TECHNICAL EXHIBIT
MINOR CHANGE AMENDMENT TO APPLICATION
FOR CONSTRUCTION PERMIT
STATION WFND-LP (FACILITY ID 21475)
FINDLAY, OHIO

APRIL 30, 2003

CH 22(-) 18 KW-DA

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Technical Narrative

This technical exhibit supports a minor change amendment to the pending application of low power television (LPTV) station WFND-LP at Findlay, Ohio (Facility ID 21475).

According to the Federal Communications Commission (FCC) database, station WFND-LP is licensed to operate on channel 47 with a plus (+) carrier offset and a directional antenna (DA) system (BLTTL-19930108JK). The maximum visual effective radiated power (ERP) is 31.5 kilowatts (kW). The antenna center of radiation is 88 meters above ground level (AGL) and 334 meters above mean sea level (AMSL). The transmitter site coordinates are 41-06-40, 83-38-54 (NAD-27). The FCC antenna structure registration number is 1047246.

Station WFND-LP has an application pending to change frequency to channel 22 with a minus (-) carrier offset (BPTTL-20020819AAD). It is proposed to use a directional antenna system with a maximum visual ERP of 45 kW. The proposed antenna radiation center is 88 meters AGL, and 333 meters AMSL. The transmitter site coordinates (41-06-40, 83-38-54) and structure registration number (1047246) are the same as for the WFND-LP license operation.

Proposed Facilities

It is proposed to amend the pending WFND-LP application for channel 22(-). It is proposed to change the directional antenna to an Andrew ALP12L2-HSMR-22 system. The major lobe of the antenna pattern will be oriented toward 198 degrees True. The proposed WFND-LP antenna will be mounted on the present supporting structure with the antenna center of radiation at 86 meters AGL, and 331.3 meters AMSL (see Figure 1). The proposed maximum visual ERP is 18 kW. There is no proposed change in channel (22), carrier offset (minus or -), site coordinates (41-06-40, 83-38-54), antenna structure (1047246), or city of assignment (Findlay, OH).

The peak gain for the Andrew ALP12L2-HSMR-22 directional antenna system is 35.64 (15.52 dB). The antenna is coupled to the transmitter through 99.1 meters (325 feet) of Andrew HJ7-50A 1-5/8 inch air dielectric Heliax transmission line. The manufacturer's average and peak power handling capability of the line on channel 22 is 6.8 kW and 9.8 kW respectively. The efficiency of the line on channel 22 is 69.3%. The transmitter power output (TPO) will be 0.73 kW. This combination results in the proposed maximum visual ERP of 18 kW.

In addition to station WFND-LP, the FCC database indicates that LPTV station W09CG (Ch.9, Findlay, OH) and FM translator station W212BT (Ch.212, 90.3 MHz, Findlay, OH) are located on the existing structure.

NTSC Allocation Considerations

A study has been conducted using the provisions of Sections 74.705, 74.707 and 74.709 of the FCC rules to assure that the proposal will not create prohibited interference with other authorized or pending analog (NTSC) full-power TV, LPTV and Class A TV stations. The proposed WFND-LP channel 22 operation complies with the FCC's allocation standards with respect to other analog assignments, except station WKEF(TV) on 22(+) at Dayton, Ohio. The applicant proposes use of the interference procedures outlined in the FCC's OET-69 Bulletin with respect to station WKEF. The proposed WFND-LP operation

complies with the FCC's 0.5% "de minimis" interference policy. A waiver of the FCC rules is requested based on use of the OET-69 procedures.

The WFND-LP site is 96 kilometers from the nearest point of the US/Canada border. Hence, consideration has been given to Canadian TV assignments. Station CIII-TV operates on channel 22(-) at Stevenson, Ontario. For purposes of the US/Canada TV agreement it is considered a Class C allotment. According to the Canada TV database, station CIII-TV operates with a directional antenna system. The maximum visual ERP is 1022 kW and the antenna height above average terrain (HAAT) is 110 meters. The CIII-TV antenna center of radiation is 290 meters AMSL. The site coordinates are 42-03-41, 82-29-05. Station CIII-TV is located 143.3 kilometers at a bearing of 42.1 degrees True (northeast) from the WFND-LP site. Figure 3 is a map showing the predicted Grade B (64 dBu) contour for the CIII-TV operation based on the information contained in the Canada TV database. In addition, the 70 kilometers protected circle for the CIII-TV channel 22 Class C allotment is shown. The 19 dBu F(50,10) interfering contour for the proposed WFND-LP operation is identified. The proposed WFND-LP 19 dBu contour does not appear to overlap any Canadian land area within the CIII-TV Grade B contour or its 70 kilometers protected circle.

