

## TECHNICAL REPORT

This technical report has been developed in support of an application for a minor modification to the construction permit, FCC File No. BPH-20031229ACC, for station WTNE-FM on 249C2 at Trenton, TN. A change in tower site is requested.

### **I. Allocation Analysis:**

The data for all terrain in this report was obtained from the V-Soft PROBE 3 computer program, utilizing the NGDC thirty (30) second terrain database. The 60 and 70 dBu F(50,50) contours were plotted accordingly. The HAAT was calculated using CONTOUR with the same database.

WTNE-FM meets 73.207 spacing requirements at the proposed transmitter site to all facilities and allocations, as is demonstrated in exhibit E-1.

An effective radiated power of 50.0 kW is specified at a HAAT of 123 meters (60 dBu = 48.4 km).

The following exhibits are provided:

- E-1 WTNE-FM.CP Spacing Study
- E-2 WTNE-FM.CP HAAT Calculation
- E-3 WTNE-FM.CP 70 dBu Contour Plot
- E-3A WTNE-FM.CP 70 dBu Enhanced Contour Plot
- E-4 WTNE-FM.CP Line of Sight Profile to Trenton, TN
- E-5 WTNE-FM.CP ASR Registration

### **II. Site:**

The facility is to be located on an existing tower, ASR no. 1043180, at coordinates: **(NAD 27) 35-44-35 W 88-59-19 N.**

### **III. Community 70 dBu Coverage:**

The WTNE-FM facility will place a 70 dBu contour over the community of Trenton, TN, in compliance with Section 73.315, as is demonstrated in exhibit E-3 and E-3A.

### **IV. Blanketing:**

The 115 dBu blanketing contour is calculated to be 2.79 km. The calculation was made in accordance with the Commission's formula:

$$115 \text{ dBu (km)} = 1.609 [0.245 (P \text{ kw})^{\frac{1}{2}}].$$

The applicant accepts the responsibility for correction of any objectionable interference or blanketing problems in accordance with Commission rules.

### **V. Antenna System and Environmental Considerations:**

A ten bay full-wavelength antenna will be mounted on the tower at a COR AGL of 107 meters. To the applicant's knowledge, no adverse impact will result to any applicable 1.1307 category. Consequently, no environmental statement is provided.

The RF contribution for the proposed facility was evaluated utilizing the Commission's FMModel program at a height 2 meters above ground level. The maximum radiation was found to be 10.52 microwatts/cm<sup>2</sup> at 28 meters, which is at the threshold of the 5% of the maximum excluding it from consideration, but it is

## Charles M. Anderson Associates

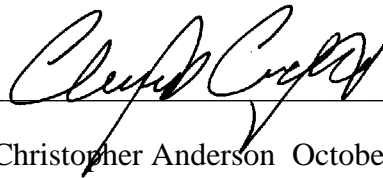
Broadcast Consultants  
1519 Euclid Avenue  
Bowling Green, KY 42103

Phone 205-782-0246  
Fax 270-793-9129  
Cell 270-535-4432

significantly below the maximum 200 microwatts/cm<sup>2</sup> permissible for general public exposure.

### **VI. Conclusion:**

It is concluded that the minor modification of the WTNE-FM CP is in full compliance with the Commission rules and policies.

A handwritten signature in black ink, appearing to read 'Christopher Anderson', is written over a horizontal line.

Christopher Anderson October 24, 2006  
andersce@yahoo.com

© 2006 Charles M. Anderson Associates

## E-1 WTNE-FM Spacing Study

## REFERENCE

35 44 35 N.

CLASS = C2

## DISPLAY DATES

DATA 10-20-06

88 59 19 W.

