

Channel Study

REFERENCE		CH# 288D - 105.5 MHz, Pwr= 0.009 kW, HAAT=130.3M, COR= 235 M								DISPLAY DATES	
35 59 54.0 N.		Average Protected F(50-50)= 6.5 km								DATA 09-19-07	
78 51 21.0 W.										SEARCH 09-19-07	
CH CITY	CALL	TYPE STATE	AZI. <--	DIST FILE #	LAT. LNG.	Pwr(kW) HAAT(M)	INT(km) COR(M)	PRO(km) LICENSEE	*IN* (Overlap in km)	*OUT*	
286C0 Durham	WDCG	LIC CN NC	242.8 62.6	30.65 BLH19880721KD	35 52 20.0 79 09 29.0	100.000 349	10.9 465	76.0 Capstar Tx Limited Partner	13.03	-45.53*	
286C1 Durham	WDCG	APP NCX NC	173.8 353.8	31.75 BMPH20070831ACO	35 42 50.0 78 49 04.0	73.000 337	9.8 443	71.9 Capstar Tx Limited Partner	15.55	-40.40*	
286C1 Durham	WDCG	CP NCX NC	173.8 353.8	31.75 BPH20020808AAB	35 42 50.0 78 49 04.0	78.000 319	9.8 425	71.3 Capstar Tx Limited Partner	15.64	-39.75*	
291C1 Knightdale	WRDU	CP CX NC	100.7 280.9	34.58 BPH20060818ABE	35 56 25.0 78 28 45.0	80.000 345	10.2 432	73.5 Capstar Tx Limited Partner	17.73	-39.10*	
291C1 Knightdale	WRDU	APP NCX NC	141.0 321.2	45.97 BMPH20070802ABP	35 40 35.0 78 32 08.0	27.500 488	8.3 567	72.3 Capstar Tx Limited Partner	31.40	-26.58*	
288D Durham	W289AY	CP C NC	147.1 327.1	7.35 BMPFT20041210ACJ	35 56 34.0 78 48 41.0	0.005 114	17.0 220	5.2 Educational Media Foundati	-15.87	-18.57	
288A Sanford	WFJA	APP NCX NC	213.7 33.4	73.86 BPH20070802ACH	35 26 40.0 79 18 31.0	2.550 168	84.2 248	29.4 Wwgp Broadcasting Corporat	-16.93	22.34	
291C0 Wilson	WRDU	LIC CX NC	113.5 293.9	66.14 BLH20020607AAR	35 45 36.0 78 11 04.0	100.000 395	11.5 481	79.4 Capstar Tx Limited Partner	48.15	-13.49*	
288A Sanford	WFJA	LIC CN NC	207.7 27.5	69.85 BLH19850320KT	35 26 28.0 79 12 54.0	2.250 129	76.6 220	25.4 Wwgp Broadcasting Corporat	-13.39	22.26	
286C1 Durham	WDCG	RSV NC	242.8 62.6	30.65	35 52 20.0 79 09 29.0	100.000 -116	3.2 0	31.0 Capstar Tx Limited Partner	20.77	-0.53*	
288D Wake Forest	W288BQ	LIC C NC	86.8 267.0	30.32 BLFT20070314ADA	36 00 47.0 78 31 12.0	0.013 98	20.4 201	6.2 Educational Media Foundati	3.13	1.36	
291C1 Knightdale	WRDU	RSV NC	100.7 280.9	34.58	35 56 25.0 78 28 45.0	100.000 -86	3.2 0	31.0 Capstar Tx Limited Partner	24.79	3.40	
289D Raleigh	W289BD	LIC C NC	145.6 325.7	28.17 BLFT20070518ADG	35 47 20.0 78 40 46.0	0.010 112	8.7 222	6.2 Liberty University, Inc.	13.24	13.22	
289C1 Clemmons	WMKS	LIC NCX NC	287.5 106.6	142.91 BLH20060724AEQ	36 22 28.0 80 22 31.0	34.000 440	104.8 763	71.2 Clear Channel Broadcasting	32.18	63.46	
288A Altavista	WKDE-FM	LIC CN VA	345.8 165.6	133.09 BMLH19970305KB	37 09 37.0 79 13 28.0	6.000 141	93.0 313	33.1 D.j. Broadcasting, Inc	33.55	78.28	
288A Lawrenceville	WHFD	LIC CN VA	46.3 226.9	122.21 BLH19910925KA	36 45 10.0 77 51 49.0	6.000 51	76.6 130	20.8 Lawrenceville Christian	38.76	78.60	
289D Henderson	AP5899	APP C NC	44.2 224.5	56.51 BNPFT20030317EUZ	36 21 41.5 78 24 56.0	0.010 148	10.0 273	7.0 Edgewater Broadcasting, In	39.73	39.84	
291D Liberty	AP4642	APP C NC	247.5 67.1	63.15 BNPFT20030312AMA	35 46 45.5 79 30 04.9	0.013 122	0.3 301	6.9 Triad Family Network, Inc	56.25	56.07	
288D Wilson	W288BP	LIC C NC	110.4 291.0	91.23 BLFT20070907AAW	35 42 32.0 77 54 38.0	0.038 50	18.9 99	5.7 Educational Media Foundati	65.78	63.56	

Terrain database is NGDC 30 SEC

ERP and HAAT on direct-line with reference station.

""affixed to 'IN' or 'Out' values = site inside protected contour.

Compliance with C.F.R. 74.1204

The proposed FM Translator is located within the protected 60 dBu contour of second adjacent channel station WDCG, channel 286C0, Durham, NC (BLH19880721KD). The predicted F(50-50) field strength of WDCG at the proposed translator site is 81.8 dBu, (see Exhibit 12A-1). Therefore, the respective predicted interfering contour generated by the proposed FM Translator is 121.8 dBu. This interfering contour extends approximately 17.1 meters from the proposed transmit antenna, and the area of overlap does not reach the ground (the antenna will be mounted at the 116 meter level on a 128 meter tower).

