TECHNICAL EXHIBIT
AMENDMENT TO
APPLICATION FOR CONSTRUCTION PERMIT
GADSDEN STATE COMMUNITY COLLEGE
RADIO STATION WSGN(FM)
GADSDEN, ALABAMA
CH 218C3 6.3 KW (V, MAX-DA) 159 M

Tabulation of Average Elevations
and Distances to Coverage Contour

Radial Bearing (deg. T.)	3-16 Kilometer Average Terrain Elevation* (meters AMSL)	Antenna Height Above Average Terrain (meters)	Effective Radiated Power (kW)	Distance to 60 dBu Contour (kilometers)
0	256.8	127.3	6.30	31.9
10	233.0	151.1	6.30	34.6
20	220.5	163.6	6.30	36.0
30	250.7	133.4	6.30	32.6
40	304.4	79.7	6.30	25.7
45	275.1	109.0	6.30	29.8
50	251.7	132.4	6.30	32.5
60	268.0	116.1	6.30	30.7
70	248.8	135.3	6.30	32.8
80	223.3	160.8	6.30	35.7
90	207.2	176.9	6.30	37.3
100	194.4	189.7	6.30	38.4
110	188.6	195.5	5.01	37.0
120	184.5	199.6	3.16	33.6
130	172.5	211.6	2.00	30.9
135	177.1	207.0	1.58	29.0
140	180.0	204.1	1.26	27.3
150	187.6	196.5	1.00	25.5

*Values for standard eight radials obtained from application BPED-860307MK, others from NGDC 30-second terrain database.

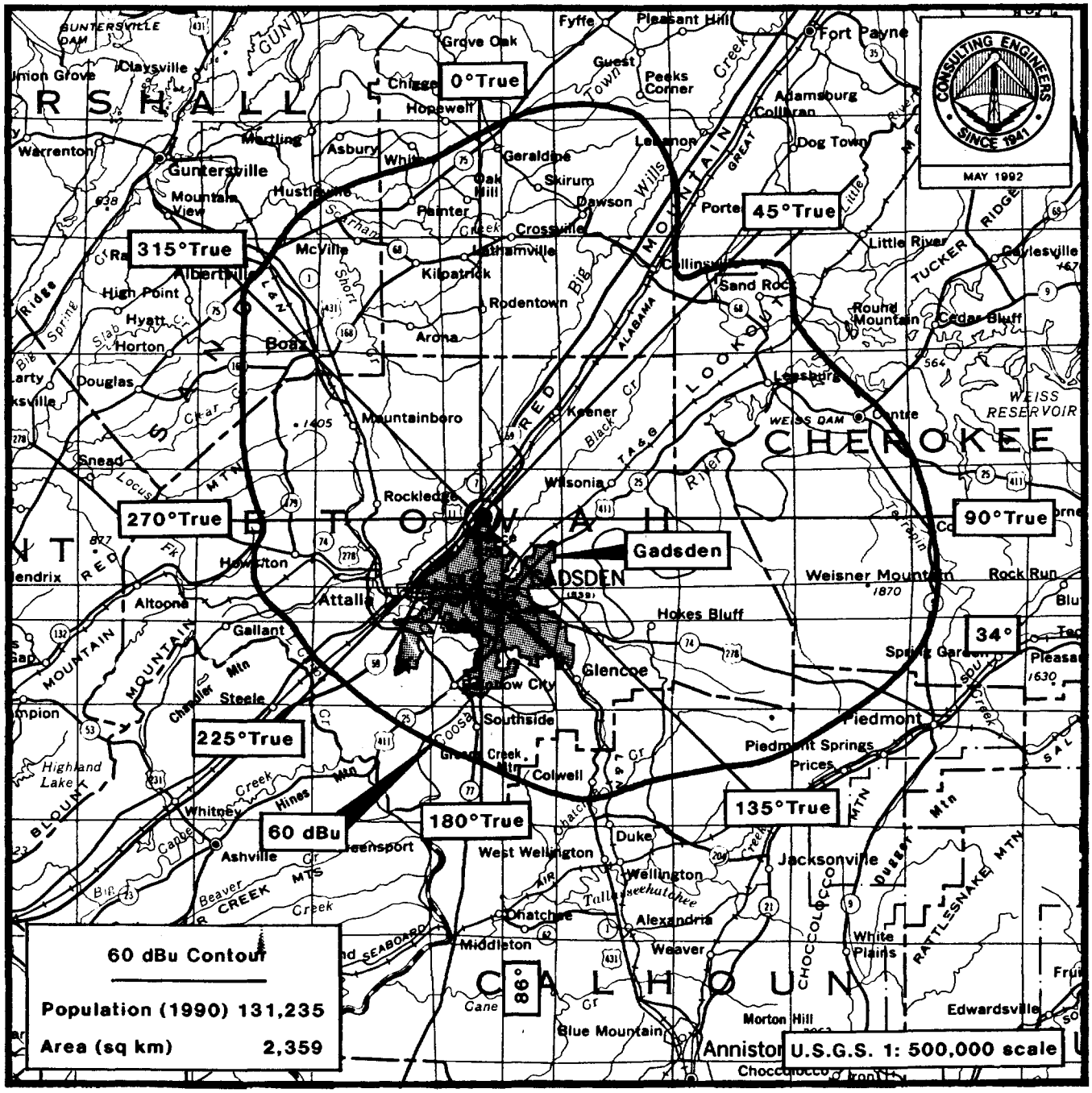
Tabulation of Average Elevations and Distances to Coverage Contour
Gadsden, Alabama

