



**SPOTSYLVANIA COUNTY, VA  
TECHNICAL REVIEW**

**Special Use Permit**

**NEW 150-ft SELF-SUPPORT MONOPOLE TOWER  
ECO-SITE/T-MOBILE**

**Plank Road  
Fredericksburg, VA 22407**

**Submitted by:**

**ATLANTIC TECHNOLOGY CONSULTANTS, INC.**

*A Member of The Atlantic Group of Companies*

**ATC PROJECT #: 1047-19**

**December 9, 2016**



THE ATLANTIC GROUP  
OF COMPANIES INC.

## **EXECUTIVE SUMMARY:**

Eco-Site, a tower development infrastructure owner, and T-Mobile Wireless (T-Mobile), a wireless communications service provider, have made application to the County for the issuance of a Special Use Permit to construct a 150-ft Self Supportive monopole tower (with a 4-ft lightning rod) for a total of 154-ft AGL on property owned by the Central Crescent Investments, LLC.


T-Mobile is an FCC licensed wireless telecommunications provider authorized to provide services in the Spotsylvania County area. T-Mobile is seeking to co-locate on this tower if approved.

Eco-Site is proposing to construct a 154-ft self-supportive monopole type tower to enhance service delivery along Plank Road (Rt. 3), the I-95 corridor area, and the surrounding underserved areas.

This report outlines the specific areas of evaluation with respect to this proposal. Supporting and clarifying evidence regarding the suitability of the proposed design in meeting the specified coverage goals is included.

It is the opinion of this consultant that the Applicant's plans conform to accepted design and construction practices for the construction of telecommunications support structures.

This Consultant recommends that the request for issuance of a Special Use Permit to allow construction as proposed be approved.



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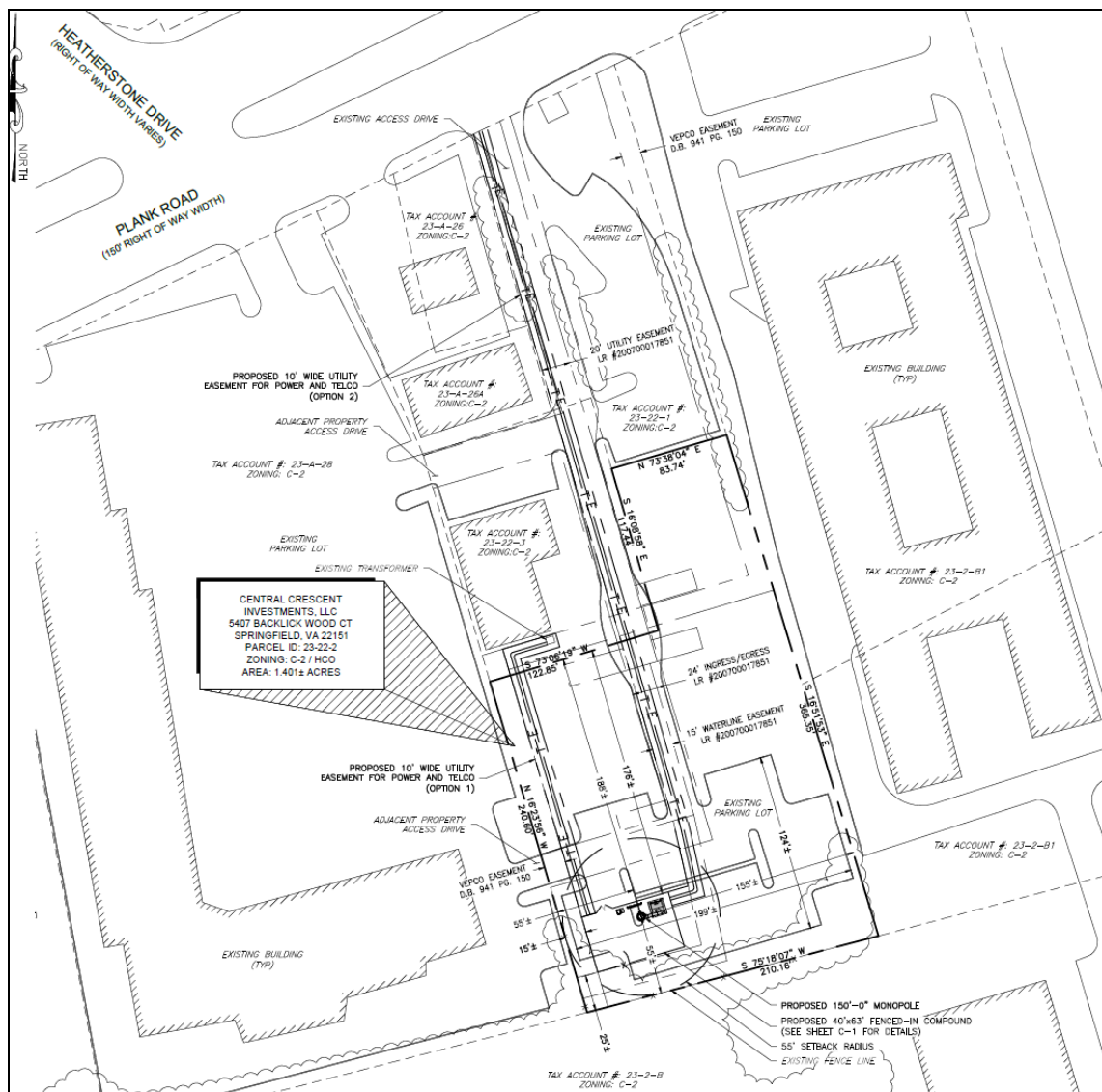
George N. Condyles, IV CPM  
President and COO  
Atlantic Technology Consultants, Inc.

## 1.0 TECHNICAL

### 1.1 Siting

The proposed tower site is a 40' x 63' lease area or 2,520 square foot portion of a 1.401 acre newly formed parcel. The property is zoned C-2/HCO and located on Tax Map 23-22-2. The proposed site can be accessed from Plank Road and is physically located at 38° 17' 22.26" N and 77° 31' 33.67" W at a ground elevation of 282' ±.

#### Site Plan



**The Applicant proposes a 20' wide ingress/egress/utility easement.**

The Applicant proposes the tower to provide three (3) carrier “slots” for all licensed Cell/PCS carriers in the market. T-Mobile would be the first “tenant” of the facility. T-Mobile will place a 10’ x 10’ concrete pad with various radio and power cabinets with an ice-bridge and utility service cabinets.

### **Use of County Owned Properties**

The County asks each Applicant to consider County owned land when evaluating properties to build/set towers.

There is no County owned property that would work with this Application.

## **1.2 Setbacks**

Spotsylvania County’s Zoning Ordinance, Chapter 23 Zoning, Article 7A Division has two (2) major requirements for communications tower setbacks.

They are:

Sec.23-7A.4.1.2.

2. The following setback requirements shall apply:

(a) All antenna support structures must maintain a minimum setback of one hundred and ten percent (110%) of the ANSI collapse zone standard from the nearest legally occupied structure and from all adjoining property lines. In the event that the same person(s) own several parcels, the setback shall be to the peripheral property lines created by the aggregate of the parcels.

Section 23-7A.1.2.6 Wireless Communication Facilities goals states the following:

The goals of this section are:

6. (a) Promote the public health, safety and general welfare of the community. To avoid potential damage to adjacent properties from tower failure and falling objects through engineering structural standards and setback requirements.

### Consultant's Opinion:

There are several occupied dwellings in the immediate area. One is the office building to the north of the proposed tower at approximately 200'. To the west is a retail strip mall that is approximately 100'. The nearest Residential occupied dwelling (Assisted Living Facility) is approximately 200'+ from the centerline of the proposed monopole tower. To the south, residential homes are approximately 300'.