Figure 4 is a map showing the predicted Grade B [64 dBu, F(50,50)] contour for the CIII-TV Class C allotment on channel 22. The CIII-TV operation is based on maximum Class C facilities. These facilities are a non-directional antenna visual ERP of 1000 kW, an antenna HAAT of 300 meters, and the antenna radiation center height of 478 meters AMSL. These facilities have been assumed at the present CIII-TV site (42-03-41, 82-29-05). The predicted 19 dBu F(50,10) interfering contour for the proposed WFND-LP operation is also shown on Figure 4. Using a 45 dB desired-to-undesired (D/U) interference ratio, the area of predicted interference has been determined. The area of predicted interference is shown shaded. It is noted that the proposed WFND-LP operation will not cause calculated interference within the Canadian border.

Calculations have been made using the interference procedures outlined in the FCC's OET-69 Bulletin and the US/Canada Letter of Understanding (LOU). The Longley-Rice propagation model has been employed with a 3 second digitized terrain database. The calculations use a 1 kilometer grid and terrain retrieval. The CIII-TV operation is based on

maximum Class C facilities at the current site (Ch.22(-), 1000 kW-ND, HAAT of 300 m, Rc of 478 m AMSL, 42-03-41, 82-29-05). The calculations indicate 14 cells (ie, 14 square kilometers) of interference. These 14 cells of interference are shown on Figure 5. All of the calculated interference is outside of the Canadian border.

It is believed the proposed WFND-LP complies with Canadian protection requirements. The applicant recognizes that it is a secondary service and must protect full service TV and DTV facilities if it should cause prohibited interference. If necessary, it is respectfully requested that the WFND-LP proposal be forwarded to Canada for its consideration and consent.

The closest point of the Mexican border is more than 2000 kilometers to the southwest. The closest FCC monitoring station is at Allegan, Michigan, approximately 253 kilometers to the northwest. The closest point of the National Radio Quiet Zone (VA/WV) is more than 330 kilometers to the southeast. The Table Mountain Radio Quiet Zone (CO) is more than 1800 kilometers to the west. The closest radio astronomy site using channel 37 is at Green Bank, West Virginia, approximately 440 kilometers to the southeast. These separations are considered sufficient to not be a coordination concern.

DTV Allocation Considerations

Pertinent US and Canadian DTV allotments and assignments on channels 21, 22 and 23 have been examined. There are no Canadian DTV allotments on channels 21 through 23 that are close enough for concern. Domestic (US) DTV allotments and assignments have been examined using the procedures outlined in the FCC's OET-69 Bulletin.[1] The proposed WFND-LP operation complies with the FCC's "de minimis" (0.5%) interference policy.

[1] The duTreil, Lundin & Rackley, Inc. DTV interference analysis program is based on the program and procedures outlined by the FCC in the Sixth Report and Order; subsequent Memorandum Opinion and Order; and FCC OET Bulletin No. 69. A nominal grid size resolution of 2 km was employed. A Sun based processor computer system was employed. The results have been found to be in very close agreement with the results of the FCC implementation of OET Bulletin No. 69.

The applicant recognizes the proposal is secondary to authorized full-service analog and DTV operations. The applicant understands that it must correct and/or eliminate prohibited interference that may result from its proposed operation. If necessary, a waiver of the FCC rules is respectfully requested based on use of the procedures outlined in the FCC's OET-69 Bulletin.

Radiofrequency Electromagnetic Field Exposure

The proposed WFND-LP facilities were evaluated in terms of potential radio frequency (RF) energy exposure at ground level to workers and the general public. A visual ERP of 18 kW with 10% aural power was assumed. A relative field value of 0.35 was assumed for the Andrew 12-bay antenna's downward radiation (see Figure 2). The calculated power density at a point 2 meters (6.6 feet) above ground level is 0.0052 mW/cm^2. This is less than 2% of the FCC's recommended limit of 0.35 mW/cm^2 for channel 22 for an "uncontrolled" environment. It is less than 1% of the FCC's recommended limit for a "controlled" environment.

Access to the transmitting site will be restricted and appropriately marked with warning signs. In the event that workers or other authorized personnel enter restricted areas or climb the tower, appropriate measures will be taken to assure worker safety with respect to radio frequency radiation exposure. Such measures include reducing the average exposure by spreading out the work over a longer period of time, wearing "accepted" RFR protective clothing and/or RFR exposure monitors or scheduling work when the stations are at reduced power or shut down. The proposed WFND-LP operation appears to be otherwise categorically excluded from environmental processing as it complies with all the criteria for such an exclusion in Section 1.1306.

If there are questions concerning this technical statement or the technical portion of this application, please communicate with the office of the undersigned.

