VARIANCE APPLICATION SYRACUSE BOARD OF ZONING APPEALS

PLEASE TYPE OR PRINT (LEGIBLY)

For Office Use Only: Application Number: V- 05 - 03M4
Tax map Section: 077. Block: 18 Lot: 06.3 Zoning District: BA

1. Address of subject property: 2648 S. Salina Street, Syracuse, NY 13205

2. Year property was purchased by current owner:

3. Applicant/contact information:

a. Owner(s) (current titleholder):

Name(s): Dunk & Bright Holdings

Mailing Address: 2648 S. Salina Street, Syracuse, NY

Zip: 13205 Daytime phone number: home phone number:

E-mail (alternate contact for additional information request):

b. Contract purchaser(s) ☐, Lessee ☐, or Co-applicant ☐ (if applicable)

***note: Copy of contract to purchase must be included with application if this contract purchaser or lessee applies.**

Name(s):

Mailing Address:

Zip: Home phone number: Day Phone:

E-mail (alternate contact for additional information request):

c. Representative: Attorney ☒, Architect ☐, Contractor ☐, Other ☐
(Only if involved in this application)

Name(s): Nixon Peabody LLP, Robert J. Brenner, Esq.

Mailing Address: 1300 Clinton Square, Rochester, NY

Zip: 14604 Telephone number: (585) 263-1035

4. Current use of property: (i.e., 1 family, 2 family, grocery store, etc.):
telecommunications tower

Proposed use and occupancy of property:
telecommunications tower

Current number of onsite (off-street) parking spaces: N/A

Proposed number of onsite (off-street) parking spaces: N/A

Days and hours of operation (**for any business uses**):

N/A

Explain in detail what (if any) new additions or construction is proposed on the site:

upgrade existing antenna arrays

Reason for request:

The courts have distinguished between use variances (for uses which are not permitted) and area variance (for excess lot coverage, additions into required yards, etc.). Be aware that ***the standards of proof for a use variance are much more demanding*** than for an area variance and that ***the burden is on the applicant*** to provide such proof in arguing their case. (See Standard of Proof requirements on required submittal page.)

Use additional sheets of paper to present proof if necessary.

Upgrade existing antenna arrays

The following affirmation must be signed and dated by the CURRENT PROPERTY OWNER or the owner's LEGAL representative (attorney, power of attorney, partner in the business, etc.).

DECLARATION

I understand that false statements made herein are **punishable as a Class A Misdemeanor, pursuant to section 210.45 of the Penal Law of the State of New York**. I declare that, subject to the penalties of perjury, any statements made on this application and any attachments are the truth and to the best of my knowledge correct.

I also understand that any false statements and/or attachments presented knowingly in connection with this application **will make consideration of this application null and void**.

Signature of CURRENT PROPERTY OWNER (or owner's LEGAL representative) — Date: 11/9/17

Robert J Brenner, Esq. Nixon Peabody LLP for Verizon Wireless

Printed or typed name of person whose signature is above (if legal representative, also state relationship to owner).

Heather Lamendola
Zoning Administrator

201 E. Washington St, Room 101
Syracuse, NY 13202

OFFICE OF ZONING ADMINISTRATION
Stephanie A. Miner, Mayor

REFERRAL COMMENTS

12/13/2017

Variance (Use): V-05-03 M4
Address: 2648 Salina St S & Brighton Av, Syracuse, 13205

Hearing Date: 1/4/2018

Request:
UPGRADING EXISTING ANTENNAS (VERIZON)

The departments and/or Boards below have reviewed the above application and provided the following comments for your information and action as appropriate.

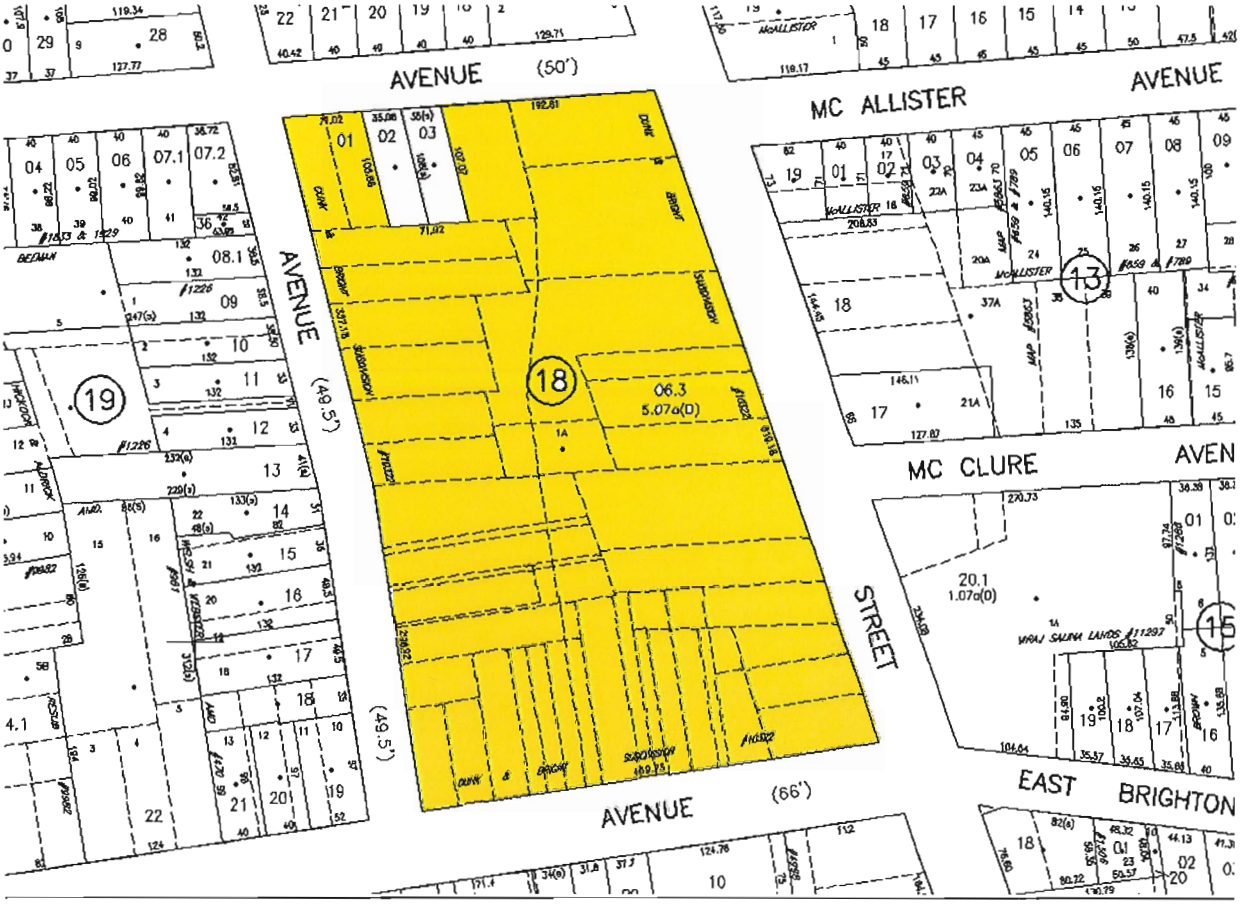
Approval	Status	Status Date	Reviewer	Comments
DPW Street Repair - Zoning	Internal Review Complete	12/04/2017	Richard DeMarzo	no concerns
DPW Commissioner - Zoning	Internal Review Complete	12/06/2017	Martin Davis	no issue
DPW Sewers - Zoning	Internal Review Complete	12/07/2017	Vinny Esposito	nay excavation will require utility locations
DPW Sidewalks - Zoning	Internal Review Complete	12/05/2017	Chris Ettinger	no concerns
Eng. Design & Cons. - Zoning	Pending	11/21/2017		No objections to proposed variance. Any future alterations shall be submitted to the City for review and approval prior to construction.
City Engineer - Zoning	Internal Review Complete	11/22/2017	Ray Wills	-City Engineer Defers comment to Mapping, Design and Construction and other reviewing Depts. -City Engineer deferment does not render permits for any work in the ROW (i.e. Street Cuts, Encroachments etc) unnecessary. Should the project require it, the permits must be obtained in advance of work commencing -Review and acceptance of Project Site Reviews, Special Permits or any of the like does not absolve the applicant from the responsibility of obtaining permits for work inside the ROW (ex Street Cuts, Curb Cuts, Encroachments, Sidewalk replacement, etc....) , or where applicable obtaining a SWPPP prior to work commencing. -THE CITY ENGINEER DEFERRAL APPLIES TO THIS REVIEW ONLY.
Eng. Mapping - Zoning	Internal Review Complete	11/21/2017	Ray Wills	-Work as shown should have no impact on Mapping Division assets.

DPW - Transportation Planner	Internal Review Complete	11/30/2017	Neil Milcarek-Burke	No major concerns.
DPW Traffic Control-Zoning	Internal Review Complete	12/01/2017	Jim French	no concerns
Water Engineering - Zoning	Pending	11/21/2017		

