Federal Communications Commission
Washington, D. C. 20554

Approved by OMB
3060-0027

FOR FCC USE ONLY

FCC 301

APPLICATION FOR CONSTRUCTION PERMIT FOR COMMERCIAL BROADCAST STATION

FOR COMMISSION USE ONLY
FILE NO.

Section I - General Information

1

Legal Name of the Applicant Aztec Capital Partners, Inc.		
Mailing Address El Zol Media 4322 N 5th St.		
City Philadelphia	State or Country (if foreign address) PA	ZIP Code 19140
Telephone Number (include area code) 215-248-8669	E-Mail Address (if available)	
FCC Registration Number 0021187331	Call Sign WNWR	Facility ID Number 1027

2.

Contact Representative (if other than applicant) Reid Avett	Firm or Company Name WOMBLE BOND DICKENSON (US) LLP	
Mailing Address 2001 K Street, NW, Suite 400 South		
City Washington	State or Country (if foreign address) DC	ZIP Code 20006
Telephone Number (include area code) 202-857-4425	E-Mail Address (if available) reid.avett@wbd-us.com	

3. If this application has been submitted without a fee, indicate reason for fee exemption (see 47 C.F.R. Section 1.1114):

☐ Governmental Entity ☐ Other _____

4. **Application Purpose.**

☐ New Station

☐ New Station with Petition for Rulemaking or Counterproposal to Amend FM Table of Allotments

☐ New Station with Petition for Rulemaking or Counterproposal to Amend FM Table of Allotments using Tribal Priority

☐ Major Change in licensed facility

☒ Minor Change in licensed facility

☐ Major Modification of construction permit

☐ Minor Modification of construction permit

☐ Major Amendment to pending application

☐ Minor Amendment to pending application

a. File number of original construction permit: _____ ☒ N/A

b. Service Type: ☒ AM ☐ FM ☐ TV ☐ DTV ☐ DTS

c. DTV Type: ☐ Pre-Transition ☐ Post-Transition ☐ Both

d. Community of License:

City	State
Philadelphia	PA

e. Facility Type: ☒ Main ☐ Auxiliary

If an amendment, submit as an Exhibit a listing by Section and Question Number of the portions of the pending application that are being revised.

Exhibit No. N/A

NOTE: In addition to the information called for in this section, an explanatory exhibit providing full particulars must be submitted for each question for which a "No" response is provided.

Section II - Legal

1. **Certification.** Applicant certifies that it has answered each question in this application based on its review of the application instructions and worksheets. Applicant further certifies that where it has made an affirmative certification below, this certification constitutes its representation that the application satisfies each of the pertinent standards and criteria set forth in the application instructions and worksheets.

☒ Yes ☐ No

2. **Parties to the Application.**

a. List the applicant, and, if other than a natural person, its officers, directors, stockholders and other entities with attributable interests, non-insulated partners and/or members. If a corporation or partnership holds an attributable interest in the applicant, list separately its officers, directors, stockholders and other entities with attributable interests, non-insulated partners and/or members. Create a separate row for each individual or entity. Attach additional pages if necessary.

(1) Name and address of the applicant and each party to the application holding an attributable interest (if other than individual also show name, address and citizenship of natural person authorized to vote the stock or holding the attributable interest). List the applicant first, officers next, then directors and, thereafter, remaining stockholders and other entities with attributable interests, and partners.

(2) Citizenship.

(3) Positional Interest: Officer, director, general partner, limited partner, LLC member, investor/creditor attributable under the Commission's **equity/debt plus** standard, etc.

(4) Percentage of votes.

(5) Percentage of total assets (equity plus debt).

(1)	(2)	(3)	(4)	(5)
Aztec Capital Partners, Inc, 4322 North 5th St Philadelphia, PA 19140	US	Applicant	100	100
Kenneth Trujillo, 4322 North 5th St Philadelphia, PA 19140	US	President	100	100

b. Applicant certifies that equity and financial interests not set forth above are non-attributable.

☐ Yes ☐ No ☒ N/A

See Explanation in Exhibit No.

3. **Other Authorizations.** List call signs, locations, and facility identifiers of all other broadcast stations in which applicant or any party to the application has an attributable interest.

Exhibit No.

☒ N/A

4. **Multiple Ownership.**

a. Is the applicant or any party to the application the holder of an attributable radio joint sales agreement or an attributable radio or television time brokerage agreement in the same market as the station subject to this application?

☐ Yes ☒ No

If "YES," radio applicants must submit as an Exhibit a copy of each such agreement for radio stations.

Exhibit No.

Section II - Legal

b. Applicant certifies that the proposed facility complies with the Commission's multiple ownership rules.

[X] Yes [ ] No

Radio applicants only: If "Yes," submit an Exhibit providing information regarding the market, broadcast station(s), and other information necessary to demonstrate compliance with 47 C.F.R. Section 73.3555(a).

See Explanation in Exhibit No.

All Applicants: If "No," submit as an Exhibit a detailed explanation in support of an exemption from, or waiver of, 47 C.F.R Section 73.3555.

c. Applicant certifies that the proposed facility:

[X] Yes [ ] No

(1) does not present an issue under the Commission's policies relating to media interests of immediate family members;

See Explanation in Exhibit No.

(2) complies with the Commission's policies relating to future ownership interests; and

(3) complies with the Commission's restrictions relating to the insulation and non-participation of non-party investors and creditors.

d. Does the Applicant claim status as an "eligible entity," that is, an entity that qualifies as a small business under the Small Business Administration's size standards for its industry grouping (as set forth in 13 C.F.R. Section 121.201), and holds:

[ ] Yes [X] No

See Explanation in Exhibit No.

(1) 30 percent or more of the stock or partnership interests and more than 50 percent of the voting power of the corporation or partnership that will own the media outlet; or

(2) 15 percent or more of the stock or partnership interests and more than 50 percent of the voting power of the corporation or partnership that will own the media outlet, provided that no other person or entity owns or controls more than 25 percent of the outstanding stock or partnership interests; or

(3) more than 50 percent of the voting power of the corporation that will own the media outlet (if such corporation is a publicly traded company)?

All applicants: If "Yes," submit as an Exhibit a detailed showing demonstrating proof of status as an eligible entity.

5. **Character Issues.** Applicant certifies that neither applicant nor any party to the application

[X] Yes [ ] No

See Explanation in Exhibit No.

a. any broadcast application in any proceeding where character issues were left unresolved or were resolved adversely against the applicant or party to the application; or

b. any pending broadcast application in which character issues have been raised.

6. **Adverse Findings.** Applicant certifies that, with respect to the applicant and any party to the application, no adverse finding has been made, nor has an adverse final action been taken by any court or administrative body in a civil or criminal proceeding brought under the provisions of any law related to the following: any felony; mass media-related antitrust or unfair competition; fraudulent statements to another governmental unit; or discrimination.

[X] Yes [ ] No

See Explanation in Exhibit No.

7. **Alien Ownership and Control.** Applicant certifies that it complies with the provisions of Section 310 of the Communications Act of 1934, as amended, relating to interests of aliens and foreign governments.

[X] Yes [ ] No

See Explanation in Exhibit No.

8. **Program Service Certification.** Applicant certifies that it is cognizant of and will comply with its obligations as a Commission licensee to present a program service responsive to the issues of public concern facing the station's community of license and service area.

[X] Yes [ ] No

9. **Local Public Notice.** Applicant certifies that it has or will comply with the public notice requirements of 47 C.F.R. Section 73.3580.

[X] Yes [ ] No

10. **Auction Authorization.** If the application is being submitted to obtain a construction permit for which the applicant was the winning bidder in an auction, then the applicant certifies, pursuant to 47 C.F.R. Section 73.5005(a), that it has attached an exhibit containing the information required by 47 C.F.R. Sections 1.2107(d), 1.2110(i), 1.2112(a) and 1.2112(b), if applicable.

☐ Yes ☐ No ☒ N/A

Exhibit No.

An exhibit is required unless this question is inapplicable.

11. **Anti-Drug Abuse Act Certification.** Applicant certifies that neither applicant nor any party to the application is subject to denial of federal benefits pursuant to Section 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C. Section 862.

☒ Yes ☐ No

12. **Equal Employment Opportunity (EEO).** If the applicant proposes to employ five or more full-time employees, applicant certifies that it is filing simultaneously with this application a Model EEO Program Report on FCC Form 396-A.

☐ Yes ☐ No ☒ N/A

13. **Petition for Rulemaking/Counterproposal to Add New FM Channel to FM Table of Allotments.** If the application is being submitted concurrently with a Petition for Rulemaking or Counterproposal to Amend the FM Table of Allotments (47 C.F.R. Section 73.202) to add a new FM channel allotment, petitioner/counter-proponent certifies that, if the FM channel allotment requested is allotted, petitioner/counter-proponent will apply to participate in the auction of the channel allotment requested and specified in this application.

☐ Yes ☐ No ☒ N/A

14. **Tribal Priority - Threshold Qualifications.** Is the Applicant applying for an FM allotment set forth in a Public Notice announcing a Tribal Threshold Qualifications window? An Applicant answering "Yes" must provide an Exhibit demonstrating that it would have been qualified to add the allotment for which it is applying using the Tribal Priority.

☐ Yes ☒ No

Exhibit No.

I certify that the statements in this application are true, complete, and correct to the best of my knowledge and belief, and are made in good faith. I acknowledge that all certifications and attached Exhibits are considered material representations. I hereby waive any claim to the use of any particular frequency as against the regulatory power of the United States because of the previous use of the same, whether by license or otherwise, and request an authorization in accordance with this application. (See Section 304 of the Communications Act of 1934, as amended.)

