

**TECHNICAL REPORT
MINOR MODIFICATION TO
W229AG**

This technical report has been developed in support of a minor modification to licensed translator W229AG. The facility will be moved to an existing tower (ASR#1223132) with 250 watts ERP as a fill in translator for the HD-2 of FM station WWWQ, on 259C0 licensed to Atlanta, GA (facility ID #73345). E2A demonstrates 60 dBu overlap with the licensed facility.

The data for all terrain utilized in this report and application exhibits were obtained from the V-Soft FMCommander and Probe 3 computer program utilizing the V-Soft NED 30 meter terrain database. The following exhibits are provided to support the modification of the facility:

- E1 Channel Study**
- E1A Interference plot to WPEZ**
- E1A1 FMOVER analysis to WPEZ**
- E1B Interference analysis to WSTR**
- E2 W229AG and WWWQ 60 dBu plot**
- E2A W229AG proposed and W229AG licensed 60 dBu overlap plot**
- E3 W229AG proposed HAAT tabulation**
- E3A W229AG licensed HAAT tabulation**
- E4 Aerial photo of tower site**
- E5 Tower ASR**

Allocation analysis and WSTR Interference Calculation:

Exhibit E1, E1A and E1A1 demonstrate that the proposed facility does not cause interference to any protected facilities. The Radio Assist Powder Springs FM translator application, file number BNPFT-200303127DND, and Immanuel Douglasville, GA FM translation application, file number BNPFT-20030317EAF, have been dismissed in separate actions.

The proposed W229AG facility is located well inside the 2nd adjacent channel WSTR channel 231C0 facility's 60 dBu contour. Therefore, the interference ratio is utilized to determine the actual W229AG interference contour, in accordance with FCC-02-244, paragraph 12. Exhibit E1B shows that WSTR places a 109.4 dBu (50, 50) contour at the W229AG tower site. Adding the 40 dBu 3rd adjacent channel interference ratio yields an interfering contour of 149.4 dBu (50, 10) at 3.8 meters. Therefore, it is

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obvious that the interference contour will not encompass any buildings or roads where radio reception is possible. In fact, the proposed antenna is at an elevation of 348 meters AGL on an existing tower and will not reach the ground. Exhibit E4 shows that there are no tall buildings or highways within 3.8 meters. **A waiver of section 74.1204 is requested in accordance with well-established Commission precedent.**

W229AG Antenna and RF exposure calculation:

W250BC will be located at a COR AGL of 348 meters on an existing tower, ASR no. 1223132, diplexed into the existing master antenna system at coordinates:

33-48-26 N 84-20-22 W (NAD 27).

The RF contribution from the 0.250 kW facility was evaluated using the formula:

$$S \text{ (RF in microwatts/cm}^2\text{)} = \frac{33.4 (F2 - \text{Vert Factor}) X (H \text{ ERP} + V \text{ ERP in watts})}{R^2 \text{ (distance to radiation center in meters)}}.$$

Based on a worst case F factor of 1.0, the RF contribution was calculated to be 0.14 $\mu\text{Watts/cm}^2$ or 0.07% of the general public exposure limit, and well below the 5% level that is excluded from consideration.

Conclusion:

It is concluded that the minor modification of W229AG will comply with all Commission rules and policies.


Charles M. Anderson

April 3, 2010

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E1 CHANNEL STUDY

REFERENCE CH# 229D - 93.7 MHz, Pwr= 0.25 kW, HAAT= 322.9 M, COR= 612 M DISPLAY DATES
 33 48 26.0 N. Average Protected F(50-50)= 23.4 km DATA 04-01-10
 84 20 22.0 W. Omni-directional SEARCH 04-01-10

CH CITY	CALL	TYPE STATE	ANT	AZI. <--	DIST FILE #	LAT. LNG.	Pwr (kW) HAAT (M)	INT (km) COR (M)	PRO (km) LICENSEE	*IN* (Overlap in km)	*OUT*
231C0 Smyrna	AL5038	RSV		175.8	5.3	33 45 35.0	100.000	12.1	83.2	-30.5*<	-79.1*<
		GA		355.8	RM10983	84 20 07.0	450	730			
231C0 Smyrna	WSTR	LIC	CX	175.3	5.3	33 45 33.0	100.000	10.3	73.3	-28.6*<	-69.1*<(1)
		GA		355.3	BLH20060523ADI	84 20 05.0	310	594	Lincoln Financial Media Co		

(1) See technical report analysis. Interfering contour, 149.4 dBu, is 3.8 meters and does not reach any building, road or population.

