

STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL

IN RE:

APPLICATION OF SBA TOWERS II, LLC FOR A
CERTIFICATE OF ENVIRONMENTAL
COMPATIBILITY AND PUBLIC NEED FOR
THE CONSTRUCTION, MAINTENANCE AND
OPERATION OF A TELECOMMUNICATIONS
FACILITY LOCATED AT 49 BRAINERD ROAD,
NIANTIC (EAST LYME), CONNECTICUT.

DOCKET NO. 396

February 16, 2010

INTERVENOR NEW CINGULAR WIRELESS ("AT&T")
RESPONSES TO SITING COUNCIL
PRE-HEARING INTERROGATORIES SET ONE

- Q1. When was a search ring initiated for this site? Provide the approximate perimeter and center of the search ring. Include scale and compass.
- A1. A search ring for this area was first approved on March 27, 2006. The original map of that search ring is included as Attachment 1. AT&T's search ring maps do not contain a scale when issued but for reference the diameter of the search ring was approximately one (1) mile. For the Council's convenience, also included in Attachment 1 is a scaled map of the area around the search ring available through the Town East Lyme GIS system.
- Q2. What is New Cingular Wireless PCS, LLC's (AT&T) existing signal strength in the area that would be covered by the proposed facility?
- A2. AT&T's existing signal strength in the proposed coverage area is in the -92 dBm to the -82 dBm range.
- Q3. What is the minimum signal level AT&T would consider acceptable for service in the vicinity of the proposed site?
- A3. AT&T's minimum signal level threshold in the proposed coverage area is -74 dBm or better.
- Q4. What is the minimum signal level that AT&T requires in order to provide adequate in-vehicle coverage? What is the minimum signal level that AT&T requires in order to provide adequate in-building coverage?

- A3. AT&T requires -82 dBm for reliable in-vehicle coverage and -74 dBm for reliable in-building coverage
- Q5. At what height would AT&T center its antennas on the proposed tower? How many antennas would be installed? How would the antennas be mounted, e.g. T-arm, low-profile platform, etc?
- A5. AT&T has a need for 170'. AT&T proposes to locate six (6) panel antennas at 170' AGL (centerline). T-arm mounts are proposed.
- Q6. Provide the distance and direction from the proposed site to the existing (or proposed) sites that the proposed tower would interact with. Also include the addresses, tower heights, antenna heights and tower types (e.g. monopole).
- A6. The requested information is as follows:

AT&T Site ID	Address	City	Antenna Height	Structure and Type	Height	Distance and Direction from Proposed site
CT5216	15 Liberty Way	East Lyme	62'	62' Rooftop		1.25 miles NW
CT5217	93 Roxbury Road	East Lyme	79'	79' Water Tank		1.8 miles N
CT1270	51 Daniels Avenue	Waterford	168'	170' Lattice Tower		3.3 miles ENE

- Q7. Would flush-mounted or T-arm-mounted antennas provide the required coverage? Would either configuration result in reduced coverage and/or necessitate greater antenna height? Explain.
- A7. T-arms would provide the required coverage. Flush mounted antennas would require at least one additional level of antennas on the monopole in order to accommodate the proposed AT&T antennas. In addition, in 2011 AT&T will begin deploying LTE (a/k/a 4G) antennas which will require an additional level of flush mounted antennas. Cumulatively this would mean three levels of antennas for AT&T. LTE/4G antennas can be accommodated with AT&T's proposed antennas all on one level of T-arm mounts.
- Q8. Would AT&T provide cellular coverage initially and then PCS service later? Explain.
- A8. Yes. AT&T's licensed operating frequencies in this part of the state include the 850 MHz ("cellular") band, specifically 880-894 MHz, as well as the 1900 MHz ("PCS") band. Initially AT&T will install 850 MHz cellular service and expand to the 1900 MHz PCS service to provide additional capacity as needed.

Q9. Provide the addresses of sites S2284, S2285, and S2286 as depicted in Tab F of SBA's Application for a Certificate of Environmental Compatibility and Public Need.

The requested information is as follows:

Site ID	Address
S2284	51 Daniels Avenue , Waterford (This is a new site which was the subject of Siting Council exempt modification EM-CING-152-090702).
S2285	Proposed site located at 49 Brainerd Road, Niantic (East Lyme), Connecticut
S2286	Proposed site located at 232 Shore Road, Old Lyme, Connecticut and currently the subject of Siting Council Docket 391.