Tax Map

2648 South Salina Street

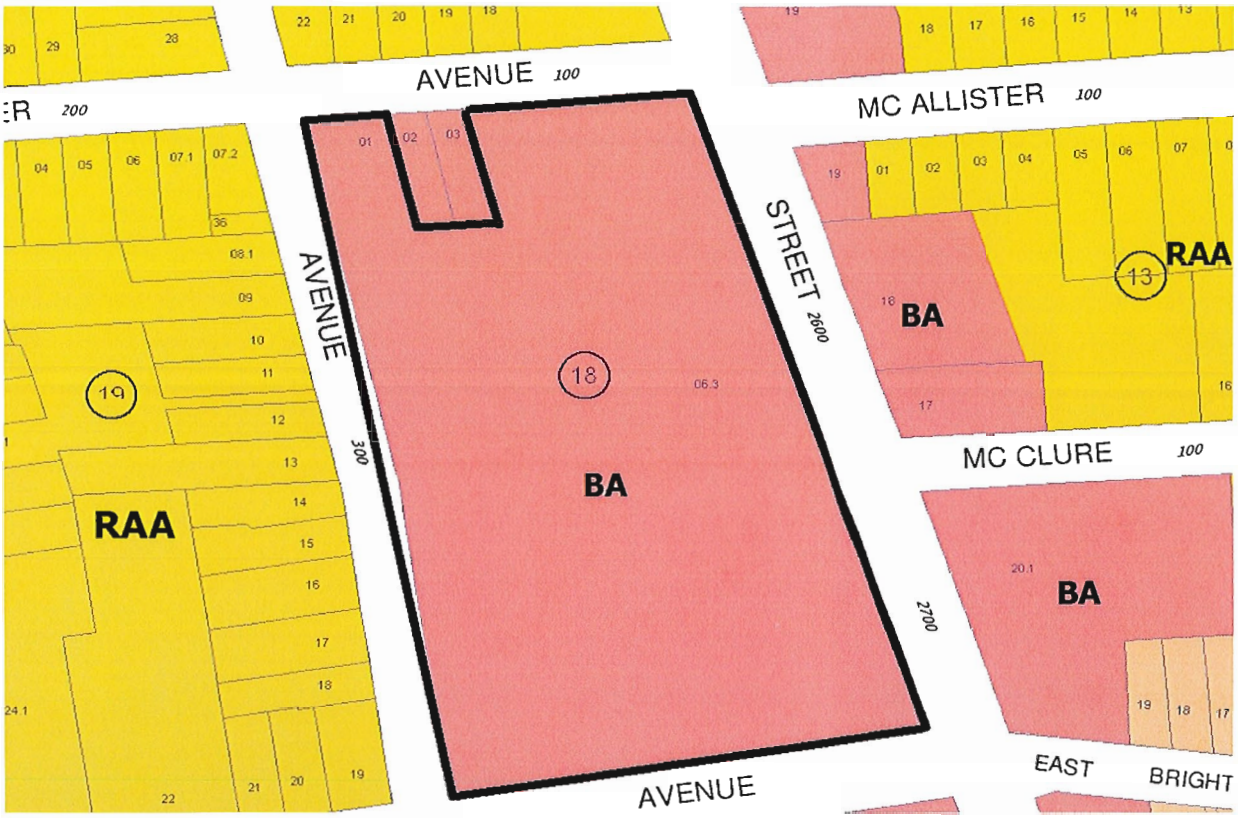
V-05-03M4

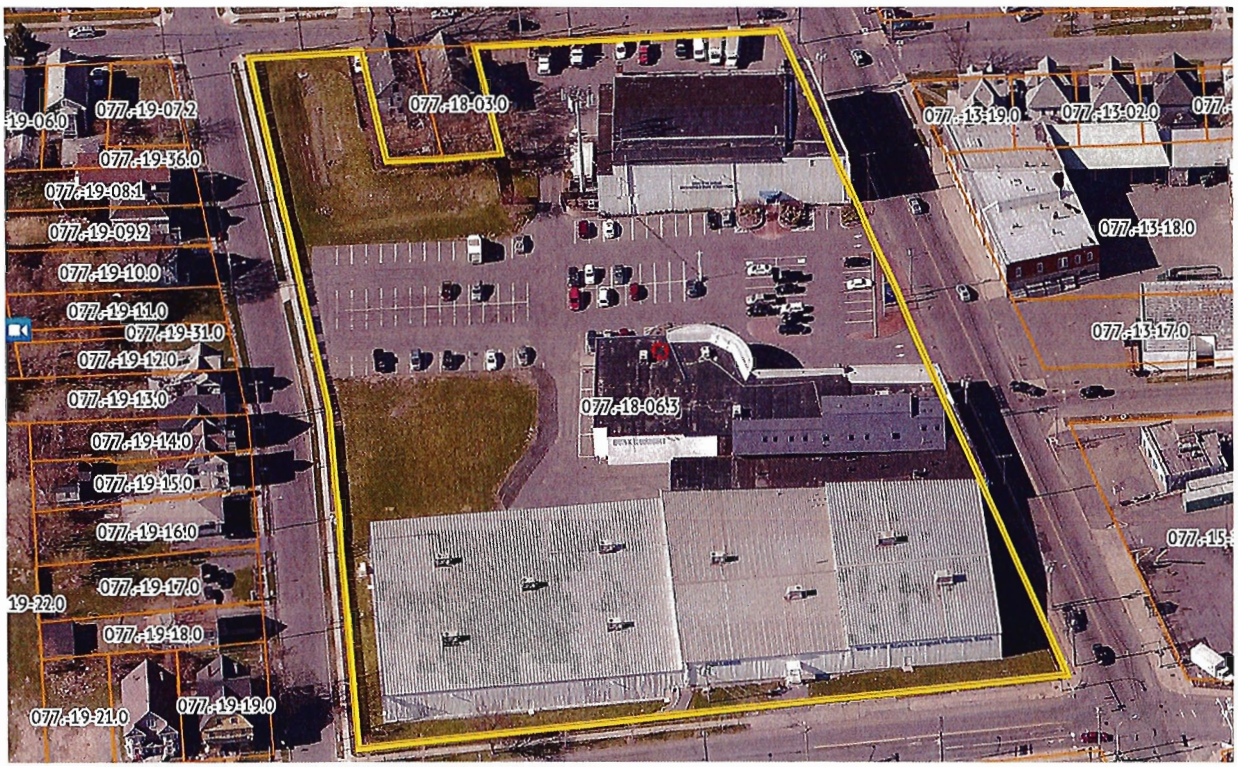


Zoning Map and Google Street

2648 South Salina Street

V-05-03M4

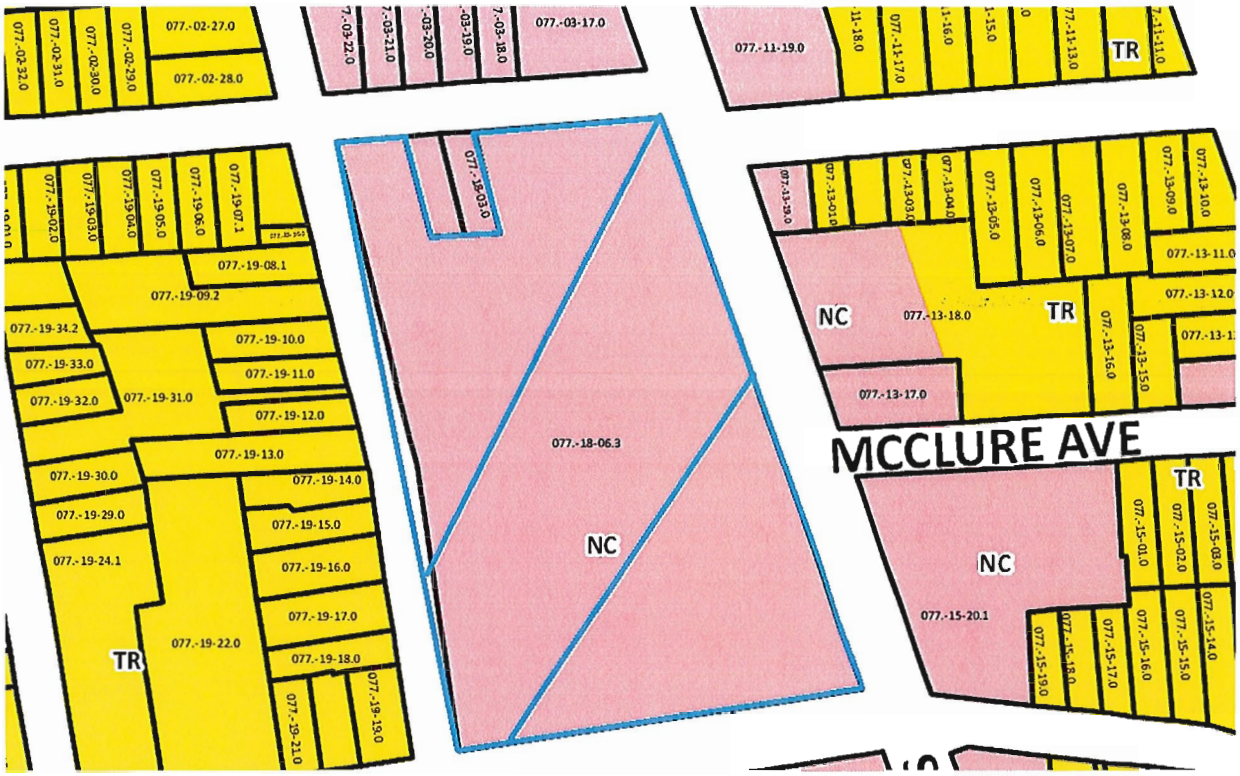




Character Area Map and Description

2648 South Salina Street

V-05-03M4



Neighborhood Center

These neighborhood-scale commercial centers were designed to serve pedestrians and so buildings were tightly packed together, built up to the sidewalk, and featured large storefront windows to entice shoppers—all of which are desirable characteristics in new development today and assets of these neighborhood centers that should be protected and expanded upon. Most buildings here are one-to-two stories tall, but some with residential or office uses above can be up to four stories tall. Uses here include retail, services, restaurants, office, and residential. Active uses should be located on the ground floor whenever possible. Large new buildings inserted into the streetscape should break up their sidewalk-facing façade with vertical articulation and windows to fit in with the smaller surrounding buildings and avoid visual monotony. Sidewalks should be wide enough to accommodate heavy pedestrian traffic and, in some locations, café seating. Occasionally detached housing is mixed into these centers, especially when they take the form of a corridor rather than a node, such as South Ave. and Butternut Circle. Residential building forms like this are not unusual in this character area, and they are often converted to commercial use with the addition of a storefront—a mix and match of forms and uses should be allowed here. (See the table following and the photos of the Northside Gallery and Recess coffee shop elsewhere in this plan, illustrations of converted residential buildings.)

DIVISION OF CODE ENFORCEMENT
201 E. WASHINGTON STREET — ROOM 101
SYRACUSE, NEW YORK 13202-1430

DENIAL OF PERMIT

REFERENCE ADDRESS 2648 S. Salina Street

WARD NO. _____

OWNER Dunk & Bright Holdings

OWNER'S ADDRESS 2648 South Salina Street
Syracuse, N.Y. 13205

TELEPHONE _____

APPLICATION FOR PERMIT TO:

erect ( ) convert ( ) maintain ( ) operate ( )

DENIED UNDER ARTICLE (s) B, III, 2 a C, I, 7

of the zoning ordinance for the following reasons: _____

☐ PLANS ATTACHED, APPROVED BY _____
ON _____

☐ SURVEY ATTACHED

☐ ZONING REVIEWED BY _____

LOCATION OF REFERENCE ADDRESS:
ASSESSOR'S ATLAS

BOOK (S) NO. _____

PLATE (S) NO. _____

PARCEL (S) NO. _____

DATE Dec. 12, 2017 SIGNATURE Gail L. Swistak

617.20
Appendix B
Short Environmental Assessment Form

Instructions for Completing

Part 1 - Project Information. The applicant or project sponsor is responsible for the completion of Part 1. Responses become part of the application for approval or funding, are subject to public review, and may be subject to further verification. Complete Part 1 based on information currently available. If additional research or investigation would be needed to fully respond to any item, please answer as thoroughly as possible based on current information.

Complete all items in Part 1. You may also provide any additional information which you believe will be needed by or useful to the lead agency; attach additional pages as necessary to supplement any item.

Part 1 - Project and Sponsor Information

Bell Atlantic Mobile Systems of Allentown, Inc. d/b/a Verizon Wireless

Name of Action or Project:
Verizon Wireless Site: South Salina

Project Location (describe, and attach a location map):
2648 South Salina Street Syracuse, NY 13205 (City of Syracuse, Onondaga County)

Brief Description of Proposed Action:
Bell Atlantic Mobile Systems of Allentown, Inc. d/b/a Verizon Wireless (Verizon Wireless as the applicant) proposes the replacement of antennas and RRH units on the existing monopole at the above referenced site.

The project includes the replacement of six (6) existing antennas (2 per sector, total of 6) with six (6) proposed antennas (2 per sector, total of 6) and the replacement of three (3) existing RRH units (1 per sector, total of3) with six (6) proposed RRH units (2 per sector, total of 6) to be mounted to the existing booms (typ. 3) on the existing monopole. The existing antennas are located at a centerline elevation of 76'0" above ground level.

Name of Applicant or Sponsor:	Telephone: 315-373-3040
Bell Atlantic Mobile Systems of Allentown, Inc. d/b/a Verizon Wireless	E-Mail: rmccabe@pyramidns.com

Address:
1275 John Street, Suite 100

City/PO:	State:	Zip Code:
West Henrietta	NY	14586

	NO	YES
1. Does the proposed action only involve the legislative adoption of a plan, local law, ordinance, administrative rule, or regulation? If Yes, attach a narrative description of the intent of the proposed action and the environmental resources that may be affected in the municipality and proceed to Part 2. If no, continue to question 2.	☑	☐
2. Does the proposed action require a permit, approval or funding from any other governmental Agency? If Yes, list agency(s) name and permit or approval:	☑	☐

3.a. Total acreage of the site of the proposed action? 0.018 acres
b. Total acreage to be physically disturbed? 0.0 acres
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor? 0.018 acres

4. Check all land uses that occur on, adjoining and near the proposed action.
☑ Urban ☐ Rural (non-agriculture) ☐ Industrial ☑ Commercial ☐ Residential (suburban)
☐ Forest ☐ Agriculture ☐ Aquatic ☐ Other (specify): _____
☐ Parkland

RESET

	NO	YES	N/A
5. Is the proposed action,			
a. A permitted use under the zoning regulations?	☐	☑	☐
b. Consistent with the adopted comprehensive plan?	☐	☑	☐
6. Is the proposed action consistent with the predominant character of the existing built or natural landscape?	NO	YES	
	☐	☑	
7. Is the site of the proposed action located in, or does it adjoin, a state listed Critical Environmental Area?	NO	YES	
If Yes, identify: _____	☑	☐	
8. a. Will the proposed action result in a substantial increase in traffic above present levels?	NO	YES	
	☑	☐	
b. Are public transportation service(s) available at or near the site of the proposed action?	☐	☑	
c. Are any pedestrian accommodations or bicycle routes available on or near site of the proposed action?	☐	☑	
9. Does the proposed action meet or exceed the state energy code requirements?	NO	YES	
If the proposed action will exceed requirements, describe design features and technologies:	☐	☑	
10. Will the proposed action connect to an existing public/private water supply?	NO	YES	
If No, describe method for providing potable water: _____	☑	☐	
11. Will the proposed action connect to existing wastewater utilities?	NO	YES	
If No, describe method for providing wastewater treatment: _____	☑	☐	
12. a. Does the site contain a structure that is listed on either the State or National Register of Historic Places?	NO	YES	
	☑	☐	
b. Is the proposed action located in an archeological sensitive area?	☑	☐	
13. a. Does any portion of the site of the proposed action, or lands adjoining the proposed action, contain wetlands or other waterbodies regulated by a federal, state or local agency?	NO	YES	
	☑	☐	
b. Would the proposed action physically alter, or encroach into, any existing wetland or waterbody?	☑	☐	
If Yes, identify the wetland or waterbody and extent of alterations in square feet or acres: _____			
14. Identify the typical habitat types that occur on, or are likely to be found on the project site. Check all that apply:			
☐ Shoreline ☐ Forest ☐ Agricultural/grasslands ☐ Early mid-successional			
☐ Wetland ☑ Urban ☐ Suburban			
15. Does the site of the proposed action contain any species of animal, or associated habitats, listed by the State or Federal government as threatened or endangered?	NO	YES	
No ground based improvements are associated with this project.	☐	☑	
16. Is the project site located in the 100 year flood plain?	NO	YES	
	☑	☐	
17. Will the proposed action create storm water discharge, either from point or non-point sources?	NO	YES	
If Yes,			
a. Will storm water discharges flow to adjacent properties? ☐ NO ☐ YES	☑	☐	
b. Will storm water discharges be directed to established conveyance systems (runoff and storm drains)?			
If Yes, briefly describe: ☐ NO ☐ YES			

RESET

	NO	YES
18. Does the proposed action include construction or other activities that result in the impoundment of water or other liquids (e.g. retention pond, waste lagoon, dam)? If Yes, explain purpose and size:	☑	☐
19. Has the site of the proposed action or an adjoining property been the location of an active or closed solid waste management facility? If Yes, describe:	☑	☐
20. Has the site of the proposed action or an adjoining property been the subject of remediation (ongoing or completed) for hazardous waste? If Yes, describe:	☑	☐

I AFFIRM THAT THE INFORMATION PROVIDED ABOVE IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE

Applicant/sponsor name: C&S Engineers for Verizon Wireless Date: 7/28/17

Signature:

Part 2 - Impact Assessment. The Lead Agency is responsible for the completion of Part 2. Answer all of the following questions in Part 2 using the information contained in Part 1 and other materials submitted by the project sponsor or otherwise available to the reviewer. When answering the questions the reviewer should be guided by the concept "Have my responses been reasonable considering the scale and context of the proposed action?"