229C1 Jeffersonville	WPEZ	LIC	NCX	148.1	137.5	32 45 12.0	100.000	165.5	66.8	-51.5*<	0.1
		GA		328.6	BLH20020529ABR	83 33 46.0	207	321	Cumulus Licensing Llc		
229D Sandy Plains	W229AG	LIC	C	340.1	30.6	34 04 00.0	0.010	25.6	7.4	-17.8<	-47.0<
		GA		160.0	BLFT20041116AEB	84 27 10.0		465	Calvary Chapel Of Twin Fal		
229D Powder Springs	637650	APP	C	282.0	38.6	33 52 43.6	0.019	20.7	6.2	-6.2<	-41.6<(2)
		GA		101.8	BNPFT20030317DND	84 44 51.2		369	Radio Assist Ministry, Inc		

(2) Application dismissed in separate action.

229D Douglasville	646310	APP	C	259.2	43.1	33 44 01.0	0.010	26.3	7.7	-7.3<	-37.1<(3)
		GA		78.9	BNPFT20030317EAF	84 47 47.0		495	Immanuel Broadcasting Netw		

(3) Application dismissed in separate action.

229C Greenville	WFBC-FM	LIC	CX	47.1	215.2	35 06 43.0	100.000	204.8	97.7	-12.3<	49.0
		SC		228.1	BLH20021022AAJ	82 36 24.0	552	1150	Entercom Greenville Licens		
227C0 Greenville	WVFJ-FM	RSV		200.1	94.9	33 00 14.0	100.000	12.2	83.9	59.4	9.9
		GA		19.9		84 41 23.0	450	700	Provident Broadcasting Com		
227C0 Manchester	WVFJ-FM	CP	ZCX	206.1	95.7	33 01 56.0	88.000	11.8	82.9	60.6	11.7
		GA		25.8	BPH20051031ABT	84 47 27.0	468	719	Provident Broadcasting Com		
229D Lindale	637621	APP	C	294.4	90.0	34 08 15.7	0.010	17.1	5.3	48.9	12.7
		GA		113.9	BNPFT20030317DMD	85 13 45.2		342	Radio Assist Ministry, Inc		
227C0 Greenville	WVFJ-FM	APP	NCX	206.6	89.4	33 05 10.0	38.000	9.3	75.5	56.9	12.8
		GA		26.3	BPH20091124ACR	84 46 10.0	491	742	Provident Broadcasting Com		
227C1 Manchester	WVFJ-FM	LIC	CX	206.6	89.4	33 05 10.0	27.000	8.3	71.6	58.0	16.7
		GA		26.3	BMLH20030220AAJ	84 46 10.0	491	742	Provident Broadcasting Com		
228A Coosa	WSRM	LIC	ZCX	300.3	94.9	34 14 02.0	1.200	41.9	27.7	29.5	31.3
		GA		119.8	BLH20090508AAF	85 13 50.0	226	444	Coosa Broadcasting Corpora		
228D Athens	W225BH	APP	DC	71.3	99.1	34 05 20.0	0.250	39.0	25.5	37.6	40.2
		GA		251.8	BPFT20091228AFF	83 19 19.0		615	Tugart Properties, Llc		
228A Coosa	WSRM	APP	NCX	298.3	106.4	34 15 21.0	3.000	39.2	26.2	43.7	44.6
		GA		117.7	BPH20091124AAV	85 21 29.0	85	309	Coosa Broadcasting Corpora		

