



ENGINEERING STUDY

NEW 204A

Lakewood, NJ

REJUVENATION OUTREACH CENTER INC

CP Modification

File # 0167401, Facility ID #764260

January, 2024

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TECHNICAL STATEMENT

This technical statement and attached exhibits were prepared on behalf of Rejuvenation Outreach Center, Inc ("ROCI"), in support of a modification to CP File #0167401, Facility ID #764260. The permittee wishes to relocate to a tower 1.8km from the currently permitted site. This application also seeks to revise the TV6 study which will show non-interference to WPVI using an alternate showing.

TECHNICAL PARAMETERS

Facilities Proposed

Location (NAD83)	40° 02' 57.8" N Latitude, 74° 13' 03.4" W Longitude
Channel	204A(88.7MHz)
Tower Overall AGL Height-	44.2m
Tower ASR	NONE (See TOWAIR calculation)
Proposed Antenna	2-Bay, half-wave spaced EPA Type 3
Antenna AGL Height-	33m
Site AMSL Height-	33.5m
COR AMSL Height	66.5m
HAAT	48m
ERP	0.5kW-H+V

BASIS OF CALCULATIONS

All exhibits and calculations in this application were prepared using the FCC 30-Second US Terrain database unless otherwise noted.

POPULATION SERVED

The proposed NCE facility will encompass 327.1 sq. km and 281,910 people. This compares favorably with the original application which covered 116.5 sq. km. and 130,531 people (2010 Census).

47 CFR § 73.509 COMPLIANCE

As demonstrated in Exhibits B and B1, the proposed NCE facility will utilize a non-directional antenna and will meet all contour protection requirements toward other stations as specified in 47 CFR § 73.509. There are no allocation implications to any Mexican or Canadian facilities.

TV CHANNEL 6 PROTECTION

WPVI-TV is a full power TV6 station located 86km from the proposed 204A Facility. A TV 6 protection report is filed separately from this exhibit.

COMMUNITY COVERAGE

As demonstrated in Exhibit D, the proposed facility will cover 100% of Lakewood, NJ in area and population with the 60dBu signal. Lakewood comprises 19 sq km (land area) and as of the 2010 Census the population of the city was 53,884.

ENVIRONMENTAL CONSIDERATIONS

The proposed antenna will be attached to a new monopole tower to be erected and owned by Sparq, LLC. Sparq has received all necessary permits to build the tower and it will be erected near the end of January, 2024. The proposed antenna for the FM station will be located at the 33m level of a 44.2 meter monopole tower. Verizon will have cellular antennas above the FM antenna.

The attachment of the proposed antenna will not alter the proposed and approved tower structure for purposes of the Nationwide Programmatic Agreement and the NHPA Section 106. There are no other non-excluded RF source located on the tower supporting the proposed antenna.

The proposed antenna will operate at a maximum power level of 500W ERP-H and V and will operate at 33m AGL. ROCI proposes to operate with a 2-bay, half-wave spaced non-directional antenna. Based upon the FCC “FM Model”¹ Power Density vs. Distance calculator using a “EPA Type 3, Opposed U dipole” type antenna setting, the maximum power density at 2m AGL contributed by the proposed antenna is expected to be 3.1 $\mu\text{W}/\text{cm}^2$ or 1.6% of the permitted 200 $\mu\text{W}/\text{cm}^2$ limit for uncontrolled exposure. There are no tall buildings near the proposed tower.

Based upon the preceding evaluation, the proposed antenna it is believed that the proposed antenna is excluded from further Environmental Assessment under 47CFR 1.1306 and 1.1307.

The proposed FM station along with other users at the site will maintain an occupational safety policy and agrees to reduce power or cease operation during periods of maintenance to avoid potentially harmful exposure of personnel to non-ionizing RF radiation.

Respectfully Submitted

A handwritten signature in black ink, appearing to read 'Bert Goldman', with a long horizontal flourish extending to the right.

Bert Goldman
Technical Consultant

¹ <https://www.fcc.gov/general/fm-model>

EXHIBIT A- TOWAIR Calculation

TOWAIR Determination Results

A routine check of the coordinates, heights, and structure type you provided indicates that this structure does not require registration.

