STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL

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 52 STADLEY ROUGH ROAD, DANBURY, CONNECTICUT

DOCKET NO. 366

FEBRUARY 19, 2009

APPLICANTS' RESPONSE TO THE CITY'S POST HEARING FILING OF THE "COMI SOLUTION"

The City has taken numerous inconsistent positions in this Docket regarding the need for and any alternatives to wireless siting in the northeast area of Danbury. The City and a group of its residents initially stated their belief that there was no need at all for one new wireless site in this area of Danbury and that wireless coverage was acceptable based on their informal "call tests". This despite expert analysis privately conducted by Mr. Graiff, a professional engineer with RF credentials, who was hired and then fired by the City without an opportunity for his professional opinion to be offered to the Council. Now, in a stunning shift, the City actually suggests through Mr. Comi, its newly hired siting consultant, that numerous new tower sites should be built in the City as the City's "preferred" solution and in comparison to the one tower proposed in this Docket.

Obviously, the City now acknowledges that gaps in coverage exist for T-Mobile and the rest of the wireless industry in this part of the City. Indeed, as detailed in the recent filing by Mr. Comi, the pendulum has swung so far that the City now actually wants the Applicants to explore construction of at least two new towers near other residences in the City and construct numerous new utility poles near still other residences (the "Comi Solution") in order to provide more than optimal coverage and at levels of service even T-Mobile is not looking for in this Docket. It is important to note that the Comi Solution is based solely on his cutting and pasting of T-Mobile's plots and without any technical RF data of his own to present to the Council which would support this purported multi-site solution. Unfortunately, Mr. Comi's lack of radiofrequency engineering expertise as required to evaluate such technical considerations has lead the City down a path that is not technically supportable.

Interestingly, the Comi Solution never even addresses the 150' tower that had been proposed at the Danbury Water District property on Peck Road (Withdrawn Docket 357) and which was leased by the City to a tower company, a location which is across Route 37 and around 1000' from the Kaufman water tank that Mr. Comi now suggests. Regardless, both of these locations in the northwestern part of the City along Route 37 would be redundant with T-Mobile's existing network and sites in that part of the City that already exist along Route 37. Similarly, the PAL site recently suggested by the City with an even taller tower would be redundant with much of T-Mobile's network to the south and not provide sufficient coverage to the north. Instead of suggesting yet a third tower as part of his multi-site solution, Mr. Comi throws out DAS as some

kind of final piece of the puzzle. As set forth in the annexed reports by SBA (the parent company to Optasite) and the plot by T-Mobile as prepared by their experts in radio frequency engineering, the "Comi Solution" is not viable for any number of technical reasons.

Simply put, the City's "preferred solution" is a multi tower solution (8 to 10 by their own count as a combination of new towers and new utility poles in ROW) which is not something T-Mobile and the Applicants would pursue. Moreover, other than attempting to satisfy one neighbor that is not a party or intervenor in the Docket, it is not clear why the City prefers as its own siting policy the construction of numerous tower sites in other residential areas when one such site as proposed in this Docket will do the job and provide appropriate levels of service in the northeastern area of Danbury. Indeed, while Mr. Comi cites local setback guidelines and other safety concerns, his report and testimony have no evidence to support the conclusions he attempts to reach with regard to the location and safety of the tower proposed in this Docket.

More perplexing is Mr. Comi's density analysis of the number of homes within 1000 feet of the proposed sites. It's not the number of homes within 1000 feet, but those with views that are typically evaluated in qualitatively trying to understand the potential for environmental impacts. Only 14 residential properties will have partial above the tree line views of the tower proposed by the Applicants as compared with the wide open views at the end of Candlewood Lake presented by the PAL site and numerous homes that would have views of a tower at the Kaufman water tank location. The City itself approved a 150' tower on its own property (Withdrawn Docket 357) which alone had a significantly greater number of views from residences as compared with the tower in this Docket.

The Applicants respectfully submit that their one tower solution in this area of the City with larger institutional properties (two churches and a public school on larger parcels) with fewer views from residential properties is more appropriate in balancing need with environmental impacts than the "Comi Solution" which should be rejected on technical grounds alone and irrespective of the cumulative environmental impacts such a solution would present.