Radial Bearing (deg. T.)	3-16 Kilometer Average Terrain Elevation* (meters AMSL)	Antenna Height Above Average Terrain (meters)	Effective Radiated Power (kW)	Distance to 60 dBu Contour (kilometers)
160	182.6	201.5	0.79	24.5
170	178.1	206.0	0.50	22.2
180	176.7	207.4	0.32	20.0
190	170.9	213.2	0.25	19.1
200	167.9	216.2	0.20	18.2
210	175.8	208.3	0.20	17.8
220	184.8	199.3	0.20	17.4
225	181.8	202.3	0.20	17.6
230	181.8	202.3	0.20	17.6
240	224.7	159.4	0.32	17.6
250	203.3	180.8	0.32	18.8
260	224.6	159.5	0.40	18.7
270	254.7	129.4	0.50	17.7
280	265.4	118.7	0.79	19.2
290	275.7	108.4	1.26	20.6
300	282.6	101.5	2.00	22.2
310	278.4	105.7	3.16	25.2
315	273.8	110.3	3.98	27.0
320	283.1	101.0	5.01	27.3
330	280.5	103.6	6.30	29.1
340	277.6	106.5	6.30	29.5
350	275.9	108.2	6.30	29.7
Average**	225.4	158.7		

*Values for standard eight radials obtained from application BPED-860307MK, others from NGDC 30-second terrain database.

**Average values based on standard eight radials only.

Figure 5



PREDICTED 60 dBu COVERAGE CONTOUR

GADSDEN STATE COMMUNITY COLLEGE

WSGN(FM) GADSDEN, ALABAMA

CH 218C3 6.3 KW(V,MAX-DA) 159 M

duTreil, Lundin & Rackley, Inc. Washington, D.C.

