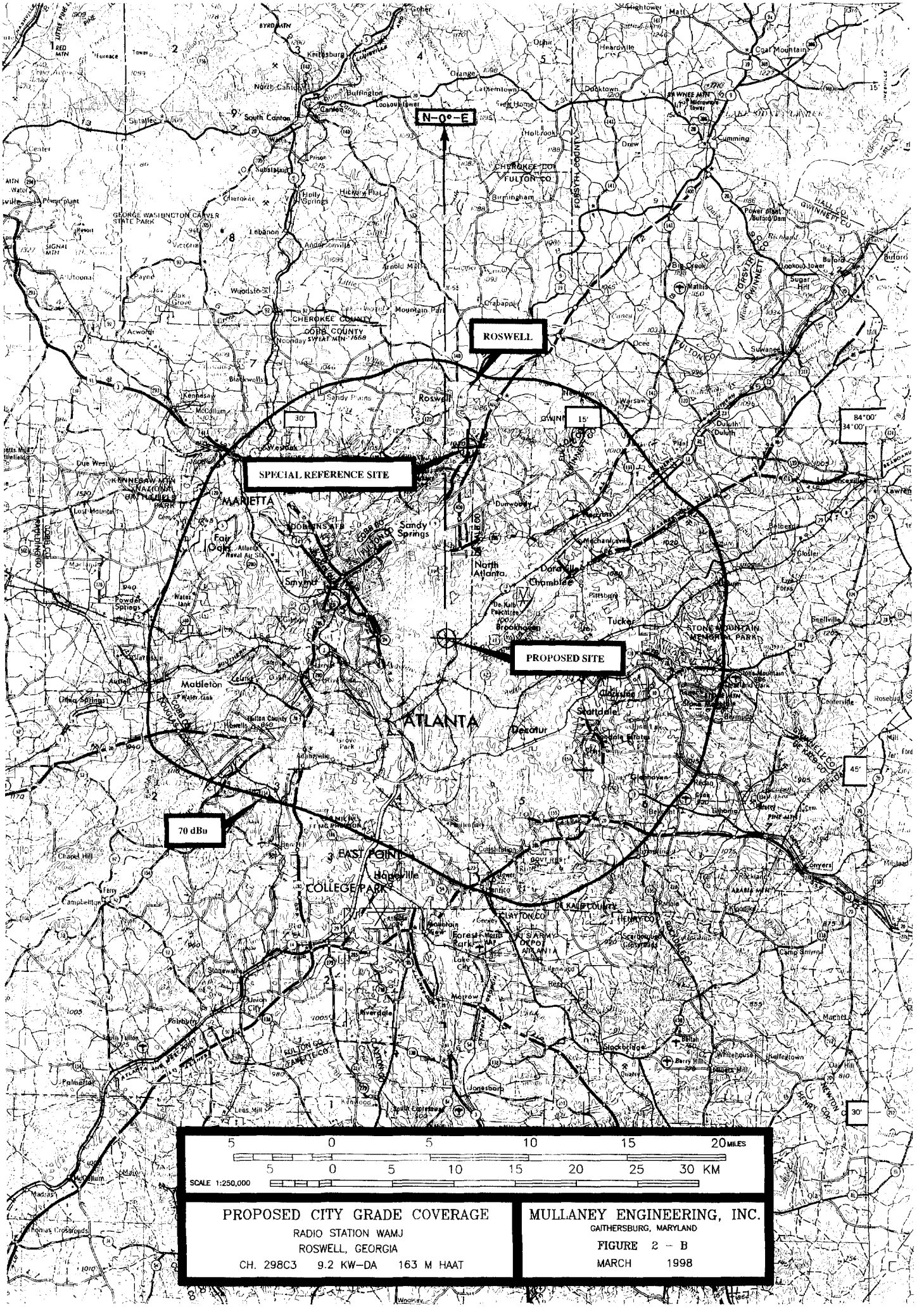


PROPOSED CITY GRADE COVERAGE

RADIO STATION WAMJ

ROSWELL, GEORGIA

CH. 298C3 9.2 KW-DA 163 M HAAT

MULLANEY ENGINEERING, INC.

