

## **Non-Interference Compliance**

Regarding Facility id 152214

Channel 209

### **Description of Exhibit 13 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 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 an aerial photo of the vicinity surrounding the proposed translator's tower site.

**Note: The tallest buildings within the zone of predicted interference are less than 20ft (6.1m) in height. This proposal provides 25.1m (82.3ft) ground clearance so 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.**

### 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.

Application_id	File Number	Callsign	Contour at Tower	Min. Contour
1208736	BLED20071001DQH	WRFG	71.5	71.5
1498792	BLED20120521ABP	WABE	78.4	78.4
Minimum F(50,50) Contour of Adjacent Station within Proposed Translator's Standard Interfering Contour				<b>71.5</b>

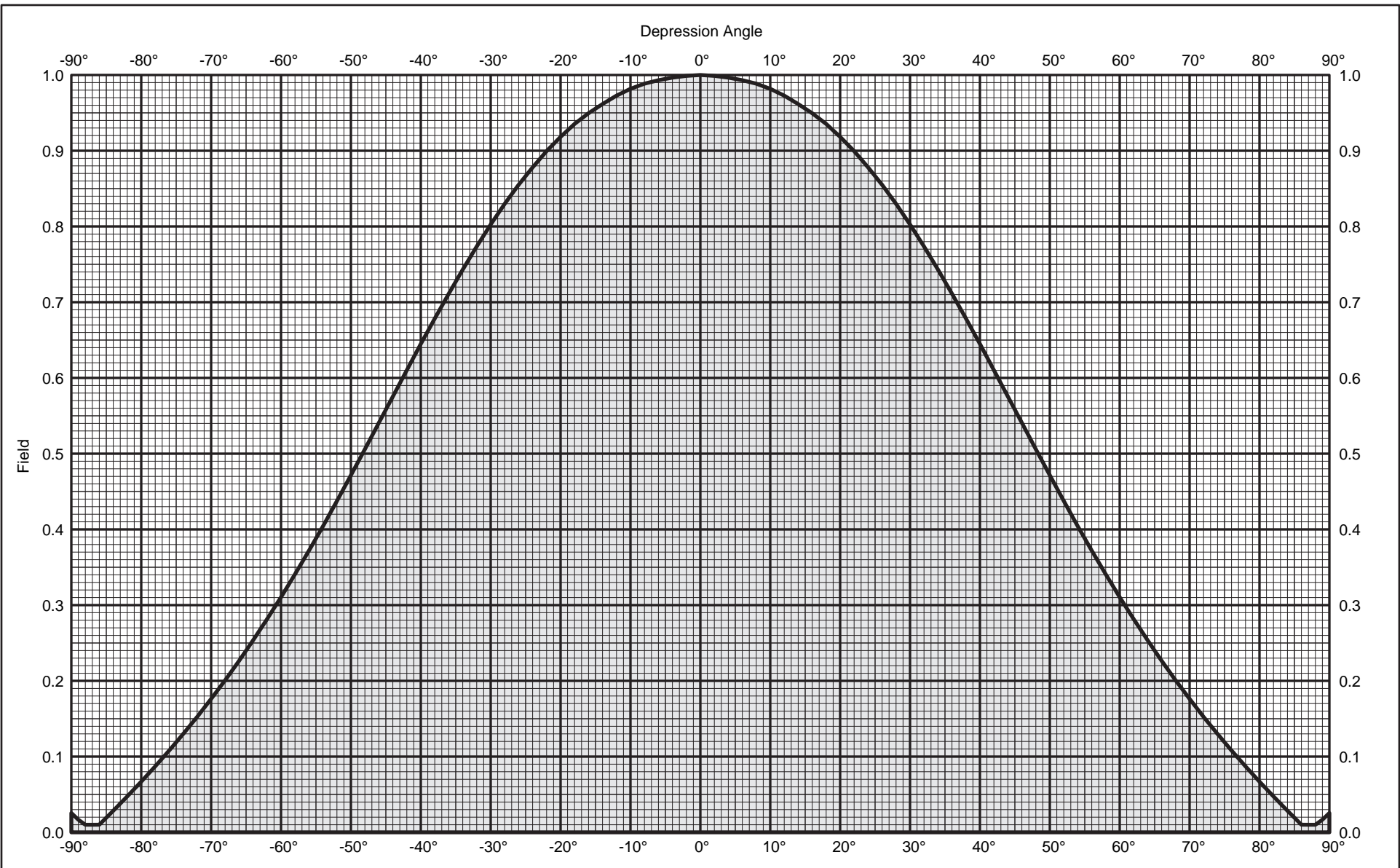
FCC 02-244 at Section II.A.5 states that "when demonstrating that 'no actual interference will occur due to . . . other factors,' pursuant to Section 74.1204(d), an applicant may use the undesired-to-desired signal ratio method." The undesired-to-desired ratio for second and third adjacent stations required by § 74.1204(a) is 40 dB. Since the minimum protected contour strength within the proposed translator's standard interference contour is **71.5 dBμ**, this makes the proposed translator's worst-case interfering contour **111.5 dBμ**. By the free-space equation, this contour is calculated to extend a maximum of **81.4 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 **25.1 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.

