

FCC 301

**APPLICATION FOR CONSTRUCTION PERMIT FOR
COMMERCIAL BROADCAST STATION**

FOR COMMISSION USE ONLY
FILE NO.

Read INSTRUCTIONS Before Filling Out Form

Section I - General Information

1. Legal Name of the Applicant RAYCOM AMERICA, INC.		
Mailing Address RSA TOWER, 20TH FLOOR 201 MONROE STREET		
City MONTGOMERY	State or Country (if foreign address) AL	ZIP Code 36104 -
Telephone Number (include area code) 3342061400		E-Mail Address (if available) RBRYAN@RAYCOMMEDIA.COM
FCC Registration Number:	Call Sign WTNZ-DT	Facility ID Number 19200
2. Contact Representative (if other than Applicant) WILLIAM H. FITZ, ESQ.		Firm or Company Name COVINGTON & BURLING
Telephone Number (include area code) 2026625120		E-Mail Address (if available) WFITZ@COV.COM
3. If this application has been submitted without a fee, indicate reason for fee exemption (see 47 C.F.R. Section 1.1114): <input type="radio"/> Governmental Entity <input checked="" type="radio"/> Other CORRECTION TO CONFORM FACTS ON LICENSE TO FACTS ON ASR		
4. Application Purpose <input type="radio"/> New station <input type="radio"/> Major Change in licensed facility <input checked="" type="radio"/> Minor Change in licensed facility (a) File number of original construction permit: BPCDT-19991029AFI <input type="checkbox"/> NA (b) Service Type: <input type="radio"/> AM <input type="radio"/> FM <input type="radio"/> TV <input checked="" type="radio"/> DTV (c) Community of License: City: KNOXVILLE State: TN (d) Facility Type <input checked="" type="radio"/> Main <input type="radio"/> Auxiliary If an amendment, submit as an Exhibit a listing by Section and Question Number the portions of the pending application that are being revised. [Exhibit 1]		

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	<input checked="" type="radio"/> Yes <input type="radio"/> No
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	application satisfies each of the pertinent standards and criteria set forth in the application instructions and worksheets.	
2.	Parties to the Application. a. List the applicant, and, if other than a natural person, its officers, directors, stockholders 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 with attributable interests, non-insulated partners and/or members. Create a separate row for each individual or entity. Attach additional pages if necessary. <div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> (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. [Enter Parties/Owners Information] </div> <div style="width: 48%;"> (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). </div> </div>	
	b. Applicant certifies that equity and financial interests not set forth above are non-attributable. <div style="text-align: right;"> <input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A See Explanation in [Exhibit 2] </div>	
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.	<input type="checkbox"/> N/A [Exhibit 3]
4.	Multiple Ownership. a. Applicant certifies that the proposed facility: <div style="margin-left: 20px;"> 1. complies with the Commission's multiple and cross-ownership rules; 2. does not present an issue under the Commission's policies relating to media interests of immediate family members; 3. complies with the Commission's policies relating to future ownership interests; and 4. complies with the Commission's restrictions relating to the insulation and non-participation of non-party investors and creditors. </div>	<input type="radio"/> Yes <input type="radio"/> No See Explanation in [Exhibit 4]
	b. Radio Applicants Only. If the grant of the application would result in certain principal community service contour overlaps, see Local Radio Ownership Worksheet, Question 1, applicant certifies that all relevant information has been placed in public inspection file(s) and submitted to the Commission.	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A See Explanation in [Exhibit 5]
5.	Character Issues. Applicant certifies that neither applicant nor any party to the application has or has had any interest in or connection with: <div style="margin-left: 20px;"> 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. </div>	<input type="radio"/> Yes <input type="radio"/> No See Explanation in [Exhibit 6]
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 any of the following: any felony; mass media-related antitrust or unfair competition; fraudulent statements to another government unit; or discrimination.	<input type="radio"/> Yes <input type="radio"/> No See Explanation in [Exhibit 7]
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.	<input type="radio"/> Yes <input type="radio"/> No See Explanation in [Exhibit 8]

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.	<input type="radio"/> Yes <input type="radio"/> 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.	<input type="radio"/> Yes <input type="radio"/> 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. An exhibit is required unless this question is inapplicable.	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A [Exhibit 9]
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.	<input checked="" type="radio"/> Yes <input type="radio"/> 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.	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A

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 REBECCA S. BRYAN	Typed or Printed Title of Person Signing VICE PRESIDENT
Signature	Date 7/6/2004