Current Spacings

SEARCH 10-23-06

----- Channel 249 - 97.7 MHz -----

Call		Channel	Location		Azi	Dist	FCC	Margin
WTNE-FM	CP	249C2	Trenton	TN	88.9	8.26	190.0	-181.74
WTNE-FM	RSV	249C2	Trenton	TN	15.1	21.59	190.0	-168.41
WTNE-FM	LIC-N	249C2	Trenton	TN	10.4	38.70	190.0	-151.30
AL9544	RSV	249C1	Augusta	AR	254.6	227.47	224.0	3.47
KJSM-FM	LIC	249C1	Augusta	AR	254.6	227.47	224.0	3.47
RDEL	DEL	250C	Nashville	TN	79.5	197.76	188.0	9.76
WWMS	LIC	248C1	Oxford	MS	185.0	175.39	158.0	17.39
WTNV	CP -N	247A	Tiptonville	TN	333.2	75.58	55.0	20.58
WXXM	LIC	251C1	Millington	TN	229.3	99.96	79.0	20.96
KBXB	LIC-N	250C2	Sikeston	MO	337.3	151.27	130.0	21.27
RADD	ADD	250C0	Nashville	TN	79.5	197.76	176.0	21.76
WSIX-FM	LIC	250C0	Nashville	TN	79.5	197.79	176.0	21.79
WKJQ-FM	LIC-N	247A	Parsons	TN	96.4	79.31	55.0	24.31
WHRK	LIC	246C1	Memphis	TN	239.1	111.69	79.0	32.69
AU7051245VAC		250A	Marietta	MS	160.4	145.64	106.0	39.64
WRIK-FM	LIC	252C1	Metropolis	IL	21.2	120.32	79.0	41.32
WLLX	LIC-N	248C2	Lawrenceburg	TN	106.2	178.36	130.0	48.36
WKXM-FM	LIC-Z	249A	Winfield	AL	150.0	218.69	166.0	52.69
WLLX	RSV	248C3	Lawrenceburg	TN	109.2	169.70	117.0	52.70
WLLX	RSV	248C2	Lawrenceburg	TN	107.7	183.26	130.0	53.26
WLLX	RSV	248C2	Lawrenceburg	TN	107.7	183.26	130.0	53.26
WLLX	RSV	248C3	Lawrenceburg	TN	109.4	173.18	117.0	56.18
WQUL	LIC	249A	West Frankfort	IL	1.2	223.22	166.0	57.22
WWKY	LIC	249A	Providence	KY	33.8	224.61	166.0	58.61
AL4925	RSV	249A	Winfield	AL	149.0	225.42	166.0	59.42
KOEA	LIC	248C2	Doniphan	MO	300.3	189.59	130.0	59.59
WZZP	LIC	248A	Hopkinsville	KY	50.1	178.71	106.0	72.71
AL1871	RSV	252C3	Loretto	TN	121.8	152.36	56.0	96.36
KHZR	CP -N	249C2	Potosi	MO	327.9	292.39	190.0	102.39
AL7099	RSV	249C2	Potosi	MO	327.4	296.11	190.0	106.11
WKSR-FM	CP -Z	252C3	Loretto	TN	112.8	167.18	56.0	111.18
KHZR	LIC	249C3	Potosi	MO	327.9	292.39	177.0	115.39
WKSR-FM	LIC	252A	Pulaski	TN	110.6	184.56	55.0	129.56
WKLD	LIC-N	249A	Oneonta	AL	130.4	303.55	166.0	137.55
AL2225	RSV	252C2	Black Rock	AR	281.9	198.73	58.0	140.73