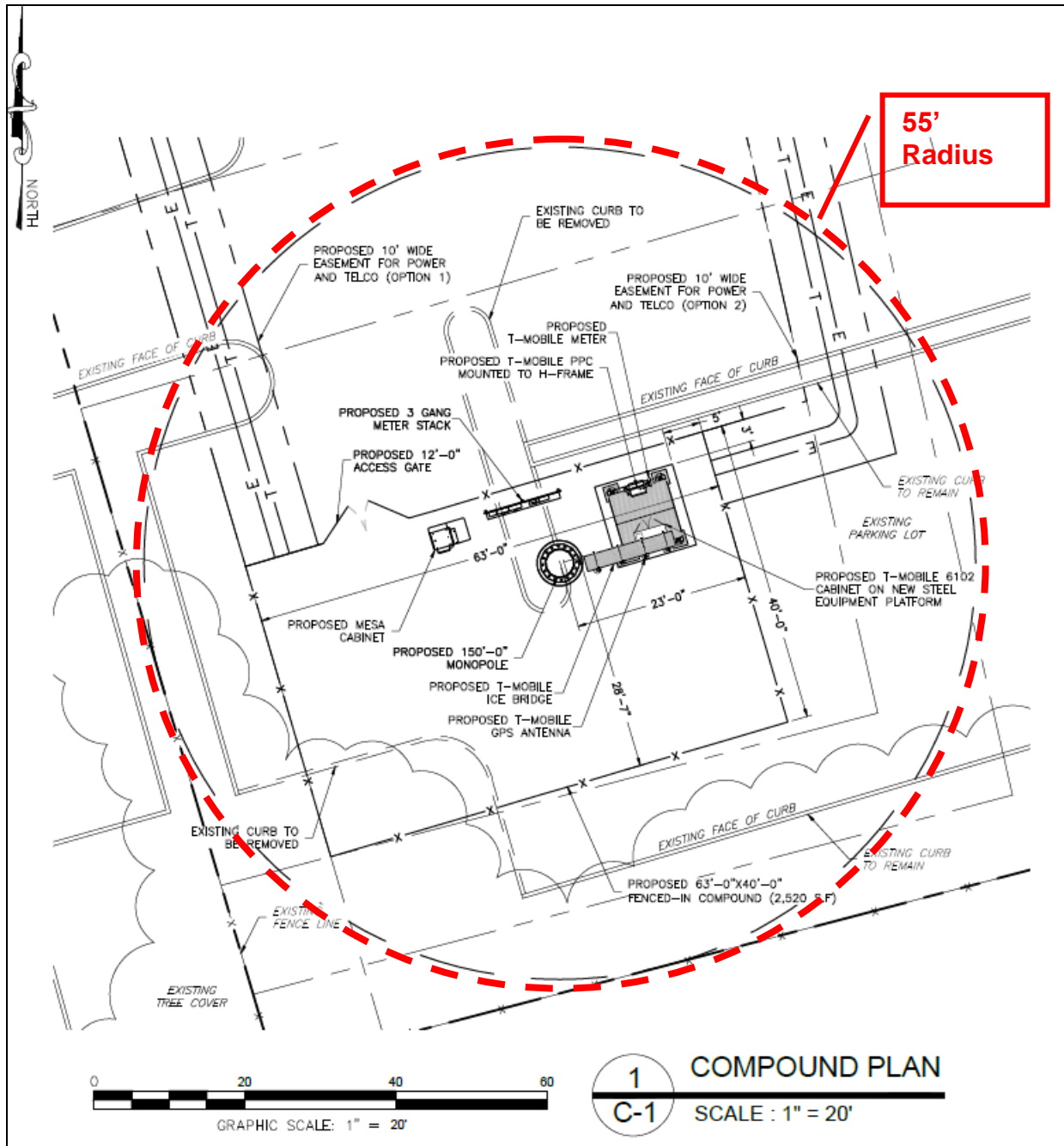
The tower has an engineered "fall-zone" of 50 feet. This is accomplished by the structure having a "double buckling" effect if failure was to occur. What "double buckling" means is that the monopole tower would "fold over itself twice at specific designed elevations to minimize the fall zone. The structural design of the tower would prevent it from a catastrophic fall as falling like a tree with failure at the base plate.

To meet the 110% Fall Zone as specified, it has a designed Fall Zone of 55' which this facility would fall within thus complying with the County's setback requirements.

The likelihood of a structural failure is minimal, as well as the possibility of falling on any occupied dwelling.

This has been attested to by the Project Engineer: Phillip A. Burtner, P.E. in the Site Plan submitted by the Applicant: Eco-Site in drawings dated 10/25/16.

**The Consultant recommends approval of the siting for this tower.**



**55' Radius has slight encroachment to Assisted Living Facility**

### **1.3 Co-location**

#### **Proposed Tower Capabilities**

3 Wireless Carriers

Slot #1....T-Mobile: Top

Slot #2.....Vacant

Slot #3.....Vacant

Eco-Site does have pre-approved written agreements with other carriers to allow for co-location. The tower and compound are being designed to accommodate a total of three (3) co-locations.

#### **Existing Towers and Structures**

While co-location is preferable to construction of a new site with such co-location minimizing visual impact of telecommunications equipment on the surrounding area, no additional tower sites are available in the area which would meet the applicant's coverage objectives.

In addition, there is one communication tower and one elevated structure (water tank) that this tower would create duplicity and thus not be in alignment with the county's policy of utilization of existing structures first.

The Applicant submitted a map of all towers in the general vicinity. (See Map below) There are several sites that are important for this evaluation.

#### **Important sites for this evaluation**

Plank & Cherry Road Water Tank  
Central Park Mall (Carl D. Silver) Tower

The Applicants, Eco-Site and T-Mobile, have explored the possibility of co-locating on either one of the two (2) sites mentioned above. Their response, written by Mr. Justin Blanset of the engineering firm Network building and Consulting, says the following:

Additionally, the existing towers at the Carl D. Silver (Central Park) and Spotsylvania County Landfill locations, including T-Mobile's 7FBU001 and 7FBU011, are at or near maximum capacity for structural loading. With new, stricter structural standards proposed to be adopted by the American National Standards Institute next year, these tower will likely not be able to accommodate many future modifications. As a result, the proposed new location will serve a function for carriers in the future (including, but not limited to, T-Mobile) seeking to upgrade coverage in the area.

The areas nearby the proposed facility lack any candidates for collocation to achieve the desired coverage goals. T-Mobile is already located at the two closest structures of sufficient height – the Central Park location and the Spotsylvania County Landfill. Although a second tower is located adjacent to T-Mobile's location 7FBU011 at the Spotsylvania County Landfill, collocating a second site in such immediate proximity to an existing site is not a viable way to increase network capacity or coverage. Due to zoning height district regulations, there are no other viable structures in the target area.

T-Mobile also considered collocation at the nearest existing structures of viable height. T-Mobile will need antennas at a certain height in order to obtain proper signal propagation. Most structures in the area are below the tree line and would thus be inappropriate for collocation. Two structures of viable height were identified: the existing water tank at 11919 Cherry Road and the approved Verizon tower to be constructed at 5325 Harrison Road. As shown by the enclosed coverage diagrams, neither site would have a significant effect on coverage in the targeted area surrounding Route 3, due to distance from the target area and topography.

**In summary, the Consultant looked at both of these sites and the data accompanying this application and concurs that both of these sites are out of position and unable to work within the network architecture.**

#### **1.4 Landscape Buffer**

The proposed site is “open/developed” commercially zoned property to the front and both sides. In the rear of the property (between the proposed site and residential neighborhood) the site has a buffer of 40-ft to 60-ft soft and hardwood trees. The buffer is approximately 50 to 80 feet from the fence of the proposed compound.

In the winter, the tower may be seen from the residential housing area. The tower will protrude approximately 40 to 50 feet above the tree line.

**The tower compound will not be visible from the closest homes in the general vicinity. Approximately the top 50' to 100' of the tower will be exposed.**

The Applicant has submitted photo simulations from various locations and directions. Upon review of these photos, the Consultant concurs with the “estimated” view from various locations.



## **1.5 Structural**

The proposed 150-ft Self Supportive monopole tower is designed with the ability to support equipment operated by multiple carriers. The supplied site plans are signed and sealed by a professional engineer licensed in the Commonwealth of Virginia. A structural analysis was included in the paperwork sent to ATC.

The design engineering firm Nello Corporation, a subsidiary of Valmont Industries (the manufacturer), is the “Engineer of Record” for this tower. This tower was fabricated by TNX Tower Corporation, also a subsidiary of Valmont who certified the design.

This tower was designed as a heavy load tower, thus able to meet the loading requirements for three (3) co-locators.

A structural analysis takes into account the structural loading of the tower’s own weight, that of the proposed appurtenances, and that of various iterations of wind, ice, and other environmental loading.

It is noteworthy that this model of tower is designed to support appurtenances for multiple carriers and remain within EIA/TIA-222-G structural guidelines (the accepted industry standard) for structures, which mandates the ability to withstand the structural loading of all appurtenances, plus additional wind and ice loading.

Furthermore, in conformance with County ordinance, work at this site will remain in compliance with ALL federal, state, and local building codes and regulations if work proceeds as outlined in the application.