**Note: The tallest buildings within the zone of predicted interference are less than 20ft (6.1m) in height. This proposal provides 25.1m (82.3ft) ground clearance so 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.**

Antenna Manufacturer:	SCA
Antenna Model:	FMV1
CORAGL:	59 m
Maximum ERP:	0.019 kW
Interfering Contour:	111.5 dBμ
Max Int. Contour Distance:	81.4 m
Min Ground Clearance:	25.1 m

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	.995	18.8	80.9	80.6	51.9
10	.982	18.3	79.9	78.7	45.1
15	.956	17.4	77.8	75.1	38.9
20	.918	16.0	74.7	70.2	33.5
25	.867	14.3	70.5	63.9	29.2
30	.803	12.3	65.3	56.6	26.3
35	.727	10.0	59.1	48.4	25.1
40	.645	7.9	52.5	40.2	25.3
45	.558	5.9	45.4	32.1	26.9
50	.472	4.2	38.4	24.7	29.6
55	.388	2.9	31.6	18.1	33.1
60	.310	1.8	25.2	12.6	37.2
65	.240	1.1	19.5	8.3	41.3
70	.176	0.6	14.3	4.9	45.5
75	.119	0.3	9.7	2.5	49.6
80	.067	0.1	5.5	0.9	53.6
85	.019	0.0	1.5	0.1	57.5
90	.025	0.0	2.0	0.0	57.0
Minimum Clearance above TGL:					<b>25.1 m</b>




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FMV Dipole  
 FM  
 Maximum gain: 1.0 dBd  
 Vertical polarization