Q10. Provide existing and proposed coverage plots assuming AT&T's antennas are centered at their proposed height, ten feet lower, and twenty feet lower, respectively.

A10. The requested plots are included as Attachment 2.

Q11. Provide the individual lengths of the coverage gaps (in miles) for the roads that AT&T seeks to provide coverage to. Describe criteria and parameters in determining the lengths of the road.

A11. While coverage to a number of local roads will be provided by the proposed site, one key Route for which coverage is targeted is Route 156. At -82 dBm, the coverage gap along Route 156 is .5 miles long.

Q12. Provide the individual lengths of coverage (in miles) that would be provided by the proposed facility on the roads that AT&T seeks to provide coverage to. Provide similar data assuming the antennas are ten feet lower and twenty feet lower, respectively.

A12. With the proposed site, coverage along Route 156 would be as follows:

Antenna Height	Length of coverage along Route 156 at -82 dBm or better.
167'	1.6 miles
157'	1.6 miles
147'	1.6 miles

Again, this the provision of reliable service along Route 156 is a portion of the coverage which will be provided to local roads, rail lines and this area of southern East Lyme generally.

Q13. Provide the areas (in square miles) that would be covered by this facility assuming that AT&T's antennas are centered at the proposed height, ten feet lower, and twenty feet lower, respectively.

A13. The areas (in square mileage) of coverage would be as follows:

Antenna Height	Area of Coverage at -74 dBm or better
167'	10.0 square miles
157'	8.4 square miles
147'	7.1 square miles

The overall square miles of coverage increases by approximately 3 (square miles) between antennas centered at 147' AGL and 167' AGL. This calculation utilizes the -74 dBm in-building standard given the number of homes and other buildings in the area to which AT&T needs to provide coverage.

- Q14. Provide the following information: number of channels per sector for each antenna system that would be installed on the proposed tower, ERP per channel for each antenna system, and frequency at which each antenna system would operate. Also, provide a power density analysis of AT&T's proposed antennas to determine the worst-case percent maximum permissible exposure at the tower base.
- A14. Please see power density analysis memorandum including the requested information included as Attachment 3.
- Q15. Has AT&T considered the Pondcliff Condominium property at 97 West Main Street, Niantic as a possible tower site? Could such tower site provide adequate coverage to the target area that AT&T seeks to cover via the 49 Brainerd Road, Niantic site?
- A15. The Pondcliff Condominium property is located an estimated 1.25 miles to the north of the proposed SBA site. Even at 190' this site would not provide reliable coverage to the target area.
- Q16. Has AT&T considered the Nebelung Farms, LLC property at 138 North Bridebrook Road, Niantic as a possible tower site? Could such tower site provide adequate coverage to the target area that AT&T seeks to cover via the 49 Brainerd Road, Niantic site?
- A16. This site is less than 0.5 mile to existing site 5216 located at 15 Liberty Way in East Lyme. As such, the Nebelung Farms property would not provide reliable coverage to the target area to be served by the proposed site.
- Q17. T-Mobile Northeast, LLC proposes three new towers in Old Lyme: 232 Shore Road; 387 Shore Road; and 61-1 Buttonball Road. Could any of these tower sites provide adequate coverage to the target area that AT&T seeks to cover via the 49 Brainerd Road, Niantic site?
- A17. No. None of these proposed tower sites would provide reliable coverage to the target area to be served by the proposed facility at 49 Brainerd Road, Niantic. AT&T is aware of all three proposals and has intervened in Siting Council Docket 391 to co-locate on the

proposed facility at the 232 Shore Road (a/k/a "Self-Storage Facility") site in order to provide reliable coverage to that area of Old Lyme.

