

STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL

IN RE:

APPLICATION OF SBA TOWERS III (SBA)
AND 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 THE TOWN OF NORTH STONINGTON

DOCKET NO. 420

September 15, 2011

SBA TOWERS III (SBA) AND NEW CINGULAR WIRELESS PCS, LLC (AT&T)
RESPONSES TO SITING COUNCIL INTERROGATORIES
SET ONE

General Questions for all three Sites

Q1. Which frequencies are New Cingular Wireless PCS, LLC (AT&T) licensed to utilize in New London County?

A1. AT&T's licenses for the area encompassing New London County include the 850MHZ band, the 1900MHz band and the 700 MHz band.

Q2. What is the signal strength for which AT&T designs its system? For in-vehicle coverage? For in building coverage?

A2. AT&T designs its system to provide -74 dBm for in-building coverage and -82 dBm for in vehicle coverage.

Q3. When was the search ring first initiated for a tower in this area? Provide the size, shape, and location of the center of the search ring.

A3. AT&T issued a search ring in January 2009. The initial search area radius was approximately ½ mile centered between Billings Lake and State Route 201. Coordinates for the center of the search area are 41° 30' 34" N and 71° 53' 5.4" W.

Q4. 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?

A4. All certified mail receipts sent were returned. Please note that neighbors of 23 & 25 Northwest Corner Road also received a follow up letter by Registered Mail (no return receipt requested) clarifying that the proposed alternative at that location was on the 25 Northwest Corner Road Parcel with access via 23 Northwest Corner Road.

Q5. Would AT&T provide both cellular and PCS service initially or cellular first and PCS in the future? When would LTE service be provided, if applicable? Explain.

A.5 AT&T would provide cellular and PCS service as well as LTE service from the outset.

Q6. Would AT&T's proposed facility comply with E911 requirements?

A6. Yes, the proposed facility will comply with E911 requirements.

Q7. Describe the land uses surrounding each of the three tower sites.

A7. The land uses around the three sites are as follows:

- **49 Mountain Road:** Land use within the general vicinity of this site is mainly comprised of low-density residential development, much of which is seasonal in association with some of the surrounding lake properties (Billings Lake, Anderson Pond and Wyassup Lake), and undeveloped woodlands. Two abutters are single-family land use with residences and four abutters are vacant parcels.

- **350B Cossaduck Hill Road:** Land use in the general vicinity consists primarily of undeveloped woodlands (including State Forest land) and low-density residential development. In this case two abutters are single family land use with residences and two abutters are vacant parcels.

- **23/25 Northwest Corner Road:** Land use consists primarily of agricultural land, undeveloped woodlands (including State Forest land) and low-density residential development. One abutter is used for single-family residences, one abutter is accessory land use without a building and six abutters are vacant parcels.

Q8. Would any of the three sites be subject to the Connecticut Coastal Management Act? Explain.

A8. No. None of the three sites under consideration are located in the Coastal Boundary and the Town of North Stonington does not lie within the Coastal Area. Therefore, the proposed development on any of the three candidate sites would not be subject to the Connecticut Coastal Management Act.

Site A: 49 Mountain Avenue Questions

Q9. What is the existing signal strength in those areas AT&T is seeking to cover from this site?

A9. Current signal levels range significantly in the proposed service area from -110 dBm to -82 dBm due to the terrain fluctuations. This type of spotty unreliable coverage is not acceptable to users of the AT&T network who are often mobile, making calls from their vehicles, their places

of business and their homes. In addition, many customers are now substituting cell phones for their landline phone service as their only means of voice communications. To properly serve these customers, the service must be reliable, especially since the service will be carrying 911 calls.

Q10. Does AT&T have any statistics on dropped calls in the vicinity of the proposed facility? If so, what do they indicate? Does AT&T have any other indicators of substandard service in this area?