	No, or small impact may occur	Moderate to large impact may occur
1. Will the proposed action create a material conflict with an adopted land use plan or zoning regulations?	☐	☐
2. Will the proposed action result in a change in the use or intensity of use of land?	☐	☐
3. Will the proposed action impair the character or quality of the existing community?	☐	☐
4. Will the proposed action have an impact on the environmental characteristics that caused the establishment of a Critical Environmental Area (CEA)?	☐	☐
5. Will the proposed action result in an adverse change in the existing level of traffic or affect existing infrastructure for mass transit, biking or walkway?	☐	☐
6. Will the proposed action cause an increase in the use of energy and it fails to incorporate reasonably available energy conservation or renewable energy opportunities?	☐	☐
7. Will the proposed action impact existing: a. public / private water supplies?	☐	☐
b. public / private wastewater treatment utilities?	☐	☐
8. Will the proposed action impair the character or quality of important historic, archaeological, architectural or aesthetic resources?	☐	☐
9. Will the proposed action result in an adverse change to natural resources (e.g., wetlands, waterbodies, groundwater, air quality, flora and fauna)?	☐	☐

RESET

	No, or small impact may occur	Moderate to large impact may occur
10. Will the proposed action result in an increase in the potential for erosion, flooding or drainage problems?	☐	☐
11. Will the proposed action create a hazard to environmental resources or human health?	☐	☐

Part 3 - Determination of significance. The Lead Agency is responsible for the completion of Part 3. For every question in Part 2 that was answered "moderate to large impact may occur", or if there is a need to explain why a particular element of the proposed action may or will not result in a significant adverse environmental impact, please complete Part 3. Part 3 should, in sufficient detail, identify the impact, including any measures or design elements that have been included by the project sponsor to avoid or reduce impacts. Part 3 should also explain how the lead agency determined that the impact may or will not be significant. Each potential impact should be assessed considering its setting, probability of occurring, duration, irreversibility, geographic scope and magnitude. Also consider the potential for short-term, long-term and cumulative impacts.

☐ Check this box if you have determined, based on the information and analysis above, and any supporting documentation, that the proposed action may result in one or more potentially large or significant adverse impacts and an environmental impact statement is required.

☐ Check this box if you have determined, based on the information and analysis above, and any supporting documentation, that the proposed action will not result in any significant adverse environmental impacts.

Name of Lead Agency	Date
Print or Type Name of Responsible Officer in Lead Agency	Title of Responsible Officer
Signature of Responsible Officer in Lead Agency	Signature of Preparer (if different from Responsible Officer)

PRINT

RESET

NIXON PEABODY

NIXON PEABODY LLP
ATTORNEYS AT LAW

NIXONPEABODY.COM
@NIXONPEABODYLLP

Robert J. Brenner
Associate
T 585-263-1035
rbrenner@nixonpeabody.com

1300 Clinton Square
Rochester, NY 14604-1792
585-263-1000

November 13, 2017

VIA FEDERAL EXPRESS

Zoning Board of Appeals
City of Syracuse
201 East Washington Street, Room 211
Syracuse, New York 13202

RE: Application by Bell Atlantic Mobile Systems of Allentown, Inc. d/b/a Verizon Wireless for a use variance from the City of Syracuse Zoning Board of Appeals to perform an antenna upgrade on an existing wireless telecommunications facility located at 2648 S. Salina Street, City of Syracuse, New York (Verizon Wireless' "South Salina" Cell Site)

Dear Members of the Zoning Board of Appeals:

Bell Atlantic Mobile Systems of Allentown, Inc. d/b/a Verizon Wireless ("Verizon Wireless"), is a public utility and wireless telecommunications licensee of the Federal Communications Commission ("FCC"). To provide reliable wireless telecommunications service around the neighborhoods and along the surrounding roadways along I-81 and US Route 11 (South Salina Street, and areas west to Onondaga Creek) and the surrounding area in the City of Syracuse (the "City"), Verizon Wireless proposes to upgrade its existing antenna arrays on the existing tower (the "Project") located at 2648 S. Salina Street, in the City of Syracuse, New York, having a Tax Account No. 77-18-22.1 (the "Site").

Per City staff's request, enclosed is a check in the amount of $25.00 for the use variance fee, together with a completed copy of the City's use variance application form.

These materials are intended to supplement those previously submitted to the City for the Project.

Please let us know if you have any questions or need any additional information. Otherwise, we respectfully request this application be placed on the Zoning Board of Appeals' next meeting agenda.

Very truly yours,

Robert J. Brenner

Enclosures
RJB/mg

NIXON PEABODY

NIXON PEABODY LLP
ATTORNEYS AT LAW

NIXONPEABODY.COM
@NIXONPEABODYLLP

Robert J. Brenner
Associate
T 585-263-1035
rbrenner@nixonpeabody.com

Nixon Peabody LLP
1300 Clinton Square
Rochester, NY 14604-1792
585-263-1000

September 20, 2017

VIA FEDERAL EXPRESS

Planning Commission
City of Syracuse
201 East Washington Street, Room 211
Syracuse, New York 13202

RE: Application by Bell Atlantic Mobile Systems of Allentown, Inc. d/b/a Verizon Wireless for site plan approval from the City of Syracuse Planning Commission to perform an antenna upgrade on an existing wireless telecommunications facility located at 2648 S. Salina Street, City of Syracuse, New York (Verizon Wireless' "South Salina" Cell Site)

Dear Members of the Planning Commission:

Bell Atlantic Mobile Systems of Allentown, Inc. d/b/a Verizon Wireless ("Verizon Wireless"), is a public utility and wireless telecommunications licensee of the Federal Communications Commission ("FCC"). To provide reliable wireless telecommunications service around the neighborhoods and along the surrounding roadways along I-81 and US Route 11 (South Salina Street, and areas west to Onondaga Creek) and the surrounding area in the City of Syracuse (the "City"), Verizon Wireless proposes to upgrade its existing antenna arrays on the existing tower (the "Project") located at 2648 S. Salina Street, in the City of Syracuse, New York, having a Tax Account No. 77-18-06.3 (the "Site").

The Project will consist of the replacement of six (6) existing antennas with six (6) proposed antennas and the replacement of three (3) RRH units with six (6) proposed RRH units on the existing 80' monopole, together with other site improvements (the "Project"), all as shown on the enclosed site plan prepared by C&S Engineers, Inc.

Accordingly, please accept this letter with the following exhibits and enclosures as Verizon Wireless' application for site plan approval for the upgrade described in this application:

Exhibit A: Completed City-supplied application form;

Exhibit B: Project description;

Exhibit C: Applicable legal standards;

Exhibit D: Radio frequency analysis with propagation studies;

Exhibit E: Short environmental assessment form ("EAF") with visual addendum;

Exhibit F: Structural analysis report;

Exhibit G: Proof of compliance with applicable federal regulations;

Exhibit H: 11" x 17" copy of the Project site plan; and

Exhibit I: Verizon Wireless' FCC Licenses.

- Three (3) copies of this application book.

Because the Project is within 500' of a State or County resource (here, I-81 and US Route 11), this application must be referred to the Onondaga County Planning Department pursuant to New York General Municipal Law § 239-m. An extra copy of the application materials have been included for that purpose.

Please let us know if you have any questions or need any additional information. Otherwise, we respectfully request this application be placed on the Planning Commission's October 16, 2017 meeting agenda.

Very truly yours,

Robert J. Brenner

Enclosures
RJB/las

EXHIBIT B

PROJECT DESCRIPTION

APPLICATION FOR APPROVAL TO UPGRADE AN EXISTING WIRELESS TELECOMMUNICATIONS FACILITY ON THE EXISTING TOWER LOCATED AT 2648 S. SALINA STREET IN THE CITY OF SYRACUSE, NEW YORK.

Bell Atlantic Mobile Systems of Allentown, Inc. d/b/a Verizon Wireless ("Verizon Wireless") is a public utility licensed and regulated by the Federal Communications Commission. It is charged with the responsibility of providing reliable wireless telecommunications service in various parts of New York State, including the South Salina Street area located in the City of Syracuse. Verizon Wireless makes this application to upgrade its facilities on the existing tower in the City of Syracuse, located at 2648 S. Salina Street (Tax Parcel No. 083.-09-05.0) (the "Site"), in order to fulfill its obligation to provide reliable wireless telecommunications service to emergency services, businesses, and individuals in the South Salina cell.

1. Overview of Wireless Telecommunication Technology and this Project

Wireless telecommunication use has burgeoned since the technology was introduced in the mid-1980s. There are currently more than 255 million wireless communication users in the United States. Wireless technology provides a critical link for emergency services, such as ambulances, which use this service to transmit vital signs and medical information via medical telemetry. Increasingly, police forces are relying on wireless telecommunications to communicate with dispatch and receive calls for assistance. Additionally, many businesses heavily rely on wireless telecommunications, and individuals use them not only for their convenience, but for safety reasons as well.

Essentially, wireless telecommunication devices operate by transmitting a very low power radio signal between the wireless device and an antenna mounted on a tower, pole, building or other structure. The antenna feeds the signal to electronic apparatus housed in a small equipment building near the antenna, where it is connected to the landline system, and is

then routed anywhere in the world. The antenna and equipment building are known as a "cell site."

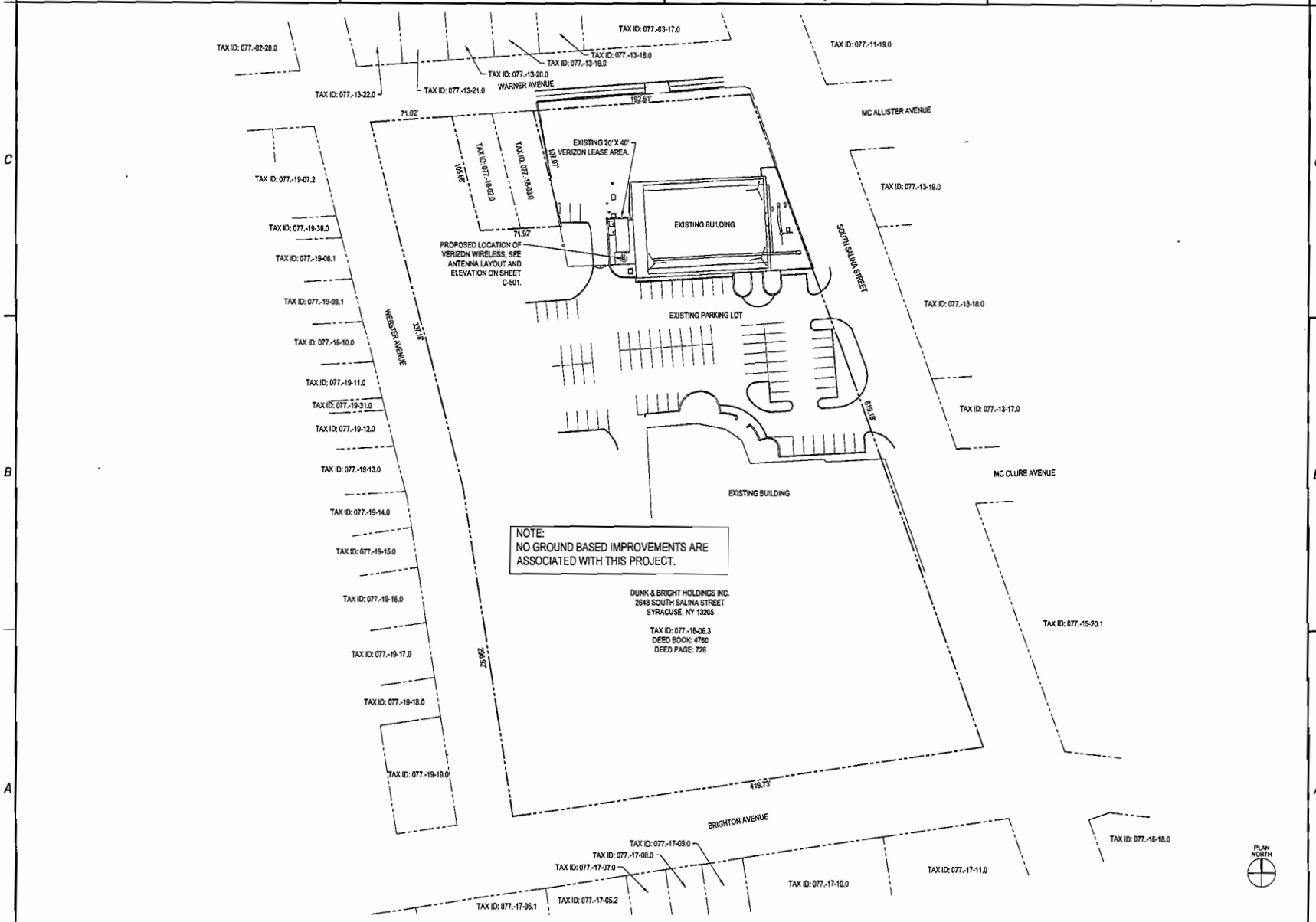
This equipment must be upgraded periodically to ensure that the cell site is operating as intended.

The Project consists of the replacement of six (6) existing antennas with six (6) proposed antennas and the replacement of three (3) RRH units with six (6) proposed RRH units on the existing 80' monopole, together with other site improvements (the "Project"), all as shown on the enclosed site plan prepared by C&S Engineers, Inc.