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-D - DTV ENGINEERING DATA	
Complete Questions 1-5 of the Certification Checklist and provide all data and information for the proposed facility, as requested in Technical Specifications, Items 1-13.	
Certification Checklist: A correct answer of "Yes" to all of the questions below will ensure an expeditious grant of a construction permit. However, if the proposed facility is located within the Canadian or Mexican borders, coordination of the proposal under the appropriate treaties may be required prior to grant of the application. An answer of "No" will require additional evaluation of the applicable information in this form before a construction permit can be granted.	
1. The proposed DTV facility complies with 47 C.F.R. Section 73.622 in the following respects:	
(a) It will operate on the DTV channel for this station as established in 47 C.F.R. Section 73.622.	<input checked="" type="radio"/> Yes <input type="radio"/> No
(b) It will operate from a transmitting antenna located within 5.0 km (3.1 miles) of the DTV reference site for this location as established in 47 C.F.R. Section 73.622.	<input checked="" type="radio"/> Yes <input type="radio"/> No
(c) It will operate with an effective radiated power (ERP) and antenna height above average terrain (HAAT) that do not exceed the DTV reference ERP and HAAT for this station as established in 47 C.F.R. Section 73.622.	<input type="radio"/> Yes <input checked="" type="radio"/> No
2. The proposed facility will not have a significant environmental impact, including exposure of workers or the general public to levels of RF radiation exceeding the applicable health and safety guidelines, and therefore will not come within 47 C.F.R. Section 1.1307. Applicant must submit the Exhibit called for in Item 13.	<input checked="" type="radio"/> Yes <input type="radio"/> No
3. Pursuant to 47 C.F.R. Section 73.625, the DTV coverage contour of the proposed facility will encompass the allotted principal community.	<input checked="" type="radio"/> Yes <input type="radio"/> No
4. The requirements of 47 C.F.R. Section 73.1030 regarding notification to radio astronomy installations,	<input checked="" type="radio"/> Yes <input type="radio"/> No

radio receiving installations and FCC monitoring stations have either been satisfied or are not applicable.	
5. The antenna structure to be used by this facility has been registered by the Commission and will not require registration to support the proposed antenna, OR the FAA has previously determined that the proposed structure will not adversely effect safety in air navigation and this structure qualifies for later registration under the Commission's phased registration plan, OR the proposed installation on this structure does not require notification to the FAA pursuant to 47 C.F.R. Section 17.7.	<input checked="" type="radio"/> Yes <input type="radio"/> No

SECTION III-D - DTV 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.	Channel Number: DTV 34 Analog TV, if any 43
2.	Zone: <input type="radio"/> I <input checked="" type="radio"/> II <input type="radio"/> III
3.	Antenna Location Coordinates: (NAD 27) Latitude: Degrees 36 Minutes 0 Seconds 13 <input checked="" type="radio"/> North <input type="radio"/> South Longitude: Degrees 83 Minutes 56 Seconds 34 <input checked="" type="radio"/> West <input type="radio"/> East
4.	Antenna Structure Registration Number: 1052156 <input type="checkbox"/> Not Applicable <input type="checkbox"/> Notification filed with FAA
5.	Antenna Location Site Elevation Above Mean Sea Level: 424.4 meters
6.	Overall Tower Height Above Ground Level: 444.2 meters
7.	Height of Radiation Center Above Ground Level: 413.3 meters
8.	Height of Radiation Center Above Average Terrain : 529 meters
9.	Maximum Effective Radiated Power : 460 kW
10.	Antenna Specifications: a. Manufacturer DIE Model TUD-O5-16/80H-2-B b. Electrical Beam Tilt: 0.75 degrees <input type="checkbox"/> Not Applicable c. Mechanical Beam Tilt: degrees toward azimuth degrees True <input checked="" type="checkbox"/> Not Applicable Attach as an Exhibit all data specified in 47 C.F.R. Section 73.685. d. Polarization: <input checked="" type="radio"/> Horizontal <input type="radio"/> Circular <input type="radio"/> Elliptical e. Directional Antenna Relative Field Values: <input checked="" type="checkbox"/> Not applicable (Nondirectional) [For a composite directional (not off-the-shelf) antenna, press the following button to fill in the relative field values subform.]

[Exhibit
39]

[Relative Field Values]

10e. Directional Antenna Relative Field Values

[Fill in this subform for a composite directional (not off-the-shelf) antenna, only.]

e. Directional Antenna Relative Field Values:

Rotation (Degrees): ☐ No Rotation

Degrees	Value	Degrees	Value	Degrees	Value	Degrees	Value	Degrees	Value	Degrees	Value
0	1	10	1	20	1	30	1	40	1	50	1
60	1	70	1	80	1	90	1	100	1	110	1
120	1	130	1	140	1	150	1	160	1	170	1
180	1	190	1	200	1	210	1	220	1	230	1
240	1	250	1	260	1	270	1	280	1	290	1
300	1	310	1	320	1	330	1	340	1	350	1

Additional
Azimuths

Relative Field Polar Plot

If a directional antenna is proposed, the requirements of 47 C.F.R. Sections 73.625(c) must be satisfied. **Exhibit required.**

[Exhibit 40]

11. Does the proposed facility satisfy the interference protection provisions of 47 C.F.R. Section 73.623 (a)? (Applicable only if **Certification Checklist** items 1(a), (b), or (c) are answered "No".)

☒ Yes ☐ No

If No, attach as an Exhibit justification therefore, including a summary of any previously granted waivers.

[Exhibit 41]

12. If the proposed facility will not satisfy the coverage requirement of 47 C.F.R. Section 73.625, attach as an Exhibit justification therefore. (Applicable only if **Certification Checklist** item 3 is answered "No".)

[Exhibit 42]

13. **Environmental Protection Act.** Submit in an Exhibit the following:

[Exhibit 43]

If **Certification Checklist** Item 2 is answered "Yes," a brief explanation of why an Environmental Assessment is not required. Also describe in the Exhibit the steps that will be taken to limit RF radiation exposure to the public and to persons authorized access to the tower site.

