

TECHNICAL EXHIBIT
AMENDMENT TO
APPLICATION FM CONSTRUCTION PERMIT
RADIO STATION WZZK-FM
BIRMINGHAM, ALABAMA

JULY 22, 2002

CH 284C0 100 KW 404 M

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Technical Narrative

The technical exhibit of which this narrative is part was prepared on behalf of radio station WZZK-FM assigned to Birmingham, Alabama. WZZK-FM presently is licensed on Channel 284C for an effective radiated power of 100 kilowatts with an antenna height above average terrain of 396 meters.¹ It is proposed in the initial application to relocate WZZK-FM to a new tower being constructed nearby (0.12 kilometer away) and increase the radiation center height above average terrain to 404 meters.² By this amendment, it is also now proposed to reclassify WZZK-FM as a Class C0 facility as requested by the Commission.

Proposed Transmitter Location

The transmitting facility will be located on a new master FM antenna mounted on a new tower located on Red Mountain in Birmingham, Alabama. The location is uniquely described by the following geographic coordinates:

33° 29' 04" North Latitude
86° 48' 25" West Longitude

¹ See FCC File Number: BLH-19831014AB.

² See FCC File Number: BPH-20020227ACS.

A sketch showing the antenna and existing supporting structure is shown on Figure 1.

Interference Concerns

The 115 dBu predicted "blanketing" contour of the proposed station would extend radially 4 kilometers from the transmitting site. The applicant recognizes its responsibility to resolve complaints of interference, including blanketing and receiver-induced interference as required by Sections 73.315(b), 73.316(e) and 73.318.

FCC Predicted Coverage Contours

The predicted coverage contours for the proposed operation were calculated in accordance with the provisions of Section 73.313. Pursuant with current FCC practice, the distances to the contours were calculated without consideration given to terrain roughness correction factors.

The average terrain elevations from 3 to 16 kilometers along eight radials evenly spaced at 45 degree intervals were obtained from a previous co-located WTTO(TV) application for construction permit. The terrain elevations were then used in combination with the effective radiated power for determining the distances to coverage contours.

Figure 2 is a map showing the predicted coverage contours. As the map illustrates, the FCC predicted 70 dBu contour entirely encompasses the principal community of Birmingham.

Proposed Site Allocation Study

Channel 284C0 at the proposed site will satisfy the Commission's minimum separation distance requirements, specified in Section 73.207(b) of the Rules, to all assignments as shown in the tabulation provided in Figure 3.

Radiofrequency Electromagnetic Field Exposure

The proposed facility has been evaluated in terms of potential radiofrequency electromagnetic field exposure at ground level in accordance with OST Bulletin No. 65, *Evaluating Compliance with FCC Specified Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields*.³ The power density at the base of the tower was calculated using the appropriate procedure contained in Section 2, Supplement A, *Additional Information for Radio and Television Broadcast Stations*, of the Bulletin.

For the calculation, a combined horizontal and vertical polarized effective radiated power of 200 kilowatts is employed with a radiation center of 308 meters above ground level. The master antenna will be a Dielectric TAV-8FMB antenna. As can be seen from Figure 4, the downward relative field value for horizontal depression angles greater than 20° will not exceed 0.2. Therefore, using this downward relative field value of 0.2, it is calculated that the maximum power density at ground level resulting from this facility is less than 0.003 mW/cm². This is less than five percent of the maximum Commission guideline value in an uncontrolled environment for a FM radio station.⁴

³ OET Bulletin 65, Second Edition 97-01, August, 1997.

⁴ The FCC maximum guideline for a FM broadcast station in an uncontrolled environment is 0.2 mW/cm².