-----

## E-2 WTNE-FM HAAT Calculation

N. Lat. = 35 44 35 W. Lng. = 88 59 19

HAAT and Distance to Contour - FCC Method - NGDC 30 SEC

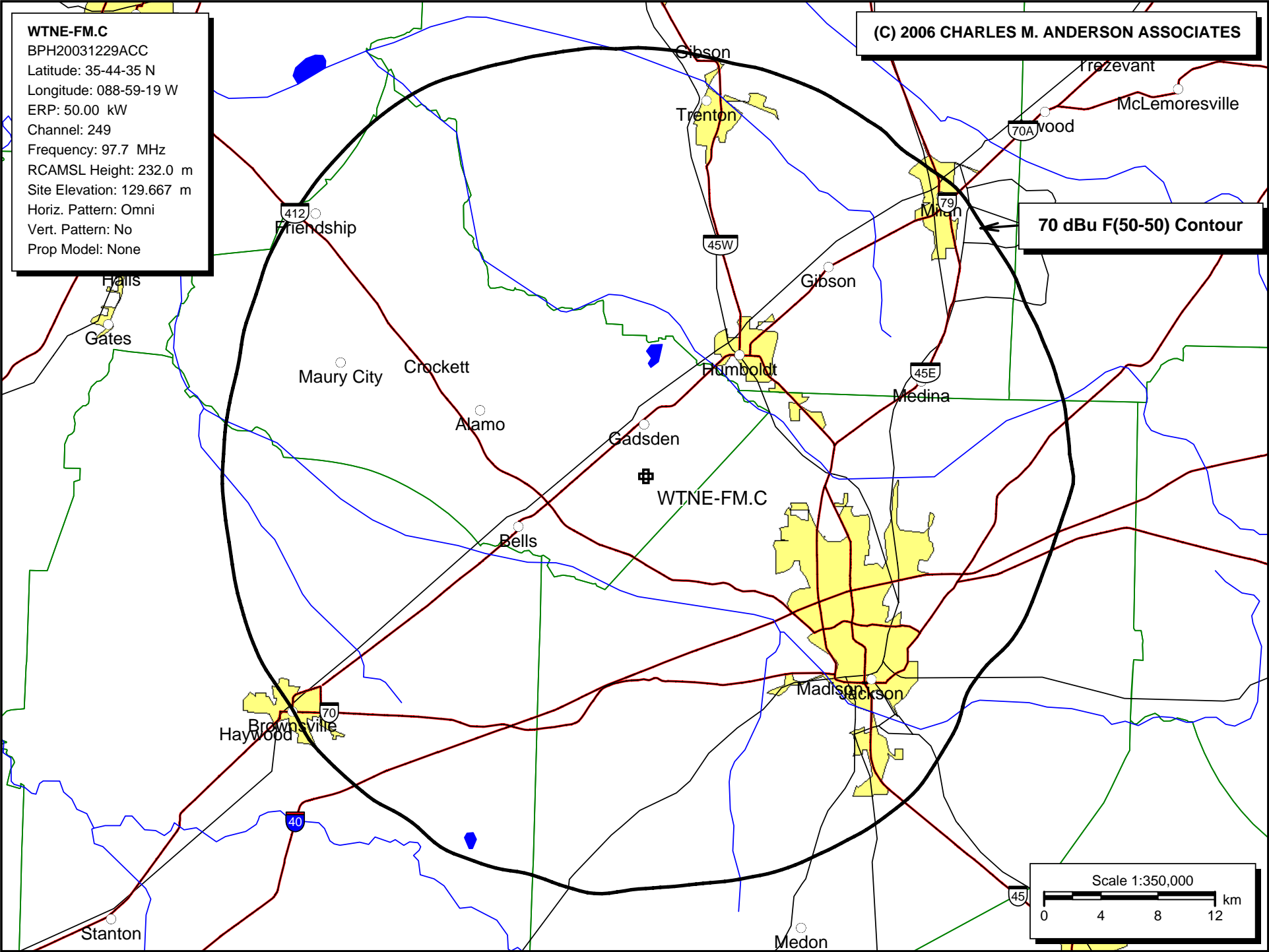
WTNE-F, Grace Broadcasting Services, , BPH20031229ACC