The proposed FM Translator is located within the protected 60 dBu contour of second adjacent channel station WDCG, channel 286C1, Durham, NC (BMPH20070831ACO). The predicted F(50-50) field strength of WDCG at the proposed translator site is 79.4 dBu, (see Exhibit 12A-2). Therefore, the respective predicted interfering contour generated by the proposed FM Translator is 119.4 dBu. This interfering contour extends approximately 22.5 meters from the proposed transmit antenna, and the area of overlap does not reach the ground (the antenna will be mounted at the 116 meter level on a 128 meter tower).

The proposed FM Translator is located within the protected 60 dBu contour of second adjacent channel station WDCG, channel 286C1, Durham, NC (BPH20020808AAB). The predicted F(50-50) field strength of WDCG at the proposed translator site is 79.2 dBu, (see Exhibit 12A-3). Therefore, the respective predicted interfering contour generated by the proposed FM Translator is 119.2 dBu. This interfering contour extends approximately 23.0 meters from the proposed transmit antenna, and the area of overlap does not reach the ground (the antenna will be mounted at the 116 meter level on a 128 meter tower).

To confirm the absence of population within the interference aperture, EMF has examined the attached topographic map (see Exhibit 12C), and aerial photo (see Exhibit 12D), which indicate a lack of structures near the proposed tower which could be tall enough to enter the 17.1, 22.5 and 23.0 meter interference apertures.



Therefore, EMF respectfully requests a waiver of C.F.R 74.1204 based on no population within the area of predicted interference.

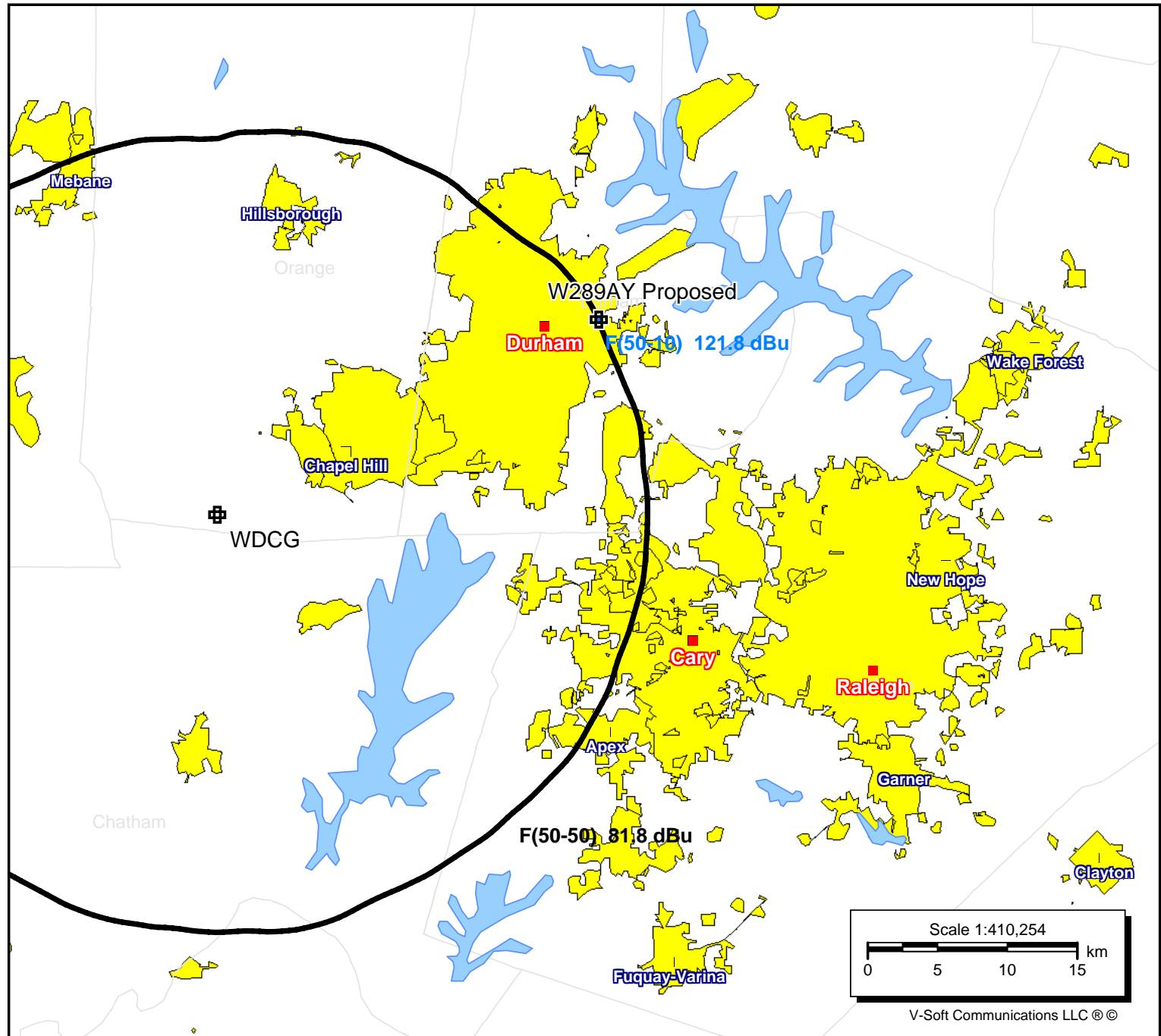
W289AY Proposed

BMPFT20041210ACJ
Latitude: 35-59-54 N
Longitude: 078-51-21 W
ERP: 0.009 kW
Channel: 288
Frequency: 105.5 MHz
AMSL Height: 235.0 m
Horiz. Pattern: Omni
Vert. Pattern: No
Prop Model: None

