

JESSE A. LANGER

PLEASE REPLY TO: Bridgeport
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December 28, 2010

VIA FEDERAL EXPRESS and ELECTRONIC MAIL

Ms. Linda Roberts
Connecticut Siting Council
Ten Franklin Square
New Britain, CT 06051

***Re: Docket No. 407 – Application by T-Mobile Northeast LLC
for a Certificate of Environmental Compatibility and Public
Need for a Telecommunications Facility at 77-145 Pleasant
Point Road in the Town of Branford, Connecticut***

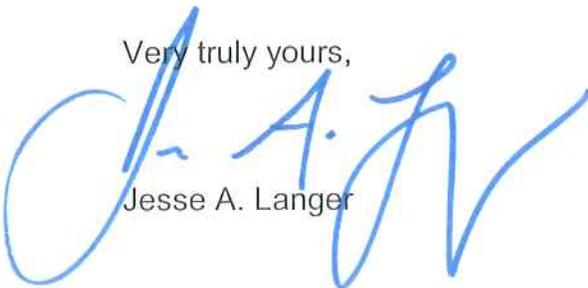
Dear Ms. Roberts:

Enclosed herein please find the following documents filed on behalf of the Applicant, T-Mobile Northeast LLC:

- (1) Original and twenty (20) copies of Responses by T-Mobile Northeast LLC to the First Set of Interrogatories by the Connecticut Siting Council.

Please contact me if you have any questions.

Very truly yours,


Jesse A. Langer

Enclosure

cc: Service List

**STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL**

RE: APPLICATION BY T-MOBILE
NORTHEAST LLC FOR A
CERTIFICATE OF ENVIRONMENTAL
COMPATIBILITY AND PUBLIC NEED
FOR A TELECOMMUNICATIONS FACILITY
AT 77-145 PLEASANT POINT ROAD IN THE
TOWN OF BRANFORD, CONNECTICUT

DOCKET NO. 407

Date: December 28, 2010

**INTERROGATORY RESPONSES TO CONNECTICUT SITING
COUNCIL FROM APPLICANT T-MOBILE NORTHEAST LLC**

The Applicant, T-Mobile Northeast LLC ("T-Mobile"), submits the following responses to the first set of Pre-Hearing Interrogatories propounded by the Connecticut Siting Council in connection with the above-captioned Application.

1. Did T-Mobile receive return receipts for all adjacent landowners listed in Tab G of the application? If not, describe any additional effort to serve notice.
A1 T-Mobile received return receipts from all of the adjacent landowners listed in Tab G of the Application for Certificate of Environmental Compatibility and Public Need ("Application") for the proposed telecommunications facility ("Facility") at Pleasant Point Road, Branford, Connecticut ("Property").
2. What is the distance and direction of the nearest residence to the proposed site? What is the address of this property? Who is the listed property owner?
A2 The closest residence would be approximately 1,375 feet to the west of the proposed Facility (Parcel H08-1-11). The address of that residence is 37 Pleasant Point Road. The listed property owner is Eileen P. Griffin.
3. Provide detail as to why alternative technologies (such as repeaters, microcells and distributed antenna systems) would not provide adequate coverage to the proposed service area?
A3 T-Mobile respectfully interposes the following objection: any requirement or preference for alternative technologies is preempted by federal law; accordingly, any action by a state or local government entity to dictate or

encourage the adoption of alternative technologies interferes with the federal regulatory scheme and is preempted. Without waiver of its rights under federal law, T-Mobile voluntarily provides the following information, responsive to this interrogatory.

There are no feasible, alternative technologies to the proposed Facility that would provide adequate coverage to the proposed service area.

Repeaters would not serve as a feasible alternative technology because of the size of the coverage objective, the geography and the lack of existing structures to mount the repeater antennas. Repeaters are better suited to extend an existing footprint than to create a new coverage footprint.

