ATTACHMENT 1

Radio Frequency Analysis Report

Proposed Site 2067

Route 198

Woodstock, CT

at&t

August 24, 2011

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1. Overview

C Squared Systems was retained by New Cingular Wireless PCS, LLC ("AT&T") to investigate the extent of coverage that could be potentially obtained by constructing a tower located at Route 198 in Woodstock, CT. AT&T is licensed by the FCC to provide wireless communications services throughout the State of Connecticut including the town of Woodstock where this proposed facility would be located.

This report addresses AT&T's need for a tower with the centerline of their antennas at 147 feet above ground level. C Squared Systems has reviewed and conducted this coverage analysis that shows AT&T has a gap in reliable service that exists in the Town of Woodstock, and the surrounding communities. The proposed site on Route 198 is needed to help fill in existing coverage gaps and provide connectivity to the rest of the AT&T network. Included as attachments in this report are coverage maps detailing the existing network, as well as the expected coverage, from the wireless facilities in this area.

2. Coverage Objective

There is a serious service deficiency in the AT&T wireless communications network in the subject area. A deficiency in coverage is evidenced by the inability to adequately and reliably transmit/receive quality calls and/or utilize data services as detailed above. Seamless reliable coverage provides users with the ability to successfully originate, receive, and maintain quality calls and/or utilize data applications throughout a service area. Overlapping coverage is required for users to be able to move throughout the service area and reliably "hand-off" between cells to maintain uninterrupted calls.

Due to terrain characteristics and the distance between the targeted coverage area and the existing sites, AT&T options to provide services in this area are quite limited. Maps of the terrain in this area and the distance to neighboring AT&T sites are attached as Attachments 4 and 5. AT&T's network requires deployment of antennas throughout the area to be covered, which are connected to receivers and transmitters that operate in a limited geographic area known as a "cell." AT&T's wireless network, including their wireless handsets and devices, operate by transmitting and receiving low power radio frequency signals to and from these cell sites. The signals are transferred to and from the landline telephone network and routed to their destinations by sophisticated electronic equipment. The size of the area served by each cell site is dependent on several factors, including the number of antennas used, the height at which the antennas are deployed, the topography of the land, vegetative cover and natural or man-made obstructions in the area. As customers move throughout the service area, the transmission from the portable devices is automatically transferred to the closest AT&T facility without interruption in service, provided that there is overlapping coverage from the cells.

Attached are two coverage maps that illustrate the existing coverage conditions as well as how the proposed site will improve coverage for this area. As you can see from the map labeled "Existing Coverage", Routes 198 and 171 and the surrounding neighborhoods are not sufficiently covered. The map labeled "Existing & Proposed Coverage" show how the proposed site will fit into and improve the existing network in this area.

Our testing for this area of Woodstock reveal that AT&T's network is not reliable and that there is a service deficiency. We completed a number of tests at varying heights to find the best solution for this area. The current gap in coverage where signal strength is < -82 dBm required for reliable in-vehicle coverage and < -74 dBm for in-building reliability are fairly significant in this area. These gaps in coverage and the benefits the proposed upgraded site that AT&T is planning for can be summarized by the following statistics:

Statistics were compiled at two antenna centerline heights: 147' AGL and 97' AGL. 97' AGL is 10 feet below the absolute minimum antenna centerline height of 107' AGL required by AT&T in order to close the coverage gaps on the roads. An antenna centerline height of 147' AGL for AT&T's antennas is the proposed height to facilitate collocation of other operators while minimizing visual impact.

Proposed Site - Area Covered (Square miles)	Proposed Incremental Area Covered @ 147' AGL	Proposed Incremental Area Covered @ 97' AGL	% Area of Coverage Lost @ 97' AGL
> -74 dBm (in-building)	5.90	2.69	54.4%
> -82 dBm (in-vehicle)	6.04	3.65	39.5%

Table 1: Area Coverage Statistics

Proposed Site - Population Captured (2000 Census)	Proposed Incremental Population Captured @ 147' AGL	Proposed Incremental Population Captured @ 97' AGL	Proposed Incremental Population Lost @ 97' AGL
> -74 dBm (in-building)	744	608	18.3%
> -82 dBm (in-vehicle)	775	534	31.1%

Table 2: Population Captured Statistics

In addition to this area square miles and population benefits, the other goal of a proposed AT&T site in this area is to improve coverage to customers as they travel to and from Woodstock as well as along the neighborhood roads. The following table 3 highlights the main roads incrementally covered in this area from the proposed site. Table 4 highlights the secondary roads incrementally covered in this area from the proposed site.

