

STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL

IN RE:

APPLICATION OF NEW CINGULAR WIRELESS
PCS, LLC (AT&T) FOR A CERTIFICATE OF ENVIRONMENTAL
COMPATIBILITY AND PUBLIC NEED FOR THE
CONSTRUCTION, MAINTENANCE AND OPERATION OF A
TELECOMMUNICATIONS TOWER FACILITY IN MONROE,
CONNECTICUT

DOCKET NO. 457

April 22, 2015

NEW CINGULAR WIRELESS, PCS LLC (AT&T)
RESPONSES TO CONNECTICUT SITING COUNCIL PRE-HEARING QUESTIONS SET I

- Q1. When was the search ring for New Cingular Wireless PCS, LLC (AT&T) established? Provide the approximate radius of AT&T's search ring for this area. Provide the longitude and latitude coordinates of the center of the search ring.
- A1. *The search ring was issued at the end of January 2013. The search ring radius is approximately ½ mile and the coordinates of the center of the search ring are 41⁰-21'-16.65" N and 73⁰-13'-21.84" W.*
- Q2. In the Site Search Summary of the Application, is site alternative number 30 (End of Timothy Hill Road) the same or a similar location to the 36 Timothy Hill Road Site suggested in an e-mail dated September 25, 2013 and attached under Tab 11 of the Application?
- A2. *Yes. Alternative #30 was evaluated at a location right at the entry point or end of Timothy Hill Road, although a tower would likely be located in the woods further west on the approximately 44 acre parcel at 36 Timothy Hill Road (Assessor's ID 114/006/000). However, even at the location evaluated, the site is approximately one mile from the search ring center and thus, too far from the area targeted for service.*
- Q3. Of the letters sent to abutting property owners, how many certified mail receipts were received? If any receipts were not returned, which owners did not receive their notice? Were any additional attempts made to contact those property owners?
- A3. *Notices to the following abutters were returned as unclaimed:
Jack J. & Deena R. Videira
James & Teresa Hall
Ronald & Marina Sadownick
Louis G. & Lori A. Pizzoli
Another notice was sent to each of these abutters via first class mail.*

- Q4. What is the grade of the proposed access road? (Average grade, maximum grade or range of grades is acceptable.)
- A4. *To avoid excessive fills or cuts, the road generally follows the existing grade. The grade of the approximately 1,629' long proposed access drive varies to a maximum of 9.8%, except one approximately 100' long section where the maximum grade is 15%.*
- Q5. What type of light fixture would be attached to the outside of AT&T's equipment shelter (and depicted on Sheet D-1)? When would the light be on?
- A5. *AT&T's equipment shelters include two, motion activated flood lights for technician safety during any required night maintenance.*
- Q6. Re-run TOWAIR at the specific longitude/latitude coordinates specified in the 1-A Certification (rounded to the nearest tenth of second) and provide a copy of the print out.
- A6. *Included in Attachment 2 is the TOWAIR result for the specific longitude/latitude specified in the 1-A Certification. The attached TOWAIR indicates that the proposed Facility will not require registration with the FAA and as such, will not require FAA lighting or marking.*
- Q7. Estimate the number of homes with seasonal visibility and year-round visibility of the proposed tower?
- A7. *Approximately six (6) residential properties could have limited views of a portion of the proposed tower. It is estimated that up to an additional 40± residential parcels could have obstructed, seasonal views of at least the top of the monopine. However this estimate is based solely on computer modeling (as APT did not have access to private properties for confirmation). Field verification activities during the balloon float are restricted to publicly accessible areas, so we rely on the computer model to compile a comprehensive list of residential properties that could have views of the tower. The model also has its limitations because is designed to answer a very simple yes-no question: can at least the top of the tower be seen from any point within a 2-mile radius (Study Area), given the intervening topography and vegetation. Theoretically, if one inch of the tower is detected from any point X in the Study Area, it is considered visible, although in real world conditions the tower might not be discernable to the human eye. Therefore, the calculations tend to over predict visibility. This is a conservative analysis that evaluates potential visibility from a residential property by interpreting if a property falls within shaded areas of potential visibility on the Viewshed Maps presented in Attachment 8 of the Application. It does not necessarily mean that views would be achieved from within residential dwellings, exterior decks, porches or patios that might be located on such properties. It may be possible to view the tower from within portions*

of shaded areas on the Viewshed Maps, but experience indicates that views will not be achieved from all locations within those shaded areas.

Q8. For how long is State Historic Preservation Office determination (dated October 1, 2013) valid for?

A8. *It is APT's understanding is that the SHPO determination is valid indefinitely unless there has been a substantive change to the Area of Potential Effect (APE) (e.g., a new resource has been listed, or become eligible for listing, on the National register of Historic Places) or the proposal has been modified. None of these conditions apply to this application.*

Q9. Quantify the amounts of cut and fill that would be required to develop the proposed facility.

A9. *Approximately 505 cubic yards of cut and approximately 1555 cubic yards of fill will be required to construct the proposed Facility, access drive and drainage structures.*

Q10. Would any blasting be required to develop the site?

A10. *Blasting is not expected but may be required. During site visits on April 25 and September 10, 2013, large boulders and some apparent outcrops were found at the surface. The Web Soil Survey provided by the Natural Resources Conservation Service of the US Department of Agriculture shows depths to ledge ranging from 18" to greater than 200" below ground level in the area of development. Additional subsurface investigation would be required to conclusively determine if ledge is present at shallow depths.*

Should bedrock be encountered within the confines of the utility trenching or tower foundation construction area, wedging and mechanical hoe-ram rock removal techniques would be implemented prior to any blasting activity.

Q11. Is the proposed site located within a 100 –year or 500-year flood zone?

A11. *The site is not located within a Special Flood Hazard Area. As shown on the applicable Flood Insurance Rate Map, (Map Number 09001C0276F, effective June 18, 2010) included in Attachment 2 and prepared by the Federal Emergency Management Agency of the Department of Homeland Security, the entire site is within Zone X: "Areas determined to be outside the 0.2% annual chance flood".*

Q12. What measures are proposed for the site to ensure security and deter vandalism? (This would cover alarms, gates, locks, etc.)

- A12. *In addition to the gated and locked compound, AT&T's shelter is locked and remotely monitored for intrusion 24 hours a day. The fence surrounding the compound will be an anti-climb weave chain link fence.*
- Q13. Resolve discrepancies between the CSC Dimensions Table and distances on the Partial Plot Plan found on Sheet A-1 of Tab 4 of the Application.
- A13. *The CSC Dimensions Table notes dimensions from the center of the proposed monopine while the distances on the plan note dimensions from the estimated face of the proposed monopine. These two methods of measurements were used based on the requirements of each measurement. The CSC table dimensions are used to show gross distances from the center of the facility to various landmarks and structures. The plot plan dimensions are used to show setback distances to the face of the structure.*
- Q14. Is AT&T proposing to install an emergency backup generator (herein after referred to as "generator") only large enough for AT& T needs at this time? If yes, would AT&T consider reserving space in the fenced compound for a future shared generator should additional carriers co-locate on the tower?
- A14. *AT&T's proposed back-up emergency generator is sized for AT&T's use only. AT&T can design the compound to provide future flexibility for the possible deployment of a larger shared generator should another carrier (or future tower site owner) decide to deploy one in the future.*
- Q15. What is the fuel source for the proposed generator? What is the size of the generator in kilowatts? Provide the estimated run time for the generator based on its fuel tank capacity. Would the fuel tank have a double wall or other containment measure(s) to protect against fuel leakage?
- A15. *The proposed back-up emergency generator is a 50kW diesel generator. The diesel fuel is stored within a 210-gallon double-walled exterior belly tank. The run time is approximately 48 hours based on a full tank at 100% load. In addition, AT&T remotely monitors emergency generators at all times. Thus, an alarm will sound if any fuel enters the outer fuel tank.*
- Q16. Would there be any interruption in service between the time power goes out and the generator comes online? For example, would AT&T provide battery backup to prevent a reboot condition and provide seamless power until generator starts? If AT&T has a battery backup system, how many hours could it supply power in the event the generator fails to start?
- A16. *AT&T will have a battery backup required to prevent the facility from experiencing a "re-boot" condition during the generator start-up delay period thus allowing for continued*

or "seamless" provision of service where signal levels allow. The battery backup system provides power to the facility for approximately 4 to 6 hours.

Q17. What size generator fuel tank would be necessary to satisfy a potential need for a minimum of 48 hours of runtime for AT&T? What size generator and fuel tank would be needed if two carriers were to share the generator and both required 48 hours of runtime? What if the generator were also shared with Town/emergency equipment?

A17. *A 200 gallon fuel tank will provide approximately 48 hours of runtime for a diesel fueled emergency back-up generator at 100% load. For 48 hours of emergency back-up power for two carriers, at least 400 gallons of fuel will be required. The increased electrical load may require a larger generator which may increase the needed fuel above this 400 gallon estimate. The requirements for any Town emergency equipment are not known.*

As noted above in response number 14, AT&T's proposed back-up emergency generator is sized for AT&T's use only. AT&T can design the compound to provide future flexibility for the possible deployment of a larger shared generator should another carrier (or future tower site owner) decide to deploy one in the future.

Q18. What size concrete pad or equivalent would be needed to accommodate a generator for AT&T approximately 50 kW in capacity? What size concrete pad or equivalent would be needed to accommodate a generator approximately 200 kW in capacity?

A18. *AT&T's proposed 50kW emergency back-up generator requires an approximately 4' x 8' concrete pad. AT&T's current design includes an 11'-5" x 24' equipment shelter pad which includes an 11'-5" x 8' patio for its 50kW emergency back-up generator. A 200kW generator will require an approximately 15' x 6' concrete pad.*

Q19. Please provide the cost of a 50 kW generator. Please provide the cost of a 200 kW shared generator.

A19. *The approximate cost of a 50 kW generator is \$30,000. The approximate cost of a 200 kW generator is \$60,000. These costs are generator costs estimates only and do not include any additional electrical equipment that may be required for a shared generator, or shipping costs, installation costs additional fuel costs or added long term maintenance.*

Q20. Has AT&T considered using a fuel cell as an emergency backup power source for the proposed site? Explain.

A20. *No. As set forth in the Siting Council's Feasibility Study in Docket 432 (Feasibility study of backup power requirements for telecommunications towers and antennas pursuant to Public Act 12-148), the type of backup power chosen for use at a facility is determined by facility constraints (such as space, weight restrictions, lease arrangements, zoning*

codes), environmental limitations and liabilities, capital and operating/maintenance costs, network functionality and fuel availability. Costs and fuel sources (including lack of reliable distribution channels in some cases) have generally led AT&T to exclude them for its business plan.

Q21. Identify the safety standards and/or codes by which equipment, machinery, or technology would be used or operated at the proposed facility.

A21. *OSHA and ET docket 93-62 and 47 CFR parts 1,2,15,42 and 97 as well as OET Bulletin 65, Edition 97-01.*

Q22. Is the proposed site near an "Important Bird Area" as designated by the National Audubon Society?

A22. *No. The nearest Important Bard Area (IBA) is located in Southbury approximately 6.72 miles to the northwest. Please see the Avian Resources Evaluation Report included in Attachment 3 for additional information.*

Q23. Would AT&T's proposed facility comply with recommended guidelines of the United State Fish and Wildlife Service for minimizing the potential for telecommunications towers to impact bird species?

A23. *Yes. The proposed development would comply with the United State Fish and Wildlife Service (USFWS) guidelines for minimizing the potential impacts to birds. Please see the Avian Resources Evaluation Report included in Attachment 3 for additional information.*

Q24. Sheets C-2 through C-5 show a "trail". Is that a recreational hiking trail? If yes, describe the visibility of the proposed tower from such trail.

A24. *The "trail" depicted on site plan sheets C-2 through C-5 represents parts of a network of informal paths and old jeep roads that extend throughout the (private) property. The "trails" are not part of the CT Blue Blaze or otherwise publicly-recognized trail system. Originating off the Cobble Hill cul-de-sac, a large portion of this network would be used to establish the proposed access road. Due to the dense forest canopy and understory, the proposed tower would not be visible from the majority of trails until within a few hundred feet of the site.*

Q25. What is the cumulative noise level that the AT&T expects at the nearest property line from the proposed facility taking into account AT&T's two air conditioning units attached to its equipment shelter? Would the expected noise levels comply with applicable standards? If no, indicate which noise mitigation measure(s) may be employed to ensure compliance.

- A25. *Included in Attachment 4 is a Noise Evaluation Report which demonstrates that the cumulative noise level associated with AT&T's two air conditioning units and the emergency generator at the nearest property line will comply with applicable standards.*
- Q26. Is the site located within an aquifer protection area?
- A26. *No. Based on publicly-available CTDEEP mapping information, there are no aquifer protection areas within the town of Monroe. Please refer to the aquifer protection area (APA) Map provided in Attachment 5.*
- Q27. Is EIA/TIA-222 version F (EIA version F) the current mandatory (minimum) standard in Connecticut because the Connecticut State Building Code currently adopts the 2003 International Building Code (2003 IBC) and the 2003 IBC adopts EIA version F? Is version G (as proposed) more conservative than Version F for this tower such that the proposed tower would comply with both Version G and Version F standards?
- A27. *Yes, EIA/TIA-222 Revision F is the current mandatory standard in Connecticut. However, it should be noted that EIA/TIA-222 Revision G is not necessarily more conservative than Revision F in all cases. The tower will be designed in accordance with both the EIA/TIA-222-F and EIA/TIA-222-G standards. The more stringent of the two design iterations will be used.*
- Q28. What is the tower design wind speed for this area (Fairfield County)?
- A28. *The tower will be designed to resist wind loads equivalent to an approximate maximum 85 MPH fastest mile wind speed (Revision F) and approximate minimum 3-second wind gust of 106 MPH (Revision G). As noted in A27 above, this will result in a tower conforming to both the EIA/TIA-222 Revision F and EIA/TIA-222 Revision G standards.*
- Q29. Would the tower be designed to be expandable in height beyond the originally proposed height?
- A29. *As with any monopole structure, the tower can be designed to accommodate future expansion, if necessary.*
- Q30. What type of antenna mounts would be used for AT&T's proposed antennas, e.g. low profile platform mount?
- A30. *Platform mounts cannot be used for tree towers due to the interference with the camouflage branches. The current design specifies a 12'-6" wide dual level ultra low profile ridged t-arm with 8' long pipe mounts for the panel antennas. Supporting RF equipment will be mounted behind the antennas or on a ring- or chain-mount standoff arm to avoid the branches.*

- Q31. Drawing D-1 depicts remote radio heads, surge suppressors, and A2 units. What are the A2 units (e.g. diplexers, tower mounted amplifiers, etc)? How many surge suppressors would be installed on the tower?
- A31. *The A2 units are additional 2-way receive-only modules that are attached to the remote radio head units (RRHs). Four surge suppressors, commonly known as "squids" will be installed on the tower.*
- Q32. If requested by the Council, could the tower be designed with a yield point to ensure that the setback radius remains within the boundaries of the 36-acre Quarry Ride Associates parcel?
- A32. *Yes, the tower can be designed with a yield point so that the setback radius remains within the boundaries of the Parcel.*
- Q33. Given the taper of the faux tree material, would the top antenna platform (i.e. AT&T's platform) still be sufficiently covered by the faux tree branches? Specifically how long are the tree branches at the approximately 151 -foot level of the tower, and as a comparison, how far away from the tower do AT&T's antennas and antenna mounts extend?
- A33. *AT&T's antennas and equipment will extend 5' to 8' from the face of the monopole. The branches will be designed to extend this same distance – 5' to 8' from the fact of the monopole so that the antennas and equipment will be covered by the monopine branches.*
- Q34. Could the antennas and antenna mounts be painted to blend in with the color of the faux tree branch material?
- A34. *Yes. The antennas and antenna mounts can be painted to blend with the color of the faux branch material.*
- Q35. What color options exist for the monopole or "tree trunk"? Is the monopole proposed as a galvanized gray color?
- A35. *The monopole can be painted a dark brown color to blend with the monopine design.*
- Q36. What other, if any stealth tower design options would be feasible to employ at this site?
- A36. *The height of the proposed tower limits camouflage options. In this case, views are very limited and concealment of the facility is not required for visual mitigation.*

Q37. Would flush-mounted antennas provide the required coverage? Would such configuration result in reduced coverage and/or necessitate greater antenna height with multiple levels of antennas? Explain.

A37. *A flush mount configuration would result in reduced coverage or necessitate greater antenna height while hindering future technological upgrades. "Flush" mounting to a tower generally refers to close contact attachment of antennas directly to the tower without use of a platform or T-arms to offset antennas from a tower for mounting. When used on a tower structure, flush mounting usually only allows three to six antennas to be installed at one level (i.e. same height AGL). A carrier must then mount sets of three antennas at multiple levels on a tower. To achieve reliable service without compromising capacity or performance the lowest level would be at the minimum height necessary with additional levels installed above that minimum level on the tower. For example, an installation of twelve antennas on a tower would require the mounting of antennas at four levels (3 antennas per level) beginning at the minimum required height required. By comparison, platforms or t-arms would entail mounting of antennas at one level.*

In general, because flush mounting requires the use of multiple levels on a tower by a single carrier, it limits the ability for other carriers to co-locate on that tower. A flush mount configuration also limits the space available for any additional equipment such as remote radio head units (RRH's), surge arrestors and other associated equipment carriers typically install along with its antennas. Flush mounting limits the space available on a given tower and it is conceivable such limits could inhibit future technological upgrades. It should also be noted that in many instances flush mounting can inhibit the ability of a carrier to tilt and angle antennas to maximally optimize performance and achieve the best coverage at a given height and location.

Moreover, the proposed Facility is designed as a monopine where flush mounted antennas are not utilized in the monopine design.

Q38. Provide a list of frequencies that AT&T is licensed to utilize in Fairfield County?