John A. Lundin

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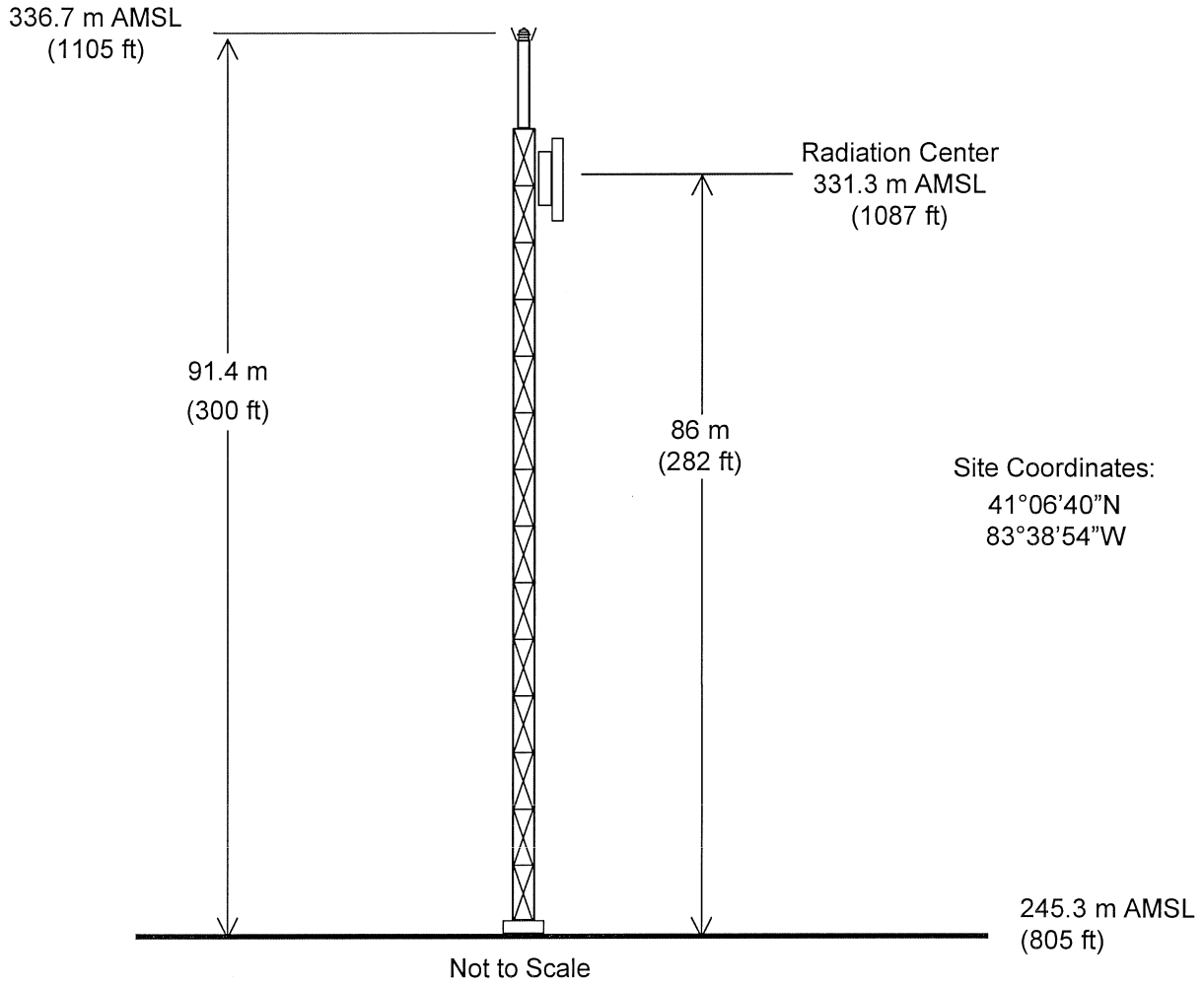
April 30, 2003