2. Required Municipal Approvals

Under the City of Syracuse Zoning Ordinance (the "Zoning Code"), the proposed Project appears to be permitted as of right. (Zoning Code § C-1-7). However, based on the project information request letter enclosed as Exhibit B, the City has concluded that site plan approval is required for the proposed Project.

The Project will not pollute, will not create noise or vibration, will not create any significant increase in traffic, will not create any environmental problems, will not increase population density, and will not create any demand on governmental facilities. Thus, the Project will not create any detriment to adjoining properties or change the character of the neighborhood. In fact, the Project will enhance governmental facilities and promote the public welfare by improving the communications capability for emergency service providers serving the City, as well as provide modern wireless telecommunication service to business, industry and individuals in the City.



A1 PROPERTY PLAN
SCALE: 1" = 40'-0" (11x17) SCALE: 1" = 40'-0" (22x34)

C&S COMPANIES
C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: 315-455-2000
Fax: 315-455-9667
www.cscos.com

STATE OF NEW YORK
ERIC K. KENNA
086339
LICENSED PROFESSIONAL ENGINEER

verizon

VERIZON WIRELESS
SITE NAME: SOUTH SALINA
PROJECT NO.: 20171607413
LOCATION CODE: 146994
2648 SOUTH SALINA STREET
SYRACUSE, NY 13205

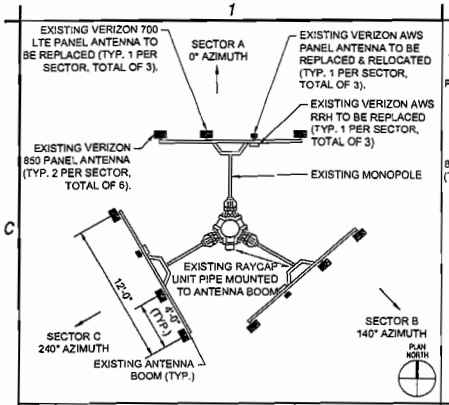
NO.	DATE	DESCRIPTION
2	7-28-17	RF COMMENTS
1	7-20-17	REVISION

REVISIONS

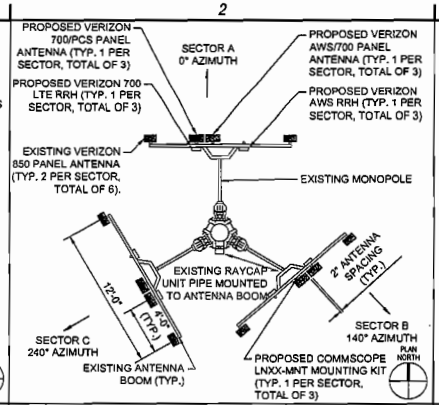
PROJECT NO: F42.001.013
DATE: JUNE 2017
DRAWN BY: J. CUYLER
DESIGNED BY: -
CHECKED BY: E.N. KENNA, P.E.

MODERNIZATION PROJECT PROPERTY PLAN

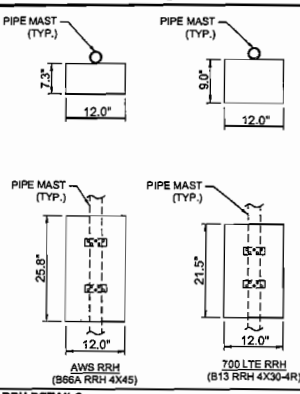
C-500



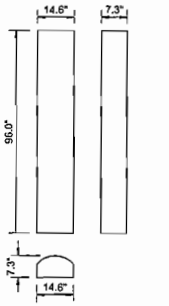
C1 **EXISTING ANTENNA LAYOUT**
SCALE: 1" = 10'-0"



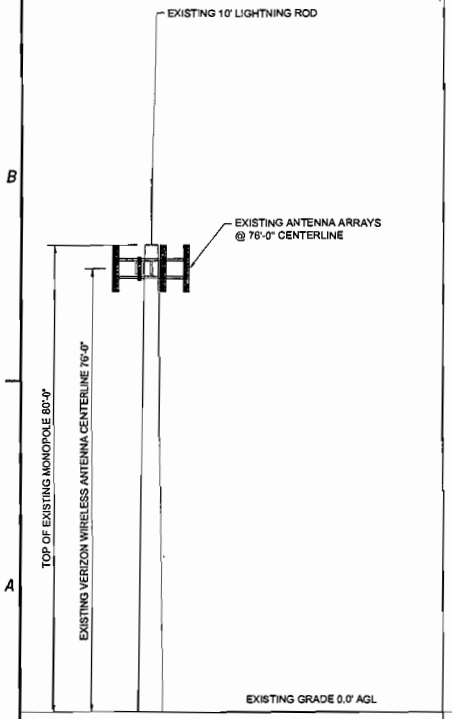
C2 **PROPOSED ANTENNA LAYOUT**
SCALE: 1" = 10'-0"



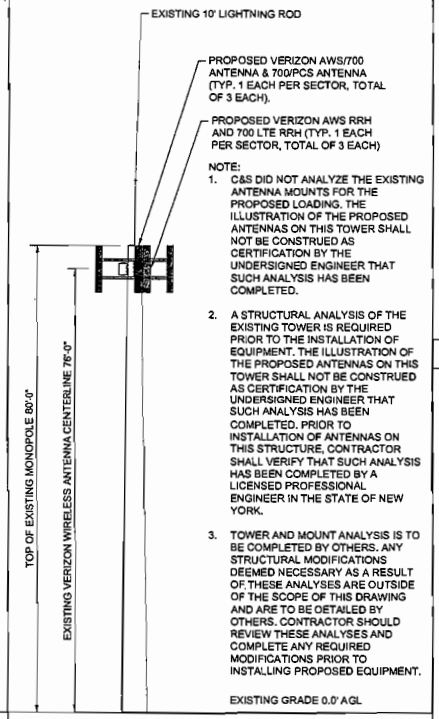
C3 **RRH DETAILS**
NTS



C4 **ANTENNA DETAILS**
NTS



A1 **EXISTING TOWER ELEVATION**
SCALE: 1" = 20'-0"



NOTE:
1. C&S DID NOT ANALYZE THE EXISTING ANTENNA MOUNTS FOR THE PROPOSED LOADING. THE ILLUSTRATION OF THE PROPOSED ANTENNAS ON THIS TOWER SHALL NOT BE CONSTRUED AS CERTIFICATION BY THE UNDERSIGNED ENGINEER THAT SUCH ANALYSIS HAS BEEN COMPLETED.
2. A STRUCTURAL ANALYSIS OF THE EXISTING TOWER IS REQUIRED PRIOR TO THE INSTALLATION OF EQUIPMENT. THE ILLUSTRATION OF THE PROPOSED ANTENNAS ON THIS TOWER SHALL NOT BE CONSTRUED AS CERTIFICATION BY THE UNDERSIGNED ENGINEER THAT SUCH ANALYSIS HAS BEEN COMPLETED. PRIOR TO INSTALLATION OF ANTENNAS ON THIS STRUCTURE, CONTRACTOR SHALL VERIFY THAT SUCH ANALYSIS HAS BEEN COMPLETED BY A LICENSED PROFESSIONAL ENGINEER IN THE STATE OF NEW YORK.
3. TOWER AND MOUNT ANALYSIS IS TO BE COMPLETED BY OTHERS. ANY STRUCTURAL MODIFICATIONS DEEMED NECESSARY AS A RESULT OF THESE ANALYSES ARE OUTSIDE OF THE SCOPE OF THIS DRAWING AND ARE TO BE DETAILED BY OTHERS. CONTRACTOR SHOULD REVIEW THESE ANALYSES AND COMPLETE ANY REQUIRED MODIFICATIONS PRIOR TO INSTALLING PROPOSED EQUIPMENT.

A2 **TOWER ELEVATION W/ PROPOSED**
SCALE: 1" = 20'-0"

SITE DATA

SITE ADDRESS:	2648 SOUTH SALINA STREET SYRACUSE, NY 13205
TOWER OWNER:	AMERICAN TOWER CORPORATION 116 HUNTINGTON AVE. 11TH FLOOR BOSTON, MA 02116
SITE NAME: SITE ID:	SOUTH SALINA NY 413176
APPLICANT:	BELL ATLANTIC MOBILE SYSTEMS OF ALLENTOWN, INC. d/b/a VERIZON WIRELESS 1275 JOHN STREET SUITE 100 WEST HENRIETTA, NY 14586
CONTACT: PHONE:	ROB McCABE (315) 373-3040

NOTES:
1. THE TOWER IS CONSTRUCTED WITH GALVANIZED STEEL.
2. THE TOWER IS NOT LIT AND NO LIGHTING IS PROPOSED BY BELL ATLANTIC MOBILE SYSTEMS OF ALLENTOWN, INC. UNLESS IT IS REQUIRED BY THE FEDERAL AVIATION ADMINISTRATION OR THE LOCAL MUNICIPALITY.
3. ALL REFERENCES TO THE TOWER AND ITS FOUNDATION ARE TO BE DIRECTED TO THE DESIGN AND DETAIL DRAWINGS BY THE TOWER SUPPLIER.
4. A STRUCTURAL ANALYSIS OF THE EXISTING TOWER IS REQUIRED PRIOR TO THE INSTALLATION OF EQUIPMENT. THE ILLUSTRATION OF THE PROPOSED ANTENNAS ON THIS TOWER SHALL NOT BE CONSTRUED AS CERTIFICATION BY THE UNDERSIGNED ENGINEER THAT SUCH ANALYSIS HAS BEEN COMPLETED. PRIOR TO INSTALLATION OF ANTENNAS ON THIS STRUCTURE, CONTRACTOR SHALL VERIFY THAT SUCH ANALYSIS HAS BEEN COMPLETED BY A LICENSED PROFESSIONAL ENGINEER IN THE STATE OF NEW YORK.
5. ANTENNA DATA PER RF ANTENNA DESIGN DATA SHEET DATED 7-26-17.
6. EXISTING ANTENNA, EQUIPMENT AND TOWER INFORMATION BASED ON INFORMATION PROVIDED BY OTHERS. C&S DID NOT VISIT THE SITE TO INDEPENDENTLY VERIFY THE INFORMATION PROVIDED.

B3 **NOTES**
NTS

STANDARD ANTENNA COLOR CODES
1. VERIZON WILL COLOR CODE AND TAG THE COAX AT BOTH THE TOP OF THE TOWER AND INSIDE THE CELL SITE BUILDING AT THE CABLE ENTRY PORT. THE MARKING SYSTEM WILL COMPRISE COLOR TAPE WITH A MINIMUM WIDTH OF ¾ INCHES, 7 MIL. VINYL PLASTIC TAPE, SCOTCH 35 OR EQUIVALENT.
2. A TAG WILL BE PLACED ON THE COAX AT THE ANTENNA AND THE COAX IN THE CELL SITE BUILDING. THE TAG WILL IDENTIFY THE ANTENNA NUMBER AND FUNCTION; TX, RX, ETC.
3. THE ENTRY PORT ASSIGNMENT SHOULD BE FOLLOWED WHERE POSSIBLE. THIS STANDARD ASSUMES THAT THE ENTRY PORT CONSISTS OF THREE ROWS OF FOUR PORTS, WITH THE FIRST ROW BEING NUMBERED FROM 1-4 FROM LEFT TO RIGHT. THE SECOND ROW IS NUMBERED FROM 5-8 (LEFT TO RIGHT) AND THE THIRD ROW 9-12 (LEFT TO RIGHT).
4. A SITE SPECIFIC COAX COLOR CODE SHEET TO BE PROVIDED BY CELLULAR EQUIPMENT ENGINEER.

ANTENNA MOUNTING NOTES
1. DESIGN AND CONSTRUCTION OF ANTENNA SUPPORTS SHALL CONFORM TO ANSI/TIA/EIA-222-G "STRUCTURAL STANDARDS FOR STEEL ANTENNA TOWERS AND ANTENNA SUPPORTING STRUCTURES". NOTE: SEE CODE FOR COUNTY SPECIFIC DESIGN WIND SPEEDS.
2. ALL STEEL MATERIALS SHALL BE GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A123 "ZINC (HOT-DIP GALVANIZED) COATINGS ON IRON AND STEEL PRODUCTS", UNLESS OTHERWISE NOTED.
3. ALL BOLTS, ANCHORS AND MISCELLANEOUS HARDWARE SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 "ZINC-COATING (HOT-DIP) ON IRON AND STEEL HARDWARE", UNLESS OTHERWISE NOTED.
4. DAMAGED GALVANIZED SURFACES SHALL BE REPAIRED BY COLD GALVANIZING IN ACCORDANCE WITH ASTM A780.
5. ALL ANTENNA MOUNTS SHALL BE INSTALLED WITH DOUBLE NUTS AND SHALL BE INSTALLED SNUG TIGHT.
6. TOWER AND MOUNT ANALYSIS IS TO BE COMPLETED BY OTHERS. ANY STRUCTURAL MODIFICATIONS DEEMED NECESSARY AS A RESULT OF THESE ANALYSES ARE OUTSIDE OF THE SCOPE OF THIS DRAWING AND ARE TO BE DETAILED BY OTHERS. CONTRACTOR SHOULD REVIEW THESE ANALYSES AND COMPLETE ANY REQUIRED MODIFICATIONS PRIOR TO INSTALLING PROPOSED EQUIPMENT.

