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May 16, 2018

VIA FEDERAL EXPRESS AND E-MAIL

Donald Serotta, Chairman  
Town of Chester Planning Board  
1786 Kings Highway  
Chester, New York 10918

RE: Application of Orange County-Poughkeepsie Limited Partnership d/b/a Verizon  
Wireless Proposed Public Utility/Personal Wireless Service Facility on existing  
water tank located off Kings Highway

Dear Chairman Serotta,

We are in receipt of the report and recommendations prepared by the Planning Board's consultant Clint Smith, P.E. dated May 14, 2018. On behalf of Verizon Wireless (the "Applicant"), I submit the following response to the specific recommendations made in the May 14<sup>th</sup> report which I have numbered below for the Planning Board's convenience. Please note that the responses provided below regarding radio frequency issues were provided by Verizon Wireless' RF Engineer, who was not available to prepare a stand-alone response due to his need to travel from Rochester to Chester for tonight's Planning Board meeting.

Recommendation No. 1: Provide clarification that Attachment 2 and 3 from the November 9, 2017 report are not the same propagation plots.

Response: Upon further review in response to this recommendation, we now see that the same propagation plot was inadvertently appended to the November 9, 2017 Site

Selection Analysis as Attachment 2 (Existing Sites Coverage) and Attachment 3 (Existing and Proposed Coverage). Attached here as **TAB 1**, please find a revised propagation plot that shows the Existing Sites Coverage which should be substituted for the former Attachment 2 to the Site Selection Analysis

Recommendation No. 2: Provide the existing sites surrounding the search ring propagation plot with the search ring included.

Response: See **TAB 2** which includes a new Attachment 1a to the Site Selection Analysis showing the search area overlaid on the same coverage map (base layer) to establish scale for coverage slides appended to the Applicant's Site Selection Analysis.

Recommendation No. 3: Provide the existing and proposed site Propagation Plots with Search Ring included.

Response: See response to Recommendation No. 2 and the new Attachment 1a which shows the search area on the same scale as the proposed site Propagation Plots.

Recommendation No. 4: Provide a FAA report for glide slope.

Response: An FAA report for glide slope is not required for this communications facility under applicable FAA regulations because the proposed antennas are less than twenty (20) feet in height and are to be located on an existing water tank (i.e., will not increase the height of another antennae structure). See 14 CFR §77.9. Under these circumstances, no further analysis is required.

Recommendation No. 5: Provide a propagation plot showing existing in-building coverage problems with the search ring included.

Response: See **TAB 3** which includes a new Attachment 3a to the Site Selection Analysis that shows an area identified as "improved variable in building coverage.

Recommendation No. 6: Provide a propagation plot showing with the proposed site in-building coverage improvements with the search ring included.

Response: See response to Recommendation No. 2 and the new Attachment 1a to the Site Selection Analysis which shows the search area on the same scale as the proposed site Propagation Plots.

Recommendation No. 7: Provide clarification on the Forward Data Volume (FDV) plot in Attachment 2 from the December 8, 2017 Search Ring Justification Report.

Response: See **TAB 4** which includes the new Attachment 2a which is the Average Schedule Eligible Users (ASEU) (Supplement to FDV).

**Recommendation No. 8:** Provide a list and brief technical justification for the rejection of all the sites identified and investigated what are in the search ring.

**Response:** As set forth in the Site Selection Analysis, a comprehensive investigation of the identified search ring was performed by a qualified site acquisition specialist, the purpose of which was to identify any existing towers or tall structures suitable for Verizon's proposed use and coverage objectives. The investigation focused on existing tall towers or structures because the Town of Chester Telecommunications Law specifically provides that applicants for wireless telecommunications facilities "shall" locate facilities in accordance with the priority list set forth in the law – the highest priority being location on "existing tall structures or telecommunication towers". See Chester Town Code § 89-6(A)(1)(a).

There was only one tall structure identified within the search area. However, that structure, an existing water tank on Creamery Pond Road, was reviewed and rejected by the Applicant's RF Design Engineer because of its low position relative to its local obstructions, low ground elevation (AMSL) and antennae centerline (ACL), and poor positioning which would prevent the Applicant from serving and offloading the neighborhoods and roads that are located south of the proposed site. These disadvantages prevent this site from covering the necessary objective and providing the necessary capacity offload detailed in the RF Justification. Therefore, it was eliminated from further consideration. A report by the Applicant's RF Design Engineer detailing these findings was submitted to the Planning Board on May 4, 2018, in response to comments received at the public hearing. A figure showing the Creamery Pond Road water tank location in the search ring is attached here as **TAB 5**.