Vertical radiation pattern  
 0 degree electrical downtilt



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FM

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Angle	Field	Rel.dB	dBd	PwrMult	Angle	Field	Rel.dB	dBd	PwrMult
-90	0.025	-31.89	-30.89	0.00	-45	0.558	-5.07	-4.07	0.39
-89	0.017	-35.56	-34.56	0.00	-44	0.575	-4.80	-3.80	0.42
-88	0.010	-40.00	-39.00	0.00	-43	0.593	-4.54	-3.54	0.44
-87	0.010	-40.00	-39.00	0.00	-42	0.610	-4.29	-3.29	0.47
-86	0.010	-39.94	-38.94	0.00	-41	0.628	-4.05	-3.05	0.50
-85	0.019	-34.30	-33.30	0.00	-40	0.645	-3.81	-2.81	0.52
-84	0.028	-30.91	-29.91	0.00	-39	0.662	-3.59	-2.59	0.55
-83	0.038	-28.42	-27.42	0.00	-38	0.678	-3.37	-2.37	0.58
-82	0.047	-26.48	-25.48	0.00	-37	0.695	-3.16	-2.16	0.61
-81	0.057	-24.86	-23.86	0.00	-36	0.711	-2.96	-1.96	0.64
-80	0.067	-23.49	-22.49	0.01	-35	0.727	-2.77	-1.77	0.67
-79	0.077	-22.27	-21.27	0.01	-34	0.743	-2.58	-1.58	0.70
-78	0.087	-21.20	-20.20	0.01	-33	0.758	-2.40	-1.40	0.72
-77	0.098	-20.21	-19.21	0.01	-32	0.774	-2.23	-1.23	0.75
-76	0.108	-19.33	-18.33	0.01	-31	0.788	-2.07	-1.07	0.78
-75	0.119	-18.49	-17.49	0.02	-30	0.803	-1.91	-0.91	0.81
-74	0.130	-17.73	-16.73	0.02	-29	0.816	-1.76	-0.76	0.84
-73	0.141	-17.01	-16.01	0.03	-28	0.830	-1.62	-0.62	0.87
-72	0.152	-16.34	-15.34	0.03	-27	0.842	-1.49	-0.49	0.89
-71	0.164	-15.69	-14.69	0.03	-26	0.855	-1.36	-0.36	0.92
-70	0.176	-15.08	-14.08	0.04	-25	0.867	-1.24	-0.24	0.95
-69	0.188	-14.50	-13.50	0.04	-24	0.878	-1.13	-0.13	0.97
-68	0.201	-13.95	-12.95	0.05	-23	0.889	-1.02	-0.02	0.99
-67	0.214	-13.41	-12.41	0.06	-22	0.899	-0.92	0.08	1.02
-66	0.226	-12.90	-11.90	0.06	-21	0.909	-0.83	0.17	1.04
-65	0.240	-12.40	-11.40	0.07	-20	0.918	-0.74	0.26	1.06
-64	0.254	-11.92	-10.92	0.08	-19	0.927	-0.66	0.34	1.08
-63	0.268	-11.45	-10.45	0.09	-18	0.935	-0.58	0.42	1.10
-62	0.282	-11.01	-10.01	0.10	-17	0.942	-0.51	0.49	1.12
-61	0.296	-10.57	-9.57	0.11	-16	0.950	-0.45	0.55	1.14
-60	0.310	-10.16	-9.16	0.12	-15	0.956	-0.39	0.61	1.15
-59	0.326	-9.75	-8.75	0.13	-14	0.962	-0.34	0.66	1.16
-58	0.341	-9.35	-8.35	0.15	-13	0.967	-0.29	0.71	1.18
-57	0.356	-8.96	-7.96	0.16	-12	0.973	-0.24	0.76	1.19
-56	0.372	-8.59	-7.59	0.17	-11	0.977	-0.20	0.80	1.20
-55	0.388	-8.22	-7.22	0.19	-10	0.982	-0.16	0.84	1.21
-54	0.404	-7.87	-6.87	0.21	-9	0.985	-0.13	0.87	1.22
-53	0.421	-7.52	-6.52	0.22	-8	0.989	-0.10	0.90	1.23
-52	0.438	-7.18	-6.18	0.24	-7	0.991	-0.08	0.92	1.24
-51	0.455	-6.85	-5.85	0.26	-6	0.993	-0.06	0.94	1.24
-50	0.472	-6.53	-5.53	0.28	-5	0.995	-0.04	0.96	1.25
-49	0.489	-6.22	-5.22	0.30	-4	0.997	-0.03	0.97	1.25
-48	0.506	-5.92	-4.92	0.32	-3	0.998	-0.02	0.98	1.25
-47	0.523	-5.63	-4.63	0.34	-2	0.999	-0.01	0.99	1.26
-46	0.541	-5.34	-4.34	0.37	-1	0.999	-0.00	1.00	1.26
					0	1.000	0.00	1.00	1.26