By checking "Yes" to **Certification Checklist** Item 2, 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 radiofrequency electromagnetic exposure in excess of FCC guidelines.

If **Certification Checklist** Item 2 is answered "No," an Environmental Assessment as required by 47 C.F.R Section 1.1311.

PREPARERS CERTIFICATION ON SECTION III MUST BE COMPLETED AND SIGNED.

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 JONATHAN N. EDWARDS	Relationship to Applicant (e.g., Consulting Engineer) TECHNICAL CONSULTANT	
Signature	Date 7/5/2004	
Mailing Address DU TREIL, LUNDIN & RACKLEY, INC. 201 FLETCHER AVENUE		
City SARASOTA	State or Country (if foreign address) FL	Zip Code 34237 -
Telephone Number (include area code) 9413296000	E-Mail Address (if available) JON@DLR.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).

Exhibits

Exhibit 39

Description: SEE EXHIBIT 43 - FIGURE 2

Attachment 39

Exhibit 42

Description: COMPLIES WITH SECTION 73.625

Attachment 42

Exhibit 43

Description: EXHIBIT 43 - PURPOSE OF APPLICATION

THIS APPLICATION IS FILED TO CONFORM THE FACTS ON THE WTNZ-DT LICENSE TO THE FACTS ON THE CURRENT VERSION OF ANTENNA STRUCTURE REGISTRATION (ASR) 1052156.

SINCE THE WTNZ-DT LICENSE APPLICATION WAS FILED, ASR OWNER SPECTRASITE COMMUNICATIONS, INC., COMMISSIONED ANOTHER FAA STUDY (2002-ASO-4997-OE) AND MODIFIED THE ASR. A COPY OF THE CURRENT ASR IS ATTACHED.

THE DUAL-CHANNEL ANTENNA FOR WTNZ AND WTNZ-DT IS MOUNTED ON THE SAME SUPPORTING STRUCTURE. ASIDE FROM THE MINOR CORRECTIONS TO THE GEOGRAPHIC COORDINATES, GROUND ELEVATION AND TOWER HEIGHT OF THE STRUCTURE, WHICH WERE REPORTED TO THE FCC ON FORM 854 FOLLOWING CLEARANCE BY THE FAA (SEE ATTACHED DETERMINATION OF NO HAZARD FOR FAA STUDY NO. 2002-ASO-4997-OE), THE OPERATING PARAMETERS OF THE TV AND DTV STATIONS HAVE NOT BEEN CHANGED. A SEPARATE FORM 301 APPLICATION IS BEING PREPARED FOR WTNZ TO SEEK THE SAME CORRECTION OF THE FACTS ON ITS AUTHORIZATION.

Attachment 43

Description
Current Version of ASR 1052156, the Tower at Sharp's Ridge, Tennessee
Determination of No Hazard for FAA Study No. 2002-ASO-4997-OE
COMPREHENSIVE TECHNICAL EXHIBIT

REFERENCE COPY

This is not an official FCC authorization. It is a record of public information contained in the FCC's Antenna Structure Registration database on the date that this reference copy was generated. In cases where FCC rules require the presentation, posting, or display of an FCC authorization, this document may not be used in place of an official FCC authorization.

**United States of America
Federal Communications Commission**

Antenna Structure Registration

Owner: SpectraSite Communications, Inc.
FCC Registration Number (FRN): 0005793526

SpectraSite Communications, Inc. 400 Regency Forest Drive, Suite 400 Cary, NC 27511	Registration Number: 1052156
	Issue Date: 12/16/2002
Location of Antenna Structure: 425.9NE SHARPS RIDGE MEMORIAL RD KNOXVILLE, TN	Ground Elevation (AMSL): 424.4 meters
	Overall Height Above Ground (AGL): 444.2 meters
Latitude: 36-00-12.8 N Longitude: 083-56-34.0 W NAD83	Overall Height Above Mean Sea Level (AMSL): 868.6 meters
Painting and Lighting Requirements: FCC Paragraphs B, F, H, 3, 10, 19, 21, 23	
Special Conditions:	

This registration is effective upon completion of the described antenna structure and notification to the Commission. YOU MUST NOTIFY THE COMMISSION WITHIN 24 HOURS OF COMPLETION OF CONSTRUCTION OR CANCELLATION OF YOUR PROJECT. Use FCC Form 854. To file electronically, connect to the Antenna Structure Registration system by pointing your web browser to <http://wireless.fcc.gov/antenna/>. Electronic filing is recommended. You may also file manually by submitting a paper copy of FCC Form 854. Use purpose code "NT" for notification of completion of construction; use purpose code "CA" to cancel your registration.

The Antenna Structure Registration is not an authorization to construct radio facilities or transmit radio signals. It is necessary that all radio equipment on this structure be covered by a valid FCC license or construction permit.

You must immediately provide a copy of this Registration to all tenant licensees and permittees sited on the structure described on this Registration (although not required, you may want to use Certified Mail to obtain proof of receipt), and display your Registration Number at the site.