Incremental Proposed Main Road in miles (>= -82 dBm)		
Street Name	**Proposed @ 147' AGL**	**Proposed @ 97' AGL**
Route 198	1.96	1.85
Route 171	1.85	1.53
Eastford Rd	0.78	0.60
Boston Tpke	0.13	0.09
State Hwy 197	0.12	0.04
Total	**4.84**	**4.11**

Table 3: Miles of Main Roads Covered by the Proposed Site

Incremental Proposed Secondary Road Coverage in miles (>= -82 dBm)		
Street Name	**Proposed @ 147' AGL**	**Proposed @ 97' AGL**
Barlow Cemetery Rd	1.63	0.94
Crystal Pond Rd	1.06	0.61
Barber Rd	1.00	0.81
Brockway Rd	0.63	0.59
Hawkins Rd	0.60	0.55
Beaver Dam Rd	0.52	0.39
Kozy Corner Rd	0.49	0.06
Crooked Trl	0.46	0.42
Perrin Rd	0.46	0.27
Old Turnpike Rd	0.45	0.19
Crooked Trail Ext	0.45	0.40
Old Colony Rd	0.43	0.27
County Rd	0.42	0.35
Bungay Hill Rd	0.41	0.33
Hopkins Rd	0.41	0.32
Pond Rd	0.35	0.33
Kenyonville Rd	0.34	0.32
Lake View Dr	0.26	0.25
Bradford Corner Rd	0.22	0.11
French Rd W	0.19	0.01
Playground Dr	0.18	0.18
Bungee Hill Rd	0.17	0.14
Laurel Hill Dr	0.16	0.16
Westford Rd	0.16	0.00
Schoolhouse Rd	0.15	0.09
Walnut Rd	0.15	0.13
Mill Bridge Road No 1	0.15	0.03
Dechand Dr	0.15	0.06
Lyon Rd	0.15	0.14
Shaw Rd	0.13	0.11

Camp Yankee Rd	0.12	0.10
Brickyard Rd	0.11	0.00
Church Rd	0.09	0.03
Yetter Hill Rd	0.09	0.02
Trepal Dr	0.09	0.09
Hiawatha Hts	0.08	0.08
Rindge Rd	0.08	0.00
N Ashford Pike	0.07	0.00
Hereford Ln	0.07	0.07
Fire Tower Rd	0.07	0.07
Pole Bridge Rd	0.07	0.00
North Rd	0.05	0.00
John Perry Rd	0.05	0.00
Swedetown Rd	0.04	0.00
Old Sawmill Rd	0.04	0.04
Child Rd	0.04	0.00
Reed Rd	0.04	0.00
TOTAL	**13.53**	**9.06**

Table 4: Miles of Secondary Roads Covered by the Proposed Site

3. DAS Suitability

The area where service is needed in this application is a wide area of poor or no service. Microcells or repeaters are better suited to small areas for fill in use and/or commercial in building service, such as stadiums, large office complexes, University campuses and transportation tunnels. Repeaters offer no added capacity in the network, and require a line of site donor facility which can be difficult in the defining terrain of the area.

With respect to distributed antennas systems ("DAS"), we note that these are generally lower power, low gain systems used in high traffic areas (i.e. capacity demand) which rely on a combination of fiber optics, transmitting antenna sites and a base station facility. The service requirements in this area of Woodstock relate to coverage on a macro level as opposed to a discrete system such as a DAS network. Given the foregoing, alternate technologies were not investigated due to the area of required coverage improvement.

4. Conclusion

The proposed tower is ideally located to close the coverage gap in Woodstock. No other existing structure was identified and available to provide the coverage requirements needed for this area. The location and the minimum height selected were chosen to achieve an optimal balance between meeting coverage objectives, clearing the tree line, minimizing the aesthetic impact to the community, and future collocation.

As depicted in the enclosed plots, the proposed AT&T site, at a height of 147 feet AGL will provide the public need for service in this area, providing an appropriate coverage footprint for the Woodstock community along with effective connectivity to the rest of AT&T existing network.

