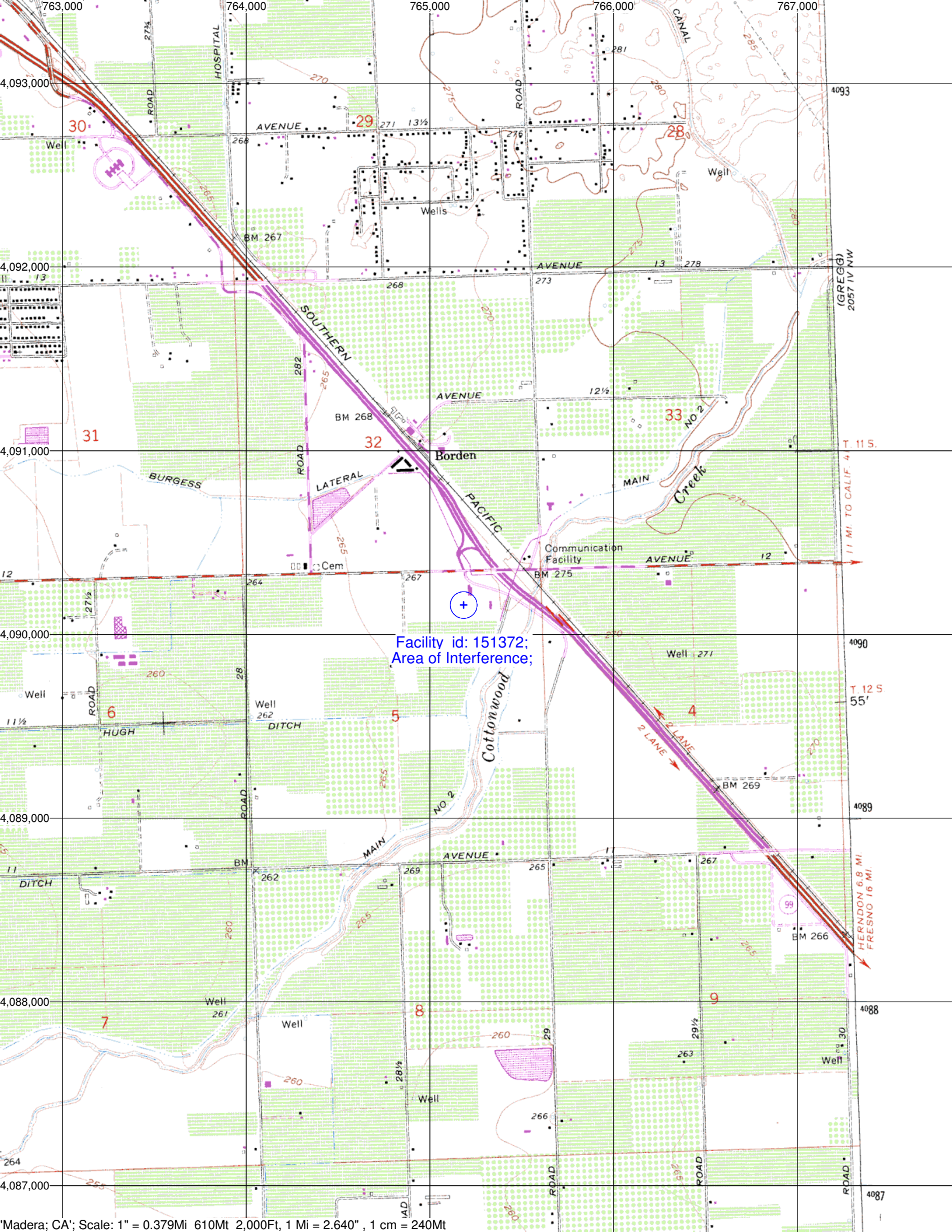
Angle	Field	Rel.dB	dBd	PwrMult	Angle	Field	Rel.dB	dBd	PwrMult
0	1.000	0.00	0.00	1.00	45	0.663	-3.57	-3.57	0.44
1	0.999	-0.01	-0.01	1.00	46	0.650	-3.74	-3.74	0.42
2	0.998	-0.02	-0.02	1.00	47	0.637	-3.92	-3.92	0.41
3	0.996	-0.03	-0.03	0.99	48	0.624	-4.10	-4.10	0.39
4	0.994	-0.05	-0.05	0.99	49	0.610	-4.29	-4.29	0.37
5	0.992	-0.07	-0.07	0.98	50	0.597	-4.48	-4.48	0.36
6	0.990	-0.09	-0.09	0.98	51	0.583	-4.68	-4.68	0.34
7	0.986	-0.12	-0.12	0.97	52	0.570	-4.89	-4.89	0.32
8	0.983	-0.15	-0.15	0.97	53	0.555	-5.11	-5.11	0.31
9	0.979	-0.18	-0.18	0.96	54	0.541	-5.33	-5.33	0.29
10	0.976	-0.21	-0.21	0.95	55	0.527	-5.56	-5.56	0.28
11	0.972	-0.25	-0.25	0.94	56	0.513	-5.79	-5.79	0.26
12	0.967	-0.29	-0.29	0.94	57	0.499	-6.04	-6.04	0.25
13	0.962	-0.33	-0.33	0.93	58	0.485	-6.29	-6.29	0.23
14	0.957	-0.38	-0.38	0.92	59	0.470	-6.56	-6.56	0.22
15	0.952	-0.43	-0.43	0.91	60	0.456	-6.83	-6.83	0.21
16	0.946	-0.48	-0.48	0.90	61	0.441	-7.12	-7.12	0.19
17	0.940	-0.54	-0.54	0.88	62	0.426	-7.41	-7.41	0.18
18	0.933	-0.60	-0.60	0.87	63	0.411	-7.71	-7.71	0.17
19	0.927	-0.66	-0.66	0.86	64	0.397	-8.03	-8.03	0.16
20	0.920	-0.72	-0.72	0.85	65	0.382	-8.36	-8.36	0.15
21	0.913	-0.79	-0.79	0.83	66	0.367	-8.71	-8.71	0.13
22	0.906	-0.86	-0.86	0.82	67	0.352	-9.07	-9.07	0.12
23	0.897	-0.94	-0.94	0.81	68	0.337	-9.45	-9.45	0.11
24	0.889	-1.02	-1.02	0.79	69	0.322	-9.85	-9.85	0.10
25	0.881	-1.10	-1.10	0.78	70	0.307	-10.27	-10.27	0.09
26	0.872	-1.19	-1.19	0.76	71	0.291	-10.71	-10.71	0.08
27	0.863	-1.28	-1.28	0.74	72	0.276	-11.17	-11.17	0.08