WDCG

BLH19880721KD
Latitude: 35-52-20 N
Longitude: 079-09-29 W
ERP: 100.00 kW
Channel: 286
Frequency: 105.1 MHz
AMSL Height: 465.0 m
Horiz. Pattern: Omni
Vert. Pattern: No
Prop Model: None

 W289AY Proposed
 WDCG



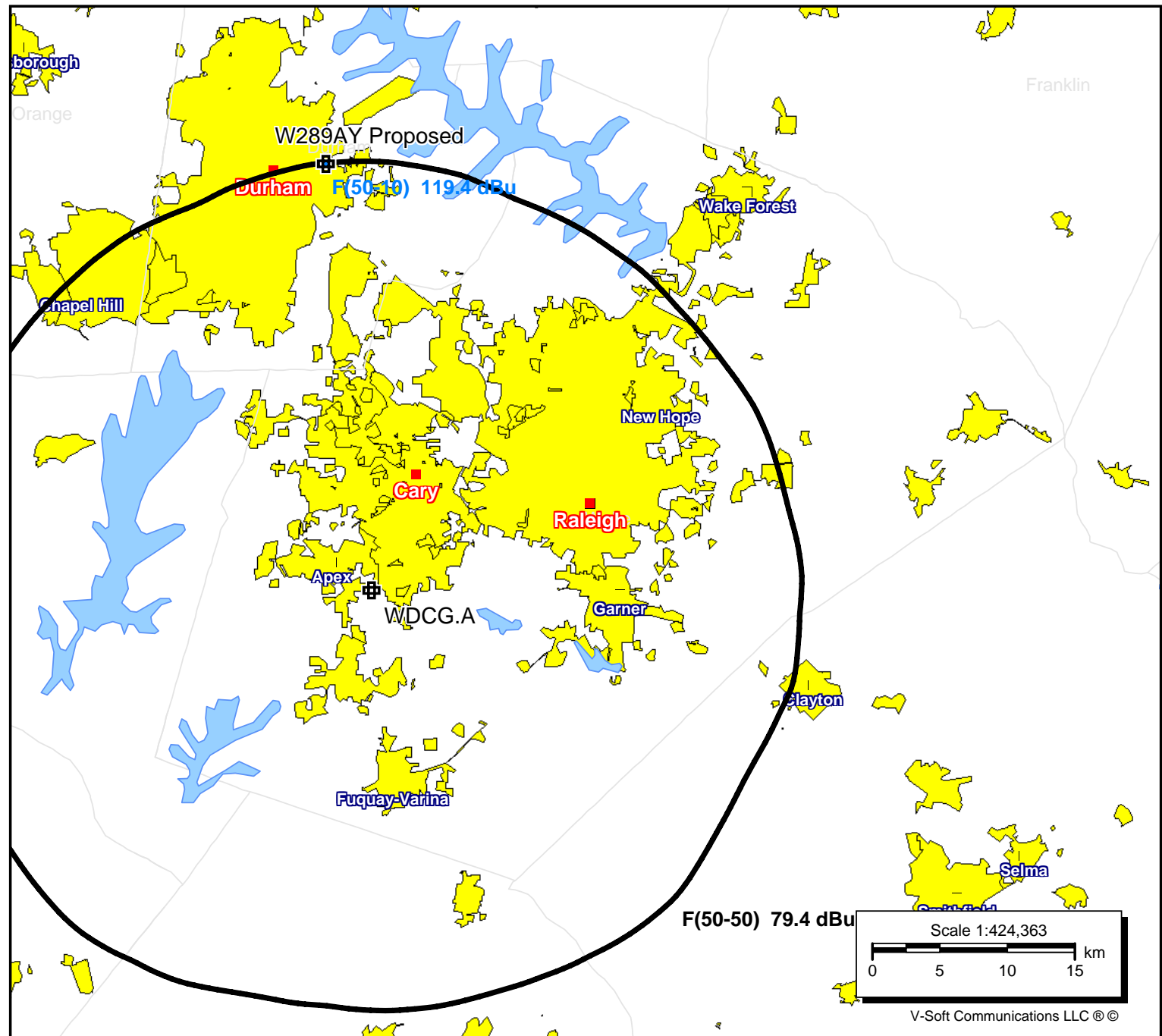
W289AY Proposed

BMPFT20041210ACJ
Latitude: 35-59-54 N
Longitude: 078-51-21 W
ERP: 0.009 kW
Channel: 288
Frequency: 105.5 MHz
AMSL Height: 235.0 m
Horiz. Pattern: Omni
Vert. Pattern: No
Prop Model: None

WDCG.A

BMPH20070831ACO
Latitude: 35-42-50 N
Longitude: 078-49-04 W
ERP: 73.00 kW
Channel: 286
Frequency: 105.1 MHz
AMSL Height: 443.0 m
Horiz. Pattern: Omni
Vert. Pattern: No
Prop Model: None