The proposed site is the only viable location that meets the Applicant's coverage and capacity objectives and satisfies the requirements of the Town Code. Where, as here, there is a site with an existing structure that meets the Applicant's coverage objectives, the Town Code dictates, that site "may not be bypassed absent a demonstration that such site is unavailable". *Id. at* §89-6(A)(3). Accordingly, locating the facility on the existing water tank at the proposed location is not only preferred, it is required by the Town Code.

**Recommendation No. 9:** Provide a brief description of what capacity relief alternatives were considered or done for the Bellvale site.

**Response:** The first alternative considered was to add an additional LTE carrier to increase capacity to the existing Bellvale site. However, the available carrier (PCS) is a bandwidth and frequency range that is not capable of covering or resolving the driving capacity issue that impacts Bellvale's 700MHz carrier. In addition, the ASEU shows regardless of FDV capacity that a site like Bellvale attempting to serve users at too great a distance (or at too weak of RF coverage levels) results with overloaded control channel capacity which is also the case in this site. Having the Silvertail water tank co-location

will allow Verizon to effectively use all its' available capacity effectively from a local and dominant location which improves both coverage and capacity.

The second alternative Verizon considered was to reduce the Bellvale sector's coverage footprint (in turn reducing the number of users and their associated network traffic demand). While this could be done through power reduction or down tilting the antennas, it would be premature for Verizon to do this at this time since it would further compromise the existing variable coverage conditions that exist in and around the Sugarloaf area. Verizon intends to resolve the current and projected overloading issues, but it does not want to do so in a way that compromises existing conditions further. This antenna optimization will occur post Silvertail activation which is part of the longer-term plan to further improve the RF conditions throughout the towns of Chester and Warwick.

The third alternative considered is whether it is possible to increase coverage and or capacity in this area by the adjustment of other neighboring cell sites. This is not possible due to terrain limitations which prevent other sites from covering into the Silvertail/Sugarloaf area.

Recommendation No. 10: Provide clarification as to whether all the Verizon radio spectrum available in your licenses is operating in the gamma sector for Bellvale.

Response: The existing Bellvale site currently has both 700MHz and AWS LTE carriers in service. Verizon also owns spectrum in the PCS and 850 bands in Orange County. The 850 carrier is currently at full capacity serving our CDMA (3G) network. The PCS carrier is available and will likely be deployed at some point but due to the Bellvale site distance to offload and coverage objectives it alone is not capable (due to PCS propagation characteristics and bandwidth capacity) of resolving the Silvertail site objectives. Use of 700/AWS/PCS and eventually 850 on the Silvertail site will be efficient and effective due to Silvertail's superior proximity to capacity and coverage objectives in this area. Bellvale and other existing sites are too far away regardless of the number of carriers in service to resolve the driving sector and coverage issues that necessitate the Silvertail site.

Recommendation No. 11: Provide clarification as to what advanced emergency services will be provided because of this proposed site.

Response: The proposed site will provide the necessary capacity offload detailed in the Search Ring Justification which will ensure the network is able to process the volume of data requested by local wireless devices. This is critical to emergency service providers which are relying more and more on mass calling events to communicate important public safety information to local residents and the wider public.

Recommendation No. 12: Provide clarification as to the use of 5G for the proposed site and surrounding sites. Specifically, will this require any changes to the proposed site.

Response: The Applicant does not have sufficient information at this time to predict when 5G will be introduced in this area or how it could impact existing and proposed sites. While it is likely some changes will be needed to the existing network to accommodate 5G, we cannot predict at this point what those changes could include or if any particular site or coverage area would require modifications.

Recommendation No. 13: Consider placing a shroud around the antenna array.

Response: The placement of a shroud will not be considered at this location because it is critical to have a clear line of sight to area objectives. Therefore, from an RF perspective, the placement of a shroud is not preferable and should be avoided where, as here, screening is not necessary to mitigate any significant adverse visual impact. In fact, the information in the record, including a professional visual resource report prepared by Tectonic Engineering, clearly show the minor addition of antennas to the existing structure is not significant and will not impact an identified State or local visual resource. The fact that the antennas may be visible from certain nearby properties does not constitute an adverse visual impact and does not provide a rational basis to require a shroud in this case.