A10. Dropped calls are above system wide averages and objectives and blocking/ineffective attempts are not an issue given the low capacity environment in this area of the State. That data is considered proprietary by AT&T but is not necessarily relevant in this particular Docket because this area is known as a poor coverage area by both benchmark data and customer experience which necessitates a coverage solution. In addition, in many instances, dropped calls may not be a reliable indicator of an inadequate network for reasons such as:

- Many users become familiar with areas of poor coverage or no service and stop making calls in these areas;
- Since mobile communication is a two-way connection, if a cell site cannot hear a mobile unit, it will not register as a failure if that link is problematic; and
- Dropped calls are a partial indicator of quality - sometimes you can hold a call but the person on the other end cannot hear you.

Q11. Would this site be needed for coverage, capacity, or both? Explain.

A11. The site would be used for coverage to the identified service area as current service in the area is unreliable due to a lack of coverage and not due to high usage of existing sites.

Q12. Provide the lengths of the existing coverage gaps on any roads that AT&T seeks to provide coverage to.

A12. Along State Route 201 the gap in reliable service currently is over 2.8 miles long. Various secondary roads cumulatively present over 21 miles of unreliable service.

Q13. Provide the lengths of the proposed coverage of any roads that AT&T seeks to provide coverage to based on the tower's proposed height, as well as ten and twenty feet shorter.

A13. Please see information included in Attachment A.

Q14. Provide the areas to be covered (in square miles) assuming the tower is at the proposed height and also ten and twenty feet shorter.

A14. Please see information included in Attachment B.

Q15. Provide coverage plots using the same scale provided assuming the tower is ten and twenty feet shorter, respectively.

A15. Please see coverage plots in Attachment C.

Q16. What is the minimum antenna centerline height required to meet AT&T's coverage objectives?

A16. For all three sites AT&T's minimum centerline height requirements to meet AT&T's coverage objectives is 187' AGL.

Q17. Would flush-mounted antennas or antennas attached to the tower via T-arms provide the Required coverage? Would either configuration result in reduced coverage and/or necessitate greater antenna height? Explain.

A17. T-arms at the 187' level at any of the proposed alternative sites would provide the required coverage. Flush mounts however would generally only allow three antennas to be mounted at the same level. Therefore, the installation of a full complement of twelve flush-mounted antennas would generally require three levels of antennas separated by 10 feet and as a result would require additional height above that of T-arm mounts.

Q18. Provide the distance and direction from the proposed tower site to the existing sites that the proposed tower would interact with. Also include the addresses, tower heights, antenna heights and tower types (e.g. monopole).

A18. All of the existing AT&T sites that the proposed tower could interact with are included in the following table. Distances provided are to the different proposed tower locations.

Site Name	Address	Town	Lat.	Long.	Antenna Centerline	Structure Type	Mountain	Cossaduck	NW	Direction
							Avenue	Hill Road	Corner Road	
CT2027	2 Wintechog Hill Road	North Stonington	41.4598	-71.9273	172'	Lattice	3.881	3.35	2.55	SW
CT2217	39 Norwich Westerly RD	Ledyard	41.4720	-71.9598	90'	Rooftop	4.611	4.1	3.04	SW
CT2917	39R Norwich Westerly Rd	Ledyard	41.4788	-71.9629	85'	Rooftop	4.546	4.05	2.98	SW
CT5717	1439 VOLUNTOWN ROAD	Griswold	41.5764	-71.8877	135'	Monopole	4.966	5.32	5.79	N
CT5743	ROUTE 164	PRESTON	41.5382	-71.9512	140'	Monopole	4.259	4.16	3.75	NW
RI4028	247 North Rd	Hopkinton	41.4950	-71.7847	266'	Lattice	5.085	5.43	6.43	E
RI4248	395 Woodville Rd	Hopkinton	41.4592	-71.7682	151'	Monopole	6.682	6.68	7.67	SE
RI4311	2670 Ten Rod Rd	Exeter	41.5750	-71.7669	167'	Monopole	7.689	8.22	9.23	NE

Q19. Calculate the amounts of cut and fill required to develop the proposed tower site and access drive.