■ W289AY Proposed
■ WDCG.A





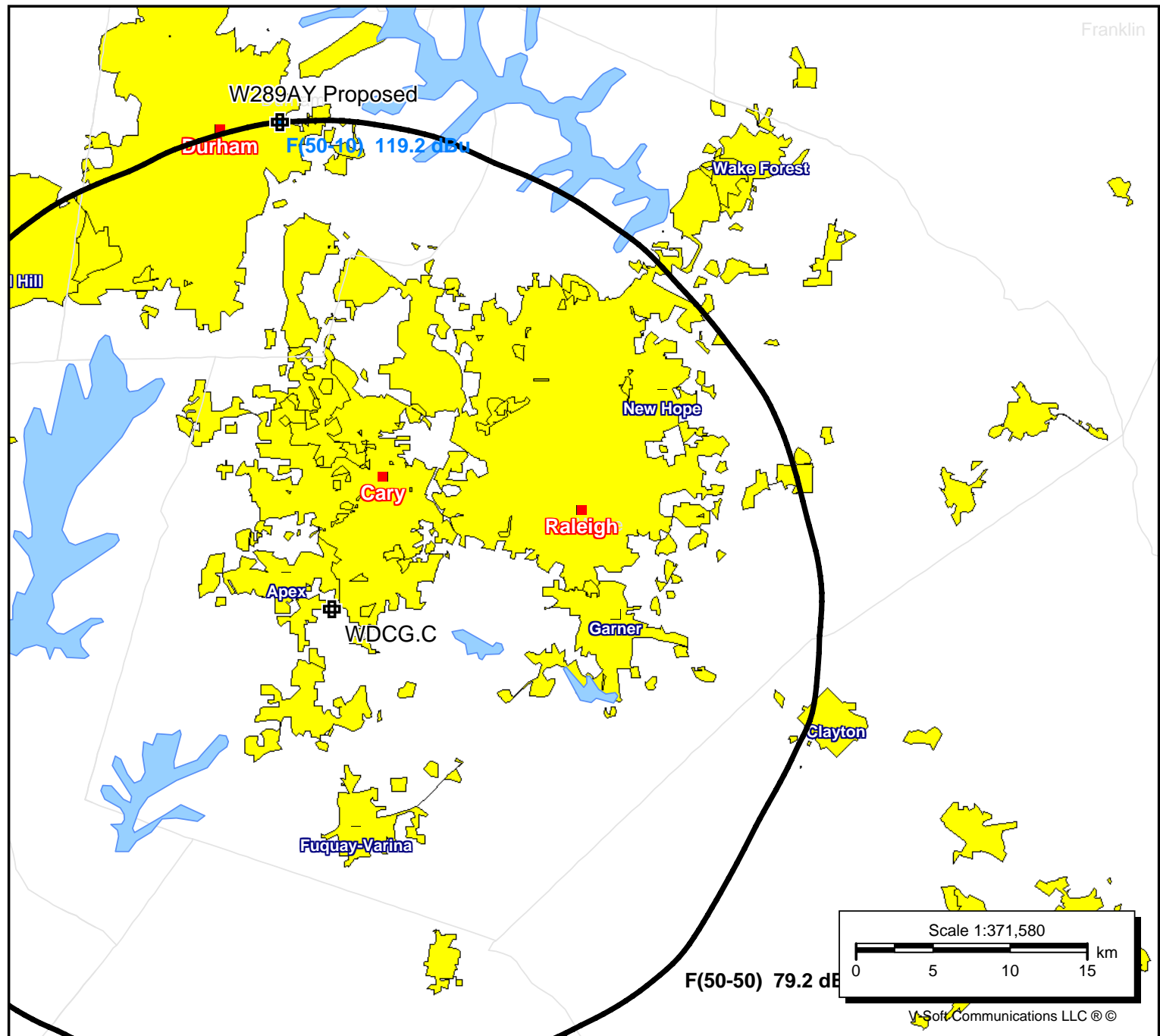
W289AY Proposed

BMPFT20041210ACJ
Latitude: 35-59-54 N
Longitude: 078-51-21 W
ERP: 0.009 kW
Channel: 288
Frequency: 105.5 MHz
AMSL Height: 235.0 m
Horiz. Pattern: Omni
Vert. Pattern: No
Prop Model: None

WDCG.C

BPH20020808AAB
Latitude: 35-42-50 N
Longitude: 078-49-04 W
ERP: 78.00 kW
Channel: 286
Frequency: 105.1 MHz
AMSL Height: 425.0 m
Horiz. Pattern: Omni
Vert. Pattern: No
Prop Model: None

 W289AY Proposed
 WDCG.C



Compliance with C.F.R. 74.1204

The proposed FM Translator is located within the protected 60 dBu contour of third adjacent channel station WRDU, channel 291C1, Knightdale, NC (BPH20060818ABE). The predicted F(50-50) field strength of WRDU at the proposed translator site is 78.5 dBu, (see Exhibit 12B-1). Therefore, the respective predicted interfering contour generated by the proposed FM Translator is 118.5 dBu. This interfering contour extends approximately 25.0 meters from the proposed transmit antenna, and the area of overlap does not reach the ground (the antenna will be mounted at the 116 meter level on a 128 meter tower).

The proposed FM Translator is located within the protected 60 dBu contour of third adjacent channel station WRDU, channel 291C1, Knightdale, NC (BMPH20070802ABP). The predicted F(50-50) field strength of WRDU at the proposed translator site is 71.3 dBu, (see Exhibit 12B-2). Therefore, the respective predicted interfering contour generated by the proposed FM Translator is 111.3 dBu. This interfering contour extends approximately 57.2 meters from the proposed transmit antenna, and the area of overlap does not reach the ground (the antenna will be mounted at the 116 meter level on a 128 meter tower).

The proposed FM Translator is located within the protected 60 dBu contour of third adjacent channel station WRDU, channel 291C0, Wilson, NC (BLH20020607AAR). The predicted F(50-50) field strength of WRDU at the proposed translator site is 65.5 dBu, (see Exhibit 12B-3). Therefore, the respective predicted interfering contour generated by the proposed FM Translator is 105.5 dBu. This interfering contour extends approximately 111.5 meters from the proposed transmit antenna, and the area of overlap does not reach the ground (the antenna will be mounted at the 116 meter level on a 128 meter tower).

