STATE OF VERMONT
PUBLIC UTILITY COMMISSION

Case No. 22-2120-PET

Petition of Industrial Tower and Wireless, LLC	)
for a Certificate of Public Good,	)
pursuant to 30 V.S.A. § 248a, authorizing	)
the construction of a wireless telecommunications	)
facility in Enosburgh, Vermont.	)

SUPPLEMENTAL PREFILED TESTIMONY OF KEVIN DELANEY

ON BEHALF OF INDUSTRIAL TOWER AND WIRELESS, LLC

August 12, 2022

Summary:

Mr. Delaney's supplemental testimony will address contentions raised in comments and Motions to Intervene filed by members of the public, the Northwest Regional Planning Commission and the Department of Public Service.

Q1. Please describe the services that Industrial Tower and Wireless, LLC ("ITW") is seeking to provide in Vermont.

A1. ITW is a federally-licensed carrier that has been authorized to provide two-way communications to consumers using an inter-connected network of "cells" that will eventually encompass large areas of the State. *See* Exhibit KD-8 (Federal Communications Commission ("FCC") Licenses). ITW has only recently begun its siting activities in Vermont. We have received Certificates of Public Good ("CPGs") for facilities in Fairfax and Eden and is pursuing CPGs for facilities in Enosburgh and Ira. After we secure the necessary real property rights, ITW will be applying for more facilities in the near future. Consumers of ITW's services include private citizens, business operators and emergency service providers. Our services include voice calling, text messaging and GPS integration for vehicle tracking.

Q2. Please describe how ITW provides the services described above.

A2. ITW operates in the 896-901 and 935-940 MHz frequency spectrum as part of the "Enhanced Specialized Mobile Radio" ("ESMR") service licensed by the FCC. As such, ITW's signals behave nearly identically to the "cellular" or 800 MHz spectrum services offered by better-known carries such as Verizon, AT&T and T-Mobile. This similarity includes the constraints on reception and transmission imposed by topography and vegetation. In other words, like its competitors, ITW's operations require clear lines of sight between the mobile or portable user and the facility.

Q3. What are ITW's specific objectives for this Project?

A3. The objective of this project is to interconnect this site with two previously approved ITW sites to the south located in Fairfax and Eden. The ultimate goal of this network of sites is to provide reliable wide-area ESMR services to the northern part of Vermont and ultimately

with the goal to provide statewide coverage connecting with existing ITW sites that are providing coverage in Massachusetts and New Hampshire.

Q4. How did the constraints and objectives described above affect ITW's choice of height for the tower ("Tower") portion of its proposed facility?

A4. ITW must select a height for its antennas that will allow such clear lines of sight. In this case, ITW conducted propagation analyses that concluded that a Tower height of 140' above ground level ("AGL") is the minimum necessary to provide optimal coverage on its network in the Enosburgh area. ITW's objectives for this site include coverage along the Vermont Route 108 corridor and connecting to the south along Vermont Route 15 where ITW's approved Fairfax tower is being constructed. If ITW were required to reduce the height of its proposed tower as the Northwest Regional Planning Commission ("RPC") appears to suggest, we could no longer meet those objectives. *See* Supplemental Propagation Maps attached as Exhibit KD-10.

Q5. How does co-location relate to the height chosen by ITW for the Tower?

A5. As stated above, ITW has chosen the 140' height for the Tower based on its needs for sufficient signal propagation to achieve its coverage objectives. However, ITW also recognizes the importance of co-location to avoid a proliferation of towers. Therefore, we designed the Tower, including its foundation, structural components and adjacent "compound," to accommodate up to five (5) additional wireless communications carriers. Any reduction in height of the Tower will reduce the number of carriers that could co-locate on it.

Q6. Describe ITW's interactions with the St. Albans Police Department regarding co-location of their equipment on the Tower.