A38. *AT&T's FCC licenses in Fairfield County include:*

<i>KNKA256</i>	<i>Cell B</i>	<i>835-845 MHz, 880-890 MHz, 846.5-849 MHz, 891.5-894 MHz</i>
<i>KNLG502</i>	<i>PCS E</i>	<i>1885-1890 MHz, 1965-1970 MHz</i>
<i>WPSL626</i>	<i>PCS A</i>	<i>1850-1855 MHz, 1930-1935 MHz</i>
<i>WQGG892</i>	<i>PCS A</i>	<i>1855-1860 MHz, 1935-1940 MHz</i>
<i>WQVN685</i>	<i>AWS J</i>	<i>1770-1780 MHz, 2170-2180 MHz</i>
<i>WPWV368</i>	<i>Lower C</i>	<i>710-716 MHz, 740-746 MHz</i>

WQIZ617 Lower E 722-728 MHz
WQJU459 Lower B 704-710 MHz, 734-740 MHzRF

Q39. Of the existing sites noted on Page 9 of the Radio Frequency Analysis Report (RF Report), indicate which ones that the proposed site would interact with to hand off signals. If AT&T's proposed antennas would interact with any other sites not listed, include those also. Also include the tower/structure heights of such facilities.

A39. *Included in the table below is information regarding AT&T's hand-off sites to the proposed Facility.*

Site Name	Address	Town	Latitude	Longitude	Antenna Centerline (feet)	Distance to Proposed Site (miles)	Structure Type	Structure Height (feet)	Ground Elevation (feet)
CT2144	230 Guinea Rd	Monroe	41.34185	-73.2745	236	2.86	Lattice	240	585
CT2203	500 Moose Hill Rd	Monroe	41.32096	-73.2014	138	2.61	Monopole	150	619
CT2256	85 Quaker Farms Rd	Oxford	41.38398	-73.1374	150	4.83	Monopole	150	629
CT5182	201 South Main St	Newtown	41.37813	-73.2742	110	3.12	Monopole	150	378
CT5186	474 Main St	Monroe	41.32569	-73.2664	140	3.07	Monopole	192	450
CT5189	88 Main St	Monroe	41.30165	-73.2508	175	3.99	Monopole	195	317
CT5266	1428 Monroe Turnpike	Monroe	41.37639	-73.1864	160	2.36	Monopole	160	590
CT5432	151 Berkshire Rd	Sandy Hook	41.39749	-73.2358	115	3.00	Monopole	148	597
CT5441	165 Birdseye Rd	Shelton	41.3258	-73.1487	108	4.33	Monopole	120	614
CT5920 ^[1]	375 Fan Hill Rd	Monroe	41.34634	-73.23074	50	0.75	Temporary	50	405

Q40. Which frequency band services would AT&T install at the proposed site, e.g. 700 MHz, 850 MHz, 1900 MHz, 2100 MHz, etc? Would all of these frequencies be provided initially, or would some be provided initially and others deployed in the future at this particular site? Explain

A40. *All of AT&T's licensed bands would be operational when the site enters service.*

Q41. Would the proposed site be needed for coverage, capacity, or both? Explain. If the proposed facility would also provide capacity relief, provide data to support the current capacity issue and demonstrate how the proposed facility would improve capacity in the area.

^[1]CT5920 is a temporary site deployed during the relocation of the Newtown School.

A41. *The proposed Facility is need for both coverage and capacity. AT&T's 700 and 850 MHz band services will be used primarily for coverage and its PCS and AWS band services will provide extra capacity.*

Q42. Are all frequencies used to transmit voice and data? Explain.

A42. *Yes, all frequencies will be used to transmit voice and data.*

Q43. What is the lowest height at which AT&T's antennas could achieve its coverage objectives from the proposed sites?

A43. *The minimum centerline height required to meet AT&T's coverage objectives for this area is 151' AGL.*

Q44. What are the signals strengths for which AT&T designs its system for the frequency bands that AT&T seeks to utilize at the proposed site? For in-vehicle coverage? For in building coverage?

A44. *For 700 MHz LTE, AT&T's design criteria are -83 and -93 dBm. For PCS LTE, the design criteria are -86 and -96 dBm. For 850 MHz, the design criteria are -74 and -82 dBm.*

Q45. What are the existing signal strengths within the area AT&T is seeking to cover for this site for the frequency bands that AT&T would utilize?

A45. *For 700 MHz, the signal strength in the gap is between -93 dBm and -120 dBm. For PCS and AWS LTE, that frequency will be deployed in the near future on existing sites. Signal strength in the gap that will be left by deploying PCS LTE on the existing sites is between -96 dBm and -120 dBm. For 850 MHz, the signal strength in the gap is between -82 dBm and -120 dBm.*

Q46. Does AT&T have any statistics on dropped calls and/or ineffective attempts in the vicinity of the proposed facility? If so, what do they indicate? Does AT&T have any other indicators of substandard service in the area?

A46. *Yes. AT&T's dropped call data for the area where reliable service is needed indicate elevated voice and data drops. In addition, data testing indicates that substandard or nonexistent data service is provided within the area identified as a need for this site.*

Q47. Provide the lengths of the existing coverage gaps on major roads that AT&T is seeking to cover from the proposed site at each frequency band used by AT&T. Break this down by street name and include the town(s) that the streets are located in.

A47. *The lengths of the existing coverage gaps on major roads for each of AT&T's frequency bands are provided below.*

700 Main Roads - Monroe

Street Name	Length Miles
State Hwy 111	0.53
River Rd	0.28
Elm St	1.30
Total	2.11

850 Main Roads – Monroe

Street Name	Length Miles
Monroe Tpke	0.70
State Hwy 111	0.05
Elm St	0.28
Total	1.03

1900 Main Roads – Monroe

Street Name	Length Miles
Monroe Tpke	1.69
Moose Hill Rd	0.23
Shelton Rd	0.13
State Hwy 111	0.52
Elm St	0.66
Total	3.23

AWS Main Roads – Monroe

Street Name	Length Miles
Elm St	1.77
Monroe Tpke	2.53
Moose Hill Rd	0.32
River Rd	0.07
Shelton Rd	0.25
State Hwy 111	0.62
Total	5.56

- Q48. Provide the lengths of the existing coverage gaps on secondary roads that AT&T is seeking to cover from the proposed site at each frequency band used by AT&T. Break this down by street name and include the town (s) that the streets are located in.
- A48. *The lengths of the existing coverage gaps on secondary roads for each of AT&T's frequency bands are provided below.*

700 Secondary Roads – Monroe

Street Name	Length Miles
Alpine Rd	0.17
Applegate Ln	0.20
Benedict Rd	0.43
Blake Rd	0.36
Brushy Ct	0.09
Bugg Hill Rd	0.84
Cahill Rd	0.11
Capitol Ln	0.12
Carcass Rd	0.16
Carriage Dr	0.11
Castlewood Dr	0.21
Chalk Hill Rd	0.27
Chimney Pl	0.11
Christianna Dr	0.33
Church St	0.65
Coldspring Rd	0.22
Colonial Dr	0.14
Commerce Dr	0.09
Crestwood Rd	0.33
Cross Bow Ln	0.36
Cross Hill Rd	0.42
Cutlers Farm Rd	0.48
Deer River Ln	0.17
Diane Ter	0.21
E Maiden Ln	0.29
E Village Rd	0.42
Edgewood Rd	0.20
Fan Hill Rd	2.84
Far Horizon Dr	0.52
Fawn Hill Rd	0.20
Field Rock Rd	0.35
Flint Ridge Rd	0.76
Garder Rd	1.62
Georges Ln	0.52
Glen Hollow Dr	0.16
Grant Rd	0.11
Great Ring Rd	0.16
Greisers Rd	0.16
Grindstone Ln	0.20
Hammertown Rd	2.44
Hannah Ln	0.11

Street Name	Length Miles
Harvester Rd	0.47
Hawley Ln	0.15
Hawthorne Dr	0.32
Hearthstone Rd	0.13
Heather Ln	0.25
Hidden Knolls Cir	0.30
High Meadow Rd	0.13
High Rock Rd	0.33
Highfield Dr	0.19
Hillside Ln	0.16
Historic Dr	0.12
Holly Pl	0.38
Jay Ln	0.13
Jockey Hollow Rd	1.03
Johnson Pl	0.23
Josies Ring Rd	0.96
Karen Dr	0.34
Kettle Creek Ln	0.14
Kimberly Dr	0.14
Knorr Rd	0.74
Lanthorne Rd	0.15
Lazy Brook Rd	0.11
Lisa Dr	0.11
Longview Rd	0.54
Lorraine Dr	0.25
Lovers Ln	0.14
Lynn Dr	0.73
Maplewood Dr	0.43
Maryanne Dr	0.32
Meadowbrook Rd	0.30
Meadows End Rd	0.22
Millbrook Ter	0.63
Millo Dr	0.12
Misty Ln	0.22
N Hillside Ln	0.18
Nancy Dr	0.32
Nickel Pl	0.15
Northbrook Dr	0.17
Northwood Rd	0.11
Old Coach Rd	0.24
Old Fawn Hill Rd	0.14
Old Hwy	0.11
Old Zoar Rd	1.08
Owl Hill Rd	0.18

Street Name	Length Miles
Pepper St	0.63
Pequonock Ridge Rd	0.19
Perry Dr	0.15
Pond View Rd	0.17
Red Coat Ln	0.35
Ridgedale Rd	0.42
River Dr	0.11
Robin Ln	0.20
Row Ledge Pond Rd	0.13
Rowledge Pond Rd	0.34
Saxony Dr	0.12
Scenic Hill Ln	0.31
Senior Dr	0.23
Sentry Hill Rd	0.37
Shady Ln	0.12
Silvermine Ln	0.10
Skyview Rd	0.12
Stable Ridge Rd	0.29
Stonecroft Way	0.12
Stonehedge Ln	0.24
Stonewall Ln	0.24
Summer View Dr	0.21
Sunset Hill Rd	0.22
Sweet Briar Ln	0.10
Timothy Hill Rd	0.18
Toll Gate Rd	0.07
Turkey Roost Rd	1.61
Twin Brook Ter	0.59
Underhill Rd	0.09
Village Green Ln	0.10
W Maiden Ln	0.58
Wells Rd	0.32
Wheeler Rd	1.99
Wildhorse Ct	0.13
Woodend Rd	0.17
Total	41.71

850 Secondary Roads – Monroe

Street Name	Length miles
Alpine Rd	0.03
Benedict Rd	0.22

Street Name	Length Miles
Blake Rd	0.29
Brushy Ct	0.09
Bugg Hill Rd	0.29
Cahill Rd	0.11
Capitol Ln	0.11
Carcass Rd	0.10
Carriage Dr	0.05
Castlewood Dr	0.19
Chalk Hill Rd	0.24
Chimney Pl	0.09
Christianna Dr	0.30
Church St	0.10
Coldspring Rd	0.22
Colonial Dr	0.14
Copper Mill Rd	0.05
Crestwood Rd	0.05
Cross Bow Ln	0.09
Cross Hill Rd	0.13
Cutlers Farm Rd	0.31
Deer River Ln	0.14
Diane Ter	0.21
Dogwood Ln	0.07
E Maiden Ln	0.11
E Village Rd	0.34
Edgewood Rd	0.06
Fan Hill Rd	1.93
Far Horizon Dr	0.05
Fawn Hill Rd	0.01
Field Rock Rd	0.15
Flint Ridge Rd	0.28
Garder Rd	0.72
Georges Ln	0.43
Grant Rd	0.08
Great Ring Rd	0.11
Greisers Rd	0.16
Grindstone Ln	0.12
Hammertown Rd	2.11
Harvester Rd	0.01
Hawley Ln	0.07

Street Name	Length Miles
Hawthorne Dr	0.08
Heather Ln	0.03
Hidden Knolls Cir	0.05
High Rock Rd	0.22
Highfield Dr	0.04
Hillside Ln	0.15
Historic Dr	0.06
Holly Pl	0.38
Jay Ln	0.05
Jockey Hollow Rd	0.83
Johnson Pl	0.20
Josies Ring Rd	0.78
Karen Dr	0.34
Kimberly Dr	0.06
Knorr Rd	0.68
Lanthorne Rd	0.01
Lisa Dr	0.08
Longview Rd	0.11
Lorraine Dr	0.25
Lovers Ln	0.04
Lynn Dr	0.34
Maryanne Dr	0.22
Meadowbrook Rd	0.16
Meadows End Rd	0.05
Millbrook Ter	0.33
Millo Dr	0.03
Misty Ln	0.22
N Hillside Ln	0.18
Nancy Dr	0.20
Nickel Pl	0.03
Northbrook Dr	0.03
Old Coach Rd	0.07
Old Fawn Hill Rd	0.14
Old Hwy	0.11
Old Zoar Rd	0.26
Owl Hill Rd	0.00
Pepper St	0.13
Pequonock Ridge Rd	0.02
Perry Dr	0.10
Pond View Rd	0.17
Ridgedale Rd	0.09
River Dr	0.07
Robin Ln	0.18

Street Name	Length Miles
Row Ledge Pond Rd	0.07
Rowledge Pond Rd	0.28
Sage Ln	0.00
Senior Dr	0.07
Sentry Hill Rd	0.31
Shady Ln	0.12
Skyview Rd	0.12
Stable Ridge Rd	0.08
Stonecroft Way	0.11
Stonehedge Ln	0.08
Sunset Hill Rd	0.10
Sweet Briar Ln	0.01
Turkey Roost Rd	1.41
Twin Brook Ter	0.08
Underhill Rd	0.01
Village Green Ln	0.07
W Maiden Ln	0.38
Wells Rd	0.03
Wheeler Rd	1.13
Woodend Rd	0.17
Total	22.84

1900 Secondary Roads – Monroe

Street Name	Length Miles
Alpine Rd	0.17
Applegate Ln	0.25
Barn Hill Rd	0.57
Behrens Ter	0.10
Benedict Rd	0.55
Blake Rd	0.36
Braeloch Way	0.13
Bugg Hill Rd	0.87
Cahill Rd	0.11
Camelot Dr	0.09
Capitol Ln	0.12
Carcass Rd	0.16
Carriage Dr	0.11
Castlewood Dr	0.21
Chalk Hill Rd	0.27
Chimney Pl	0.11
Christianna Dr	0.33
Church St	0.69

Street Name	Length Miles
Coldspring Rd	0.22
Colonial Dr	0.14
Commerce Dr	0.11
Crestwood Rd	0.33
Cross Bow Ln	0.37
Cross Hill Rd	0.44
Cutlers Farm Rd	0.51
Deer River Ln	0.17
Deerfield Ln	0.12
Diane Ter	0.21
E Maiden Ln	0.27
E Village Rd	0.48
Edgewood Rd	0.20
Fan Hill Rd	2.84
Far Horizon Dr	0.54
Fawn Hill Rd	0.23
Field Rock Rd	0.40
Flint Ridge Rd	0.90
Garder Rd	1.72
Georges Ln	0.52
Glen Hollow Dr	0.16
Grant Rd	0.11
Great Ring Rd	0.23
Greisers Rd	0.16
Grindstone Ln	0.34
Grist Mill Rd	0.15
Hammertown Rd	2.49
Hannah Ln	0.11
Harvester Rd	0.55
Hawley Ln	0.15
Hawthorne Dr	0.32
Hearthstone Rd	0.16
Heather Ln	0.28
Hidden Knolls Cir	0.31
High Meadow Rd	0.13
High Rock Rd	0.33
Highfield Dr	0.24
Highland Dr	0.22
Hillside Ln	0.16
Historic Dr	0.12
Hollow Tree Ln	0.09
Holly Pl	0.38

Street Name	Length Miles
Jay Ln	0.13
Jockey Hollow Rd	1.08
Johnson Pl	0.23
Josies Ring Rd	0.96
Karen Dr	0.34
Kettle Creek Ln	0.24
Kimberly Dr	0.24
Knorr Rd	0.74
Lanthorne Rd	0.15
Lazy Brook Rd	0.41
Longview Rd	0.65
Lorraine Dr	0.25
Lovers Ln	0.24
Lynn Dr	0.73
Maplewood Dr	0.50
Maryanne Dr	0.32
Meadowbrook Rd	0.34
Meadows End Rd	0.51
Millbrook Ter	0.68
Millo Dr	0.15
Misty Ln	0.22
N Hillside Ln	0.18
Nancy Dr	0.36
Nickel Pl	0.28
Northbrook Dr	0.22
Northwood Rd	0.13
Old Coach Rd	0.32
Old Fawn Hill Rd	0.14
Old Hwy	0.11
Old Tannery Rd	0.19
Old Zoar Rd	1.14
Owl Hill Rd	0.18
Pepper St	0.97
Pequonock Ridge Rd	0.21
Perry Dr	0.15
Pond View Rd	0.17
Red Coat Ln	0.44
Richmond Dr	0.20
Ridgedale Rd	0.48
River Dr	0.11
Robin Ln	0.20

Street Name	Length Miles
Row Ledge Pond Rd	0.15
Rowledge Pond Rd	0.35
Saddle Hill Rd	0.10
Saxony Dr	0.14
Scenic Hill Ln	0.38
Senior Dr	0.23
Sentry Hill Rd	0.33
Settlers Farm Rd	0.31
Shady Ln	0.12
Skyview Rd	0.12
Stable Ridge Rd	0.36
Stonecroft Way	0.12
Stonehedge Ln	0.24
Stonewall Ln	0.35
Summer View Dr	0.25
Sunset Hill Rd	0.42
Sweet Briar Ln	0.10
Timothy Hill Rd	0.31
Turkey Roost Rd	1.61
Twin Brook Ter	0.78
Underhill Rd	0.10
Valleyview Dr	0.12
Village Green Ln	0.10
W Maiden Ln	0.58
Wells Rd	0.58
Wheeler Rd	2.05
Wildhorse Ct	0.21
Woodend Rd	0.17
Total	50.18

AWS Secondary Roads – Monroe

Street Name	Length Miles
Admiral Dr	0.05
Alpine Rd	0.17
Applegate Ln	0.27
Barn Hill Ln	0.00
Barn Hill Rd	0.59
Bayberry Meadow Rd	0.08
Behrens Ter	0.11
Benedict Rd	0.55
Bittersweet Cir	0.01
Blake Rd	0.36
Blue Spruce Ln	0.06