FCC Tower ID: 1047246

APRIL 2003



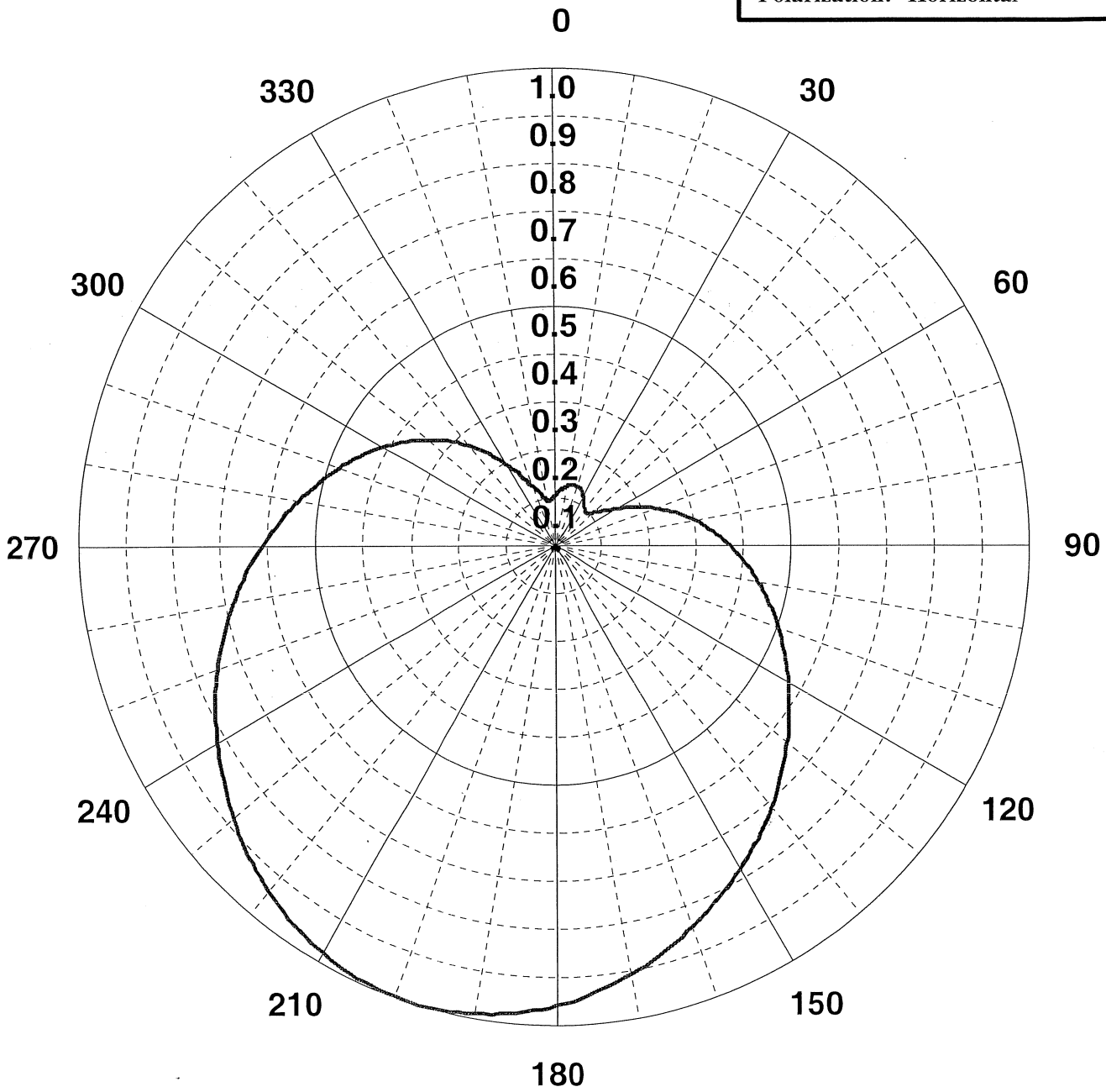
PROPOSED ANTENNA AND SUPPORTING STRUCTURE