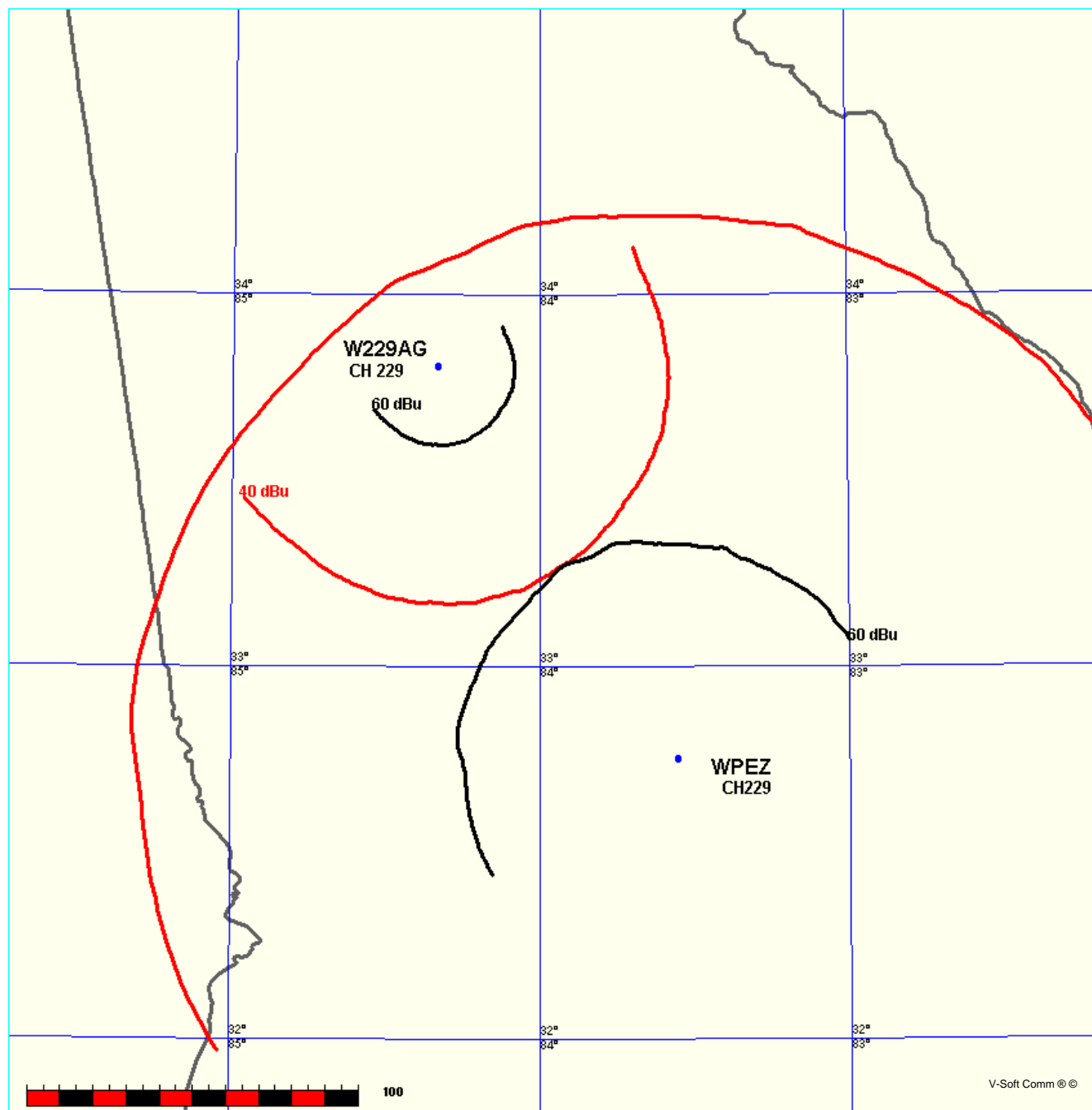
Terrain database is NED 30 Meter, R= 73.215 qualifying spacings or FCC minimum spacings in KM, M= Margin in KM
 In & Out distances between contours are shown at closest points. Reference Zone = 2, Co to 3rd adjacent.
 Ant Column: (D= DA Standard, Z= DA 73.215, N= Not DA 73.215, _= Omni), Polarization (C,H,V,E), Beamtilt(Y,N,X)
 "*"affixed to 'IN' or 'OUT' values = site inside protected contour.