28	0.854	-1.37	-1.37	0.73	73	0.261	-11.67	-11.67	0.07
29	0.844	-1.47	-1.47	0.71	74	0.246	-12.19	-12.19	0.06
30	0.835	-1.57	-1.57	0.70	75	0.231	-12.75	-12.75	0.05
31	0.825	-1.67	-1.67	0.68	76	0.215	-13.34	-13.34	0.05
32	0.815	-1.78	-1.78	0.66	77	0.200	-13.98	-13.98	0.04
33	0.805	-1.89	-1.89	0.65	78	0.185	-14.67	-14.67	0.03
34	0.794	-2.00	-2.00	0.63	79	0.169	-15.42	-15.42	0.03
35	0.783	-2.12	-2.12	0.61	80	0.154	-16.25	-16.25	0.02
36	0.772	-2.25	-2.25	0.60	81	0.139	-17.16	-17.16	0.02
37	0.760	-2.38	-2.38	0.58	82	0.123	-18.18	-18.18	0.02
38	0.749	-2.51	-2.51	0.56	83	0.108	-19.34	-19.34	0.01
39	0.737	-2.65	-2.65	0.54	84	0.092	-20.68	-20.68	0.01
40	0.725	-2.79	-2.79	0.53	85	0.077	-22.26	-22.26	0.01
41	0.713	-2.93	-2.93	0.51	86	0.062	-24.20	-24.20	0.00
42	0.701	-3.08	-3.08	0.49	87	0.046	-26.70	-26.70	0.00
43	0.689	-3.24	-3.24	0.47	88	0.031	-30.22	-30.22	0.00
44	0.676	-3.40	-3.40	0.46	89	0.015	-36.24	-36.24	0.00
					90	0.010	-40.00	-40.00	0.00

# **Adjacent Channel Study** **For Station K252DO, Facility\_id: 151372**

## **Co-channel through third adjacent:**

Application_id	Facility_id	Prefix	ARN	Call	Licensee	Class	City	State	Status	ERP	RCAMSL	Channel	Adj	Dist	Overlap
1136021	18409	BXPH	20060619AAZ	KMGV	CBS RADIO STATIONS INC.	B	FRESNO	CA	CP	1	1424	250	2	55.2	0.0475
265644	18409	BLH	19980408KB	KMGV	INFINITY RADIO LICENSE INC.	B	FRESNO	CA	LIC	2.1	1439	250	2	55.2	0.0475
644391	151316	BNPFT	20030317EVN	NEW	RADIO ASSIST MINISTRY, INC.	D	FIREBAUGH	CA	APP	0.12	83	252	0	39.7	0