CERTIFICATE OF SERVICE

I hereby certify that on this day, an original and twenty copies of the Applicants Responses to the City of Danbury's Post-Hearing Filing of the Comi Testimony were served on the Connecticut Siting Council by hand with an electronic copy sent via email and copy served by hand to:

City of Danbury
Laslo L. Pinter, Esq.
Robin L. Edwards, Esq.
City of Danbury
Office of the Corporation Counsel
155 Deer Hill Avenue
Danbury, Connecticut 06810
(203) 797-4518
R.Edwards@ci.danbury.ct.us
L.Pinter@ci.danbury.ct.us

Dated: February 19, 2009

Christopher Fisher

cc: Charles Regulbuto
Hans Fiedler

Danbury Site Review
– Chris Fagas, Director of RF Engineering, SBA Advanced Wireless Networks

I have been asked to step in and review some coverage alternatives that were suggested by the City of Danbury for the Stadley Rough Road area, and provide my professional opinion. In particular I have been asked to evaluate the Optasite/SBA tower proposal and compare it with an alternative technology called DAS (Distributed Antenna Systems). While I have not been involved with the proposed tower site from the beginning, I do have a very broad background in all types of wireless coverage solutions. In addition to working as an RF Engineering Professional for Cellular and PCS Wireless Operators for over ten years, during which time I presented RF Engineering testimony for many tower proposals to the Connecticut Siting Council, I have also spent the past four years specializing on designing, building, and operating DAS Networks for a Wireless Infrastructure Provider, in support of Cellular and PCS/AWS Wireless Operators. I serve in that role currently for SBA, the parent corporation to Optasite.

The area in question in Danbury is hilly with a ridgeline near Candlewood Lake, and with very high wireless subscriber density. To be sure, the Federal Road and US Route 7 corridors have very high vehicular traffic coupled with a large number of hot spots/establishments where large numbers of subscribers congregate. The residential areas to the north clearly have a great need for excellent wireless connectivity on several fronts. There is a clear need here for high density voice communications, highly advanced data/smartphone communications, and life-safety Enhanced 911 location communication services and the need of wireless carriers to serve this area of Danbury is fairly evident.

The proposed tower site provides coverage over approximately a dozen square miles from a single point on the ridgeline. The proposed tower would provide a substantial amount of wide area coverage for T-Mobile and other wireless carriers. This allows for an efficiency of design, from both an engineering and a cost standpoint. Essentially, a macrocell makes sense in this area of Danbury.
DAS technology typically used today requires distributing a multitude of low height antennas throughout a coverage area and placing them atop common existing physical supports such as utility poles. The definition as provided by the PCIA DAS Forum and Wikipedia is:
"A Distributed Antenna System (DAS) – a network of spatially separated antenna nodes connected to a common source via a transport medium that provides wireless service within a geographic area or structure. DAS antenna elevations are generally at or below the clutter level and node installations are compact."

In a DAS system, each of the antenna points needs to also have dedicated equipment boxes that are interconnected with fiber optic cables and run back to a central Base Station Equipment Shelter, or Base Station Hotel. The RF from the Base Station(s) is converted to light and distributed by fiber optics to the antenna points where it is converted back to RF for the over-the-air handset wireless interface, and the opposite takes place on the reciprocal path from the handset to the Base Station.

SBA Advanced Wireless Networks, LLC One Research Drive, Suite 200C Westborough, MA 01581 Tel: 508-799-2460 Fax: 508-471-1399
www.sbasite.com

In this challenging terrain in Danbury it would absolutely be necessary to situate the antenna points atop the utility poles so that they each provide some reasonable coverage, versus locating them in the communication space halfway up the existing utility poles (which would dramatically increase the number of required antenna points). Even at the pole-top height there would still be a need for at least a couple dozen to several dozen antenna points to replicate the coverage of the aforementioned single ridgeline tower point. In Connecticut, NU does not allow any of their electric companies (e g , CL&P, PSNH) to allow pole-top attachment of antennas. This rules out using the existing utility poles over approximately 80 percent of the Danbury coverage area where utility poles are situation for construction of a DAS Network. Of note, within the residential areas of this part of Danbury, 20 percent has no existing above grade distribution network which would require new poles to be installed regardless of NU's policy

DAS Applicability Summary: Lacking pole-top attachment on existing NU/CL&P utility poles essentially rules out a DAS solution for approximately 80 percent of this coverage area. Furthermore, there are no utility poles at all in the remaining 20 percent of the coverage area (near and north of the proposed tower). These new utility pole installations would be even much more extensive than just those needed for attaching the antenna points to, as additionally the fiber optic and power cables would need to be supported and strung as well between all of the antenna points on new intermediate utility poles, at a support rate of at least 20 new utility poles per mile. All of this is very invasive and inefficient compared to a single tower solution. As such, having reviewed the area and coverage objectives, we do not consider DAS a viable alternative let alone[illegible] and environmental considerations of any DAS.