Typed or Printed Name of Person Signing	Typed or Printed Title of Person Signing
Kenneth I. Trujillo	President
Signature 	Date May 31, 2022

WILLFUL FALSE STATEMENTS ON THIS FORM ARE PUNISHABLE BY FINE AND/OR IMPRISONMENT (U.S. CODE, TITLE 18, SECTION 1001), AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION PERMIT (U.S. CODE, TITLE 47, SECTION 312(a)(1)), AND/OR FORFEITURE (U.S. CODE, TITLE 47, SECTION 503).

SECTION III PREPARER'S CERTIFICATION

I certify that I have prepared Section III (Engineering Data) on behalf of the applicant, and that after such preparation, I have examined and found it to be accurate and true to the best of my knowledge and belief.

Name	Relationship to Applicant (e.g., Consulting Engineer)	
Edward A. Schober	Consulting Engineer	
Signature 	Date 31 May 2022	
Mailing Address PO Box 367		
City Haddon Heights	State or Country (if foreign address) NJ	ZIP Code 08035
Telephone Number (include area code) 856-546-8008	E-Mail Address (if available) FCC@Radiotechniques.com	

WILLFUL FALSE STATEMENTS ON THIS FORM ARE PUNISHABLE BY FINE AND/OR IMPRISONMENT (U.S. CODE, TITLE 18. SECTION 1001), AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION PERMIT (U.S. CODE, TITLE 47, SECTION 312(a)(1)), AND/OR FORFEITURE (U.S. CODE, TITLE 47, SECTION 503).

SECTION III - A AM Engineering

TECHNICAL SPECIFICATIONS Ensure that the specifications below are accurate. Contradicting data found elsewhere in this application will be disregarded. All items must be completed. The response "on file" is not acceptable.

TECH BOX

1. Frequency: 1540 kHz

2. Class: ☐ A ☐ B ☐ C ☒ D

3. Hours of Operation: ☒ Unlimited ☐ Limited ☐ Daytime ☐ Share Time ☐ Specified Hours: _____

4. **Daytime Operation:** ☒ Yes ☐ No

   a. Power: 10 kW

   b. Antenna Location Coordinates: (NAD 27)

   40 ° 0 ' 5 " ☒ N ☐ S Latitude

   75 ° 12 ' 36 " ☐ E ☒ W Longitude

   c. **Nondirectional:** ☒ Yes ☐ No

   If "Yes," complete the following items. If additional space is needed, please provide the information requested below in an Exhibit.

   Exhibit No.

   Theoretical 334.5 mV/m per kW at 1 km

Tower	1
Overall height above ground (include obstruction lighting) (meters)	74.6
Antenna structure registration	1232260 Number ☐ Notification filed with FAA ☐ Not applicable
Height of radiator above base insulator, or above base, if grounded (meters)	71.8
Electrical height of radiator (degrees)	132.8
Top-Loaded/Sectionalized apparent height (degrees)	
A	
B	
C	
D	

TECH BOX - DAYTIME OPERATION

d. **Directional:** ☐ Yes ☒ No

If "Yes," complete the following items. If additional space is needed, please provide the information requested below in an Exhibit.

Exhibit No.

Theoretical _____ mV/m at 1 km

Standard RMS: _____ mV/m at 1 km

Towers	1	2	3	4
Overall height above ground (include obstruction lighting) (meters)				
Antenna structure registration	_____ Number ☐ Notification filed with FAA ☐ Not applicable	_____ Number ☐ Notification filed with FAA ☐ Not applicable	_____ Number ☐ Notification filed with FAA ☐ Not applicable	_____ Number ☐ Notification filed with FAA ☐ Not applicable
Height of radiator above base insulator, or above base, if grounded (meters)				
Electrical height of radiator (degrees)				
Field ratio				
Phase (degrees)				
Spacing (degrees)				
Tower orientation (degrees)				
Tower reference switch				
Top-Loaded/Sectionalized apparent height (degrees)				
A				
B				
C				
D				

Augmented: ☐ Yes ☐ No

If "Yes," complete the following:

Augmented RMS: _____ mV/rn at 1 krn

Azimuth	Span	Augmentation radiation (mV/m at 1 km)

TECH BOX - NIGHTTIME OPERATION

5. **Nighttime Operation:** [X] Yes [ ] No

a. Power: 0.007 kW

b. Antenna Location Coordinates: (NAD 27)

40	° 0	' 5	"	[X] N	[ ] S	Latitude
75	° 12	' 36	"	[ ] E	[X] W	Longitude

c. **Nondirectional:** [X] Yes [ ] No

If "Yes," complete the following items. If additional space is needed, please provide the information requested below in an Exhibit.

Exhibit No.

Theoretical 334.5 mV/m per kW at 1 km

Tower	1
Overall height above ground (include obstruction lighting) (meters)	74.6
Antenna structure registration	1232260 Number [ ] Notification filed with FAA [ ] Not applicable
Height of radiator above base insulator, or above base, if grounded (meters)	71.8
Electrical height of radiator (degrees)	132.5
Top-Loaded/Sectionalized apparent height (degrees)	
A	
B	
C	
D	

TECH BOX - NIGHTTIME OPERATION

d. **Directional:** ☐ Yes ☒ No

If "Yes," complete the following items. If additional space is needed, please provide the information requested below in an Exhibit.

Exhibit No.

Theoretical _____ mV/m at 1 kin

Standard RMS: _____ mV/rn at 1 kin

Towers	1	2	3	4
Overall height above ground (include obstruction lighting) (meters)				
Antenna structure registration	_____ Number ☐ Notification filed with FAA ☐ Not applicable	_____ Number ☐ Notification filed with FAA ☐ Not applicable	_____ Number ☐ Notification filed with FAA ☐ Not applicable	_____ Number ☐ Notification filed with FAA ☐ Not applicable
Height of radiator above base insulator, or above base, if grounded (meters)				
Electrical height of radiator (degrees)				
Field ratio				
Phase (degrees)				
Spacing (degrees)				
Tower orientation (degrees)				
Tower reference switch				
Top-Loaded/Sectionalized apparent height (degrees)				
A				
B				
C				
D				

Augmented: ☐ Yes ☐ No

If "Yes," complete the following:

Augmented RMS: _____ mV/m at 1 km

Azimuth	Span	Augmentation radiation

TECH BOX - CRITICAL HOURS OPERATION

6. Critical Hours Operation: [X] Yes [ ] No

a. Power: 1.2 kW

b. Antenna Location Coordinates: (NAD 27)

40 °	0 '	5 "	[V] N	[ ] S Latitude
75 °	12 '	36 "	[ ] E	[X] W Longitude

c. Nondirectional: [X] Yes [ ] No

If "Yes," complete the following items. If additional space is needed, please provide the information requested below in an Exhibit.

Exhibit No.

Theoretical 334.5 mV/m per kW at 1 km

Tower	1
Overall height above ground (include obstruction lighting) (meters)	74.6
Antenna structure registration	1232260 Number [ ] Notification filed with FAA [ ] Not applicable
Height of radiator above base insulator, or above base, if grounded (meters)	71.8
Electrical height of radiator (degrees)	132.5
Top-Loaded/Sectionalized apparent height (meters)	
A	
B	
C	
D	

TECH BOX - CRITICAL HOURS OPERATION

d. **Directional:** ☐ Yes ☒ No

Exhibit No.

if "Yes," complete the following items. If additional space is needed, please provide the information requested below in an Exhibit.

Theoretical _____ mV/m at 1 km

Standard RMS: _____ mV/m at 1 km

Towers	1	2	3	4
Overall height above ground (include obstruction lighting) (meters)				
Antenna structure registration	_____ Number ☐ Notification filed with FAA ☐ Not applicable	_____ Number ☐ Notification filed with FAA ☐ Not applicable	_____ Number ☐ Notification filed with FAA ☐ Not applicable	_____ Number ☐ Notification filed with FAA ☐ Not applicable
Height of radiator above base insulator, or above base, if grounded (meters)				
Electrical height of radiator (degrees)				
Field ratio				
Phase (degrees)				
Spacing (degrees)				
Tower orientation (degrees)				
Tower reference switch				
Top-Loaded/Sectionalized apparent height (degrees)				
A				
B				
C				
D				

Augmented: ☐ Yes ☐ No

If "Yes," complete the following:

Augmented RMS: _____ mV/m at 1 km

Azimuth	Span	Augmentation radiation

NOTE: In addition to the information called for in this section, an explanatory exhibit providing full particulars must be submitted for each question for which a "No" response is provided.

CERTIFICATION

7. **Broadcast Facility.** The proposed facility complies with the engineering standards and assignment requirements of 47 C.F.R. Sections 73.24(e), 73.24(g), 73.33, 73.45, 73.150, 73,152, 73.160, 73.182(a)-(i), 73.186, 73.189, 73.1650. **Exhibit Required.**

[X] Yes [ ] No — See Explanation in Exhibit No. — Exhibit No. ENG

8. **Community Coverage.** The proposed facility complies with community coverage requirements of 47 C.F.R. Section 73.24(i).

[X] Yes [ ] No — See Explanation in Exhibit No. ENG

9. **Main Studio Location.** The proposed main studio location complies with requirements of 47 C.F.R. Section 73.1125.

[X] Yes [ ] No — See Explanation in Exhibit No. N/A

10. **Interference.** The proposed facility complies with all of the following applicable rule sections. Check all those that apply. An exhibit is required for each applicable section.