GAITHERSBURG, MARYLAND

FIGURE 2 - B

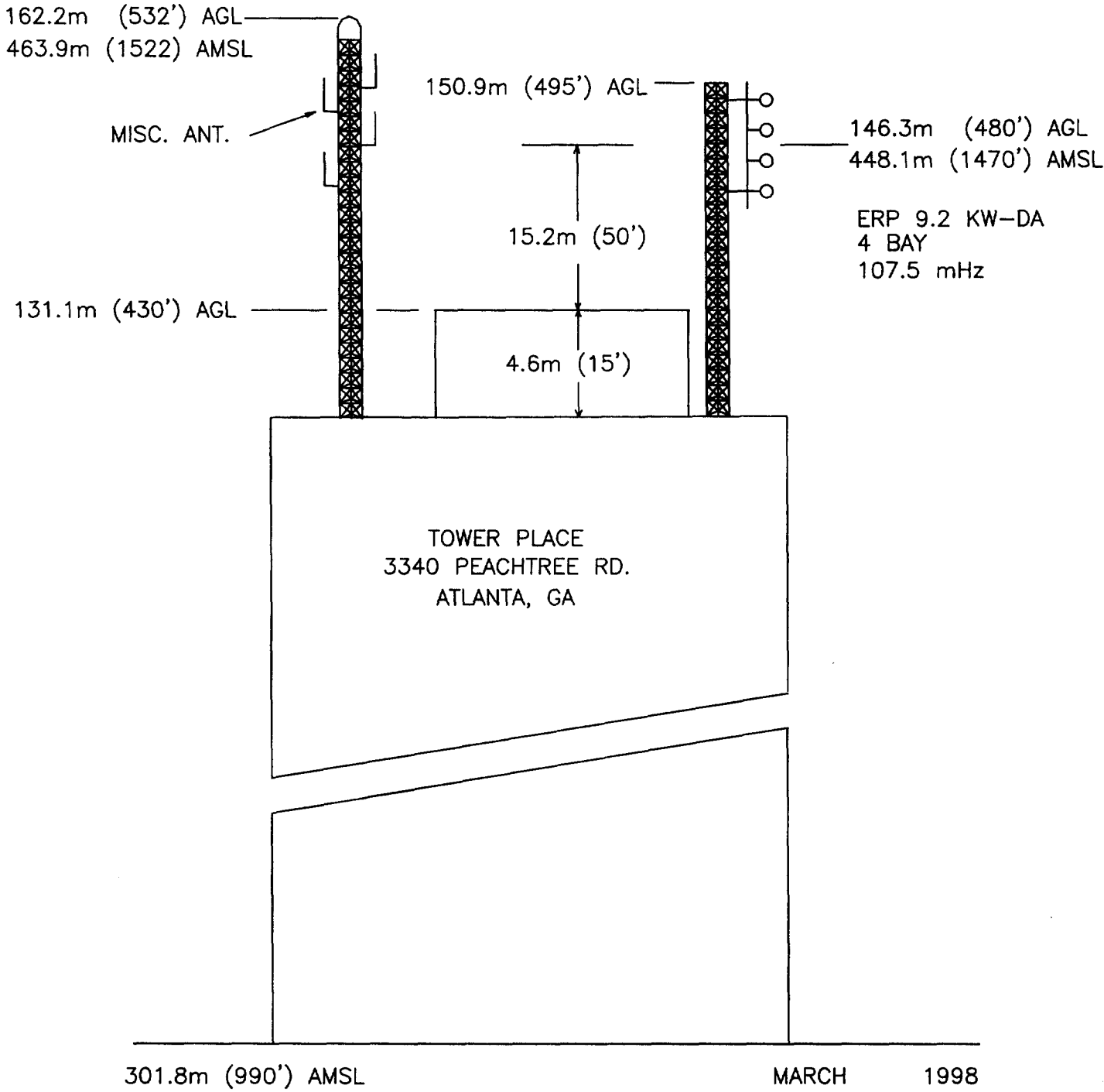
MARCH 1998

PAINTING AND LIGHTING IN ACCORDANCE
WITH F.A.A. SPECIFICATIONS.

NOT DRAWN TO
SCALE OR SHAPE

N. LAT.: 33-50-48
W. LON: 84-22-16 NAD 1927
N. LAT.: 33-50-48.37
W. LON: 84-22-15.74 NAD 1983

FAA: 79-ASO-1992-OE



TOWER SKETCH	MULLANEY ENGINEERING, INC.
RADIO STATION WAMJ	GAITHERSBURG, MARYLAND
ROSWELL, GEORGIA	FIGURE 3
CH. 298C3 9.2 KW-DA 163 M HAAT	MARCH 1998

********** FM CHANNEL STUDY NO. 2 - MULLANEY ENGINEERING, INC. GAITHERSBURG, MARYLAND - 4-MAR-98 16:26:45 *********
********** LAST UPDATE: 980228 **********

WAMJ 298 C3 FM
ROSWELL GA US
33.5048 84.2216 (D.MMSS)

POLARIZATION	ERP (KW) HOR PLN	BM TILT	HAAT (METER)	RCAMSL (METER)
HORIZONTAL	9.200	0.000	163.0	448.1
VERTICAL	9.200	0.000	163.0	448.1

BUILDING / TOWER

****

AZIMUTH FROM	AZIMUTH TO	CALL	STS	FILE NUMBER	CITY	ST	C	LAT (D.MMSS)	LONG (D.MMSS)	REL	CHN	ERP (KW) HORZ	ERP (KW) VERT	HAAT (M)	D A	I-CON F5010 (KM)	P-CON F5050 (KM)	DIST (KM)	IR RSEP (KM)	IC RSEP (KM)	REZLT IR IC
308.7	128.3	WTSHFM	LIC	BLH921001KC	Rockmart	GA	A	34.1503	84.5905	2ND	296C2	45.H	45.V	158				72.2	56.		
202.8	22.4	WCGQ	LIC	BLH861124KA	Columbus	GA	A	32.2759	85.0323	1ST	297C	100.H	100.V	308				165.9	176.		S
59.1	240.1	WJMZFM	LIC	BLH790510AD	Anderson	SC	A	34.4206	82.3620	1ST	297C	100.H	100.V	308				188.2	176.		
132.1	312.9	WDBN	LIC	BLH940315KA	Wrightsvi	GA	A	32.3705	82.4605	CO	298A	6.0H	6.0V	100				202.2	142.		
14.1	194.1	WAMJ	CP	BPH870727MF	Roswell	GA	A	33.5548	84.2045	CO	298A	6.0H	6.0V	98				9.5	142.		-
3.0	183.0		USE		Roswell	GA	A	34.0130	84.2136	CO	298A	H	V					19.8	142.		-
320.9	140.4		VAC		La Fayett	GA	A	34.4231	85.1333	CO	298A	H	V					123.8	142.		DEL
319.0	138.5	NEW	APP	BPH920304MH	La Fayett	GA	A	34.4138	85.1612	CO	298A	2.75H	2.75V	104				125.2	142.		DEL
320.9	140.4		DEL	RM9151	La Fayett	GA	A	34.4231	85.1333	CO	298A	H	V					123.8	142.		DEL
											DOCKET97-196 **										
267.1	85.9	WRAX	LIC	BLH910708KB	Birmingha	AL	A	33.4352	86.3757	1ST	299C	100.H	100.V	377				209.8	176.		
16.1	196.5	WIVKFM	LIC	BLH911008KA	Knoxville	TN	A	35.4841	83.4010	1ST	299C	91.H	91.V	626				227.2	176.		
148.1	328.5	WPEZ	LIC	BLH890221KA	Macon	GA	A	32.4512	83.3346	2ND	300C1	100.B	100.B	210				142.7	76.		
148.1	328.5	WPEZ	DEL	RM9204	Macon	GA	A	32.4512	83.3346	2ND	300C1	H	V	0				142.7	76.		
											DOCKET98-18 **										
185.5	5.5	WPEZ	ADD	RM9204	Hampton	GA	A	33.1530	84.2621	2ND	300C1	H	V	0				65.6	76.		MX
COMMENTSite Restriction 20.4km Southwest											**DOCKET**98-18 **										