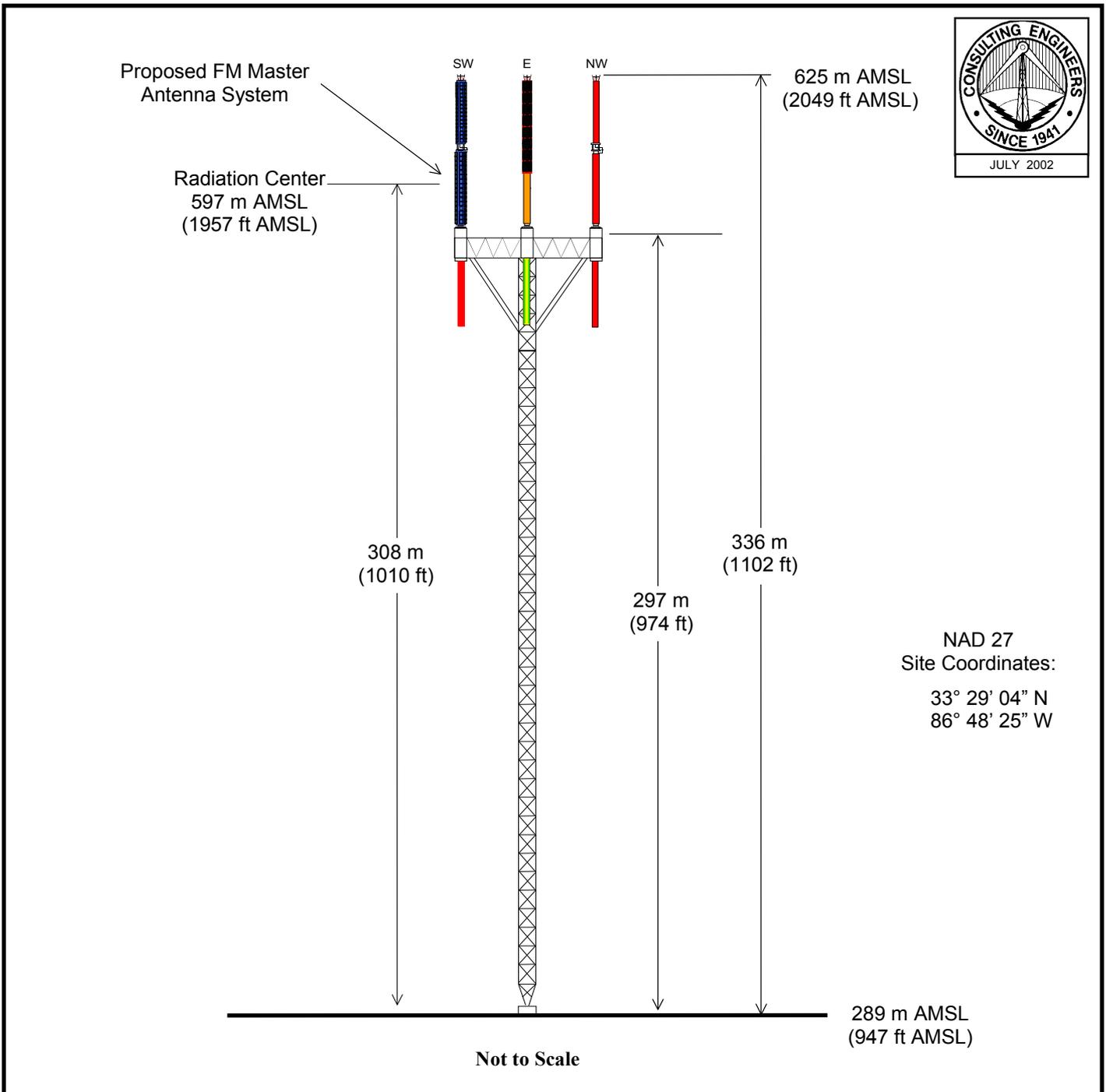
When it becomes necessary for workers to ascend the tower, appropriate measures, such as reduction or shut down of power if necessary, shall be taken to ensure that the human exposure to radiofrequency electromagnetic will not exceed the FCC guidelines.

Charles A. Cooper

July 22, 2002

du Treil, Lundin & Rackley, Inc.
201 Fletcher Avenue
Sarasota, Florida 34237
941.329.6000