[X] Yes [ ] No — See Explanation in Exhibit No. ENG

Groundwave.

a. [X] 47 C.F.R. Section 73.37 — Exhibit No. ENG

Skywave.

b. [X] 47 C.F.R. Section 73.182. — Exhibit No. ENG

Critical Hours.

c. [X] 47 C.F.R. Section 73.187. — Exhibit No. ENG

11. **Environmental Protection Act.** The proposed facility is excluded from environmental processing under 47 C.F.R. Section 1.1306 (i.e., the facility will not have a significant environmental impact and complies with the maximum permissible radio frequency electromagnetic exposure limits for controlled and uncontrolled environments). Unless the applicant can determine compliance through the use of the RF worksheets in Appendix A, an **Exhibit is required.**

[X] Yes [ ] No — See Explanation in Exhibit No. ENG

By checking "Yes" above, the applicant also certifies that it, in coordination with other users of the site, will reduce power or cease operation as necessary to protect persons having access to the site, tower or antenna from radio frequency electromagnetic exposure in excess of FCC guidelines.

12. **Community of License Change - Section 307(b).** If the application is being submitted to change the facility's community of license, then the applicant certifies that it has attached an exhibit containing information demonstrating that the proposed community of license change constitutes a preferential arrangement of assignments under Section 307(b) of the Communications Act of 1934, as amended (47 U.S.C. Section 307(b)).

[ ] Yes [ ] No [X] N/A — Exhibit No.

An exhibit is required unless this question is not applicable.

13. **Dispositive Section 307(b) Preference**

a. Was the AM facility that is the subject of this application awarded on the basis of a dispositive Section 307(b) preference?

[ ] Yes [X] No

b. If yes to 13(a), applicant certifies that: (i) the community of license proposed in the subject application is the same as that on which the Section 307(b) preference was based, or (ii) as shown in the attached Exhibit, the service area proposed in the subject application is substantially equivalent to the service area on which the Section 307(b) preference was based.

[ ] Yes [ ] No [ ] N/A — Exhibit No.

c. If yes to 13(a) and no to 13(b), applicant certifies that, although in the subject application it proposes to: (i) change the community of license, or (ii) modify service to the area on which the Section 307(b) preference was based, it has for a period of four years of on-air operations: (1) served the community of license, or (2) provided full service to the area on which the Section 307(b) preference was based.

[ ] Yes [ ] No — Exhibit No.

PREPARER'S CERTIFICATION ON PAGE 5 MUST BE COMPLETED AND SIGNED.

Engineering Report
WNWR Transmitter Relocation
Aztec Capital Partners, Inc.
Exhibit 16 Page 1

Abstract

Radiotechniques Engineering, LLC has prepared this report in support of the application for Aztec Capital Partners, Inc. (Aztec) to relocate the transmitter site of WNWR, Philadelphia, PA to the tower site of WHAT, Philadelphia, PA using a multifrequency diplex filter system.

This application proposes technical facilities identical to those described in the expired Construction Permit BP-20190201AAO.

Status

The licensed facilities of WNWR have been dismantled, and the site is no longer available to the licensee. The facilities described herein and in Construction Permit BP-20190201AAO have been constructed with the exception of full power adjustment and final configuration of the diplex filter system, the three phase power source by the Utility Company, and connection of the WNWR 10 kW transmitter.

WNWR is operating using daytime facilities as described in the Critical hours portion of BP-20190201AAO and this application.

Antenna

The proposed antenna is a base insulated self supporting antenna tower, Registration Number (ARN) 1232260. The antenna is 132.5 electrical degrees tall at the 1540 kHz frequency providing a highly efficient radiator. It has a conventional 120 radial ground system limited by property boundaries or other obstructions. The 90 degree length of radials at the WHAT 1340 kHz frequency will be 103.5 degrees long at the WNWR 1540 kHz frequency, so no degradation of efficiency due to the ground system is to be expected.

The tower is registered to the WNWR licensee who is responsible for marking and lighting.

Day Coverage

The day service contours are shown in Figure 1. The area of Philadelphia covered by the proposed contours were measured by polar planimeter. The Day 5.0 mV/m contour covers 94.7% of the City and the Critical hours 5.0 mV/m contour covers 64.2% meeting the requirement of §73.24(i)

Blanketing

The 1 V/m blanketing contour at the day power of 10,000 Watts encompasses a population of 7,700 persons. The population within the 25 mV/m contour is, however 1,092,672 persons, so the population within the 1 V/m blanketing contour is only 0.7% of that within the 25 mV/m contour, thereby meeting the requirements of FCC Regulations §73.24(g). Figure 3 is a satellite photograph of the antenna location with the 1 V/m contour.

Groundwave Interference

Figure 4 is the analysis of groundwave overlap. The contours for both the licensed and proposed facilities of allocations significance are shown in Figure 4A. There is grandfathered overlap with Co-Channel and first adjacent channel stations which is reduced by this application.

Ground conductivity for the proposed WNWR facility are those used in the application for Construction Permit BP-20190201AAO, listed below:

Bearing	Dist (km)	Cond	Dist	Cond	Dist	Cond	Dist	Cond
170°	26.9	3.0						
207.5°	28.0	2.0						
214°	12.4	2.0	22.8	1.0	49.0	0.1	100.0	1.0
234°	12.4	2.0-	23.8	1.0	100.0	0.1		

All other conductivity values were from FCC Figure M3

Ground Conductivity for the WJDM CP are those used in the application for its Construction Permit BP-20200416AAD listed below:

Bearing	Dist (km)	Cond	Dist	Cond	Dist	Cond	Dist	Cond
205°	93.5	5000						
210°	66.5	5000	91.79	4.0				
215°	65.74	4.0	88.97	4.0				
220°	66.0	4.0	89.75	4.0				
225°	66.8	4.0	88.97	4.0				
230°	66.59	4.0	89.1	4.0				
235°	66.34	4.0	89.31	4.0				
240°	68.15	4.0	81.3	4.0				
245°	66.5	4.0	90.65	4.0				
250°	65.83	4.0	90.45	4.0				
255°	66.83	4.0	90.45	4.0				
260°	66.26	4.0	85.74	4.0				
265°	51.1	4.0	73.62	4.0				

Figure 4B shows the detail with respect to first adjacent channel station WSRY, Elkton, MD. Both the received and caused overlap is substantially reduced by this proposal compared with the licensed facility. The tabulation of overlap areas and populations are shown on the map.

There is grandfathered with respect to cochannel overlap with WDON, (Formerly WACA) Wheaton, MD and WADK, Newport RI. Both of these facilities have grandfathered overlap with the licensed WNWR facilities. The overlap, both caused and received with respect to WDON is greatly reduced as can be obviously seen on the map.

There is a small amount of overlap with the WADK 0.5 mV/m contour and the licensed 0.025 mV/m contour on Eastern Long Island New York. This interference is reduced by the proposed change.

There is no other prohibited overlap with any other stations, and the overlap of the licensed WNWR contours with first adjacent channel stations WCTR, Chestertown, MD, as well as second adjacent channel station WCHE, Chester, PA are eliminated. The former WJDM, Elizabeth, NJ has been deleted, and WTHE, FCC ID which now holds the call WJDM

formerly on 1520 kHz has a construction permit for 1530 kHz. There is no overlap with the proposed WNWR when the conductivity values used in the WJDM application are used.

Night Operation

WNWR is proposed to be licensed as a class D AM station with low power night operation. As such there is no requirement to provide night interference free signals to any specific portion of the principal community.

Table 1 is the calculation of the night interference free contour used to develop the service contour map of Figure 2. Figure 5 is a map showing the protection of class A stations from the proposed facility. Although not specifically shown, the proposed 0.025 mV/m 10% skywave signal does not approach Alaska.

Table 2 is a study showing that the proposed radiated field will not interfere with any Class B or Class C station or proposal.

Critical Hours

The WNWR proposed facility is limited under the present critical hours restrictions of §73.187 to reduced power during the two hours after sunrise and the two hours before sunset. We understand that the Commission has proposed eliminating or modifying the requirement for Critical Hours protection of class A stations in FCC Docket MB 13-249. In the case that this limitation is removed while this application is pending, or while the resulting construction permit remains open and unexpired, that the application or construction permit would be automatically amended to delete critical hours power limitations without further application or processing delays. No changes to the physical facility is required to accommodate the deletion of critical hours limitations.

Figure 6 details the critical hours limitations. It additionally demonstrates substantial clearance between the proposed 0.005 mV/m groundwave contour and the KXEL 0.1 mV/m protected groundwave contour.

Environment

Section 106 Review

The tower is currently in use by WNWR. The existing tower was built prior to March 16, 2001. The antenna collocation programmatic agreement generally permits collocation without consultation or review under Section 106 Subpart B of 36CFR Part 800. No further review is necessary as:

- The mounting of the antenna will not result in a substantial increase in the size of the antenna or tower structure.
- Prior to the collocation, the tower or structure has not been determined by the FCC to have an effect on one or more historic properties,
- The tower or structure is not the subject of a pending environmental review,
- The collocation licensee has not received a written or electronic notification that the FCC is in receipt of a complaint that the collocation has an adverse effect on one or more historic properties.

FCC Part 1.1306

- The site is not within an officially designated wilderness area or wildlife preserve.
- The mounting of the antenna will not effect endangered species.
- The site is not in a floodplain.
- The mounting of the antenna will not involve a significant change in surface features.
- The tower will not use high intensity white lights.
- The mounting of the antenna does not exceed human exposure limits. See below.
- Compliance with RF safety requirements in accordance with FCC part 1.1306(8)b) as demonstrated below. The operation does not exceed human exposure limits.