FMV Dipole

FM

Maximum gain: 1.0 dBd

Vertical polarization

Vertical radiation pattern

0 degree electrical downtilt

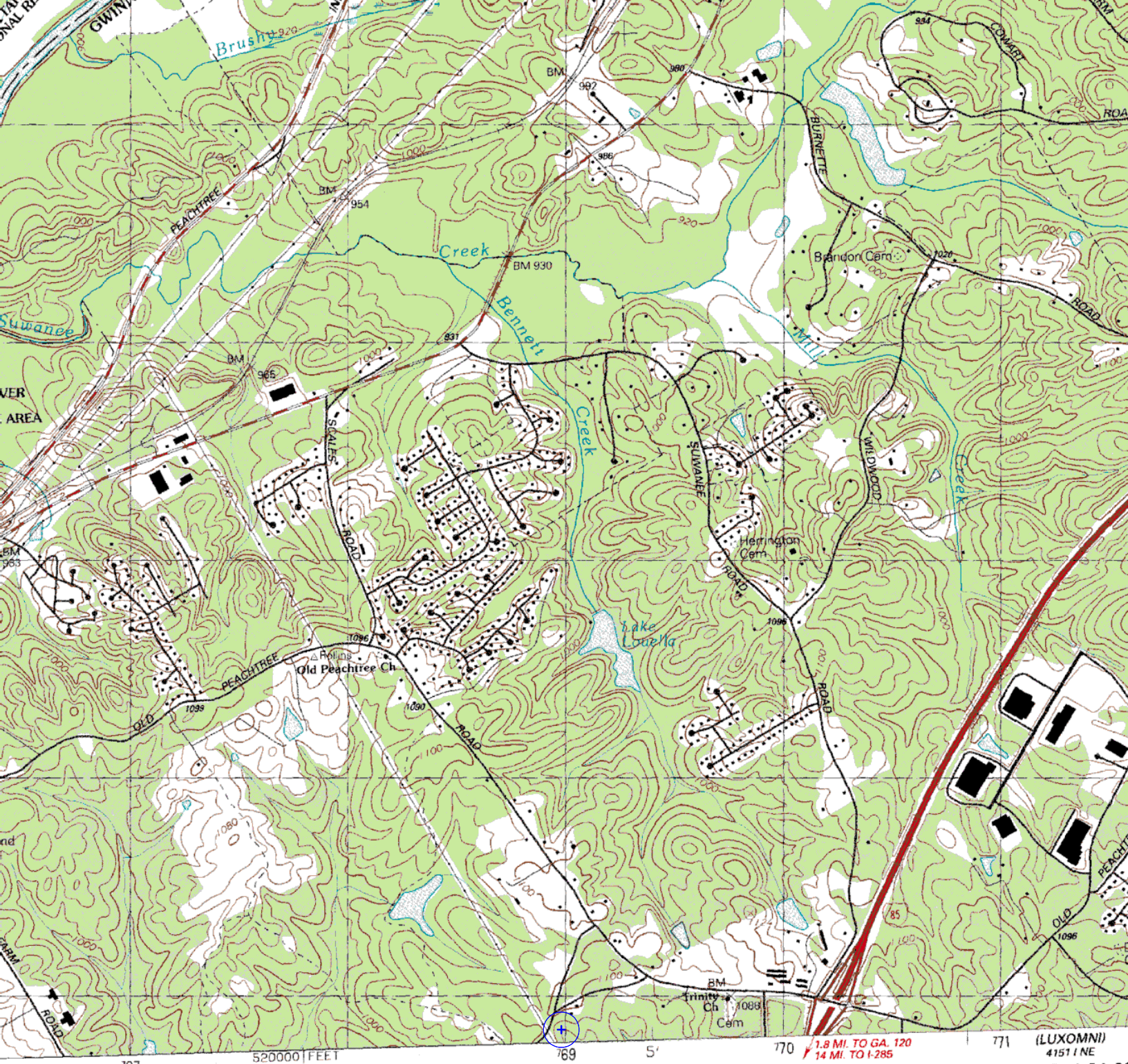
Angle	Field	Rel.dB	dBd	PwrMult	Angle	Field	Rel.dB	dBd	PwrMult
0	1.000	0.00	1.00	1.26	45	0.558	-5.07	-4.07	0.39
1	0.999	-0.00	1.00	1.26	46	0.541	-5.34	-4.34	0.37
2	0.999	-0.01	0.99	1.26	47	0.523	-5.63	-4.63	0.34
3	0.998	-0.02	0.98	1.25	48	0.506	-5.92	-4.92	0.32
4	0.997	-0.03	0.97	1.25	49	0.489	-6.22	-5.22	0.30
5	0.995	-0.04	0.96	1.25	50	0.472	-6.53	-5.53	0.28
6	0.993	-0.06	0.94	1.24	51	0.455	-6.85	-5.85	0.26
7	0.991	-0.08	0.92	1.24	52	0.438	-7.18	-6.18	0.24
8	0.989	-0.10	0.90	1.23	53	0.421	-7.52	-6.52	0.22
9	0.985	-0.13	0.87	1.22	54	0.404	-7.87	-6.87	0.21
10	0.982	-0.16	0.84	1.21	55	0.388	-8.22	-7.22	0.19
11	0.977	-0.20	0.80	1.20	56	0.372	-8.59	-7.59	0.17
12	0.973	-0.24	0.76	1.19	57	0.356	-8.96	-7.96	0.16
13	0.967	-0.29	0.71	1.18	58	0.341	-9.35	-8.35	0.15
14	0.962	-0.34	0.66	1.16	59	0.326	-9.75	-8.75	0.13
15	0.956	-0.39	0.61	1.15	60	0.310	-10.16	-9.16	0.12
16	0.950	-0.45	0.55	1.14	61	0.296	-10.57	-9.57	0.11
17	0.942	-0.51	0.49	1.12	62	0.282	-11.01	-10.01	0.10
18	0.935	-0.58	0.42	1.10	63	0.268	-11.45	-10.45	0.09
19	0.927	-0.66	0.34	1.08	64	0.254	-11.92	-10.92	0.08
20	0.918	-0.74	0.26	1.06	65	0.240	-12.40	-11.40	0.07