STATION WFND-LP
FINDLEY, OHIO
CH 22(-) 18 KW

du Treil, Lundin & Rackley, Inc. Sarasota, Florida

ANDREW

Channel: 22
Type: ALP-MR
Gain: 2.82 (4.5 dB)
Polarization: Horizontal

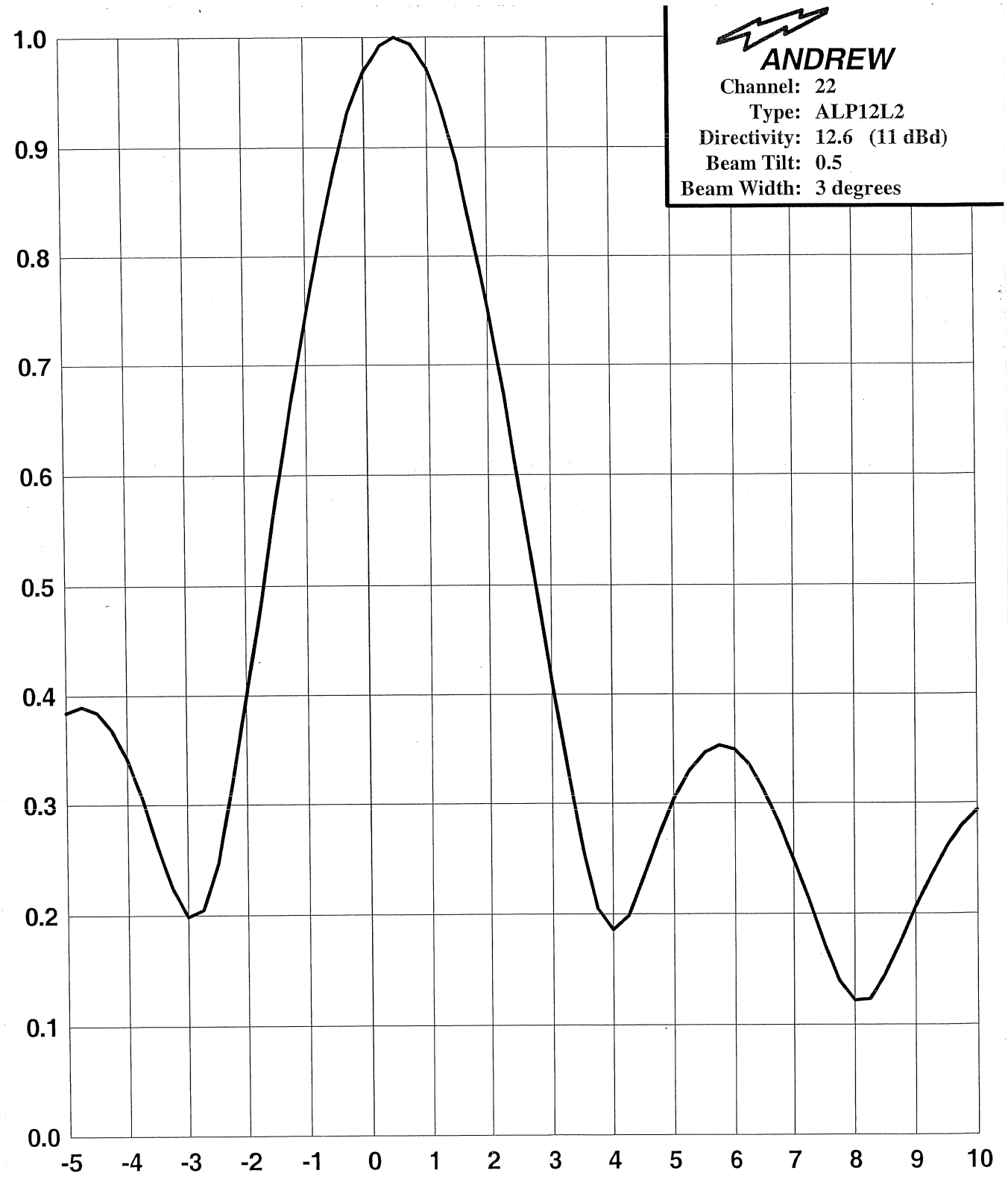


ANDREW CORPORATION
10500 W. 153rd Street
Orland Park, Illinois U.S.A. 60462

Company:
Site:
Proposal Number:

Author:

Date: 4/29/2003



ANDREW CORPORATION
10500 W. 153rd Street
Orland Park, Illinois U.S.A. 60462

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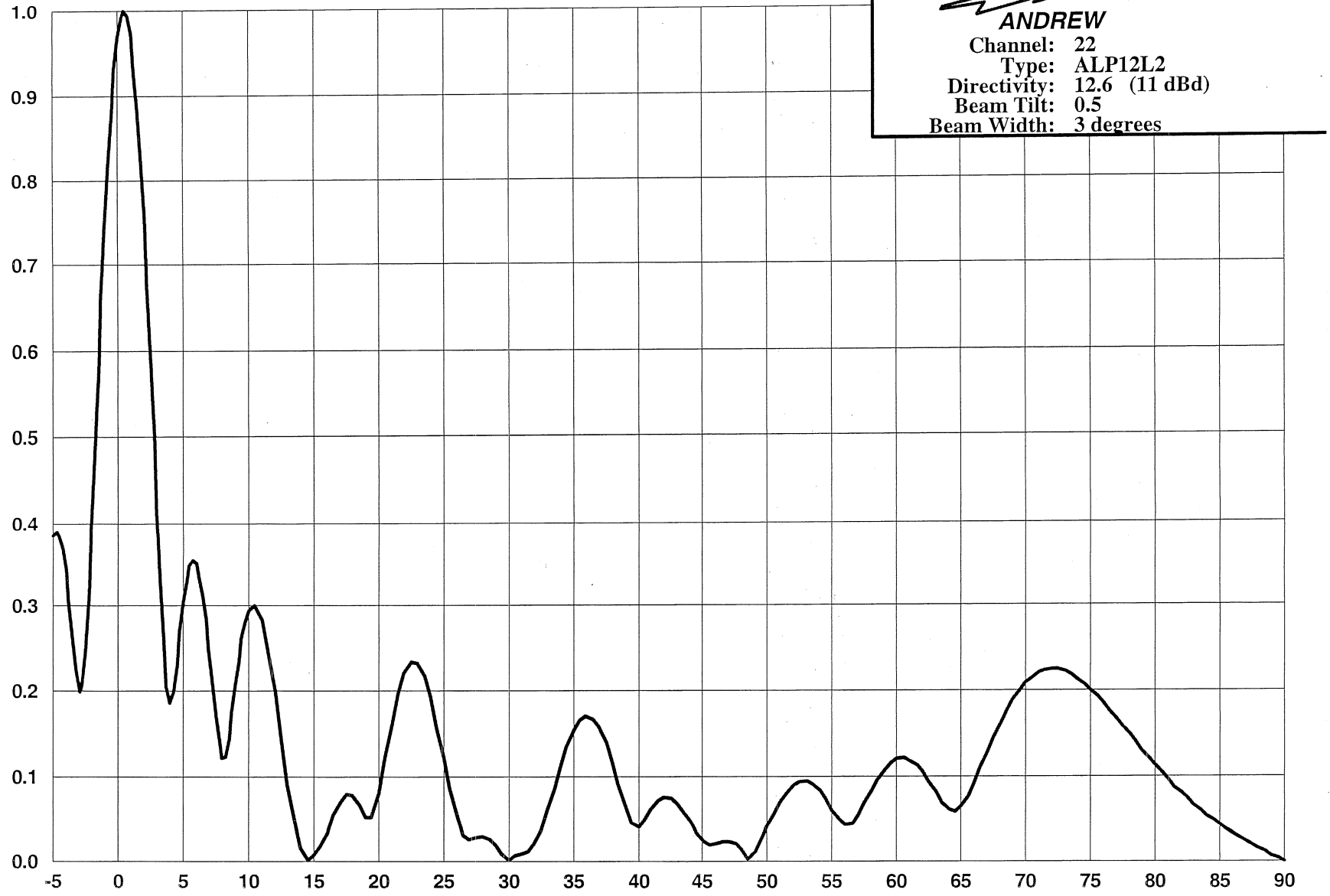
Site:
Proposal Number:

Author:

Date: 4/21/2003



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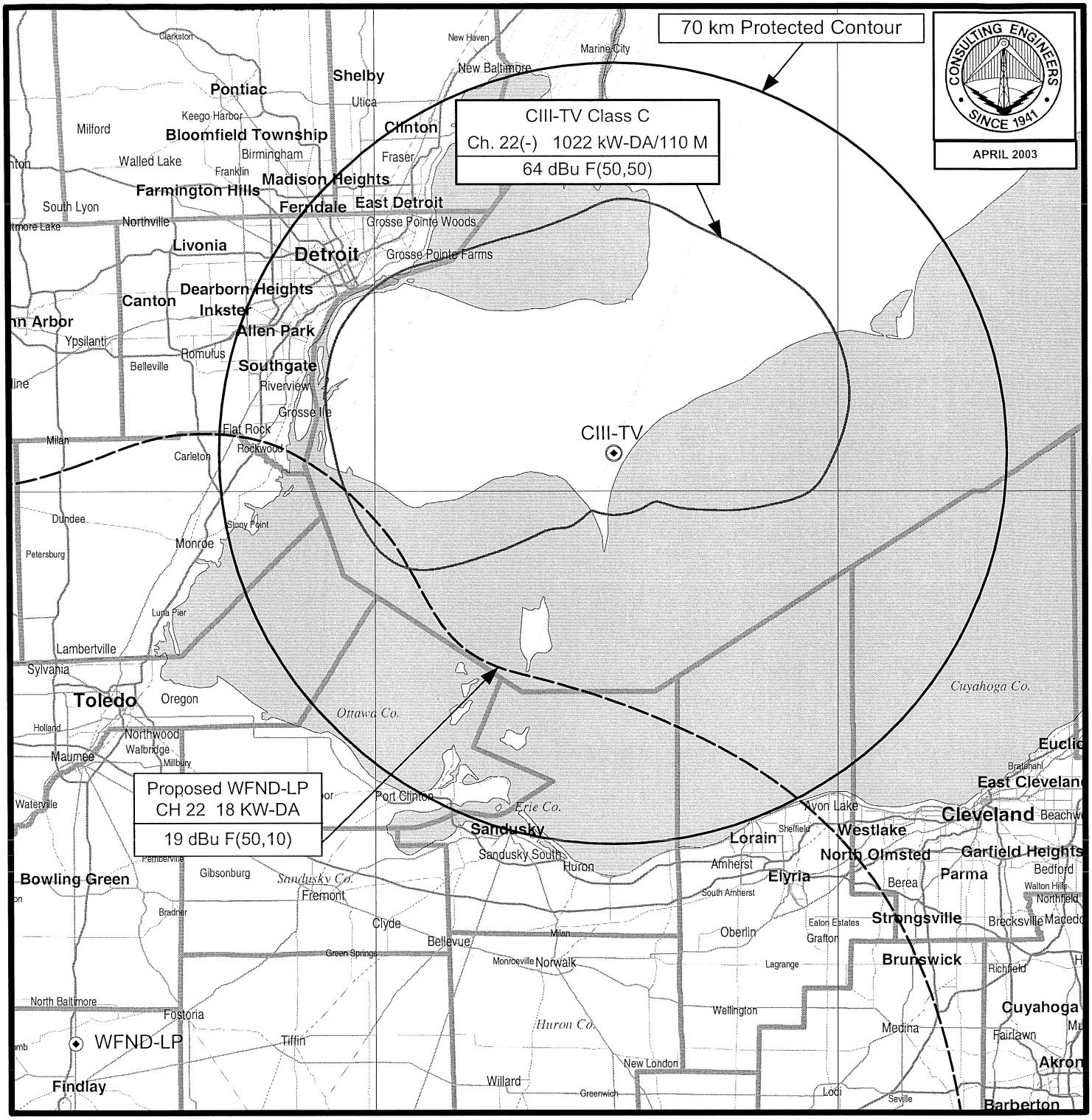
Date: 4/21/2003