***** NOTICE *****

TOWAIR's findings are not definitive or binding, and we cannot guarantee that the data in TOWAIR are fully current and accurate. In some instances, TOWAIR may yield results that differ from application of the criteria set out in 47 C.F.R. Section 17.7 and 14 C.F.R. Section 77.13. A positive finding by TOWAIR recommending notification should be given considerable weight. On the other hand, a finding by TOWAIR recommending either for or against notification is not conclusive. It is the responsibility of each ASR participant to exercise due diligence to determine if it must coordinate its structure with the FAA. TOWAIR is only one tool designed to assist ASR participants in exercising this due diligence, and further investigation may be necessary to determine if FAA coordination is appropriate.

DETERMINATION Results							
PASS SLOPE(50:1): NO FAA REQ-RWY 10499 MTRS OR LESS & 3498.79 MTRS (3.49880) KM AWAY							
Type	C/R	Latitude	Longitude	Name	Address	Lowest Elevation (m)	Runway Length (m)
AIRP	R	40-03-51.00N	074-10-53.00W	LAKWOOD	OCEAN LAKWOOD, NJ	10.1	910.3999999999998
Your Specifications							
NAD83 Coordinates							
Latitude						40-02-57.8 north	
Longitude						074-13-03.4 west	
Measurements (Meters)							
Overall Structure Height (AGL)						44.2	
Support Structure Height (AGL)						0	
Site Elevation (AMSL)						33.5	
Structure Type							
MTOWER - Monopole							

EXHIBIT B ALLOCATION STUDY

ComStudy 2.2 search of channel 204 (88.7 MHz Class A) at 40-02-57.8 N, 74-13-03.4 W.

CALL	CITY	ST CHN CL	DIST	SEP	BRNG	CLEARANCE
NCE-CP	LAKEWOOD	NJ 204 A	1.82	115.00	208.5	-33.19 dB Current CP
WPVI-TV	PHILADELPHIA	PA 6 TV	87.27	0.00	269.9	0.0 See TV6 Exhibit
WFJS-FM	FREEHOLD	NJ 207 B1	25.38	48.00	10.4	0.07 dB Exhibit C
WRSU-FM	NEW BRUNSWICK	NJ 204 A	49.96	115.00	338.2	0.08 dB Exhibit C
WBZC	PEMBERTON	NJ 205 B1	36.11	96.00	230.6	1.50 dB Exhibit C
WEHA	PORT REPUBLIC	NJ 204 A	52.70	115.00	200.6	3.03 dB
WXPB	PHILADELPHIA	PA 203 B	86.99	113.00	269.6	4.39 dB
WMCX	WEST LONG BRANCH	NJ 205 A	31.19	72.00	35.0	4.38 dB
WKNZ	HARRINGTON	DE 204 B1	173.95	143.00	222.7	8.94 dB
WRHU	HEMPSTEAD	NY 204 A	90.72	115.00	34.8	10.71 dB
WBYX	STROUDSBURG	PA 204 B1	147.94	143.00	318.8	13.31 dB
WPSC-FM	WAYNE	NJ 204 A	105.27	115.00	357.1	14.96 dB
WYGG	ASBURY PARK	NJ 201 A	25.70	31.00	43.3	16.23 dB
WWFM	TRENTON	NJ 206 A	43.50	31.00	302.5	16.74 dB
WXPB	MIDDLETOWN	PA 204 B	205.17	178.00	270.3	17.02 dB
WZBL	BARNEGAT LIGHT	NJ 201 A	34.19	31.00	165.8	20.11 dB
WNJT-FM	TRENTON	NJ 201 A	47.58	31.00	303.3	20.64 dB
WNHU	WEST HAVEN	CT 204 A	174.13	115.00	37.1	21.87 dB
WBGO	NEWARK	NJ 202 B1	80.91	48.00	13.9	21.14 dB
WVBH	BEACH HAVEN WEST	NJ 202 A	37.59	31.00	189.7	22.51 dB