I would request that you distribute copies of this letter and the enclosed materials to the other Planning Board members so that we may discuss this at the May 16, 2018 meeting.

Please kindly contact me with any questions or concerns.

Very truly yours,  
YOUNG SOMMER, LLC

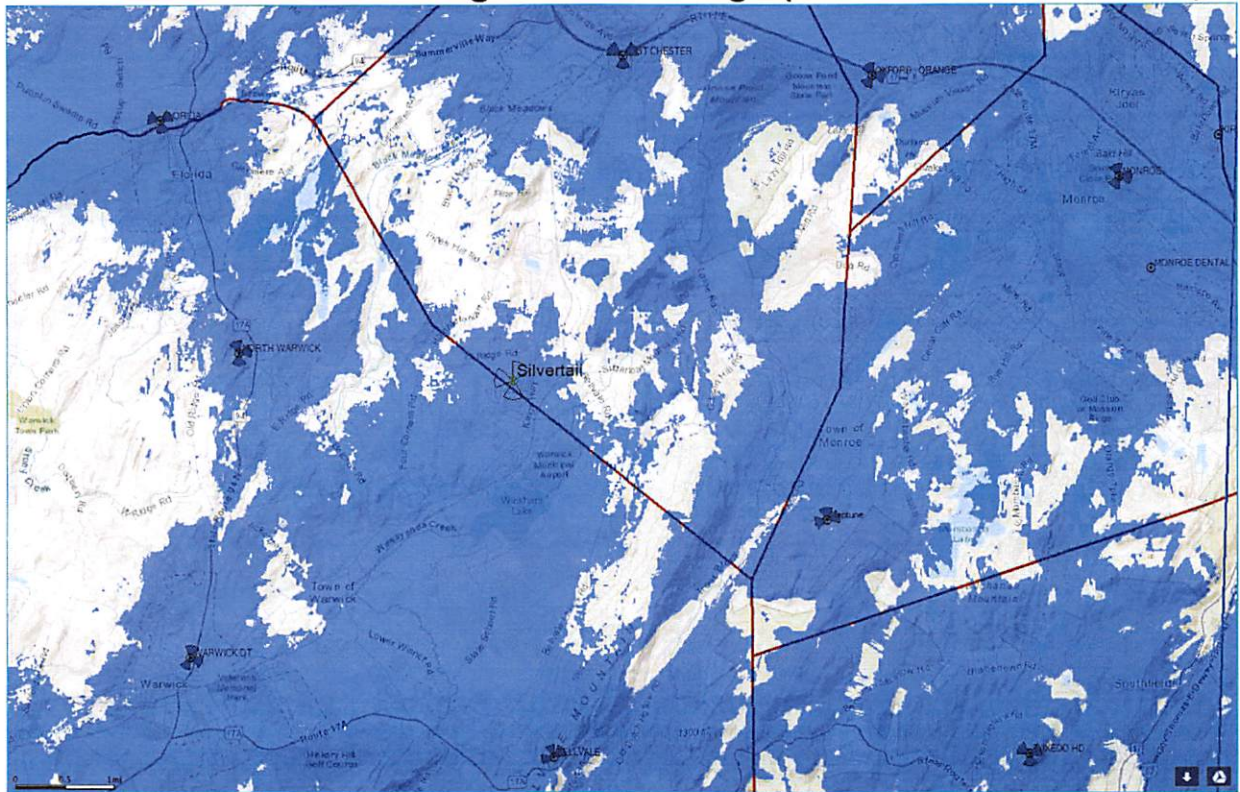
A handwritten signature in black ink, appearing to read "Allyson M. Phillips", written over a horizontal line.

Scott Olson, Esq.  
Allyson M. Phillips, Esq.