## **1.6 RF Exposure**

FCC bulletin OET-65 provides guidance for a licensee proposing to construct a telecommunications support structure in calculation of RF exposure limitations, including analysis of the cumulative effect of all transmitters on the structure.

Documentation of a Radio Frequency exposure was included with this application. It was certified by Mr. Mohammad Alsamna, Radio Frequency Engineer for T-Mobile in a letter dated September 27, 2016.

Appropriate steps, including warning signage at the site, must be taken to protect both the general public and site workers from unsafe RF exposure in accordance with federal guidelines. RF site exposure warning signage shall be appropriately placed at this site, in conformance with FCC regulations and industry standards. (See full Letter Below)



September 27, 2016

9019 Old Battlefield Boulevard  
Spotsylvania, VA 22553

Re: T-Mobile Telecommunications Wireless Installation (T-Mobile site ID: 7FBU103J)  
Plank Rd, Fredericksburg, VA, 22401 (Parcel 23-22-2)

To Whom It May Concern:

T-Mobile has filed the attached building permit application to operate equipment at this site on the basis of FCC licenses which exclusively entitles the company to transmit within their assigned frequency ranges. It has been brought to my attention that Spotsylvania County will require a letter of non-interference and EME compliance for this site.

Please be advised that T-Mobile will not cause localized interference with reception of television and radio broadcasts and will not operate on any frequency owned and/or used by the Spotsylvania County emergency system. In the event that there is any interference between T-Mobile's frequency and the County's frequency, or any interference with reception of public safety or broadcast communications, T-Mobile will take necessary measures to resolve these issues.

Additionally, the radio frequency emissions will continue to be within the acceptable FCC limits. T-Mobile sites are designed and constructed to meet all applicable radio frequency electromagnetic exposure (RF EME) regulations for occupational/controlled and general population/uncontrolled "maximum permitted exposure" (MPE). The full description of FCC MPE limits can be found in 47 CFR 1.1307(b) and 1.1310.

Should you have any questions or need any further assistance, please do not hesitate to contact me.

Thank you for your attention to this matter.

Sincerely,  
Mohammed Alsamna  
RF Engineer  
T-Mobile  
12050 Baltimore Ave  
Beltsville, MD 20705  
201-310-1829

## **1.7 Grounding**

Grounding of all structures and equipment at an RF site is critically important to the safety of both personnel and equipment at the site. Even a single component not meeting this standard places all other site components at risk for substantial

damage. All structures and equipment at the site should maintain a ground potential difference of less than 5 ohms.

**If this request is approved, the Applicant will enter into the Design Phase and Grounding should be addressed in the Electrical/Grounding Plans.**

## **1.8 General Safety**

The consultant concurs with the Applicant's proposed site security and safety plans. They are:

1. This site compound will be surrounded by a suitable 40' x 63' eight (8) foot tall chain-link security fence with three strands of barbed wire on top to prevent unauthorized access to the tower site.
2. Safety measures to be placed at this site include RF exposure warning signage, site identification information, and routine and emergency contact information.
3. Include the installation of an OSHA-approved style of fall prevention cable.
4. Maintain the access road gate to limit unauthorized traffic from ingress to the site.

## **1.9 Interference**

An interference study, taking into account all proximally located transmitters and receivers known to be active in the area, is advisable prior to any deployment of antennae.

A full interference study of potential adverse effects of the county's 700/800 MHz Public Safety Communications system has been included with the Applicant's submission package. It is recommended that all wireless carriers broadcasting at the 700/800 MHz spectrum coordinate with the Emergency Services Department to ensure that no interference will occur with the Public Safety Radio System.

This was certified by Mr. Mohammad Alsamna Radio Frequency Engineer from T-Mobile thus stating it would not interfere with any Public Safety frequencies.

**The consultant sees no evidence of interference.**

Should any interference issues be posed with respect to this site, mitigation would nevertheless remain the responsibility of the tower owner and affected carrier(s), and would be regulated by the Federal Communication Commission, having no effect or burden on the County.

## **2.0 PROCEDURAL**

### **2.1 FAA Study**

The approved Federal Aviation Administration study and report known as Study: VA0003 – Fredericksburg dated 5-20-16.

The findings are:

#### **EXECUTIVE SUMMARY OF FINDINGS**

- **The maximum height that can be built at this site without notice to the FAA is 200 feet AGL or 485 feet AMSL.**
- Maximum No Extended Study height at this site is 355 AGL, or 640 AMSL.
- Maximum No Hazard height at this site is 355 AGL, or 640 AMSL.
- Maximum no marking and lighting height at this site is 200 AGL, or 485 AMSL.

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**The tower, if approved, does not require lighting.**



**SITE SPECIFIC EVALUATION  
FOR**

Client Site Name: Plank & Bragg

Client Site Number: VA-0003

Client Site Location: Fredericksburg, VA.

Client/Requestor Name: Ingrid Thomas

Date: 5/20/16

Company Name: Eco-Site

Address: 240 Leigh Farm Road, Suite 415

Address: Durham, NC. 27707

*This is an evaluation based on application of surfaces identified in Federal Aviation Regulation (FAR) Part 77 and Federal Communication Commission (FCC) Rules Part 17.*

**EXECUTIVE SUMMARY OF FINDINGS**

- **The maximum height that can be built at this site without notice to the FAA is 200 feet AGL or 485 feet AMSL.**
- Maximum No Extended Study height at this site is 355 AGL, or 640 AMSL.
- Maximum No Hazard height at this site is 355 AGL, or 640 AMSL.
- Maximum no marking and lighting height at this site is 200 AGL, or 485 AMSL.

**SITE DATA SUBMITTED FOR STUDY**

Type of Structure: Antenna

Coordinates of site: Lat: 38° 17' 22.26"  
Long: 77° 31' 33.67"  
Datum: NAD 83

Site Ground Elevation: 285  
Total Height above the ground of the entire structure (AGL): 150  
Overall height of structure above mean sea level (AMSL): 435

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*Note: This report is for planning purposes only. If notification to the FAA or FCC is submitted on a site (whether it is, or is not required), a determination of no hazard or an approval letter should be received prior to any actions taken at this site.*

## 2.2 FCC Antenna Site Registration

**This site is not required to have an antenna site registration number.**

TOWAIR Search Results							Page 1 of 1
<b>TOWAIR Determination Results</b>							
A routine check of the coordinates, heights, and structure type you provided indicates that this structure does not require registration.							
<b>*** NOTICE ***</b>							
<p>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.</p>							
<b>DETERMINATION Results</b>							
<b>PASS SLOPE(50:1): NO FAA REQ-RWY 10499 MTRS OR LESS &amp; 7014.66 MTRS (7.01470 ) KM AWAY</b>							
<b>Type</b>	<b>C/R</b>	<b>Latitude</b>	<b>Longitude</b>	<b>Name</b>	<b>Address</b>	<b>Lowest Elevation (m)</b>	<b>Runway Length (m)</b>
AIRP	R	38-15-48.00N	077-27-11.00W	SHANNON	SPOTSYLVANIA FREDERICKSBURG, VA	25.3	914.10000000000002
<b>Your Specifications</b>							
<b>NAD83 Coordinates</b>							
Latitude						38-17-22.3 north	
Longitude						077-31-33.7 west	
<b>Measurements (Meters)</b>							
Overall Structure Height (AGL)						46.9	
Support Structure Height (AGL)						45.7	
Site Elevation (AMSL)						86	
<b>Structure Type</b>							
MTOWER - Monopole							
<b><u>Tower Construction Notifications</u></b>							
Notify Tribes and Historic Preservation Officers of your plans to build a tower.							

## **2.3 Environmental Impacts**

The National Environmental Policy Act of 1969 (NEPA), delineated in Title 47 of the Code of Federal Regulations, Part 1, Subpart I, sections 1.1301-1.1319, requires federal agencies to incorporate environmental considerations into their decision-making process when evaluating new construction proposals.

As a licensing agency, the Federal Communication Commission (FCC) requires all licensees to consider the potential environmental effects from their construction of antenna support structures, and to disclose those effects in an Environmental Assessment (EA) that must be filed with the FCC for review.

### **A Phase I NEPA report was submitted with this Application.**

Typically, a NEPA Phase I Report should include the following items:

- NEPA Checklist
- NEPA Summary Report
- Associated documentation
  - Figures, Drawings, Maps
  - Tribal Correspondence
  - Land Resources Map and FEMA Floodplain Map
  - SHPO Correspondence (See next Section 2.4 “Historic Impacts)
  - Department of Game and Inland Fisheries Response
  - Department of Conservation and Recreation Response

The NEPA Phase I Assessment is a report that is submitted to the FCC only if requested by the FCC.