You must comply with all applicable FCC obstruction marking and lighting requirements, as set forth in Part 17 of the Commission's Rules (47 C.F.R. Part 17). These rules include, but are not limited to:

- **Posting the Registration Number:** The Antenna Structure Registration Number must be displayed in a conspicuous place so that it is readily visible near the base of the antenna structure. Materials used to display the Registration Number must be weather-resistant and of sufficient size to be easily seen at the base of the antenna structure. Exceptions exist for certain historic structures. See 47 C.F.R. 17.4(g)(h).
- **Inspecting lights and equipment:** The obstruction lighting must be observed at least every 24 hours in order to detect any outages or malfunctions. Lighting equipment, indicators, and associated devices must be inspected at least once every three months.

- **Reporting outages and malfunctions:** When any top steady-burning light or a flashing light (in any position) burns out or malfunctions, the outage must be reported to the nearest FAA Flight Service Station, unless corrected within 30 minutes. The FAA must again be notified when the light is restored. The owner must also maintain a log of these outages and malfunctions.
- **Maintaining assigned painting:** The antenna must be repainted as often as necessary to maintain good visibility.
- **Complying with environmental rules:** If you certified that grant of this registration would not have a significant environmental impact, you must nevertheless maintain all pertinent records and be ready to provide documentation supporting this certification and compliance with the rules, in the event that such information is requested by the Commission pursuant to 47 C.F.R. 1.1307(d).
- **Updating information:** The owner must notify the FCC of proposed modifications to this structure; of any change in ownership; or, within 30 days of dismantlement of the structure.

Copies of the Code of Federal Regulations (which contain the FCC's antenna structure registration rules, 47 C.F.R. Part 17) are available from the Government Printing Office (GPO). To purchase CFR volumes, call (202) 512-1800. For GPO Customer Service, call (202) 512-1803. For additional FCC information, consult the Antenna Homepage on the Internet at <http://wireless.fcc.gov/antenna/> or call the FCC's National Call Center at 1-888-CALLFCC (1-888-225-5322).

We have estimated the third party burden requirement associated with this collection to be 1 hour. This requirement has been identified under OMB control number of 3060-0139.

Registration Number: 1052156

Issue Date: 10/24/2002

FCC 854R

Obstruction Marking and Lighting Specifications for Antenna Structures

It is to be expressly understood that the issuance of the below specifications is in no way to be considered as precluding additional or modified markings or lighting as may hereafter be required under the provisions of Section 303(q) of the Communications Act of 1934, as amended.

B. There shall be installed at the top of the skeletal or other main support structure three or more high intensity light units which conform to FAA/DOD Specification L-856, High Intensity Obstruction Lighting Systems. The complement of units shall emit a white high intensity light and produce an effective intensity of not less than 200,000 candelas (daytime) uniformly about the antenna structure in the horizontal plane. The effective intensity shall be reduced to approximately 20,000 candelas at twilight, and to approximately 2,000 candelas at night. The light units shall be mounted in a manner to insure unobstructed viewing from aircraft at any normal angle of approach, so that the effective intensity of the full beam is not impaired by any structural member of the skeletal framework. The units will normally be adjusted so that the center of the beam is in the horizontal plane.

F. At the approximate one-fifth, two-fifths, three-fifths and four-fifths levels of the skeletal tower there shall be installed three or more high intensity light units which conform to FAA/DOD Specification L-856, High Intensity Obstruction Lighting Systems. The complement of units shall emit a white high intensity light and produce an effective intensity of not less than 200,000 candelas (daytime) uniformly about the antenna structure in the horizontal plane. The effective intensity shall be reduced to approximately 20,000 candelas at twilight, and to approximately 2,000 candelas at night. The light units shall be mounted in a manner to insure unobstructed viewing from aircraft at any normal angle of approach, so that the effective intensity of the full beam is not impaired by any structural member of the skeletal framework. The normal angular adjustment of the beam centers above the horizontal shall be three degrees (3°) at the one-fifth level, two degrees (2°) at the two-fifths level, one degree (1°) at the three-fifths level and zero degrees (0°) at the four-fifths level.

H. All high and medium intensity lights shall be synchronized to flash simultaneously at 40 pulses per minute. The light system shall be equipped with a light sensitive control device which shall face the north sky and cause the intensity steps to change automatically when the north sky illumination on a vertical surface is as follows:

1. Day to Twilight: Shall not occur before the illumination drops to 60 footcandles, but shall occur before it drops below 30 footcandles.
2. Twilight to Night: Shall not occur before the illumination drops to 5 footcandles, but shall occur before it drops to 2

footcandles.

3. Night to Day: The intensity changes listed in 1. and 2. above shall be reversed in transitioning from the night to day modes.

3. There shall be installed at the top of the structure one 300 m/m electric code beacon equipped with two 620- or 700-watt lamps (PS-40, Code Beacon type), both lamps to burn simultaneously, and equipped with aviation red color filters. Where a rod or other construction of not more than 6.10 meters (20 feet) in height and incapable of supporting this beacon is mounted on top of the structure and it is determined that this additional construction does not permit unobstructed visibility of the code beacon from aircraft at any normal angle of approach, there shall be installed two such beacons positioned so as to insure unobstructed visibility of at least one of the beacons from aircraft at any normal angle of approach. The beacons shall be equipped with a flashing mechanism producing not more than 40 flashes per minute nor less than 12 flashes per minute with a period of darkness equal to approximately one-half of the luminous period.