To confirm the absence of population within the interference aperture, EMF has examined the attached topographic map (see Exhibit 12C), and aerial photo (see Exhibit 12D), which indicate a lack of structures near the proposed tower which could be tall enough to enter the 25.0, 57.2 and 111.5 meter interference apertures.

Therefore, EMF respectfully requests a waiver of C.F.R 74.1204 based on no population within the area of predicted interference.

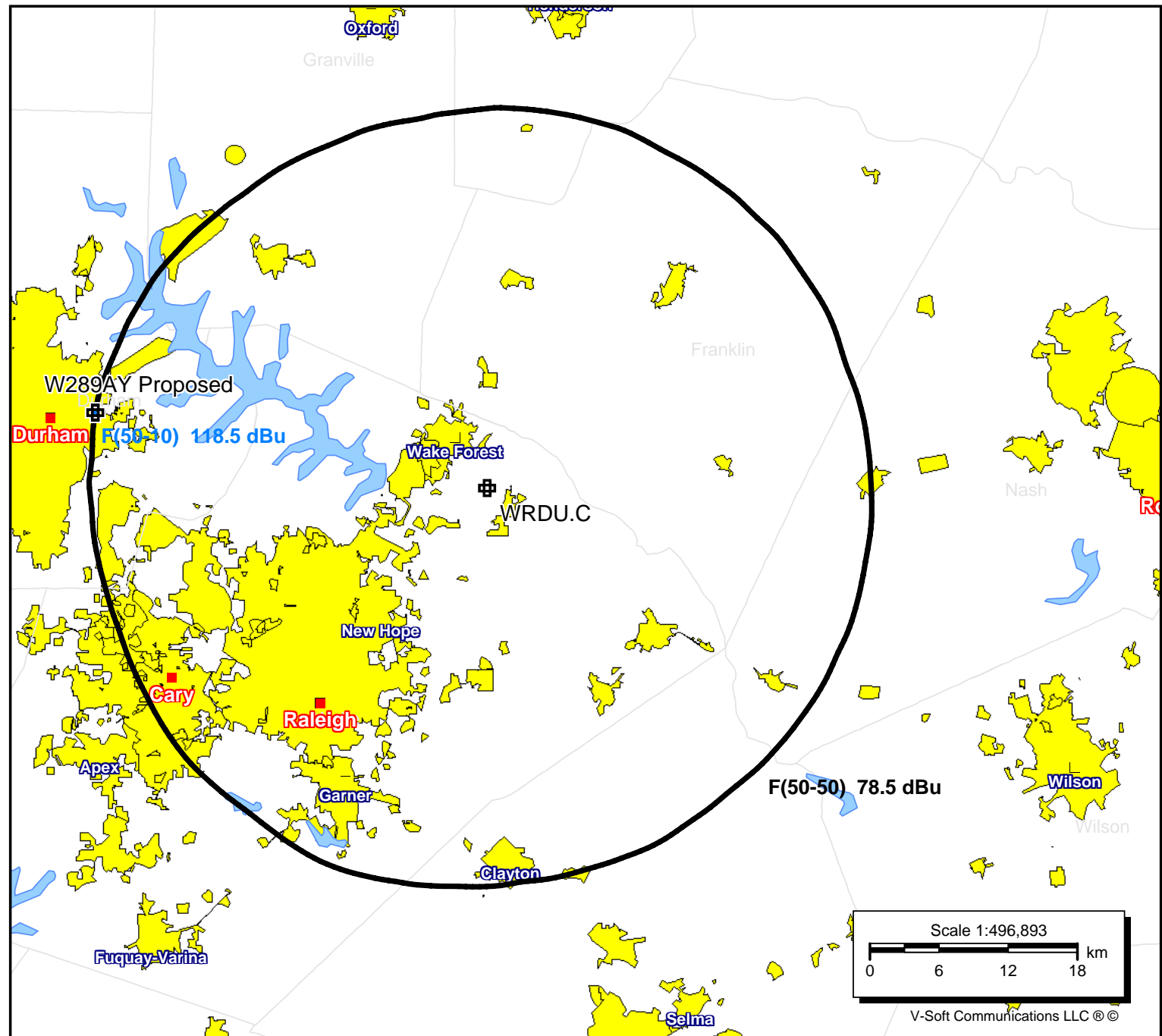
W289AY Proposed

BMPFT20041210ACJ
Latitude: 35-59-54 N
Longitude: 078-51-21 W
ERP: 0.009 kW
Channel: 288
Frequency: 105.5 MHz
AMSL Height: 235.0 m
Horiz. Pattern: Omni
Vert. Pattern: No
Prop Model: None

WRDU.C

BPH20060818ABE
Latitude: 35-56-25 N
Longitude: 078-28-45 W
ERP: 80.00 kW
Channel: 291
Frequency: 106.1 MHz
AMSL Height: 432.0 m
Horiz. Pattern: Omni
Vert. Pattern: No
Prop Model: None

