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 58 MONTANO ROAD/ 618 NEIPSIC ROAD IN THE TOWN OF GLASTONBURY, CONNECTICUT

DOCKET NO. 359

Date: JUNE 16, 2008

INTERROGATORY RESPONSES TO INTERVENOR KARL WAGENER FROM CO-APPLICANT OMNIPOINT COMMUNICATIONS, INC.

Co-applicant Omnipoint Communications, Inc. ("T-Mobile") submits the following responses to the interrogatories from intervenor Karl Wagener in connection with the above captioned Docket.

1. In your response to the Interrogatories filed by the Siting Council, Exhibit 4 contains propagation maps at 107 ft AGL and 117 ft AGL. Regarding Site A:

a. Why does the 107 ft AGL propagation map show a more robust signal in a large area to the west of the tower when compared to the 117 ft AGL?

A. The proposed site is modeled using a highly focused directional antenna pattern. Typically as the antenna is raised in elevation, more energy is focused toward the horizon and pulled away from some of the immediate lower lying areas. This does not mean that we would be taking coverage away completely from certain areas, however reducing the receive level to some degree. By reducing the receive values only slightly in some areas, this may result in the area falling into a different coverage threshold range with respect to the plots. This will show up as a different threshold color, however may only be a very slight change in actual receive signal level.

Also a reduction to 107 ft., combined with the terrain in this area results in lost handoff to CT11248A which will result in dropped calls, inconsistent coverage and unreliable E911 service. T-Mobile's goal is to provide reliable service to the entire coverage area, not just improved signal to one pocket of Route 2.

b. At 107 ft AGL, the only apparent gap along Route 2 appears to be an approximately 1700-foot length east/southeast of the proposed Site A.

i. Please provide a more refined map of this area, with contours of coverage rather than "blocks."

A. T-Mobile has submitted propagation plots utilizing 30 meter averaged bins (blocks). In contrast to contour plots, which will only depict the outer limits of any defined coverage over a given serving cells area, the block representation will allow for the user to more easily distinguish features such as terrain obstructions and transition points between differing coverage thresholds. A modeled plot using contours would not be a more refined or accurate map of this area, as contour modeling does not take into consideration the unique topographical features present in each search area. Bin or block propagation plots are the industry standard in Connecticut (and before the CT Siting Council) which is likely attributable to their accuracy, applicant and regulator standardization, and the topography of Connecticut.

ii. What is the actual signal strength in this area?

A. The existing T-Mobile signal strength in this area ranges from -85 dBm to -110 dBm.

iii. Would the result of this signal strength be actual dropped calls, or just weak reception?

A. Due to signal quality degradation and the inability to guarantee a clean signal below T-Mobile's minimum design threshold of -84 dBm, the transition would be from clear reliable calls to garbled indistinguishable transmissions and then to dropped calls. Below -84 dBm, T-Mobile cannot guarantee reliable service for all transmission types from voice calls, data sessions and E-911 emergency calls and services.

v. Is there any need to plan for in-building reception in that small area, given the development restrictions on land on both sides of Route 2 in that area.

A. In a design environment such as this one, T-Mobile's objective is to design for its minimum requirements for in-vehicle traffic which is -84 dBm. T-Mobile does examine the areas that will have a high enough concentration of coverage from the proposed facility to increase in building service, however above this, there is no such additional need established by T-Mobile to provide additional in building service outside of that covered by the proposed facility.

i. Has the applicant reviewed the Glastonbury Plan of Conservation and Development for restrictions such as conservation easements, wetlands, watercourses, and other restrictions?

A. See Optasite's Responses Dated June 13, 2008

c. Please provide coverage estimates of that area at 3-foot AGL tower height increments, beginning at 102 feet.

A. For a facility of this height T-Mobile utilizes 10 foot increments as its standard increment value when analyzing tower facilities. As the RF engineer will testify, when dealing with modeled propagation analysis the slight variations produced by the tuned propagation model typically only become noticeably significant when analyzed in 10 foot increments (followed by 20 foot increments on larger towers / structures usually over 200 feet in height; the taller the facility the larger the propagation plot increment). Composite footprint from that proposed facility would not show any visible changes at 3 foot increments).