The approved and licensed engineering consulting firm, Advantage Environmental Consultants, LLC located at 8610 Washington Boulevard, Suite 217, Jessup, Maryland 20794 submitted a report. Delainey Loedding, Staff Scientist, and Andrew L. Fleming, Senior Project Manager, were engaged by the Applicant.

The NEPA Study was conducted, reviewed and results published August 24, 2016.

### **No issues were found with this Application.**

(See Report Conclusions/Recommendations below)

### ***Conclusions/Recommendations***

Based on the results of this assessment, the preparation and submittal of an Environmental Assessment is not warranted and no further action is recommended.

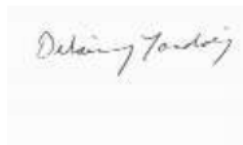
However, the following recommendation was provided by the Virginia Department of Conservation and Recreation (DCR): Due to the presence of a Stream Conservation Unit (SCU) downstream from the project site with two associated natural heritage resources (Aquatic Natural Communities NP-Lower Rappahannock Second Order Stream and NC-Lower Rappahannock Second Order Stream), the DCR recommends "the implementation of and strict adherence to applicable state and local erosion and sediment control/storm water management laws and regulations, establishment/enhancement of riparian buffers with native plant species and maintaining natural stream flow."

This report is intended exclusively for the use and benefit of Network Building and Consulting, LLC and Eco-Site, Inc. This report is not for the use or benefit of, nor may it be relied upon by, any other person or entity for any purpose without the advance written consent of AEC. AEC makes no representation to any third party except that it has used the degree of care and skill ordinarily exercised by a reasonable, prudent environmental professional in the same community and in the same time frame given the same or similar facts and circumstances. No other warranties are made to any third party, either expressed or implied.

We appreciate the opportunity to be of service to Network Building and Consulting, LLC and Eco-Site, Inc. Qualifications for the environmental professionals involved with this assessment are presented in Appendix G. If you should have any questions regarding this report, please contact Mr. Andrew Fleming at (301) 776-0500.

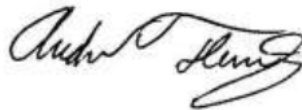
Sincerely,

**ADVANTAGE ENVIRONMENTAL CONSULTANTS, LLC**



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Delaine Loedding  
Staff Scientist



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Andrew L. Fleming  
Senior Project Manager



## 2.4 Historic Impacts

Section 106 of the National Historic Preservation Act of 1966 (NHPA) requires that State Historic Preservation Offices (SHPO) and the President's Advisory Council on Historic Preservation be given a reasonable opportunity to comment on all undertakings with the potential to affect historic properties.

**The Applicant has submitted this e-mail published by the Commonwealth of Virginia State Historic Preservation Officer showing No Adverse Effect on Historic Properties in APE.**

**From:** [towernotifyinfo@fcc.gov](mailto:towernotifyinfo@fcc.gov)  
**To:** [htabloff@aec-env.com](mailto:htabloff@aec-env.com)  
**Subject:** Section 106 Notification of SHPO/THPO Concurrence- Email ID #1840706  
**Date:** Friday, July 08, 2016 5:15:37 PM

This is to notify you that the Lead SHPO/THPO has concurred with the following filing:

Date of Action: 07/08/2016

Direct Effect: No Adverse Effect on Historic Properties in APE

Visual Effect: No Adverse Effect on Historic Properties in APE

Comment Text: We believe that the undertaking will have No Adverse Effect on historic properties listed in or eligible for the National Register of Historic Places, specifically the Salem Church Battlefield (088-5181) and the Fredericksburg II Battlefield (111-5296).

Chris Novelli

Virginia Department of Historic Resources

File Number: 0007303214

TCNS Number: 139000

Purpose: New Tower Submission Packet

Notification Date: 7AM EST 06/15/2016

Applicant: Eco-Site, Inc.

Consultant: Advantage Environmental Consultants, LLC

Positive Train Control Filing Subject to Expedited Treatment Under Program Comment: No

Site Name: VA-0003

Site Address: Adjacent to 3920 Plank Road

Detailed Description of Project:

Site Coordinates: 38-17-22.3 N, 77-31-33.7 W

City: Fredericksburg

County: SPOTSYLVANIA

State:VA

Lead SHPO/THPO: Virginia Department of Historic Resources

### NOTICE OF FRAUDULENT USE OF SYSTEM, ABUSE OF PASSWORD AND RELATED MISUSE

Use of the Section 106 system is intended to facilitate consultation under Section 106 of the National Historic Preservation Act and may contain information that is confidential, privileged or otherwise protected from disclosure under applicable laws. Any person having access to Section 106 information shall use it only for its intended purpose. Appropriate action will be taken with respect to any misuse of the system.

## **2.5 Results of NEPA Phase 1 and SHPO**

As mentioned above, the Environmental and Historic Consultant sees No Adverse Impact to the area if this Application is approved.

**The consultant concurs with this finding.**

## **2.6 Supporting Documentation**

This tower facility will be used for:

1. Voice Communications
2. Light Data such as Text and PDA activity (APPs)
3. Broadband (Full motion video, deep and wide “pipe” for downloading and uploading data, etc.) Tele-commuters will benefit.

The proposed tower is to support LTE Service delivery.

The standard for 4-G Service is -74dBm signal strength.

This signal strength is greater than  $-74 + 104 = 30$  dBm stronger signal.

This represents a 16.85 % gain or higher signal strength for this system to operate.

## **RF Analysis**

An independent RF analysis has been performed by this Consultant, which indicates that the Applicant will be able to meet their stated coverage objectives by co-location at 150-ft RAD center as proposed. Additionally, and as indicated, no proximal sites affording co-location potential and meeting the stated coverage goals are available.

A. Frequency Bands with 3 sets of antennas:

- a. 700 MHz : Voice
- b. 800 MHz : Light Data
- c. 1700 – 2100 MHz: Broadband

B. Strength Required for 4G:

- 74 dBm : Excellent
- 74 dBm to -82 dBm : Very good
- 82 dBm to -92 dBm : Good
- > -92 dBm : Poor and pixilation failure.

C. Signal Strength required for older 2/3G Service:

-104 dBm.

**LTE Service requires a higher Signal Strength.**

The Propagation maps are calculated at the following heights and "Penalties" associated with Coverage areas in relationship to the tower height:

<b>Tower/Antenna Center line Height - feet</b>	<b>Penalty or Reduction in Coverage- %</b>
<b>80' AGL</b>	<b>35-45 %</b>
<b>90' AGL</b>	<b>25-35 %</b>
<b>110' AGL</b>	<b>15-25 %</b>
<b>130' AGL</b>	<b>5- 15%</b>
<b>150' AGL</b>	<b>0 %</b>

**In summary, the new LTE service (Digital Broadband) requires antenna/tower placement in a closer proximity to the receiving and transmitting device.**

### **3.0 RECOMMENDATIONS**

This request for approval to construct a 150-ft monopole tower (with a 4-ft lightning rod) as proposed represents an appreciable intent on the part of the Applicant to conform to all applicable federal, state, and local regulations, accepted industry practices, and specific County ordinances regarding telecommunications towers.

It is therefore the recommendation of this Consultant that the request for issuance of a Special Use Permit be approved.

In closing, this consultant remains available to address any comments or questions which may arise following review of this report. Any interested party with such comments or questions may feel free to contact this firm, which remains committed to delivering independent, objective, unbiased, and thorough consulting services.