Street Name	Length Miles
Braeloch Way	0.13
Brushy Ct	0.09
Bugg Hill Rd	0.89
Cahill Rd	0.11
Camelot Dr	0.09
Capitol Ln	0.12
Carcass Rd	0.16
Carriage Dr	0.11
Castlewood Dr	0.21
Chalk Hill Rd	0.27
Chimney Pl	0.11
Christianna Dr	0.33
Church St	1.07
Cobblers Hill Ct	0.04
Coldspring Rd	0.22
Colonial Dr	0.14
Commerce Dr	0.11
Copper Mill Rd	0.05
Countryside Dr	0.02
Crestwood Rd	0.33
Cross Bow Ln	0.38
Cross Hill Rd	0.65
Cutlers Farm Rd	0.52
Deer River Ln	0.17
Deerfield Ln	0.18
Diane Ter	0.21
Dogwood Ln	0.07
Doris Rd	0.06
Driftwood Rd	0.13
E Maiden Ln	0.32
E Village Rd	0.48
Echowoods Cir	0.08
Edgewood Rd	0.20
Evergreen Ln	0.04
Fan Hill Rd	2.84
Far Horizon Dr	0.69
Fawn Hill Rd	0.23
Field Rock Rd	0.42
Flint Ridge Rd	0.90
Founders Way	0.15
Garder Rd	1.72
Georges Ln	0.52
Glen Hollow Dr	0.16
Grant Rd	0.11

Street Name	Length Miles
Great Ring Rd	0.28
Greisers Rd	0.16
Grindstone Ln	0.35
Grist Mill Rd	0.35
Hammertown Rd	2.61
Hannah Ln	0.11
Harvester Rd	0.61
Hawley Ln	0.15
Hawthorne Dr	0.32
Hearthstone Rd	0.16
Heather Ln	0.36
Hidden Knolls Cir	0.31
High Meadow Rd	0.13
High Rock Rd	0.33
Highfield Dr	0.24
Highland Dr	0.41
Hillside Ln	0.16
Historic Dr	0.12
Hollow Tree Ln	0.09
Holly Pl	0.38
Hurd Ave	0.23
Jans Ct	0.01
Jay Ln	0.13
Jeanette St	0.04
Jockey Hollow Rd	1.08
Johnson Pl	0.23
Josies Ring Rd	0.96
Juniper Cir	0.04
Karen Dr	0.34
Kettle Creek Ln	0.24
Kimberly Dr	0.24
Knorr Rd	0.74
Lanthorne Rd	0.15
Lazy Brook Rd	0.62
Lima Rd	0.14
Lisa Dr	0.08
Longview Rd	0.65
Lorraine Dr	0.25
Lovers Ln	0.33
Lynn Dr	0.73
Maplewood Dr	0.50
Maryanne Dr	0.32
Meadowbrook Rd	0.34
Meadows End Rd	0.61

Street Name	Length Miles
Millbrook Ter	0.68
Millo Dr	0.15
Misty Ln	0.22
Moss Rd	0.10
N Hillside Ln	0.18
Nancy Dr	0.36
Nickel Pl	0.28
Northbrook Dr	0.26
Northwood Rd	0.13
Nutmeg Cir	0.02
Old Coach Rd	0.32
Old Fawn Hill Rd	0.14
Old Hwy	0.11
Old Tannery Rd	0.32
Old Zoar Rd	1.14
Owl Hill Rd	0.18
Penny Royal Ln	0.09
Pepper St	1.10
Pequonock Ridge Rd	0.21
Perry Dr	0.15
Pond View Rd	0.17
Red Coat Ln	0.44
Richmond Dr	0.20
Ridgedale Rd	0.53
River Dr	0.11
Robin Ln	0.20
Rockview Cir	0.05
Rosewood Cir	0.03
Row Ledge Pond Rd	0.15
Rowledge Pond Rd	0.35
Saddle Hill Rd	0.10
Sage Ln	0.06
Saxony Dr	0.14
Scenic Hill Ln	0.38
Senior Dr	0.23
Sentry Hill Rd	0.35
Settlers Farm Rd	0.40
Shady Ln	0.12
Silvermine Ln	0.11
Skyview Rd	0.12
Spinning Wheel Rd	0.07
Stable Ridge Rd	0.36
Stonecroft Way	0.12
Stonehedge Ln	0.24

Street Name	Length Miles
Stonewall Ln	0.35
Stoneybrook Dr	0.01
Summer View Dr	0.25
Sunset Hill Rd	0.42
Sweet Briar Ln	0.10
Timothy Hill Rd	0.31
Toll Gate Rd	0.07
Turkey Roost Rd	1.61
Twin Brook Ter	0.89
Underhill Rd	0.15
Valleyview Dr	0.12
Village Green Ln	0.10
W Maiden Ln	0.58
Weathervane Rd	0.08
Wells Rd	0.65
Wheeler Rd	2.12
Wildhorse Ct	0.40
Winsor Rd	0.09
Woodend Rd	0.17
Wrabel Cir	0.05
Total	54.40

700 Secondary Roads – Newtown

Street Name	Length Miles
Arrowhead Ln	0.16
Aspen Ln	0.12
Avalon Way	0.24
Beagle Trl	0.11
Botsford Hill Rd	0.75
Buck Trl	0.22
Button Shop Rd	0.16
Clearview Dr	0.15
Dusty Ln	0.12
Great Ring Rd	1.24
Hammertown Rd	0.17
High Bridge Rd	0.35
High Rock Rd	1.26
Hoseye Coach Rd	0.19
Kaechele Dr	0.09
Kelly Ct	0.27
Little Brook Ln	0.23
Lyrical Ln	0.15
Marlin Rd	0.90

Street Name	Length Miles
New Lebbon Rd	1.37
Rowledge Pond Rd	0.53
Sand Hill Rd	0.36
Sand Hill Road Ext	0.13
Settlers Ln	0.18
Surry Trl	0.23
Swamp Rd	0.36
Toddy Hill Rd	0.89
Turkey Roost Rd	0.28
Walker Hill Rd	0.29
Total	11.21

850 Secondary Roads – Newtown

Street Name	Length Miles
Arrowhead Ln	0.04
Aspen Ln	0.12
Avalon Way	0.11
Botsford Hill Rd	0.31
Buck Trl	0.03
Great Ring Rd	0.24
Hammertown Rd	0.00
High Bridge Rd	0.20
High Rock Rd	1.09
Kaechele Dr	0.00
Kelly Ct	0.12
Little Brook Ln	0.01
Marlin Rd	0.27
New Lebbon Rd	0.75
Rowledge Pond Rd	0.43
Sand Hill Rd	0.19
Sand Hill Road Ext	0.12
Settlers Ln	0.04
Swamp Rd	0.11
Toddy Hill Rd	0.16
Turkey Roost Rd	0.07
Total	4.40

1900 Secondary Roads – Newtown

Street Name	Length Miles
Arrowhead Ln	0.30
Aspen Ln	0.12

Street Name	Length Miles
Avalon Way	0.30
Beagle Trl	0.13
Botsford Hill Rd	0.90
Bradley Ln	0.34
Buck Trl	0.22
Button Shop Rd	0.27
Camelot Crst	0.08
Clearview Dr	0.09
Dusty Ln	0.14
Great Ring Rd	1.59
High Bridge Rd	0.55
High Rock Rd	1.30
Hoseye Coach Rd	0.24
Indian Hill Ln	0.22
Kaechele Dr	0.19
Kelly Ct	0.40
Little Brook Ln	0.33
Lyrical Ln	0.09
Marlin Rd	1.51
New Lebbon Rd	1.43
Post Ln	0.08
Rowledge Pond Rd	0.55
Sand Hill Rd	0.36
Sand Hill Road Ext	0.13
Settlers Ln	0.39
Surry Trl	0.39
Swamp Rd	0.55
Toddy Hill Rd	1.06
Turkey Roost Rd	0.43
Walker Hill Rd	0.50
Total	15.33

AWS Secondary Roads – Newtown

Street Name	Length Miles
Arrowhead Ln	0.40
Aspen Ln	0.12
Aspen Way	0.11
Avalon Way	0.30
Beagle Trl	0.16
Botsford Hill Rd	0.97
Bradley Ln	0.55
Buck Trl	0.22

Street Name	Length Miles
Button Shop Rd	0.49
Camelot Crst	0.12
Clearview Dr	0.10
Dusty Ln	0.24
Farmery Rd	0.02
Grace Moore Rd	0.09
Great Ring Rd	1.78
Hammertown Rd	0.10
High Bridge Rd	0.74
High Rock Rd	1.47
Honey Ln	0.06
Hoseye Coach Rd	0.33
Indian Hill Ln	0.30
Kaechele Dr	0.18
Kelly Ct	0.40
Little Brook Ln	0.41
Lyrical Ln	0.28
Marlin Rd	1.60
New Lebbon Rd	1.66
Post Ln	0.08
Rowledge Pond Rd	0.55
Sand Hill Rd	0.36
Sand Hill Road Ext	0.13
Serenity Ln	0.08
Settlers Ln	0.40
Still Hill Rd	0.13
Strawberry Ln	0.24
Surry Trl	0.45
Swamp Rd	0.70
Toddy Hill Rd	1.06
Turkey Roost Rd	0.46
Walker Hill Rd	0.50
Total	18.30

- Q49. What is the total (not incremental) predicted coverage footprint from the proposed site (in square miles), at each frequency band used by AT&T? Provide such data for the proposed antenna height and ten feet shorter.
- A49. *The total (not incremental) predicted coverage footprint from the proposed site in square miles for each of AT&T's frequency bands are included below.*

	Incremental Coverage from Proposed Site (700 MHz)		Incremental Coverage from Proposed Site (1900 MHz)	
Area Coverage at 151 feet:	(≥ -74 dBm)	1.28	(≥ -86 dBm)	0.68
	(≥ -82 dBm)	5.16	(≥ -96 dBm)	2.73

Area Coverage at 141 feet:	(≥ -74 dBm)	1.15	(≥ -86 dBm)	0.64
	(≥ -82 dBm)	4.49	(≥ -96 dBm)	2.43

	Incremental Coverage from Proposed Site (850 MHz)		Incremental Coverage from Proposed Site (AWS)	
Area Coverage at 151 feet:	(≥ -74 dBm)	3.11	(≥ -86 dBm)	0.67
	(≥ -82 dBm)	8.08	(≥ -96 dBm)	2.49

Area Coverage at 141 feet:	(≥ -74 dBm)	1.81	(≥ -86 dBm)	0.62
	(≥ -82 dBm)	5.03	(≥ -96 dBm)	2.23

Q50. In the RF Report under Tab 1 of the Application, AT&T included an existing coverage plot and an existing and proposed coverage plot for 700 MHz and 1900 MHz. Provide similar plots for 850 MHz or 2100 MHz or other frequencies that AT&T would utilize, as applicable.

A50. *Please see the plots included in Attachment 6.*

Q51. Provide propagation maps showing existing plus proposed coverage at an antenna height that is ten feet shorter than proposed for 700 MHz, 850 MHz, 1900 MHz, 2100 MHz, or as applicable.

A51. *Please see the plots included in Attachment 7.*

- Q52. Provide the lengths of the coverage that AT&T would provide along primary roads from the proposed site at the proposed frequencies, e.g. 700 MHz, 850MHz, 1900 MHz, 2100 MHz, or as applicable. Also provide such data assuming that the tower is ten feet shorter. Break this data down by street name and include the town(s) that the streets are located in.
- A52. *The lengths of the coverage that AT&T would provide along primary roads from the proposed site at the proposed frequencies at the proposed centerline height of 151' and at 141' are provided below.*

Proposed Centerline Height: 151' AGL

700 Main Roads– Monroe

Street Name	Length Miles
River Rd	0.07
Elm St	0.34
Total	0.41

700 Secondary Roads– Monroe

Street Name	Length Miles
Barn Hill Rd	0.04
Behrens Ter	0.01
Benedict Rd	0.25
Blake Rd	0.36
Cahill Rd	0.11
Cannon Way	0.03
Carriage Dr	0.11
Castlewood Dr	0.19
Chalk Hill Rd	0.24
Chimney Pl	0.11
Christianna Dr	0.33
Coldspring Rd	0.22
Copper Mill Rd	0.05
Cross Bow Ln	0.01
Diane Ter	0.21
Dogwood Ln	0.06
E Maiden Ln	0.03
Fan Hill Rd	1.26
Field Rock Rd	0.04
Flint Ridge Rd	0.73
Georges Ln	0.52
Glen Hollow Dr	0.16

Street Name	Length Miles
Great Ring Rd	0.16
Greisers Rd	0.16
Grindstone Ln	0.20
Hammertown Rd	0.59
Harmony Ln	0.04
Hawthorne Dr	0.32
Highland Dr	0.00
Historic Dr	0.07
Holly Pl	0.38
Jockey Hollow Rd	0.79
Johnson Pl	0.12
Josies Ring Rd	0.12
Karen Dr	0.34
Knorr Rd	0.30
Lorraine Dr	0.25
Lynn Dr	0.67
Maryanne Dr	0.32
Millbrook Ter	0.52
Misty Ln	0.22
Nancy Dr	0.32
Old Coach Rd	0.11
Old Fawn Hill Rd	0.14
Old Hwy	0.11
Old Zoar Rd	0.71
Owl Hill Rd	0.17
Penny Royal Ln	0.01
Pepper St	0.05
Pequonock Ridge Rd	0.07
Red Coat Ln	0.17
River Dr	0.11
Row Ledge Pond Rd	0.05
Rowledge Pond Rd	0.09
Sage Ln	0.06
Scenic Hill Ln	0.04
Shady Ln	0.03
Skyview Rd	0.12
Stonecroft Way	0.12
Stonehedge Ln	0.24
Stonewall Ln	0.24
Summer View Dr	0.16
Turkey Roost Rd	1.61
Underhill Rd	0.09

Street Name	Length Miles
Village Green Ln	0.03
W Maiden Ln	0.48
Wells Rd	0.25
Wheeler Rd	1.35
Wildhorse Ct	0.02
Woodend Rd	0.04
Total	17.28

700 Secondary Roads - Newtown

Street Name	Length Miles
Arrowhead Ln	0.11
Bradley Ln	0.02
Buck Trl	0.02
Great Ring Rd	0.84
High Rock Rd	0.42
Hoseye Coach Rd	0.01
Kelly Ct	0.19
Lyrical Ln	0.01
Marlin Rd	0.21
New Lebbon Rd	0.01
Rowledge Pond Rd	0.01
Sand Hill Rd	0.09
Walker Hill Rd	0.29
Total	2.23

850 Secondary Roads – Monroe

Street Name	Length Miles
Bagburn Rd	0.12
Benedict Rd	0.22
Blake Rd	0.29
Cahill Rd	0.11
Castlewood Dr	0.19
Chalk Hill Rd	0.24
Christianna Dr	0.30
Coldspring Rd	0.22
Diane Ter	0.21
Fan Hill Rd	1.24
Field Rock Rd	0.12
Flint Ridge Rd	0.28
Georges Ln	0.43
Great Ring Rd	0.11
Greisers Rd	0.16

Street Name	Length Miles
Grindstone Ln	0.12
Hammertown Rd	0.84
Holly Pl	0.38
Jockey Hollow Rd	0.83
Johnson Pl	0.17
Josies Ring Rd	0.34
Karen Dr	0.34
Knorr Rd	0.39
Lorraine Dr	0.25
Lynn Dr	0.32
Maryanne Dr	0.22
Millbrook Ter	0.32
Misty Ln	0.22
Nancy Dr	0.20
Old Fawn Hill Rd	0.14
Old Hwy	0.11
Old Zoar Rd	0.28
Pepper St	0.10
Rowledge Pond Rd	0.13
Shady Ln	0.10
Skyview Rd	0.12
Stonecroft Way	0.11
Turkey Roost Rd	1.41
W Maiden Ln	0.38
Wheeler Rd	1.09
Woodend Rd	0.13
Total	13.25

850 Secondary Roads – Newtown

Street Name	Length Miles
Great Ring Rd	0.10
High Rock Rd	0.57
Kelly Ct	0.11
Marlin Rd	0.12
Sand Hill Road Ext	0.12
Total	1.01

1900 Main Roads – Monroe

Street Name	Length Miles
Elm St	0.14
River Rd	0.07
Total	0.21

1900 Secondary Roads – Monroe

Street Name	Length Miles
Barn Hill Rd	0.11
Blake Rd	0.36
Cahill Rd	0.11
Chalk Hill Rd	0.20
Christianna Dr	0.33
Diane Ter	0.16
Fan Hill Rd	0.71
Flint Ridge Rd	0.17
Georges Ln	0.52
Glen Hollow Dr	0.16
Great Ring Rd	0.23
Greisers Rd	0.14
Grindstone Ln	0.22
Hammertown Rd	0.13
Hawthorne Dr	0.22
Jockey Hollow Rd	0.38
Karen Dr	0.20
Knorr Rd	0.13
Lorraine Dr	0.17
Lynn Dr	0.44
Maryanne Dr	0.32
Millbrook Ter	0.31
Misty Ln	0.22
Nancy Dr	0.36
Old Coach Rd	0.12
Old Hwy	0.11
Old Zoar Rd	0.17
River Dr	0.12
Skyview Rd	0.12
Stonehedge Ln	0.21
Stonewall Ln	0.35
Sunset Hill Rd	0.02
Turkey Roost Rd	1.36
W Maiden Ln	0.26
Wells Rd	0.12
Wheeler Rd	1.07
Total	10.36

1900 Secondary Roads – Newtown

Street Name	Length Miles
Arrowhead Ln	0.14
Great Ring Rd	0.59
Kelly Ct	0.18
Marlin Rd	0.21
Walker Hill Rd	0.48
Total	1.60

AWS Main Roads – Monroe

Street Name	Length Miles
Elm St	0.14

AWS Secondary Roads – Monroe

StreetName	Length Miles
Barn Hill Rd	0.12
Behrens Ter	0.10
Blake Rd	0.36
Cahill Rd	0.11
Chalk Hill Rd	0.20
Christianna Dr	0.33
Diane Ter	0.16
Fan Hill Rd	0.71
Flint Ridge Rd	0.17
Georges Ln	0.52
Glen Hollow Dr	0.16
Great Ring Rd	0.25
Greisers Rd	0.14
Grindstone Ln	0.22
Grist Mill Rd	0.12
Hammertown Rd	0.13
Hawthorne Dr	0.22
Highland Dr	0.18
Jockey Hollow Rd	0.38
Karen Dr	0.20
Knorr Rd	0.13
Lorraine Dr	0.17
Lynn Dr	0.44
Maryanne Dr	0.32
Millbrook Ter	0.31