E1A W229AG - WPEZ INTERFERENCE PLOT

FMCommander Single Allocation Study - 04-02-2010 - NED 30 Meter
W229AG's Overlaps (In= -51.46 km, Out= 0.1 km)

W229AG CH 229 D
Lat= 33 48 26.0, Lng= 84 20 22.0
0.25 kW 322.9 M HAAT, 612 M COR
Prot.= 60 dBu, Intef.= 40 dBu

WPEZ CH 229 C1 73.215 N BLH20020529ABR
Lat= 32 45 12.0, Lng= 83 33 46.0
100.0 kW 207 M HAAT, 321 M COR
Prot.= 60 dBu, Intef.= 40 dBu



E1A1 FMOVER TO WPEZ

04-02-2010 NED 30 Meter Terrain Data

WPEZ BLH20020529ABR

W229AG

Channel = 229C1
Max ERP = 100 kW
RCAMSL = 321 M
N. Lat. 32 45 12.0
W. Lng. 83 33 46.0
Protected
60 dBu

Channel = 229D
Max ERP = 0.25 kW
RCAMSL = 612 M
N. Lat. 33 48 26.0
W. Lng. 84 20 22.0
Interfering
40 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
313.0	100.0000	0209.0	064.7	161.1	000.2500	0333.1	076.9	38.00	
314.0	100.0000	0208.3	064.6	160.3	000.2500	0335.7	076.5	38.24	
315.0	100.0000	0208.8	064.6	159.6	000.2500	0336.2	076.0	38.45	
316.0	100.0000	0210.0	064.7	158.9	000.2500	0334.7	075.4	38.59	
317.0	100.0000	0211.9	064.9	158.1	000.2500	0335.3	074.8	38.81	
318.0	100.0000	0213.4	065.1	157.3	000.2500	0334.3	074.3	38.96	
319.0	100.0000	0214.0	065.1	156.5	000.2500	0331.9	073.9	39.03	
320.0	100.0000	0214.9	065.2	155.7	000.2500	0329.6	073.5	39.09	
321.0	100.0000	0217.4	065.4	154.9	000.2500	0329.4	072.9	39.26	
322.0	100.0000	0218.4	065.5	154.0	000.2500	0329.6	072.6	39.39	
323.0	100.0000	0219.9	065.7	153.1	000.2500	0328.7	072.2	39.49	
324.0	100.0000	0222.1	065.9	152.3	000.2500	0328.2	071.9	39.60	
325.0	100.0000	0224.6	066.1	151.4	000.2500	0326.6	071.5	39.68	
326.0	100.0000	0227.2	066.3	150.5	000.2500	0324.7	071.2	39.74	
327.0	100.0000	0229.9	066.6	149.6	000.2500	0322.4	070.8	39.77	
328.0	100.0000	0232.2	066.7	148.6	000.2500	0324.8	070.6	39.93	
329.0	100.0000	0232.5	066.8	147.7	000.2500	0325.6	070.6	39.97	
330.0	100.0000	0230.0	066.6	146.7	000.2500	0326.0	070.8	39.89	
331.0	100.0000	0226.9	066.3	145.8	000.2500	0326.7	071.2	39.79	
332.0	100.0000	0223.9	066.0	144.9	000.2500	0325.6	071.6	39.61	
333.0	100.0000	0221.9	065.8	144.0	000.2500	0326.5	071.9	39.52	
334.0	100.0000	0220.4	065.7	143.2	000.2500	0326.8	072.3	39.41	
335.0	100.0000	0217.2	065.4	142.3	000.2500	0327.1	072.8	39.24	
336.0	100.0000	0214.8	065.2	141.5	000.2500	0327.8	073.3	39.10	
337.0	100.0000	0215.9	065.3	140.6	000.2500	0328.9	073.5	39.06	
338.0	100.0000	0218.1	065.5	139.7	000.2500	0327.1	073.6	38.95	
339.0	100.0000	0219.4	065.6	138.8	000.2500	0327.1	073.9	38.86	
340.0	100.0000	0221.9	065.8	137.9	000.2500	0327.1	074.1	38.79	
341.0	100.0000	0225.3	066.1	137.0	000.2500	0325.7	074.2	38.68	
342.0	100.0000	0228.2	066.4	136.1	000.2500	0323.8	074.5	38.53	
343.0	100.0000	0229.0	066.5	135.3	000.2500	0323.6	075.0	38.36	
344.0	100.0000	0228.3	066.4	134.6	000.2500	0321.5	075.6	38.08	
345.0	100.0000	0226.4	066.2	133.9	000.2500	0320.8	076.3	37.80	