An Outdoor Distributed Antenna System ("Outdoor DAS") is also not a viable alternative to the proposed Facility. The area to be served by the proposed Facility encompasses a large area, including Leetes Island Road (Route 146) and Pleasant Point Road, south of Interstate 95, as well as the surrounding area and the Amtrak rail line that passes through the area. While it is difficult to respond to this interrogatory with specificity due to the absence of an existing concrete Outdoor DAS plan, based on a review of the existing conditions found in the area where the Facility is proposed, an Outdoor DAS system faces a panoply of technical problems, including, but not limited to:

- (A) The unavailability of a sufficient number of existing utility poles on which to string fiber-optic cable and install Outdoor DAS nodes;
- (B) The general, relatively low height of those utility poles that do exist and might be used for the Outdoor DAS nodes;
- (C) The existing, uneven terrain and mature vegetation, which would prevent Outdoor DAS nodes from providing reliable coverage throughout the area where there is currently a gap in coverage;
- (D) The unavailability of unused fiber-optic cables (dark fiber), to serve as the backbone for the Outdoor DAS network; and
- (E) The need to access easements, enter pole attachment agreements to use the various utility poles, and/or secure conduit agreements, the complexity of which is compounded by the large number of Outdoor DAS nodes necessary to provide reliable wireless service over the coverage area which the proposed Facility is designed to serve.

In designing Outdoor DAS systems, these items and others must be studied before any technical design can be performed. Failure to do so can cause a major flaw in the Outdoor DAS network design relative to coverage and capacity. It is for these reasons that Outdoor DAS networks are typically deployed only in limited circumstances where a traditional macro-cell site cannot provide reliable coverage and an Outdoor DAS system is shown to be a better alternative. Furthermore, today's wireless systems provide enhanced communications beyond just voice along the roadways or transportation corridors, such as the Amtrak line. The demand to provide reliable in-building coverage for voice and data communications, as well as to provide for enhanced 911 access, is a paramount requirement in today's wireless environment.

As a general overview, in an Outdoor DAS system, the base station equipment is located at the end of the fiber run(s). The information is then transferred from pole to pole via fiber-optic cable from a base station hotel to each of the pole attachments. In essence, the wireless system becomes a mesh of wires connecting all of the end points or "nodes." Ultimately, what started out as a wireless system becomes a hybrid wired/wireless network. Moreover, Outdoor DAS systems generally rely upon low-powered nodes (with the available output power at each node shared by one or more wireless carriers) that use short omni-directional antennas or lower gain panel antennas with limited choices for patterns. These limitations make it difficult for a carrier to maintain control over the design and optimization of a wireless network. By contrast, traditional macro-cell site architecture allows a wireless provider to use directional antennas, specific antenna patterns, and customized orientation or down tilt to allow for optimum coverage and minimal interference. Using antennas that can focus in on one specific direction, also known as "sectorization," is especially important to avoid interference over 3G wideband CDMA networks like the one T-Mobile operates.

Additionally, T-Mobile provides wireless services to customers using a national network of more than 40,000 independent cell sites. T-Mobile is not a certified telecommunications provider in Connecticut, and thus it does not possess the regulatory authority necessary to secure pole attachment rights and/or gain access easements, both of which would be critical in constructing an Outdoor DAS system in the area in question.

The combination of these factors makes the operation of a DAS network over such a large geographic open area infeasible, especially for T-Mobile, and these issues are thus among the many reasons why most DAS networks are deployed in controlled / confined environments.

Micro-cells would not serve as a feasible alternative for the coverage objective for many of the same reasons as an Outdoor DAS system.