****

DISTANCE (MILES)	DISTANCE (KM)	CALL	LOCATION			FREQ. (KHZ)		COORDINATES		FILE NO.	AZIMUTH FROM	AZIMUTH TO
2.61	4.21	WQXI	ATLANTA	GA	US	790	Lic	DAN Day 33-48-42N	84-21-13W	BL970822KA	157.4	337.4
2.68	4.32	WAFS	ATLANTA	GA	US	920	Lic	ND1 Day 33-48-35N	84-21-23W	BL810302AN	161.7	341.7
2.73	4.40	WNIV	ATLANTA	GA	US	970	Lic	NDD Day 33-48-35N	84-21-14W		158.8	338.8
2.73	4.40	WGKA	ATLANTA	GA	US	1190	Lic	NDD Day 33-48-35N	84-21-14W	BL860714AB	158.8	338.8

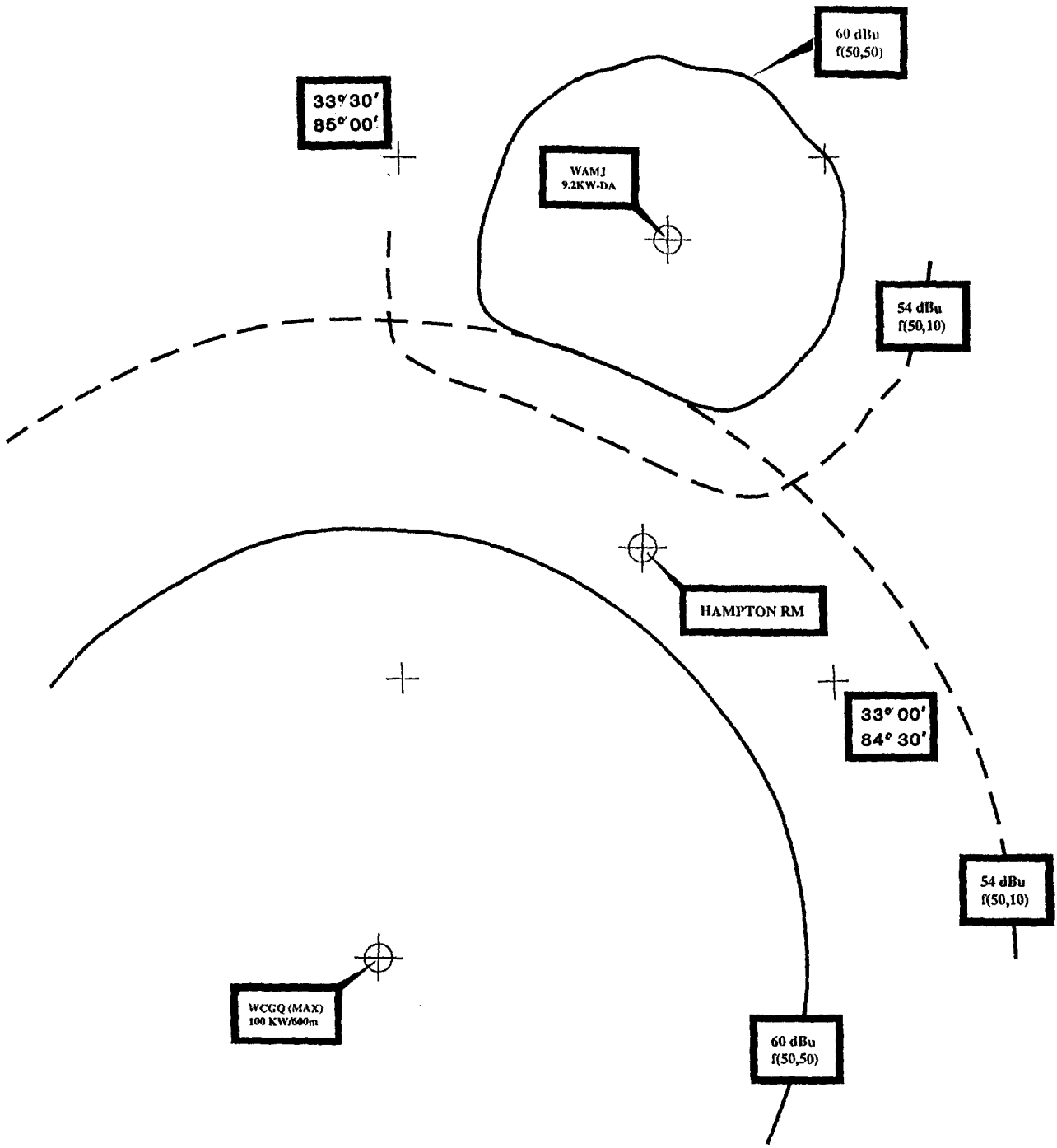
C3 CHANNEL ALLOCATION – PROPOSED SITE

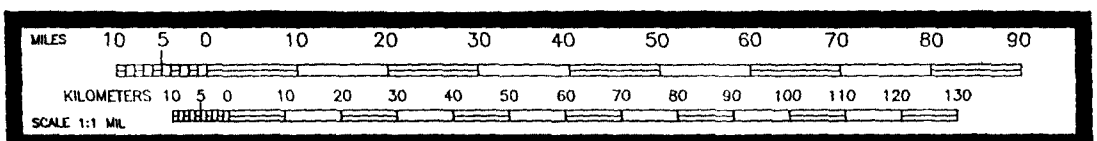
RADIO STATION WAMJ
ROSWELL, GEORGIA
Ch. 298C3 9.2 KW–DA 163 M HAAT

MULLANEY ENGINEERING, INC.
GAITHERSBURG, MARYLAND

FIGURE 4

MARCH 1998





SHORT SPACING – ALLOCATION MAP

RADIO STATION WAMJ

ROSWELL, GEORGIA

CH. 298C3 9.2 KW–DA 163 M HAAT

MULLANEY ENGINEERING, INC.