Without this site in this area, at the height requested, significant gaps in service will exist within the Town of Woodstock; and the identified public need for reliable wireless services in this area will not be met.

5. Statement of Certification

I certify to the best of my knowledge that the statements in this report are true and accurate.

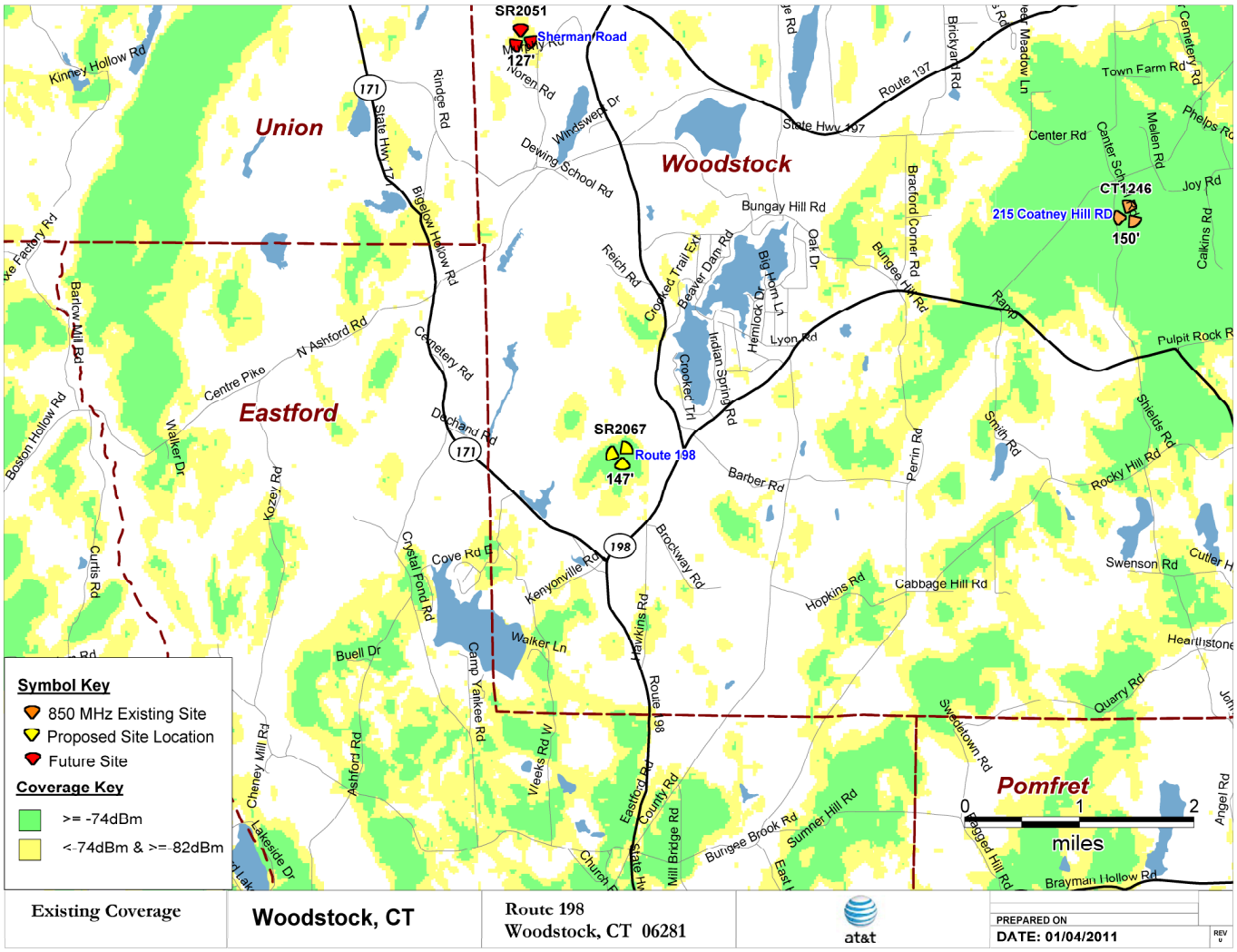
anthony wells

August 24, 2011

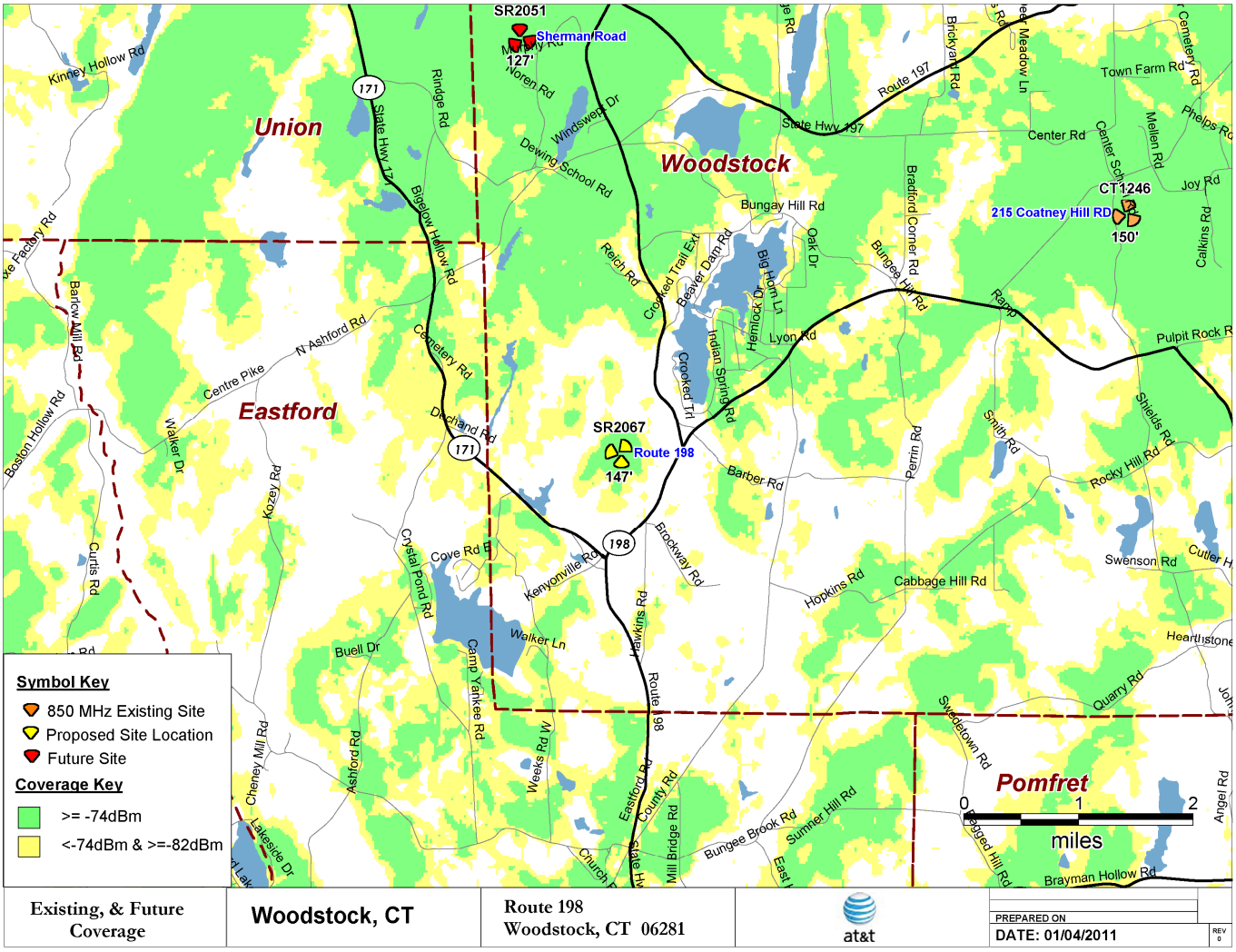
Tony Wells
C Squared Systems, LLC

Date