A3 **EQUIPMENT SCHEDULES**
NTS

EXISTING/PROPOSED EQUIPMENT & CABLING SCHEDULE

SECTOR	FREQUENCY	DIMENSION HxWxD	QTY.	DOWN-TILT (MEC)	RRH	CABLE	AZIMUTH	ANTENNA RAD	
A	850	96.0"x12.5"x7.1"	1	SEE RF DESIGN		AVA7	0°	76'-0"	RAYCAP
	700/PCS	96.0"x14.6"x7.3"	1	SEE RF DESIGN	700 LTE RRH	HYBRIFLEX			
	AWS/700	96.0"x14.6"x7.3"	1	SEE RF DESIGN	AWS RRH	SHARED HYBRIFLEX			
	850	96.0"x12.5"x7.1"	1	SEE RF DESIGN		AVA7			
B	850	96.0"x12.5"x7.1"	1	SEE RF DESIGN		AVA7	140°	76'-0"	
	700/PCS	96.0"x14.6"x7.3"	1	SEE RF DESIGN	700 LTE RRH	SHARED HYBRIFLEX			
	AWS/700	96.0"x14.6"x7.3"	1	SEE RF DESIGN	AWS RRH	SHARED HYBRIFLEX			
	850	96.0"x12.5"x7.1"	1	SEE RF DESIGN		AVA7			
C	850	96.0"x12.5"x7.1"	1	SEE RF DESIGN		AVA7	240°	76'-0"	
	700/PCS	96.0"x14.6"x7.3"	1	SEE RF DESIGN	700 LTE RRH	SHARED HYBRIFLEX			
	AWS/700	96.0"x14.6"x7.3"	1	SEE RF DESIGN	AWS RRH	SHARED HYBRIFLEX			
	850	96.0"x12.5"x7.1"	1	SEE RF DESIGN		AVA7			

EXISTING EQUIPMENT & CABLING SCHEDULE

SECTOR	FREQUENCY	DIMENSION HxWxD	QTY.	DOWN-TILT (MEC)	RRH	CABLE	AZIMUTH	ANTENNA RAD	
A	850	96.0"x12.5"x7.1"	1	0°/2°		AVA7	0°	76'-0"	RAYCAP
	700 LTE	96.0"x12.5"x7.1"	1	4°/2°		(2) AVA7			
	AWS	48.0"x6.7"x4.1"	1	4°/2°	AWS RRH	HYBRIFLEX			
	850	96.0"x12.5"x7.1"	1	0°/2°		AVA7			
B	850	96.0"x12.5"x7.1"	1	0°/2°		AVA7	140°	76'-0"	
	700 LTE	96.0"x12.5"x7.1"	1	4°/2°		(2) AVA7			
	AWS	48.0"x6.7"x4.1"	1	4°/2°	AWS RRH	SHARED HYBRIFLEX			
	850	96.0"x12.5"x7.1"	1	0°/2°		AVA7			
C	850	96.0"x12.5"x7.1"	1	0°/2°		AVA7	240°	76'-0"	
	700 LTE	96.0"x12.5"x7.1"	1	4°/2°		(2) AVA7			
	AWS	48.0"x6.7"x4.1"	1	3°/2°	AWS RRH	SHARED HYBRIFLEX			
	850	96.0"x12.5"x7.1"	1	0°/2°		AVA7			

NOTE:
EXISTING: 6 RUNS OF COAX, (6) 850 ANTENNAS, (1) JUNCTION BOX, & (1) STANDARD 6x12 HYBRIFLEX.

REPLACE & RELOCATE: (3) AWS ANTENNAS WITH (3) AWS/700 ANTENNAS.

REPLACE: (3) AWS RRH's & (3) 700 LTE ANTENNAS WITH (3) 700/PCS ANTENNAS.

WEATHERPROOF ALL UNUSED PORTS AND CABLES.

C&S COMPANIES
C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: 315-455-2000
Fax: 315-455-9667
www.cscos.com

verizon

VERIZON WIRELESS
SITE NAME: SOUTH SALINA
PROJECT NO.: 20171607413
LOCATION CODE: 146994
2648 SOUTH SALINA STREET
SYRACUSE, NY 13205

NO.	DATE	DESCRIPTION
2	7-28-17	RF COMMENTS
1	7-26-17	REVISION

REVISIONS

PROJECT NO:	F42.001.013
DATE:	JUNE 2017
DRAWN BY:	J.CUTLER
DESIGNED BY:	-
CHECKED BY:	E.N.KENNA, P.E.

MODERNIZATION PROJECT
TOWER ELEVATION, DETAILS & NOTES

C-501

Jul 28, 2017 - 1:29pm
F:\Projects\F42 - VERIZON\F42.001.013 UNY Modernization\Design\Cad\South Salina\Plan Prep\CAD\F42001006_C-501.dwg

EXHIBIT C

APPLICABLE LEGAL STANDARDS

In Cellular Tel. Co. v. Rosenberg, 82 N.Y.2d 364 (1993), the New York Court of Appeals determined that cellular telephone companies are public utilities. The Court held that proposed cellular telephone installations are to be reviewed by zoning boards pursuant to the traditional standard afforded to public utilities, rather than the standards generally required for the necessary approvals.

> 'It has long been held that a zoning board may not exclude a utility from a community where the utility has shown a need for its facilities.' There can be no question of Cell One's need to erect the cell site to eliminate service gaps in its cellular telephone service area. The proposed cell site will also improve the transmission and reception of existing service. Application of our holding in Matter of Consolidated Edison to sitings of cellular telephone companies, such as Cellular One, permits those companies to construct structures necessary for their operation which are prohibited because of existing zoning laws and to provide the desired services to the surrounding community. . . . Moreover, the record supports the conclusion that Cellular One sustained its burden of proving the requisite public necessity. Cellular One established that the erection of the cell site would enable it to remedy gaps in its service area that currently prevent it from providing adequate service to its customers in the Dobbs Ferry area.

Rosenberg, 82 N.Y.2d at 372-74 (citing Consolidated Edison Co. v. Hoffman, 43 N.Y.2d 598 (1978)).

This special treatment of a public utility stems from the essential nature of its service, and because a public utility transmitting facility must be located in a particular area in order to provide service. For instance, water towers, electric switching stations, water pumping stations and telephone poles must be in particular locations (including within residential districts) in order to provide the utility to a specific area:

> [Public] utility services are needed in all districts; the service can be provided only if certain facilities (for example, substations) can be located in commercial and even in residential districts. To exclude such use would result in an impairment of an essential service.

Anderson, New York Zoning Law Practice, 3d ed., p. 411 (1984) (hereafter "Anderson"). See also, Cellular Tel. Co. v. Rosenberg, 82 N.Y.2d 364 (1993); Payne v. Taylor, 178 A.D.2d 979 (4th Dep't 1991).

Accordingly, the law in New York is that a municipality may not prohibit facilities, including towers, necessary for the transmission of a public utility. In Rosenberg, 82 N.Y.2d at 371, the court found that "the construction of an antenna tower . . . to facilitate the supply of cellular telephone service is a 'public utility building' within the meaning of a zoning ordinance." See also Long Island Lighting Co. v. Griffin, 272 A.D. 551 (2d Dep't 1947) (a municipal corporation may not prohibit the expansion of a public utility where such expansion is necessary to the maintenance of essential services).

In the present case, Verizon Wireless must upgrade its facility which serves its South Salina cell, located in the City of Syracuse. The proposed Project is needed to provide adequate and reliable wireless telecommunications service coverage to this area. Therefore, Verizon Wireless satisfies the requisite showing of need for the facility under applicable New York law.

Network Engineering
132 Creek Circle
East Syracuse, New York 13057

SOUTH SALINA CELL SITE - RADIO FREQUENCY ("RF") ANALYSIS

This report is submitted in connection with the proposed 700 MHz and Advanced Wireless Services (AWS) Remote Radio Head (RRH) upgrade to the existing wireless telecommunications facility located at 2648 South Salina Street, in the City of Syracuse, Onondaga County, which Verizon Wireless ("Verizon Wireless") refers to as the "South Salina" site. The analysis and information below are intended to address the radio frequency ("RF") related aspects in regard to the need for the upgrade.

Background of Facility Design and Coverage Objectives

From a coverage perspective, the South Salina Facility is intended to provide an adequate and safe level of emergency and non-emergency wireless telecommunications services (in-building and mobile) around the neighborhoods and along the surrounding roadways in and around the Targeted Coverage Area.

Specifically:

- The Telecommunications Facility must fill or enhance coverage in areas of weak and unreliable service in Verizon Wireless' 4th Generation (4G)/Long Term Evolution (LTE) (700 MHz) wireless telecommunications network Targeted Coverage Area (along I-81 and US Route 11 (South Salina Street, and areas west to Onondaga Creek) and several other local roads, including the homes and businesses in the area).

- The Telecommunications Facility must also provide new Advanced Wireless Services (AWS, or 2100 MHz) coverage that approximates 700 MHz LTE wireless telecommunications coverage so that Verizon Wireless' wireless telecommunications service is comparable at both 4G LTE and AWS frequencies in and around the Targeted Coverage Area.

- Lastly and of significant importance, coverage from this facility must integrate (to the fullest extent possible) with existing service from Verizon Wireless' neighboring cells, thereby providing reliable and seamless wireless telecommunications coverage at both LTE and AWS frequencies (as well as future 4th Generation wireless telecommunications services in the existing cellular 850 MHz and PCS 1900 MHz bands), especially along all local and commuter routes passing through and around Targeted Coverage Area.

Wireless Facility Design Requirements – Reason For Upgrade

The 4G services currently installed at the South Salina cell site includes both 700 MHz LTE AWS services. The transmitting equipment, referred to as the Remote Radio Head (or RRH), for the AWS service currently provides service for a particular frequency band. Recent changes by the FCC to allow Verizon Wireless to utilize additional spectrum in the AWS band has been authorized (known as AWS-3). This upgrade replaces the existing RRHs with models that utilize the complete spectrum of the authorized frequencies for the AWS band to include AWS-3. This upgrade also upgrades the 700 MHz service by replacing older technology equipment with RRHs. In order to keep up with the growing demand for telecommunication services, AWS (with its complete authorized spectrum) is used to supplement existing 700 MHz service, wherever required. An effort is underway by Verizon Wireless to install the newer RRHs on newly constructed sites and replace older versions with the newer, wider AWS-3 spectrum capable versions. This strategy for utilizing multiple LTE technologies (700 MHz and AWS in this case) is used wherever the demand warrants for sites at or near capacity and allows for full use of the FCC authorized spectrum for AWS service. Since the South Salina cell site is located in an area of dense residential population and near I-81, it is capacity limited in its current configuration. As a result, an RRH upgrade to both 700 MHz and AWS is required to be performed to the South Salina cell site to meet current telecommunication service demands. This strategy of upgrading 700 MHz RRHs and existing AWS RRH models with newer AWS-3 capable versions is being rolled out to cell sites in the Upstate New York area, especially those in urban areas where demand is the greatest.

Figure 1 below shows the South Salina cell site as it exists with 700 MHz coverage followed by Figure 2 of the proposed 700 MHz coverage with the upgraded RRH. Figure 2 shows a slight coverage improvement over the existing coverage.