4. When did T-Mobile initiate a site search in this area of Branford? What was the shape, size and center of the search area?
- A4 T-Mobile initiated a site search in this area of Branford on or about July 17, 2008. T-Mobile undertook this site search to locate a telecommunications facility in the area of the Route 146 corridor, including secondary roadways and the Amtrak rail line passing through the area. The center of the search area was along Pleasant Point Road, south of Route 146 nearby the north-bound spur in the Amtrak rail line.**
5. Would development of the proposed site and access road require the removal of any trees between six inches and eight inches in diameter at breast height?
- A5 T-Mobile is performing an additional field survey to acquire the requested information. T-Mobile anticipates completing the field survey on or about January 7, 2011.**
6. What would be the diameter at the top and bottom of the proposed monopole? What version of the "Structural Standards for Steel Antenna Towers and Antenna Support Structures" will T-Mobile use for the design and construction of the proposed tower?
- A6 The diameter of the proposed monopole would be approximately 47" to 54" at the base and approximately 23" to 30" at the top. The final dimensions would be determined upon completion of the tower design. The design and construction of the proposed Facility would utilize EIA/TIA-222-F "Structural Standards for Steel Antenna Towers and Antenna Support Structures.**
7. How many utility poles would have to be installed to bring the utilities to the proposed site?
- A7 Approximately 4 new utility poles would be required for the utility routing. The utility company would determine the final number of new utility poles.**
8. Could utilities be installed underground along the access road?
- A8 Although underground utility routing is feasible from an engineering perspective, T-Mobile has determined that underground utilities would result in a greater environmental impact when compared to an overhead utility routing. Additionally, any utility routing is subject to the approval of the applicable utility company.**
9. What is the length of the existing abandoned railroad bed access to the proposed site? What would be the length of the new access that would be required from the abandoned railroad bed to the compound?

- A9** The proposed access to the Facility would extend approximately 95 feet from Pleasant Point Road to the existing abandoned railroad bed, 340 feet along the existing abandoned railroad bed, and 65 feet from the existing abandoned railroad bed to the proposed Facility.
10. Page 14 of the application states that T-Mobile's consultant, EBI, recommended an environmental assessment and that T-Mobile has initiated that process. Has this assessment been completed? What were the results?
- A10** T-Mobile has conducted a preliminary assessment of the environmental impact of the Facility and provided that documentation to the Council as attachments to the Application. T-Mobile has prepared the Environmental Assessment ("EA") but cannot submit the EA to the Federal Communications Commission ("FCC") until T-Mobile obtains a building permit. The FCC requires that the applicant for an EA include a building permit in that applicant's EA package. Upon receipt of the building permit for the Facility, T-Mobile would finalize the EA and submit the EA for review by the FCC.
11. What is the distance of Wetland 2 and Wetland 3 from any area that would be disturbed by construction of the proposed project?
- A11** The proposed Facility compound would not be within 100 feet of any wetland. The proposed gravel access, however, would be proximate to some of the wetlands located on or near the Property. At its closest point, the proposed gravel access would be approximately 13 feet from Wetland 2 (wetland flag WF 2-7). At its closest point, the proposed gravel access would be approximately 8 feet from Wetland 3 (wetland flag WF 3-8).
12. Does T-Mobile expect that any blasting will be required for the development of the proposed project?
- A12** T-Mobile does not anticipate any blasting for the development of the proposed Facility, including the filled compound with retaining wall, filled access way to Pleasant Point Road and overhead utilities. T-Mobile would confirm whether blasting is required upon the completion of the final geotechnical investigation.
13. What is the estimated cost of T-Mobile's antennas and related ground equipment that would be installed at this site?
- A13** The estimated cost for T-Mobile's antennas and related ground equipment would be approximately \$86,000.
14. What will T-Mobile use for emergency backup power at the proposed site? Could T-Mobile use a fuel cell to provide backup power during a power outage?