Street Name	Length Miles
Misty Ln	0.22
Nancy Dr	0.36
Old Coach Rd	0.12
Old Hwy	0.11
Old Zoar Rd	0.17
River Dr	0.11
Skyview Rd	0.12
Stonehedge Ln	0.21
Stonewall Ln	0.35
Turkey Roost Rd	1.36
Underhill Rd	0.10
W Maiden Ln	0.26
Wells Rd	0.12
Wheeler Rd	1.07
Wildhorse Ct	0.13
Total	11.00

AWS Secondary Roads – Newtown

Street Name	Length Miles
Arrowhead Ln	0.14
Great Ring Rd	0.59
High Rock Rd	0.10
Kelly Ct	0.18
Marlin Rd	0.26
Walker Hill Rd	0.48
Total	1.75

Ten feet below the proposed centerline height: 141' AGL

700 Main Roads– Monroe

Street Name	Length Miles
Elm St	0.34
Total	0.34

700 Secondary Roads – Monroe

Street Name	Length Miles
Benedict Rd	0.25
Blake Rd	0.36
Cahill Rd	0.11
Carriage Dr	0.11
Castlewood Dr	0.19
Chalk Hill Rd	0.24
Chimney Pl	0.11
Christianna Dr	0.33
Coldspring Rd	0.22
Diane Ter	0.21
Fan Hill Rd	1.17
Flint Ridge Rd	0.73
Georges Ln	0.52
Glen Hollow Dr	0.16
Great Ring Rd	0.16
Greisers Rd	0.16
Grindstone Ln	0.20
Hammertown Rd	0.56
Hawthorne Dr	0.32
Holly Pl	0.38
Jockey Hollow Rd	0.79
Johnson Pl	0.11
Josies Ring Rd	0.11
Karen Dr	0.34
Knorr Rd	0.30
Lorraine Dr	0.25
Lynn Dr	0.67
Maryanne Dr	0.32
Millbrook Ter	0.50
Misty Ln	0.22
Nancy Dr	0.32
Old Coach Rd	0.11
Old Hwy	0.11
Old Zoar Rd	0.71
Owl Hill Rd	0.13
Red Coat Ln	0.17
River Dr	0.11
Skyview Rd	0.12
Stonecroft Way	0.12
Stonehedge Ln	0.24
Stonewall Ln	0.24
Turkey Roost Rd	1.61

Street Name	Length Miles
Underhill Rd	0.09
W Maiden Ln	0.48
Wells Rd	0.21
Wheeler Rd	1.35
Total	16.27

700 Secondary Roads – Newtown

Street Name	Length Miles
Arrowhead Ln	0.10
Great Ring Rd	0.80
Walker Hill Rd	0.29
Total	1.19

850 Main Roads– Monroe

None

850 Secondary Roads– Monroe

Street Name	Length Miles
Benedict Rd	0.22
Blake Rd	0.29
Cahill Rd	0.11
Castlewood Dr	0.18
Chalk Hill Rd	0.22
Christianna Dr	0.30
Coldspring Rd	0.22
Diane Ter	0.21
Fan Hill Rd	0.96
Flint Ridge Rd	0.28
Georges Ln	0.43
Great Ring Rd	0.11
Greisers Rd	0.16
Grindstone Ln	0.12
Hammertown Rd	0.67
Holly Pl	0.38
Jockey Hollow Rd	0.78
Johnson Pl	0.11
Josies Ring Rd	0.16
Karen Dr	0.34
Knorr Rd	0.24
Lorraine Dr	0.25

Street Name	Length Miles
Lynn Dr	0.29
Maryanne Dr	0.22
Millbrook Ter	0.30
Misty Ln	0.22
Nancy Dr	0.20
Old Fawn Hill Rd	0.14
Old Hwy	0.11
Old Zoar Rd	0.16
Skyview Rd	0.12
Stonecroft Way	0.11
Turkey Roost Rd	1.41
W Maiden Ln	0.38
Wheeler Rd	1.08
Total	11.47

850 Secondary Roads– Newtown

Street Name	Length Miles
Great Ring Rd	0.10

1900 Main Roads– Monroe

Street Name	Length Miles
Elm St	0.13

1900 Secondary Roads– Monroe

Street Name	Length Miles
Blake Rd	0.36
Cahill Rd	0.11
Chalk Hill Rd	0.20
Christianna Dr	0.33
Diane Ter	0.16
Fan Hill Rd	0.66
Flint Ridge Rd	0.14
Georges Ln	0.52
Glen Hollow Dr	0.16
Great Ring Rd	0.20
Greisers Rd	0.14
Grindstone Ln	0.23
Hammertown Rd	0.11
Hawthorne Dr	0.21

Street Name	Length Miles
Jockey Hollow Rd	0.34
Karen Dr	0.18
Knorr Rd	0.13
Lorraine Dr	0.16
Lynn Dr	0.42
Maryanne Dr	0.30
Millbrook Ter	0.27
Misty Ln	0.22
Nancy Dr	0.36
Old Coach Rd	0.12
Old Hwy	0.11
Old Zoar Rd	0.15
River Dr	0.11
Skyview Rd	0.12
Stonehedge Ln	0.21
Stonewall Ln	0.35
Turkey Roost Rd	1.35
W Maiden Ln	0.22
Wells Rd	0.12
Wheeler Rd	1.06
Total	9.85

1900 Secondary Roads– Newtown

Street Name	Length Miles
Arrowhead Ln	0.13
Great Ring Rd	0.47
Marlin Rd	0.17
Walker Hill Rd	0.45
Total	1.23

AWS Main Roads– Monroe

None

AWS Secondary Roads– Monroe

Street Name	Length Miles
Behrens Ter	0.10
Blake Rd	0.36
Cahill Rd	0.11
Chalk Hill Rd	0.20
Christianna Dr	0.33
Diane Ter	0.16
Fan Hill Rd	0.66

Street Name	Length Miles
Flint Ridge Rd	0.14
Georges Ln	0.52
Glen Hollow Dr	0.16
Great Ring Rd	0.20
Greisers Rd	0.14
Grindstone Ln	0.23
Grist Mill Rd	0.10
Hammertown Rd	0.11
Hawthorne Dr	0.21
Highland Dr	0.18
Jockey Hollow Rd	0.34
Karen Dr	0.18
Knorr Rd	0.13
Lorraine Dr	0.16
Lynn Dr	0.42
Maryanne Dr	0.30
Millbrook Ter	0.27
Misty Ln	0.22
Nancy Dr	0.36
Old Coach Rd	0.12
Old Hwy	0.11
Old Zoar Rd	0.15
River Dr	0.11
Skyview Rd	0.12
Stonehedge Ln	0.21
Stonewall Ln	0.35
Turkey Roost Rd	1.35
Underhill Rd	0.10
W Maiden Ln	0.22
Wells Rd	0.12
Wheeler Rd	1.06
Wildhorse Ct	0.11
Total	10.56

AWS Secondary Roads– Newtown

Street Name	Length Miles
Arrowhead Ln	0.13
Great Ring Rd	0.47
Marlin Rd	0.22
Walker Hill Rd	0.45
Total	1.28

Q53. Provide the lengths of the coverage that AT&T would provide along secondary roads from the proposed site at the proposed frequencies, e.g. 700 MHz, 850 MHz, 1900 MHz, 2100 MHz, or as applicable. Also provide such data assuming that the tower is ten feet shorter. Break this data down by street name and include the town(s) that the streets are located in.

A53. *Please see the tables in A52 above.*

Q54. If the worst-case power density analysis under Tab 7 of the Application was performed without the normal 10 dB off-beam pattern loss, would the total percent maximum permissible exposure be approximately 10 times the 2.89 percent or 28.9 percent?

A54. *Yes.*

Q55. The RF Report provides the population living within the existing and incremental coverage area for 700 MHz and 1900MHz. Provide similar data for 850 MHz or other frequencies if applicable.

A55. *Please see the table below.*

	Incremental Coverage from Proposed Site (850 MHz)		Incremental Coverage from Proposed Site (AWS)	
	Population Coverage: ¹	(≥ -74 dBm)	1138	(≥ -86 dBm)
(≥ -82 dBm)		1907	(≥ -96 dBm)	1771

Q56. Will the proposed facility support text-to-911 service? Is additional equipment required for this purpose?

A56. *AT&T and this facility will be able to support text-to-911 service once this functionality is supported and requested by the Public Safety Answering Point (PSAP). AT&T is not aware that this functionality had yet been requested for this area.*

Q57. Are you aware of any Public Safety Answering Points in the area of the proposed site that are able to accept text-to-911?

A57. *Please see A56 above.*

¹ Population figures are based upon 2010 US Census Block Data

CERTIFICATE OF SERVICE

I hereby certify that on this day, an Original and fifteen copies of the foregoing were sent by overnight mail to the Connecticut Siting Council:

Dated: April 22, 2015

A handwritten signature in cursive script that reads "Lucia Chiochio". The signature is written in black ink and is positioned above a horizontal line.

Lucia Chiochio

cc: Michele Briggs, AT&T
Kelly Bettuchi, AT&T
David Vivian, SAI
Jesse Moreno, Proterra Design
Martin Lavin, C Squared
Michael Libertine, APT
Dean Gustafson, APT

ATTACHMENT 1

TOWAIR Determination Results

*** NOTICE ***

TOWAIR's findings are not definitive or binding, and we cannot guarantee that the data in TOWAIR are fully current and accurate. In some instances, TOWAIR may yield results that differ from application of the criteria set out in 47 C.F.R. Section 17.7 and 14 C.F.R. Section 77.13. A positive finding by TOWAIR recommending notification should be given considerable weight. On the other hand, a finding by TOWAIR recommending either for or against notification is not conclusive. It is the responsibility of each ASR participant to exercise due diligence to determine if it must coordinate its structure with the FAA. TOWAIR is only one tool designed to assist ASR participants in exercising this due diligence, and further investigation may be necessary to determine if FAA coordination is appropriate.

DETERMINATION Results	
Structure does not require registration. There are no airports within 8 kilometers (5 miles) of the coordinates you provided.	
Your Specifications	
NAD83 Coordinates	
Latitude	41-21-18.9 north
Longitude	073-13-20.2 west
Measurements (Meters)	
Overall Structure Height (AGL)	49.4
Support Structure Height (AGL)	47.2
Site Elevation (AMSL)	149
Structure Type	
MTOWER - Monopole	

[Tower Construction Notifications](#)

Notify Tribes and Historic Preservation Officers of your plans to build a tower.

CLOSE WINDOW

ATTACHMENT 2

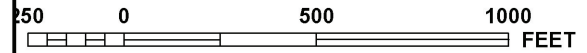


JOINS PANEL 0277

45 80 000m N



MAP SCALE 1" = 500'



METER

NFP
NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0276F

FIRM
FLOOD INSURANCE RATE MAP
FAIRFIELD COUNTY,
CONNECTICUT
(ALL JURISDICTIONS)

PANEL 276 OF 626
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
MONROE, TOWN OF	090009	0276	F
NEWTOWN, TOWN OF	090011	0276	F

Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.



MAP NUMBER
09001C0276F

EFFECTIVE DATE
JUNE 18, 2010

Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov

ATTACHMENT 3



AVIAN RESOURCES EVALUATION

April 20, 2015

**Site Acquisitions, Inc.
500 Enterprise Drive, Suite 3A
Rocky Hill, CT 06067**

APT Project No.: CT1931081

Attn: Tim Burks

**Re: CT Siting Council Docket 457
Responses to Interrogatories
30 Cobblers Hill Court
Monroe, Connecticut**

New Cingular Wireless PCS, LLC (“AT&T”) proposes to construct a new wireless telecommunications Facility (“Facility”) at 30 Cobblers Hill Court in Monroe, Connecticut (the “host Property”). The host Property consists of 36 undeveloped acres dominated by complexes of upland and wetland forested areas with intermixed open field and scrub/shrub habitats. The proposed Facility site is located within an upland forested area. AT&T proposes to install a 162-foot tall monopine and ground equipment enclosure within a 75-foot by 75-foot gravel compound area surrounded with an 8-foot tall chain link fence. A 12-foot wide, approximately 1,634-foot long gravel access is proposed in order to gain admission to the Facility, extending off the cul-de-sac of Cobblers Hill Court and following existing cleared dirt access routes for long segments. An area of approximately 57,000 square feet will require tree clearing activities as part of the proposed development. Based on site plan information prepared by Pro Terra Design Group, LLC approximately 164 trees with diameters of 6-inches or greater at breast height would be removed within the area of the proposed compound and driveway.

This evaluation is provided in response to *Pre-hearing Questions Set One* submitted by the Connecticut Siting Council (the “Council”) for Docket No. 457, specifically:

- Question #22 – Is the proposed site near an “Important Bird Area” as designated by the National Audubon Society?
- Question #23 – Would AT&T’s proposed facility comply with recommended guidelines of the United State Fish and Wildlife Service for minimizing the potential for telecommunications towers to impact bird species?

All-Points Technology Corporation, P.C. (“APT”) reviewed several publicly-available sources of avian data for the state of Connecticut to provide the following information with respect to potential impacts on migratory birds associated with the proposed development. This desktop analysis and

attached graphics identify avian resources and their proximities to the host Property. Information within an approximate 2-mile radius of the host Property is graphically depicted on the attached Avian Resources Map. Some of the avian data referenced herein are not located in proximity to the project area and are therefore not visible on the referenced map due to its scale. However, in those cases the distances separating the host Property from the resources are identified in the discussions below.

Proximity to Important Bird Areas

The National Audubon Society has identified 27 Important Bird Areas (“IBAs”) in the state of Connecticut. IBAs are sites that provide essential habitat for breeding, wintering, and/or migrating birds. The IBA must support species of conservation concern, restricted-range species, species vulnerable due to concentration in one general habitat type or biome, or species vulnerable due to their occurrence at high densities as a result of their congregatory behavior¹. The closest IBA to the host Property is the Audubon Center at Bent of the River, located in Southbury approximately 6.72 miles to the northwest. Encompassing a wide variety of relatively undisturbed upland and wetland habitats, this 554 acre historic estate (with an additional ±100 acres in conservation easements) serves as a model land management preserve dedicated to environmental education, research and bird conservation. This IBA contains exceptional habitats for birds and other wildlife, including managed shrubland habitats providing nesting habitat for early successional species of conservation concern. Due to its distance from the site, this IBA would not experience an adverse impact resulting from the proposed development of the Facility.

Supporting Migratory Bird Data

Beyond Audubon’s IBAs, the following analysis and attached graphics also identify several additional avian resources and their proximities to the host Property. Although these data sources may not represent habitat indicative of important bird areas, they may indicate possible bird concentrations² or migratory pathways.

Critical Habitat

Connecticut Critical Habitats depict the classification and distribution of 25 rare and specialized wildlife habitats in the state. It represents a compilation of ecological information collected over many years by state agencies, conservation organizations and individuals. Critical habitats range in size from areas less than one acre to areas that are tens of acres in extent. The Connecticut Critical Habitats information can serve to highlight ecologically significant areas and to target areas of species diversity for land conservation and protection but may not necessarily be indicative of habitat for bird species. The nearest Critical Habitat to the proposed Facility site is a dry subacidic forest, denoted as the Tungsten Mine Park located approximately 4.62 miles to the south. Based on the distance separating this resource from the proposed Facility, no adverse impacts are anticipated.

¹ http://web4.audubon.org/bird/iba/iba_intro.html

² “bird concentrations” is related to the USFWS *Interim Guidance on the Siting, Construction, Operation and Decommissioning of Communications Towers* (September 14, 2000) analysis provided at the end of this document

Avian Survey Routes and Points

Breeding Bird Survey Route

The North American Breeding Bird Survey is a cooperative effort between various agencies and volunteer groups to monitor the status and trends of North American bird populations. Routes are randomly located to sample habitats that are representative of an entire region and do not necessarily represent concentrations of avifauna or identification of critical avian habitats. Each year during the height of the avian breeding season (June for most of the United States) participants skilled in avian identification collect bird population data along roadside survey routes. Each survey route is approximately 24.5 miles long and contains 50 stops located at 0.5-mile intervals. At each stop, a three-minute count is conducted. During each count, every bird seen or heard within a 0.25-mile radius is recorded. The resulting data is used by conservation managers, scientists, and the general public to estimate population trends and relative abundances and to assess bird conservation priorities. The nearest survey route to the host Property is the Long Hill Breeding Bird Survey Route (Route #18013) located approximately 2.32 miles to the northwest. This ± 25 -mile long bird survey route begins on the Easton/Trumbull town line and generally winds its way north through Monroe, Newtown, and Southbury before terminating in Roxbury. Since bird survey routes represent randomly selected data collection areas, they do not necessarily represent a potential restriction to development projects, including the proposed Facility.

Hawk Watch Site

The Hawk Migration Association of North America (“HMANA”) is a membership-based organization committed to the conservation of raptors through the scientific study, enjoyment and appreciation of raptor migration. HMANA collects hawk count data from almost 200 affiliated raptor monitoring sites throughout the United States, Canada and Mexico, identified as “Hawk Watch Sites.” In Connecticut, Hawk Watch Sites are typically situated on prominent hills and mountains that tend to concentrate migrating raptors and may be an indicator of secondary migratory routes that connect to the Atlantic Flyway. The nearest Hawk Watch Site, Osborn Hill, is located in Newtown, approximately 2.95 miles to the north of the host Property.

Most hawks migrate during the day (diurnal) to take advantage of two theorized benefits: (1) diurnal migration allows for the use of updrafts or rising columns of air called thermals to gain lift without flapping thereby reducing energy loss; and, (2) day migrants can search for prey and forage as they migrate. Therefore, no adverse impacts to migrating hawks are anticipated with development of the Facility, based on the $2.95\pm$ mile separation distance to a migrating raptor concentration and hawk migration behavior occurring during the daytime under favorable weather conditions when thermals form.

Bald Eagle Survey Route

Bald Eagle Survey Routes consist of locations of midwinter Bald Eagle counts from 1986 to 2005 with an update provided in 2008. This survey was initiated in 1979 by the National Wildlife Federation. This database includes information on statewide, regional and national trends. Survey

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routes are included in the database only if they were surveyed consistently in at least four years and where at least four eagles were counted in a single year. A Bald Eagle Site survey route³ along the Housatonic River (Housatonic River Survey Route #2), which flows within approximately 3.2 miles northeast of the host Property, is located on the borders of the Towns of Monroe and Oxford and extends north to CT Route 123 in the Town of Brookfield.