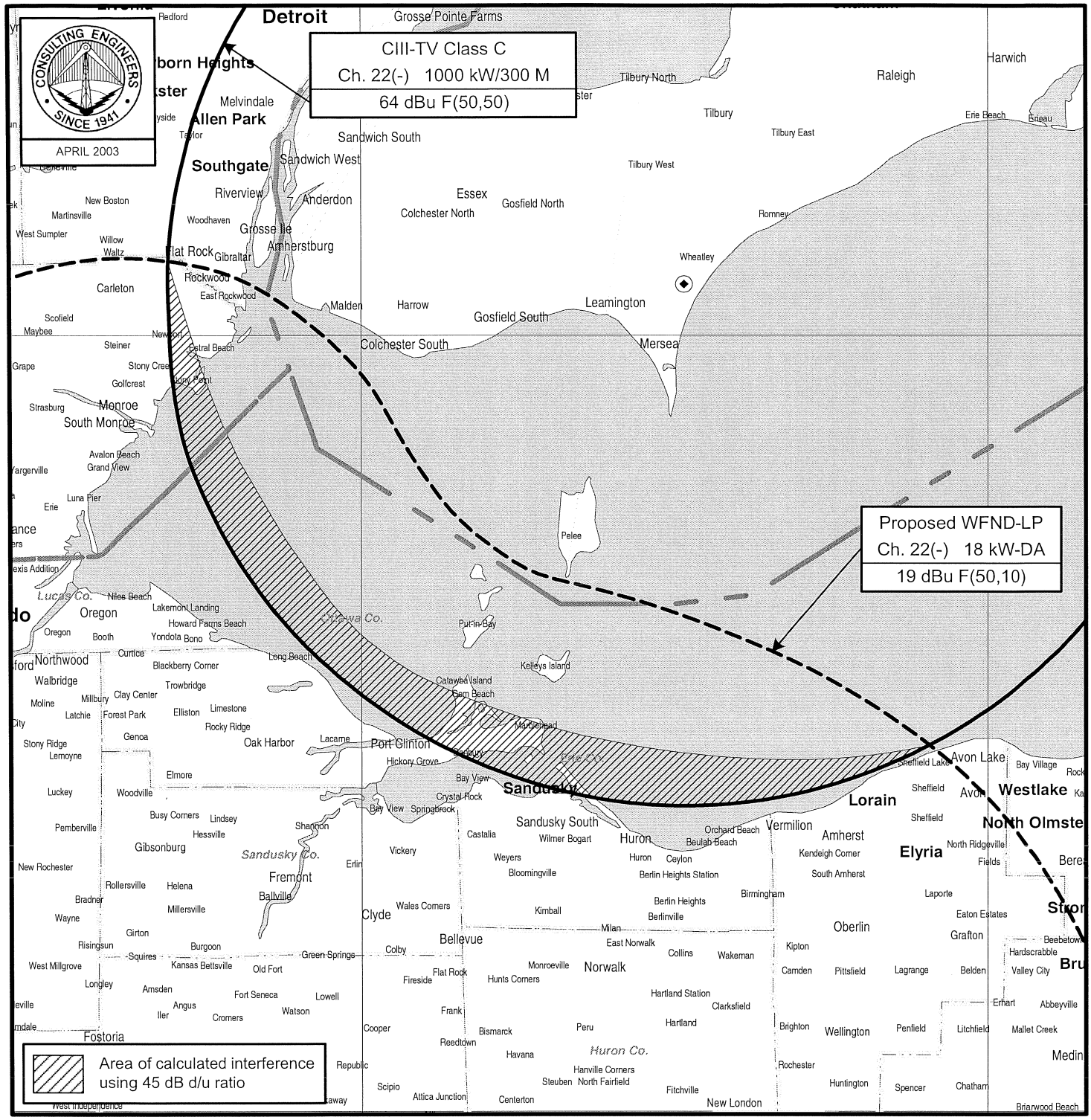
Figure 2
Sheet 3 of 3



CANADA ALLOCATION STUDY

TV STATION WFND-LP
FINDLAY, OHIO
CH 22 18 KW (MAX-DA)