The Co-applicants have already provided propagation plots as requested in this interrogatory for Site A, only at 10 foot increments. See Co-applicant's Interrogatory Response to the Connecticut Siting Council, Exhibit 4 (propagation plots at l07 AGL and 117 AGL). After discussions with the Attorney Knapp, it was agreed that T-Mobile would prepare a propagation plot at 97 ft AGL to respond to the above interrogatory. Said plot is attached hereto.

<u>Given the closeness of Site A to Site B</u>:

2. Why is the tower at Site A proposed to be 34 feet higher in total elevation?

A. The overall AMSL height of the antennas proposed at Site A is 35 feet higher in total elevation due to the ground elevation and minimum height required to cover the objective area. It is very unreliable to compare the AMSL values of two geographically dispersed locations as these values do not tell anything pertinent to the terrain conditions that surround and are in between the two locations and the coverage objective. These values will only give an absolute answer to which location is higher in elevation with reference to an entity that is not relatively close to either candidate (the ocean).

a. What are the specific characteristics of the topography (or other factors) that require the additional elevation at Site A?

A. Site A's minimum AGL height is based largely upon the fact that it is located close to a ridge line and constrictive terrain very close to the site that requires a certain height to clear. In this instance the minimum height required to clear this terrain obstruction is 117' AGL. Site B does sit at a lower AMSL

elevation, however it is in a different geographic location as compared to Site A, slightly removed from some of these terrain features where it has the ability to provide potential coverage around some of the constrictive terrain that is close to Site A at a given height. In the instance of Site B, this minimum height is 127 feet AGL to provide coverage to the coverage objective.

3. The propagation maps show that the combination of an antenna at the 1616 New London Turnpike location in conjunction with a smaller tower at Site A would provide equivalent coverage to the proposed tower.

a. What would be the minimum required height for antennas at Site A if antennas were also put on the existing tower at 1616 New London Turnpike?

A. The minimum height required at Site A in conjunction with the 1616 New London Turnpike tower at 150 feet AGL is 107 feet AGL. This however does create an extreme case of inefficient site design from a coverage standpoint. By covering a particular corridor in this manner, the coverage from the New London Turnpike site would be required to "leap frog" existing coverage from T-Mobile's CT11248 to the east to provide less than a half mile of coverage to a small portion of the primary Route 2 corridor that is T-Mobile's coverage objective. This results in redundant coverage to parts of T-Mobile's existing footprint in the area and causes a very inefficient handover environment along this section or Route 2, most likely resulting in excessive handovers back and forth between serving sites in a small area ("ping-ponging") which dramatically increases the likelihood of dropped calls or poor service on all services including E-911 calls from this stretch of road.

b. What would be the minimum required height for antennas at Site B if antennas were also put on the existing tower at 1616 New London Turnpike?

A. The minimum height required at Site B in conjunction with the New London Turnpike tower at 150 feet AGL is 117 feet AGL with the same design concerns as outlined in answer 3a.

c. Including the costs of rental of space at the 1616 New London Turnpike location, what would be the cost differential of building the minimum required height tower at Site A in conjunction with an antenna at the 1616 New London Turnpike location?

A. T-Mobile cannot opine as to the cost of building the tower at Site A or cost of rental space at the New London Turnpike location. It can however, indicate that because this scenario would require 2 sites to cover the same area as only 1 facility ate either Site A or B, and it would double its equipment and construction

costs of approximately $145,000 to $175,000 per site (the costs associated with co-locating on an existing tower).

d. Including the costs of rental of space at the 1616 New London Turnpike location, what would be the cost differential of building the minimum required height tower at Site B in conjunction with an antenna at the 1616 New London Turnpike location?

A. Same response as 3c.

4. Please provide a simulation of a good monopine design at 117, 107, and 90 feet AGL at Site A, and 127, 117, and 107 at Site B.

A. To be provided by Optasite

See Optasite's Responses dated June 13, 2008 for remainder of Interrogatory Responses.

Respectfully Submitted,

By:_____

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Certification

This is to certify that a copy of the foregoing has been mailed, this date to all parties and intervenors of record.