Respectfully submitted,



George N. Condyles, IV, CPM  
President & COO



## **FCC NEPA LAND USE SCREENING CHECKLIST**

**Eco-Site Site No. VA-0003  
0 Plank Road  
Fredericksburg, Virginia 22407**

Prepared for:

Network Building and Consulting, LLC  
6095 Marshalee Drive, Suite 300  
Elkridge, Maryland 21075

And

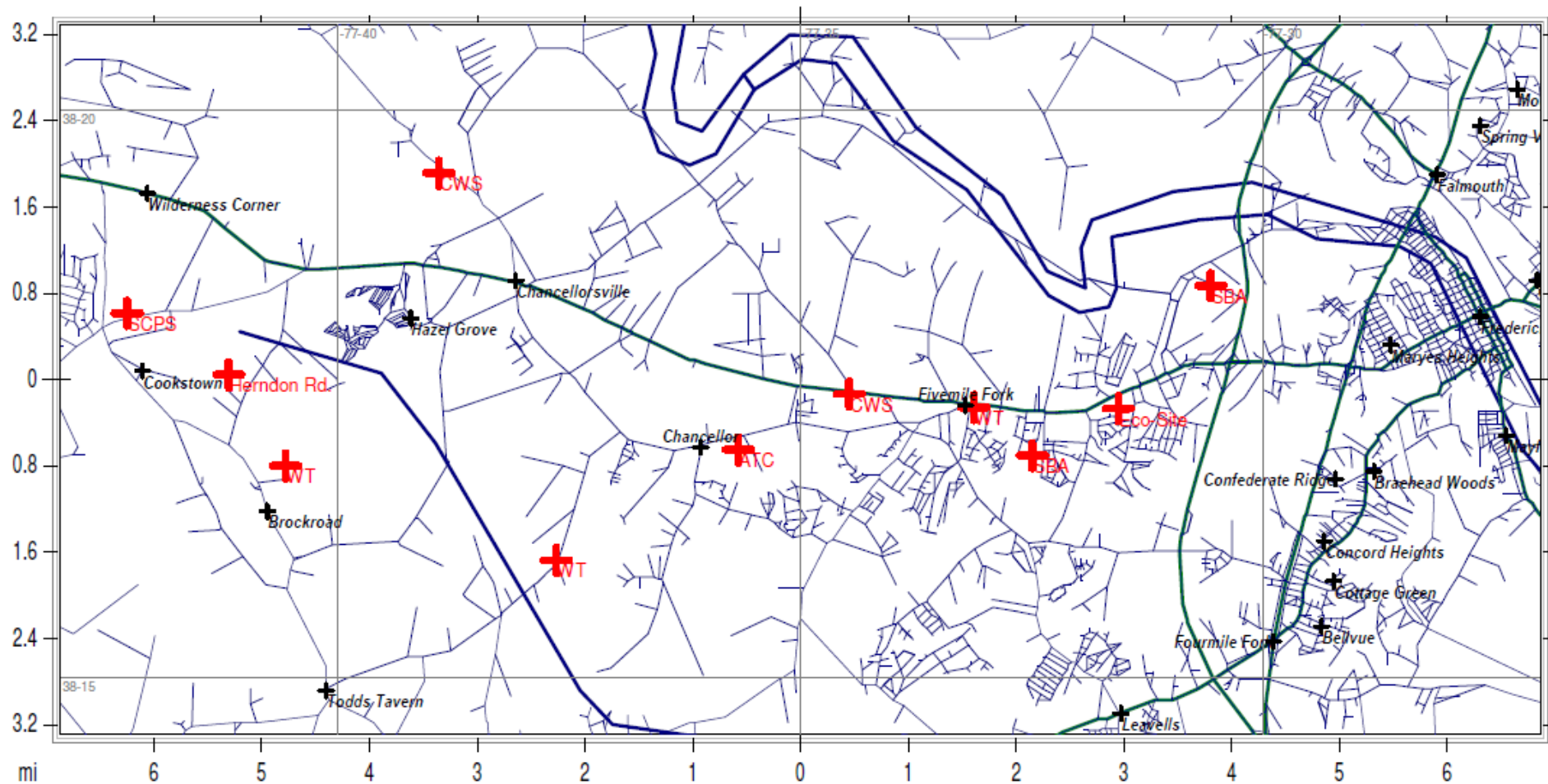
Eco-Site, Inc.  
240 Leigh Farm Road  
Suite 415  
Durham, North Carolina 27707

Prepared by:

Advantage Environmental Consultants, LLC  
8610 Washington Boulevard, Suite 217  
Jessup, Maryland 20794  
TEL (301) 776-0500 • FAX (301) 776-1123

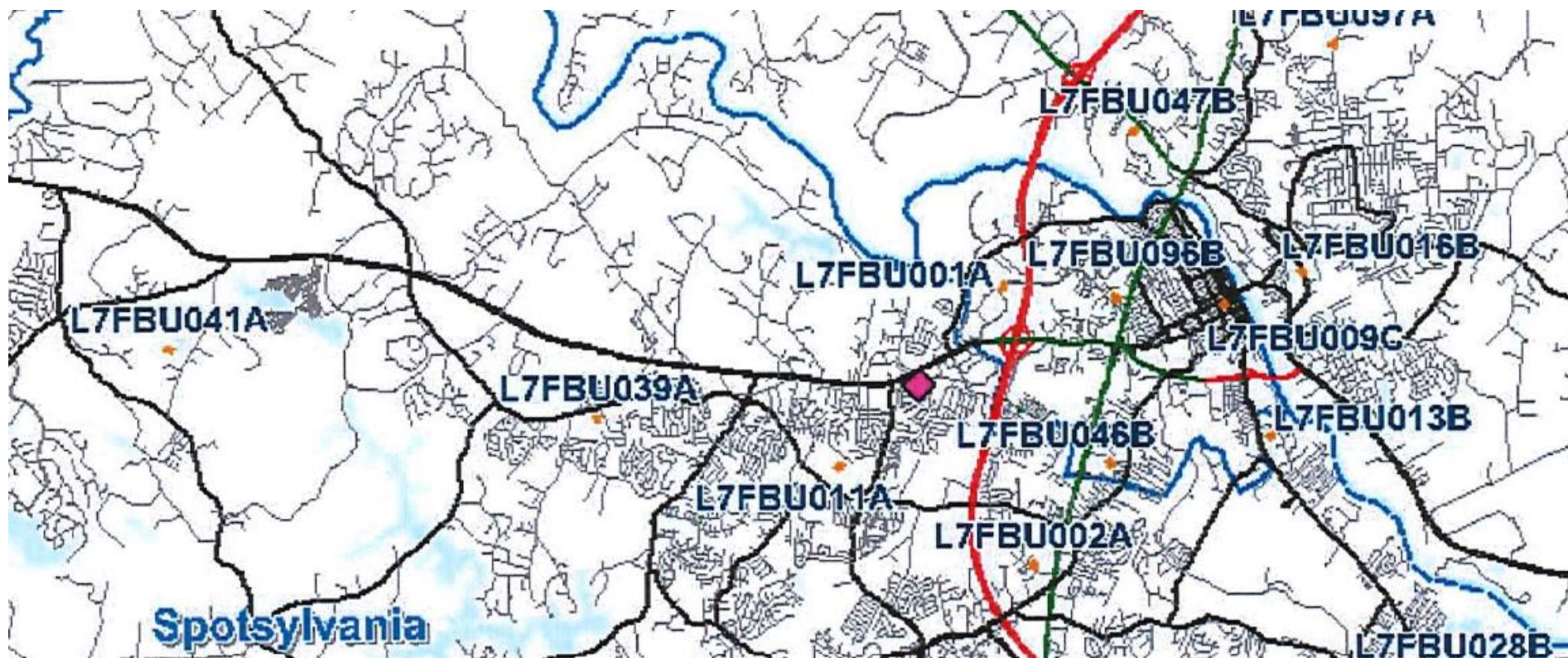
AEC Project No. NBC-Eco-002  
August 24, 2016