GAITHERSBURG, MARYLAND

FIGURE 5

MARCH 1998

FM COVERAGE
****

WAMJ C3 UPGRADE - FROM TOWER PLACE 3/98

CHANNEL NO. 298 C3 FREQUENCY 107.5 MHZ
CENTER OF RADIATION 448.1 METERS AMSL
COORDINATES: 33-50-48 / 84-22-16

MAXIMUM ERP 9.2 KW-DA

	BEARING DEGREES		3-16 KM AVERAGE	C.R. HAAT	E.R.P. (KW)	DISTANCE TO CONTOURS (KM) 60.0	54.0
CITY	0.	*	295.3	152.8	9.200	38.0	56.5
	15.		303.8	144.3	9.200	36.9	55.4
	30.		292.5	155.6	9.200	38.3	57.0
	45.	*	299.8	148.3	9.200	37.3	55.8
	60.		294.0	154.1	9.200	38.0	56.6
	75.		282.8	165.3	9.200	39.3	58.3
	90.	*	294.6	153.5	9.200	38.0	56.6
	105.		294.8	153.3	9.200	38.0	56.6
	120.		285.5	162.6	9.200	38.9	57.9
	135.	*	288.4	159.7	9.200	38.6	57.5
	150.		285.8	162.3	9.200	38.9	57.8
	165.		286.2	161.9	8.200	38.0	56.5
	180.	*	285.0	163.1	4.303	32.8	49.2
	195.		287.4	160.7	3.046	29.9	45.2
	210.		280.6	167.5	2.715	29.8	44.9
	225.	*	266.7	181.4	3.264	32.3	48.4
	240.		251.3	196.8	6.220	38.9	57.5
	255.		250.6	197.5	9.200	42.2	62.3
	270.	*	269.1	179.0	9.200	40.7	60.0
	285.		287.9	160.2	9.200	38.8	57.6
	300.		285.3	162.8	9.200	39.1	57.9
	315.	*	285.4	162.7	9.200	39.1	57.9
	330.		287.0	161.1	9.200	38.8	57.6
	345.		301.4	146.7	9.200	37.2	55.7

AVERAGE (8) * 285.5 162.6 Meters

54.0 DBU CONTOUR IS BASED ON F(50,10) CURVE

WAMJ - SHORT SPACING CONTOURS

RADIO STATION WAMJ
ROSWELL, GEORGIA
Ch. 298C3 9.2 KW-DA 163 M HAAT

MULLANEY ENGINEERING, INC.
GAITHERSBURG, MARYLAND

FIGURE 5-A
MARCH 1998

FM COVERAGE
****

WCGQ LIC - Columbus, GA (MAX) 3/98

CHANNEL NO. 297 C FREQUENCY 107.3 MHZ

CENTER OF RADIATION 710.0 METERS AMSL

COORDINATES: 32-27-59 / 85-03-23

BEARING DEGREES		3-16 KM AVERAGE	C.R. HAAT	E.R.P. (KW)	DISTANCE TO CONTOURS (KM) 60.0	54.0
0.	*	130.6	579.4	100.	91.1	135.5
15.		120.9	589.1	100.	91.4	136.0
30.		124.4	585.6	100.	91.2	135.8
45.	*	128.7	581.3	100.	91.1	135.7
60.		111.9	598.1	100.	91.7	136.5
75.		90.8	619.2	100.	92.5	137.4
90.	*	86.4	623.6	100.	92.7	137.8
105.		85.9	624.1	100.	92.7	137.8
120.		86.7	623.3	100.	92.7	137.8
135.	*	74.1	635.9	100.	93.2	138.4
150.		88.3	621.7	100.	92.7	137.6
165.		118.8	591.2	100.	91.4	136.1
180.	*	105.3	604.7	100.	92.1	136.8
195.		103.1	606.9	100.	92.1	137.0
210.		97.6	612.4	100.	92.2	137.1
225.	*	97.9	612.1	100.	92.2	137.1
240.		104.6	605.4	100.	92.1	136.8
255.		110.3	599.7	100.	91.7	136.6
270.	*	114.9	595.1	100.	91.6	136.3
285.		117.9	592.1	100.	91.6	136.1
300.		127.4	582.6	100.	91.1	135.7
315.	*	142.0	568.0	100.	90.4	134.9
330.		148.3	561.7	100.	90.3	134.5
345.		129.5	580.5	100.	91.1	135.7