Figure 1



Tower Reg. No. 1226663

ANTENNA AND SUPPORTING STRUCTURE

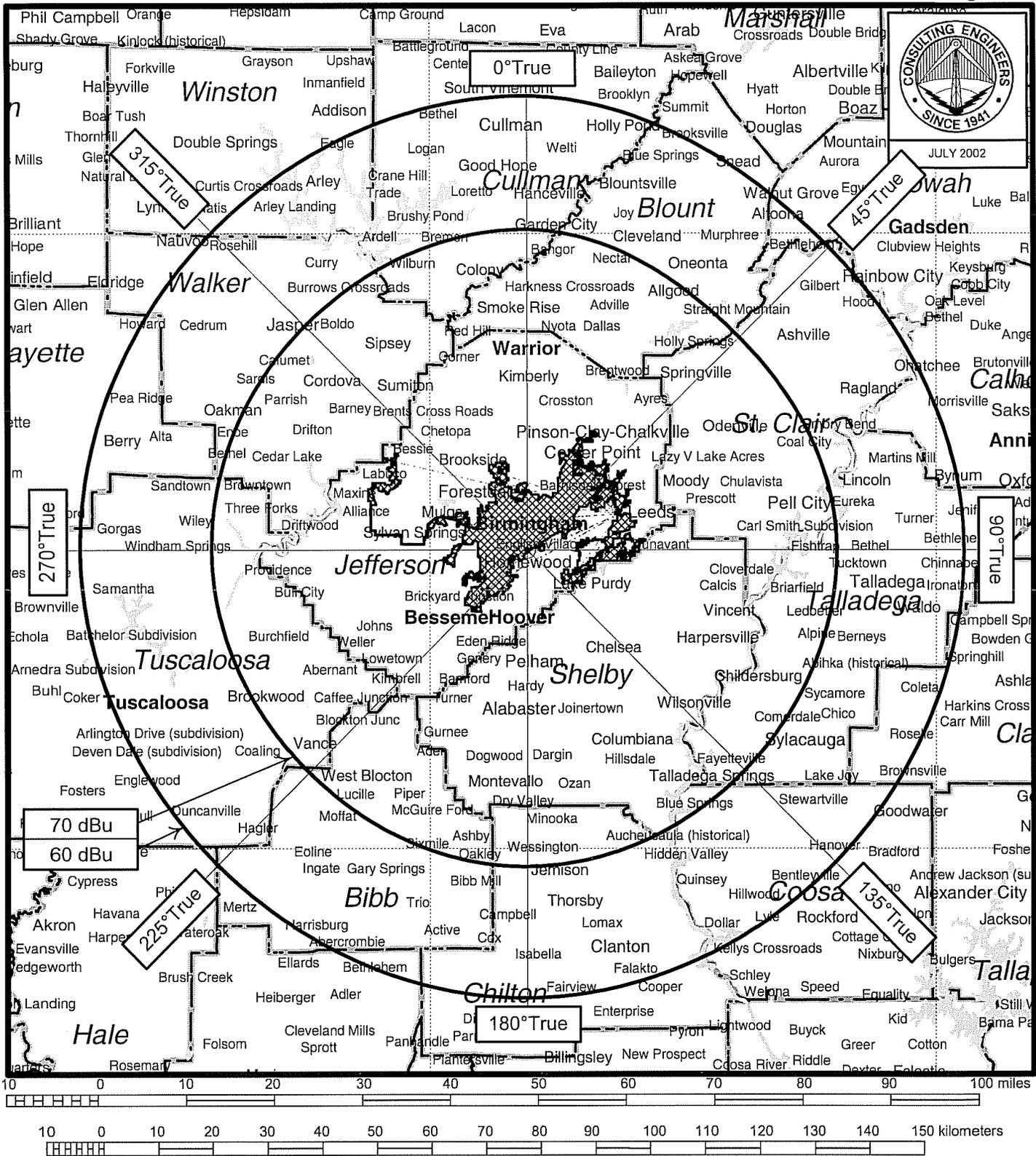
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du Treil, Lundin & Rackley, Inc. Sarasota, Florida