TECHNICAL EXHIBIT
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GADSDEN, ALABAMA
CH 218C3 6.3 KW (V, MAX-DA) 159 M

Allocation Study

Proposed Transmitter Site: 34° 04' 29" North Latitude
86° 01' 11" West Longitude

Station Considered	Maximum Distance to 60 dBu Contour (km)	Interfering Contour/ Maximum Distance to Interfering Contour (dBu)/(km)	Distance From Proposed WSGN(FM) Required* (km)	Distance From Proposed WSGN(FM) Actual (km)
Proposed 217A, Oxford, AL		See Sheet 3		
WAWL(FM), Signal Mountain, TN CH 218A, 0.2 kW (Max-DA), 290 m 35° 09' 42" N/85° 19' 06" W	26.7	40/80.2	127.0	136.7
WAWL(FM) (CP), Red Bank, TN		See Sheet 3		118.5
WUAL-FM, Tuscaloosa, AL		See Sheets 3 and 4		169.0
WWEV(FM), Cumming, GA		See Sheet 3		
WYFD(FM), Decatur, AL CH 219A, 3.0 kW, 115 m 34° 33' 05" N/87° 03' 56" W	25.9	54/38.9	82.8	109.8
Proposed WYFD(FM), Decatur, AL		See Sheet 3		105.7
WLJS(FM), Jacksonville, AL		See Sheet 3		36.5
WKUL(FM), Cullman, AL CH 221A, 3.0 kW, 47 m 34° 10' 34" N/86° 50' 30" W	---	---	42/1	76.7

No intermediate frequency related stations within required separations of 47 CFR 73.207.

/1Required separation per 47 CFR 73.207.

*The required distance is the sum of the maximum distance to the protected contour of the desired station and the maximum distance to the interfering contour of the undesired station or the sum of the maximum distance to the interfering contour of the desired station and the maximum distance to the protected contour of the undesired station, whichever figure is greater. Distances employed for WSGN(FM) proposed interfering contours [F(50,10)] are as follows: 80 dBu = 12.7 km, 54 dBu = 56.9 km, 40 dBu = 100.3 km. The distance employed for the WSGN(FM) proposed 60 dBu contour [F(50,50)] is 38.4 km.