- Q18. SBA Towers II LLC proposes a new tower facility at 14 Cross Lane, Old Lyme. Could such tower site provide adequate coverage to the target area that AT&T seeks to cover via the 49 Brainerd Road, Niantic site? Explain.
- A18. The previously contemplated tower facility at 14 Cross Lane in Old Lyme would not have provided adequate reliable coverage to the target area in East Lyme. In addition, it is AT&T's understanding pursuant to its participation in Siting Council Docket 391 that this location is no longer available for the siting of such a facility.
- Q19. Would AT&T have backup power at its tower site? How would backup power be provided, e.g. battery, diesel generator, etc.? Has AT&T considered using a fuel cell as a backup power source for the proposed facility? Explain.
- A19. AT&T's proposed backup power is largely composed of a diesel generator. AT&T will also have a battery backup required to prevent the facility from experiencing a "re-boot" condition during the generator start-up delay period. The typical total run time of the backup generator to be used is approximately 114 hours. The generator's fuel tank is a steel containment chamber that is lined with a bladder to contain fuel in the unlikely event of a fuel spill.
- Q20. If a generator or fuel cell is to be used as a backup power source, would AT&T meet all applicable noise standards at the subject property boundaries? What are the expected noise levels at the fenced compound perimeter and nearest property boundary?
- A20. Yes. AT&T's generator would meet the state noise standards at the subject property boundaries. Expected noise levels at the nearest property boundary are calculated at 45 dBA which would meet both the state day and night standards of 55 dBA and 45 dBA respectively. There are no applicable standards for the sound levels in and around the proposed compound. Typically the generator is run for approximately 20 minutes a week during the day in order to maintain operational efficiency.
- Q21. Provide the estimated costs of AT&T's antennas and radio equipment for the proposed tower site.
- A21. While antenna and equipment costs vary, it is estimated that the costs of antennas, lines and equipment at this site will be between \$250,000 to \$300,000.

CERTIFICATE OF SERVICE

I hereby certify that on this day, a copy of the foregoing was sent electronically and by overnight mail to the Connecticut Siting Council with copy to:

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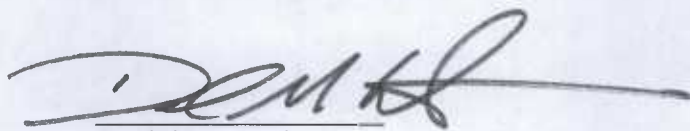
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Dated: February 16, 2010

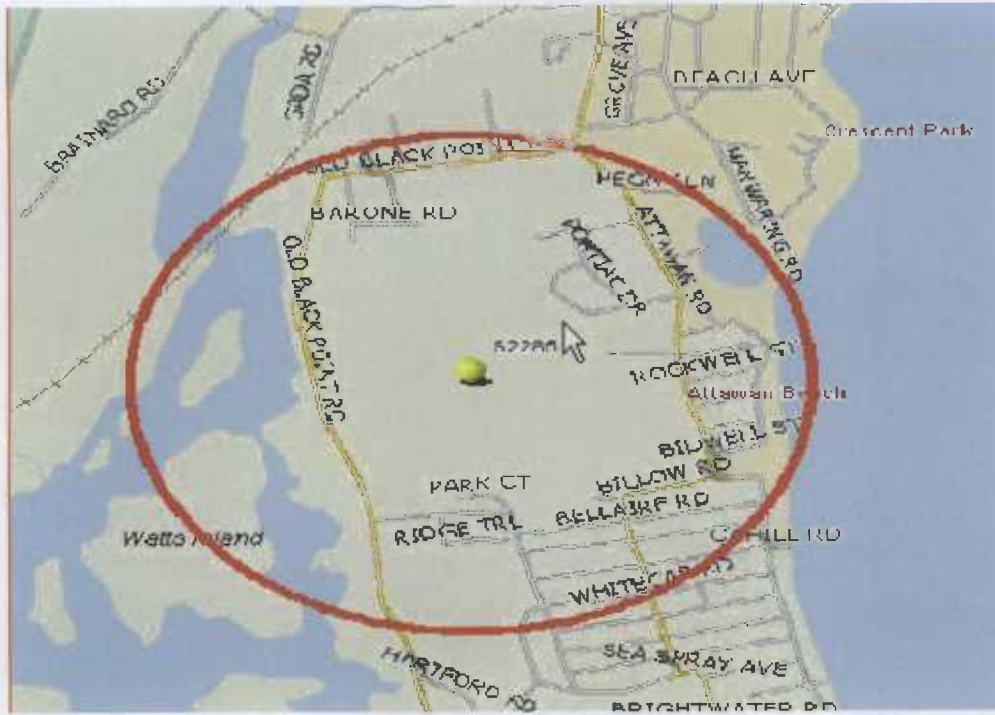


Daniel M. Laub

cc: Michele Briggs, AT&T
John Blevins, AT&T
David Vivian, SAI
Christopher B. Fisher, Esq.