Bald Eagle migration patterns are complex, dependent on age of the individual, climate (particularly during the winter) and availability of food.⁴ Adult birds typically migrate alone and generally as needed when food becomes unavailable, although concentrations of migrants can occur at communal feeding and roost sites. Migration typically occurs during the middle of day (10:30–17:00) as thermals provide for opportunities to soar up with limited energetic expense; Bald Eagle migration altitudes are estimated to average 1,500–3,050 m by ground observers.⁵ Four adults tracked by fixed-wing aircraft in Montana averaged 98 km/d during spring migration and migrated at 200–600 m above ground (McClelland et al. 1996).⁶

In addition, the USFWS's *National Bald Eagle Management Guidelines* (May 2007) recommends a 660 foot buffer to bald eagle nests if the activity will be visible from the nest with an additional management practice recommendation of retaining mature trees and old growth stands, particularly within 0.5 mile from water.

No adverse impacts to migrating Bald Eagle are anticipated with development of the Facility. This conclusion is based on the short (162-foot) height of the Facility, eagle migration patterns during the daytime under favorable weather conditions when thermals form and compliance with USFWS bald eagle management guidelines.

Flyways

The host Property is located in Fairfield County, approximately 11.8 miles north of Long Island Sound. The Connecticut coast lies within the Atlantic Flyway, one of four generally recognized regional primary migratory bird flyways (Mississippi, Central and Pacific being the others). This regional flyway is used by migratory birds travelling to and from summering and wintering grounds. The Atlantic Flyway is particularly important for many species of migratory waterfowl and shorebirds, and Connecticut's coast serves as vital stopover habitat. Migratory land birds also stop along coastal habitats before making their way inland. Smaller inland migratory flyways are often concentrated along major riparian areas as birds

³ Bald Eagle survey routes generally follow along major river systems in Connecticut, with viewpoints gained from accessible state and local roadways.

⁴ Buehler, David A. 2000. Bald Eagle (*Haliaeetus leucocephalus*), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: <http://bna.birds.cornell.edu/bna/species/506> [Accessed 09/09/13].

⁵ Harmata, A. R. 1984. Bald Eagles of the San Luis valley, Colorado: their winter ecology and spring migration. Ph.D. Thesis. Montana State Univ. Bozeman.

⁶ McClelland, B. R., P. T. McClelland, R. E. Yates, E. L. Caton, and M. E. McFadden. 1996. Fledging and migration of juvenile Bald Eagles from Glacier National Park, Montana. *J. Raptor Res.* 30:79-89.

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use these valuable stopover habitats to rest and refuel as they make their way further inland to their preferred breeding habitats. The Connecticut Migratory Bird Stopover Habitat Project (Stokowski, 2002)⁷ identified potential flyways along the Housatonic, Naugatuck, Thames, and Connecticut Rivers. This study paralleled a similar earlier study conducted by the Silvio O. Conte National Fish & Wildlife Refuge (Neotropical Migrant Bird Stopover Habitat Survey⁸), which consisted of collection of migratory bird data along the Connecticut River and the following major Connecticut River tributaries: Farmington, Hockanum, Scantic, Park, Mattabesset, Salmon, and Eight Mile Rivers. Of these potential flyways, the nearest to the proposed Facility site is the Housatonic River, located approximately 2.9 miles to the northeast. Although the Pequonnock River riparian corridor, located 0.38 mile west/southwest of the site, is not identified as a potential flyway, it potentially forms a secondary flyway as birds move northward from the Housatonic River corridor during the spring migration. These major riparian corridors may provide secondary flyways as they likely provide more food and protection than more exposed upland sites, particularly during the spring migration⁹.

Siting of tower structures within flyways can be a concern, particularly for tall towers and even more particularly for tall towers with guy wires and lighting. The majority of studies on bird mortality due to towers focuses on very tall towers (greater than 1000 feet), illuminated with non-flashing lights, and guyed. These types of towers, particularly if sited in major migratory pathways, do result in significant bird mortality (Manville, 2005)¹⁰. The proposed Facility is not this type of tower, being an unlit, unguyed monopine structure only 162 feet in height. More recent studies of short communication towers (<300 feet) reveal that they rarely kill migratory birds¹¹. Studies of mean flight altitude of migrating birds reveal flight altitudes of 410 meters (1350 feet), with flight altitudes on nights with bad weather between 200 and 300 meters above ground level (656 to 984 feet)¹².

No adverse impacts to migrating bird species are anticipated with the proposed Facility, based on the distance separating the host Property from both the Housatonic River and Pequonnock potential flyway corridors and the short (162-foot) height of the unlit and unguyed Facility.

Waterfowl Focus Areas

The Atlantic Coast Joint Venture (“ACJV”) is an affiliation of federal, state, regional and local partners working together to address bird conservation planning along the Atlantic Flyway. The ACJV has

⁷ Stokowski, J.T. 2002. Migratory Bird Stopover Habitat Project Finishes First Year. Connecticut Wildlife, November/December 2002. P.4.

⁸ The Silvio O. Conte National Fish & Wildlife Refuge Neotropical Migrant Bird Stopover Habitat Survey <http://www.science.smith.edu/stopoverbirds/index.html>

⁹ The Silvio O. Conte National Fish & Wildlife Refuge Neotropical Migrant Bird Stopover Habitat Survey. http://www.science.smith.edu/stopoverbirds/Chapter5_Conclusions&Recommendations.html

¹⁰ Manville, A.M. II. 2005. Bird strikes and electrocutions at power lines, communications towers, and wind turbines: state of the art and state of the science - next steps toward mitigation. Bird Conservation Implementation in the Americas: Proceedings 3rd International Partners in Flight Conference 2002. C.J. Ralph and T.D. Rich, editors. USDA Forest Service General Technical Report PSW-GTR-191. Pacific Southwest Research Station, Albany CA. pp. 1-51-1064.

¹¹ Kerlinger, P. 2000. Avian Mortality at Communication Towers: A Review of Recent Literature, Research, and Methodology. Prepared for U.S. Fish and Wildlife Service Office of Migratory Bird Management.

¹² Mabee, T.J., B.A. Cooper, J.H. Plissner, D.P. Young. 2006. Nocturnal bird migration over an Appalachian ridge at a proposed wind power project. Wildlife Society Bulletin 34:682-690.

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identified waterfowl focus areas recognizing the most important habitats for waterfowl along the Atlantic Flyway. Connecticut contains several of these waterfowl focus areas. The nearest waterfowl focus area to the host Property is the Lower Housatonic River-Greater Meadows Focus Area, located approximately 7.23 miles to the southwest. Please refer to the attached Connecticut Waterfowl Focus Areas Map. Based on the distance of these resources to the host Property, no direct impacts would occur from development of the proposed Facility.

CTDEEP Migratory Waterfowl Data

The Connecticut Department of Energy and Environmental Protection (“CTDEEP”) created a Geographic Information System (“GIS”) data layer in 1999 identifying concentration areas of migratory waterfowl at specific locations in Connecticut. The intent of this data layer is to assist in the identification of migratory waterfowl resource areas in the event of an oil spill or other condition that might be a threat to waterfowl species. This data layer identifies conditions at a particular point in time and has not been updated since 1999.

No migratory waterfowl areas are located near to the host Property within the Town of Monroe. The nearest migratory waterfowl area (Housatonic River at Nells Island in Stratford, CT) is located approximately 12.2 miles to the southeast of the host Property. The associated species are identified as American black duck, bufflehead, Canada goose, canvasback, goldeneye, green-winged teal, and mallard. Based on its distance to the host Property, no impacts to migratory waterfowl habitat are anticipated to result from development of the proposed Facility.

CTDEEP Natural Diversity Data Base

CTDEEP’s Natural Diversity Data Base (“NDDB”) program performs hundreds of environmental reviews each year to determine the impact of proposed development projects on state listed species and to help landowners conserve the state’s biodiversity. State agencies are required to ensure that any activity authorized, funded or performed by a state agency does not threaten the continued existence of endangered or threatened species. Maps have been developed to serve as a pre-screening tool to help applicants determine if there is a potential impact to state listed species.

The NDDB maps represent approximate locations of endangered, threatened and special concern species and significant natural communities in Connecticut. The locations of species and natural communities depicted on the maps are based on data collected over the years by CTDEEP staff, scientists, conservation groups, and landowners. In some cases an occurrence represents a location derived from literature, museum records and/or specimens. These data are compiled and maintained in the NDDB. The general locations of species and communities are symbolized as shaded areas on the maps. Exact locations have been masked to protect sensitive species from collection and disturbance and to protect landowner’s rights whenever species occur on private property.

APT originally submitted a review request to the CTDEEP NDDB in July 2013. A Species of Special Concern, Eastern Box Turtle (*Terrapene carolina carolina*), was identified within the vicinity of the site. APT provided proposed protection measures during construction. The CTDEEP responded in an email (dated June 18, 2014) that the proposed protection measures for Eastern Box Turtle will adequately

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protect any populations occurring in the vicinity of the project. Because CTDEEP NDDDB determinations are valid for a 12-month period, APT has submitted a supplemental request in April 2015 to the agency for an updated finding. A copy of the CTDEEP's response will be provided to the Council upon receipt.

USFWS Communications Towers Compliance

In 2013, the U.S Fish and Wildlife Service ("USFWS") prepared its *Revised Voluntary Guidelines for Communication Tower Design, Siting, Construction, Operation, Retrofitting, and Decommissioning*¹³, which recommends the 13 voluntary guidelines below. These voluntary guidelines are designed to assist tower companies in developing their communication systems in a way which minimizes the risk to migratory birds and threatened and endangered species. With respect to Council's question 23, APT offers the following responses for each of the recommended actions below.

1. *Collocation of the communications equipment on an existing communication tower or other structure (e.g., billboard, water and transmission tower, distribution pole, or building mount) is strongly recommended. Depending on tower load factors and communication needs, from 6 to 10 providers should collocate on an existing tower or structure.*

Collocation opportunities on existing towers, buildings or non-tower structures are not available in the area while achieving the required radio frequency ("RF") coverage objectives of the service provider intending to use this Facility.

2. *If collocation is not feasible and a new tower or towers are to be constructed, it is strongly recommended that the new tower(s) should be not more than 199 feet above ground level ("AGL"), and that construction techniques should not require wires. Such towers should be unlighted if Federal Administration ("FAA") regulations and lighting standards permit. If lighting is required, no red-steady lights should be used. USFWS considers towers that are unlit, unguyed, monopole or lattice, and less than 200 feet AGL to be the environmentally preferred "gold standard".*

The proposed Facility would consist of a 162-foot monopine structure which requires neither guy wires nor lighting and is therefore consistent with USFWS' environmentally preferred "gold standard".

3. *If constructing multiple towers, the cumulative impacts of all the towers to migratory birds – especially to Birds of Conservation Concern¹⁴ and threatened and endangered species, as well as the impacts of each individual tower, should be considered during development of a project.*

Multiple towers are not proposed as part of this project.

¹³ Manville, A.M., Ph.D., C.W.B. Suggestions Based on Previous USFWS Recommendations to FCC Regarding WT Docket No. 03-187, FCC 06-164, Notice of Proposed Rulemaking, "Effects of Communication Towers on Migratory Birds" (2007), Docket No. 08-61, FCC's Antenna Structure Registration Program (2011), Service 2012 Wind Energy Guidelines, and Service 2013 Eagle Conservation Plan Guidance. September 27, 2013.

¹⁴ U.S. Fish and Wildlife Service. 2008. Birds of Conservation Concern 2008. United States Department of Interior, Fish and Wildlife Service, Division of Migratory Bird Management, Arlington, VA. 85 pp. <http://www.fws.gov/migratorybirds/>

- 4. The topography of the proposed tower site and surrounding habitat should be clearly noted, especially in regard to surrounding hills, mountains, mountain passes, ridge lines, rivers, lakes, wetlands, and other habitat types used by raptors, Birds of Conservation Concern, and state and federally listed species, and other birds of concern. Active raptor nests, especially those of Bald Eagles, should be noted, including known or suspected distances from proposed tower sites to nest locations.*

The topography of the proposed tower site and surrounding habitat is provided in the attached Avian Resources Map. No Bald Eagle nests, foraging areas or roost sites are known to be located at or within close proximity to the proposed tower site.¹⁵ A Bald Eagle survey route associated with the Housatonic River, which provides foraging and roosting habitat and potential nesting habitat, is located approximately 3.2 mile northeast of the proposed Facility site.

- 5. If at all possible, new towers should be sited within existing “antenna farms” (i.e., clusters of towers), in degraded areas (e.g., strip mines or other heavily industrialized areas), in commercial agricultural lands, in Superfund sites, or other areas where bird habitat is poor or marginal. Towers should not be sited in or near wetlands, or other known bird concentration areas (e.g., state or Federal refuges, staging areas, rookeries, and Important Bird Areas), in known migratory or daily movement flyways, areas of breeding concentration, in habitat of threatened or endangered species, or key habitats for Birds of Conservation Concern. Additionally, towers should not be sited in areas with a high incidence of fog, mist, and low ceilings.*

There are no existing “antenna farms” in the area. The site is not within wetlands, known bird concentration area, migratory or daily movement flyway, habitat of threatened or endangered avian species, or critical habitat. According to a June 18, 2014 email from the CTDEEP, AT&T’s proposed protection measures for Eastern Box Turtle (*Terrapene carolina carolina*) will adequately protect any populations occurring in the vicinity of the project.

In Connecticut, seasonal atmospheric conditions can occasionally produce fog, mist and/or low ceilings. However, high incidences of these meteorological conditions, relative to the region, are not known to exist in the vicinity of the host Property.

- 6. If taller (>199 feet AGL) towers requiring lights for aviation safety must be constructed, the minimum amount of pilot warning and obstruction avoidance lighting required by the FAA should be used. The use of solid (non-flashing) warning lights at night should be avoided to minimize bird fatalities.*

The proposed Facility height (162 feet AGL) is less than 199 feet and would not require any aviation safety lighting.

¹⁵ U.S. Fish and Wildlife Service. 2007. National Bald Eagle Management Guidelines. United States Department of Interior, Fish and Wildlife Service, 23 pp. <http://www.fws.gov/southdakotafieldoffice/NationalBaldEagleManagementGuidelines.pdf>

7. *Tower designs using guy wires for support, which are proposed to be located in known raptor or waterbird concentration areas, daily movement routes, major diurnal migratory bird movement routes, staging areas, or stopover sites, should have daytime visual markers or bird deterrent devices installed on the wires to prevent collisions by these diurnally moving species.*

The proposed Facility would be free-standing and would not require guy wires or visual marking.

8. *Towers and appendant facilities should be sited, designed and constructed so as to avoid or minimize habitat loss within and adjacent to the tower "footprint." However, a larger tower footprint is preferable to the use of guy wires in construction. Road access and fencing should be minimized to reduce or prevent habitat fragmentation, disturbance, and the creation of barriers, and to reduce above ground obstacles to birds in flight.*

The proposed Facility is sited, designed, and would be constructed to accommodate proposed equipment and to allow for future collocations within the smallest footprint possible. While the host Property is generally entirely undeveloped with complexes of upland and wetland forested areas, the proposed 1,634-foot gravel access route follows long segments of existing dirt travel-ways, the proposed facility location is not located in any wetland areas and consists of a relatively small 75-foot by 75-foot gravel compound, and is not located within a large core forest block. Therefore, it is not anticipated that significant habitat fragmentation will result from the proposed project.

9. *If, prior to tower design, siting and construction, it has been determined that a significant number of breeding, feeding, or roosting birds, especially of Birds of Conservation Concern, state or federally-listed bird species, and eagles are known to habitually use the proposed tower construction area, relocation to an alternate site is highly recommended. If this is not an option, seasonal; restrictions on construction may be advisable in order to avoid disturbance, site and nest abandonment, especially during breeding, rearing and other periods of high bird activity.*

Significant numbers of breeding, feeding, or roosting birds are not known to habitually use the proposed tower construction areas at the host Property.

10. *Security lighting for on-ground facilities, equipment and infrastructure should be motion- or heat-sensitive, down-shielded, and of a minimum intensity to reduce nighttime bird attraction and eliminate constant nighttime illumination, but still allow for safe nighttime access to the site.¹⁶¹⁷*

Security lighting for on-ground facilities would be down-shielded using Dark Sky compliant fixtures set on motion sensor with timer.

¹⁶ Manville, A.M., II. 2011. Comments of the U.S. Fish and Wildlife Service's Division of Migratory Bird Management Filed Electronically on WT Docket No. 08-61 and WT Docket No. 03-187, Regarding the Environmental Effects of the Federal Communication's Antenna Structure Registration Program. January 14, 2011. 12 pp.

¹⁷ U.S. Fish and Wildlife Service. 2012. U.S. Fish and Wildlife Service Land-Based Wind Energy Guidelines. March, 82 pp.

11. *Representatives from the USFWS or researchers from the Research Subcommittee of the Communication Tower Working Group (“CTWG”) should be allowed access to the site to evaluate bird use; conduct dead-bird searches; place above ground net catchments below the towers; and to perform studies using radar, Global Positioning System, infrared, thermal imagery, and acoustical monitoring equipment, as necessary to assess and verify bird movements and to gain information on the impacts of various tower sizes, configurations, and lighting systems.*

With prior notification to AT&T, USFWS personnel would be allowed access to the proposed Facility to conduct evaluations.

12. *Towers no longer in use, not re-licensed by the FCC for use, or determined to be obsolete should be removed within 12 months of cessation of use.*

If the proposed Facility was no longer in use or determined to be obsolete, it would be removed within 12 months of cessation of use.