Protection of Humans from Radiofrequency Exposure

The proposed WNWR facilities share the tower with WHAT, Philadelphia, PA

WHAT, 1 kW, 1340 kHz, tower height 0.326 wavelength
WNWR, Proposed, 10 kW, 1540 kHz, tower height 0.368 wavelength

OET Bulletin 65 Section 1 Table 2 and Table 3 specify distance from the tower for fencing.
Entering the tables for WHAT Table 2 distance is 1 Meter Table 2 distance is 2 meters
By linear interpolation the distance required would be 1.3 meters
Entering the tables for WNWR, Table 2 distance is 2 meters Table 3 distance is 2 meters.
The distance required is 2 meters

By very conservative analysis the two distances can be added for a minimum distance from the tower to the fence of 3.3 meters.

The fence will be located no less than 3.3 meters from the tower, assuring that there is no unfenced area with radiofrequency energy exceeding the general population standards.

The licensee of both WHAT and WNWR agree to coordinate to cease operation or reduce power before anyone climbs on the tower or works within the fence to assure that workers are not exposed to radiofrequency energy in excess of the standard.

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Engineer's Statement

This is to certify that this report has been prepared by myself. It is correct and accurate of my own knowledge, except were stated otherwise, and where that is so, the information is correct to the best of my knowledge and belief.

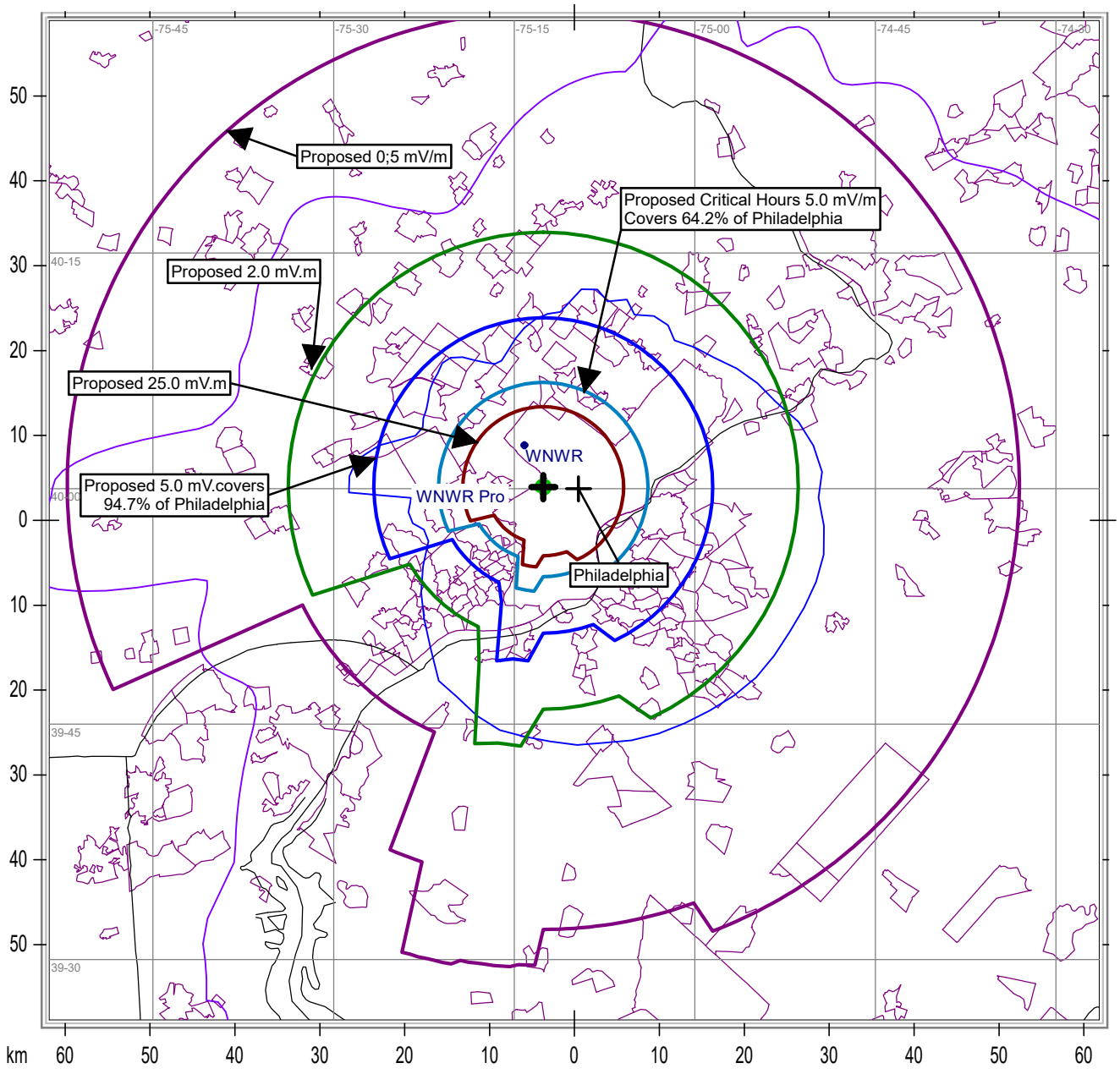
I further certify that I am a Licensed Professional Engineer in the State of New Jersey, and the Commonwealth of Pennsylvania with a BSEE degree from the Newark College of Engineering of NJIT, and that I am, and have been for over fourty years, regularly engaged in the practice of radio engineering with the firm of Radiotechniques Engineering, LLC, with

offices at 402 Tenth Avenue, Haddon Heights, NJ. I am a member of the AFCCE, Senior member of the IEEE and SBE and hold a FCC General Radiotelephone Operator License. My qualifications are a matter of record with the FCC.