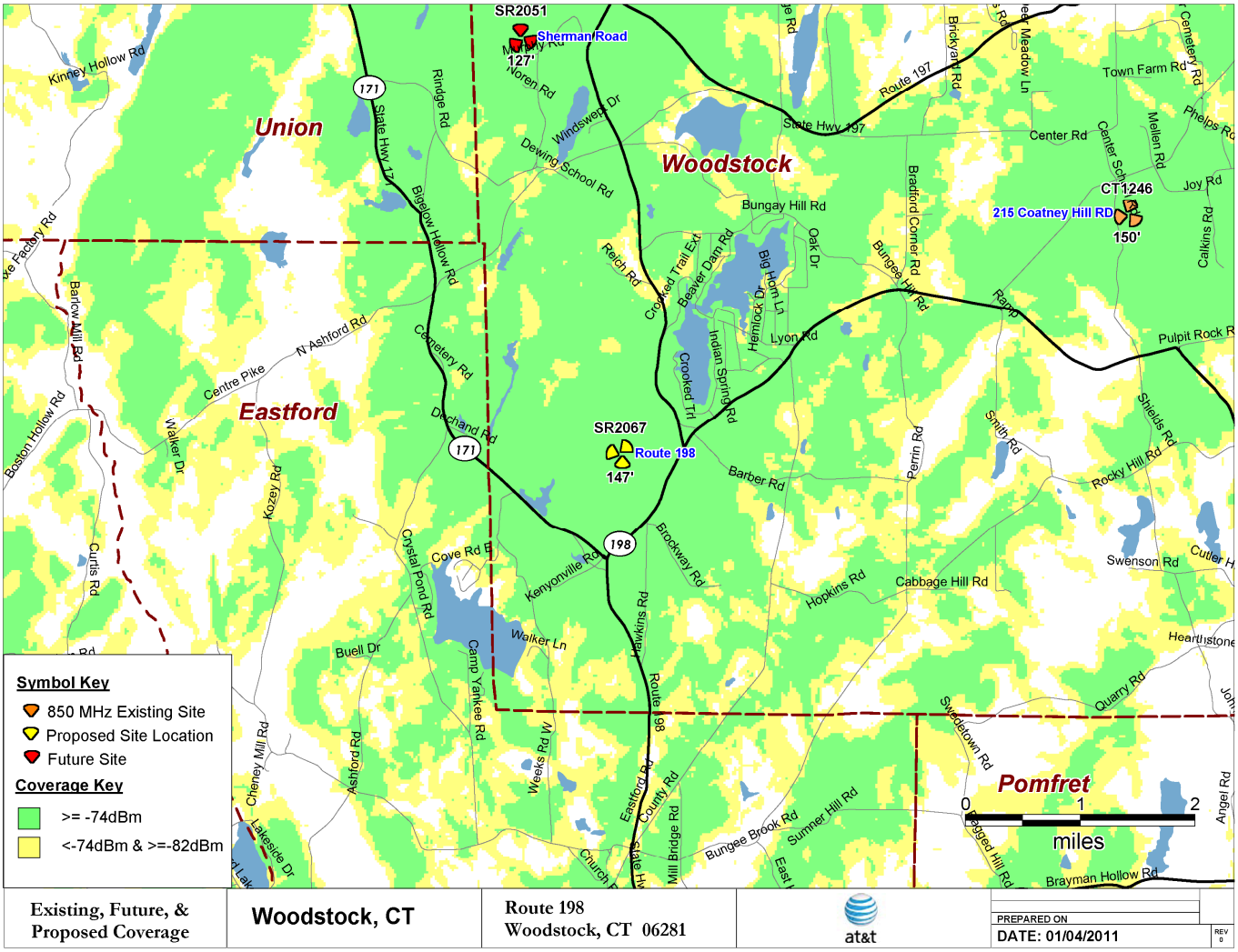
6. Attachments



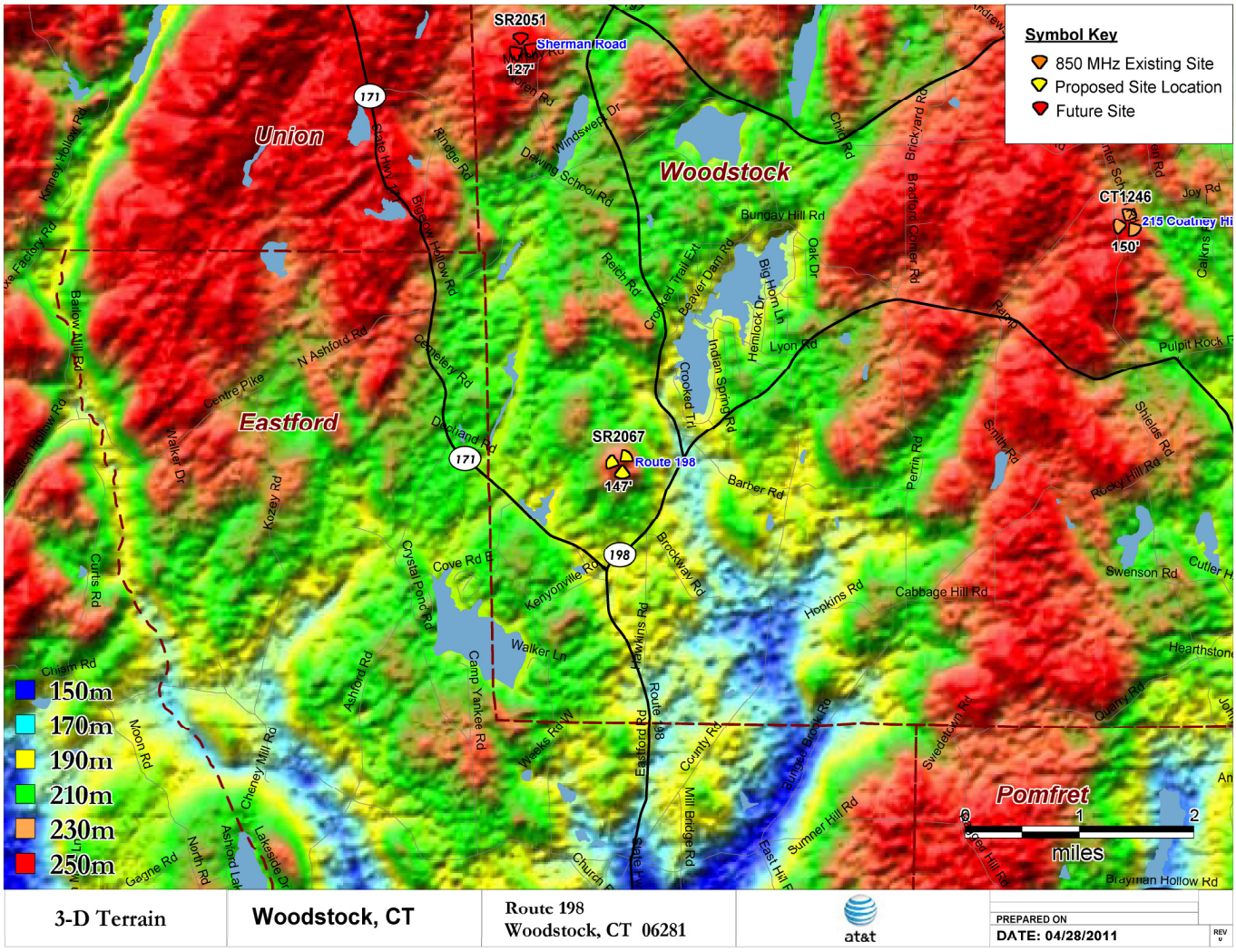
Attachment 1: "Existing Coverage" for the Current AT&T network