AVERAGE (8) * 110.0 600.0 Meters

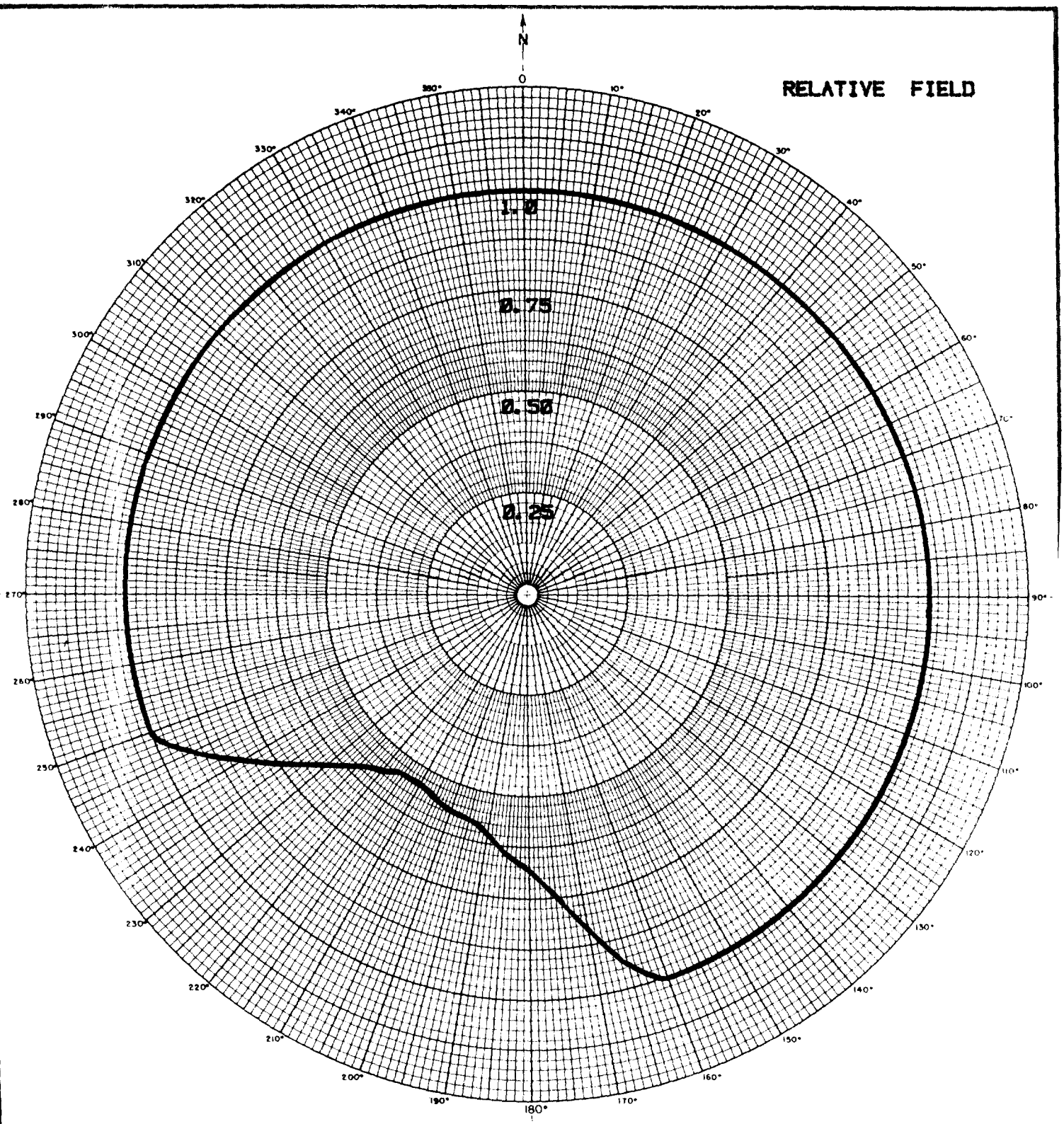
54.0 DBU CONTOUR IS BASED ON F(50,10) CURVE

WCGQ - SHORT SPACING CONTOURS

RADIO STATION WAMJ
ROSWELL, GEORGIA
Ch. 298C3 9.2 KW-DA 163 M HAAT

MULLANEY ENGINEERING, INC.
GAITHERSBURG, MARYLAND

FIGURE 5-B
MARCH 1998



HORIZONTAL RADIATION PATTERN

RADIO STATION WAMJ

ROSWELL, GEORGIA

CH. 298C3 9.2 KW-DA 163 M HAAT

MULLANEY ENGINEERING, INC.