E1B

W229AG

BLFT20090416AVM

Latitude: 33-48-26 N

Longitude: 084-20-22 W

ERP: 0.25 kW

HAAT: 327.62 m

Channel: 229

Frequency: 93.7 MHz

RCAMSL Height: 612.3 m

Site Elevation: 264.3 m

Horiz. Pattern: Omni

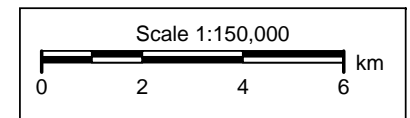
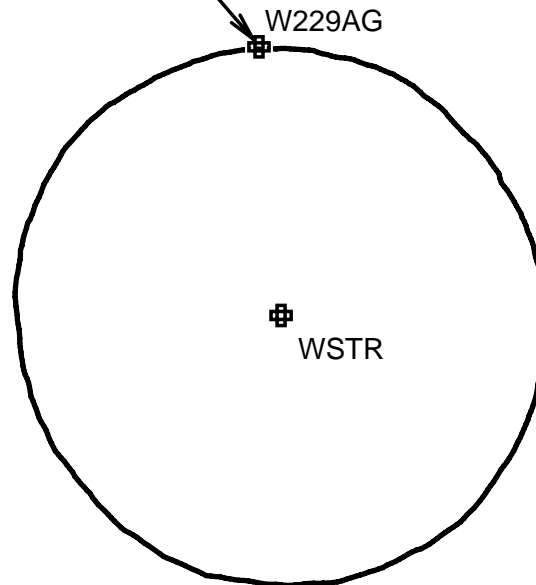
Vert. Pattern: No

Prop Model: None

WSTR FCC (50,50) CONTOUR

AT PROPOSED W229AG SITE = 109.4 MV/M

INTERFERING CONTOUR = $109.4 + 40 = 149.4 = 3.8$ METERS



E2 60 DBU PLOTS

**WWWQ FCC STANDARD 60 DBU (50,50) PLOT
PROPOSED 60 DBU CONTAINED ENTIRELY
WITH WWWQ 60 DBU**

**W229AG LICENSED
FCC STANDARD 60 DBU (50,50) PLOT**

W229AG

60 DBU OVERLAP

W229AG
WWWQ

**W229AG PROPOSED
FCC STANDARD 60 DBU (50,50) PLOT**

WWWQ

BLH20030514ABW
Latitude: 33-48-26 N
Longitude: 084-20-22 W
ERP: 100.00 kW
HAAT: 340.0 m
Channel: 259
Frequency: 99.7 MHz
RCAMSL Height: 612.0 m
Site Elevation: 264.0 m
Horiz. Pattern: Omni

W229AG

BLFT20041116AEB
Latitude: 34-04-00 N
Longitude: 084-27-10 W
ERP: 0.01 kW
HAAT: 0.0 m
Channel: 229
Frequency: 93.7 MHz
RCAMSL Height: 465.0 m
Site Elevation: 419.0 m
Horiz. Pattern: Omni

W229AG

PROPOSED
Latitude: 33-48-26 N
Longitude: 084-20-22 W
ERP: 0.25 kW
HAAT: 327.62 m
Channel: 229
Frequency: 93.7 MHz
RCAMSL Height: 612.3 m
Site Elevation: 264.3 m
Horiz. Pattern: Omni

Scale 1:850,000

0 10 20 30 km

**E2A PROPOSED VS LICENSED
60 DBU OVERLAP - CLOSE VIEW**

**PROPOSED FCC STANDARD 60 DBU
SERVICE CONTOUR USING NED 30 METER TERRAIN DATA**

60 DBU OVERLAP

**LICENSED W229AG FCC STANDARD 60 DBU (50,50)
SERVICE CONTOUR USING NED 30 METER TERRAIN DATA**

W229AG

PROPOSED

Latitude: 33-48-26 N
Longitude: 084-20-22 W
ERP: 0.25 kW
HAAT: 327.62 m
Channel: 229
Frequency: 93.7 MHz
RCAMSL Height: 612.3 m
Site Elevation: 264.3 m
Horiz. Pattern: Omni