1

AT&T S2285 Search Ring Map





Date: 2/16/10

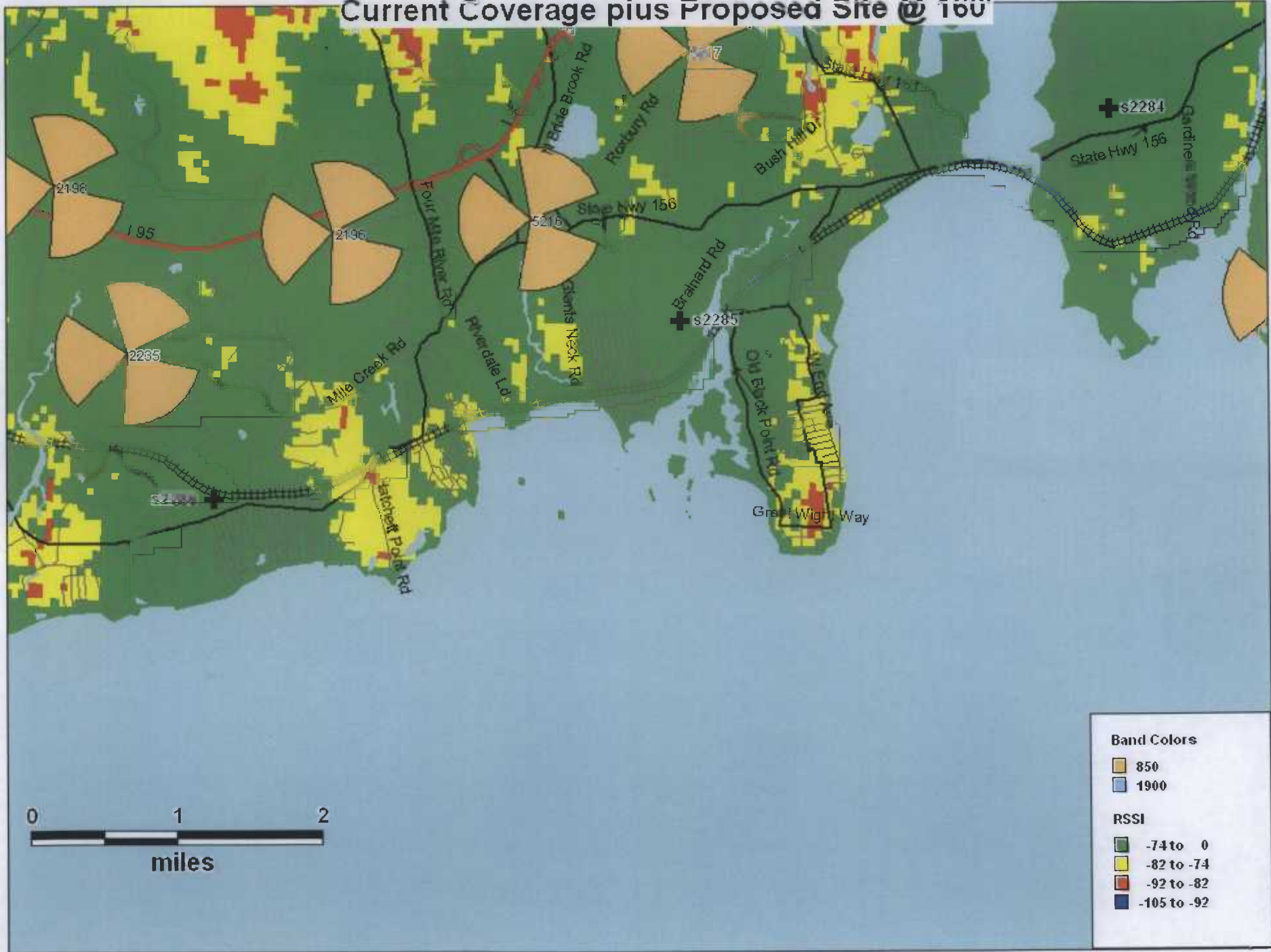


Scale: 1"=1500' (1:18000)