- A14** T-Mobile would utilize battery backup power for the proposed Facility. Presently, T-Mobile does not use fuel cells for backup power; however, T-Mobile continues to explore the usage of fuel cells for the future.
15. Is Tilcon still the owner of the host property of the proposed site? Is the proposed access road on property owned by Branford Steam Railroad?
- A15** Tilcon is still the owner of record for the host property of the proposed site. The host property does not have a street address. Branford Steam Railroad Co. still owns the property which would host the proposed access to the Facility. The property commonly known as 77-145 Pleasant Point Road would host a segment of the proposed access.
16. Would T-Mobile design a yield point into the proposed tower? If so, at what height above ground level?
- A16** The proposed Facility would include a yield point at approximately 129 feet above ground level ("AGL").
17. By what distance would the proposed tower radius extend over the adjacent property to the south?
- A17** The proposed tower radius would extend approximately 66 feet over a parcel identified on the town's assessor's map as parcel H08-4-2.1, which is directly adjacent to the Property to the south. The proposed tower radius would also extend 63 feet onto a parcel identified on the town's assessor's map as parcel H08-4-2, which is adjacent to parcel H08-4-2.1 to the south. Both parcels are owned by Branford Steam Railroad Co.
18. What is the height of the proposed retaining wall that would be installed along the compound?
- A18** The maximum height of the proposed retaining wall would be approximately 4 to 5 feet AGL.
19. Are any other telecommunications carriers interested in locating on the proposed facility at this time?
- A19** There are no other carriers interested in the proposed Facility at this time.
20. What is the distance and direction of the nearest public and private airfields to the proposed facility?
- A20** The closest public airfield is Tweed New Haven Airport (41-15-49.5/-72-53-12.5), with an address of 155 Burr Street, New Haven, Connecticut, which is located approximately 6.35 miles to the west of the proposed Facility. The closest private airfield is Maplewood Farm Airfield (41-28-06/-72-42-30.34),

which is located at Tuttle Road, Durham, Connecticut, approximately 13.6 miles to the northeast of the proposed Facility.

21. What is the distance of the proposed compound to the nearest property boundary?

A21 The area leased by T-Mobile would be located on the existing southern property line at the closest location to the property line. The proposed compound area (within the leased area) would be located within 5 feet of the southern property line at the closest location to the property line.

22. What is the existing signal level in the proposed service area?

A22 T-Mobile’s existing coverage levels in the proposed service area range from -80 dBm to values below -110 dBm.

23. What is the percentage of dropped calls that occur on T-Mobile service in the area that would be covered by the proposed facility?

A23 The average dropped call rate is 3.85 percent for the cells leading into the existing coverage gap that the proposed Facility would alleviate. The following table lists the dropped call percentages from each of the cells leading into the existing coverage gap.

Cell	TCH Drop Call%
CT11025B_A	1.39
CT11025B_B	3.58
CT11026C_B	3.30
CT11027D_C	4.71
CT11328F_A	3.43
CT11328F_B	2.36
CTNH806A_C	8.19
Average	3.85

24. What is the total area (in square miles) that T-Mobile would cover from the proposed site at a signal strength of -84 dBm?

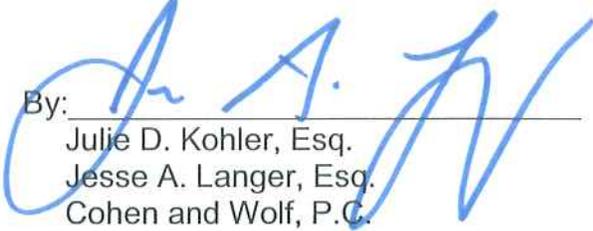
A24 The total area covered by the proposed facility at a level of -84 dBm or better would be 5.43 square miles. This does not include any of the coverage footprint area broadcast over open water.

25. What is the length of the existing coverage gap along Leetes Island Road (Route 146), Pleasant Point Road, and the Amtrak rail line at a signal strength of -84 dBm?