du Treil, Lundin & Rackley, Inc. Sarasota, Florida



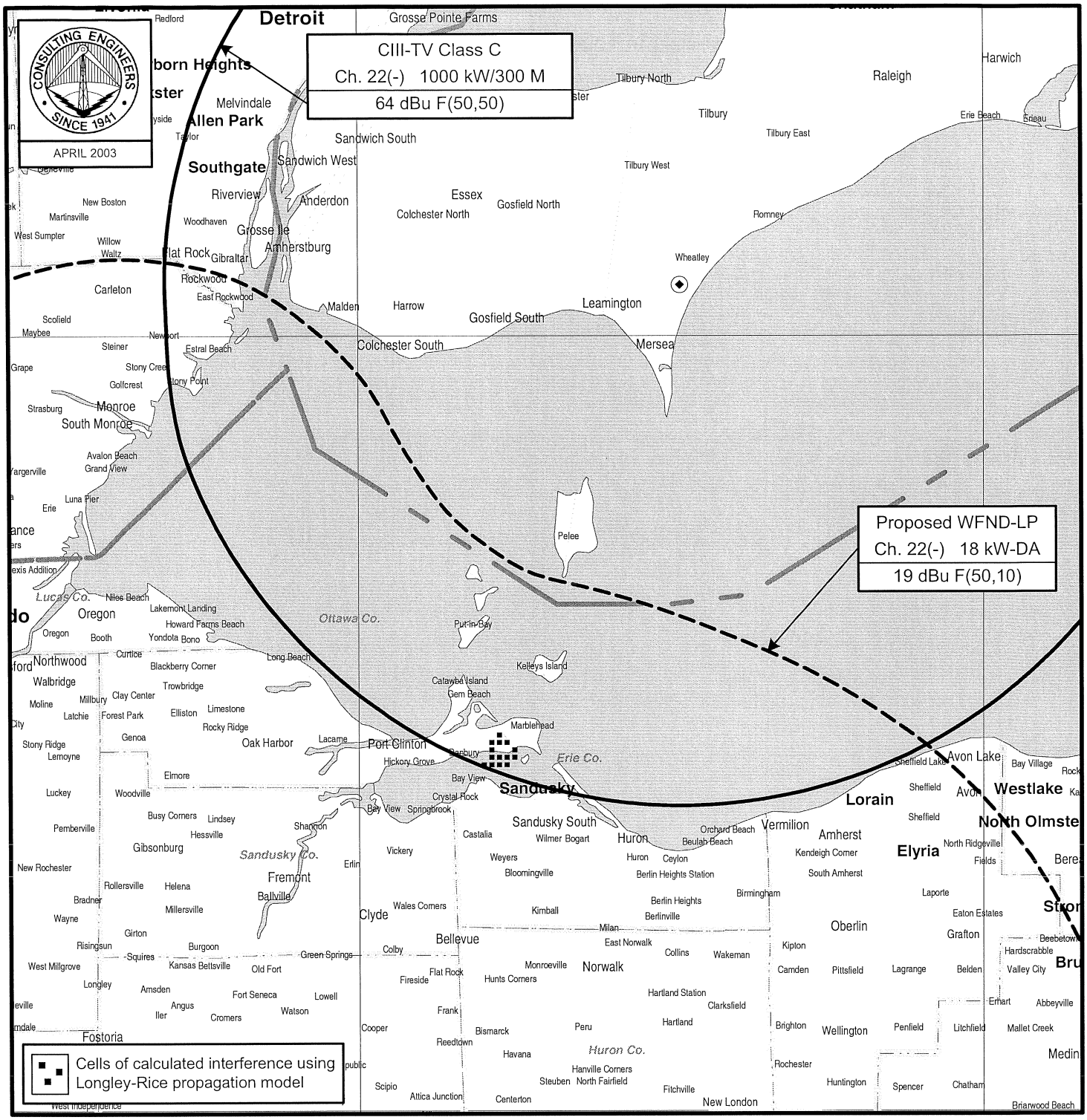
PREDICTED INTERFERENCE TO CIII-TV

STATION WFND-LP

FINDLAY, OHIO

CH 22 18 KW (MAX-DA)

du Treil, Lundin & Rackley, Inc Sarasota, Florida



PREDICTED INTERFERENCE TO CIII-TV

STATION WFND-LP

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CH 22 18 KW (MAX-DA)

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