21	0.909	-0.83	0.17	1.04	66	0.226	-12.90	-11.90	0.06
22	0.899	-0.92	0.08	1.02	67	0.214	-13.41	-12.41	0.06
23	0.889	-1.02	-0.02	0.99	68	0.201	-13.95	-12.95	0.05
24	0.878	-1.13	-0.13	0.97	69	0.188	-14.50	-13.50	0.04
25	0.867	-1.24	-0.24	0.95	70	0.176	-15.08	-14.08	0.04
26	0.855	-1.36	-0.36	0.92	71	0.164	-15.69	-14.69	0.03
27	0.842	-1.49	-0.49	0.89	72	0.152	-16.34	-15.34	0.03
28	0.830	-1.62	-0.62	0.87	73	0.141	-17.01	-16.01	0.03
29	0.816	-1.76	-0.76	0.84	74	0.130	-17.73	-16.73	0.02
30	0.803	-1.91	-0.91	0.81	75	0.119	-18.49	-17.49	0.02
31	0.788	-2.07	-1.07	0.78	76	0.108	-19.33	-18.33	0.01
32	0.774	-2.23	-1.23	0.75	77	0.098	-20.21	-19.21	0.01
33	0.758	-2.40	-1.40	0.72	78	0.087	-21.20	-20.20	0.01
34	0.743	-2.58	-1.58	0.70	79	0.077	-22.27	-21.27	0.01
35	0.727	-2.77	-1.77	0.67	80	0.067	-23.49	-22.49	0.01
36	0.711	-2.96	-1.96	0.64	81	0.057	-24.86	-23.86	0.00
37	0.695	-3.16	-2.16	0.61	82	0.047	-26.48	-25.48	0.00
38	0.678	-3.37	-2.37	0.58	83	0.038	-28.42	-27.42	0.00
39	0.662	-3.59	-2.59	0.55	84	0.028	-30.91	-29.91	0.00
40	0.645	-3.81	-2.81	0.52	85	0.019	-34.30	-33.30	0.00
41	0.628	-4.05	-3.05	0.50	86	0.010	-39.94	-38.94	0.00
42	0.610	-4.29	-3.29	0.47	87	0.010	-40.00	-39.00	0.00
43	0.593	-4.54	-3.54	0.44	88	0.010	-40.00	-39.00	0.00
44	0.575	-4.80	-3.80	0.42	89	0.017	-35.56	-34.56	0.00
					90	0.025	-31.89	-30.89	0.00