- A25** The length of the existing coverage gap is 4.64 miles along Leetes Island Road (Route 146), 1.27 miles along Pleasant Point Road and 3.22 miles along the Amtrak rail line. This calculus incorporates T-Mobile's facility at 123 Pine Orchard Road (Docket 386). An existing coverage map including the Facility at 123 Pine Orchard Road is appended hereto as Attachment A.
26. What is the length of coverage the proposed site would provide along Leetes Island Road (Route 146), Pleasant Point Road, and the Amtrak rail line at a signal strength of -84 dBm?
- A26** The length of coverage the Facility would provide is 3.81 miles along Leetes Island Road (Route 146), 1.27 miles along Pleasant Point Road and 2.10 miles along the Amtrak rail line.
27. Provide T-Mobile coverage maps showing existing coverage and coverage from the proposed site at 147 feet 9 inches above ground level using the same scale and parameters as the coverage maps behind Tab H of the application.
- A27** The coverage map showing existing coverage and coverage from the proposed Facility at 147'9" AGL is appended hereto as Attachment B.
28. Provide T-Mobile coverage maps showing existing coverage and coverage from the proposed site at 167 feet 9 inches above ground level using the same scale and parameters as the coverage maps behind Tab H of the application.
- A28** The coverage map showing existing coverage and coverage from the proposed Facility at 167'9" AGL is appended hereto as Attachment C.
29. Provide the distance from each existing facility listed behind Tab I of the application to the proposed facility.
- A29** A table listing each existing facility listed in Tab I of the Application for the proposed Facility is appended hereto as Attachment D.
30. Identify existing sites with which the proposed site would hand off service. If any of these sites are not listed behind Tab I of the application, include address, type and height of tower, height of T-Mobile antennas, and distance and direction from the proposed site.
- A30** The following existing telecommunications facilities which the proposed Facility would hand off service include: CTNH 801, CT110258, CT1027D and CTNH 806A.

Respectfully submitted,

T-MOBILE NORTHEAST LLC

By: 

Julie D. Kohler, Esq.

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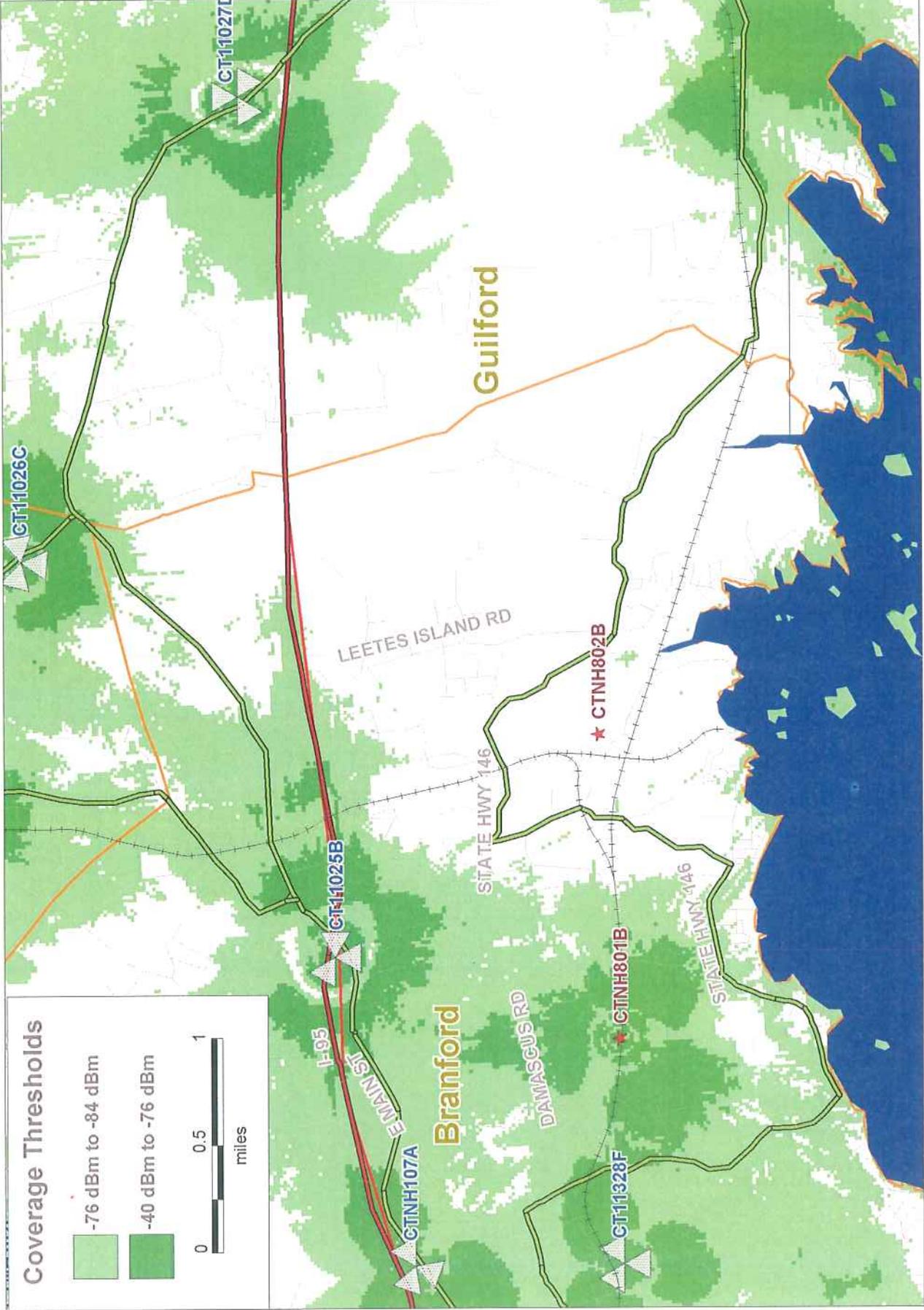
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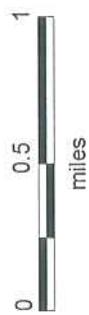
jlanger@cohenandwolf.com