# TAB 1

## ATTACHMENT 2

### Verizon Wireless Existing Sites Coverage (700MHz RSRP -95dBm)

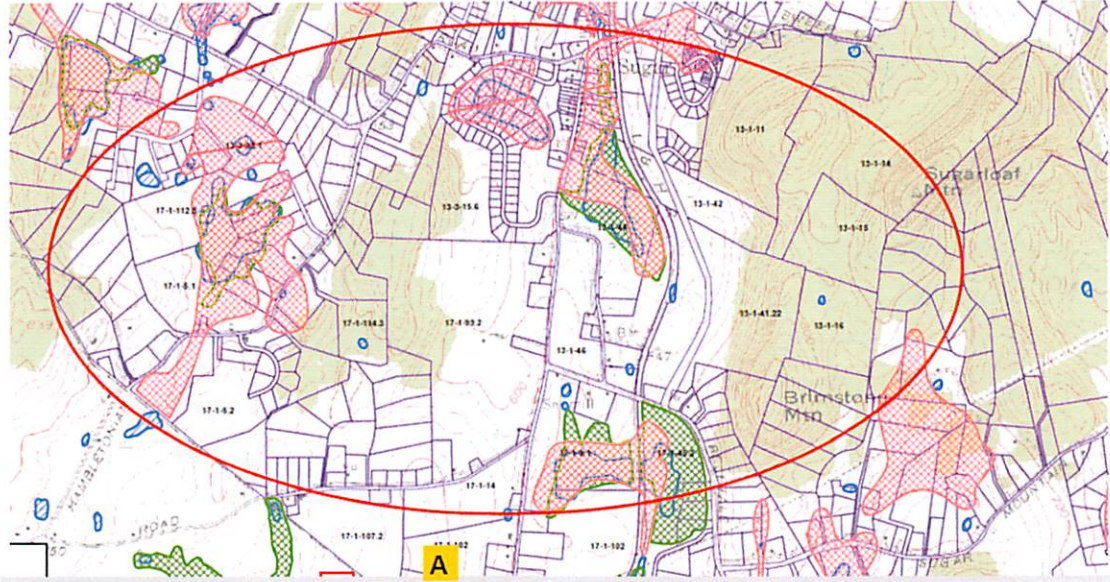


# TAB 2



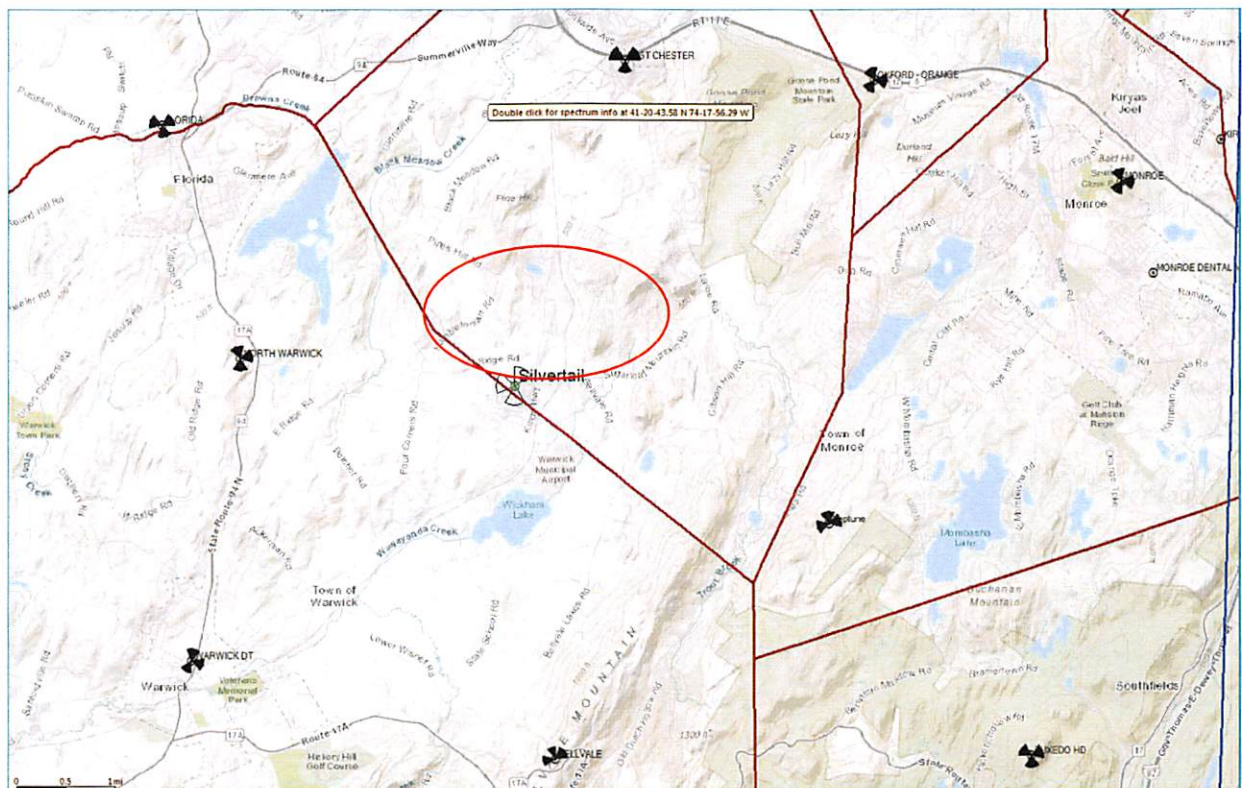
## ATTACHMENT 1

### VERIZON WIRELESS SILVERTAIL SEARCH RING (Zoom w/tax parcel)



## ATTACHMENT 1a