**Washington DC | Nashville TN | Richmond VA | Philadelphia PA | San Diego CA | Denver CO**



**Tower and Water Tank Sites in South/Central Spotsylvania County**

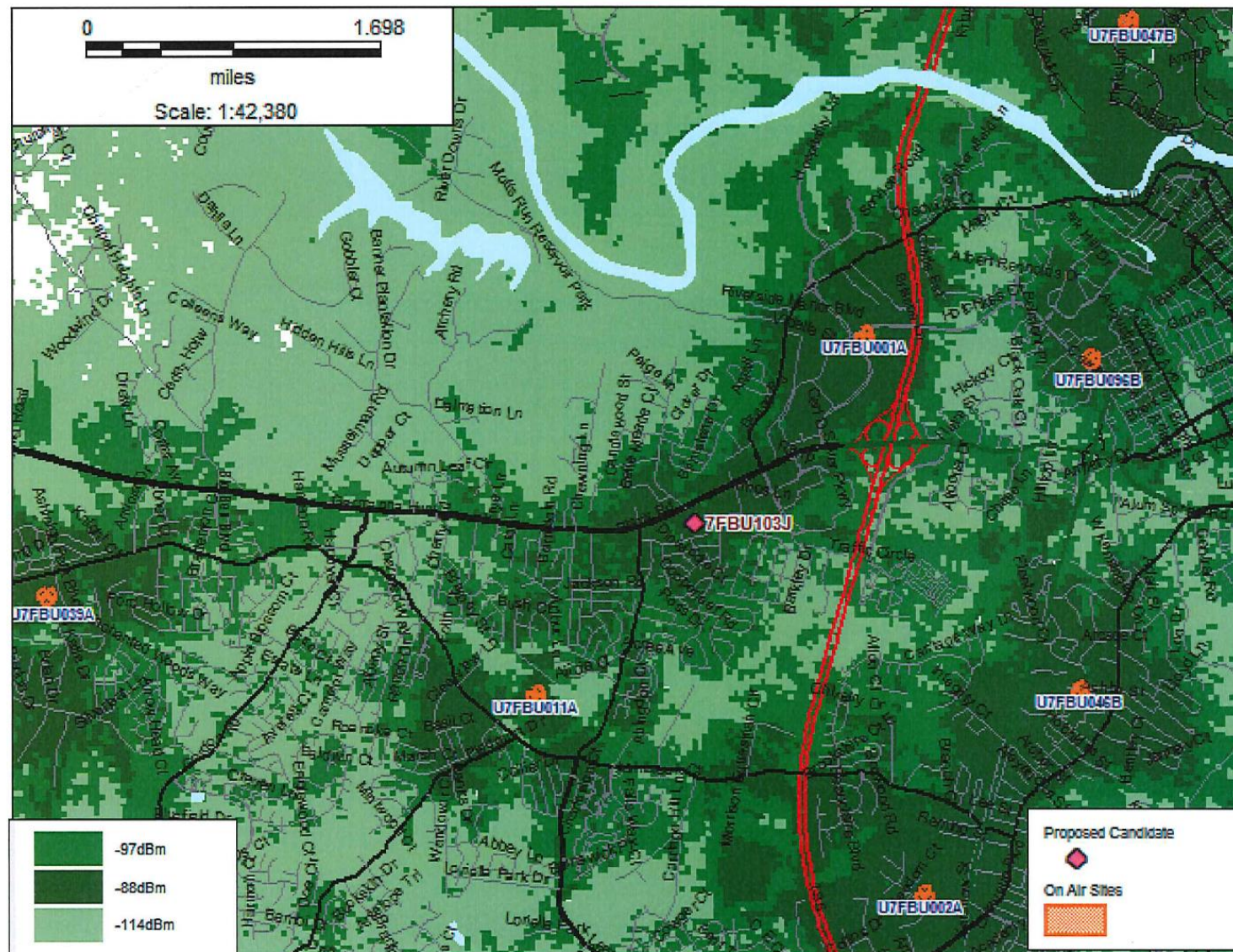




**T-Mobile Active and Proposed Sites in immediate area**

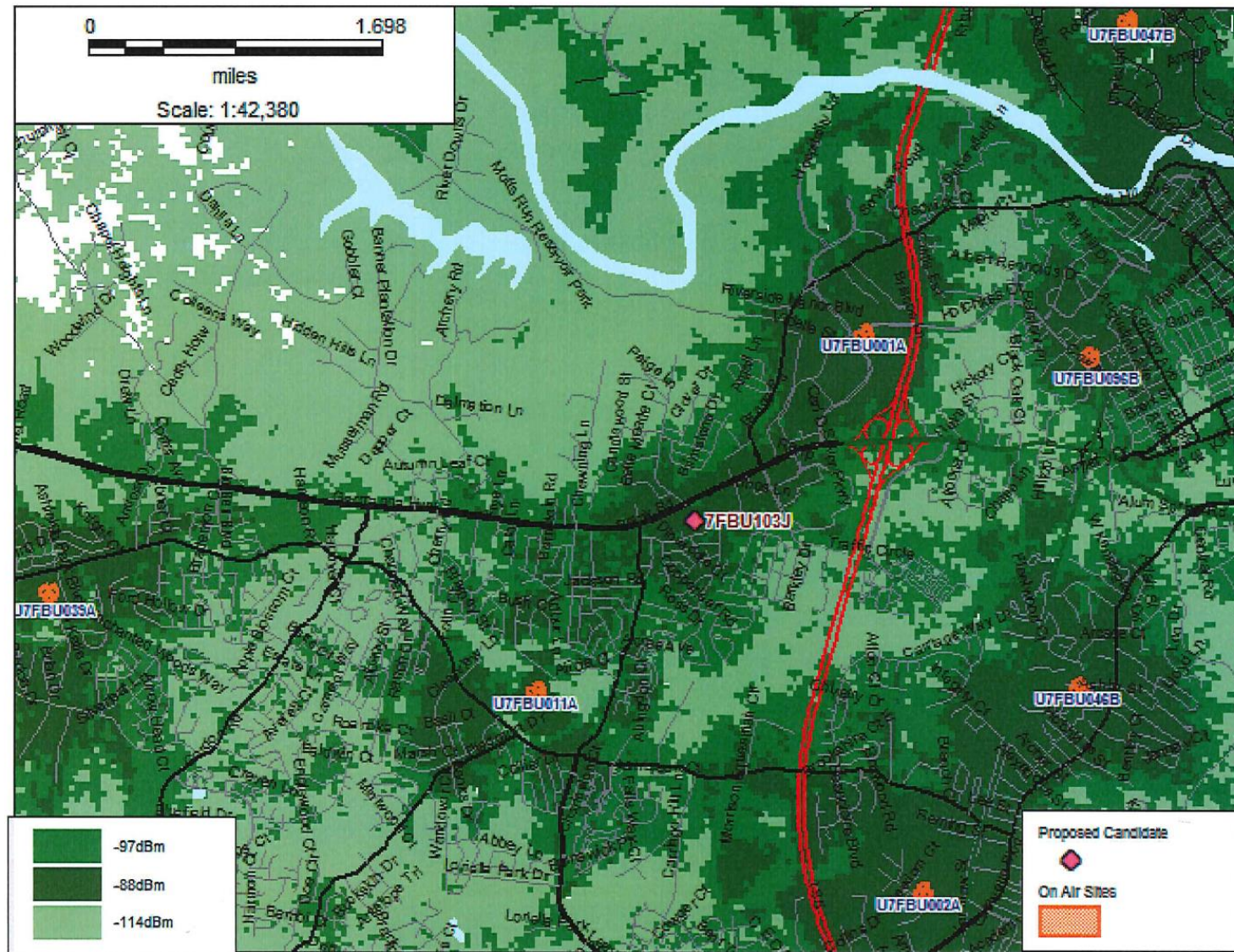


