# CONTOUR OVERLAP AND LONGLEY-RICE INTERFERENCE STUDIES PROPOSED W52CW CHANNEL 16 - CHARLOTTE, NORTH CAROLINA

We conducted a computer analysis of the interference situation for the proposed facility, the results of which are shown in Exhibit D-2. The study is based on contour protection requirements of Sections 74.705, 74.706, and 74.707 of the FCC's Rules with respect to analog full-power, digital full-power, and low power television stations, respectively. It concludes that the facility proposed herein meets these requirements except to seven stations: WPDE-DT, Channel 16 in Florence, South Carolina; WGGS-TV, Channel 16 in Greenville, South Carolina; WJWJ-TV, Channel 16 in Beaufort, South Carolina; WGPX(TV), Channel 16 in Burlington, North Carolina; and, WKHA-DT, Channel 16 in Hazard, Kentucky.

We then conducted detailed interference studies using the Longley-Rice methodology contained in the Commission's *OET Bulletin No. 69*, with respect to these facilities of concern. The software utilizes a 2-square kilometer cell size (except where noted), calculates signal strength at 1.0 kilometer increments along each radial studied, and employs the 1990 U.S. Census to count population within cells. In addition, the program does not attribute interference to the proposed facility in cells within the protected contour of the station under study where interference from another source (other than Trinity's proposed W52CW) already is predicted to exist (also known as "masking"). The results of these studies are provided in Exhibit D-3. They conclude that

the facility proposed herein causes no significant new interference to any of the potentially affected stations.

As a result, waivers of Section 74.705 of the Commission's Rules with respect to interference to WJWJ-TV, WGGS-TV, WCCB, and WGPX and Section 74.706 with regard to WPDE-DT, WNSC-DT and WKHA-DT are requested and believed to be justified based on the aforementioned Longley-Rice studies.

# PROPOSED W52CW

CH. 16 - CHARLOTTE NC REFERENCE DISPLAY DATES 35 15 07 N LPTV Pwr = 51.8 kW, HAMSL COR= 398 M DATA 05-31-03 80 41 12 W SEARCH 06-04-03 ..... Channel 16-, 482 MHz ...... Call Channel Location Dist Azi FCC Margin WPDE-D\*CP 16 Florence SC 158.40 128.2 > 349.31 -190.91 WGGSTV\*CP 16+ Greenville SC 161.02 258.1 > 229.62 -67.54 WGGSTV\*LI 16+ Greenville SC 161.02 258.1 > 223.42 -61.40 WJWJTV\*LI 16- Beaufort SC 281.70 179.9 > 324.96 -43.26 WNSC-D\*CP 15 Rock Hill SC 54.84 213.5 > 082.80 -27.96 WCCB LI 18Z Charlotte NC 4.68 290.9 > 032.00 -27.32 WGGSTV\*LI 16 Hazard KY 311.41 314.6 > 340.43 -22.74 WUNETV\*LI 17Z Linville NC 138.03 311.2 > 128.63 11.22 WLTX-D\*CPM 17 Columbia SC 128.32 183.2 > 132.92 23.11 WGXA-D CP 16 Macon GA 384.06 224.4 > 356.94 27.12 WLTX-D\*ST 17 Columbia SC 128.32 183.2 > 126.33 28.19 WPDETV LI 15- Florence SC 158.40 128.2 > 117.28 41.12 WGXA ALD 16 MACON GA 384.06 224.4 > 337.51 46.55 WHKYTV CP 14- Hickory NC 79.13 312.7 > 032.00 47.13 WKYTV LI 14- Hickory NC 79.13 312.7 > 032.00 47.13 WKWTYV LI 14- Hickory NC 79.13 312.7 > 032.00 47.13 WTWBTV LI 20Z Lexington NC 103.82 48.5 > 032.00 71.82 WTWBTV CPM 20Z Lexington NC 103.82 48.5 > 032.00 71.82 \_\_\_\_\_\_ \_\_\_\_\_\_ 

<sup>\*</sup> Actual radials antenna height and directional patterns used (if any)

# INTERFERENCE SUMMARY

# PROPOSED W52CW CHANNEL 16 - CHARLOTTE, NORTH CAROLINA

Call Sign	Status	City, State	Ch.	Longley-Rice Service Population	Unmasked Interference From Proposed Facility	_%
*WPDE-DT BPCDT-1999	CP 110AFV	Florence, SC	16	1,415,269	6,155	0.44
WGGS-TV BPCT-20021	CP 024AAC	Greenville, SC	16	1,215,492	4,352	0.36
WGGS-TV BLCT-2629	Lic.	Greenville, SC	16	1,110,579	1,820	0.16
WJWJ-TV BLET-395	Lic.	Beaufort, SC	16	672,021	0	0
WNSC-DT BPEDT-2000	CP 0501AH\	Rock Hill, SC	15	1,170,273	0	0
WCCB(TV) BLCT-791128	Lic. BLG	Charlotte, NC	18	1,807,903	0	0
WGPX BLCT-199804	Lic. 410KG	Burlington, NC	16	1,532,289	7,381	0.48
WKHA-DT BLEDT-2002	Lic. 0205AAV	Hazard, KY V	16	382,907	0	0

<sup>\*</sup>Study utilized 1.0-kilometer cell size and 0.1-kilometer increment spacing.