W229AG

BLFT20041116AEB

Latitude: 34-04-00 N
Longitude: 084-27-10 W
ERP: 0.01 kW
HAAT: 0.0 m
Channel: 229
Frequency: 93.7 MHz
RCAMSL Height: 465.0 m
Site Elevation: 419.0 m
Horiz. Pattern: Omni

Scale 1:50,000

0 0.7 1.4 2.1 km

V-Soft Communications LLC ©

E3 W229AG PROPOSED HAAT TABULATION

N. Lat. = 334826.0 W. Lng. = 842022.0
HAAT and Distance to Contour,
V-Soft 3-16 km, 131 pts Method - NED 30 Meter

	Azi.	AV EL	HAAT	dBk	60-F5
000	300.0	312.0	-6.02	22.99	
030	294.7	317.3	-6.02	23.18	
060	309.1	302.9	-6.02	22.66	
090	297.5	314.5	-6.02	23.08	
120	292.3	319.7	-6.02	23.26	
150	288.7	323.3	-6.02	23.39	
180	284.5	327.5	-6.02	23.53	
210	297.9	314.1	-6.02	23.07	
240	287.6	324.4	-6.02	23.43	
270	261.3	350.7	-6.02	24.31	
300	274.4	337.6	-6.02	23.87	
330	281.2	330.8	-6.02	23.65	

Ave El= 289.10 M HAAT= 322.90 M AMSL= 612 M

E3A W229AG LICENSED HAAT TABULATION

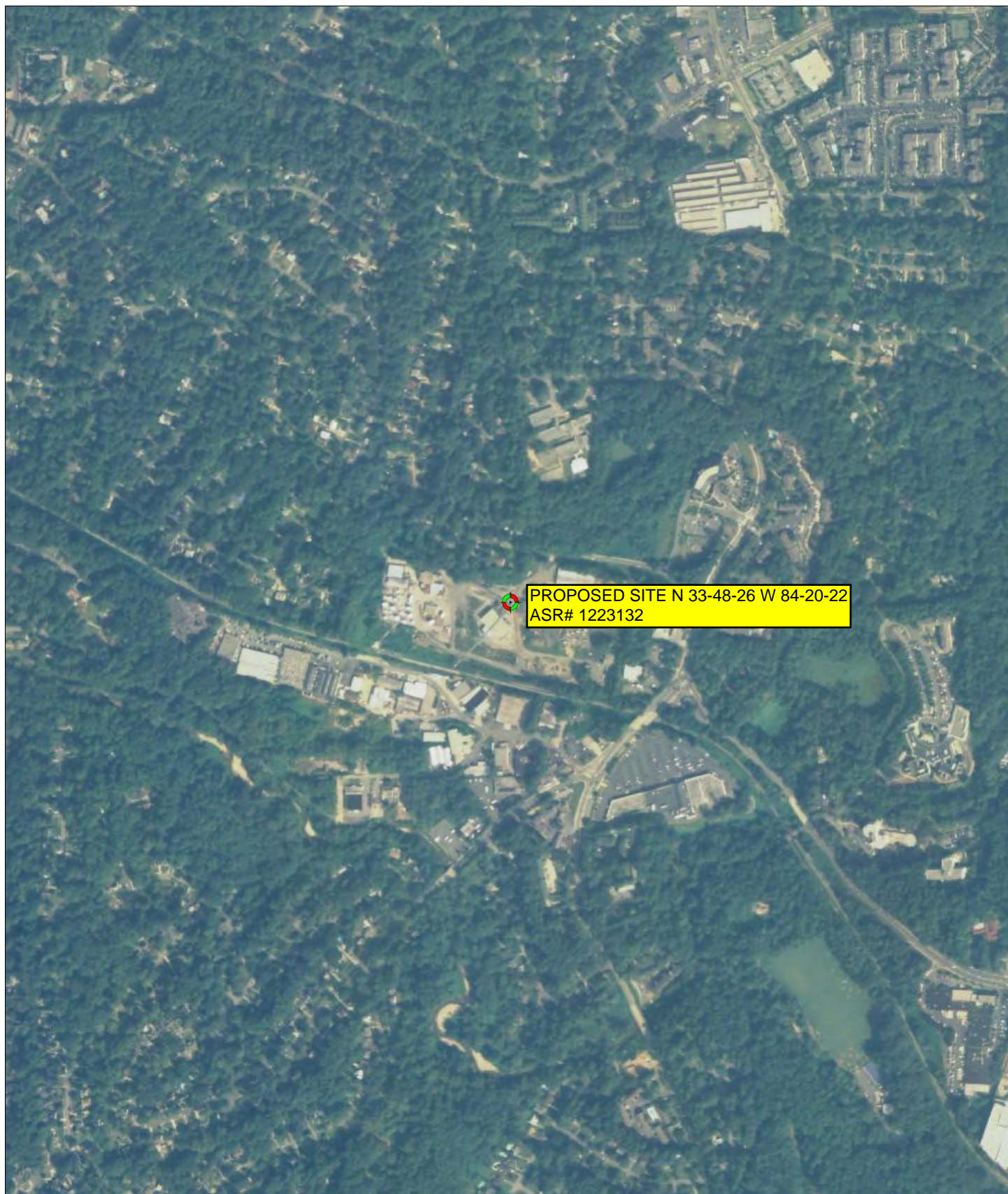
N. Lat. = 340400.0 W. Lng. = 842710.0
HAAT and Distance to Contour,
V-Soft 3-16 km, 131 pts Method - NED 30 Meter