644226	151151	BNPFT	20030317FYG	NEW	ROBERT J. CONNELLY, JR.	D	CALWA	CA	APP	0.25	127	252	0	39.9	0
648837	155608	BNPFT	20030317EHK	NEW	ROBERT J. CONNELLY, JR.	D	SANGER	CA	APP	0.25	136	253	1	50.5	0
648810	155581	BNPFT	20030317EIT	NEW	ROBERT J. CONNELLY, JR.	D	SANGER	CA	APP	0.25	136	252	0	50.5	0
648759	155535	BNPFT	20030317ERO	NEW	ROBERT J. CONNELLY, JR.	D	SELMA	CA	APP	0.25	127	253	1	52	0
648545	155321	BNPFT	20030317EDO	NEW	ROBERT J. CONNELLY, JR.	D	SELMA	CA	APP	0.25	127	252	0	52	0
640424	147715	BNPFT	20030317CYD	NEW	EDGEWATER BROADCASTING, INC.	D	REEDLEY	CA	APP	0.027	175.4	253	1	61.7	0
644497	151418	BNPFT	20030317EZA	NEW	RADIO ASSIST MINISTRY, INC.	D	REEDLEY	CA	APP	0.027	175.4	253	1	61.7	0
644491	151412	BNPFT	20030317EYU	NEW	RADIO ASSIST MINISTRY, INC.	D	REEDLEY	CA	APP	0.027	175.4	252	0	61.7	0
280026	65374	BLH	19990119KH	KLOQ-FM	CLARKE BROADCASTING CORPORATION	A	WINTON	CA	LIC	6	130	254	2	66.5	0
648784	155558	BNPFT	20030317ENW	NEW	ROBERT J. CONNELLY, JR.	D	DINUBA	CA	APP	0.25	134	253	1	70.9	0
648785	155559	BNPFT	20030317ENN	NEW	ROBERT J. CONNELLY, JR.	D	DINUBA	CA	APP	0.25	134	253	1	70.9	0
648793	155566	BNPFT	20030317EKQ	NEW	ROBERT J. CONNELLY, JR.	D	DINUBA	CA	APP	0.25	134	252	0	70.9	0
644394	151319	BNPFT	20030317EVQ	NEW	RADIO ASSIST MINISTRY, INC.	D	HANFORD	CA	APP	0.055	123	252	0	71	0
631851	86866	BPH	20030307ABB	KZLA	HURON BROADCASTING LLC	A	HURON	CA	CP	6	151	252	0	72	0
1145880	86866	BPH	20060830ABH	KZLA	HURON BROADCASTING LLC	A	HURON	CA	APP	2.79	578	252	0	72.3	0





Facility id: 151372;  
Area of Interference;