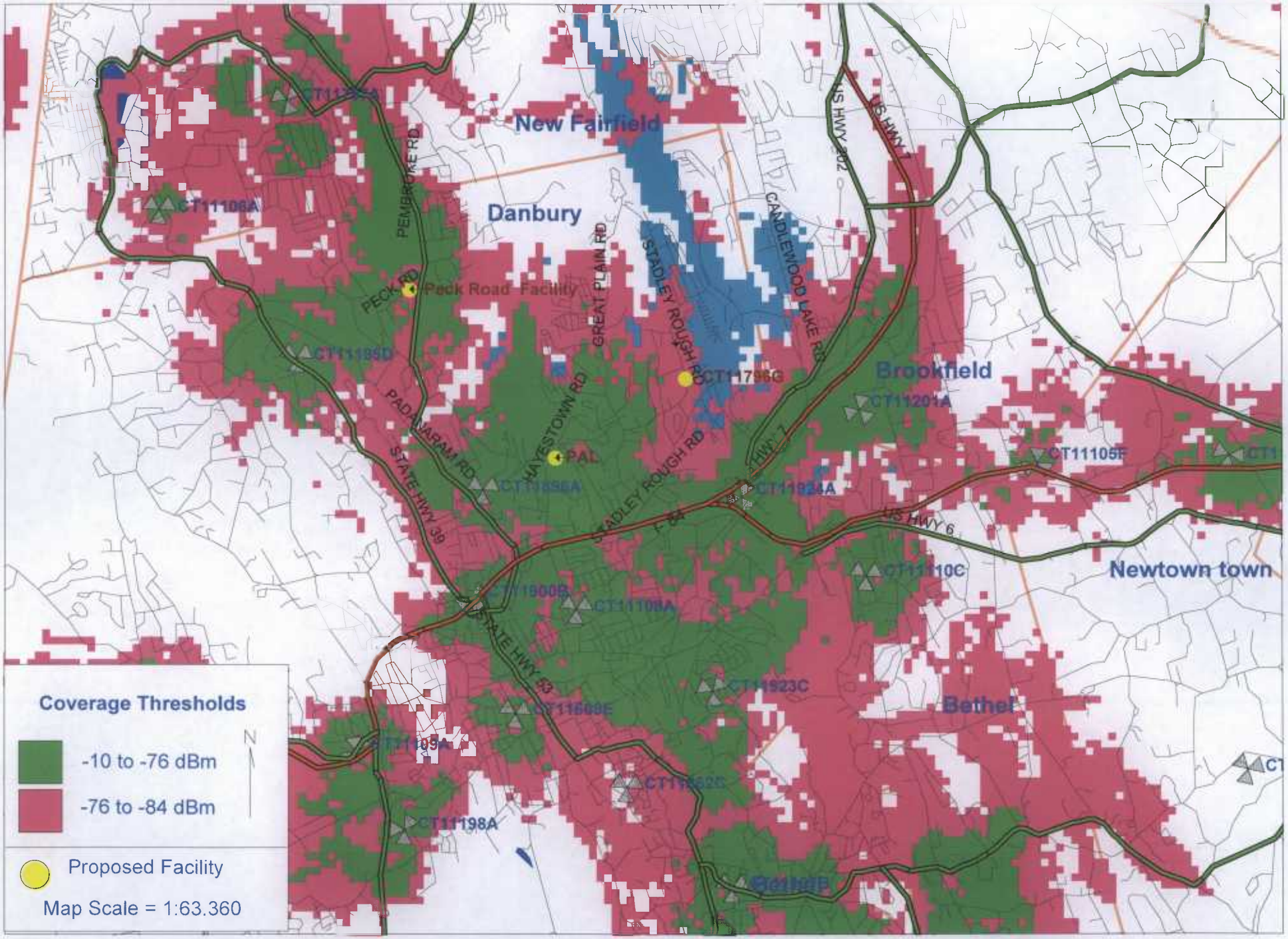
Chris Fagas, Director of RF Engineering

State of Massachusetts, ss.
County of Middlesex

On this 19th day of February , 2009, before me, the undersigned notary public, personally appeared Chris Fagas, proved to me through satisfactory evidence of identification, which were personally known to me to be the person whose name is signed on the preceding or attached document, and acknowledged to me that he signed it voluntarily for its stated purpose.

Notary Public
AMANDA HAGER HOLOPAINEN
MY COMMISSION EXPIRES 4/9/2010

Chris Fagas is the Director of RF Engineering for SBA Advanced Wireless Networks, a wireless carrier's carrier that provides infrastructure solutions to the Cellular, PCS and AWS industry. Prior to the past four years that Chris has been concentrating on developing DAS Networks, he had extensive experience developing Traditional Macro and Micro Networks in several Senior RF Engineering roles with AT&T Wireless, Nextel Communications, and as an Independent RF Engineering Consultant. He has dedicated the past fifteen plus years of his career to improving the customer experience of wireless subscribers in the New England and New York Metro region, while accommodating community and regulator interests. Chris is a graduate of the University of Rhode Island, a member of the Institute of Electrical and Electronics Engineers and its Antenna and Propagation Society, the Radio Club of America, the American Radio Relay League, and the Quarter Century Wireless Association.



Differential Plot Showing T-Mobile Existing On air Sites including the City Of Danbury
P.A.L. Location @ 147' and the Wireless Edge Peck Road Location @ 147'
(light blue represents areas covered by the proposed Stadley Rough rd site that remain uncovered)