STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL

IN RE:

APPLICATION OF OPTASITE TOWERS LLC AND OMNIPOINT COMMUNICATIONS, INC. FOR A CERTIFICATE OF ENVIRONMENTAL COMPATIBILITY AND PUBLIC NEED FOR THE CONSTRUCTION, MAINTENANCE AND OPERATION OF A TELECOMMUNICATIONS FACILITY AT 1 DEERFIELD LANE, ANSONIA, CONNECTICUT

DOCKET NO. 340

Date: SEPTEMBER 10, 2007

PRE-FILED TESTIMONY OF SCOTT HEFFERNAN

Q1. Please summarize your professional background in telecommunications.

A. My career in the wireless industry has spanned the past eleven years. For the past two years, my responsibilities as a contractor for T-Mobile have included the design and integration of the T-Mobile wireless network. Prior to this period, I was responsible for the design, integration, optimization and management of network buildouts for commercial wireless carriers, including Nextel, AT&T Wireless, Cingular, and Voicestream (T-Mobile's predecessor). Additionally, I have been involved in network design for government entities such as the Department of Homeland Security, Department of the Army, Department of the Navy, and the United States Marine Corps.

Q2. What does your testimony address?

A. The purpose of my testimony is to provide information relating to T-Mobile's existing network in this area of the state and to describe the need for a

proposed facility in the area. This includes information on the general design of T-Mobile's network and the technical constraints in selecting proposed facilities.

Q.3. Please describe T-Mobile's wireless network in Connecticut.

A. T-Mobile's predecessor entities began building a wireless network to provide PCS service in Connecticut in the mid 1990s. T-Mobile is licensed by the Federal Communications Commission to provide PCS service using frequencies in the 1900 MHz range. T-Mobile operates approximately 550 sites in Connecticut. Current efforts are directed to providing signal to areas without coverage and meeting demand for additional capacity within areas already served. Each new site must be chosen to meet the need for coverage and/or capacity without creating RF interference among sites.

Q4. What requirements does the nature of wireless technology place on T-Mobile's selection of cell site locations?

A: Like all personal communications service providers, T-Mobile's wireless network is based on the principle of frequency reuse. Cell site locations must be chosen to provide for sufficient signal strength overlap to allow call hand-off between cells without creating unnecessary duplicative coverage and frequency interference. Terrain variations and local land use policies and development further limit cell site locations.

Technological advances in service, such as the availability of data and video services through customer handsets, are also significant factors in system

development. Increased customer demand and expectations resulting from those advances drive the need for additional sites.

T-Mobile's required lower limit threshold is -84 dBm, which is expected to provide reliable in-vehicle coverage. A higher threshold level of -76 dBm is the minimum required to provide reliable in-building coverage. At levels below the -84 dBm threshold, signal degradation would be expected to result in areas of unreliable service to T-Mobile customers for voice and data services. In addition, levels below -84 dBm would adversely affect T-Mobile's ability to provide reliable E-911 services as mandated by the federal government.

Q5. Please describe T-Mobile's need for the proposed site.

A. The interrelationship between the proposed site and T-Mobile's existing system (including recently approved but not yet on-air sites) is depicted in the propagation plots included in Exhibit G of the Application. As shown, this proposed site is needed primarily to provide new coverage along Route 313, Peck Hill Road, Northrop Road and the surrounding area.

Q6. How did T-Mobile analyze the proposed sites?

A. T-Mobile's RF engineers first utilized propagation prediction tools to determine the potential effectiveness of the proposed locations in meeting the identified coverage need. That analysis took into account the coverage objective, T-Mobile's existing on-air sites in this area and the terrain that exists in

this area. The analysis revealed that an antenna center line of 177' would allow T-Mobile to achieve the coverage objective levels in this area.

In order to further refine and determine the minimum height required to achieve the coverage objective, T-Mobile then conducted a drive test. The drive test allowed T-Mobile to gather accurate signal strength measurements along the target routes at various heights.

The drive test revealed that an antenna center line of 177' would allow T-Mobile to achieve the coverage objective levels in this area. At 167' and below, the coverage starts to break apart and fall below the T-Mobile minimum required threshold of -84 dBm. T-Mobile users would be likely to briefly experience poor service quality in this area.

Q7. Please summarize the basis for the height of this proposed facility

A. Based upon the results of the analysis conducted for the proposed Ansonia facility, the minimum height required to fully cover the intended coverage objective is 177' AGL. At heights below 177' AGL, the coverage within the target areas along Peck Hill Road, Route 313 and the surrounding area starts to fall below the required minimum T-Mobile coverage threshold of -84 dBm. A minimum height of 177' at the Site to locate T-Mobile's antennas, will allow T-Mobile to provide adequate coverage within the targeted portion of Litchfield Road and the surrounding area.

09/07/07

Date

Scott Heffernan

Subscribed and sworn before me this 7th day of September, 2007.

By: Tina Codella
Notary

TINA CODELLA
NOTARY PUBLIC
My Comm. Expires 12/31/07