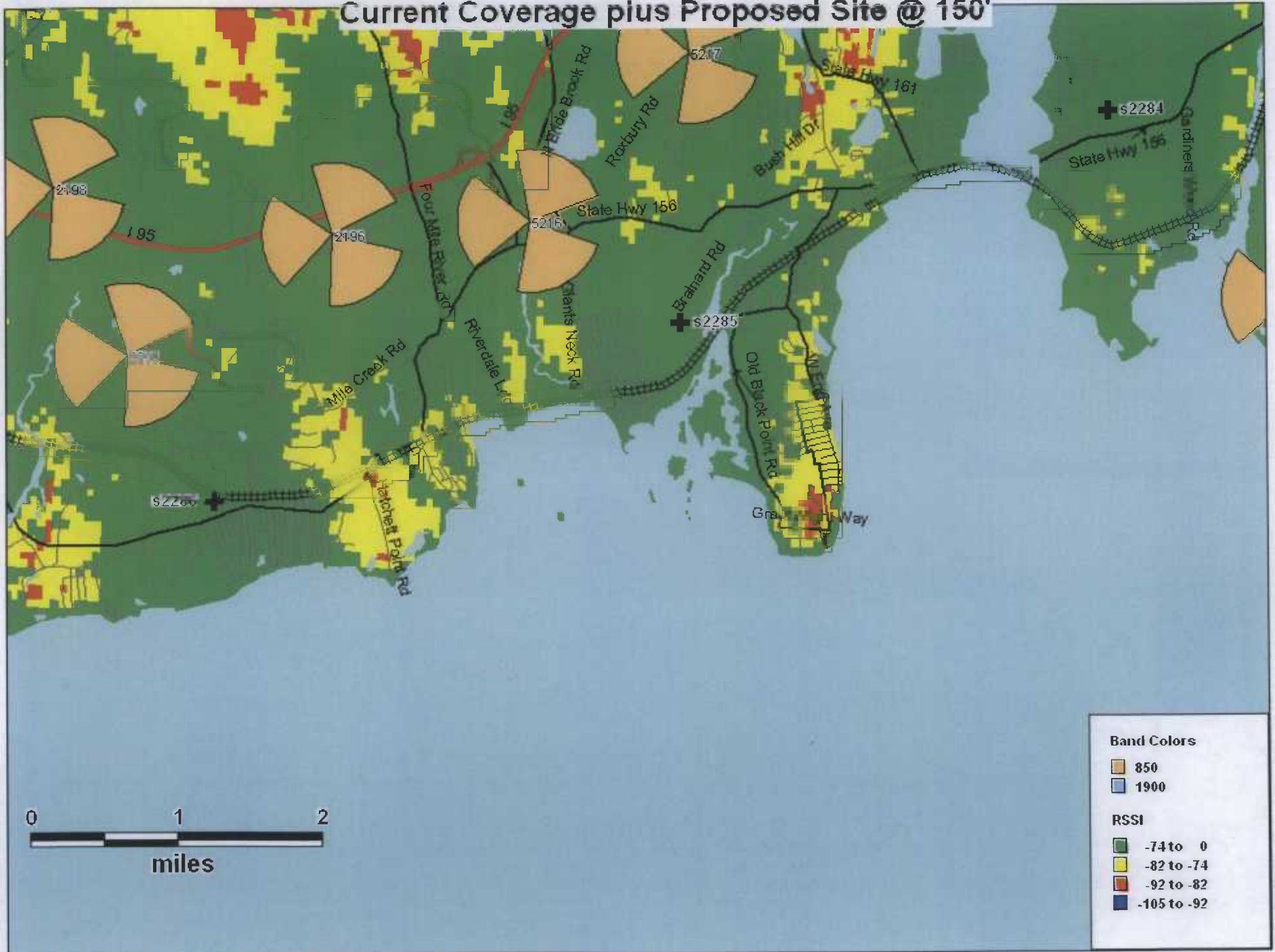
Interactive Map

2

Current Coverage plus Proposed Site @ 160'



Current Coverage plus Proposed Site @ 150'



3



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Steven L. Levine
Real Estate Consultant

February 16, 2010

TO: Attorney Chris Fisher

FROM: Steve Levine

RE: Power Density Calculation for a Proposed AT&T Facility at 49 Brainard Road,
Niantic, Connecticut.

The cumulative worst-case power density for this site in accordance with FCC OET Bulletin No. 65 (1997) for a point of interest at ground level besides the tower follows.

This worst-case calculation assumes all channels working simultaneously at full power with the antennas facing directly downward.

	Centerline Height above Ground (feet)	Frequency (MHz)	Number of Channels per Sector	Power Per Channel (Watts ERP)	Power Density (mW/cm ²)	Standard Regulatory Limits (mW/cm ²)	Percent of Regulatory Limit
AT&TUMTS	167	1900 Band	1	500	0.0064	1.0000	0.64
AT&TUMTS	167	850	1	500	0.0064	0.5867	1.10
AT&TGSM	167	1900 Band	4	427	0.0220	1.0000	2.20
AT&TGSM	167	850	4	296	0.0153	0.5867	2.60
Total							6.5%