A6. After receiving comments from first responders in the area concerning gaps in their coverage, ITW was directed to the St. Albans Police Department ("Police Department"), which coordinates the provision of emergency services throughout Franklin County. In response, the Police Department stated its commitment to co-locate its antennas at the 140' level of the Tower. Letter of Chief Maurice Lamothe, dated August 8, 2022 (Exhibit KD-7). As Chief Lamothe observed:

> The installation of the tower would be a valuable improvement for public safety communications for the following towns: Bakersfield, Enosburg, Berkshire and South Richford for Police, Fire and EMS.

Id. Expanding on his observation and stating the Police Department's interest in co-locating its equipment on the Tower, Chief Lamothe further observed:

> These areas have been known to have dead spots for our current radio system while dispatching emergency calls. We would want to install our equipment at the top, 140 feet, of the tower to get the best results for emergency dispatching. This proposed tower site would improve the radio communication as we move forward in upgrading our service to the area.

Id. In further communications with the Police Department, ITW stated its commitment to allow the Department to place its equipment on the Tower rent-free.

Q7. What efforts has ITW made to secure the commitment of other wireless carriers to co-locate on the Tower?

A7. We have reached out to the following carriers: AT&T, Dish Network, T-Mobile, US Cellular and Verizon**.** At this point, none of those carriers has been willing to commit to co-locate its antennas and other equipment at the Tower. That is not surprising. It is standard operating procedure in the wireless communications industry for carriers not to make such commitments until a facility has received all of its permits and approvals. I have worked in this industry for over 30 years.

At the same time, my experience has taught me that, once a facility such as the one we are

proposing in Enosburgh is permitted, carriers will commit to co-locate on it.

Q8. How would a reduction of the Tower's height impact the potential for further co-location?

A8. The same experience teaches that if the Tower's height were to be reduced in the permitting process, it would become a less attractive option for those competing carriers. In fact, if the height of the Tower were reduced , those other carriers would not be able to reach their nearest sites without gaps and might well decide to build their own towers, which would contravene the public interest.

To illustrate this phenomenon, I conducted propagation studies using my knowledge of the location of the sites in the Enosburgh area used by AT&T and Verizon.[1] I compiled the maps submitted as Exhibit KD-9 using the 1900 MHz spectrum, in which both AT&T and Verizon are licensed, with a starting centerline height of 122.5' AGL and then descending in 20-foot intervals to 62.5' AGL. The maps show that the Tower would stop providing useful coverage with AT&T or Verizon antennas mounted at 102.5' AGL because of intervening terrain and vegetation in the area.[2]

ITW and the Police Department would place their antennas at the top of the Tower. ITW must have its 13' long receive antenna mounted at the top centerline on the Tower pointing downwards. *Id.* There must also be vertical separation between the tip of that antenna (reaching down to 107' AGL if the Tower height was reduced to 120' AGL) and the uppermost part of the first commercial co-locator's antennas. Those antennas are typically 8' long, so the highest centerline at which they could be mounted to avoid interfering with

[1] These maps are based on sites where each individual carrier is currently located. The rest of the information is generic, meaning that ITW did not have the exact antenna types, orientations or frequencies used by AT&T and Verizon.

[2] The white space between the yellow and blue projections from the site location indicates a gap in coverage.

ITW's antennas would be 102.5' AGL. Hence, if the overall height of the Tower was reduced , potential co-location opportunities for AT&T and Verizon would be severely compromised.

Finally, ITW will construct the Tower regardless of whether it has commitments from other wireless providers. A statement to the contrary made by counsel at a meeting of the RPC that I was not able to attend was erroneous.

Q9. Does this conclude your Supplemental Prefiled Testimony?

A9. Yes.

Exhibits to Supplemental Prefiled Testimony of Kevin Delaney

Exhibit KD-7	St. Albans Police Department Letter of August 8, 2022
Exhibit KD-8	FCC Licenses Held by ITW
Exhibit KD-9	Propagation Maps for Generic AT&T and Verizon Coverage
Exhibit KD-10	Supplemental Propagation Maps for ITW