LMS as of 1/12/2024

EXHIBIT C Pertinent Protection Contours

Proposed 204A, Lakewood, NJ, Allocation map

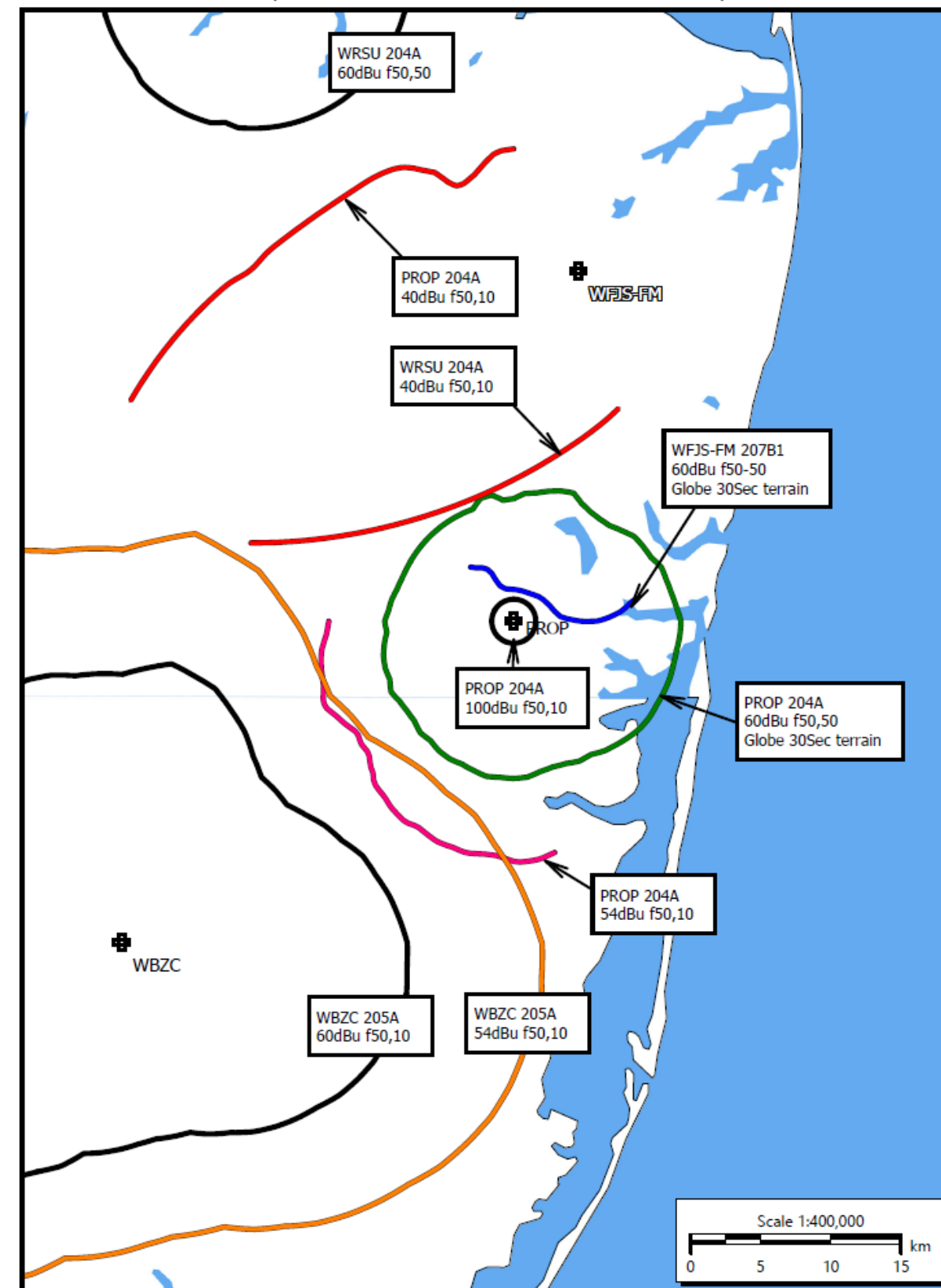


EXHIBIT D Community Coverage

COL Coverage 204A, Lakewood, NJ, 500 watts, 48m HAAT