# **Adjacent Channel Study** **For Station W209CD, Facility\_id: 152214**

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

App_id	Fac_id	File_Number	Call	Licensee	Class	City	State	Status	ERP	RCAMSL	Char	Adj	Dist	Overlap
1208736	54585	BLED-20071001DQH	WRFG	RADIO FREE GEORGIA BROADCASTING	C1	ATLANTA	GA	LIC	65	432	207	2	31.6	0.1134
1498792	3538	BLED-20120521ABP	WABE	BOARD OF EDUCATION, CITY OF ATLANTA	C0	ATLANTA	GA	LIC	100	615	211	2	35.2	0.1134
1332761	5125	BLED-20090909AAI	WYFW	BIBLE BROADCASTING NETWORK	A	WINDER	GA	LIC	6	333	208	1	30	0
1350599	150669	BLFT-20091221AIU	W209CG	EDGEWATER BROADCASTING INC	D	TALLAPOOSA	GA	LIC	0.01	476	209	0	38.4	0
1627428	150669	BPFT-20130408ACP	W209CG	EDGEWATER BROADCASTING INC	D	TALLAPOOSA	GA	CP	0.099	345	209	0	39.6	0
83875	6706	BLED-19851202KD	WBCX	BRENAU COLLEGE	A	GAINESVILLE	GA	LIC	0.84	447	206	3	42.5	0
581027	76477	BLED-19980915AAA	WNGU	GEORGIA PUBLIC TELECOMMUNICATIONS	A	DAHLONEGA	GA	LIC	0.75	573	208	1	58.9	0
1394038	172935	BLED-20100726AIQ	WAKP	MIDDLE GEORGIA COMMUNITY COLLEGE	A	SMITHBORO	GA	LIC	2.9	219	206	3	92	0





United States Geological Survey

COAA, USCE, Georgia Department of Transportation

Survey  
Metric methods from aerial photographs  
ed 1963. Revised from aerial photographs  
ed 1991. Map edited 1992

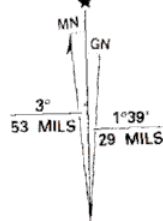
not grid ticks: Georgia coordinate  
verse Mercator)

inverse Mercator grid, zone 16

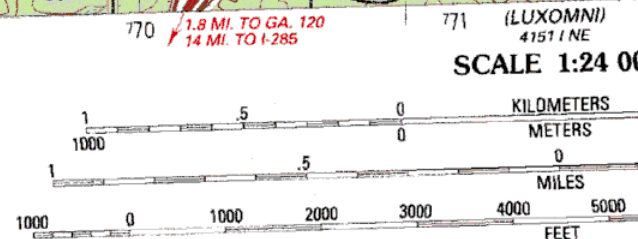
tum  
927 North American Datum and North  
(NAD 83) for 7.5-minute intersections  
1875. The NAD 83 is shown by

holdings within the boundaries of  
ervations shown on this map  
in which only landmark buildings are shown

Facility id: 152214;  
Area of Interference;