13. *In order to obtain information on the usefulness of these guidelines in preventing bird strikes and better understanding impacts from habitat fragmentation, please advise USFWS personnel of the final location and specifications of the proposed tower, and which measures recommended in these guidelines were implemented.*

The location and specifications of the proposed tower have been provided in this report and accompanying maps. A review of measures recommended for implementation in the *Revised Voluntary Guidance for Communication Tower Design, Siting, Construction, Operation, Retrofitting, and Decommissioning* (September 27, 2013) are provided herein. The proposed Facility is not proximate to an Important Bird Area and would comply with the USFWS guidelines for minimizing the potential impacts to birds being an unlit, ungued monopine structure only 162 feet in height. APT recommends that a copy of this report be submitted to USFWS if the proposed Facility is constructed. Should the final location and specifications of the proposed Facility be modified as part of the siting process, this report will be updated accordingly.

Summary and Conclusions

Based on the results of this desk-top evaluation, no migratory bird species are anticipated to be negatively impacted by AT&T’s proposed development. The proposed Facility is not proximate to an Important Bird Area and would comply with the USFWS guidelines for minimizing the potential impacts to birds.

ALL-POINTS TECHNOLOGY CORPORATION, P.C.

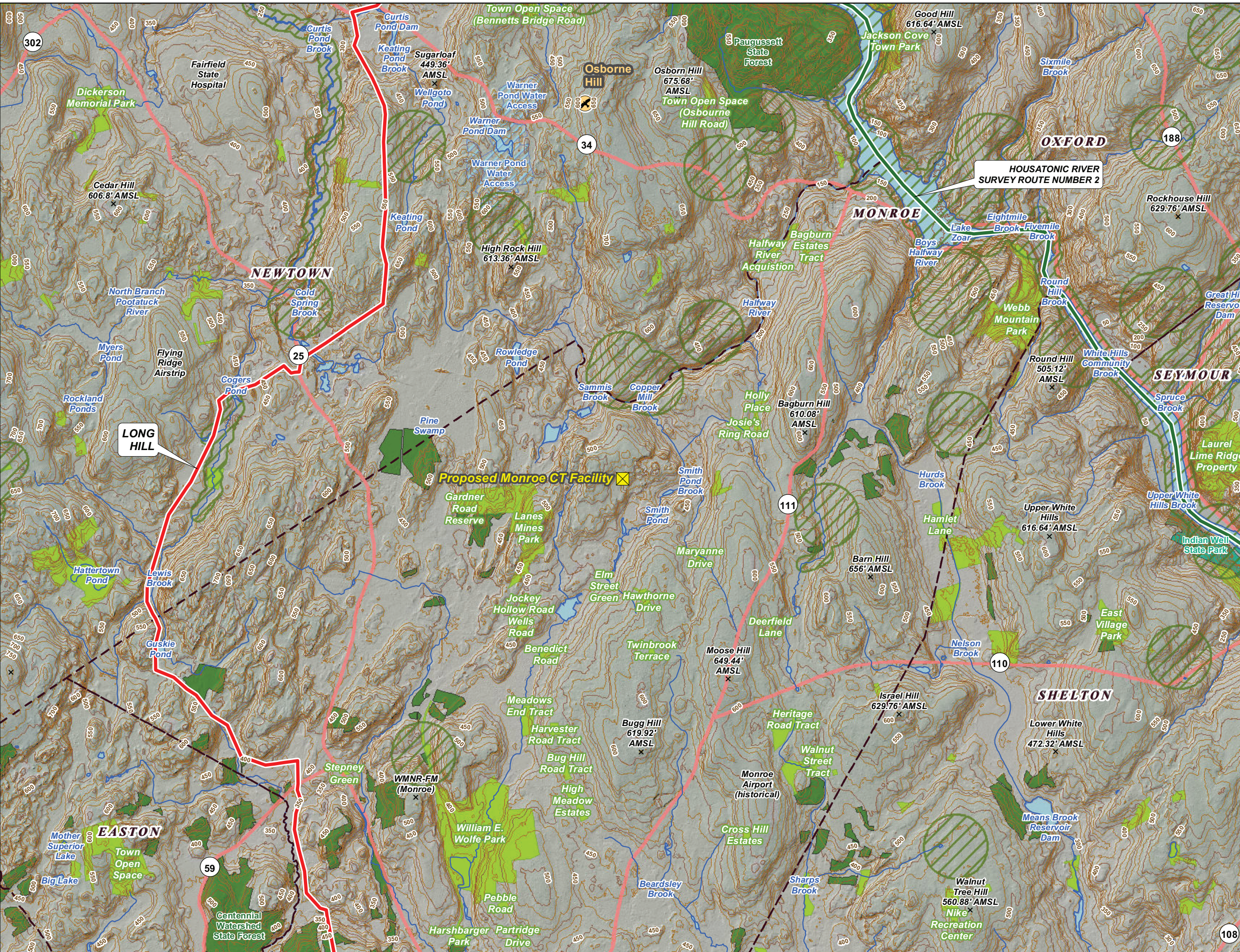
3 SADDLEBROOK DRIVE · KILLINGWORTH, CT 06419 · PHONE 860-663-1697 · FAX 860-663-0935

Figures

- Avian Resources Map
- Connecticut Waterfowl Focus Areas Map

Avian Resources Map

Proposed Wireless
Telecommunications Facility
Monroe CT - S1200
30 Cobblers Hill Court
Monroe, Connecticut



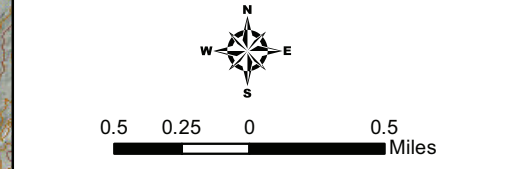
Legend

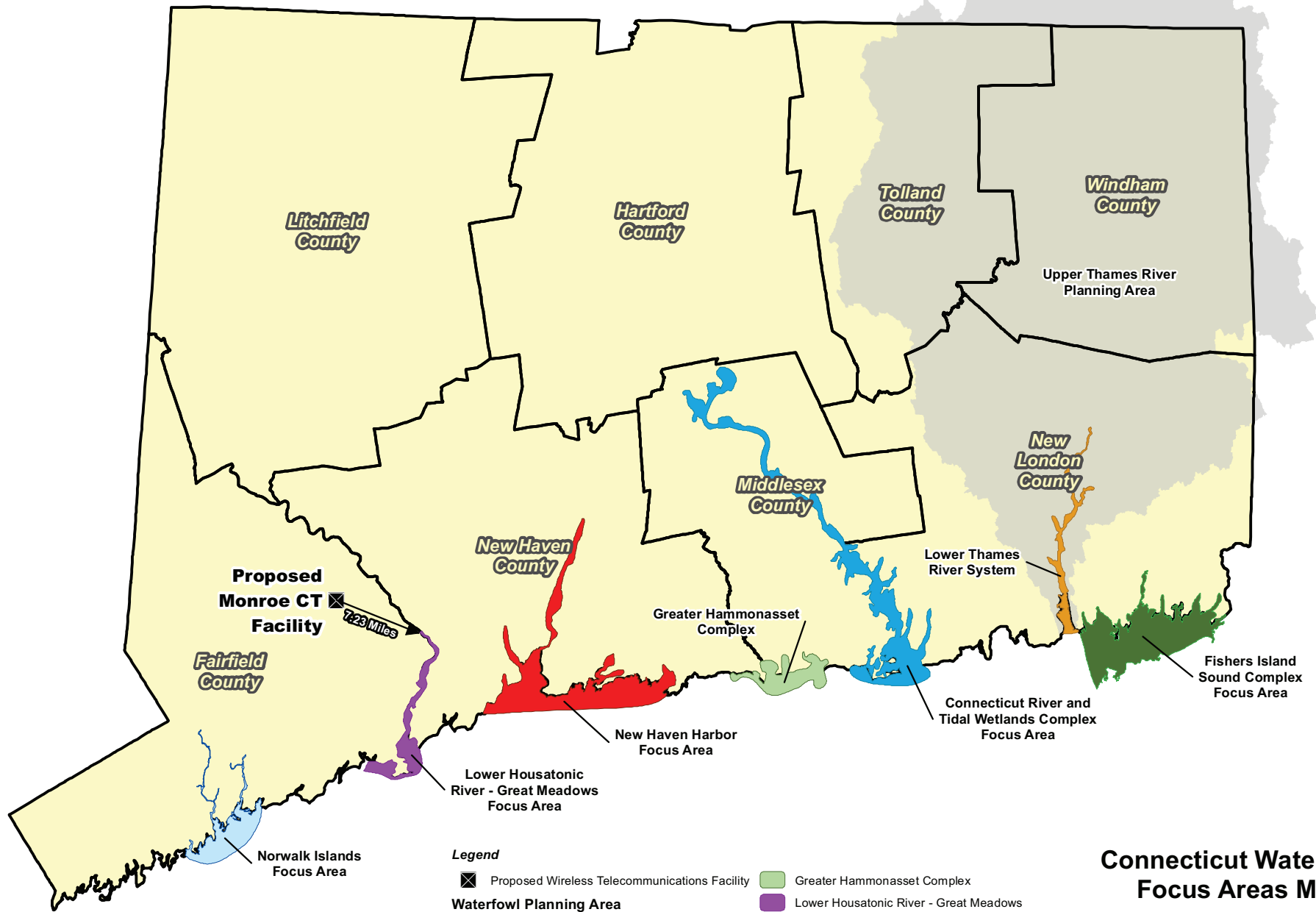
- Proposed Facility
 - Hawk Watch Site
 - Important Bird Area*
 - Bald Eagle Survey Route
 - Breeding Bird Survey Route
 - Natural Diversity Database (CTDEEP, 12/2014)
 - Critical Habitat (CTDEEP, 07/2009)*
 - Migratory Waterfowl (CTDEEP, 1999)*
 - Preserved Open Space (CTDEEP, 1997)
 - Federal Open Space (CTDEEP, 2004)*
- CT DEP Property (CT DEEP, 12/2010)**
- State Forest
 - State Park
 - DEP Owned Waterbody*
 - State Park Scenic Reserve*
 - Historic Preserve*
 - Natural Area Preserve*
 - Fish Hatchery
 - Flood Control*
 - State Park Trail*
 - Water Access
 - Wildlife Area*
 - Wildlife Sanctuary*
 - Other*
 - Open Water
 - Town Boundary

*None within mapped extents

Avian Source Information:
 Bald Eagle Sites: U.S. Geological Survey, National Biological Information Infrastructure: 2008, Midwinter Bald Eagle Counts, 1986-2005 (update 2008).
 Hawk Watch Sites: Hawk Migration Association of North America (HMANA), Hawk Count website: <http://hawkcount.org/sitesel.php?country=USA&stateprov=Connecticut>
 Migratory Waterfowl: CTDEEP GIS, 1999
 Important Bird Sites/Areas: National Audubon Society, Audubon Connecticut
http://ct.audubon.org/BirdSci_IBAs.html
 Breeding Bird Survey Routes: Patuxent Wildlife Research Center of the U.S. Geological Survey and the Canadian Wildlife Service's National Wildlife Research Centre
<http://www.nationalatlas.gov/mid/bbrstl.html>

Base Map Source: 2012 aerial photograph (CTECO map service)
 Map Date: February 2015



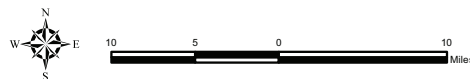


Legend

-
- Proposed Wireless Telecommunications Facility
- Greater Hammonasset Complex
- Lower Housatonic River - Great Meadows
- Lower Thames River System
- New Haven Harbor
- Connecticut River and Tidal Wetlands Complex
- Norwalk Islands
- Fishers Island Sound Complex

Connecticut Waterfowl Focus Areas Map

Proposed Wireless Telecommunications Facility
 Monroe CT - S1200
 30 Cobblers Hill Court
 Monroe, Connecticut



ATTACHMENT 4

Noise Evaluation Report

Proposed AT&T (Cingular Wireless) Communications Facility
Site Number S1200
30 Cobblers Hill Ct
Monroe, CT

April 15, 2015

Prepared For:
Tom Johnson, P.E.
Pro Terra Design Group, LLC
4 Bay Road - Bldg. "A" - Suite 200
Hadley, MA

Prepared By:
Allan Smardin
HMB Acoustics LLC
3 Cherry Tree Lane
Avon, CT

Introduction

AT&T (Cingular Wireless) has proposed a wireless communications facility to be located at 30 Cobblers Hill Court - Monroe, CT. The proposed site will include an equipment shelter. The shelter maintains 2 wall mounted air-conditioning units used to cool the radio equipment. A back-up emergency generator which runs only when commercial power to the site is interrupted, will be located on a concrete pad that is adjacent to the equipment shelter. The facility will be surrounded by an 8 foot tall chain link fence.

The residential properties that are nearest to the emergency generator and to the equipment shelter are located along Cobblers Hill Ct.; Pinto Lane; Mustang Drive; and the Copper Mill Brook area.

On April 14, 2015, existing background noise measurements were taken at various residential locations. These noise levels averaged between 35 and 40 dBA. They did not affect the noise levels that were projected from the emergency generator or from the air-conditioners mounted on the wall of the equipment shelter.

The purpose of the evaluation is to determine whether the generator and air-conditioners will comply with the State of CT Noise Regulations.

It is important to note that the emergency generator operates approximately 15-20 minutes each week for testing. All testing is done during daytime hours. Other than these testing periods, the generator runs only in times of emergency, when commercial power to the facility is interrupted. Typically, only one of the two air-conditioner units operates at any one time. This report and the noise regulations utilize a dBA scale. This scale is used because it closely approximates the response characteristic of the human ear to loudness, and is the scale most commonly used in the measurement of community noise.

Noise Regulations

The State of CT has enacted regulations which limit the amount of noise which may be transferred from one property to another. In pertinent part, the Regulations provide as follows:

Daytime Hours - The hours between 7 a.m. and 10 p.m., local time.

Nighttime Hours - The hours between 10 p.m. and 7 a.m., local time.

(Sec. 22a-69-1.1 (h) and (n)).

Noise Level Standards

The allowable noise levels between a Residential Noise Emitter and a Residential Noise Receptor is as follows:

Zone in Which Noise Emitter is Located	Residential Receptors	
	Allowable Levels	Allowable Levels
	Daytime Hours (dBA)	Nighttime Hours (dBA)
Residential	55	45

(Sec. 22a-69-3.5 (c)).

Exemptions

“Noise created as a result of, or relating to an emergency.”

(Sec. 22a-69-1.8 (f)).

Noise Evaluation Results

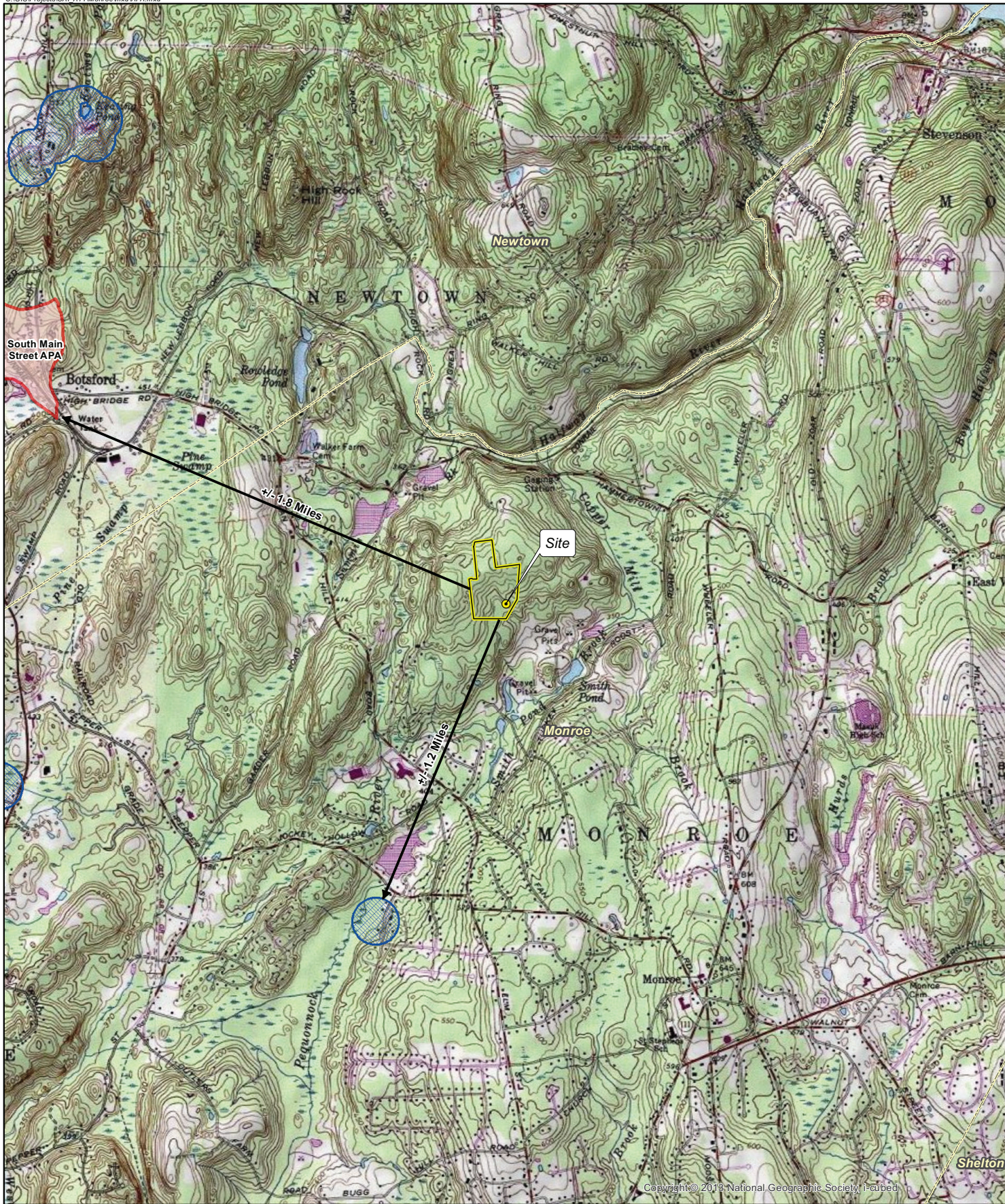
The noise levels listed on page 3 take into account background noise conditions; and the effect of acoustical shielding provided by structures on the property. The combined effect of the emergency generator and one air-conditioner operating together complies

with the provisions set forth in the noise regulations when projected to the nearest residential property lines.