A19. For this site the total cut would be approximately 214 cubic yards and the total would be approximately 40 cubic yards.

Q20. What is the fuel source for the backup generator? How many hours of run time would the generator have based on its fuel tank capacity? Has AT&T considered using a fuel cell as a

backup power source for the proposed facility? Explain.

A20. AT&T deploys a diesel generator with a 210 gallon fuel capacity which provides and Approximately 48 hour runtime. AT&T has not considered use of a fuel cell as a backup power source for the proposed facility based on overall operational desires for the site and the network. However, it should be noted that fuel cell backup power is available to AT&T which involves hydrogen fuel sources.

Q21. Does AT&T anticipate the use of the backup generator as a temporary power source until Permanent electrical service is provided?

A21. No.

Q22. Would any blasting be required to develop the site?

A22. No blasting is anticipated at this time for any of the alternative sites. A geotechnical survey of the project site would be completed once a Facility is approved by the Siting Council and would be provided to the Siting Council as a part of a Development and Management ("D&M") Plan. Chipping would be the first preferred method of removal if rock/ledge removal is required.

Q23. Is the proposed site within an "Important Bird Area" as designated by the National Audubon Society?

A23. No. The nearest Important Bird Area (IBA) to the site is the Barn Island Wildlife Management Area located approximately 9.5 miles to the south/southeast. This island is open to the general public and maintained by the Connecticut Department of Energy and Environmental Protection; it represents the single largest State-owned coastal property. Based on the distance between the proposed Facility and this IBA, no impacts to avian species are anticipated. Please find included as Attachment D a report on avian resources.

Q24. Would the proposed facility comply with recommended guidelines of the United States Fish and Wildlife Service for minimizing the potential for telecommunications towers to impact bird species?

A24. Yes. The proposed Facility at this location would comply with the U.S. Fish & Wildlife Service guidelines. Please see the report included in Attachment D.

Site B: 23/25 Northwest Corner Road Questions

Q25. What is the existing signal strength in those areas AT&T is seeking to cover from this site?

A25. Current signal levels range significantly in the proposed service area from -110 dBm to -82 dBm due to the terrain fluctuations. This type of spotty unreliable coverage is not acceptable for users of the AT&T network who are often mobile, making calls from their vehicles, their places of business and their homes. In addition, many customers are now substituting cell phones for their landline phone service as their only means of voice communications. To properly serve

these customers, the service must be reliable, especially since the service will be carrying their 911 calls.

Q26. Does AT&T have any statistics on dropped calls in the vicinity of the proposed facility? If so, what do they indicate? Does AT&T have any other indicators of substandard service in this area?

A26. Dropped calls are above system wide averages and objectives and blocking/ineffective attempts are not an issue given the low capacity environment in this area of the State. That data is considered proprietary by AT&T but is not necessarily relevant in this particular Docket because this area is known as a poor coverage area by both benchmark data and customer experience which necessitates a coverage solution. In addition, in many instances, dropped calls may not be a reliable indicator of an inadequate network for reasons such as:

- Many users become familiar with areas of poor coverage or no service and stop making calls in these areas;
- Since mobile communication is a two-way connection, if a cell site cannot hear a mobile unit, it will not register as a failure if that link is problematic; and
- Dropped calls are a partial indicator of quality - sometimes you can hold a call but the person on the other end cannot hear you.

Q27. Would this site be needed for coverage, capacity, or both? Explain.

A27. The site would be used for coverage to the identified service area as current service in the area is unreliable due to a lack of coverage and not due to high usage of existing sites.

Q28. Provide the lengths of the existing coverage gaps on any roads that AT&T seeks to provide coverage to.