ATTACHMENT A



Coverage Thresholds

- 76 dBm to -84 dBm
- 40 dBm to -76 dBm

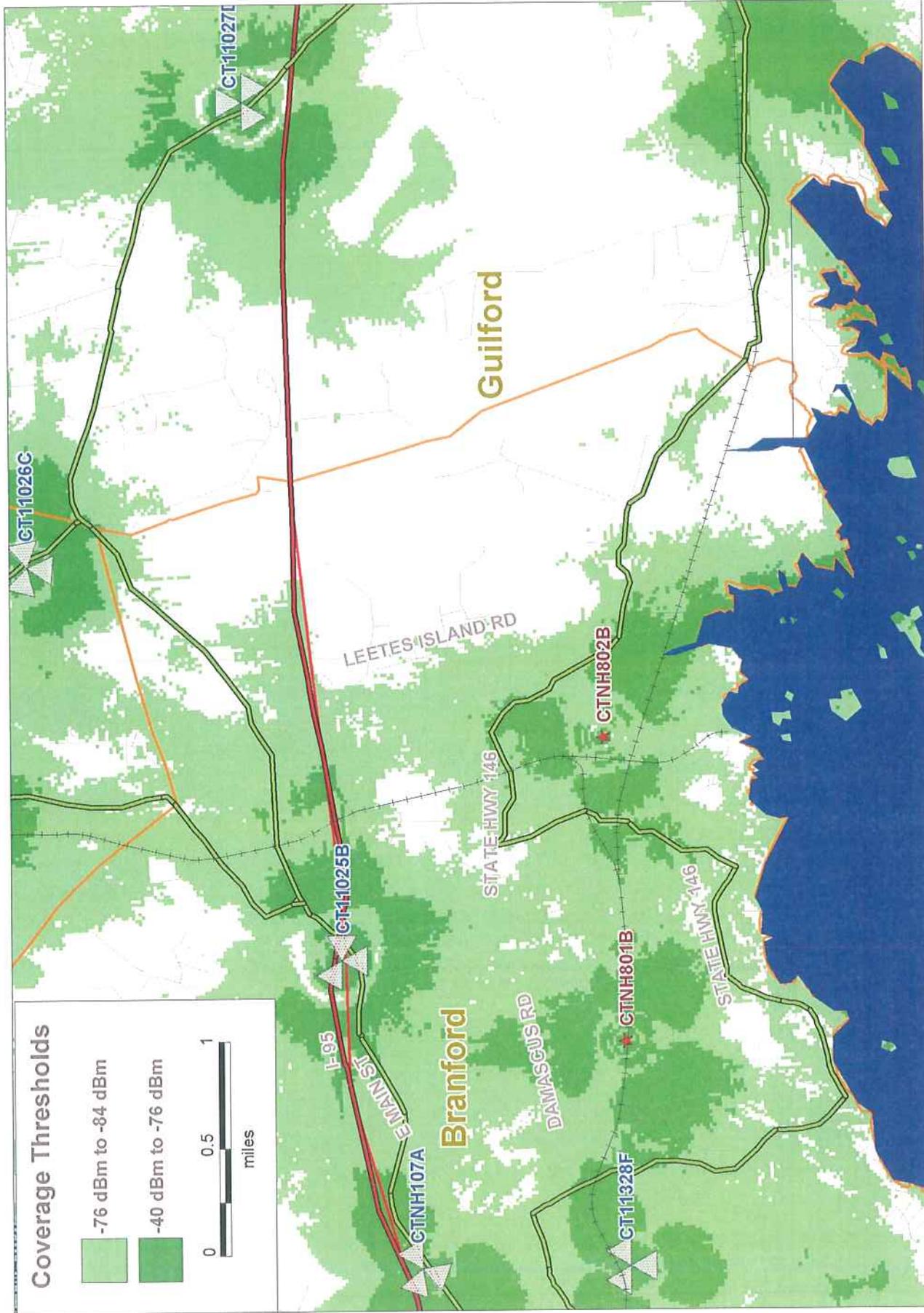


Existing T-mobile Coverage
 With CTNH801B @ 122 feet

Coverage Threshold Descriptions
 Dark Green: In-Building Coverage (Residential)
 Light Green: In-Vehicle Coverage