Figure 2



FCC PREDICTED COVERAGE CONTOURS

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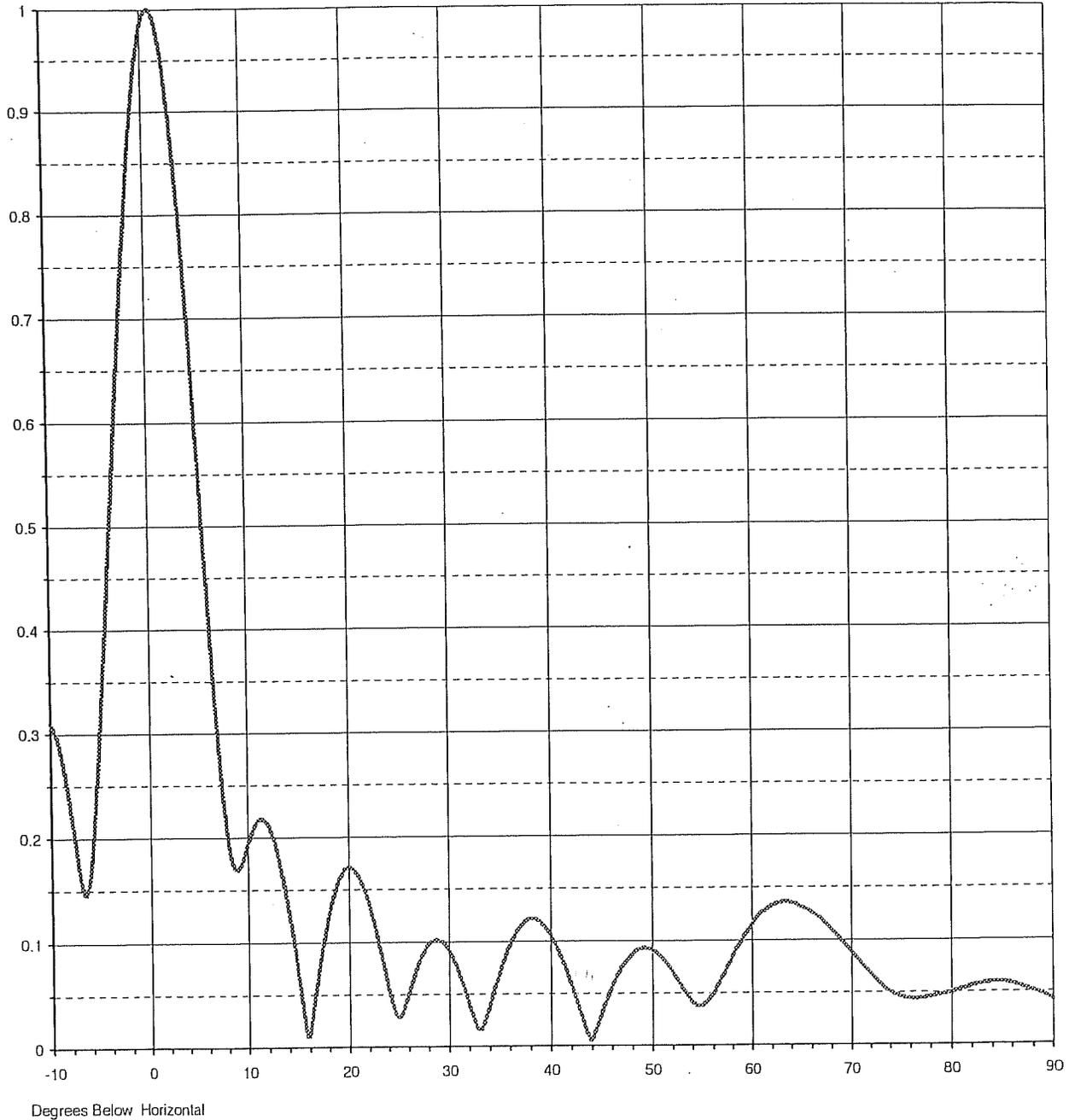
Allocation (Separation) Study

33° 29' 04" North Latitude
 86° 48' 25" West Longitude

Call Id	City St	File Status Num	Channel Freq	ERP HAAT	DA Id	Latitude Longitude	73 215	Bear	Dist. (km)	Req min
WQZZ 31145	EUTAW AL APP C	BPH 20010402AAI	282A 104.3	3.7 130	N	32-58-24 087-46-23	Y	238.0	106.41	86.0
WQZZ 31145	EUTAW AL APP C	BPH 20010402AAI	282A 104.3	3.7 130	N	32-58-35 087-46-36	N	238.2	106.51	86.0
WQZZ 31145	EUTAW AL LIC C	BMLH 19980806KC	282A 104.3	4.7 113		32-55-19 087-49-08		236.7	113.11	86.0
WZZK-F 48724	BIRMINGHAM AL APP C	BPH 20020227ACS	284C 104.7	100 404	N	33-29-04 086-48-25	N	98.7	0.00	
<i>(Applicant's proposal being herein amended.)</i>										
WZZK-F 48724	BIRMINGHAM AL LIC C	BLH 19831014AB	284C 104.7	100 396	N	33-29-02 086-48-21	N	121.0	0.12	
<i>(Applicant's subject station)</i>										
WSGM 14730	COALMONT TN LIC C	BLH 19931201KA	284A 104.7	1 167	Y	35-16-44 085-44-02	N	26.0	222.17	215.0
WFSH-F 56390	ATHENS GA LIC C	BLH 19890707KA	284C1 104.7	100 299	N	33-51-56 083-49-34	N	80.4	279.65	259.0
WSLY 24820	YORK AL LIC C	BLH 19940822KB	285C2 104.9	50 150	N	32-16-54 088-15-23	N	225.7	190.23	176.0
WFXO 59614	IUKA MS LIC C	BLH 19900827KB	285C2 104.9	50 135	N	34-46-35 088-23-40	N	315.0	204.89	176.0
WQSB 58945	ALBERTVILLE AL CP C	BPH 20001208ADR	286C2 105.1	30 192	N	34-21-16 086-26-15	Y	19.3	102.37	89.0

ELEVATION PATTERN

RMS Gain at Main Lobe	3.68 (5.66 dB)	Beam Tilt	0.75 deg
RMS Gain at Horizontal	3.60 (5.56 dB)	Frequency	104.70 MHz
Calculated / Measured	Calculated	Drawing #	08V370075-90



VERTICAL PLANE RELATIVE FIELD PATTERN

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