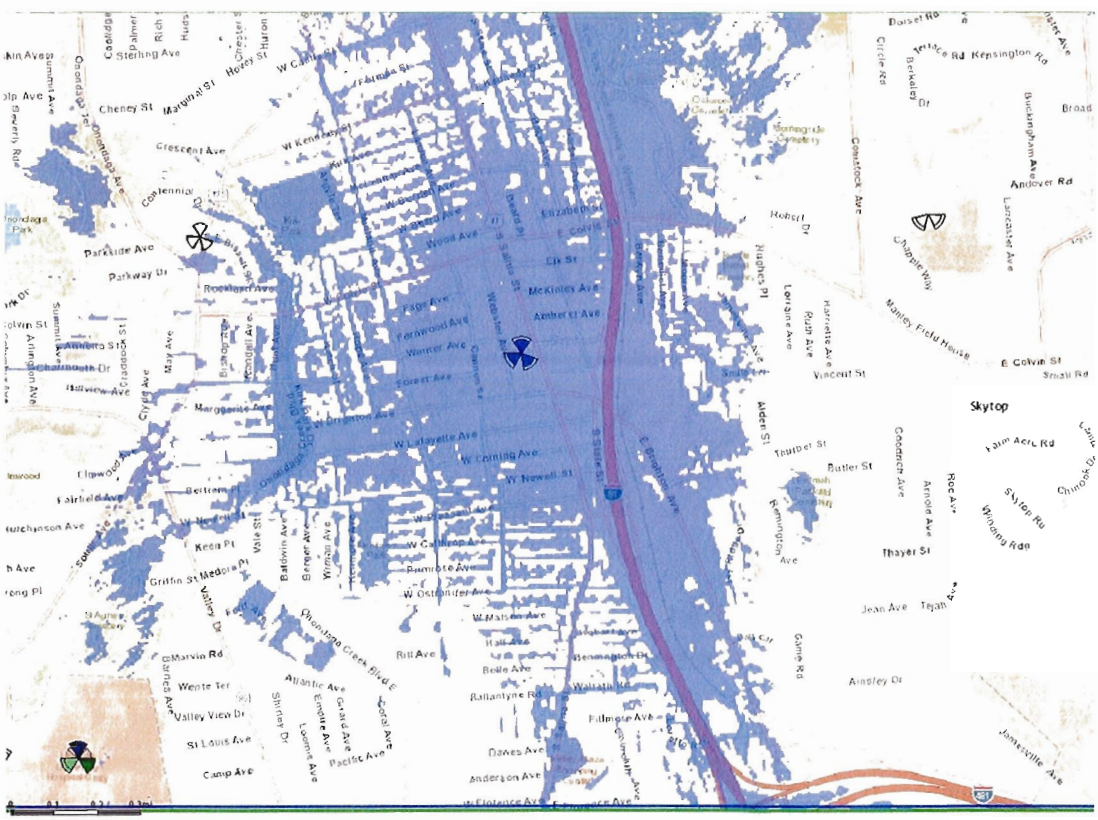


Figure 1. South Salina Cell Site showing existing 700 MHz Coverage

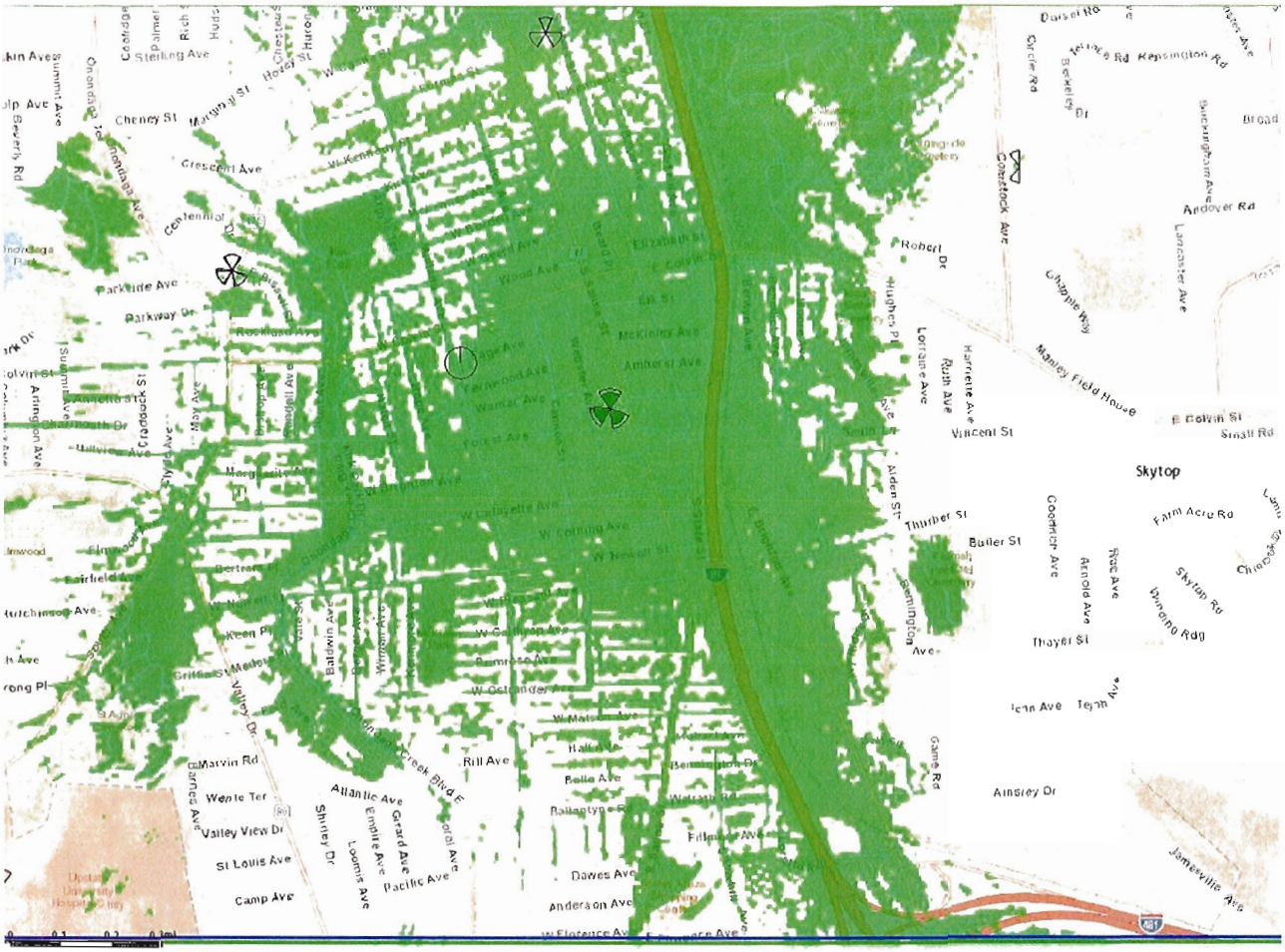


Figure 2. South Salina Cell Site showing proposed 700 MHz Coverage with RRH upgrade (slight improvement)

Figure 3 below shows the South Salina cell site as it exists with AWS coverage followed by Figure 4 of the proposed AWS coverage with the upgraded RRH. Figure 4 shows a coverage improvement over the existing coverage.

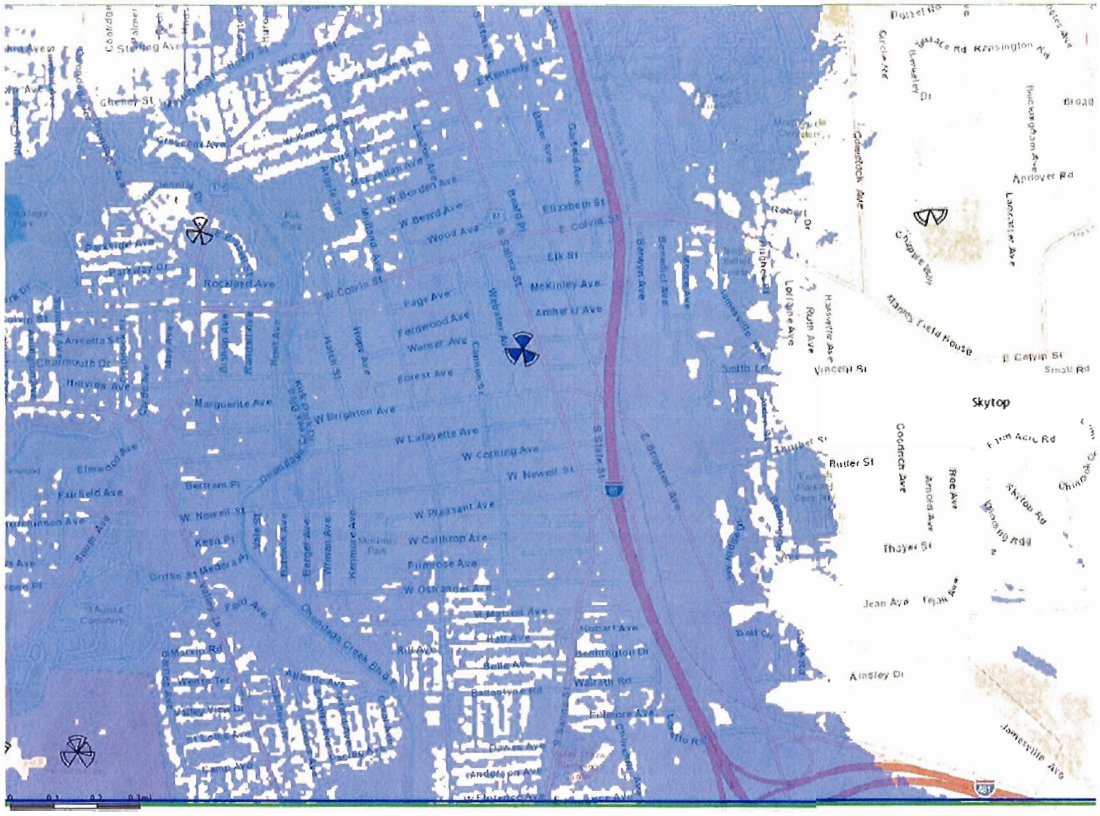


Figure 3. South Salina Cell Site showing existing AWS Coverage

Figure 4. South Salina Cell Site showing proposed AWS Coverage with RRH upgrade

Conclusion

Based on the increasing demand for LTE service, the existing capacity limitation of the site, and the large coverage area due to its location, it is clear that the upgrade to the 700 MHz and AWS RRHs is required to South Salina facility to meet current telecommunication service demands.

Respectfully submitted by:

Eugene S. DiDomenico
Radio Frequency (RF) Design Engineer
Verizon Wireless

Date: July 25, 2017

AMERICAN TOWER®
CORPORATION

Structural Evaluation	
ATC Site Number & Name	**413178, South Salina NY, NY**
Carrier Site Number & Name	**N/A, South Salina**
Site Location	339 Webster Avenue Syracuse, NY 13205-1459, Onondaga County 43.021950 N / -76.144333 W
Tower Description	**80 ft Monopole**
Basic Wind Speed Basic Wind Speed w/ Ice Code	90 mph (3-Second Gust, V_{asd}) / 115 mph (3-Second Gust, V_{ult}) 40 mph (3-Second Gust) w/ 1" ice ANSI/TIA-222-G / 2015 IBC

Existing and Reserved Equipment

Elevation[1] (ft)		Qty	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
77.0	77.0	1	VZW Unused Reserve: 11,169 sq in	Sector Frame	(12) 1 5/8" Coax	Verizon

Equipment to be Removed

Elevation[1] (ft)		Qty	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
77.0	77.0	9	CSS X7C-FRO-840	-	(6) 1 5/8" Coax	Verizon
		3	48" x 6" Panel			

Proposed Equipment

Elevation[1] (ft)		Qty	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
77.0	77.0	3	Alcatel-Lucent B13 RRH4x30-4R	Sector Frame	(1) 1 1/4" Fiber	Verizon
		1	Raycap RxxDC-3315-PF-48			
		3	Alcatel-Lucent B66A RRH 4x45			
		6	CSS V7C-865			
		3	Alcatel-Lucent RRH2x60-AWS Band 4 w/ Bracket			
		6	JMA Wireless X7CQAP-86-865-VR0			

[1] Mount elevation is defined as height above bottom of steel structure to bottom of mount, RAD elevation is defined as center of antenna above grade level (AGL).

Install proposed coax inside of the pole shaft.

The existing and proposed loads listed in the tables above are compared to the tower's current design capacity or previous structural analysis. The tower should be re-evaluated as future loads are added or if actual loads are found different from those listed in the tables. The subject tower and foundation ***are adequate*** to support the above stated loads in conformance with specified requirements.

AT/ EDR

May 22 2017 3:46 PM cosign

MILLENNIUM ENGINEERING, P.C.
132 Jaffrey Road
Malvern, Pennsylvania 19355
Cell: 610-220-3820 Fax: 610-644-4355
www.millenniumengineering.net Email: pauldugan@comcast.net

July 25, 2017

Attn: Eugene S. DiDomenico, Engr III Cslt-RF Design
Verizon Wireless
132 Creek Circle
East Syracuse, NY 13057

Re: RF Safety FCC Compliance of Proposed Communications Facility Modifications (Modernization)
Site Name: South Salina, Collocation on Existing 80' Monopole (90' Overall Height)
2648 S. Salina Street, Syracuse, NY 13205 (City of Syracuse, Onondaga County)

Dear Mr. DiDomenico,

I have performed an analysis to provide an independent determination and certification that the proposed Verizon Wireless communications facility modifications at the above referenced property will comply with Federal Communications Commission (FCC) exposure limits and guidelines for human exposure to radiofrequency electromagnetic fields (Code of Federal Regulation 47 CFR 1.1307 and 1.1310). As a registered professional engineer I am under the jurisdiction of the State Registration Boards in which I am licensed to hold paramount the safety, health, and welfare of the public and to issue all public statements in an objective and truthful manner.

The existing communications facility consists of collocation on an existing 80' monopole (90' overall height – top of existing lightning rod) at the above referenced property. The existing Verizon Wireless antenna configuration from the information furnished to me consists of (1) 700 MHz (LTE) antenna (JMA X7C-865-2 or equivalent), (2) 850 MHz (CDMA) antennas (JMA V7C-865-2 or equivalent) and (1) 2100 MHz (LTE) antenna (JMA AXP18-60-2 or equivalent) on each of three faces (total of 12 antennas) spaced with azimuths of 0/140/240 degrees on the horizontal plane at a centerline of 76' above ground level and mechanical downtilt of 4/4/4 degrees for 700 MHz, 0/0/0 degrees for 850 MHz and 4/4/3 degrees for 2100 MHz on each face, respectively. Transmitting from these antennas currently is (1) 700 MHz LTE wideband channel, up to (8) 850 MHz CDMA channels and (1) 2100 MHz LTE wideband channel per face.

Verizon Wireless plans to remove the (3) existing 700 MHz (LTE) antennas and (3) existing 2100 MHz (LTE) antennas and replace them with (1) 700/1900 MHz (LTE) dual-band antenna and (1) 700/2100 MHz (LTE) dual-band antenna on each face. Verizon Wireless also plans to replace the 700 MHz and 2100 MHz remote radio heads on each face. The (6) existing 850 MHz (CDMA) antennas will remain. The revised Verizon Wireless antenna configuration from the information furnished to me consists of (1) 700/1900 MHz (LTE) dual-band antenna (JMA X7CQAP-86-865-V-3 or equivalent), (1) 700/2100 MHz (LTE) dual-band antenna (JMA X7CQAP-86-865-V-3 or equivalent) and (2) 850 MHz (CDMA) antennas (JMA V7C-865-2 or equivalent) on each of three faces (total of 12 antennas) spaced with azimuths of 0/140/240 degrees on the horizontal plane at a centerline of 76' above ground level and mechanical downtilt of 3 degrees for 700/1900 MHz and 700/2100 MHz and 0 degrees for 850 MHz on each face. Verizon Wireless will not initially transmit in the 1900 MHz (PCS) frequency band. Transmitting from these antennas will be up to (2) 700 MHz LTE wideband channels, up to (8) 850 MHz CDMA channels and up to (2) 2100 MHz LTE wideband channels per face.