10. On levels at approximately four-fifths, three-fifths, two-fifths and one-fifth of the overall height of the tower one similar flashing 300 m/m electric code beacon shall be installed in such position within the tower proper that the structural members will not impair the visibility of this beacon from aircraft at any normal angle of approach. In the event these beacons cannot be installed in a manner to insure unobstructed visibility of the beacons from aircraft at any normal angle of approach, there shall be installed two such beacons at each level. Each beacon shall be mounted on the outside of diagonally opposite corners or opposite sides of the tower at the prescribed height.

19. On levels at approximately nine-tenths, seven-tenths, one-half, three-tenths and one-tenth of the overall height of the tower, at least two 116- or 125-watt lamps (A21/TS) enclosed in an aviation red obstruction light globes shall be installed on each outside corner of the structure.

21. All lights shall burn continuously or shall be controlled by a light sensitive device adjusted so that the lights will be turned on at a north sky light intensity level of about 35 foot candles and turned off at a north sky light intensity level of about 58 foot candles.

CLOSE WINDOW



Federal Aviation Administration
Southern Regional Office
1701 Columbia Avenue-ASO-520
College Park, GA 30337

AERONAUTICAL STUDY No.
2002-ASO-4997-OE
PRIOR STUDY No.

Issued Date: 10/24/2002

WILLETTE PRINCE
SPECTRASITE COMMUNICATIONS
400 REGENCY FOREST DR, STE 400
CARY, NC 27511

**** DETERMINATION OF NO HAZARD TO AIR NAVIGATION ****

The Federal Aviation Administration has completed an aeronautical study under the provisions of 49 U.S.C., Section 44718 and, if applicable, Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure Type: Antenna Tower
Location: KNOXVILLE, TN
Latitude: 36-0-12.8 NAD83
Longitude: 83-56-34
Heights: 1457 feet above ground level (AGL)
2849 feet above mean sea level (AMSL)

This aeronautical study revealed that the structure does exceed obstruction standards but would not be a hazard to air navigation provided the following condition(s), if any, is(are) met:

As a condition to this Determination, the structure should continue to be marked and/or lighted utilizing a bi-dual system.

See attachment for additional condition(s) or information.

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights, and frequencies or use of greater power will void this determination. Any future construction or alteration, including increase to heights, power, or the addition of other transmitters, requires separate notice to the FAA.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of the structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

This determination concerns the effect of this structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

A copy of this determination will be forwarded to the Federal Communications Commission if the structure is subject to their licensing authority.

This aeronautical study included evaluation of a 1457 foot AGL structure that exists at this time. Action will be taken to ensure aeronautical charts are updated to reflect this existing height and the most current coordinates/elevation as indicated in the above description.

If we can be of further assistance, please contact our office at (404) 305-5579. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2002-ASO-4997-OE.



Earl P. Newalu Jr.
Specialist

(EBC

Attachment(s)...

cc: NACO w/map 43-2285

Frequency Data for ASN 2002-ASO-4997-OE

LOW FREQUENCY	HIGH FREQUENCY	FREQUENCY UNIT	ERP	ERP UNIT
82	88	MHz	100	KW
542	548	MHz	898	KW
590	596	MHz	460	KW
644	650	MHz	1960	KW
524	530	MHz	18	KW
572	578	MHz	760	KW
536	542	MHz	5000	KW

Frequency Attachment (EBC)

ATTACHMENT

AERONAUTICAL STUDY
02-ASO-4997-OE

The existing structure is located approximately 4.12 nautical miles northwest of the Knoxville Downtown (DKX) Airport Reference Point. This structure exceeds the standard for determining obstructions to air navigation contained in Part 77, Subpart C, of the Federal Aviation Regulations as follows:

Exceeds FAR Part 77.23(a)(1) by 957 feet, its height more than 500 feet above ground level (AGL).

Exceeds FAR Part 77.23(a)(2) by 1145 feet, its height more than 312 feet above ground level (AGL) at its site with respect to the DKX Airport.

Details of the structure were not circularized to the aeronautical public for comment since the increase in height was considered and the study did not identify any effects that the structure would have on any existing or proposed Instrument Flight Rules (IFR) operations, procedures or minimum flight altitudes.

The existing structure was found to have no adverse effect on the VFR airport traffic patterns in the vicinity of the site.

TV STATION

BRUTE FORCE (AIRBORNE RECEIVERS):

FAA facility/frequency/location VOR 116.4 MHz Knoxville, TN critical to aviation safety is located 6.38 nautical miles from your proposed transmitter site. Aircraft operating in the frequency protected service volume (FPSV) making a VOR approach to Runway 08 at the Knoxville Downtown Airport will be subject to navigational receiver front-end desensitization. Aircraft receiver front-end desensitization occurs when the receiver is subject to signal strength of -10dBm or greater.

This determination of No Hazard is granted provided the following conditional statement is included in the proponent's construction permit or license to radiate:

Upon receipt of notification from the Federal Communications Commission that harmful interference is being caused by the licensee's (permittee's) transmitter, the licensee (permittee) shall either immediately reduce the power to the point of no interference, cease operation, or take such immediate corrective action as necessary to eliminate the harmful interference. This condition expires after one year of interference-free operation.