### VERIZON WIRELESS SILVERTAIL SEARCH RING (scaled to following coverage slides)

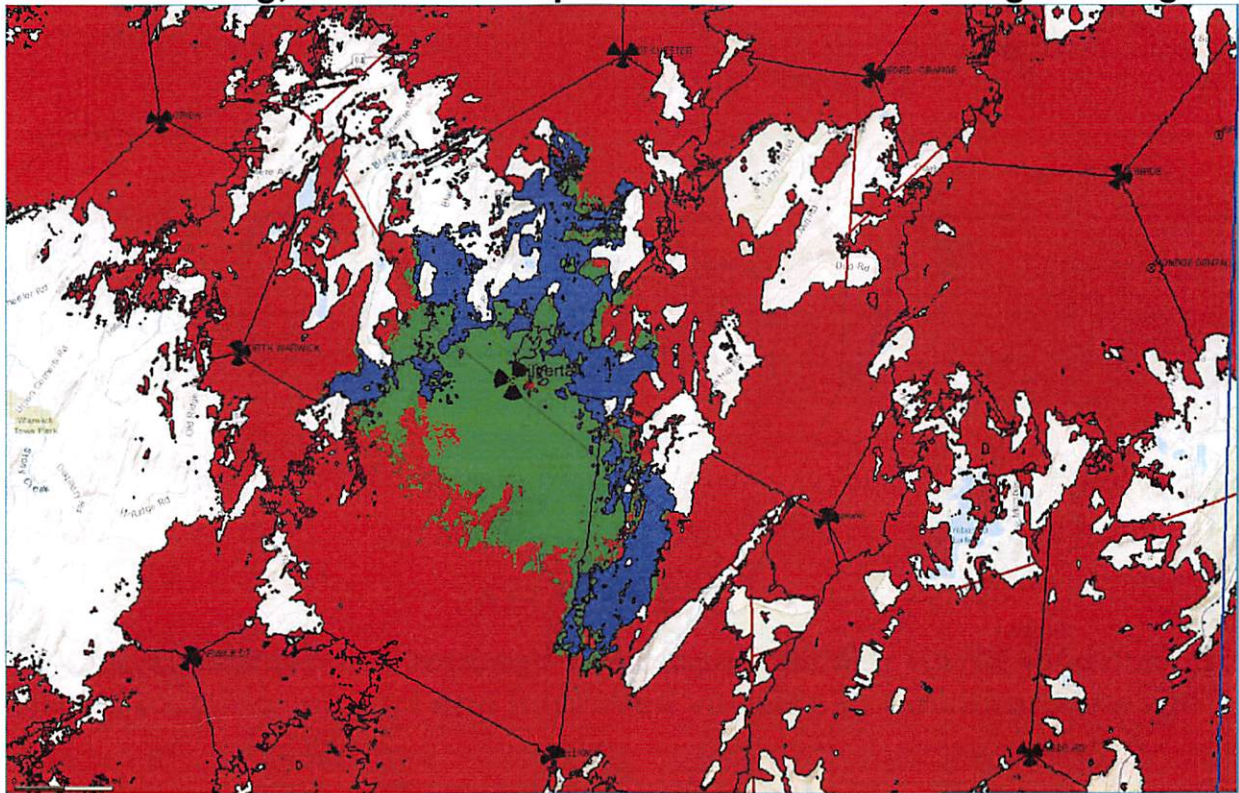


**TAB 3**



### ATTACHMENT 3a

#### Verizon Existing and Proposed Coverage (700MHz RSRP -95dBm) Shows existing, offload and improved variable in building coverage