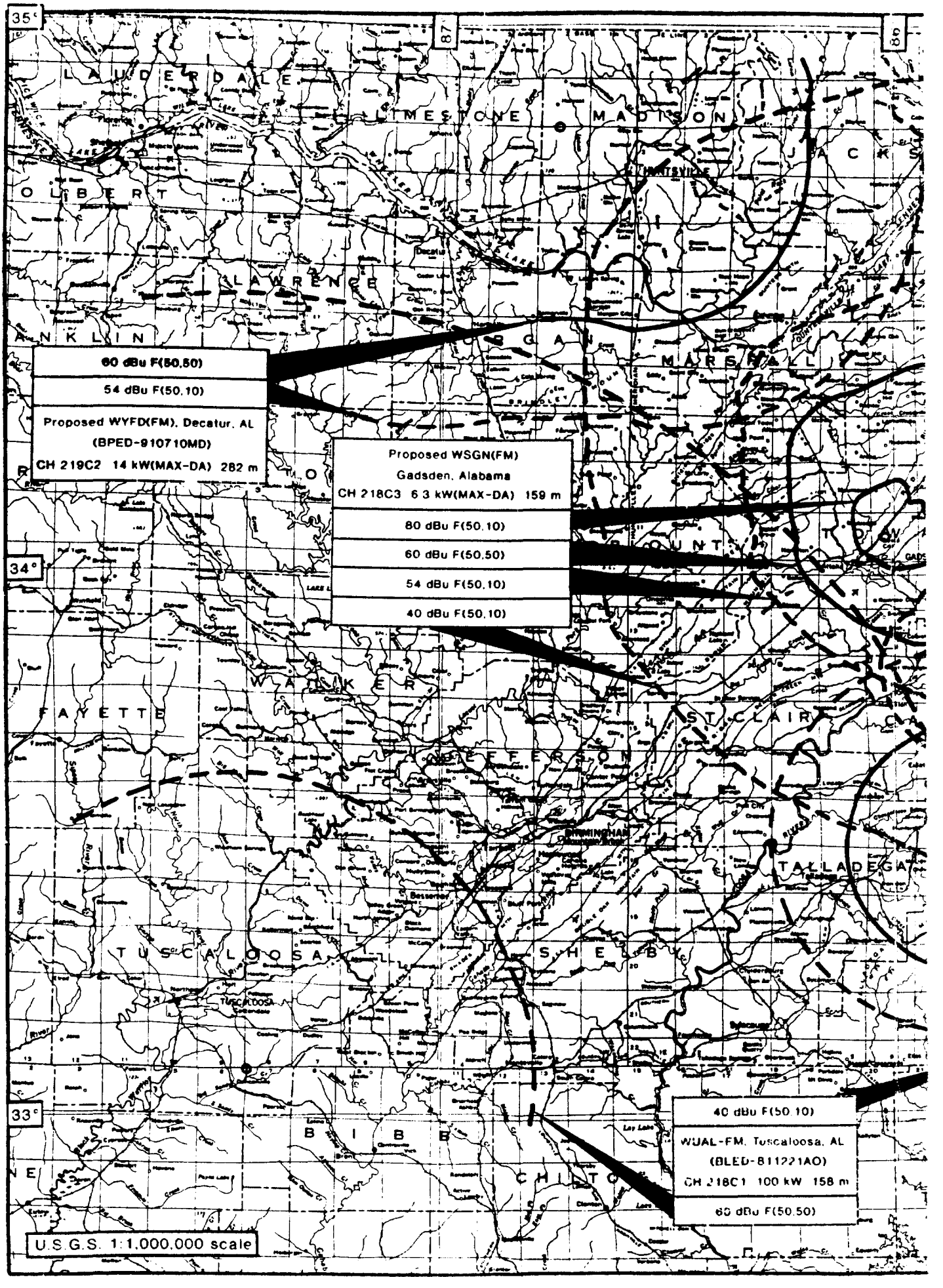