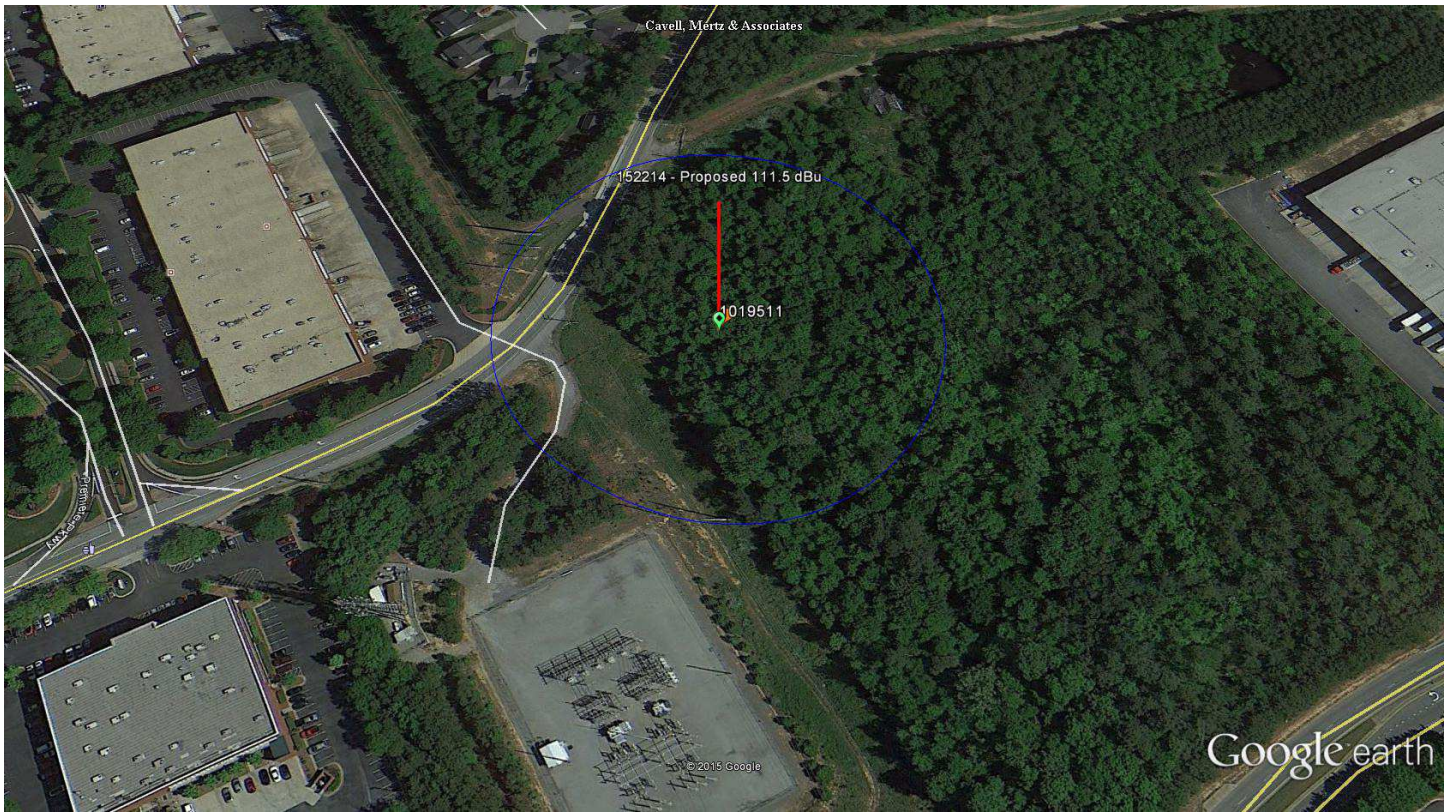
UTM GRID AND 1992 MAGNETIC NORTH  
DECLINATION AT CENTER OF SHEET



CONTOUR INTERVAL  
NATIONAL GEODETIC VERTICAL D

THIS MAP COMPLIES WITH NATIONAL MA  
FOR SALE BY U. S. GEOLOGICAL SURVEY, DENVER, CO  
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND S





Google earth

feet  
meters