■ W289AY Proposed
■ WRDU.C



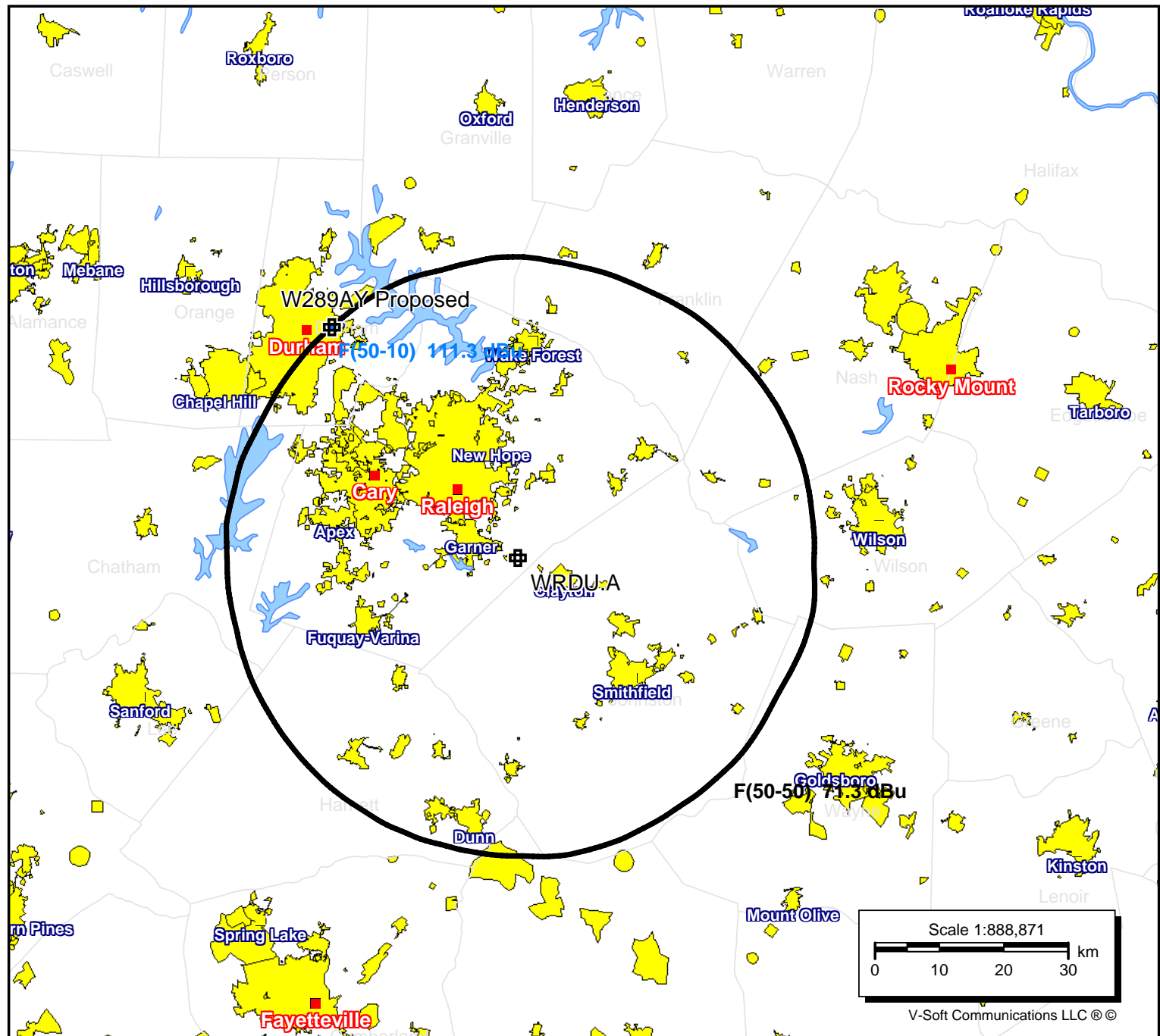
W289AY Proposed

BMPFT20041210ACJ
Latitude: 35-59-54 N
Longitude: 078-51-21 W
ERP: 0.009 kW
Channel: 288
Frequency: 105.5 MHz
AMSL Height: 235.0 m
Horiz. Pattern: Omni
Vert. Pattern: No
Prop Model: None

WRDU.A

BMPH20070802ABP
Latitude: 35-40-35 N
Longitude: 078-32-08 W
ERP: 27.50 kW
Channel: 291
Frequency: 106.1 MHz
AMSL Height: 566.0 m
Horiz. Pattern: Omni
Vert. Pattern: No
Prop Model: None