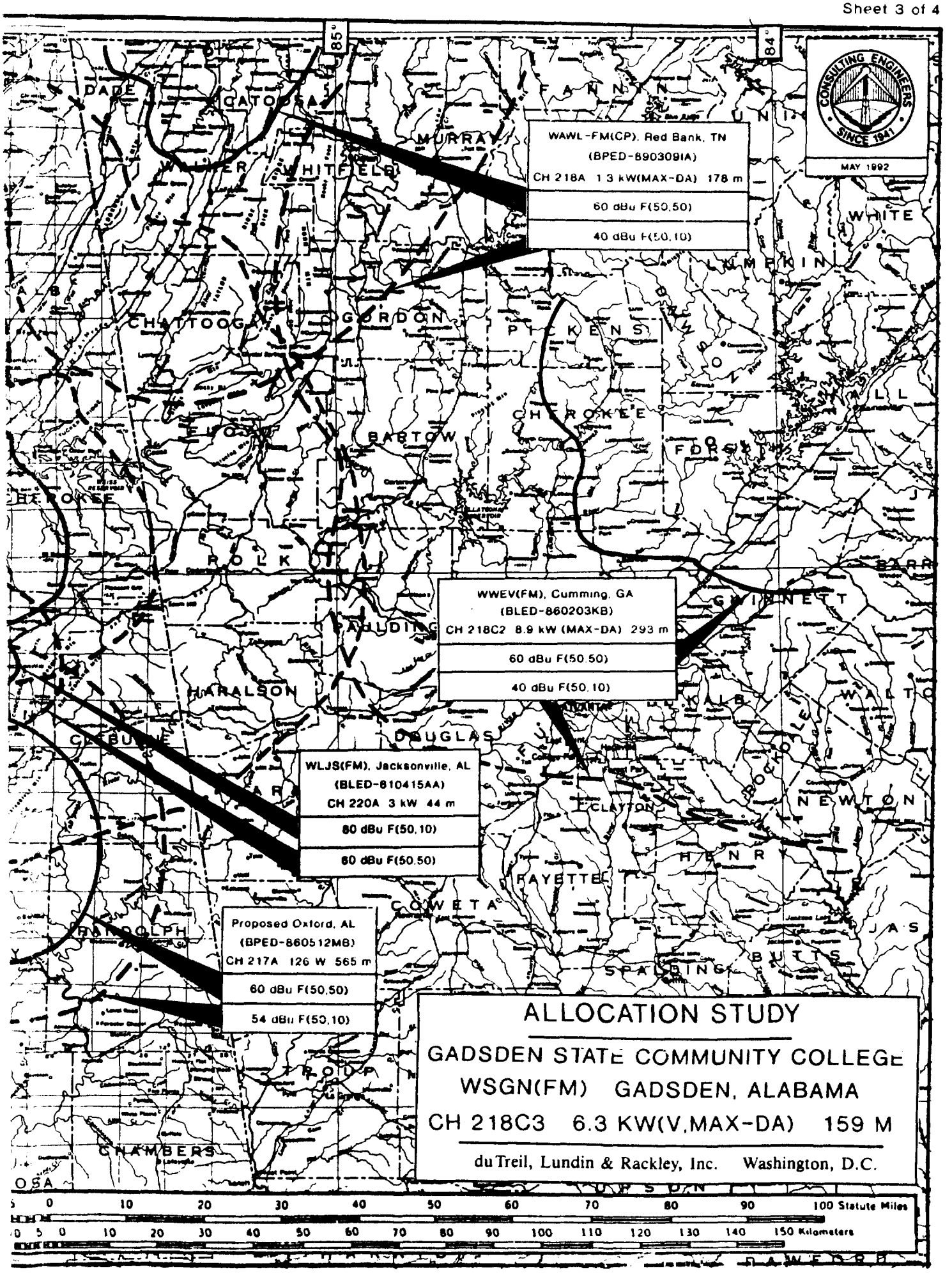