The following assumptions are made for reasonable upper limit radiofrequency operating parameters for the revised facility due to Verizon Wireless antennas alone to accommodate all licensed frequency bands:

- (1) 700/1900 MHz (LTE) dual-band transmit antenna per face at 0-10 degrees mechanical downtilt
- (1) 700/2100 MHz (LTE) dual-band transmit antenna per face at 0-10 degrees mechanical downtilt
- (1) 850 MHz (CDMA) transmit antenna per face at 0-10 degrees mechanical downtilt
- (2) 700 MHz LTE wideband channels/face at 4x30W max power/face before cable loss/antenna gain
- (8) 850 MHz CDMA channels/face at 20W max power/channel before cable loss/antenna gain
- (2) 1900 MHz LTE wideband channels/face at 4x30W max power/face before cable loss/antenna gain
- (2) 2100 MHz LTE wideband channels/face at 4x45W max power/face before cable loss/antenna gain
- The facility would be at or near full capacity during busy hour

Using the far-field power density equations from FCC Bulletin OET 65, the power density at any given distance from the antennas is equal to $0.360(ERP)/R^2$ where R is the distance to the point at which the exposure is being calculated. The given equation is a conversion of the OET 65 power density equation for calculating power density given the distance in feet and the result in metric units (mW/cm^2). This calculated power density assumes the location is in the main beam of the vertical pattern of the antenna. After making an adjustment for the reduction in power density due to the vertical pattern of the transmit antenna, the calculated ground level power density is below 2 $\mu W/cm^2$ at any distance from the antenna system of Verizon Wireless.

The 700 MHz "Upper C Block" transmit frequencies (746-757 MHz), which Verizon Wireless is licensed by the FCC to operate, have an uncontrolled/general population maximum permissible exposure (MPE) FCC limit of 497 $\mu W/cm^2$. The 850 MHz (cellular) "B Band" transmit frequencies (880-894 MHz), which Verizon Wireless is also licensed by the FCC to operate, have an uncontrolled/general population MPE FCC limit of 587 $\mu W/cm^2$. The 1900 MHz (PCS) "F Block" transmit frequencies (1970-1975 MHz), which Verizon Wireless is also licensed by the FCC to operate, have an uncontrolled/general population MPE FCC limit of 1000 $\mu W/cm^2$ or 1 mW/cm^2. The 2100 MHz (AWS) "A2 Block", "B Block", "C Block" and "J Block" transmit frequencies (2115-2120, 2120-2130, 2130-2135, 2170-2180 MHz), which Verizon Wireless is also licensed by the FCC to operate, have an uncontrolled/general population MPE FCC limit of 1000 $\mu W/cm^2$ or 1 mW/cm^2. Therefore, the exposure at ground level at any distance from the structure would be substantially below 1 % of the FCC general population exposure limits due to Verizon Wireless antennas alone. The extremely low ground exposure levels are due to the elevated positions of the antennas in the structure and the low power which these systems operate. See Figures 1 and 2 in back of this report which discuss the relationship between height, proximity or distance, and orientation to level of electromagnetic field exposure.

From the information furnished to me, the existing structure does not currently contain any other existing antenna systems.

From the standpoint of RF exposure, the presence of Verizon Wireless does not preclude the future addition of other tenants or licensees including emergency or other municipal services which benefit the public from collocation on this structure. There is a substantial margin of safety to allow for the addition of transmit antennas of other communications services. Keep in mind that continuous exposure at 100 % of standard is considered by the scientific community as just as safe as 1 % of standard since the exposure limits themselves contain a large margin of safety.

In summary, the existing communications facility complies with all applicable exposure limits and guidelines adopted by the FCC governing human exposure to radiofrequency electromagnetic fields (FCC Bulletin OET 65). The facility will remain in compliance with the proposed antenna and operating parameter modifications of Verizon Wireless. Federal law (FCC Rule Title 47 CFR 1.1307 and 1.1310) sets the national standard for compliance with electromagnetic field safety. The FCC exposure limits are based on exposure limits recommended by the National Council on Radiation Protection and Measurements (NCRP) and, over a wide range of frequencies, the exposure limits developed by the Institute of Electrical and Electronics

Engineers, Inc., (IEEE) and adopted by the American National Standards Institute (ANSI). **Thus, there is full compliance with the standards of the IRPA, FCC, IEEE, ANSI, and NCRP.**

General Information on Electromagnetic Field Safety

Verizon Wireless facilities transmit and receive low power electromagnetic fields (EMF) between base station antennas and handheld portable cell phones. The radiofrequency energy from these facilities and devices is non-ionizing electromagnetic energy. Non-ionizing, unlike X-Rays or other forms of potentially harmful energy in the microwave region, is not cumulative over time nor can the energy change the chemical makeup of atoms (e.g. strip electrons from ions). "Non-ionizing" simply means that the energy is not strong enough to break ionic bonds.

Safe levels of electromagnetic fields were determined by numerous worldwide organizations, such the International Committee for Non-Ionizing Radiation Protection, a worldwide multi-disciplinary team of researchers and scientists studying the effects of non-ionizing radiofrequency energy such as that emitted by base stations or cell phones. The FCC did not arbitrarily establish their own standards, but adopted the recommendations of all leading organizations that set standards and research the subject such as the Institute of Electrical and Electronics Engineers (IEEE), American National Standards Institute (ANSI), and National Council on Radiation Protection and Measurements (NCRP).

When Verizon Wireless is located on an antenna structure such as a self-supporting lattice type tower, monopole, guyed tower, watertank, etc. the antennas are typically 10 meters or more above ground level (10 meters = 32.81 feet). With the relatively low power and elevated positions of the antennas on the structure with respect to ground level, the maximum ground level exposure can rarely approach 1 % of the applicable FCC exposure limit regardless of how many sets of antennas are collocated on the structure. For this reason, the FCC considers the facilities "categorically excluded" from routine evaluation at antenna heights above 10 meters (or above 32.81 feet). Categorical exclusion exempts a site from routine on-site evaluation. However, the facility is not excluded from compliance with the federal exposure limits and guidelines. The types of facilities used by Verizon Wireless typically elevated on antenna structures (away from access to close proximity, i.e. greater than 10 meters or 32.81 feet) simply cannot generate ground level exposure levels that approach the limits under any circumstances.

From a regulatory perspective, the FCC has sole jurisdiction over the regulation of electromagnetic fields from all facilities and devices. The FCC has established guidelines and limits over emissions and exposure to protect the general public. The FCC also has certain criteria that trigger when an environmental evaluation must be performed. The criteria are based on distance from the antennas (accessibility) and transmit power levels.

CONCLUSIONS:

1) **The existing communications facility complies with electromagnetic field safety standards by a substantial margin (well below 1 %) in all publicly accessible areas. This includes the base of the existing structure and any areas in proximity to the existing structure.**

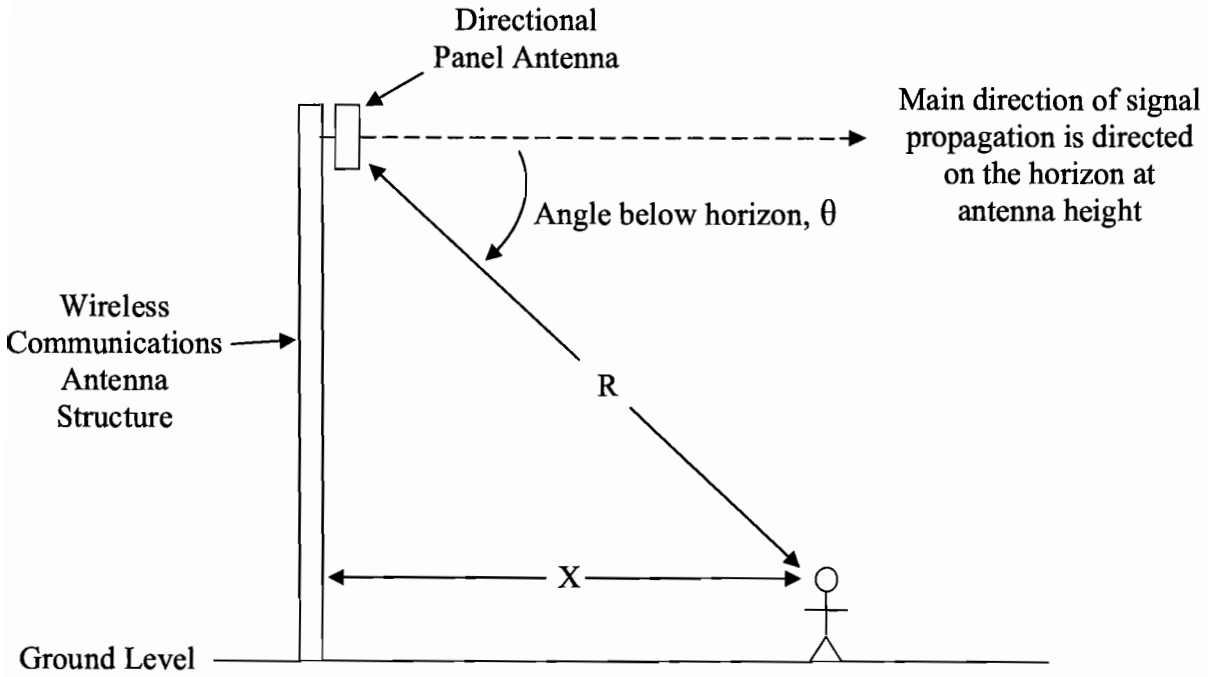
2) **Verizon Wireless takes appropriate measures to ensure that all telecommunications facilities (including this existing facility with proposed modifications) comply with applicable exposure limits and guidelines adopted by the FCC governing human exposure to radiofrequency electromagnetic fields (FCC Bulletin OET 65). With the proposed antenna and operating parameter modifications of Verizon Wireless, the composite electromagnetic field exposure from the revised communications facility will remain well below 1 % of the applicable standards in all publicly accessible areas.**

3) **In cases where such compliance exists, the subject of electromagnetic field safety is preempted**. The Telecommunications Act of 1996 states that: "No state or local government or instrumentality thereof may regulate the placement, construction, and modification of personal wireless service facilities on the basis of the environmental effects of radio frequency emissions to the extent that such facilities comply with the [FCC's] regulations concerning such emissions." Telecommunications Act of 1996, § 332[c][7][B][iv].

Respectfully,

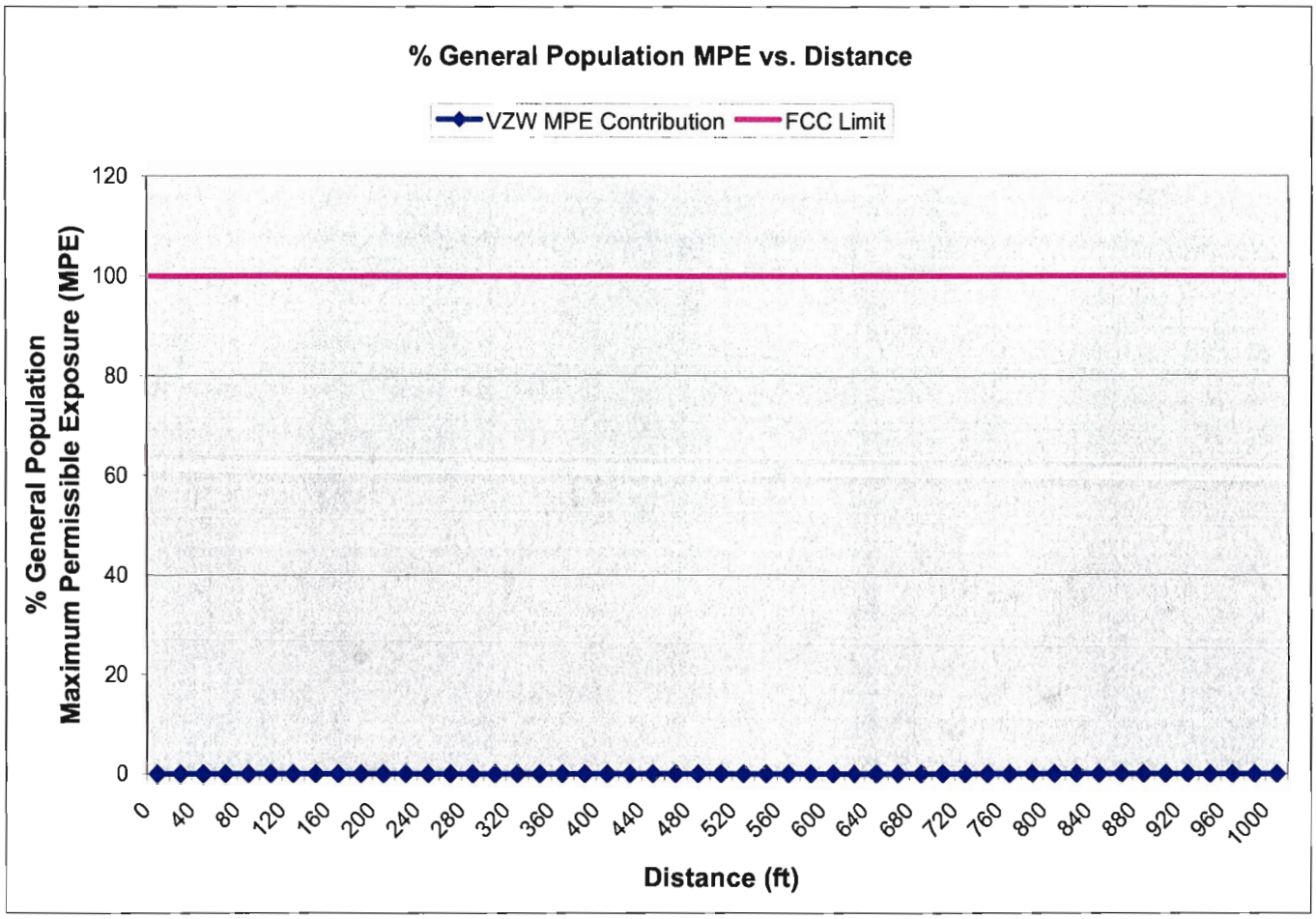
Paul Dugan, P.E.
Registered Professional Engineer
New York License Number 79144

FIGURE 1: Diagram of Electromagnetic Field Strength as a Function of Distance and Antenna Orientation



The above diagram illustrates the conceptual relationship of distance and orientation to directional panel antennas used in wireless communications. At the base of the structure (x = 0), the distance R is a minimum when the angle of the direction of propagation θ is a maximum. As one moves away from the antenna structure, the horizontal distance X increases as well as the distance R to the antennas while the angle below the horizon decreases. For this reason, electromagnetic fields from these facilities remain fairly uniform up to a few hundred feet and continue to taper off with distance. As noted in the report, the electromagnetic fields from these types of facilities are hundreds of times below safety standards at any distance from the antenna structure, making them essentially indistinguishable relative to other sources of electromagnetic fields in the environment due to the elevated heights of the antennas and the relatively low power at which these systems operate.