■ W289AY Proposed
■ WRDU.A



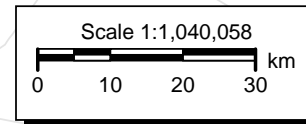
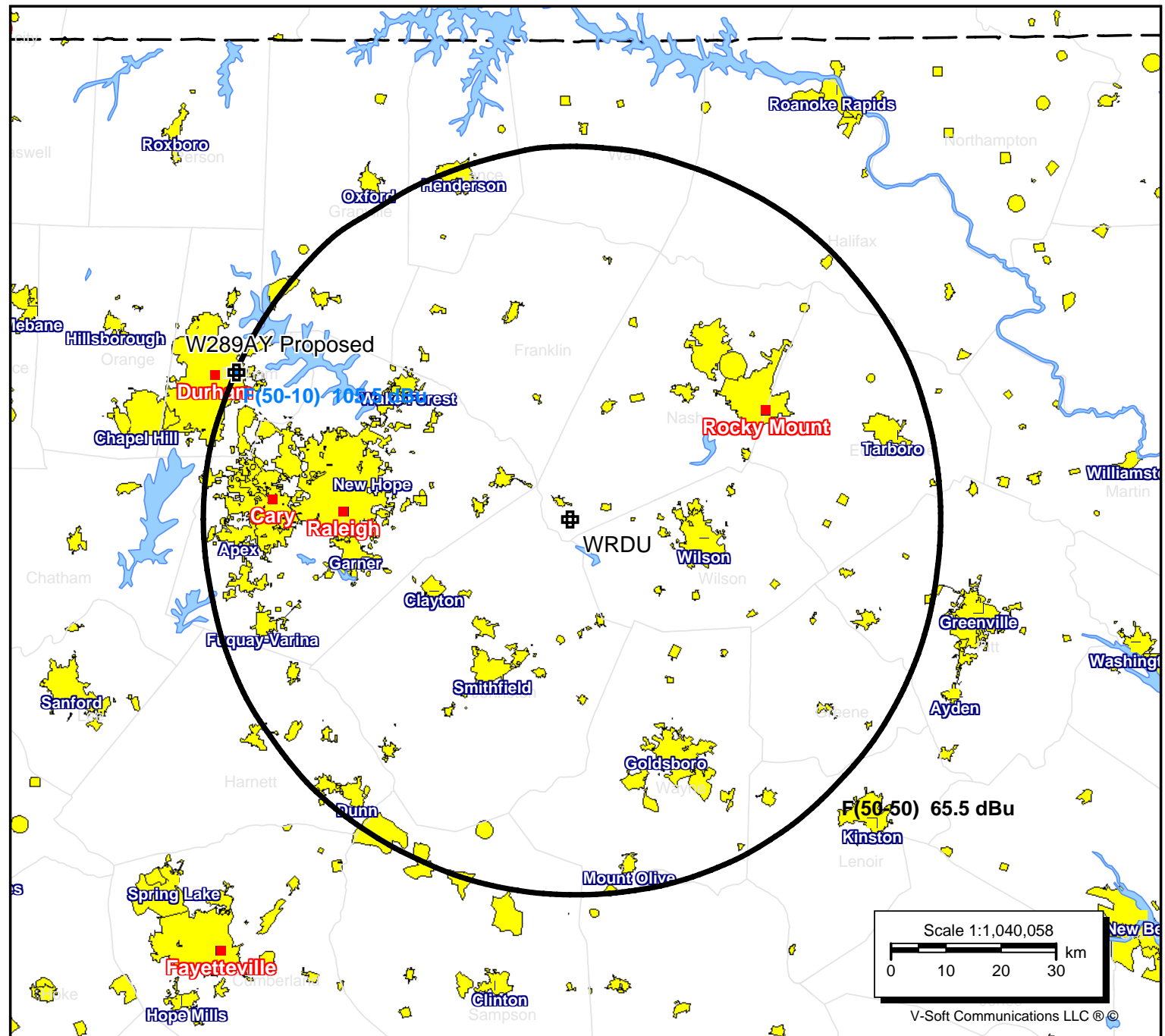
W289AY Proposed

BMPFT20041210ACJ
Latitude: 35-59-54 N
Longitude: 078-51-21 W
ERP: 0.009 kW
Channel: 288
Frequency: 105.5 MHz
AMSL Height: 235.0 m
Horiz. Pattern: Omni
Vert. Pattern: No
Prop Model: None