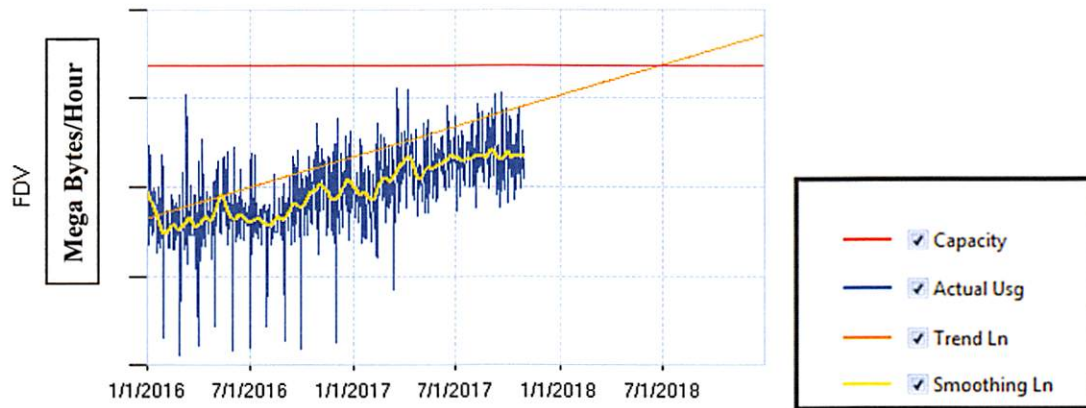
- Existing Coverage
- Proposed Coverage (capacity offload area)
- Proposed Coverage (improved variable in building coverage)

# TAB 4

## ATTACHMENT 2

### VERIZON WIRELESS

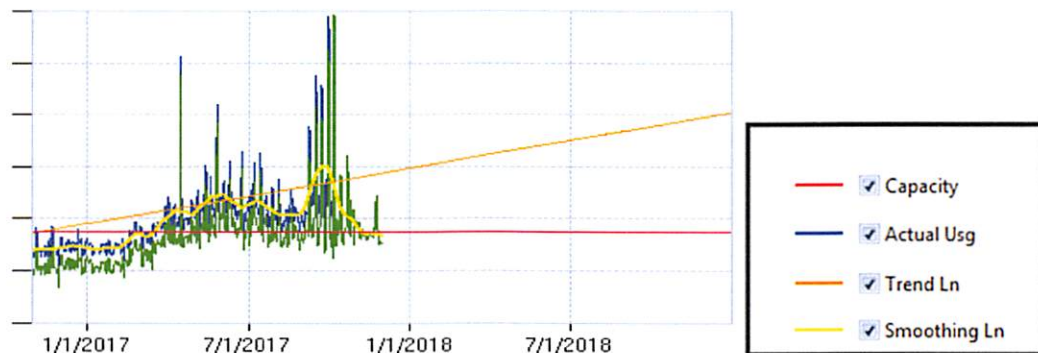
#### FDV DATA CHART – Bellvare Gamma



## ATTACHMENT 2a

### VERIZON WIRELESS

#### ASEU DATA CHART – Bellvare Gamma



**Summary:** This graph shows ASEU (Average Schedule Eligible User). ASEU is a measurement of the loading of the control channels and systems of a given site. The ASEU load is heavily impacted by distant users or those in poor RF conditions.

The blue line represents the daily data use on the **Gamma** sector of the **Bellvare** site. The orange line represents a projection based on the last year's usage to show the projected usage for the upcoming year. The red line is the limit where the sector reaches exhaustion and service significantly degrades. At the point in time where we see the blue or orange lines reach or exceed the red line is when service quickly degrades as usage continues to increase.

# TAB 5



## ATTACHMENT 5

### VERIZON WIRELESS

### PARCELS IDENTIFIED & INVESTIGATED