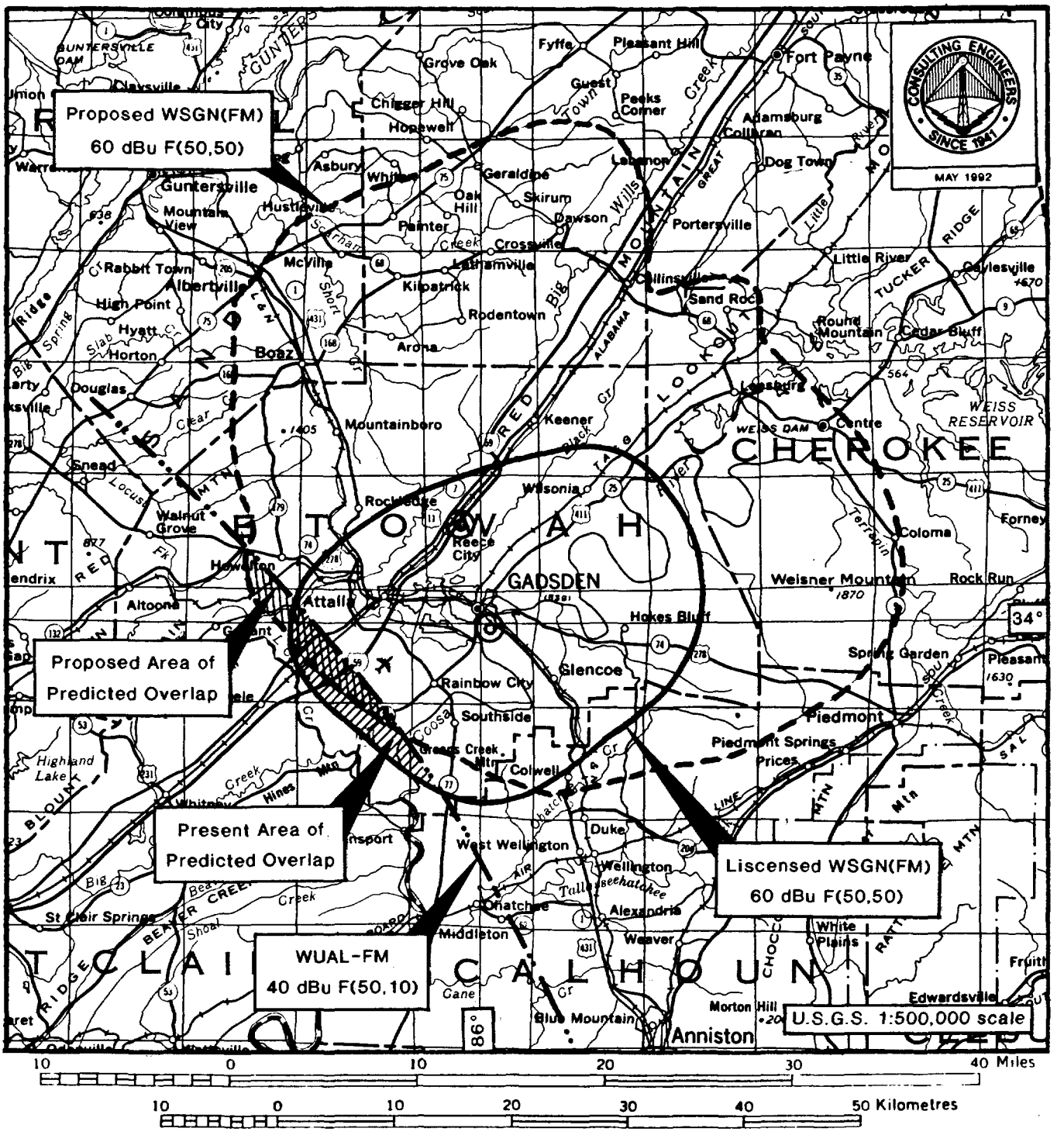