GAITHERSBURG, MARYLAND

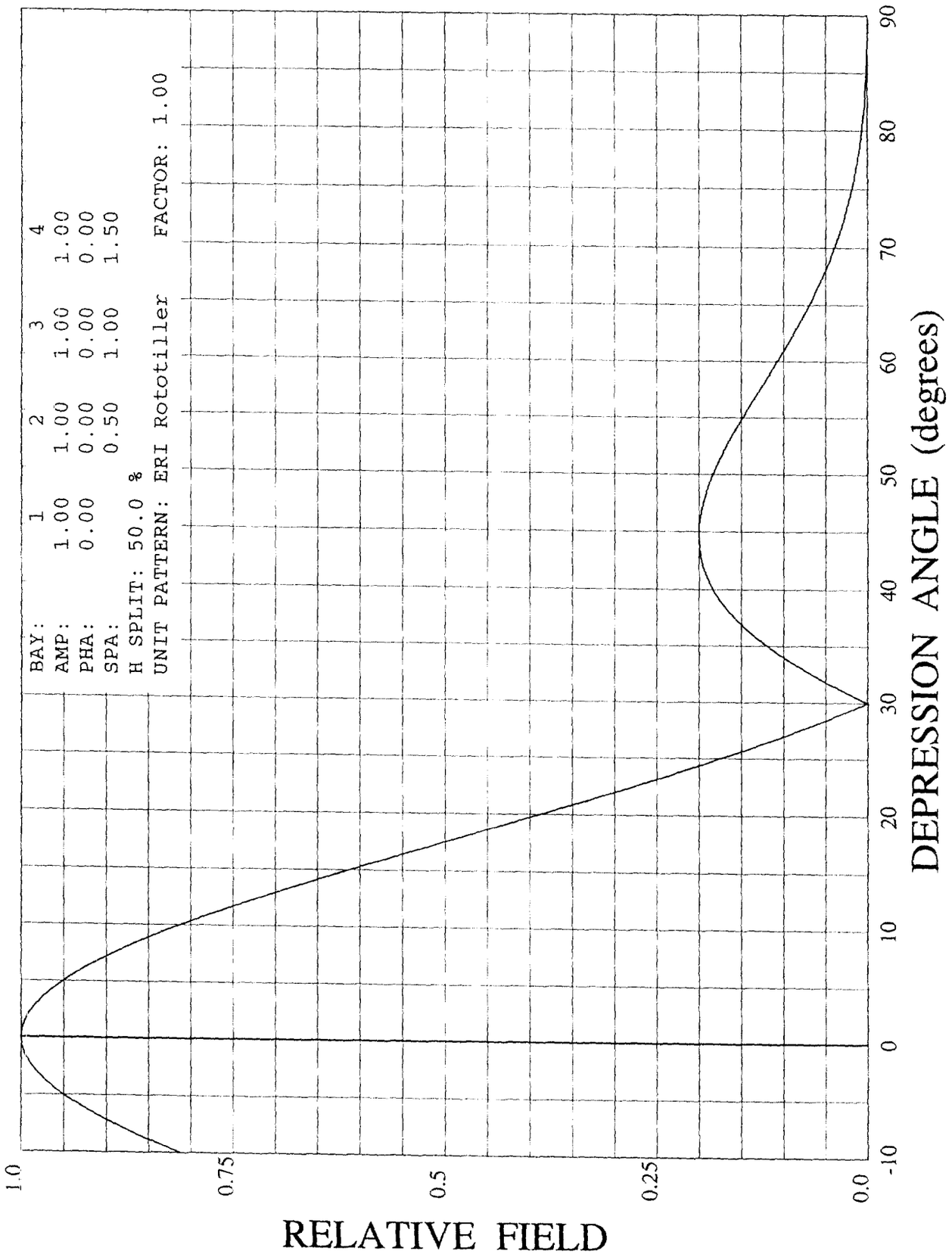
FIGURE 6

MARCH 1998

BEARING DEGREES		RELATIVE FIELD	ENVELOPE DBK	KW
0.		1.000	9.64	9.200
10.		1.000	9.64	9.200
20.		1.000	9.64	9.200
30.		1.000	9.64	9.200
40.		1.000	9.64	9.200
50.		1.000	9.64	9.200
60.		1.000	9.64	9.200
70.		1.000	9.64	9.200
80.		1.000	9.64	9.200
90.		1.000	9.64	9.200
100.		1.000	9.64	9.200
110.		1.000	9.64	9.200
120.		1.000	9.64	9.200
130.		1.000	9.64	9.200
140.		1.000	9.64	9.200
150.		1.000	9.64	9.200
160.		1.000	9.64	9.200
170.		0.841	8.14	6.513
180.		0.684	6.34	4.303
190.		0.603	5.24	3.340
200.		0.569	4.74	2.977
210.		0.543	4.34	2.715
215.	Min	0.543	4.34	2.715
220.		0.569	4.74	2.977
230.		0.653	5.94	3.925
240.		0.822	7.94	6.220
250.		1.000	9.64	9.200
260.		1.000	9.64	9.200
270.		1.000	9.64	9.200
280.		1.000	9.64	9.200
290.		1.000	9.64	9.200
300.		1.000	9.64	9.200
310.		1.000	9.64	9.200
320.		1.000	9.64	9.200
330.		1.000	9.64	9.200
340.		1.000	9.64	9.200
350.		1.000	9.64	9.200

TABULATION OF HORIZONTAL RADIATION PATTERN
RADIO STATION WAMJ
ROSWELL, GEORGIA
Ch. 298C3 9.2 KW-DA 163 M HAAT

MULLANEY ENGINEERING, INC.
GAITHERSBURG, MARYLAND
FIGURE 6-A
MARCH 1998



4 - BAY FM ELEVATION PATTERN

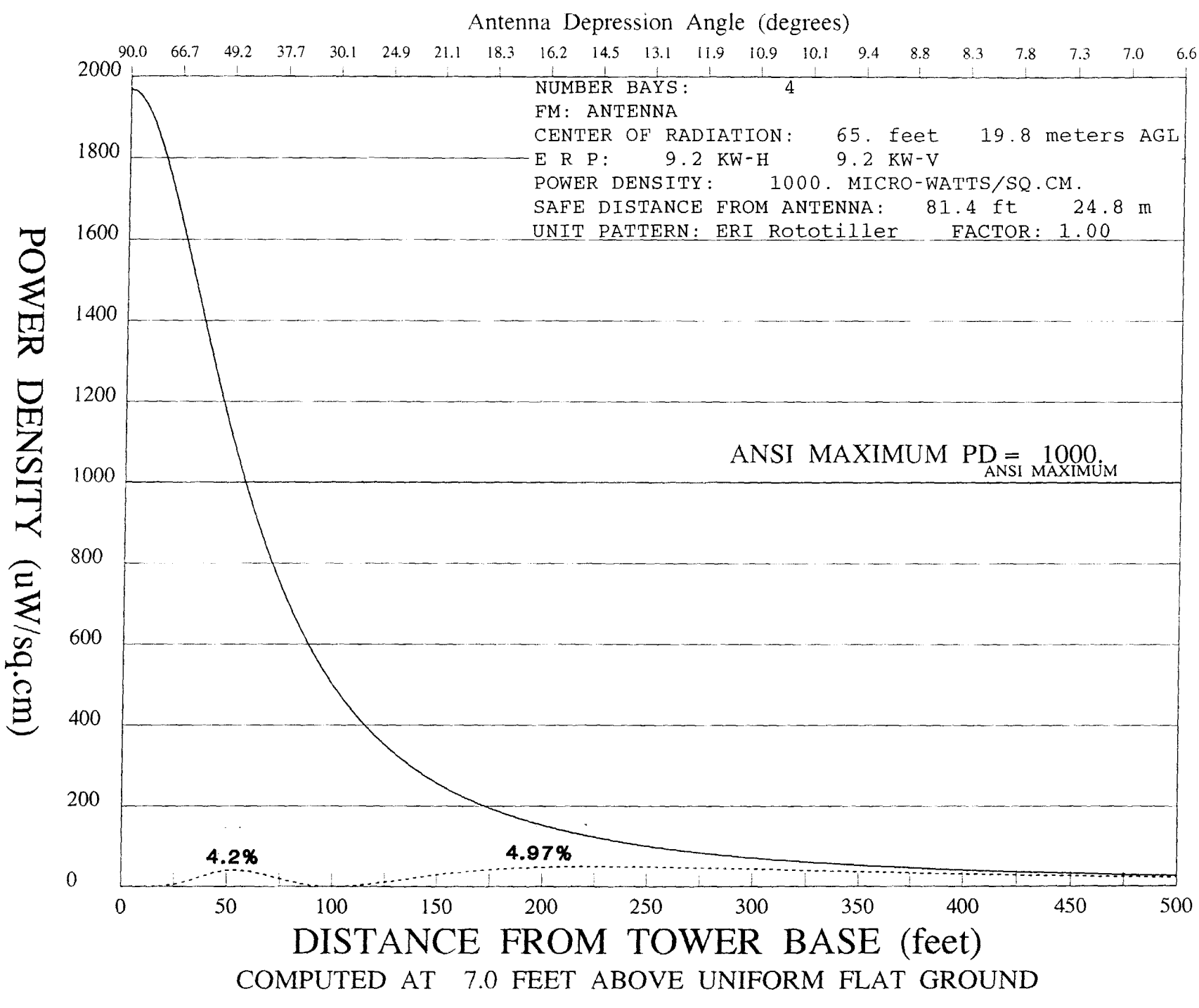
RADIO STATION WAMJ (C3 UPGRADE)
ROSWELL, GEORGIA