A28. Along State Route 201 the gap in reliable service currently is over 2.8 miles long. Various secondary roads cumulatively present over 21 miles of unreliable service.

Q29. Provide the lengths of the proposed coverage of any roads that AT&T seeks to provide coverage to based on the tower's proposed height, as well as ten and twenty feet shorter.

A29. Please see Attachment A.

Q30. Provide the areas to be covered (in square miles) assuming the tower is at the proposed height and also ten and twenty feet shorter.

A30. Please see Attachment B.

Q31. Provide coverage plots using the same scale provided assuming the tower is ten and twenty feet shorter, respectively.

A31. Please see Attachment C.

Q32. What is the minimum antenna centerline height required to meet AT&T's coverage objectives?

A32. For all three sites AT&T's minimum centerline height requirements to meet AT&T's coverage objectives is 187' AGL.

Q33. Would flush-mounted antennas or antennas attached to the tower via T-arms provide the required coverage? Would either configuration result in reduced coverage and/or necessitate greater antenna height? Explain.

A33. T-arms at the 187' level at any of the proposed alternative sites would provide the required coverage. Flush mounts however would generally only allow three antennas to be mounted at the same level. Therefore, the installation of a full complement of twelve flush-mounted antennas would generally require three levels of antennas separated by 10 feet and as a result would require additional height above that of T-arm mounts.

Q34. Provide the distance and direction from the proposed tower site to the existing sites that the proposed tower would interact with. Also include the addresses, tower heights, antenna heights and tower types (e.g. monopole).

A34. Please see the table included in A18.

Q35. Calculate the amounts of cut and fill required to develop the proposed tower site and access drive.

A35. As this site was identified and developed as an alternative in response to requests from the Town a topographic survey is not yet available and data regarding cut and fill quantities is not available at this time.

Q36. What is the fuel source for the backup generator? How many hours of run time would the generator have based on its fuel tank capacity? Has AT&T considered using a fuel cell as a backup power source for the proposed facility? Explain.

A36. AT&T deploys a diesel generator with a 210 gallon fuel capacity which provides and approximately 48 hour runtime. AT&T has not considered use of a fuel cell as a backup power source for the proposed facility based on overall operational desires for the site and the network.

Q37. Does AT&T anticipate the use of the backup generator as a temporary power source until permanent electrical service is provided?

A37. No.

Q38. Would any blasting be required to develop the site?

A38. No need for blasting is anticipated at this time for any of the alternative sites. A geotechnical survey of the project site would be completed once a Facility is approved by the Siting Council and would be provided to the Siting Council as a part of a Development and Management ("D&M") Plan. Chipping would be the first preferred method of removal if rock-ledge removal is required.

Q39. Is the proposed site within an "Important Bird Area" as designated by the National Audubon Society?

A39. No. The nearest Important Bird Area (IBA) to the site is the Barn Island Wildlife Management Area located approximately 9.5 miles to the south/southeast. This island is open to the general public and maintained by the Connecticut Department of Energy and Environmental Protection; it represents the single largest State-owned coastal property. Based on the distance between the proposed Facility and this IBA, no impacts to avian species are anticipated. Please find included as Attachment D a report on avian resources.

Please note this attachment also includes correspondence from the Connecticut Department of Energy and Environmental Protection (DEEP) indicating that the Natural Diversity Data Base has been reviewed and no impacts to species of concern are anticipated.

Q40. Would the proposed facility comply with recommended guidelines of the United States Fish and Wildlife Service for minimizing the potential for telecommunications towers to impact bird species?

A40. Yes. The proposed Facility at this location would comply with the U.S. Fish & Wildlife Service Guidelines. Please see the report included in Attachment D.

Q41. What is the status of the review of this site by the Connecticut State Historic Preservation Officer (SHPO)?