31 May 2022

Edward A. Schober, PE

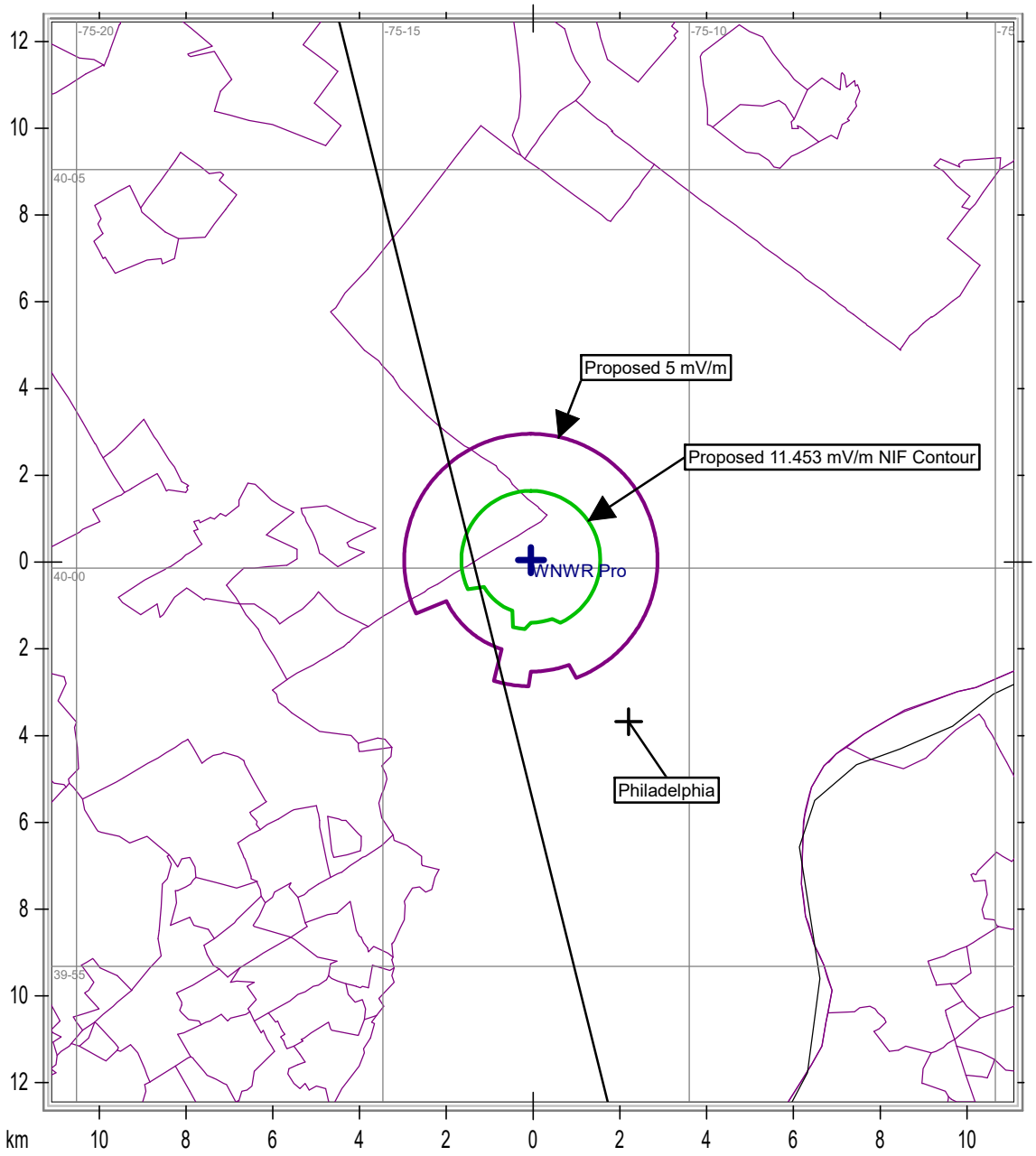
Daytime Service Contours



Poposed WNWR serves 95% of Philadelphia measured by polar plamimeter

State Borders City Borders Lat/Lon Grid

Night Service Contours



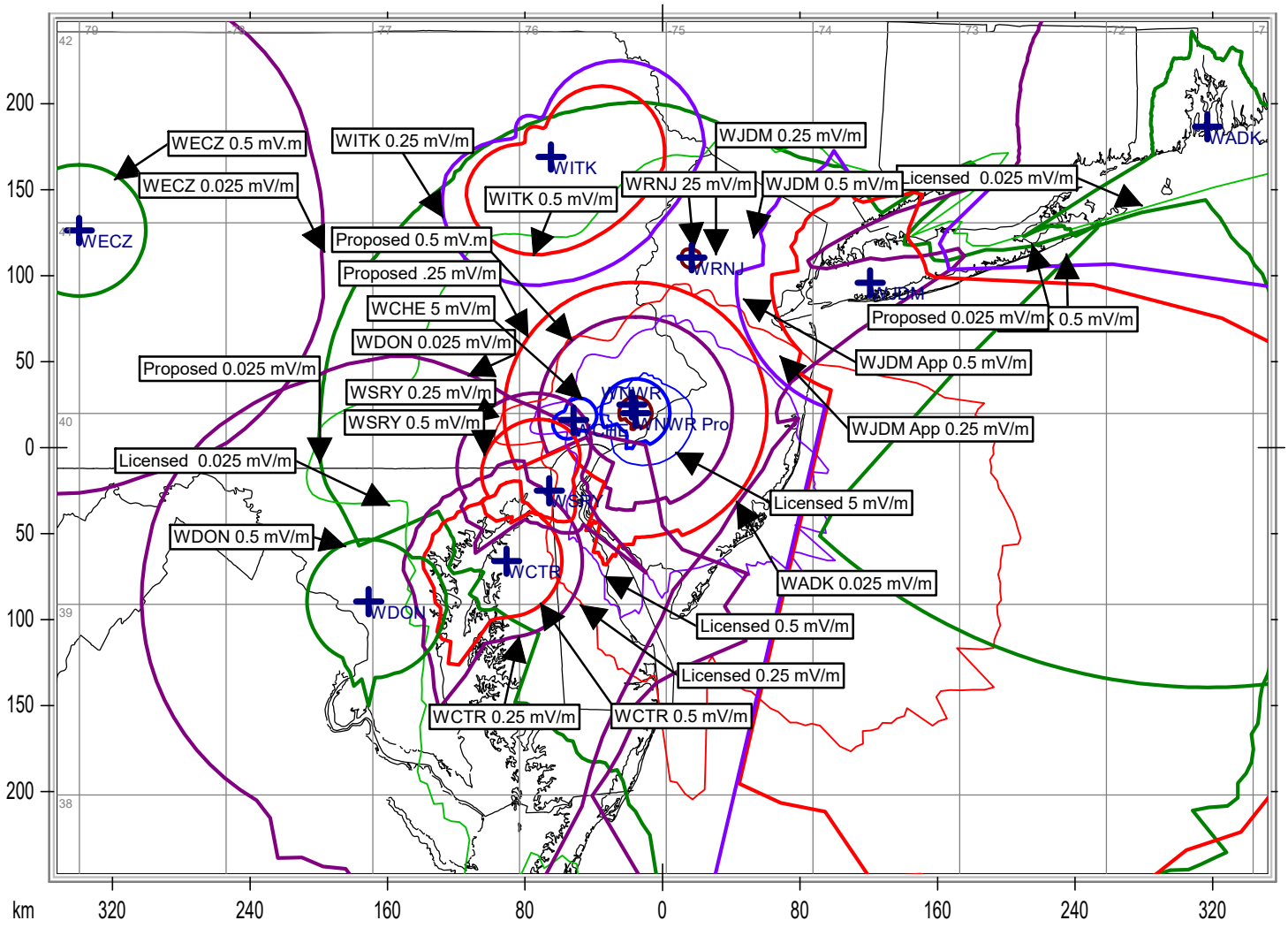
Class D stations are not required to provide any level of night servoce