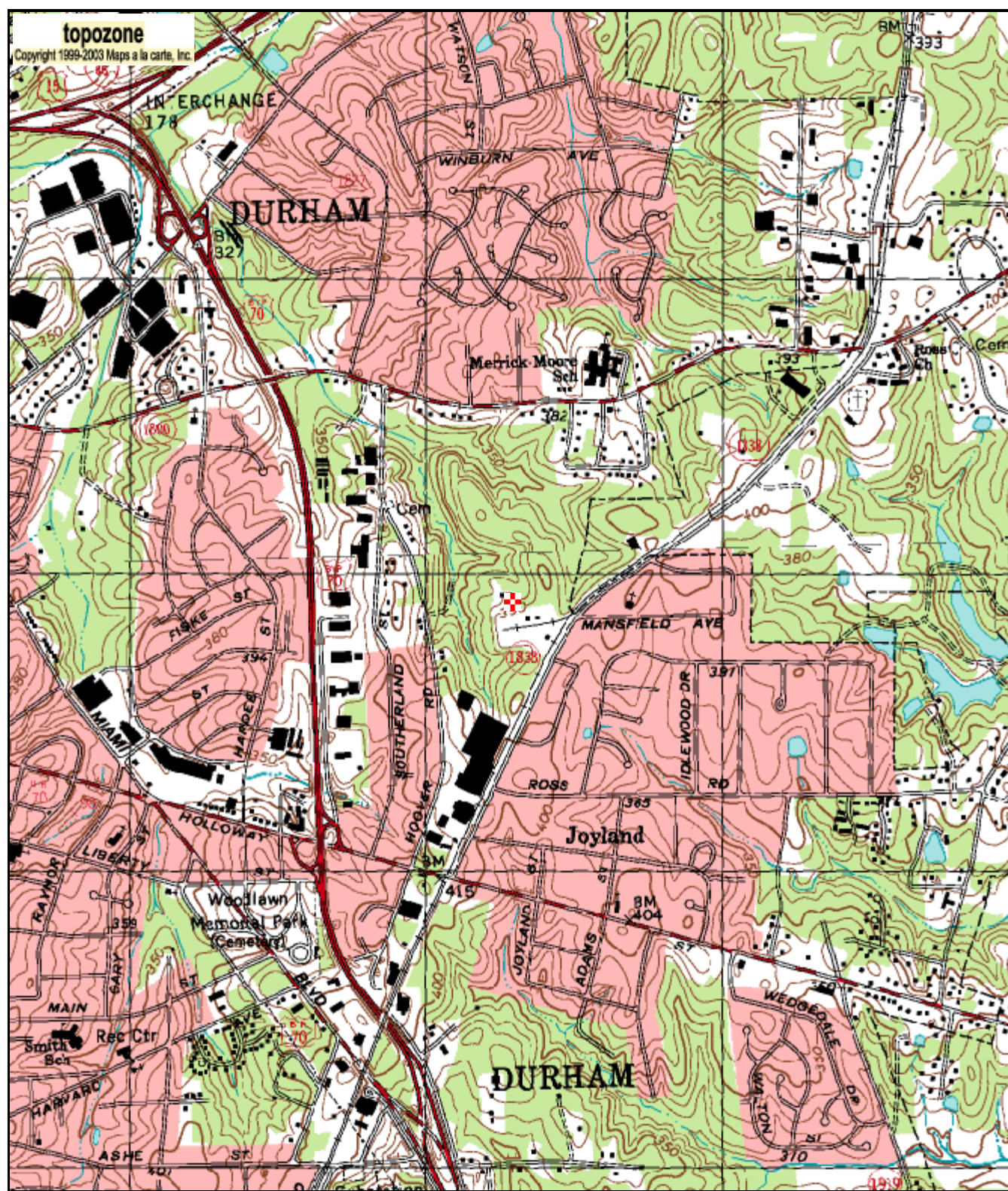
WRDU

BLH20020607AAR
Latitude: 35-45-36 N
Longitude: 078-11-04 W
ERP: 100.00 kW
Channel: 291
Frequency: 106.1 MHz
AMSL Height: 481.0 m
Horiz. Pattern: Omni
Vert. Pattern: No
Prop Model: None

■ W289AY Proposed
■ WRDU



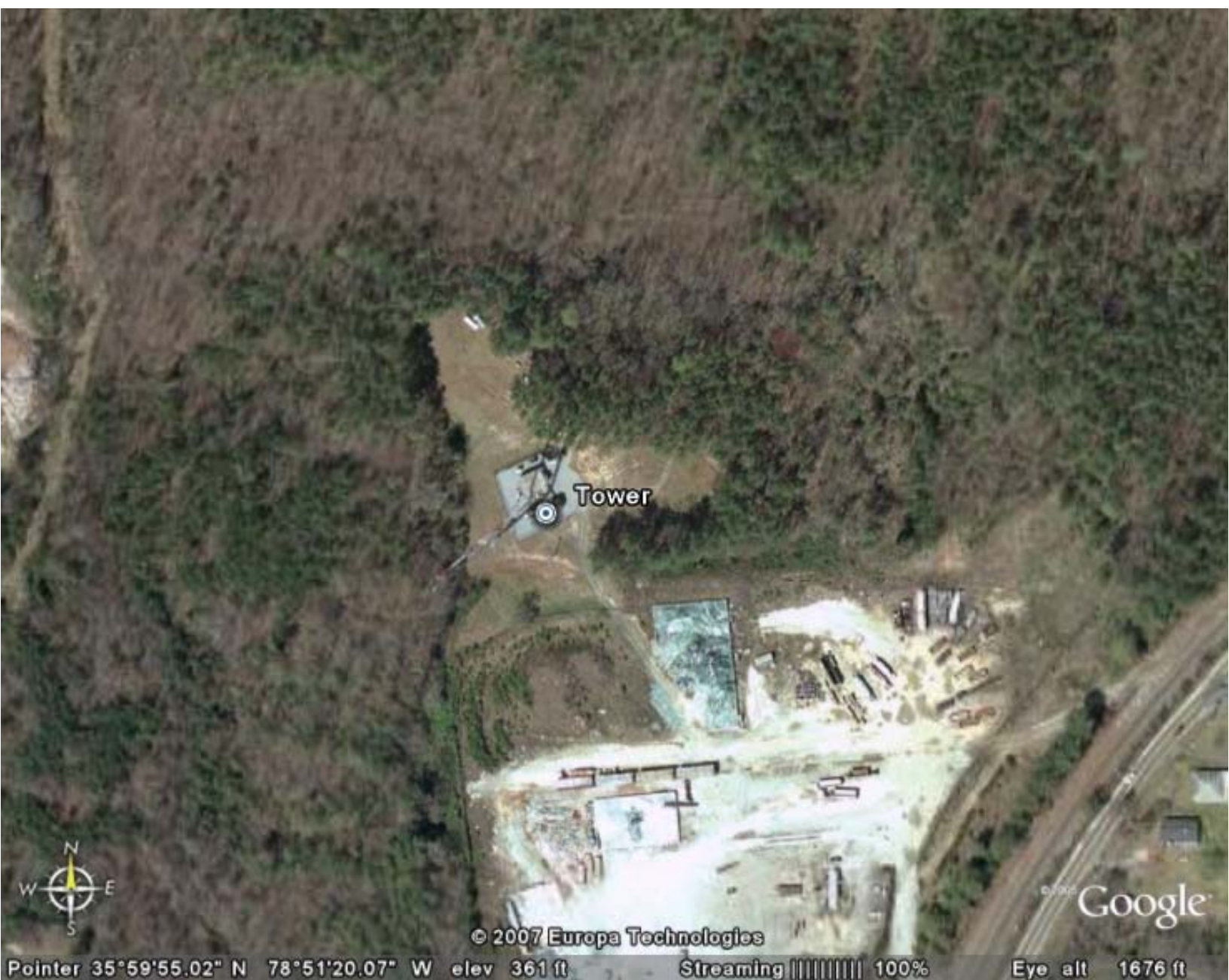
V-Soft Communications LLC ©



0 0.3 0.6 0.9 1.2 1.5 km
0 0.2 0.4 0.6 0.8 1 mi

35° 59' 54"N, 78° 51' 21"W (NAD27)
USGS Southeast Durham (NC) Quadrangle
Projection is UTM Zone 17 NAD83 Datum

M=0
G=1.261



Tower



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Google

Pointer 35°59'55.02" N 78°51'20.07" W elev 361 ft Streaming ||||| 100% Eye alt 1676 ft

FMCommander Single Allocation Study
09-19-2007

W289AY.C CH 288 D
0.009 kW 235 M COR
Prot. = 60 dBu
Intef. = 40 dBu

W288BQ CH 288 D BLFT20070314ADA
0.013 kW, 201 M COR
Prot. = 60 dBu
Intef. = 40 dBu

Scale = 1:750,000