////////////////////////////////////END OF COMMENTS////////////////////////////////////

TECHNICAL EXHIBIT
MINOR CHANGE APPLICATION
STATION WTNZ-DT (FACILITY ID 19200)
KNOXVILLE, TENNESSEE
CH 34 460 KW 529 M

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TECHNICAL EXHIBIT
MINOR CHANGE APPLICATION
STATION WTNZ-DT (FACILITY ID 19200)
KNOXVILLE, TENNESSEE
CH 34 460 KW 529 M

Technical Narrative

This Technical Exhibit supports a minor change application for digital television station WTNZ-DT on channel 34 at Knoxville, Tennessee. Station WTNZ-DT is licensed to operate with a non-directional effective radiated power (ERP) of 460 kW and an antenna height above average terrain (HAAT) of 531 meters (BLCDT-20021104AAE).

The tower registration (ASRN) for the existing tower has been modified since the WTNZ-DT authorization was prepared and there are discrepancies between the WTNZ-DT data and the tower registration data. This application is only being prepared to correct the coordinates and associated heights for WTNZ-DT to agree with the information in ASRN 1052156.

Proposed Facilities

This minor change application proposes a slight change in coordinates (two seconds in longitude) and the antenna HAAT will decrease by 2 meters. The corrected transmitter site coordinates are: 36-00-13 N, 83-56-34 W. A non-directional ERP of 460 kW and antenna HAAT of 529 meters are hereby proposed (*FCC tower registration no. 1052156*).

The proposed WTNZ-DT operating facilities (460 kW, 529 meters HAAT) are slightly less than the licensed WTNZ-DT facilities. Therefore, the proposed WTNZ-DT facilities (ERP & HAAT) comply with Section 73.622(f)(5) of the FCC's rules concerning maximum ERP and HAAT.

Allocation Study

Interference calculations have been made using the procedures outlined in the FCC's OET-69 bulletin, using a 2 kilometer grid spacing. The proposed WTNZ-DT operation does not cause excessive calculated interference to any analog or DTV assignment. Below is the list of stations considered in the OET-69 analysis.

Stations Potentially Affected by Proposed Station					
Chan	Call	City/State	Dist (km)	Status	App. Ref. No.
20	WBXX-TV	CROSSVILLE TN	37.4	LIC	BLCT-19971028KE
27	960919KW	CANTON NC	105.2	APP	BPET-19960919KW
27	WTNB-CA	CLEVELAND TN	123.3	LIC	BLTT-19971027JD
32	WEEE-LP	KNOXVILLE TN	0.0	CP	BPTTA-20030224AAQ
33	WCLP-TV	CHATSWORTH GA	155.8	CP	BPEDT-20000425AAP
33	WCLP-DT	CHATSWORTH GA	155.8	PLN	DTVPLN-DTVP0898
33	WUNF-TV	ASHEVILLE NC	124.8	LIC	BLET-19980316KE
34	WCFT-DT	TUSCALOOSA AL	424.4	PLN	DTVPLN-DTVP0924
34	WUVG-TV	ATHENS GA	208.9	LIC	BLCT-19960614KH
34	WBKI-TV	CAMPBELLSVILLE KY	216.2	LIC	BLCT-20001109ABF
34	WSOC-DT	CHARLOTTE NC	302.0	PLN	DTVPLN-DTVP0943
34	WSOC-TV	CHARLOTTE NC	302.0	CP	BPCDT-20000427ABI
34	WCET-DT	CINCINNATI OH	350.7	PLN	DTVPLN-DTVP0950
34	WCET	CINCINNATI OH	350.6	CP	BPEDT-20000420ABE
34	WSET-TV	LYNCHBURG VA	410.8	CP MOD	BMPCDT-20021001AAJ
34	WSET-TV	LYNCHBURG VA	410.8	LIC	BPRM-20010525ADB
34	WPBY-DT	HUNTINGTON WV	316.9	PLN	DTVPLN-DTVP0961
34	WPBY-TV	HUNTINGTON WV	316.9	LIC	BLEDT-20040211AAL
35	WKHA	HAZARD KY	148.4	LIC	BLET-19810303KE
35	WGGs-TV	GREENVILLE SC	182.1	CP	BPCDT-19991027ABK
35	WGGs-DT	GREENVILLE SC	182.1	PLN	DTVPLN-DTVP0992
35	WTVC-DT	CHATTANOOGA TN	155.6	PLN	DTVPLN-DTVP0993
38	WPDP-LP	CLEVELAND TN	114.5	CP	BPTTL-20010607ABP

From the above list of stations considered, the table below shows the calculated interference caused to each station. Only stations that are predicted to receive an increase in interference from the proposed WTNZ-DT operation are shown in the interference table.

Study Station	Baseline	Net Population Change/Interference
20 WBXX-TV CROSSVILLE TN (LIC)	1,390,888	22 (0.00%)
33 WCLP-DT CHATSWORTH GA (CP)	1,510,013	612 (0.04%)
33 WUNF-TV ASHEVILLE NC (LIC)	1,811,044	1,867 (0.10%)
34 WUVG-TV ATHENS GA (LIC)	3,089,759	964 (0.03%)
34 WBKI-TV CAMPBELLSVILLE KY (LIC)	1,434,547	12,488 (0.87%)
35 WTVC-DT CHATTANOOGA TN (PLN)	991,940	5,920 (0.60%)

The proposed WTNZ-DT operation does not cause prohibitive interference to any other analog or DTV assignments and therefore complies with the FCC's 2%/10% interference standard.