FIGURE 2: Graph of MPE Contribution vs. Distance

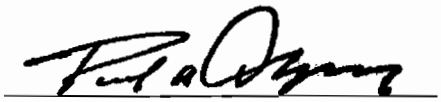


The above graph represents the contribution of Verizon Wireless to the composite electromagnetic field exposure level at any distance from the base of the structure. The contribution of Verizon Wireless will remain well under 1% of the FCC general population maximum permissible exposure (MPE) at any distance as shown.

DECLARATION OF ENGINEER

Paul Dugan, P.E., declares and states that he is a graduate telecommunications consulting engineer (BSE/ME Widener University 1984/1988), whose qualifications are a matter of record with the Federal Communications Commission (FCC). His firm, Millennium Engineering, P.C., has been retained by Verizon Wireless to perform power density measurements or calculations for an existing or proposed communications facility and analyze the data for compliance with FCC exposure limits and guidelines for human exposure to radiofrequency electromagnetic fields.

Mr. Dugan also states that the calculations or measurements made in the evaluation were made by himself or his technical associates under his direct supervision, and the summary letter certification of FCC compliance associated with the foregoing document was made or prepared by him personally. Mr. Dugan is a registered professional engineer in the Jurisdictions of Pennsylvania, New Jersey, Delaware, Maryland, Virginia, New York, Connecticut, District of Columbia, West Virginia and Puerto Rico with over 30 years of engineering experience. Mr. Dugan is also an active member of the Association of Federal Communications Consulting Engineers, the National Council of Examiners for Engineering, the National Society of Professionals Engineers, the Pennsylvania Society of Professional Engineers, and the Radio Club of America. Mr. Dugan further states that all facts and statements contained herein are true and accurate to the best of his own knowledge, except where stated to be in information or belief, and, as to those facts, he believes them to be true. He believes under penalty of perjury the foregoing is true and correct.



Paul Dugan, P.E.

Executed this the 25th day of July, 2017.

PAUL DUGAN, P.E.
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Malvern, Pennsylvania 19355

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Email: pauldugan@comcast.net
Web Page: www.millenniumengineering.net

EDUCATION:

Widener University, Chester, Pennsylvania
Master of Business Administration, July 1991
Master of Science, Electrical Engineering, December 1988
Bachelor of Science, Electrical Engineering, May 1984

PROFESSIONAL ASSOCIATIONS:

Registered Professional Engineer in the following jurisdictions:

Pennsylvania, License Number PE-045711-E
New Jersey, License Number GE41731
Maryland, License Number 24211
Delaware, License Number 11797
Virginia, License Number 36239
Connecticut, License Number 22566
New York, License Number 079144
District of Columbia, License Number PE-900355
West Virginia, License Number 20258
Puerto Rico, License Number 18946

Full member of **The Association of Federal Communications Consulting Engineers** (www.afcce.org) January 1999 to Present
Elected to serve on the Board of Directors for 2006-2007

Full member of **The National Society of Professional Engineers** (www.nspe.org) and the **Pennsylvania Society of Professional Engineers** (www.pspe.org) June 2003 to Present
Currently serving on the Board of Directors of the Valley Forge Chapter and as South East Region Vice-Chair for the "Professional Engineers in Private Practice" Executive Committee

Actively participate in **Chester County ARES/RACES** (CCAR www.w3eoc.org) which prepares and provides emergency backup communications for Chester County Department of Emergency Services, March 2005 to Present

Full member of **The National Council of Examiners for Engineering** (www.ncees.org) May 2001 to Present

Full Member of **The Radio Club of America** (www.radio-club-of-america.org) December 2003 to present

PROFESSIONAL EXPERIENCE:

Millennium Engineering, P.C., Malvern, Pennsylvania
Position: **President**, August 1999 to Present (www.millenniumengineering.net)

Verizon Wireless, Plymouth Meeting, Pennsylvania
Position: **Cellular RF System Design/Performance Engineer**, April 1990 to August 1999

Communications Test Design, Inc., West Chester, Pennsylvania
Position: **Electrical Engineer,** May 1984 to April 1990

ULS License

AWS (1710-1755 MHz and 2110-2155 MHz) License - WQON841 - Cellco Partnership

Call Sign	WQON841	Radio Service	AW - AWS (1710-1755 MHz and 2110-2155 MHz)
Status	Active	Auth Type	Regular

Market

Market	CMA053 - Syracuse, NY	Channel Block	A
Submarket	2	Associated Frequencies (MHz)	001710.00000000-001720.00000000 002110.00000000-002120.00000000

Dates

Grant	10/17/2011	Expiration	12/18/2021
Effective	11/01/2016	Cancellation	

Buildout Deadlines

1st 2nd

Notification Dates

1st 2nd

Licensee

FRN 0003290673 Type General Partnership

Licensee

Cellco Partnership
5055 North Point Pkwy, NP2NE Network Engineering
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ATTN Regulatory

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Contact

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F:(770)797-1036
E:LicensingCompliance@VerizonWireless.com

Ownership and Qualifications

Radio Service Type Mobile

Regulatory Status Common Carrier Interconnected Yes

Alien Ownership
The Applicant answered "No" to each of the Alien Ownership questions.

Basic Qualifications
The Applicant answered "No" to each of the Basic Qualification questions.

Tribal Land Bidding Credits
This license did not have tribal land bidding credits.

Demographics

Race

Ethnicity Gender

ULS License

AWS (1710-1755 MHz and 2110-2155 MHz) License - WQQZ838 - Cellco Partnership

Call Sign	WQQZ838	Radio Service	AW - AWS (1710-1755 MHz and 2110-2155 MHz)
Status	Active	Auth Type	Regular

Market

Market	BEA006 - Syracuse, NY-PA	Channel Block	B
Submarket	8	Associated Frequencies (MHz)	001720.00000000-001730.00000000 002120.00000000-002130.00000000

Dates

Grant	03/04/2013	Expiration	11/29/2021
Effective	11/01/2016	Cancellation	

Buildout Deadlines

1st	2nd

Notification Dates

1st	2nd

Licensee

FRN	0003290673	Type	General Partnership

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Ownership and Qualifications

Radio Service Type	Mobile		
Regulatory Status	Common Carrier	Interconnected	Yes

Alien Ownership
The Applicant answered "No" to each of the Alien Ownership questions.

Basic Qualifications
The Applicant answered "No" to each of the Basic Qualification questions.

Tribal Land Bidding Credits
This license did not have tribal land bidding credits.

Demographics

Race	
Ethnicity	Gender

ULS License

AWS (1710-1755 MHz and 2110-2155 MHz) License - WQTX807 - Cellco Partnership

Call Sign	WQTX807	Radio Service	AW - AWS (1710-1755 MHz and 2110-2155 MHz)
Status	Active	Auth Type	Regular

Market

Market	BEA006 - Syracuse, NY-PA	Channel Block	C
Submarket	6	Associated Frequencies (MHz)	001730.00000000-001735.00000000 002130.00000000-002135.00000000

Dates

Grant	04/22/2014	Expiration	11/29/2021
Effective	11/01/2016	Cancellation	

Buildout Deadlines

1st 2nd

Notification Dates

1st 2nd

Licensee

FRN 0003290673 Type General Partnership

Licensee

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Ownership and Qualifications

Radio Service Type Mobile

Regulatory Status Common Carrier Interconnected Yes

Alien Ownership
The Applicant answered "No" to each of the Alien Ownership questions.

Basic Qualifications
The Applicant answered "No" to each of the Basic Qualification questions.

Tribal Land Bidding Credits
This license did not have tribal land bidding credits.

Demographics

Race

Ethnicity Gender

ULS License

Cellular License - KNKA238 - Bell Atlantic Mobile Systems of Allentown, Inc.

Call Sign	KNKA238	Radio Service	CL - Cellular
Status	Active	Auth Type	Regular

Market

Market	CMA053 - Syracuse, NY	Channel Block	B
Submarket	0	Phase	2

Dates

Grant	04/14/2015	Expiration	05/15/2025
Effective	12/09/2016	Cancellation	

Five Year Buildout Date

05/24/1990

Control Points

3 500 W. Dove Rd., TARRANT, Southlake, TX
P: (800)264-6620

Licensee

FRN 0003301512 Type Corporation

Licensee

Bell Atlantic Mobile Systems of Allentown, Inc.
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Ownership and Qualifications

Radio Service Type	Mobile		
Regulatory Status	Common Carrier	Interconnected	Yes

Alien Ownership
The Applicant answered "No" to each of the Alien Ownership questions.

Basic Qualifications
The Applicant answered "No" to each of the Basic Qualification questions.

Demographics

Race

Ethnicity Gender

ULS License

PCS Broadband License - KNLH276 - Cellco Partnership

This license has pending applications: 0007716979

Call Sign	KNLH276	Radio Service	CW - PCS Broadband
Status	Active	Auth Type	Regular

Market

Market	BTA438 - Syracuse, NY	Channel Block	F
Submarket	0	Associated Frequencies (MHz)	001890.00000000-001895.00000000 001970.00000000-001975.00000000

Dates

Grant	07/23/2007	Expiration	06/27/2017
Effective	11/01/2016	Cancellation	

Buildout Deadlines

1st	06/27/2002	2nd	

Notification Dates

1st	06/04/2002	2nd	

Licensee

FRN 0003290673 Type Joint Venture

Licensee

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Ownership and Qualifications

Radio Service Type	Mobile		
Regulatory Status	Common Carrier	Interconnected	Yes

Alien Ownership

Is the applicant a foreign government or the representative of any foreign government?	No
Is the applicant an alien or the representative of an alien?	No
Is the applicant a corporation organized under the laws of any foreign government?	No
Is the applicant a corporation of which more than one-fifth of the capital stock is owned of record or voted by aliens or their representatives or by a foreign government or representative thereof or by any corporation organized under the laws of a foreign country?	No
Is the applicant directly or indirectly controlled by any other corporation of which more than one-fourth of the capital stock is owned of record or voted by aliens, their representatives, or by a foreign government or representative thereof, or by any corporation organized under the laws of a foreign country?	**Yes**

The Alien Ruling question is not answered.

Basic Qualifications
The Applicant answered "No" to each of the Basic Qualification questions.

Tribal Land Bidding Credits
This license did not have tribal land bidding credits.

Demographics

Race

Ethnicity Gender

ULS License

700 MHz Upper Band (Block C) License - WQJQ689 - Cellco Partnership

PA **This license has pending applications:** 0007719269, 0007581227

Call Sign	WQJQ689	Radio Service	WU - 700 MHz Upper Band (Block C)
Status	Active	Auth Type	Regular

Market

Market	REA001 - Northeast	Channel Block	C
Submarket	0	Associated Frequencies (MHz)	000746.00000000-000757.00000000 000776.00000000-000787.00000000

Dates

Grant	11/26/2008	Expiration	06/13/2019
Effective	01/31/2017	Cancellation	

Buildout Deadlines

1st	06/13/2013	2nd	06/13/2019

Notification Dates

1st	06/20/2013	2nd	

Licensee

FRN	0003290673	Type	General Partnership

Licensee

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E:LicensingCompliance@VerizonWireless.com

Ownership and Qualifications

Radio Service Type	Mobile		
Regulatory Status	Common Carrier	Interconnected	Yes

Alien Ownership
The Applicant answered "No" to each of the Alien Ownership questions.

Basic Qualifications
The Applicant answered "No" to each of the Basic Qualification questions.

Tribal Land Bidding Credits
This license did not have tribal land bidding credits.

Demographics

Race

Ethnicity

Gender