Mullaney Engineering, Inc.
Gaithersburg, Maryland

FIGURE 7
MARCH 1998

R.F. EXPOSURE ANALYSIS

RADIO STATION WAMJ (C3 UPGRADE)
ROSWELL, GEORGIA



Mullaney Engineering, Inc.
Gaithersburg, Maryland

FIGURE 7-A
MARCH 1998

********** FM CHANNEL STUDY NO. 1 - MULLANEY ENGINEERING, INC. GAITHERSBURG, MARYLAND - 4-MAR-98 16:26:44 *********
********** LAST UPDATE: 980228 **********

WAMJ 298 C3 FR
ROSWELL - SPECIAL REF. GA US
33.5911 84.2106 (D.MMSS)

POLARIZATION	ERP (KW) HOR PLN	BM TILT	HAAT (METER)	RCAMSL (METER)
HORIZONTAL	25.000	0.000	100.0	
VERTICAL	25.000	0.000	100.0	

SPECIAL REFERENCE POINT

EST SITE ELEVATION : 299.6 m.; 982.9 ft.
EST RAD CENTER AGL : 100.6 m.; 330.0 ft.
RAD CENTER A.M.S.L.: 400.2 m.; 1313.0 ft.

****

* POSSIBLE INTERFERENCE TO FCC MONITORING STATION *
* POWDER SPRINGS, GA *
****

FM TO FCC DISTANCE = 37.1 KM;BEARING = 248.2 (DISTANCE IS WITHIN 80. KM AND ERP 25 KW OR MORE)

****

AZIMUTH FROM	AZIMUTH TO	CALL	STS	FILE NUMBER	CITY	ST	C	LAT (D.MMSS)	LONG (D.MMSS)	REL	CHN	ERP (KW) HORZ	ERP (KW) VERT	HAAT (M)	D A	I-CON F5010 (KM)	P-CON F5050 (KM)	DIST (KM)	IR RSEP (KM)	IC RSEP (KM)	REZ IR
297.0	116.6	WTSHFM	LIC	BLH921001KC	Rockmart	GA	A	34.1503	84.5905	2ND	296C2	45.H	45.V	158				65.4	56.		
201.4	21.0	WCGQ	LIC	BLH861124KA	Columbus	GA	A	32.2759	85.0323	1ST	297C	100.H	100.V	308				180.9	176.		C
63.1	244.1	WJMZFM	LIC	BLH790510AD	Anderson	SC	A	34.4206	82.3620	1ST	297C	100.H	100.V	308				179.2	176.		C
135.5	316.4	WDBN	LIC	BLH940315KA	Wrightsvi	GA	A	32.3705	82.4605	CO	298A	6.0H	6.0V	100				211.6	142.		
175.1	355.1	WAMJ	CP	BPH870727MF	Roswell	GA	A	33.5548	84.2045	CO	298A	6.0H	6.0V	98				6.3	142.		.
315.3	134.8		VAC		La Fayett	GA	A	34.4231	85.1333	CO	298A	H	V					113.5	142.		DEL
313.3	132.8	NEW	APP	BPH920304MH	La Fayett	GA	A	34.4138	85.1612	CO	298A	2.75H	2.75V	104				115.3	142.		DEL
315.3	134.8		DEL	RM9151	La Fayett	GA	A	34.4231	85.1333	CO	298A	H	V					113.5	142.		DEL
COMMENT EFFECTIVE 3/9/98										**DOCKET**97-196 **											
263.0	81.7	WRAX	LIC	BLH910708KB	Birmingha	AL	A	33.4352	86.3757	1ST	299C	100.H	100.V	377				213.0	176.		
16.9	197.2	WIVKFM	LIC	BLH911008KA	Knoxville	TN	A	35.4841	83.4010	1ST	299C	91.H	91.V	626				211.8	176.		
151.7	332.1	WPEZ	LIC	BLH890221KA	Macon	GA	A	32.4512	83.3346	2ND	300C1	100.B	100.B	210				155.2	76.		
151.7	332.1	WPEZ	DEL	RM9204	Macon	GA	A	32.4512	83.3346	2ND	300C1	H	V	0				155.2	76.		
											DOCKET98-18 **										
185.7	5.7	WPEZ	ADD	RM9204	Hampton	GA	A	33.1530	84.2621	2ND	300C1	H	V	0				81.2	76.		C
COMMENTSite Restriction 20.4km Southwest											**DOCKET**98-18 **										