Radiofrequency Electromagnetic Field Exposure

The proposed WTNZ-DT facilities were evaluated in terms of potential radio frequency (RF) energy exposure at ground level to workers and the general public. The radiation center for the proposed DTV antenna is located 413.3 meters above ground level. The DTV ERP is 460 kW. A conservative relative field of 0.2 was used for the calculation (see Figure 2). Therefore, the "worst-case" calculated power density at a point 2 meters (6.6 feet) above ground level is 0.0036 mW/cm². This is less than 1 % of the FCC's recommended limit of 0.40 mW/cm² for channel 34 for an "uncontrolled" environment.

Access to the transmitting site will be restricted and appropriately marked with warning signs. As this will be a multi-user site an agreement will control access. 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.

It is noted that this statement only addresses the potential for radiofrequency electromagnetic field exposure. All other aspects of the environmental processing analysis will be or already have been provided to the FCC by the tower owner as part of the tower registration process.

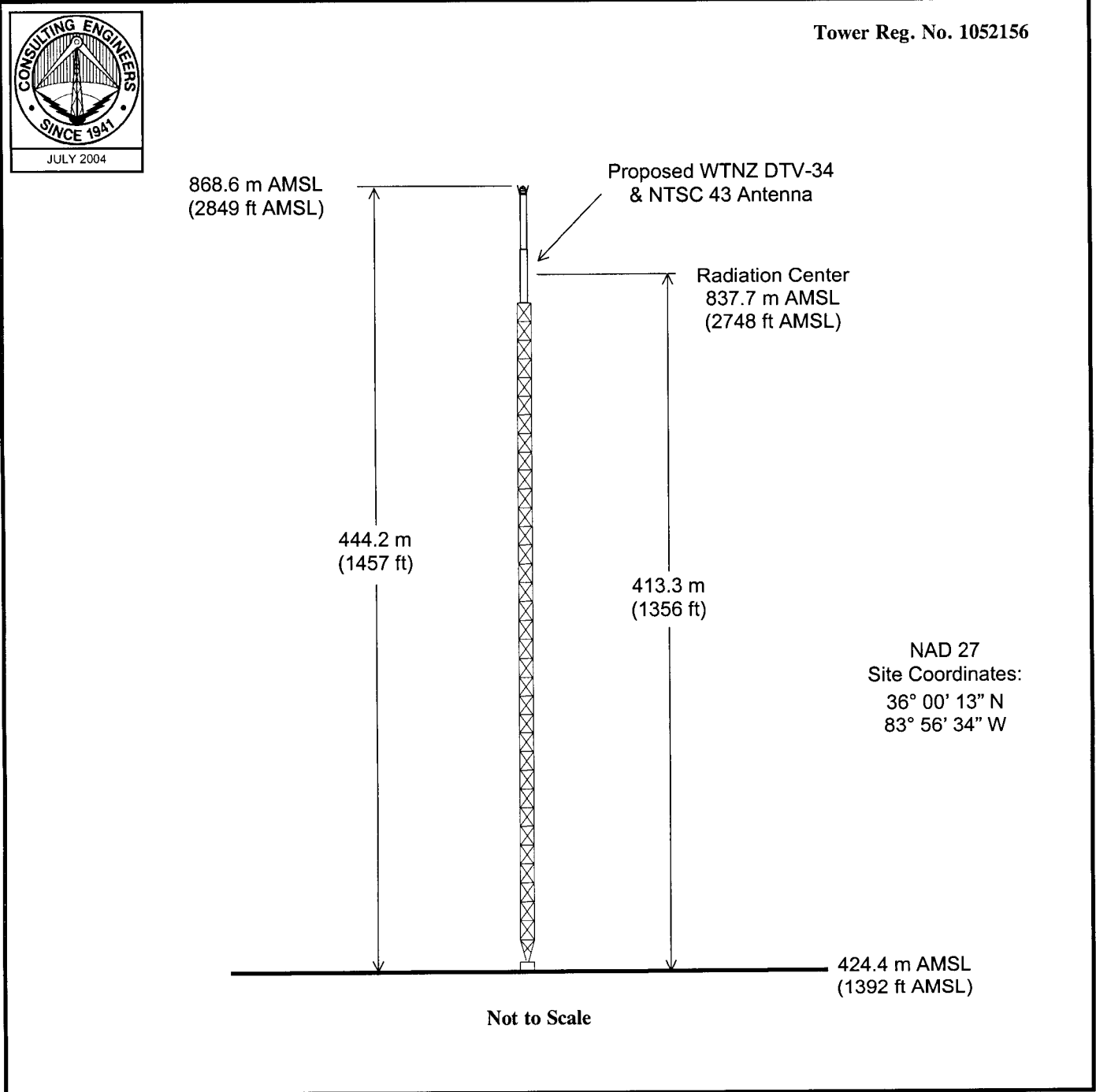


Jonathan N. Edwards

du Treil, Lundin & Rackley, Inc.
201 Fletcher Avenue
Sarasota, Florida 34237
(941) 329-6000