60 dBu F(50,50)
54 dBu F(50,10)
Proposed WYFD(FM), Decatur, AL
(BPED-910710MD)
CH 219C2 14 kW(MAX-DA) 282 m
Proposed WSGN(FM)
Gadsden, Alabama
CH 218C3 6 3 kW(MAX-DA) 159 m
80 dBu F(50,10)
60 dBu F(50,50)
54 dBu F(50,10)
40 dBu F(50,10)
40 dBu F(50,10)
WUAL-FM, Tuscaloosa, AL
(BLED-811221AO)
CH 218C1 100 kW 158 m
60 dBu F(50,50)
U.S.G.S. 1:1,000,000 scale
LAUDERDALE
LIMESTONE
MADISON
HUNTSVILLE
LAWRENCE
MARSHALL
WALKER
FAYETTE
JEFFERSON
ST CLAIR
TALLADEGA
TUSCALOOSA
SHELBY
BIBB
CHILTON
35°
34°
33°
87
86

Figure 6

Sheet 3 of 4





ALLOCATION STUDY

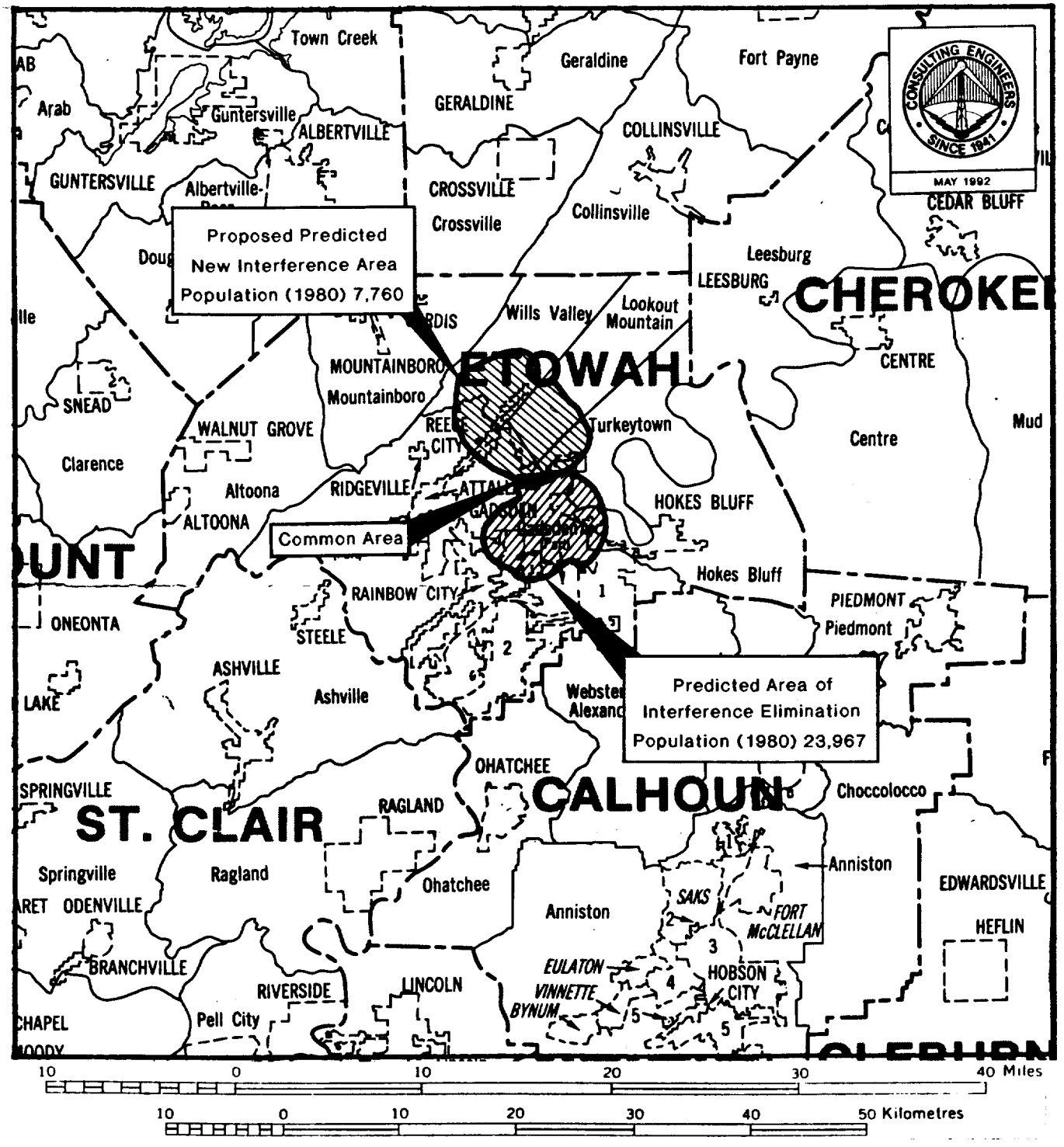
GADSDEN STATE COMMUNITY COLLEGE

WSGN(FM) GADSDEN, ALABAMA

CH 218C3 6.3 KW(V,MAX-DA) 159 M

duTreil, Lundin & Rackley, Inc. Washington, D.C.