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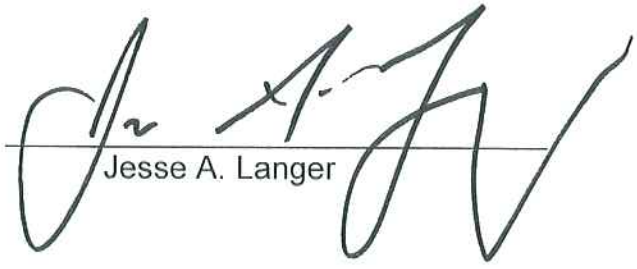

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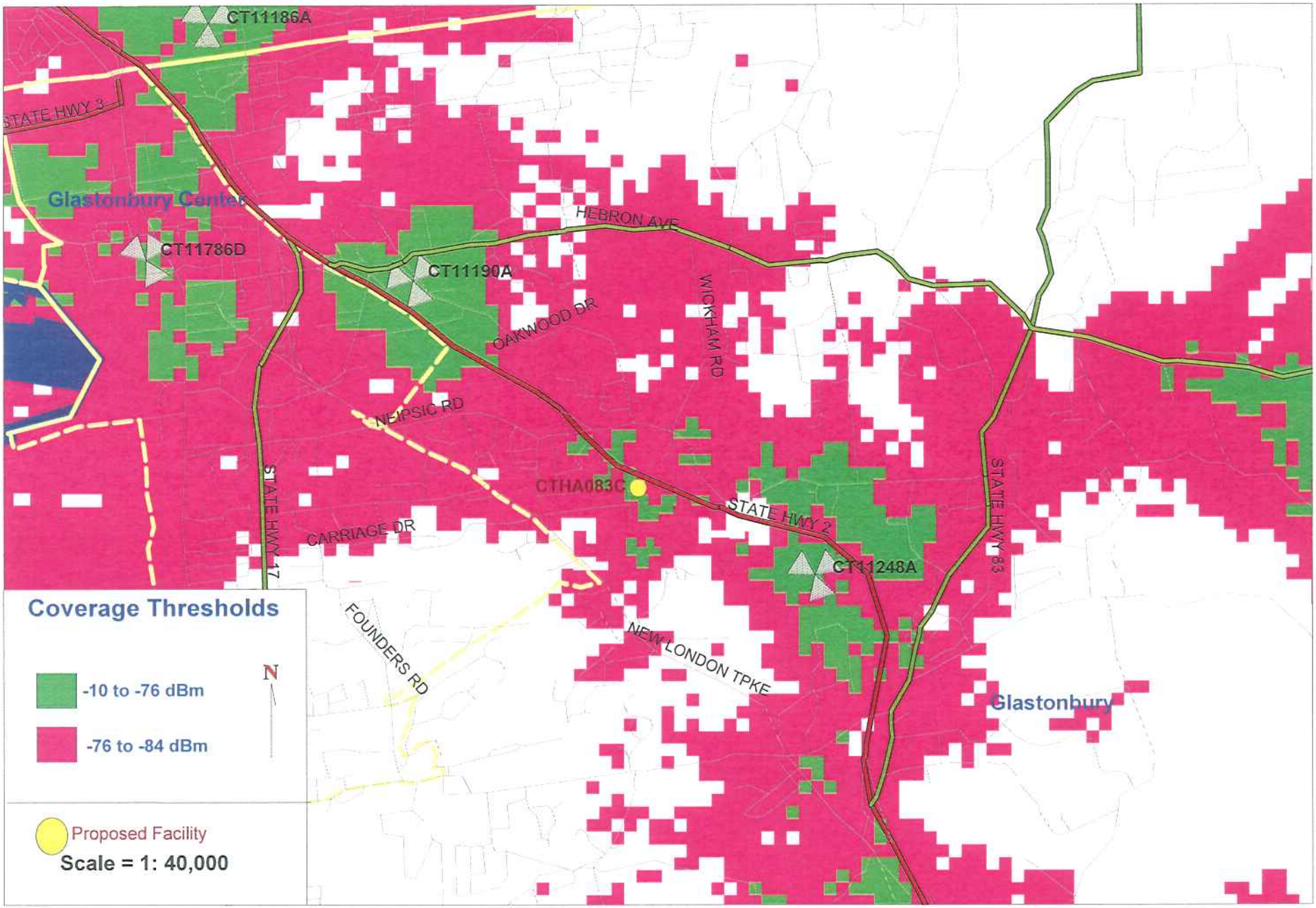
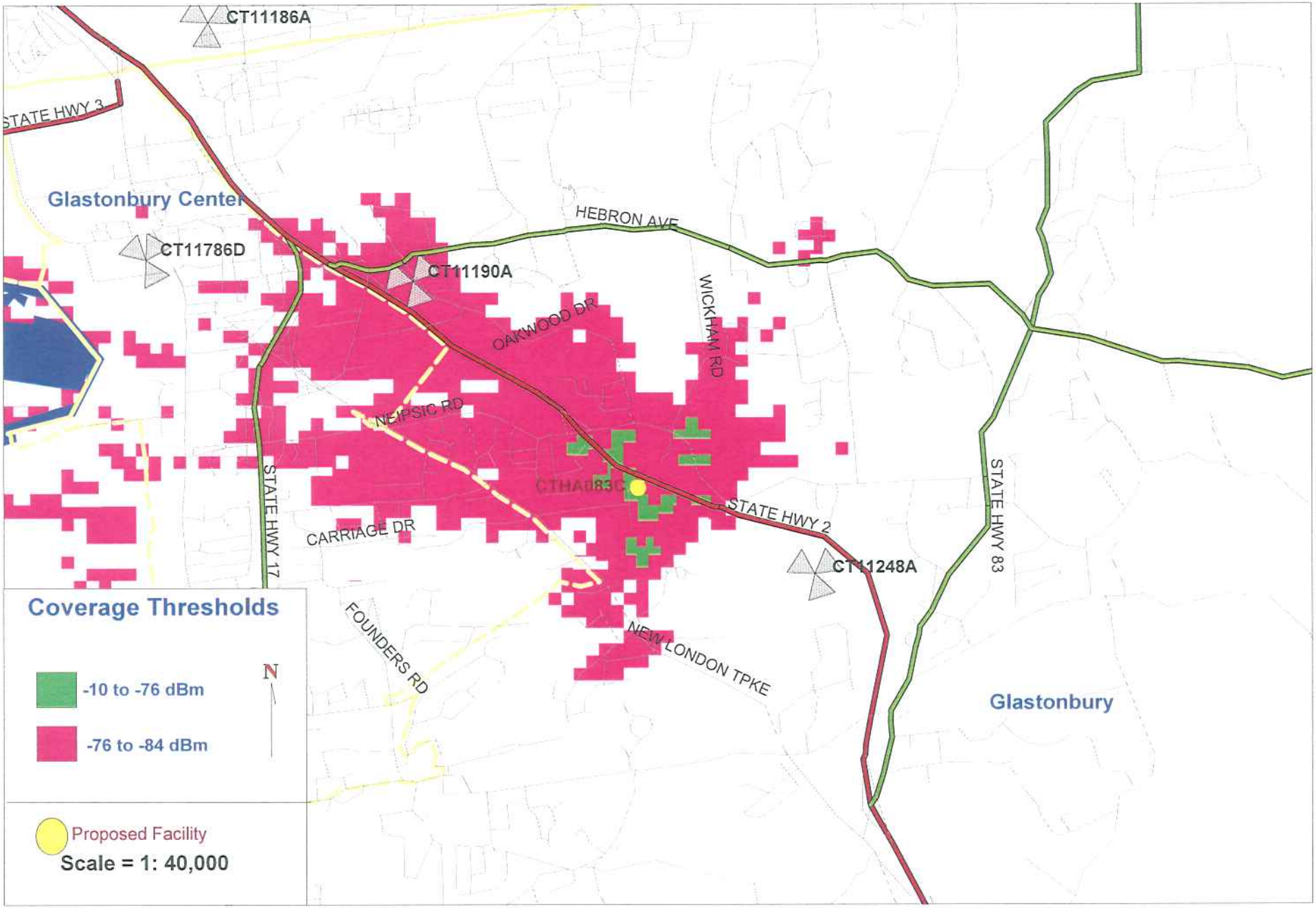


T-Mobile Existing Coverage With CTHA083C @ 97'



T-Mobile Proposed CTHA083C @ 97'