- T-Mobile---

ATTACHMENT B

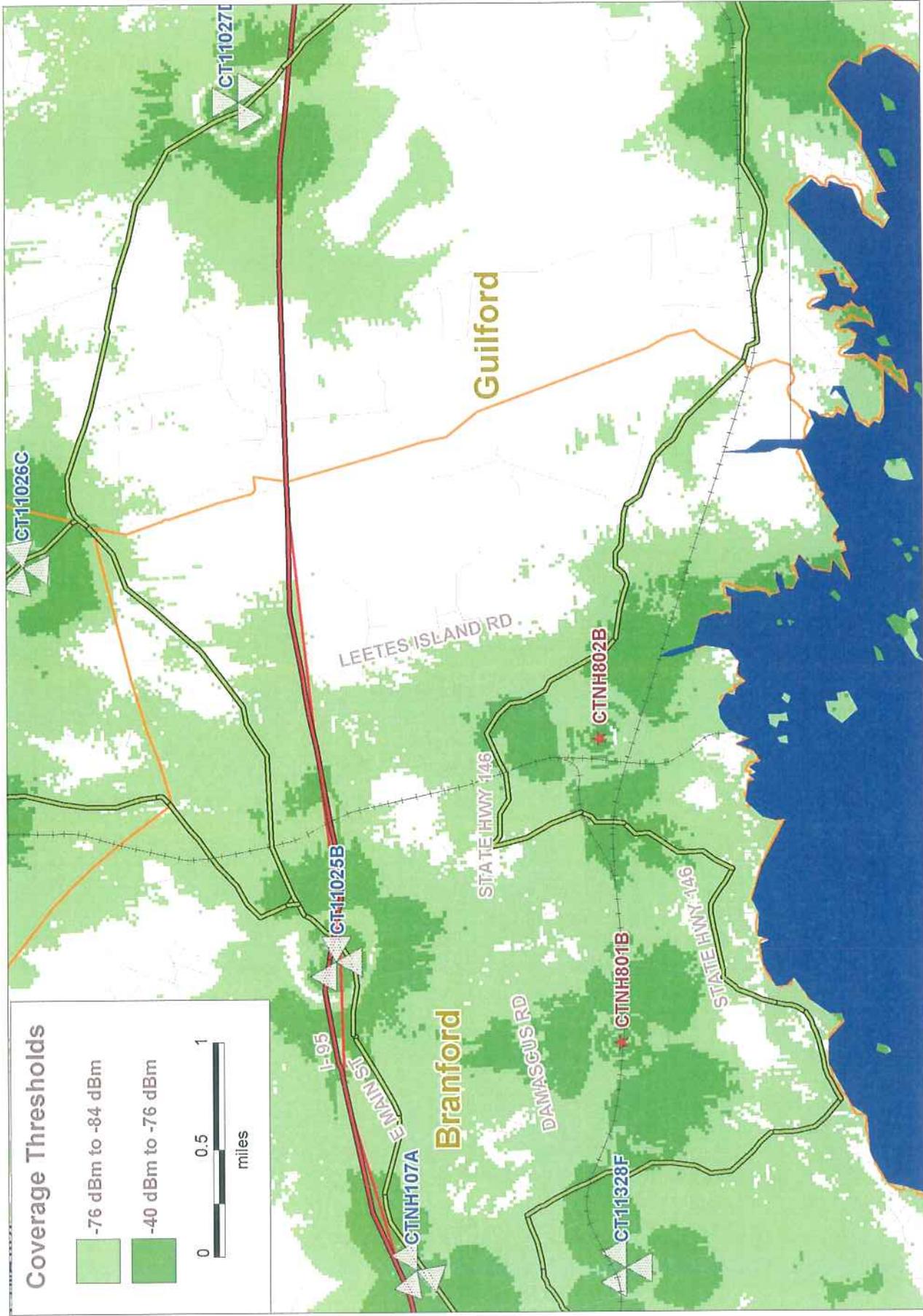


Coverage Threshold Descriptions
 Dark Green: In-Building Coverage (Residential)
 Light Green: In-Vehicle Coverage

Existing T-Mobile Coverage
 With CTNH801B @ 122 feet
 And Proposed CTNH802B @ 147 feet

- T-Mobile -

ATTACHMENT C



Coverage Threshold Descriptions
 Dark Green: In-Building Coverage (Residential)
 Light Green: In-Vehicle Coverage

Existing T-mobile Coverage
 With CTNH801B @ 122 feet
 And Proposed CTNH802B @ 167 feet

- T-Mobile -



ATTACHMENT D

Site	Name	Address	Town	Facility Type	Antenna Height	Structure height	Status	Distance to proposed site
CT11328F	Mairns Systems SS	50 Maple Street	Branford	Smoke Stack	97	100	On-Air	2.45 miles
CTNH101A	Global Signal Branford	850 Main Street	Branford	Monopole	130	130	On-Air	3.69 miles
CTNH107A	Global Cherry Hill	148-160 North Main Street	Branford	Monopole	125	147	On-Air	2.64 miles
CT11025B	Branford x95	10 Sylvia Street	Branford	Monopole	120	120	On-Air	1.63 miles
CTNH102C	Branford American Twr	405 Brushy Plain Road	Branford	Monopole	140	150	On-Air	3.98 miles
CT11390G	TVI Ind. Park	26 Commerce Drive	North Branford	Monopole	147	150	On-Air	3.22 miles
CT11372B	SBA North Branford	39 Ciro Road	North Branford	Monopole	167	170	On-Air	3.86 miles
CT11026C	Gulford Rt. 1	72 Notch Hill Road, Tower # 4955 Line # 150	North Branford	Utility Pole	80	70	On-Air	2.84 miles
CT11027D	Sprint Gulford	1919 Boston Post Road	Gulford	Monopole	147	150	On-Air	3.44 miles
CTNH806A	Sachems Water Tank	188 Sachems Head Road	Gulford	Water Tank	85	87	On-Air	3.77 miles
CTNH801B	T-Mobile Branford	123 Pine Orchard Rd	Branford	Monopole	122	125	Approved - Pending	1.48 miles

CERTIFICATE OF SERVICE

I hereby certify that on this day a copy of the foregoing was delivered by Electronic Mail and First Class U.S. Mail, postage prepaid, to all parties and interveners of record, as follows:

N/A



Jesse A. Langer