W229AG, Calvary Chapel Of Twin Falls, BLFT20041116AEB

Azi.	AV EL	HAAT	dBk	60-F5
000	296.8	168.2	-20.00	7.52
030	315.0	150.0	-20.00	7.09
060	307.3	157.7	-20.00	7.28
090	337.0	128.0	-20.00	6.58
120	303.3	161.7	-20.00	7.37
150	297.1	167.9	-20.00	7.51
180	306.5	158.5	-20.00	7.30
210	329.0	136.0	-20.00	6.76
240	305.2	159.8	-20.00	7.33
270	308.9	156.1	-20.00	7.24
300	292.7	172.3	-20.00	7.62
330	292.9	172.1	-20.00	7.61

Ave El= 307.64 M HAAT= 157.36 M AMSL= 465 M

E4 AERIAL PHOTOGRAPH OF PROPOSED SITE



0 0.2 Mi

0 1000 Ft

Registration 1223132 [Map Registration](#)**Registration Detail**

Reg Number	1223132	Status	Constructed
File Number	A0425886	Constructed	03/27/2002
FAA Study	00-ASO-8684-OE	EMI	Yes
FAA Issue Date	01/18/2001	NEPA	No

Antenna Structure

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

Location (in NAD83 Coordinates)

Lat/Long 33-48-26.4 N 084-20-21.5 W 1800 Briarcliff Road NE
City, State Atlanta , GA
Center of
AM Array

Heights (meters)

Elevation of Site Above Mean Sea Level	Overall Height Above Ground (AGL)
264.3	360.3
Overall Height Above Mean Sea Level	Overall Height Above Ground w/o Appurtenances
624.6	321.9

Painting and Lighting Specifications

FAA Chapters 4, 9, 12

Paint and Light in Accordance with FAA Circular Number 70/7460-1K

Owner & Contact Information

FRN	0006154249	Licensee ID	L00167959
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Owner

Richland Towers, Inc.
4890 West Kennedy Blvd., Suite 920
Tampa , FL 33609

P: (813)286-4140
E:

Contact

4890 West Kennedy Blvd., Suite #920
Tampa , FL 33609

P: (813)286-4140
E:

Last Action Status

Status	Constructed	Received	01/24/2005
Purpose	Notification	Entered	01/24/2005
Mode	Interactive		

Related Applications

01/24/2005 A0425886 - Notification (NT)
01/15/2004 A0360461 - Admin Update (AU)
03/08/2001 A0173831 - Admin Update (AU)
Related applications (4)