Figure 7



TV CHANNEL 6 PROTECTION STUDY

GADSDEN STATE COMMUNITY COLLEGE

WSGN(FM) GADSDEN, ALABAMA

CH 218C3 6.3 KW(V,MAX-DA) 159 M

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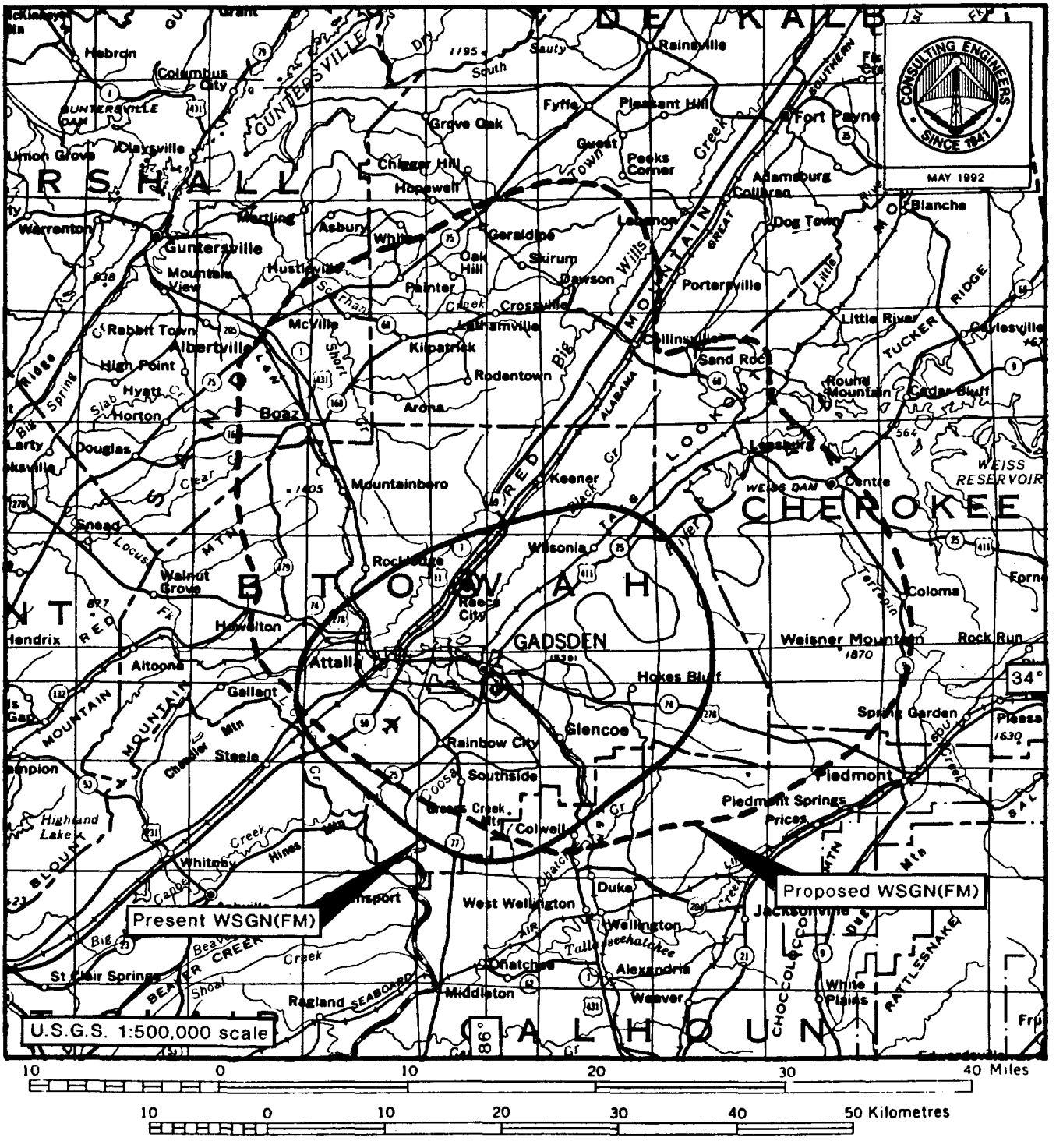
Figure 8



PREDICTED 60 DBU COVERAGE COMPARISON

GADSDEN STATE COMMUNITY COLLEGE

WSGN(FM) GADSDEN, ALABAMA

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