July 5, 2004

Figure 1



PROPOSED ANTENNA AND SUPPORTING STRUCTURE

STATION WTNZ-DT
KNOXVILLE, TENNESSEE

CH 34 460 KW 529 M

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

Proposal Number **DCA-9330**Date **31-Mar-01**

Call Letters

Channel **34**Location **Knoxville, TN**Customer **Spectrasite**Antenna Type **TUD-O5-16/80H-2-B****TABULATION OF ELEVATION PATTERN**Elevation Pattern Drawing #: **16U318075-B34-90**

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.027	2.4	0.224	10.6	0.061	30.5	0.013	51.0	0.015	71.5	0.019
-9.5	0.046	2.6	0.231	10.8	0.070	31.0	0.020	51.5	0.029	72.0	0.019
-9.0	0.027	2.8	0.236	11.0	0.072	31.5	0.018	52.0	0.039	72.5	0.018
-8.5	0.060	3.0	0.222	11.5	0.047	32.0	0.009	52.5	0.038	73.0	0.016
-8.0	0.096	3.2	0.186	12.0	0.024	32.5	0.011	53.0	0.029	73.5	0.013
-7.5	0.075	3.4	0.138	12.5	0.041	33.0	0.015	53.5	0.015	74.0	0.010
-7.0	0.029	3.6	0.098	13.0	0.027	33.5	0.011	54.0	0.014	74.5	0.008
-6.5	0.058	3.8	0.097	13.5	0.031	34.0	0.008	54.5	0.023	75.0	0.006
-6.0	0.046	4.0	0.128	14.0	0.057	34.5	0.018	55.0	0.024	75.5	0.005
-5.5	0.060	4.2	0.160	14.5	0.050	35.0	0.022	55.5	0.017	76.0	0.005
-5.0	0.130	4.4	0.176	15.0	0.018	35.5	0.016	56.0	0.023	76.5	0.006
-4.5	0.128	4.6	0.173	15.5	0.026	36.0	0.008	56.5	0.048	77.0	0.007
-4.0	0.052	4.8	0.152	16.0	0.029	36.5	0.012	57.0	0.075	77.5	0.007
-3.5	0.081	5.0	0.118	16.5	0.017	37.0	0.013	57.5	0.094	78.0	0.007
-3.0	0.083	5.2	0.080	17.0	0.043	37.5	0.007	58.0	0.100	78.5	0.007
-2.8	0.063	5.4	0.055	17.5	0.054	38.0	0.013	58.5	0.090	79.0	0.006
-2.6	0.086	5.6	0.060	18.0	0.035	38.5	0.022	59.0	0.065	79.5	0.006
-2.4	0.156	5.8	0.079	18.5	0.014	39.0	0.023	59.5	0.036	80.0	0.005
-2.2	0.243	6.0	0.090	19.0	0.026	39.5	0.015	60.0	0.045	80.5	0.004
-2.0	0.329	6.2	0.089	19.5	0.019	40.0	0.009	60.5	0.087	81.0	0.004
-1.8	0.398	6.4	0.075	20.0	0.023	40.5	0.014	61.0	0.129	81.5	0.003
-1.6	0.440	6.6	0.053	20.5	0.046	41.0	0.015	61.5	0.161	82.0	0.002
-1.4	0.444	6.8	0.035	21.0	0.045	41.5	0.009	62.0	0.179	82.5	0.002
-1.2	0.405	7.0	0.045	21.5	0.021	42.0	0.012	62.5	0.183	83.0	0.002
-1.0	0.324	7.2	0.068	22.0	0.018	42.5	0.023	63.0	0.174	83.5	0.002
-0.8	0.216	7.4	0.088	22.5	0.025	43.0	0.026	63.5	0.153	84.0	0.002
-0.6	0.154	7.6	0.099	23.0	0.015	43.5	0.020	64.0	0.126	84.5	0.003
-0.4	0.258	7.8	0.098	23.5	0.045	44.0	0.009	64.5	0.091	85.0	0.003
-0.2	0.435	8.0	0.087	24.0	0.074	44.5	0.010	65.0	0.064	85.5	0.003
0.0	0.617	8.2	0.068	24.5	0.072	45.0	0.016	65.5	0.044	86.0	0.003
0.2	0.778	8.4	0.046	25.0	0.038	45.5	0.014	66.0	0.035	86.5	0.003
0.4	0.902	8.6	0.031	25.5	0.029	46.0	0.009	66.5	0.034	87.0	0.003
0.6	0.978	8.8	0.033	26.0	0.068	46.5	0.018	67.0	0.034	87.5	0.003
0.8	1.000	9.0	0.043	26.5	0.086	47.0	0.029	67.5	0.033	88.0	0.003
1.0	0.967	9.2	0.050	27.0	0.076	47.5	0.032	68.0	0.028	88.5	0.003
1.2	0.885	9.4	0.048	27.5	0.056	48.0	0.025	68.5	0.022	89.0	0.003
1.4	0.765	9.6	0.039	28.0	0.032	48.5	0.013	69.0	0.016	89.5	0.003
1.6	0.621	9.8	0.033	28.5	0.017	49.0	0.010	69.5	0.012	90.0	0.003
1.8	0.472	10.0	0.023	29.0	0.018	49.5	0.018	70.0	0.012		
2.0	0.342	10.2	0.030	29.5	0.017	50.0	0.018	70.5	0.015		
2.2	0.254	10.4	0.046	30.0	0.009	50.5	0.011	71.0	0.018		