State Borders City Borders Lat/Lon Grid

Exhibit 3 Transmitter site

Including 1 V/m Contour

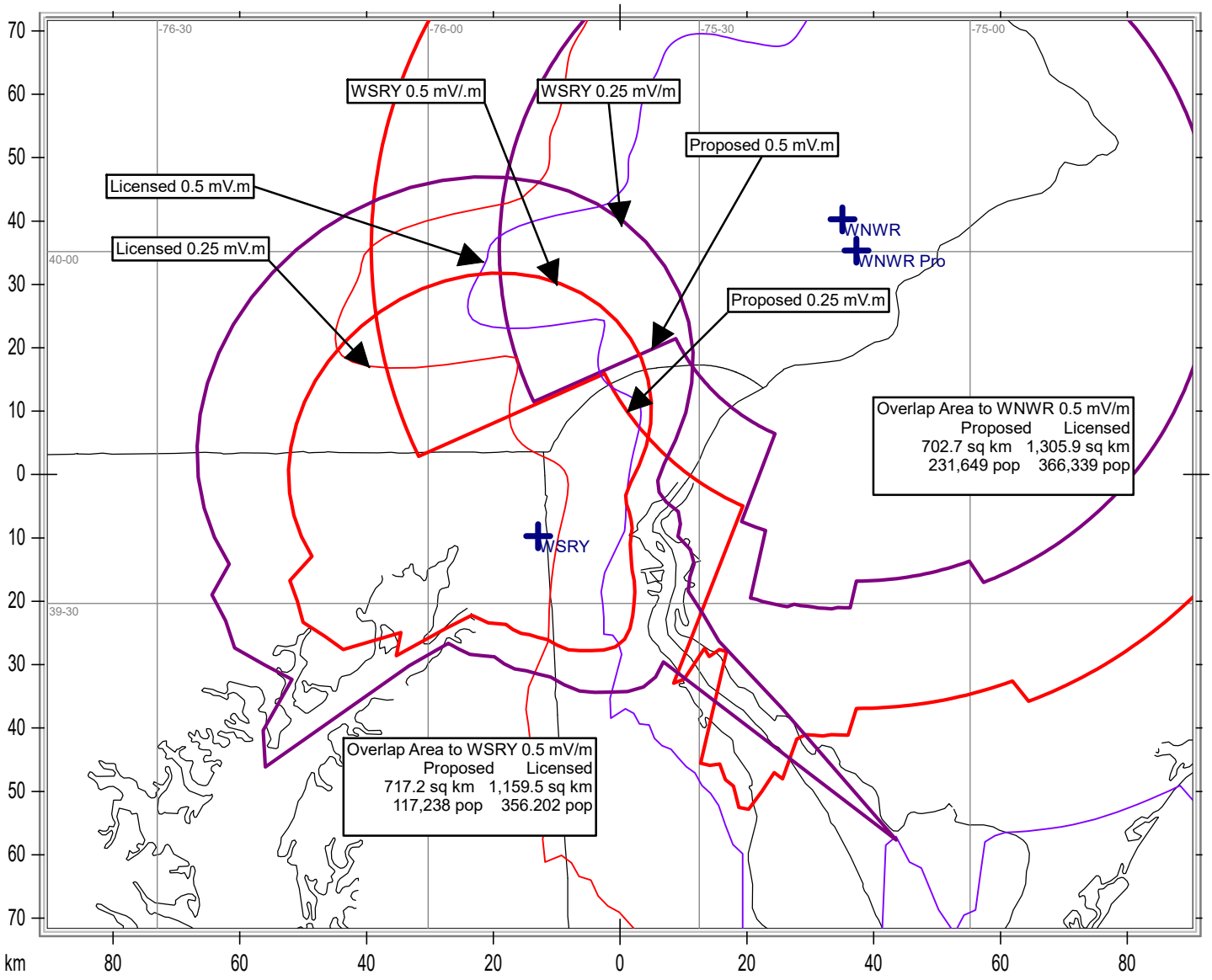
Daytime Allocations overview



State Borders Lat/Lon Grid

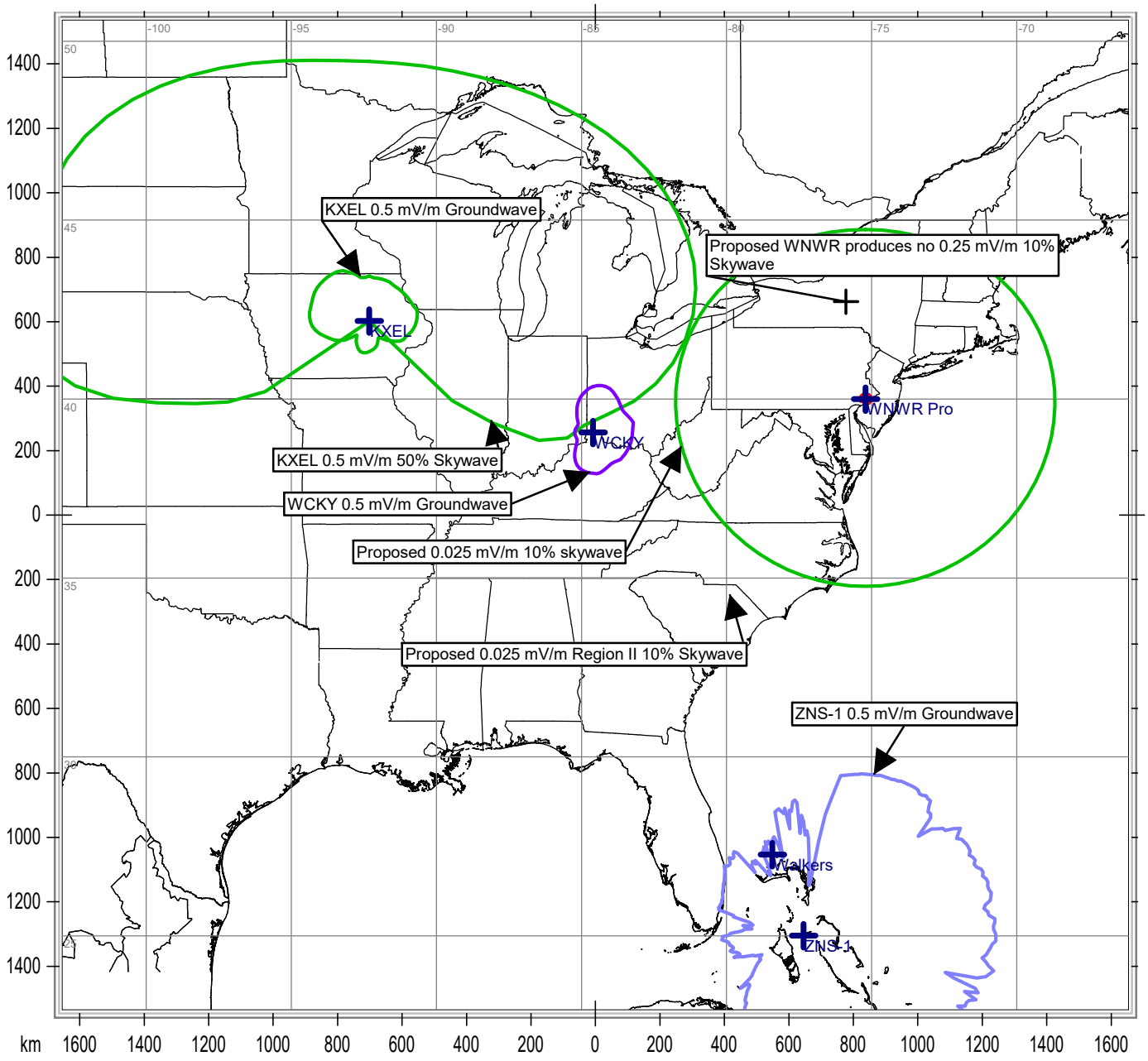
Map Scale: 1:3884532 1 cm = 38.85 km V|H Size: 495.36 x 704.21 km

Detail Day Overlap with WSRY



State Borders Lat/Lon Grid

Night Skywave Class A Protection



State Borders Lat/Lon Grid

Map Scale: 1:19410196 1 cm = 194.10 km V|H Size: 3070.40 x 3307.38 km

Figure 5 Night Class A Protection

RADIO TECHNIQUES
402 Tenth Avenue ● PO Box 367 ● Haddon Heights, NJ 08035

Engineering Report ● Table 1
Night Interference Free Contour
WNWR, Proposed, Philadelphia PA
May 2022

Coordinates : 40-00-06.0 N 75-12-35.0 W
Frequency : 1540

SITE INFO

CALL	FRQ	COUNTRY	CITY	ST	DIST	CLASS	SLANT DIST	GEOMAG MID	AZIMUTH	GND RAD	MIN ELEV	MAX ELEV	MAX RAD	SWAVE FLD	LIMITATION	RSS LIMIT 50%	RSS LIMIT 25%
KXEL	1540	US	WATERLOO	IA	1450.7	A	1464.4	52.5	93.9	3255.4	2.4	6.1	3244.0	0.017652	11.453	11.453	11.453
ZNS-	1540	BF	NASSAU		1679.4	A	1691.3	43.9	6.3	1136.9	1.1	4.3	1136.7	0.019019	4.324	0.000	12.242
WCKY	1530	US	CINCINNATI	OH	812.1	A	836.4	50.9	79.7	3462.4	8.2	14.6	3265.0	0.053940	3.522	0.000	12.738
CBE	1550	CA	WINDSOR	ON	690.9	A	719.3	52.5	108.3	1556.0	10.2	17.5	1459.3	0.066189	1.932	0.000	0.000
WITK	1550	US	PITTSTON	PA	157.1	B	254.3	52.1	161.8	431.8	42.1	56.3	230.7	0.335951	1.550	0.000	0.000
CHIN	1540	CA	TORONTO	ON	529.8	B	566.3	53.2	137.9	54.9	14.0	23.1	53.4	0.096602	1.031	0.000	0.000
WSDK	1550	US	BLOOMFIELD	CT	293.4	B	355.1	52.4	226.0	292.5	25.5	38.5	242.9	0.205562	0.999	0.000	0.000

Engineering Report - Night Permissible Fields – Table 1

WNWR Relocation, Philadelphia, PA – May 2022

Coordinates : 40-00-05.0 N 75-12-36.0 W Frequency : 1540 PWR: 0.007 kW Initial Inv Field: 27.99 mV/M

SITE INFO BEARING	CALL	LIM	CLASS	SLANT	GEOMAG	AZIMUTH	GND RAD	MIN ELEV	MAX ELEV	MAX RAD	SWAVE FLD	LIMITATION	RSS LIMIT 50%	RSS LIMIT 25%
44.3	WSDK	1218.163	B	355.1	52.4	44.3	28.0	25.5	38.5	22.6	0.205534	0.093	17.947	20.030
132.0		36173.111	C	6474.1	29.2	132.0	28.0	0.0	0.0	28.0	0.000276	0.002	4.000	4.000
134.8		37118.025	C	6608.9	28.0	134.8	28.0	0.0	0.0	28.0	0.000269	0.002	4.000	4.000
135.9	ZYH-	33948.739	C	6257.6	29.0	135.9	28.0	0.0	0.0	28.0	0.000295	0.002	4.000	4.000
136.0	ZYH-	31069.371	C	5984.7	30.1	136.0	28.0	0.0	0.0	28.0	0.000322	0.002	4.000	4.000
140.8	ZYH9	99999.000	C	5810.8	29.7	140.8	28.0	0.0	0.0	28.0	0.000339	0.002	10.000	10.000
141.0		41382.514	C	6969.9	25.0	141.0	28.0	0.0	0.0	28.0	0.000242	0.001	4.000	4.000
141.7		39179.924	C	6750.6	25.7	141.7	28.0	0.0	0.0	28.0	0.000255	0.001	4.000	4.000
144.2		99999.000	C	5323.4	31.0	144.2	28.0	0.0	0.0	28.0	0.000408	0.002	10.000	10.000
144.5		40706.267	C	7116.1	23.6	144.5	28.0	0.0	0.0	28.0	0.000246	0.001	4.000	4.000
144.9	ZYI-	46911.411	C	7571.0	21.7	144.9	28.0	0.0	0.0	28.0	0.000213	0.001	4.000	4.000
148.1	ZYL-	45210.286	C	7490.8	21.3	148.1	28.0	0.0	0.0	28.0	0.000221	0.001	4.000	5.061
148.4		48338.502	C	7665.1	20.5	148.4	28.0	0.0	0.0	28.0	0.000207	0.001	4.000	4.575
149.0	ZYL-	99999.000	C	7334.2	21.8	149.0	28.0	0.0	0.0	28.0	0.000237	0.001	10.000	10.000
149.9	ZYL-	46089.369	C	7533.0	20.8	149.9	28.0	0.0	0.0	28.0	0.000217	0.001	4.000	5.299
151.7	ZYH-	99999.000	C	6809.6	23.5	151.7	28.0	0.0	0.0	28.0	0.000250	0.001	10.000	10.000
152.1	ZYK5	45278.343	C	7494.1	20.5	152.1	28.0	0.0	0.0	28.0	0.000221	0.001	4.000	5.525
152.1	ZYK7	41319.536	B	7656.2	19.8	152.1	28.0	0.0	0.0	28.0	0.000207	0.001	3.427	5.063
152.2		42735.176	C	7362.7	21.1	152.2	28.0	0.0	0.0	28.0	0.000234	0.001	4.000	5.077
153.4	ZYK5	40813.597	B	7524.4	20.2	153.4	28.0	0.0	0.0	28.0	0.000218	0.001	3.556	5.472
154.6		41249.510	C	7278.5	21.0	154.6	28.0	0.0	0.0	28.0	0.000242	0.001	4.000	4.842
154.7	ZYK7	43028.172	C	7378.7	20.6	154.7	28.0	0.0	0.0	28.0	0.000232	0.001	4.000	5.237
156.1		99999.000	C	7930.0	17.9	156.1	28.0	0.0	0.0	28.0	0.000194	0.001	4.000	4.658
156.2		48636.401	C	7690.5	19.0	156.2	28.0	0.0	0.0	28.0	0.000206	0.001	4.000	4.785
157.0	ZYI-	41826.280	C	7311.9	20.5	157.0	28.0	0.0	0.0	28.0	0.000239	0.001	4.000	4.741
157.5		46841.562	C	7567.8	19.3	157.5	28.0	0.0	0.0	28.0	0.000213	0.001	4.000	4.772
157.9	ZYJ-	99999.000	C	7877.3	17.9	157.9	28.0	0.0	0.0	28.0	0.000196	0.001	4.000	4.894
158.4	ZYJ-	43357.948	C	7396.3	19.9	158.4	28.0	0.0	0.0	28.0	0.000231	0.001	4.000	4.796
158.9	WUPR	26068.388	B	2558.1	40.7	158.9	28.0	0.0	0.0	28.0	0.009523	0.005	17.183	19.860
159.3	ZYI-	99999.000	C	6403.6	24.1	159.3	28.0	0.0	0.0	28.0	0.000280	0.002	10.000	10.000
159.4	WKFE	17637.383	B	2579.3	40.6	159.4	28.0	0.0	0.0	28.0	0.009403	0.005	12.584	13.267
161.3	LRH3	49908.128	C	7795.2	17.8	161.3	28.0	0.0	0.0	28.0	0.000200	0.001	4.000	4.757
161.4	ZYK-	99999.000	C	7978.2	16.9	161.4	28.0	0.0	0.0	28.0	0.000191	0.001	4.000	4.268
162.1	CX15	36764.706	B	8419.6	14.9	162.1	28.0	0.0	0.0	28.0	0.000170	0.001	2.500	3.724
163.8	ZP 5	48464.308	C	7675.9	18.0	163.8	28.0	0.0	0.0	28.0	0.000206	0.001	4.000	4.192
164.2	HIBU	15921.026	C	2479.2	40.7	164.2	28.0	0.0	0.0	28.0	0.002315	0.013	14.742	14.742
164.8	CV15	99999.000	C	8417.0	14.6	164.8	28.0	0.0	0.0	28.0	0.000170	0.001	4.000	4.231
164.9	CW15	99999.000	C	8219.1	15.4	164.9	28.0	0.0	0.0	28.0	0.000179	0.001	4.000	4.567
165.4	LU28	99999.000	C	8760.0	13.0	165.4	28.0	0.0	0.0	28.0	0.000162	0.001	4.120	4.426
165.6	LRH3	47539.925	C	7599.1	18.1	165.6	28.0	0.0	0.0	28.0	0.000210	0.001	4.000	4.177
166.2	LRI3	99999.000	C	7880.1	16.8	166.2	28.0	0.0	0.0	28.0	0.000196	0.001	4.000	4.439
166.4	HIFP	17502.857	C	2454.8	40.7	166.4	28.0	0.0	0.0	28.0	0.002361	0.013	16.533	16.533
167.5	LT35	99999.000	C	8355.0	14.6	167.5	28.0	0.0	0.0	28.0	0.000172	0.001	4.000	4.194
169.4	LRJ3	99999.000	C	8004.7	16.0	169.4	28.0	0.0	0.0	28.0	0.000190	0.001	4.000	4.294
169.7	LRJ3	99999.000	C	8258.2	14.8	169.7	28.0	0.0	0.0	28.0	0.000177	0.001	4.000	4.038
169.7	CP 1	99999.000	B	6477.5	22.7	169.7	28.0	0.0	0.0	28.0	0.000276	0.002	5.749	5.749
170.5	LRK3	48799.493	C	7704.2	17.2	170.5	28.0	0.0	0.0	28.0	0.000205	0.001	4.000	4.252
173.4	LRJ3	48540.586	C	7682.3	17.1	173.4	28.0	0.0	0.0	28.0	0.000206	0.001	4.000	4.049
175.8	OAX6	99999.000	B	6277.7	23.3	175.8	28.0	0.0	0.0	28.0	0.000293	0.002	6.500	6.500
176.1	CB 1	99999.000	C	8189.5	14.7	176.1	28.0	0.0	0.0	28.0	0.000181	0.001	4.000	4.005
177.4	CC-1	99999.000	C	8519.4	13.2	177.4	28.0	0.0	0.0	28.0	0.000170	0.001	4.000	4.000
177.5	HJHD	27700.145	C	3667.9	35.0	177.5	28.0	0.0	0.0	28.0	0.000903	0.005	10.000	10.000