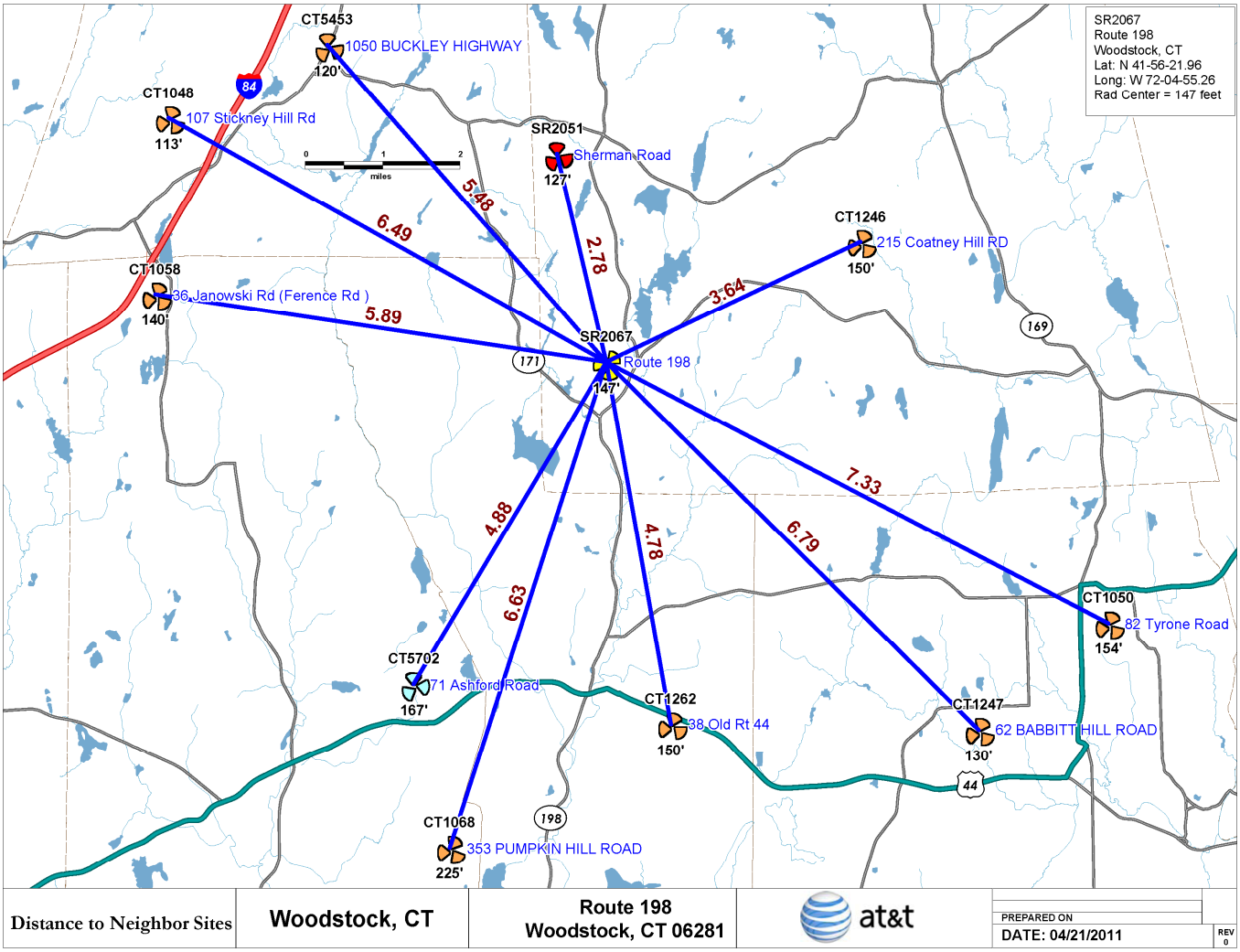
Attachment 2: "Existing & Future Coverage" for the AT&T network without coverage from Proposed site SR2067



Attachment 3: "Existing, Future & Proposed Coverage" for the AT&T network with coverage from Proposed site SR2067



Attachment 4: 3D Terrain Map



Attachment 5: Map of Distance to Neighbor Sites

Verizon Wireless
Network Department
99 E River Dr 9th Floor
East Hartford, CT 06108

June 8, 2011

Mr. Randy Howse
North Atlantic Towers
10 Country Hollow Lane
Haverhill, MA. 01832

Re: Proposed North Atlantic Towers & AT&T Telecommunications Facility at Route 198, Woodstock, Connecticut

Dear Mr. Howse:

Please be advised that Cellco Partnership d/b/a Verizon Wireless is submitting this Letter of Intent for the above noted site. Cellco does have a need for a facility in this area of Woodstock. Cellco could satisfy its coverage objectives in the area by installing antennas at the 140-foot level on the proposed North Atlantic Tower on Route 198.

Unfortunately, this Woodstock cell site is not on Cellco's current build program and, therefore, no budget has been established for this site for 2011. Cellco cannot, therefore, intervene in any North Atlantic Towers & AT&T proceeding before the Connecticut Siting Council.

Please let me know if you have any additional questions. I will contact you if there is any change to this status.

Very truly yours,

Sandy Carter

Sandy Carter
Manager Real Estate/Zoning

Cc: Lucia Cocchio, Esq.
Jim Smith