## Current on-air Sites with FBU103J @150



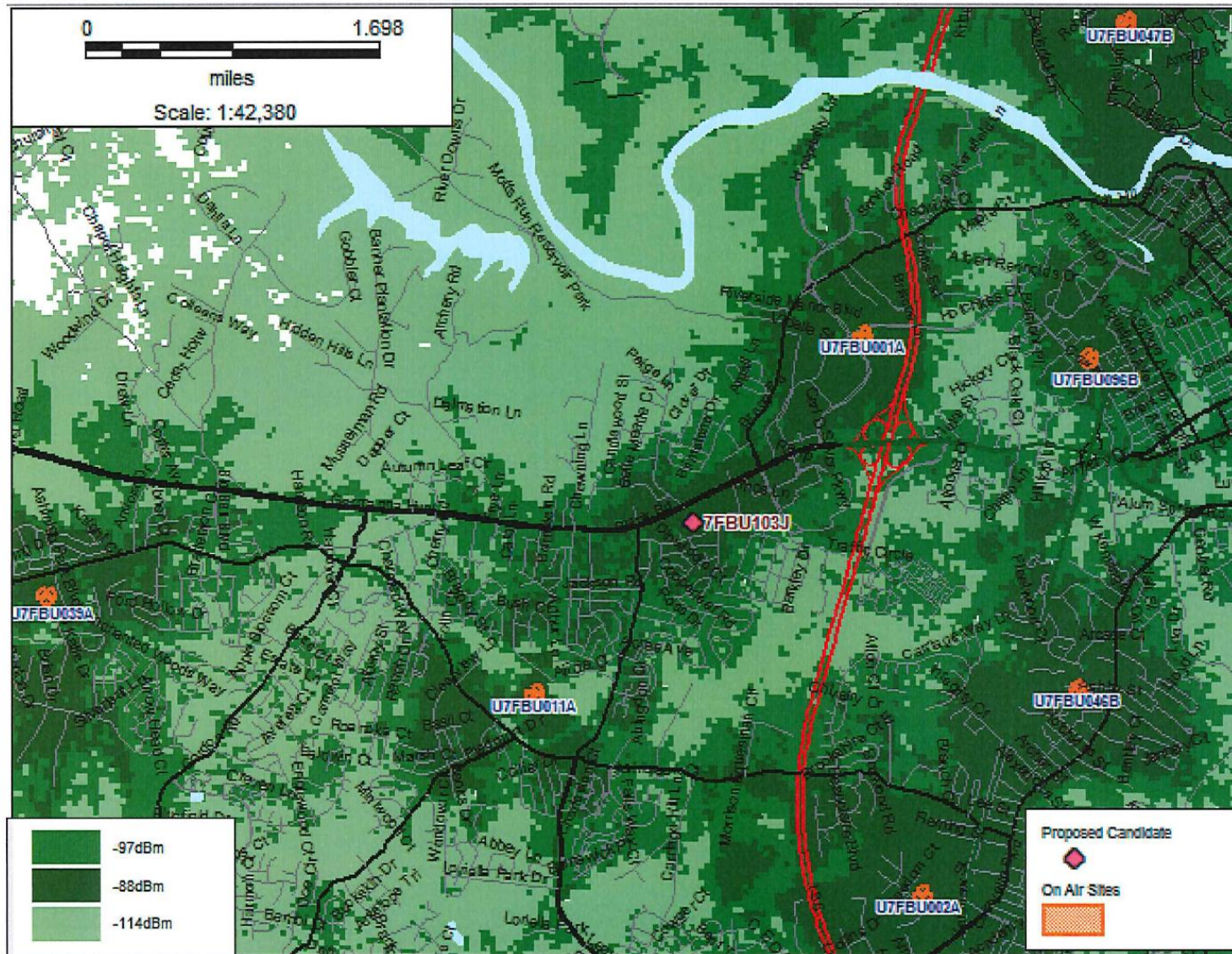


## Current on-air Sites with FBU103J @130



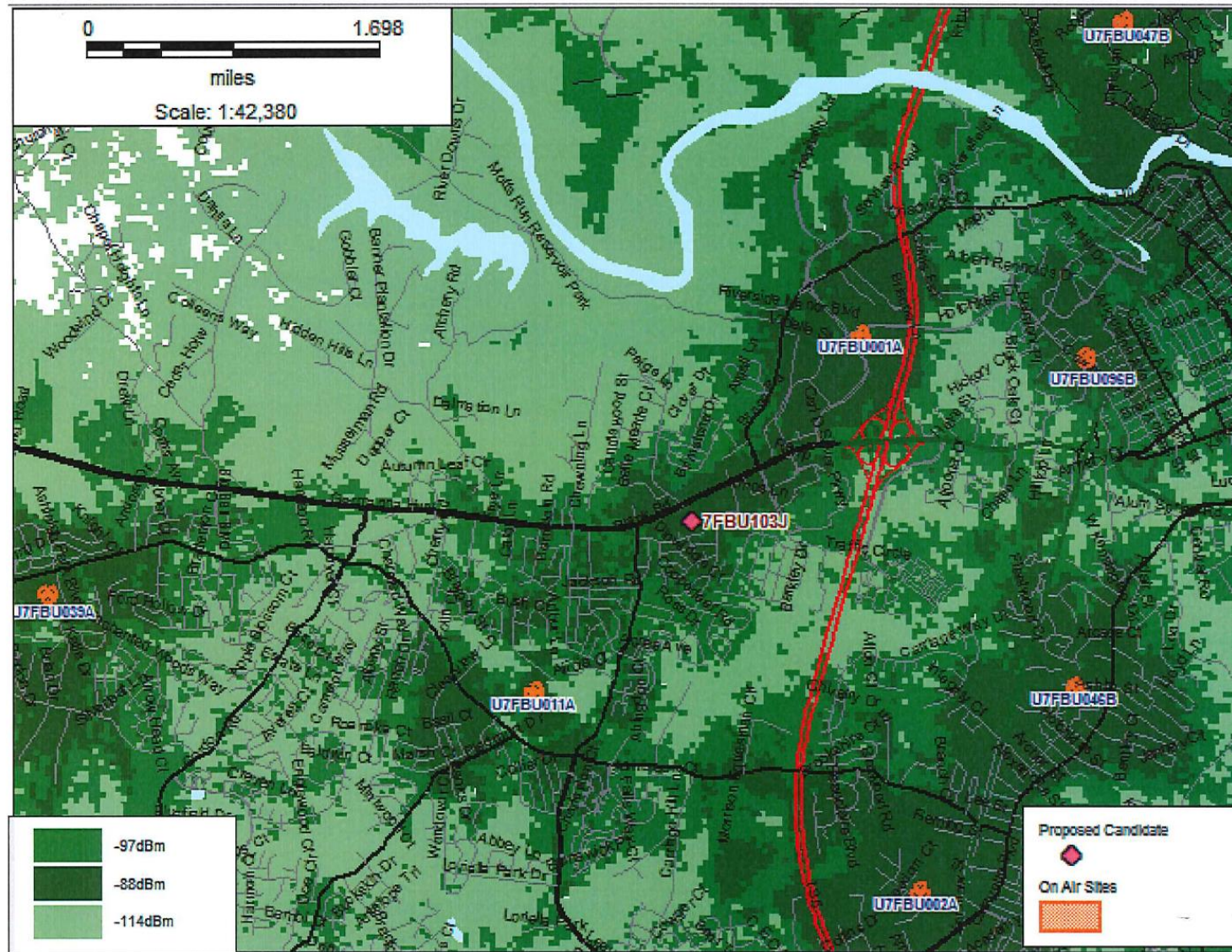


## Current on-air Sites with FBU103J @120



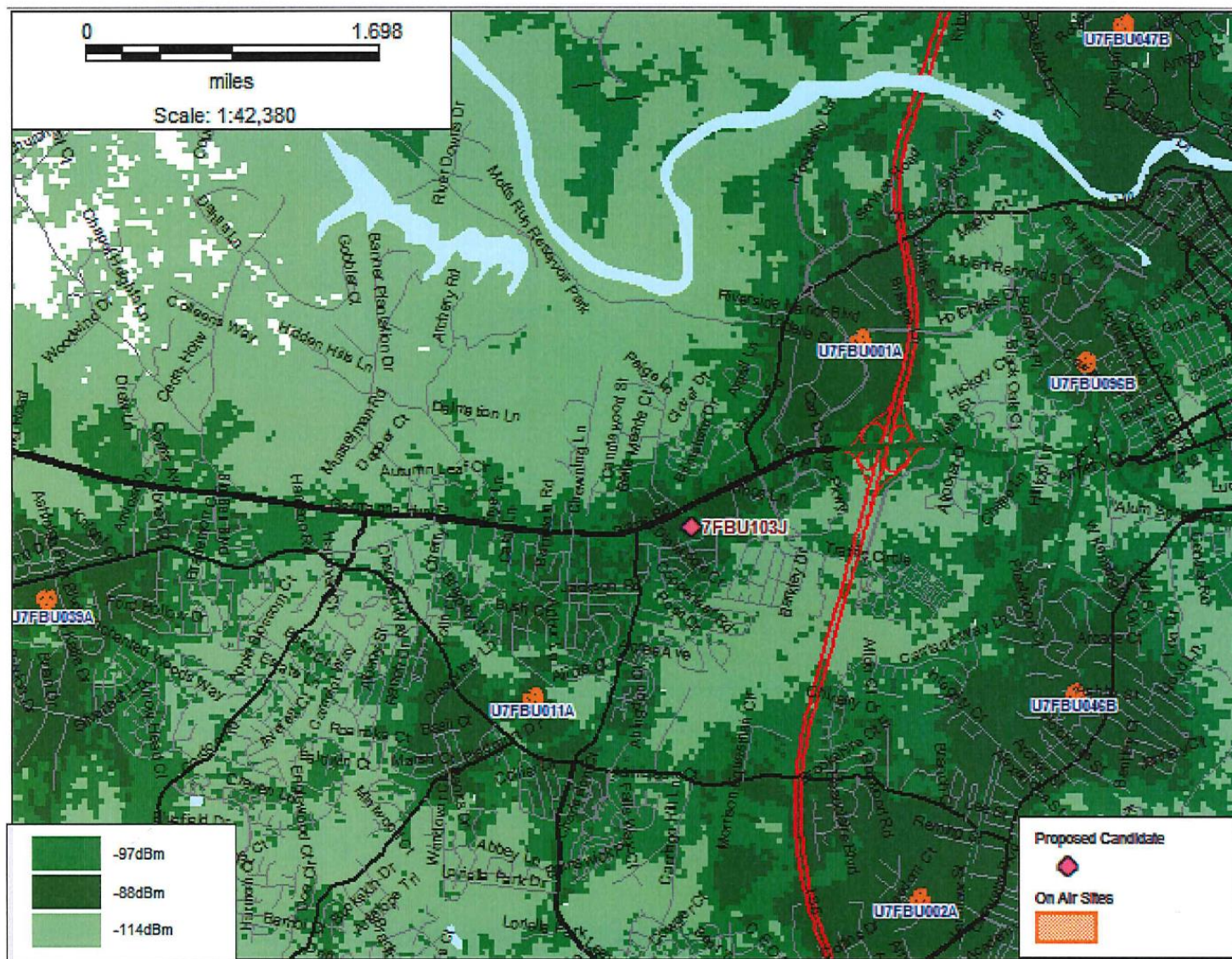