Engineering Report - Night Permissible Fields – Table 1

WNWR Relocation, Philadelphia, PA – May 2022

Coordinates : 40-00-05.0 N 75-12-36.0 W Frequency : 1540 PWR: 0.007 kW Initial Inv Field: 27.99 mV/M

SITE INFO BEARING	CALL	LIM	CLASS	SLANT	GEOMAG	AZIMUTH	GND RAD	MIN ELEV	MAX ELEV	MAX RAD	SWAVE FLD	LIMITATION	RSS LIMIT 50%	RSS LIMIT 25%
178.3	CD 1	99999.000	C	8936.7	11.3	178.3	28.0	0.0	0.0	28.0	0.000153	0.001	4.000	4.000
180.5	HJBV	24912.888	C	3500.7	35.7	180.5	28.0	0.0	0.0	28.0	0.001003	0.006	10.000	10.000
180.7	HJZF	31249.592	C	3880.1	34.0	180.7	28.0	0.0	0.0	28.0	0.000800	0.004	10.000	10.000
181.0	OBX4	99999.000	C	5637.4	26.1	181.0	28.0	0.0	0.0	28.0	0.000367	0.002	10.000	10.000
181.8	CMJZ	23073.814	C	2213.3	41.5	181.8	28.0	0.0	0.0	28.0	0.003164	0.018	29.198	29.198
183.2	OBZ4	99999.000	C	5661.4	26.0	183.2	28.0	0.0	0.0	28.0	0.000364	0.002	10.000	10.000
184.4	HCUB	47467.534	C	4720.9	30.2	184.4	28.0	0.0	0.0	28.0	0.000527	0.003	10.000	10.000
186.5	HCFM	46035.628	C	4639.0	30.6	186.5	28.0	0.0	0.0	28.0	0.000543	0.003	10.000	10.000
186.9	HCHG	99999.000	C	4839.1	29.7	186.9	28.0	0.0	0.0	28.0	0.000500	0.003	10.000	10.000
187.5	ZNS-	See MaP	A	1679.4	6.3	187.5	0.0	0.0	0.0	0.0	0.036405	0.025	0.000	0.000
187.6	OBX1	99999.000	C	4879.9	29.6	187.6	28.0	0.0	0.0	28.0	0.000487	0.003	10.000	10.000
197.1	TIAC	13934.038	C	3462.3	36.3	197.1	28.0	0.0	0.0	28.0	0.001030	0.006	5.743	5.977
198.2	WRHC	14966.176	B	1666.5	44.2	198.2	28.0	1.2	4.5	28.0	0.019368	0.011	23.189	23.189
198.9	WRHC	14569.472	B	1658.8	44.3	198.9	28.0	1.3	4.5	28.0	0.019504	0.011	22.733	22.733
200.6	YNR1	367.281	A	3258.3	16.0	200.6	0.0	0.0	0.0	0.0	0.006807	0.025	0.000	0.000
205.5	HRYK	10627.382	C	3114.2	38.3	205.5	28.0	0.0	0.0	28.0	0.001315	0.007	5.588	7.699
211.5	XECA	8514.393	B	2707.6	40.5	211.5	28.0	0.0	0.0	28.0	0.004644	0.026	15.818	19.940
212.1	TGRF	14244.230	C	3197.0	38.6	212.1	28.0	0.0	0.0	28.0	0.001149	0.006	6.544	7.413
216.6	XEYK	5247.587	B	2495.0	41.9	216.6	28.0	0.0	0.0	28.0	0.005737	0.032	12.042	16.240
218.6	XEVF	10492.393	B	3172.2	39.4	218.6	28.0	0.0	0.0	28.0	0.003009	0.017	12.628	17.042
219.9	XETA	8184.996	B	2986.5	40.3	219.9	28.0	0.0	0.0	28.0	0.003652	0.020	11.956	17.519
230.5	XE	12588.360	B	3510.4	39.8	230.5	28.0	0.0	0.0	28.0	0.002504	0.014	12.608	16.171
230.6	XERT	13307.124	B	3201.4	40.9	230.6	28.0	0.0	0.0	28.0	0.002862	0.016	15.233	19.372
230.9	XEGP	10198.247	B	3032.2	41.6	230.9	28.0	0.0	0.0	28.0	0.003526	0.020	14.385	20.101
234.2	XEPA	9875.138	B	2951.6	42.3	234.2	28.0	0.0	0.0	28.0	0.003757	0.021	14.840	20.150
235.7	XENC	11700.185	B	3265.5	41.5	235.7	28.0	0.0	0.0	28.0	0.002867	0.016	13.419	18.793
235.8	XENC	11668.034	B	3257.6	41.6	235.8	28.0	0.0	0.0	28.0	0.002863	0.016	13.363	18.793
235.9	XENC	11656.903	B	3262.0	41.6	235.9	28.0	0.0	0.0	28.0	0.002865	0.016	13.361	18.771
237.4	XE	12152.566	B	3607.8	40.7	237.4	28.0	0.0	0.0	28.0	0.002357	0.013	11.457	15.607
240.3	XE	9677.537	B	3001.1	43.2	240.3	28.0	0.0	0.0	28.0	0.003607	0.020	13.965	19.452
241.1	KGBT	14044.364	B	2593.1	44.5	241.1	28.0	0.0	0.0	28.0	0.008225	0.005	7.229	9.241
242.4	KGBC	1038.881	B	2151.7	46.0	242.4	28.0	0.0	1.5	28.0	0.011281	0.063	6.519	9.375
242.4	XE00	14456.104	B	3203.4	42.9	242.4	28.0	0.0	0.0	28.0	0.002852	0.016	16.491	22.368
243.2	XEST	8588.237	B	2826.2	44.2	243.2	28.0	0.0	0.0	28.0	0.004176	0.023	14.347	19.848
246.1	XEDR	16364.939	B	3278.7	43.4	246.1	28.0	0.0	0.0	28.0	0.002874	0.016	18.812	23.246
247.1	XE	14486.491	B	3078.5	44.1	247.1	28.0	0.0	0.0	28.0	0.003410	0.019	19.759	23.814
247.8	KEDA	1778.252	B	2421.8	46.0	247.8	28.0	0.0	0.2	28.0	0.008880	0.050	10.898	12.632
250.2	XE	23402.947	B	3771.6	42.9	250.2	28.0	0.0	0.0	28.0	0.002126	0.012	19.906	22.020
254.0	XEDC	16410.068	B	3069.1	45.5	254.0	28.0	0.0	0.0	28.0	0.003434	0.019	22.538	24.931
254.5	KZMP	955.593	B	2110.4	47.8	254.5	28.0	0.0	1.7	28.0	0.010856	0.061	7.166	8.299
256.1	XE00	26521.153	B	3456.8	45.0	256.1	28.0	0.0	0.0	28.0	0.002597	0.015	27.552	30.478
260.7	XEHO	6698.034	B	3476.0	46.1	260.7	28.0	0.0	0.0	28.0	0.002563	0.014	6.868	9.572
260.7	XEHO	6698.034	B	3476.0	46.1	260.7	28.0	0.0	0.0	28.0	0.002563	0.014	6.868	9.572
260.7	XEHO	6696.678	B	3475.7	46.1	260.7	28.0	0.0	0.0	28.0	0.002564	0.014	6.868	9.573
263.5	XENV	23896.297	B	3232.8	47.2	263.5	28.0	0.0	0.0	28.0	0.002851	0.016	27.249	31.459
265.2	KNSH	12427.014	B	2422.8	48.9	265.2	28.0	0.0	0.2	28.0	0.007655	0.004	6.138	7.610
265.7	WCKY	See Map	A	812.1	79.7	265.7	0.0	0.0	0.0	0.0	0.069533	0.250	0.000	0.000
272.8	WLTI	2362.769	B	891.2	51.3	272.8	28.0	7.5	13.4	27.5	0.047568	0.026	7.398	8.991
274.0	KMPC	7224.265	B	3837.8	48.9	274.0	28.0	0.0	0.0	28.0	0.002682	0.015	13.786	15.500
274.2	KWRN	99999.000	B	3731.2	49.1	274.2	28.0	0.0	0.0	28.0	0.002826	0.002	19.131	20.785
275.7	KESJ	4765.277	B	1680.1	51.3	275.7	28.0	1.2	4.4	28.0	0.014321	0.008	5.198	5.460
275.7	KENT	7111.669	B	3510.9	49.8	275.7	28.0	0.0	0.0	28.0	0.003096	0.017	15.647	17.613