Property Line	Generator and (1) Air-Conditioner dBA
North (Cobblers Hill Court)	33
South (Pinto Lane)	31
East (Copper Mill Brook Area)	34
West (Mustang Drive)	34

Note: With the generator and two air-conditioners operating simultaneously, the dBA level will increase by 3 dBA.

ATTACHMENT 5



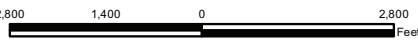
Legend

- Site
- Subject Property
- Municipal Boundary
- CT DEEP Area of Contribution to Public Supply Well (updated 8/2015)

CT DEEP Aquifer Protection Area (APA; updated 2/2015)

- Final Adopted Aquifer Protection
- Final Aquifer Protection
- Preliminary Aquifer Protection

Map Notes:
 Base Map Source: USGS 7.5 Minute Topographic Quadrangle Maps, Long Hill and Southbury (1984), CT. Site located on the Long Hill Quadrangle CTDEEP GIS data layers
 Map Date: April 2015



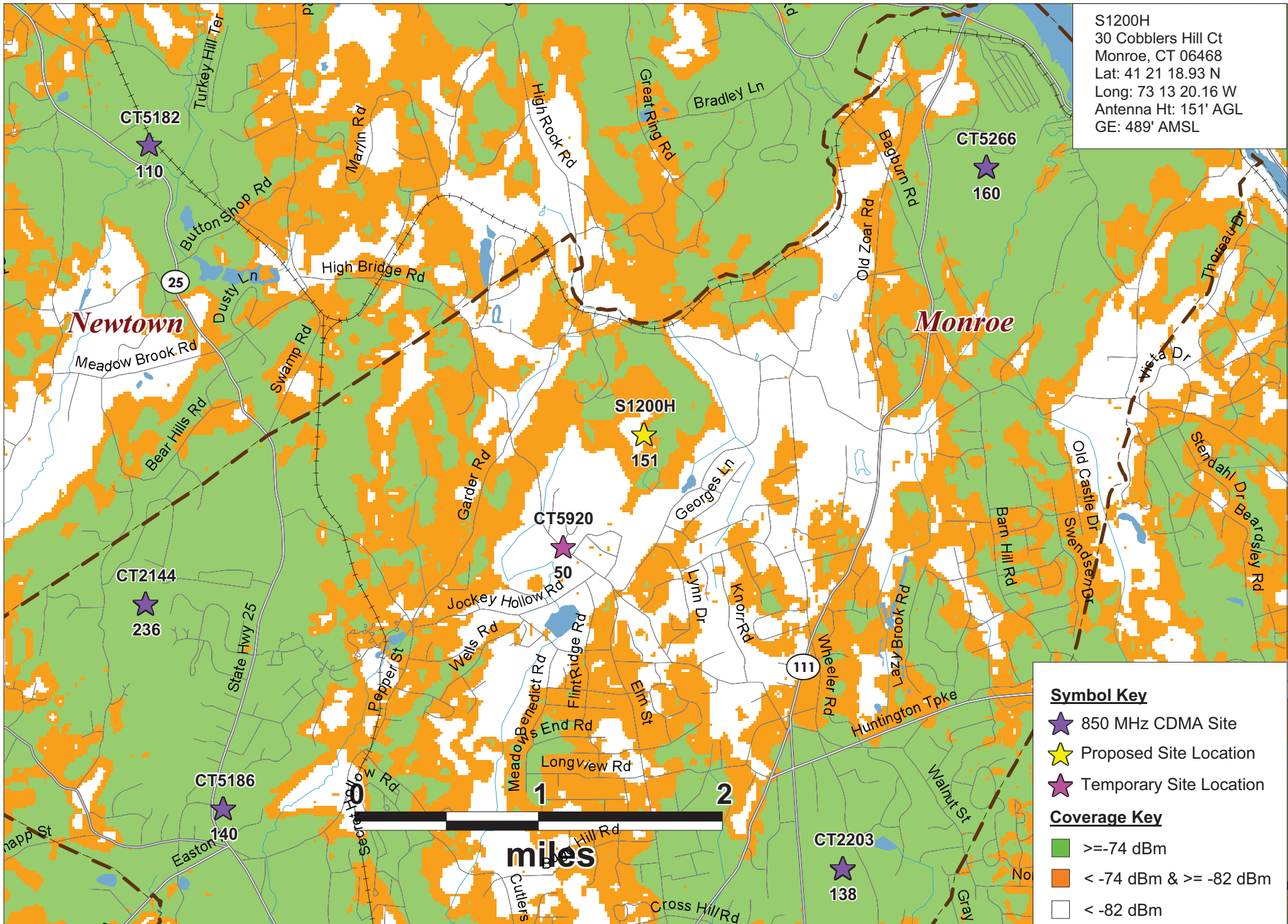
Aquifer Protection Area Map

Proposed Wireless Telecommunications Facility
 Monroe CT - S1200
 30 Cobblers Hill Court
 Monroe, Connecticut



ATTACHMENT 6

S1200H
 30 Cobblers Hill Ct
 Monroe, CT 06468
 Lat: 41 21 18.93 N
 Long: 73 13 20.16 W
 Antenna Ht: 151' AGL
 GE: 489' AMSL



Symbol Key

- ★ 850 MHz CDMA Site
- ★ Proposed Site Location
- ★ Temporary Site Location

Coverage Key

- ≥ -74 dBm
- < -74 dBm & ≥ -82 dBm
- < -82 dBm



Existing 850 MHz
 CDMA Coverage

Monroe

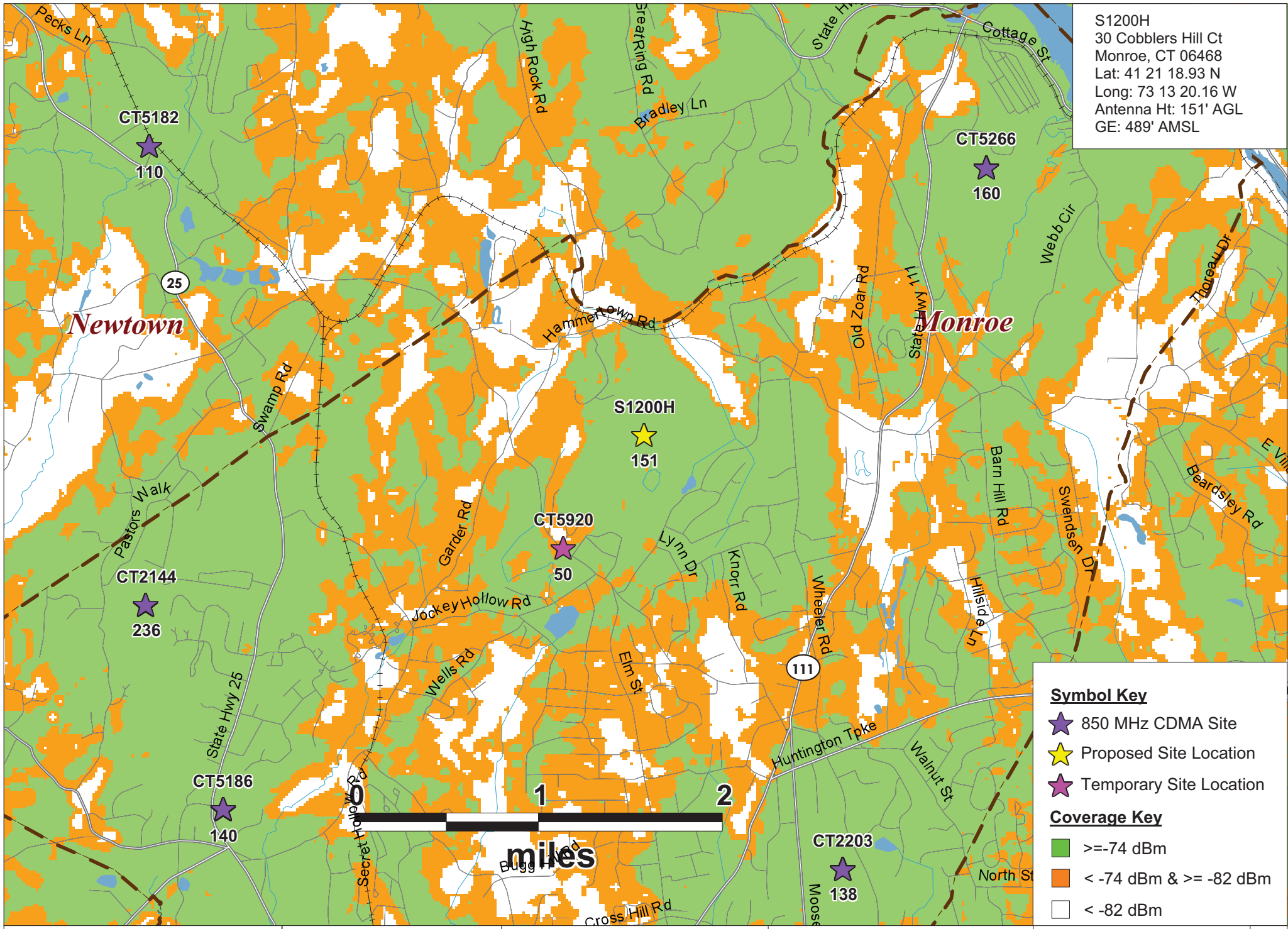
30 Cobblers Hill Ct
 Monroe, CT 06468



PREPARED ON _____
 DATE: 4/17/2015

REV 0

S1200H
 30 Cobblers Hill Ct
 Monroe, CT 06468
 Lat: 41 21 18.93 N
 Long: 73 13 20.16 W
 Antenna Ht: 151' AGL
 GE: 489' AMSL



Symbol Key

- 850 MHz CDMA Site
- Proposed Site Location
- Temporary Site Location

Coverage Key

- >= -74 dBm
- < -74 dBm & >= -82 dBm
- < -82 dBm

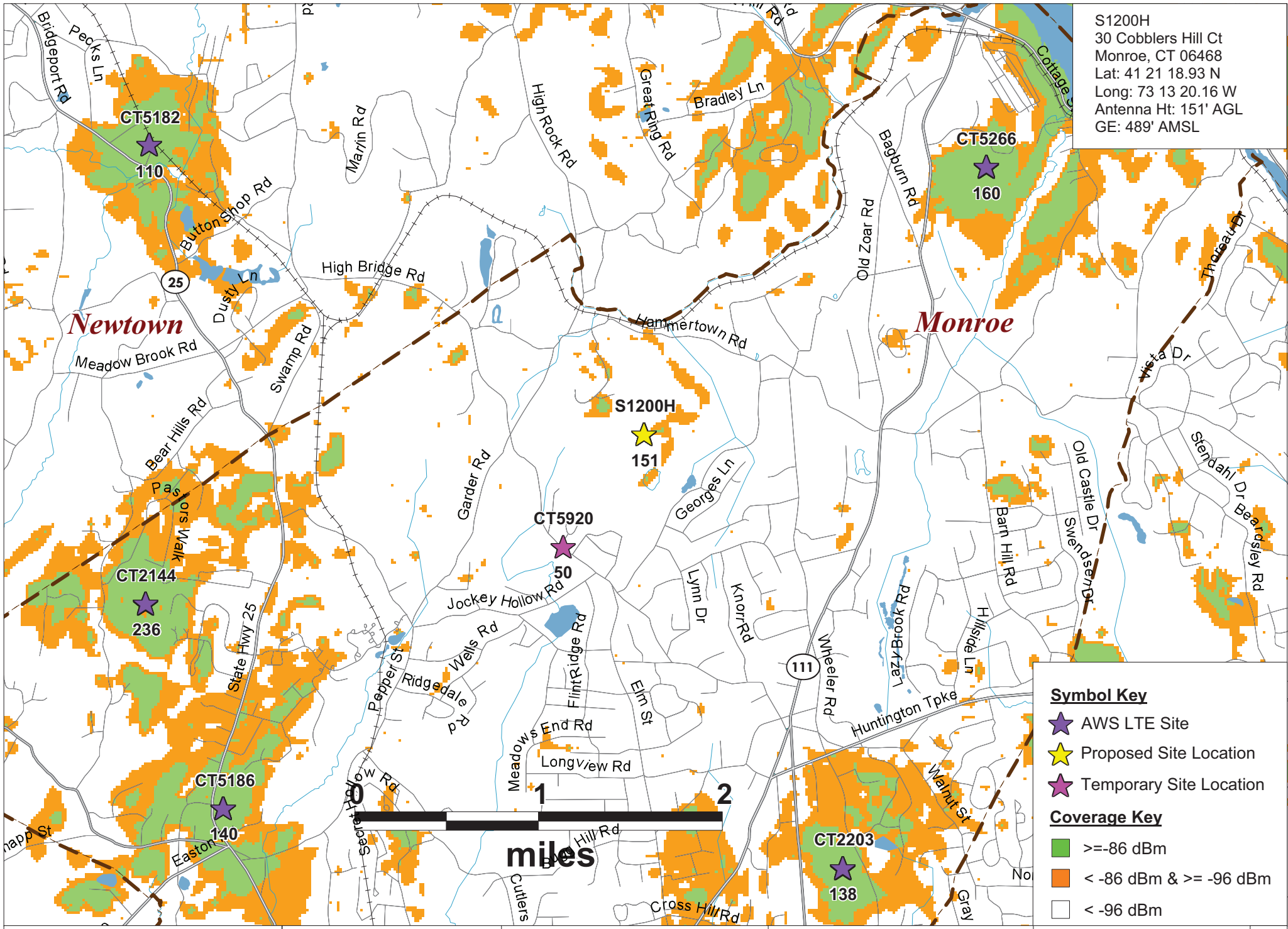
Existing & Proposed
 850 MHz CDMA Coverage

Monroe

30 Cobblers Hill Ct
 Monroe, CT 06468



PREPARED ON _____
 DATE: 4/17/2015
 REV 0



S1200H
 30 Cobblers Hill Ct
 Monroe, CT 06468
 Lat: 41 21 18.93 N
 Long: 73 13 20.16 W
 Antenna Ht: 151' AGL
 GE: 489' AMSL

Symbol Key

- AWS LTE Site
- Proposed Site Location
- Temporary Site Location

Coverage Key

- >= -86 dBm
- < -86 dBm & >= -96 dBm
- < -96 dBm

Existing AWS LTE Coverage

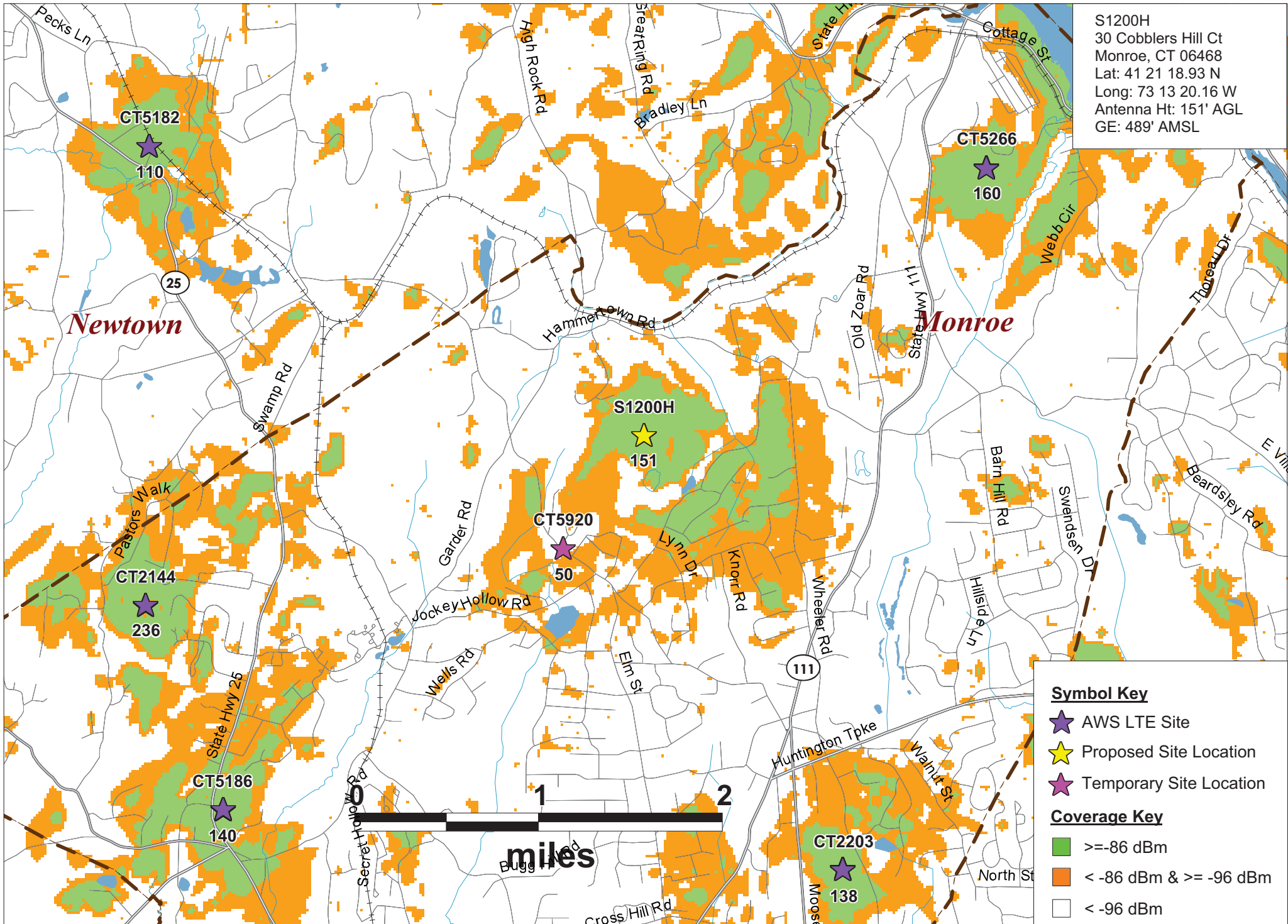
Monroe

30 Cobblers Hill Ct
 Monroe, CT 06468



PREPARED ON _____
 DATE: 4/17/2015
 REV 0

S1200H
 30 Cobblers Hill Ct
 Monroe, CT 06468
 Lat: 41 21 18.93 N
 Long: 73 13 20.16 W
 Antenna Ht: 151' AGL
 GE: 489' AMSL