Azi. AV EL HAAT ERP kW dBk Field 60-F5

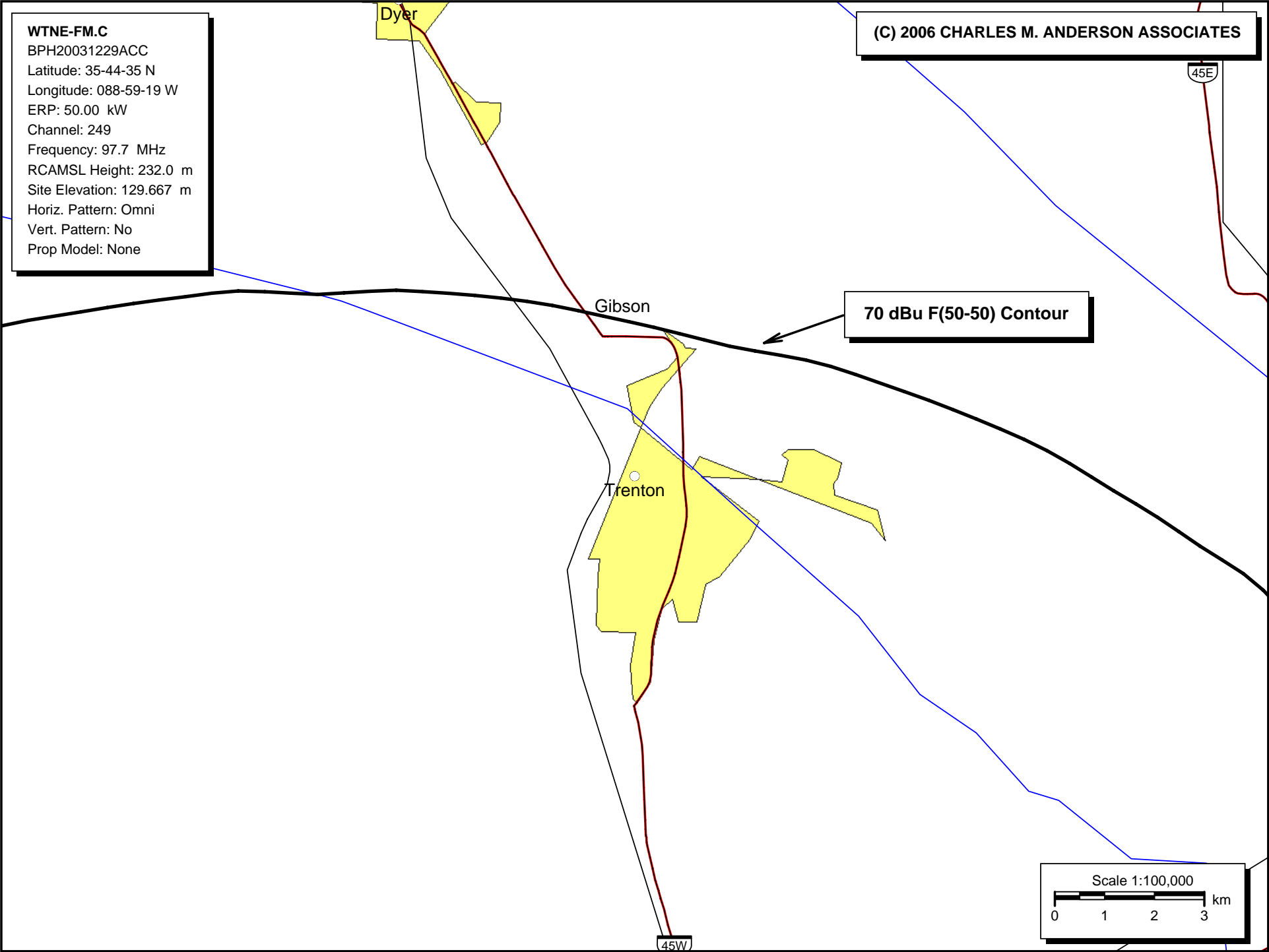
000	106.0	126.0	50.0000	16.99	1.000	48.84
045	110.9	121.1	50.0000	16.99	1.000	48.14
090	106.6	125.4	50.0000	16.99	1.000	48.76
135	119.7	112.3	50.0000	16.99	1.000	46.80
180	117.1	114.9	50.0000	16.99	1.000	47.22
225	108.3	123.7	50.0000	16.99	1.000	48.51
270	109.4	122.6	50.0000	16.99	1.000	48.36
315	95.6	136.4	50.0000	16.99	1.000	50.33