RADIO TECHNIQUES
402 Tenth Avenue ● PO Box 367 ● Haddon Heights, NJ 08035

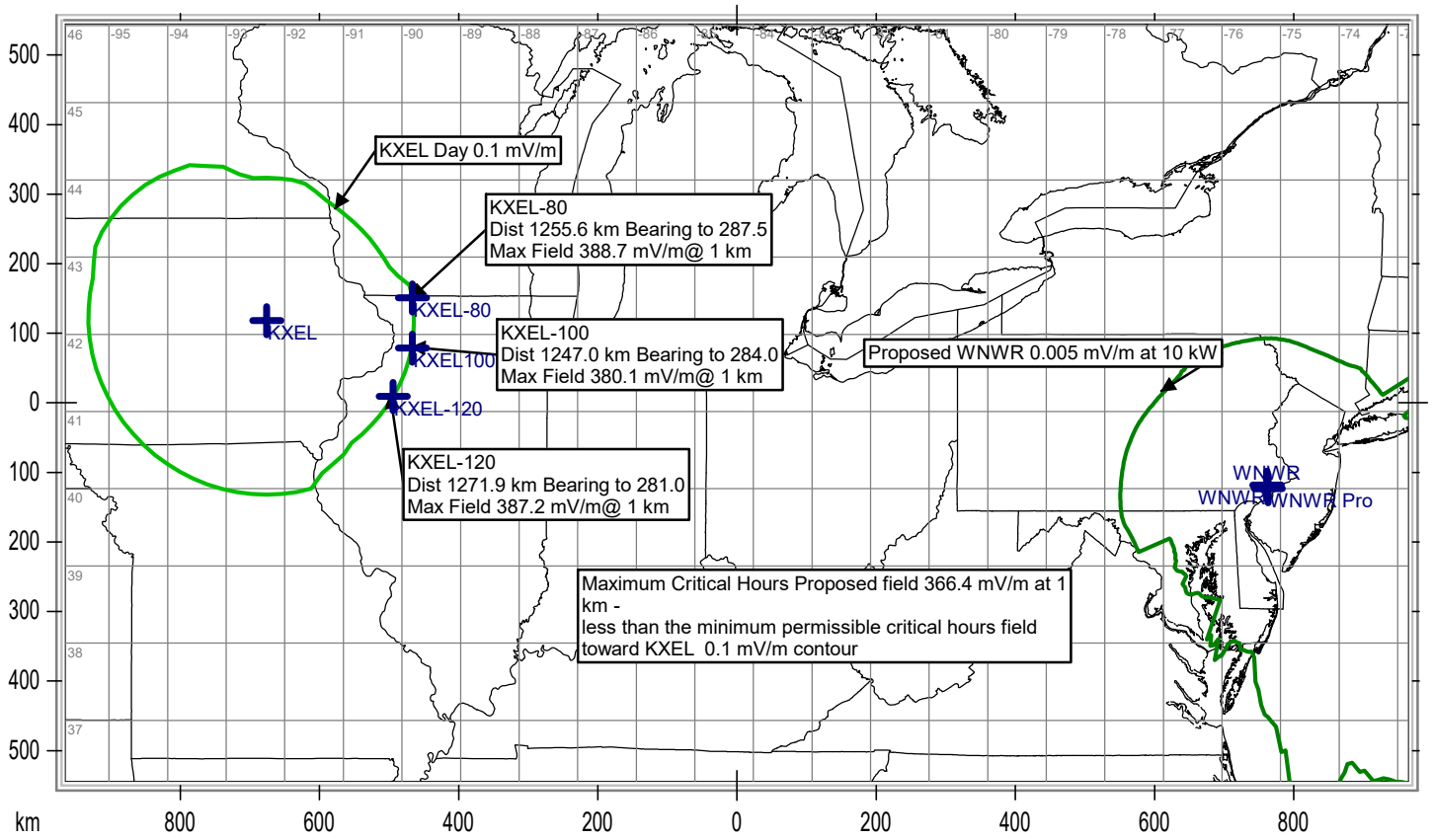
Engineering Report - Night Permissible Fields – Table 1

WNWR Relocation, Philadelphia, PA – May 2022

Coordinates : 40-00-05.0 N 75-12-36.0 W Frequency : 1540 PWR: 0.007 kW Initial Inv Field: 27.99 mV/M

SITE INFO BEARING	CALL	LIM	CLASS	SLANT	GEOMAG	AZIMUTH	GND RAD	MIN ELEV	MAX ELEV	MAX RAD	SWAVE FLD	LIMITATION	RSS LIMIT 50%	RSS LIMIT 25%
279.3	KXEX	99999.000	B	3877.5	50.3	279.3	28.0	0.0	0.0	28.0	0.002303	0.001	12.585	13.882
279.5	KKCL	16741.692	B	2555.1	51.5	279.5	28.0	0.0	0.0	28.0	0.005700	0.003	5.178	7.635
281.6	KGMZ	99999.000	B	4046.5	50.8	281.6	28.0	0.0	0.0	28.0	0.001968	0.001	6.843	8.747
282.3	KREA	5357.211	B	7901.5	44.5	282.3	28.0	0.0	0.0	28.0	0.000583	0.003	2.500	2.500
283.4	KFBK	12176.827	A	3930.7	73.1	283.4	0.0	0.0	0.0	0.0	0.002053	0.250	0.000	0.000
283.6	KMRI	34515.843	B	3104.6	52.1	283.6	28.0	0.0	0.0	28.0	0.003400	0.002	7.251	9.388
285.2	KXEL	See Map	A	1450.7	93.9	285.2	0.0	0.0	0.0	0.0	0.091361	0.025	0.000	0.000
295.3	KKOV	99999.000	B	3856.1	55.1	295.3	28.0	0.0	0.0	28.0	0.001338	0.001	16.775	17.603
298.7	KXPA	7835.155	B	3807.0	56.1	298.7	28.0	0.0	0.0	28.0	0.001192	0.007	7.077	7.469
300.9	KRPI	99999.000	B	3828.0	56.7	300.9	28.0	0.0	0.0	28.0	0.001048	0.001	37.961	37.961
316.5	KVOG	99999.000	B	12783.6	43.5	316.5	28.0	0.0	0.0	28.0	0.000153	0.000	2.500	2.500
320.7	CHIN	885.448	B	566.3	53.2	320.7	28.0	18.7	18.7	24.9	0.120210	0.599	42.576	42.576
342.2	WITK	906.748	B	254.3	52.1	342.2	28.0	42.1	56.3	15.7	0.335926	0.105	24.368	24.368

Critical Hours Protection



State Borders Lat/Lon Grid