Symbol Key

- ★ AWS LTE Site
- ★ Proposed Site Location
- ★ Temporary Site Location

Coverage Key

- ≥ -86 dBm
- < -86 dBm & ≥ -96 dBm
- < -96 dBm

Existing & Proposed
 AWS LTE Coverage

Monroe

30 Cobblers Hill Ct
 Monroe, CT 06468

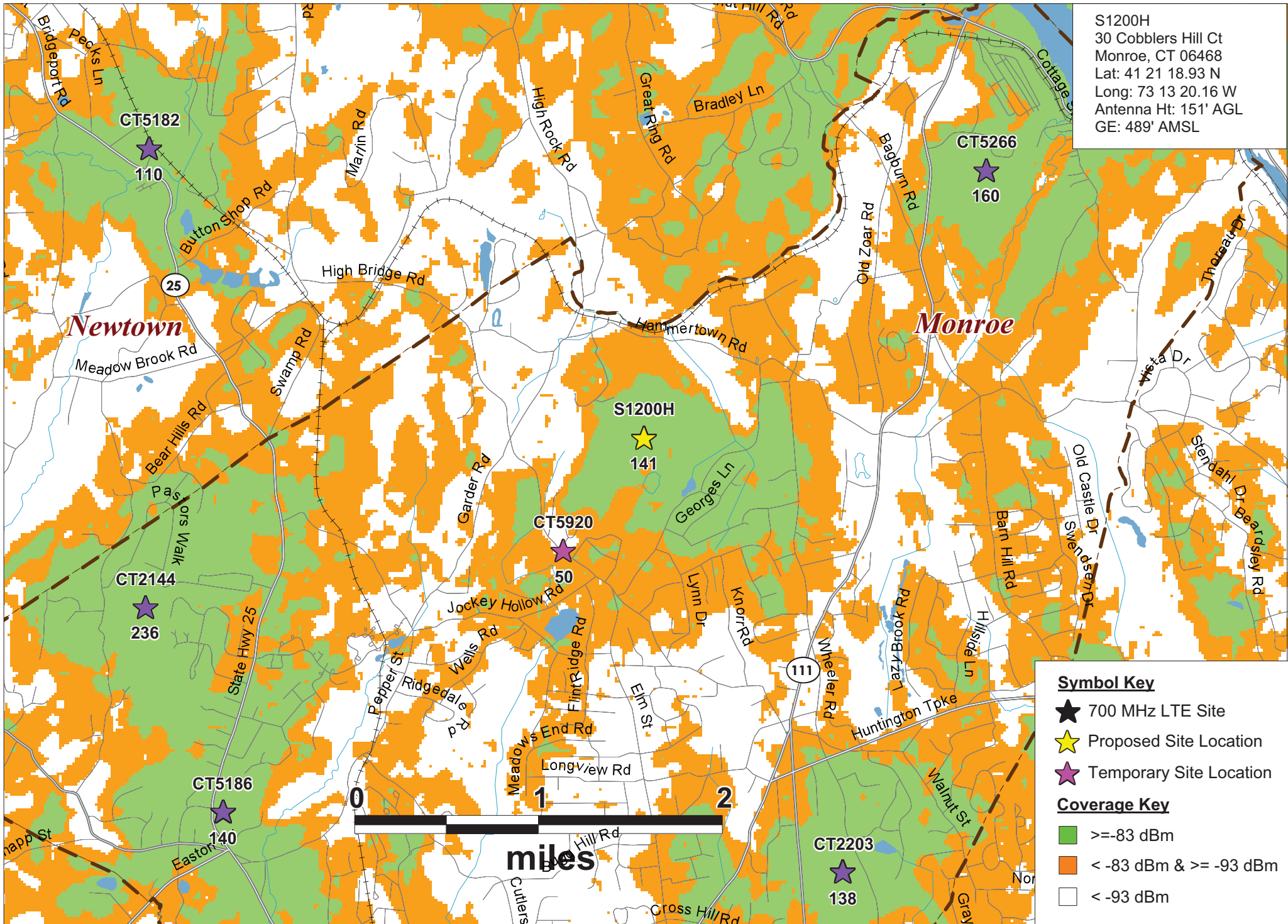


PREPARED ON _____
 DATE: 4/17/2015

REV 0

ATTACHMENT 7

S1200H
 30 Cobblers Hill Ct
 Monroe, CT 06468
 Lat: 41 21 18.93 N
 Long: 73 13 20.16 W
 Antenna Ht: 151' AGL
 GE: 489' AMSL



- Symbol Key**
- ★ 700 MHz LTE Site
 - ★ Proposed Site Location
 - ★ Temporary Site Location
- Coverage Key**
- ≥ -83 dBm
 - < -83 dBm & ≥ -93 dBm
 - < -93 dBm

Existing & Proposed@141
 700 MHz LTE Coverage

Monroe

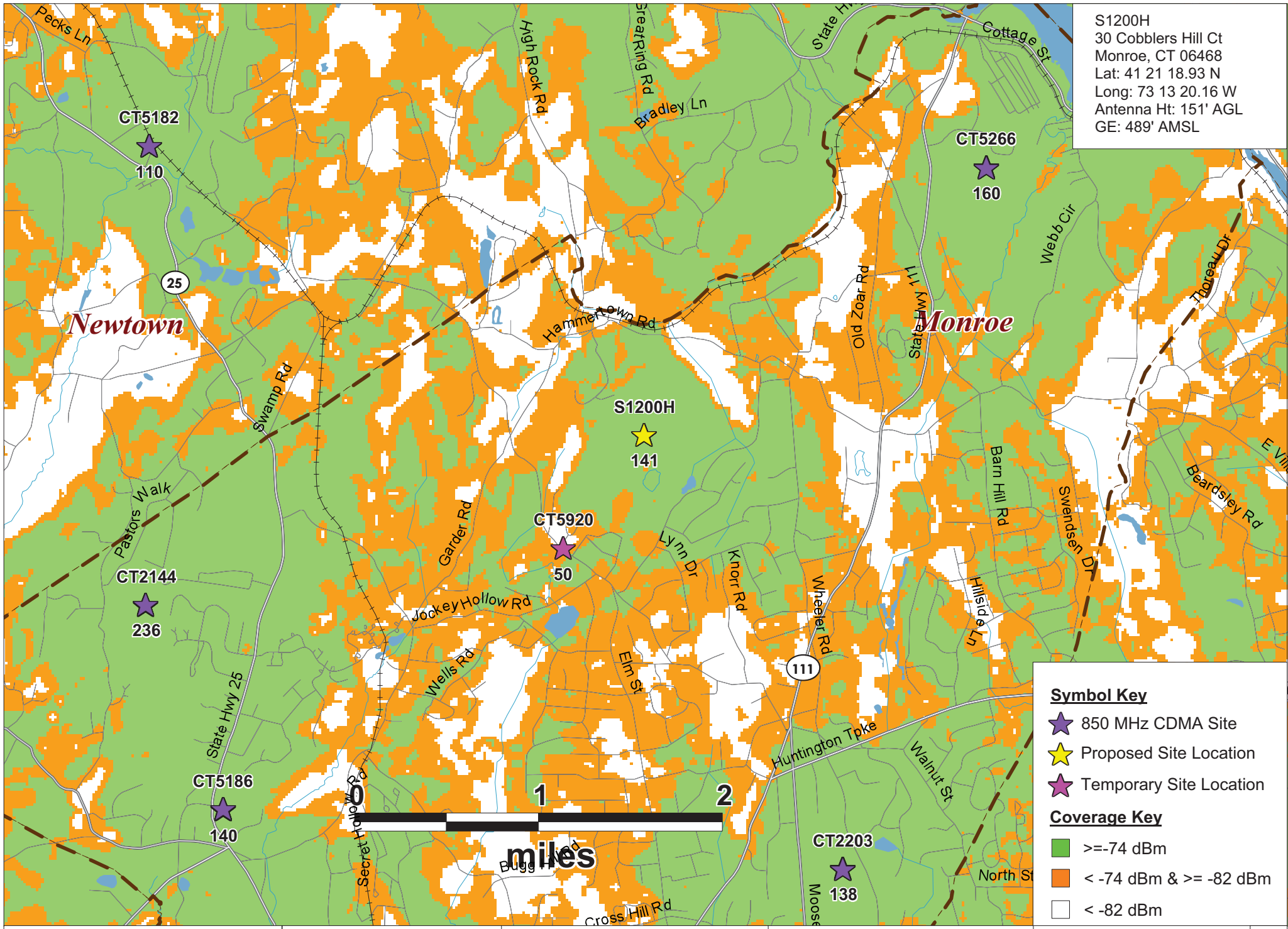
30 Cobblers Hill Ct
 Monroe, CT 06468



PREPARED ON _____
 DATE: 4/21/2015

REV 0

S1200H
 30 Cobblers Hill Ct
 Monroe, CT 06468
 Lat: 41 21 18.93 N
 Long: 73 13 20.16 W
 Antenna Ht: 151' AGL
 GE: 489' AMSL



Symbol Key

- 850 MHz CDMA Site
- Proposed Site Location
- Temporary Site Location

Coverage Key

- >= -74 dBm
- < -74 dBm & >= -82 dBm
- < -82 dBm

Existing & Proposed @ 141
 850 MHz CDMA Coverage

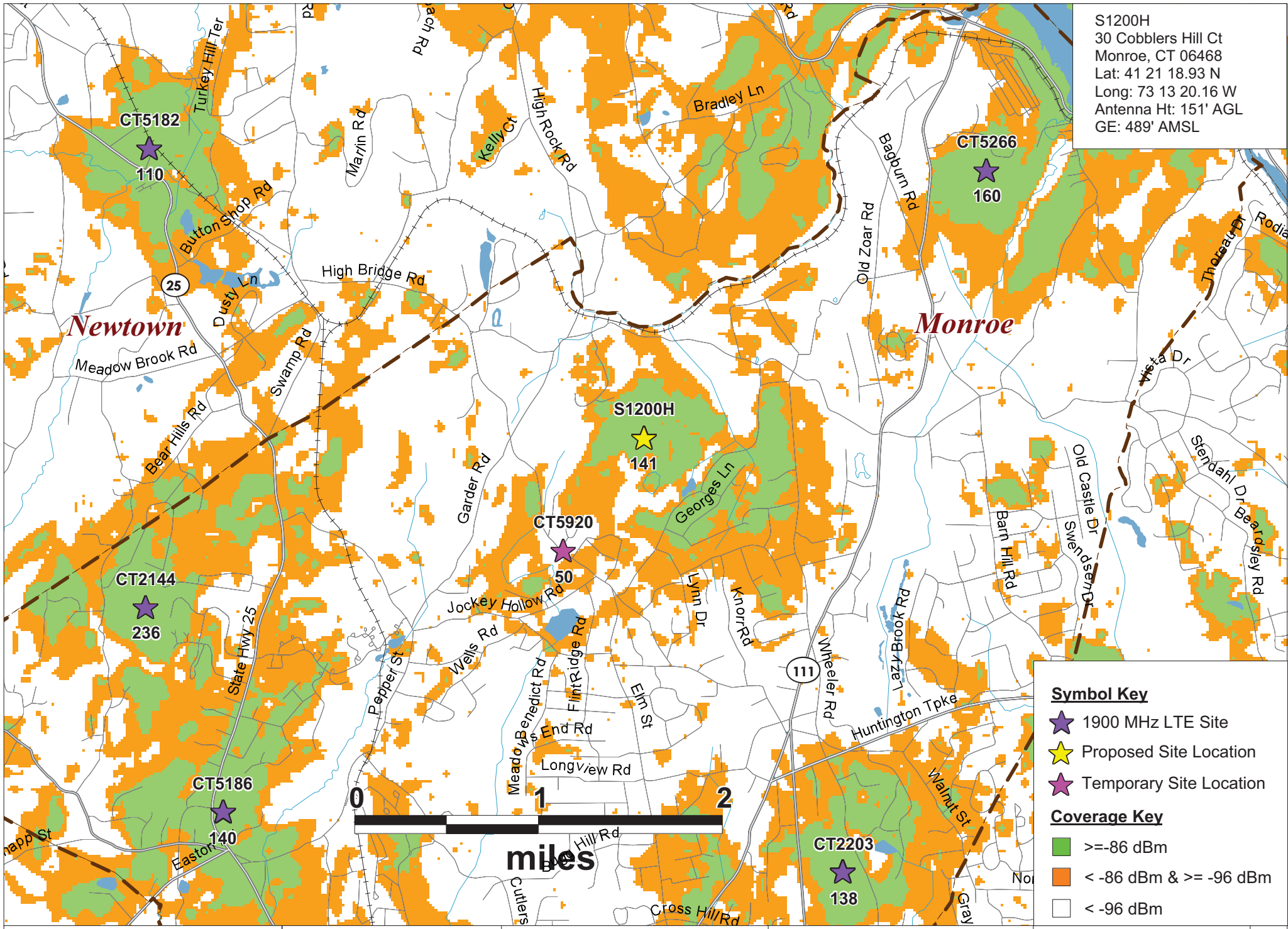
Monroe

**30 Cobblers Hill Ct
 Monroe, CT 06468**



PREPARED ON _____
 DATE: 4/17/2015
 REV 0

S1200H
 30 Cobblers Hill Ct
 Monroe, CT 06468
 Lat: 41 21 18.93 N
 Long: 73 13 20.16 W
 Antenna Ht: 151' AGL
 GE: 489' AMSL



Symbol Key

- 1900 MHz LTE Site
- Proposed Site Location
- Temporary Site Location

Coverage Key

- >=-86 dBm
- <-86 dBm & >=-96 dBm
- <-96 dBm

Existing & Proposed@141
 1900 MHz LTE Coverage

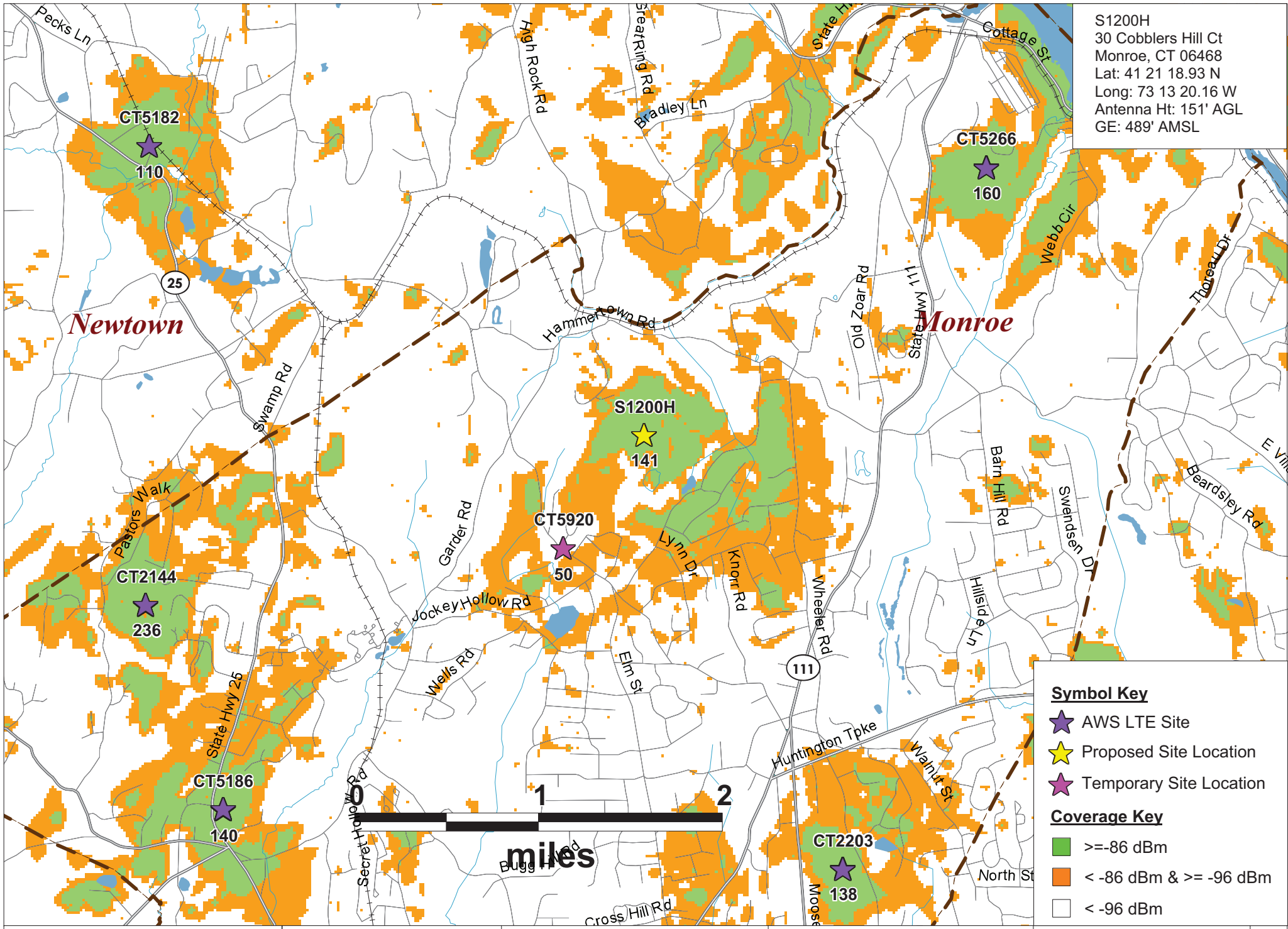
Monroe

30 Cobblers Hill Ct
 Monroe, CT 06468



PREPARED ON _____
 DATE: 4/21/2015

REV 0



S1200H
 30 Cobblers Hill Ct
 Monroe, CT 06468
 Lat: 41 21 18.93 N
 Long: 73 13 20.16 W
 Antenna Ht: 151' AGL
 GE: 489' AMSL

Symbol Key

- ★ AWS LTE Site
- ★ Proposed Site Location
- ★ Temporary Site Location

Coverage Key

- >= -86 dBm
- < -86 dBm & >= -96 dBm
- < -96 dBm

Existing & Proposed @ 141
 AWS LTE Coverage

Monroe

30 Cobblers Hill Ct
 Monroe, CT 06468



PREPARED ON _____
 DATE: 4/17/2015
 REV 0