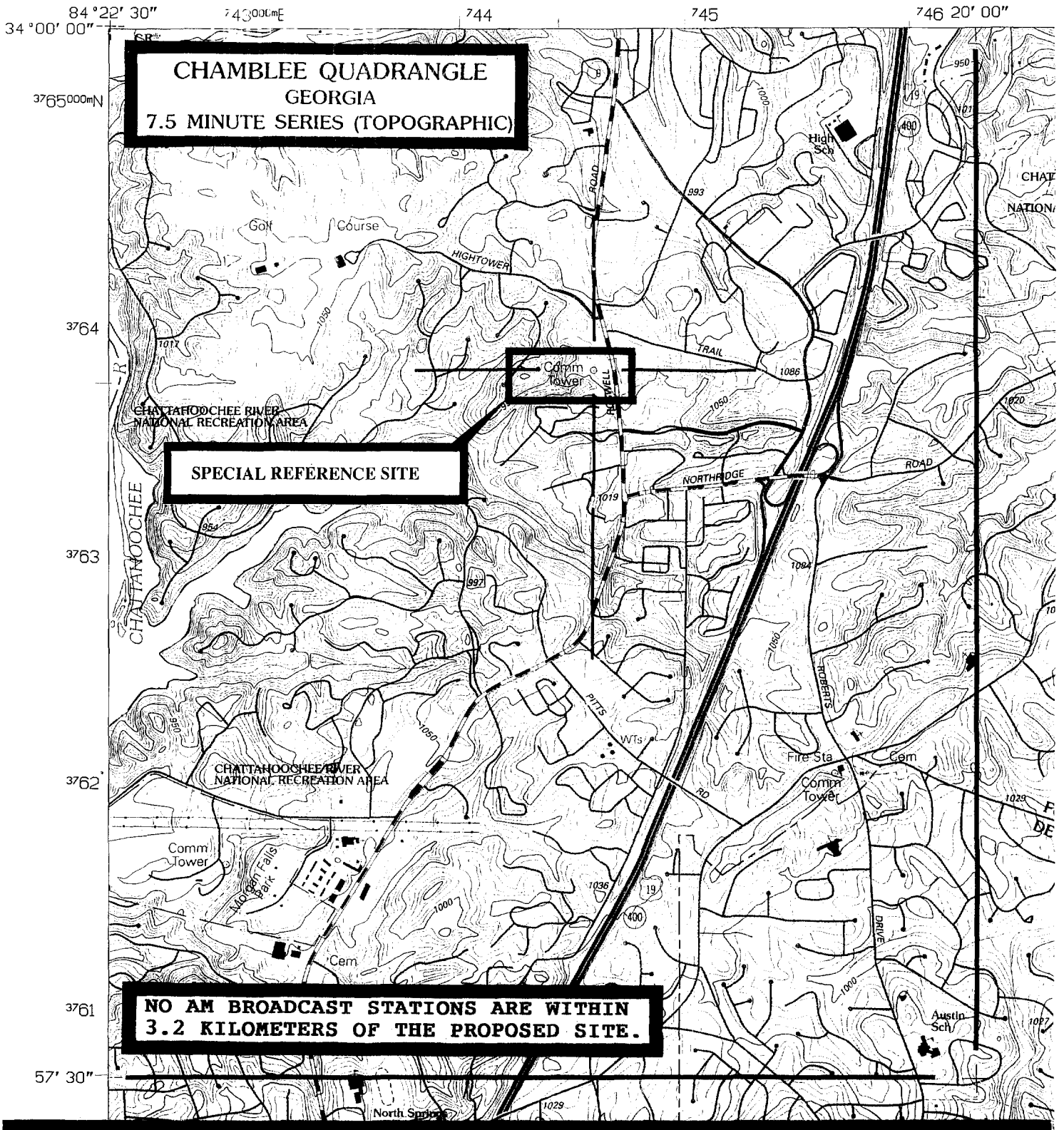
****

THERE WERE 0 AM STATIONS WITHIN 6.43 KM (4 MI) OF THE FM REFERENCE COORDINATES

C3 CHANNEL ALLOCATION –
SPECIAL REFERENCE SITE
RADIO STATION WAMJ
ROSWELL, GEORGIA
Ch. 298C3 9.2 KW–DA 163 M HAAT

MULLANEY ENGINEERING, INC.
GAITHERSBURG, MARYLAND
FIGURE 8
MARCH 1998

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY



TOPOGRAPHIC MAP
RADIO STATION WAMJ
ROSWELL, GEORGIA
CH. 298C3 9.2 KW-DA 163 M HAAT

MULLANEY ENGINEERING, INC.
GAITHERSBURG, MARYLAND
FIGURE 8-A
MARCH 1998

SECTION VI - EQUAL EMPLOYMENT OPPORTUNITY PROGRAM

Does the applicant propose to employ five or more full-time employees? ☐ Yes ☐ No

If Yes, the applicant must include an EEO program called for in the separate Broadcast Equal Employment Opportunity Program Report (FCC Form 396-A).

SECTION VII - CERTIFICATIONS

1. Has or will the applicant comply with the public notice requirements of 47 C.F.R. Section 73.3580? ☒ Yes ☐ No

2. Has the applicant reasonable assurance, in good faith, that the site or structure proposed in Section V of this form, as the location of its transmitting antenna, will be available to the applicant for the applicant's intended purpose? ☒ Yes ☐ No

   If No, attach as an Exhibit, a full explanation. Exhibit No.

3. If reasonable assurance is not based on applicant's ownership of the proposed site or structure, applicant certifies that it has obtained such reasonable assurance by contacting the owner or person possessing control of the site or structure.

   Name of person contacted: Andrea Lowry

   Telephone No. (include area code): 713-570-3305

   Person contacted: (check one box below:

   ☐ Owner ☒ Owner's Agent ☐ Other (specify)

4. By checking Yes, the applicant certifies, that, in the case of an individual applicant, he or she is not subject to a denial of federal benefits that includes FCC benefits pursuant to Section 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C. Section 862, or, in the case of a non-individual applicant (e.g., corporation, partnership or other unincorporated association), no party to the application is subject to a denial of federal benefits that includes FCC benefits pursuant to that section. For the definition of a "party" for these purposes, see 47 C.F.R. Section 1.2002(b). ☒ Yes ☐ No

The APPLICANT hereby waives any claim to the use of any particular frequency as against the regulatory power of the United States because of the previous use of the same, whether by license or otherwise, and requests an authorization in accordance with this application. (See Section 304 of the Communications Act of 1934, as amended.)

The APPLICANT acknowledges that all the statements made in this application and attached Exhibits are considered material representations, and that all Exhibits are a material part hereof and incorporated herein.

The APPLICANT represents that this application is not filed for the purpose of impeding, obstructing, or delaying determination on any other application with which it may be in conflict.

In accordance with 47 C.F.R. Section. 1.65, the APPLICANT has a continuing obligation to advise the Commission, through amendments, of any substantial and significant changes in information furnished.

I certify that the statements in this application are true, complete, and correct to the best of my knowledge and belief, and are made in good faith.

Name Frank W. Johnson, Jr.	Signature Frank W. Johnson Jr.
Title President	Date March 6, 1998
Typed or Printed Name of Person Signing	

WILLFUL FALSE STATEMENTS ON THIS FORM ARE PUNISHABLE BY FINE AND/OR IMPRISONMENT (U.S. CODE, TITLE 18, SECTION 1001), AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION PERMIT (U.S. CODE, TITLE 47, SECTION 312(a)(1)), AND/OR FORFEITURE (U.S. CODE, TITLE 47, SECTION 503).