## Current on-air Sites with FBU103J @110



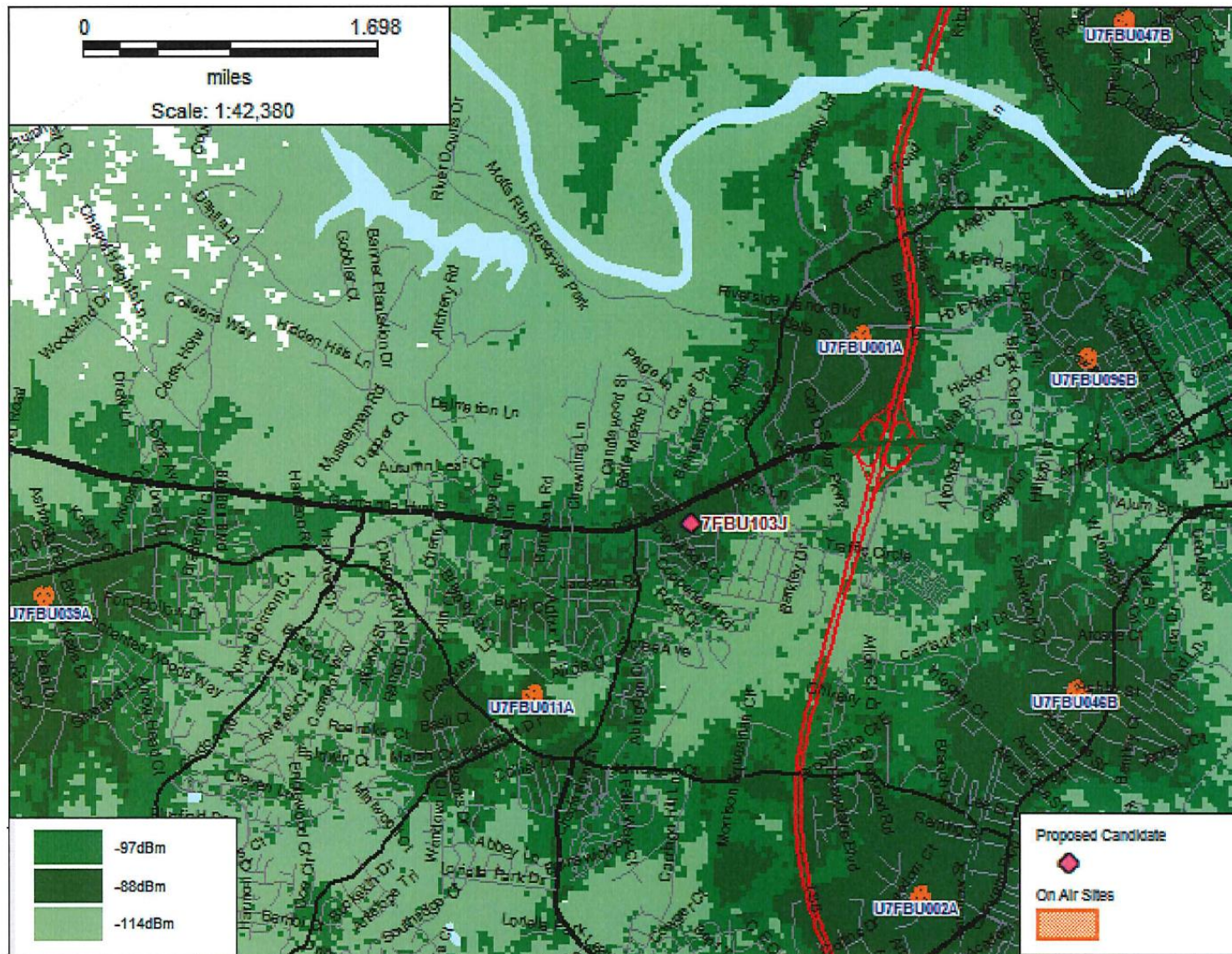


## Current on-air Sites with FBU103J @90



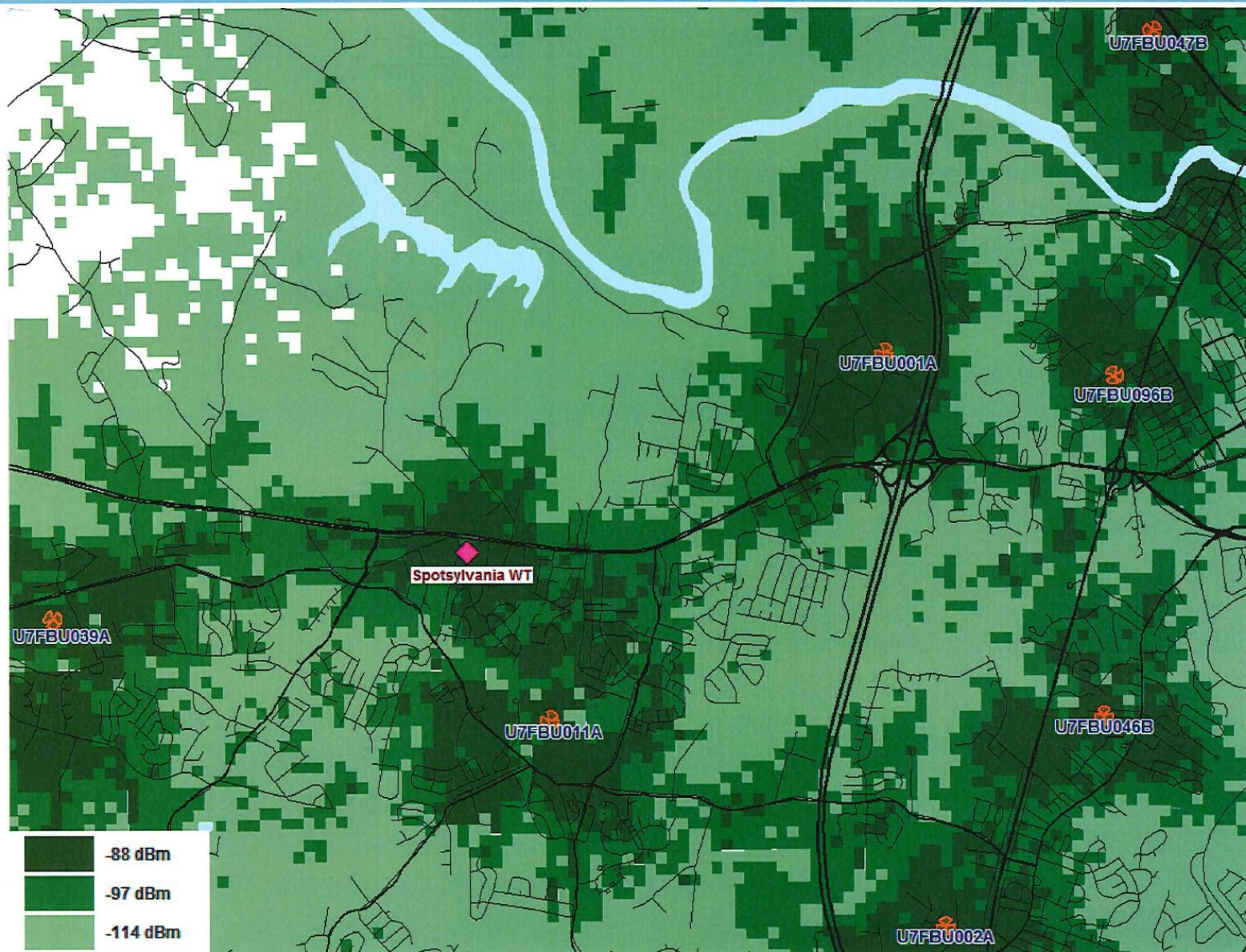


## Current on-air Sites with FBU103J @80





## Coverage plot with proposed Spotsylvania WT(80') Candidate





## Coverage plot with proposed VZ Tower (140') Candidate