Ave El= 109.19 M HAAT= 122.81 M AMSL= 232 M

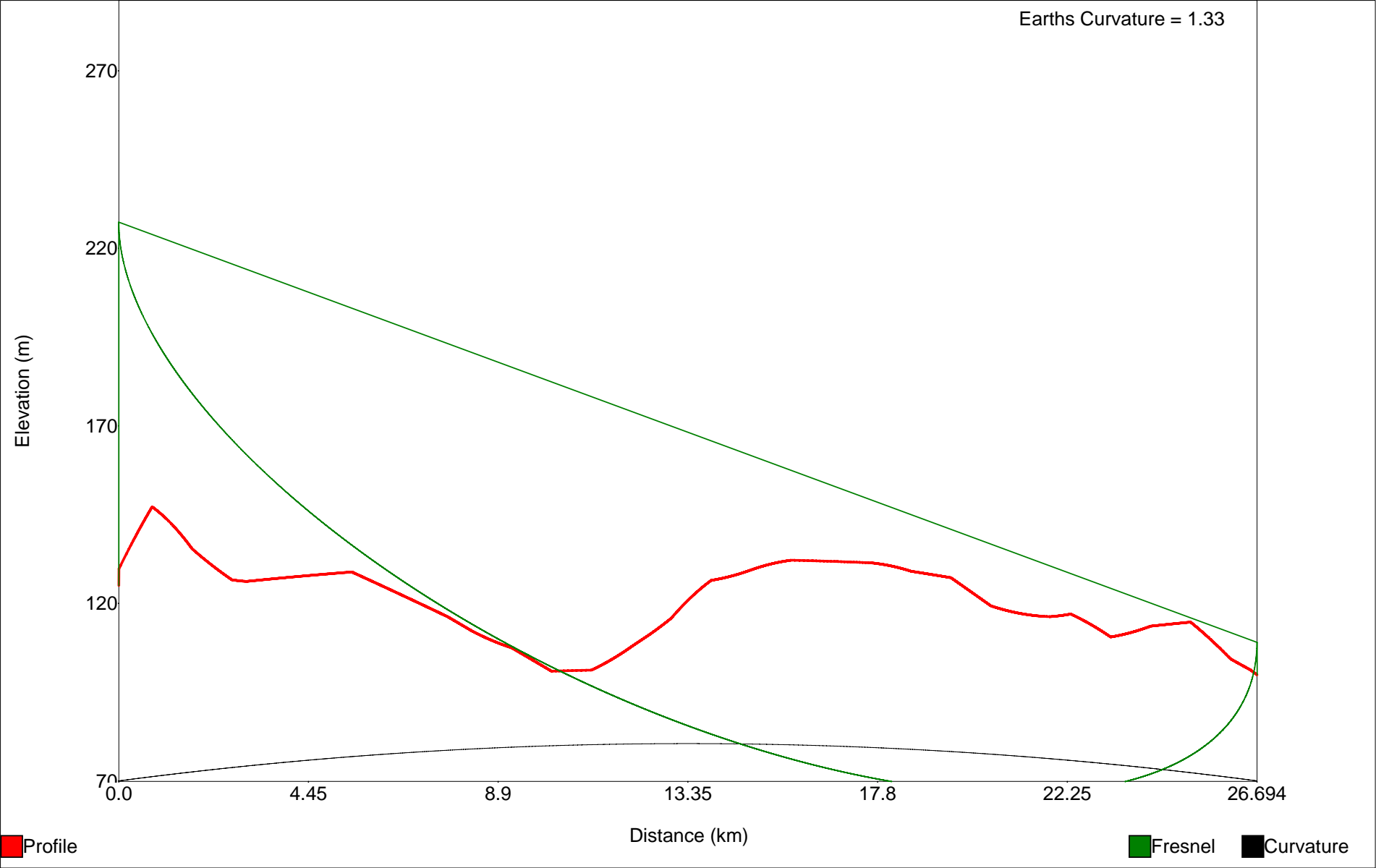
E-3 WTNE-FM 70 dBu Contour Plot



E-3A WTNE-FM 70 dBu Contour - Enhanced Plot



E-4 WTNE-FM Line of Sight Profile



Starting Latitude: 35-44-35 N  
Starting Longitude: 088-59-19 W

End Latitude: 35-58-50 N  
End Longitude: 088-56-29 W

Distance: 26.694414429 km  
Bearing: 9.180 deg

Transmitter Height (AG) = 102.3 m  
Receiver Height (AG) = 9.1 m

Transmitter Elevation = 125.0 m  
Receiver Elevation = 99.9 m

Frequency = 97.7 MHz  
Fresnel Zone: 0.6



# E-5 ASR Registration 1043180

ASR Registration Search

## Registration 1043180

 [Reference Copy](#)  [Map Registration](#)

### Registration Detail

Reg Number	1043180	Status	Constructed
File Number	A0050859	Constructed	11/12/1998
FAA Study	98-ASO-2761-OE	EMI	No
FAA Issue Date	06/01/1998	NEPA	No

### Antenna Structure

Structure Type TOWER - Free standing or Guyed Structure used for Communications Purposes

#### Location (in NAD83 Coordinates)

Lat/Long 35-44-35.0 N 088-59-19.0 W .1 MI E OF GUM FLAT RD  
City, State GADSDEN , TN  
Center of AM Array

### Heights (meters)

Elevation of Site Above Mean Sea Level	Overall Height Above Ground (AGL)
125.0	126.0
Overall Height Above Mean Sea Level	Overall Height Above Ground w/o Appurtenances
251.0	122.0

### Painting and Lighting Specifications

FAA Chapters 4, 6, 13  
Paint and Light in Accordance with FAA Circular Number 70/7460-1J  
.

### Owner & Contact Information

FRN	0001769538	Licensee ID	L00191675
-----	------------	-------------	-----------

#### Owner

LESH COMMUNICATIONS SERVICE INC 335 BELLEVUE ST JACKSON , TN 38301	P: (901)427-9851 E: LESCHCOM@USIT.NET
--	--

#### Contact

P:  
E:

.

### Last Action Status

Status	Constructed	Received	10/13/1998
Purpose	Modification	Entered	10/14/1998
Mode	Mail In (Manual)		

### Related Applications

10/13/1998	A0050859 - Modification (MD)
03/23/1998	A0050858 - New (NE)

.

### Comments

#### Comments

None

.

### Automated Letters

None

.