A41. VHB, on behalf of SBA, submitted site- and area-specific information to the Connecticut State Historic Preservation Office (SHPO) to obtain a preliminary determination regarding potential visual effects on historic resources. No adverse visual effects were identified by the Connecticut State Historic Preservation Office (SHPO). The area of the site does possess the potential for cultural resources to be present. If this site is selected as the preferred alternative, SBA will coordinate with the SHPO to determine what, if any, additional research or investigations would be required to obtain a "no adverse effect" determination for below-ground resources.

Site C: 350B Cossaduck Hill Road

Q42. What is the existing signal strength in those areas AT&T is seeking to cover from this site?

A42. Current signal levels range significantly in the proposed service area from -110 dBm to -82 dBm due to the terrain fluctuations. This type of spotty unreliable coverage is not acceptable for users of the AT&T network who are often mobile, making calls from their vehicles, their places

of business and their homes. In addition, many customers are now substituting cell phones for their landline phone service as their only means of voice communications. To properly serve these customers, the service must be reliable, especially since the service will be carrying their 911 calls.

Q43. Does AT&T have any statistics on dropped calls in the vicinity of the proposed facility? If so, what do they indicate? Does AT&T have any other indicators of substandard service in this area?

A43. Dropped calls are above system wide averages and objectives and blocking/ineffective attempts are not an issue given the low capacity environment in this area of the State. That data is considered proprietary by AT&T but is not necessarily relevant in this particular Docket because this area is known as a poor coverage area by both benchmark data and customer experience which necessitates a coverage solution. In addition, in many instances, dropped calls may not be a reliable indicator of an inadequate network for reasons such as:

- Many users become familiar with areas of poor coverage or no service and stop making calls in these areas;
- Since mobile communication is a two-way connection, if a cell site cannot hear a mobile unit, it will not register as a failure if that link is problematic; and
- Dropped calls are a partial indicator of quality - sometimes you can hold a call but the person on the other end cannot hear you.

Q44. Would this site be needed for coverage, capacity, or both? Explain.

A44. The site would be used for coverage to the identified service area as current service in the area is unreliable due to a lack of coverage and not due to high usage of existing sites.

Q45. Provide the lengths of the existing coverage gaps on any roads that AT&T seeks to provide coverage to.

A45. Along State Route 201 the gap in reliable service currently is over 2.8 miles long. Various secondary roads cumulatively present over 21 miles of unreliable service.

Q46. Provide the lengths of the proposed coverage of any roads that AT&T seeks to provide coverage to based on the tower's proposed height, as well as ten and twenty feet shorter.

A46. Please see Attachment A.

Q47. Provide the areas to be covered (in square miles) assuming the tower is at the proposed height and also ten and twenty feet shorter.

A47. Please see Attachment B.

Q48. Provide coverage plots using the same scale provided assuming the tower is ten and twenty feet shorter, respectively.

A48. Please see Attachment C.

Q49. What is the minimum antenna centerline height required to meet AT&T's coverage objectives?

A49. For all three sites AT&T's minimum centerline height requirements to meet AT&T's coverage objectives is 187' AGL.

Q50. Would flush-mounted antennas or antennas attached to the tower via T-arms provide the required coverage? Would either configuration result in reduced coverage and/or necessitate greater antenna height? Explain.

A50. T-arms at the 187' level at any of the proposed alternative sites would provide the required coverage. Flush mounts however would generally only allow three antennas to be mounted at the same level. Therefore, the installation of a full complement of twelve flush-mounted antennas would generally require three levels of antennas separated by 10 feet and as a result would require additional height above that of T-arm mounts.

Q51. Provide the distance and direction from the proposed tower site to the existing sites that the proposed tower would interact with. Also include the addresses, tower heights, antenna heights and tower types (e.g. monopole).

A51. Please see the table included in A18.

Q52. Calculate the amounts of cut and fill required to develop the proposed tower site and access drive.

A52. As this site was identified and developed as an alternative in response to requests from the Town, a topographic survey is not yet available and data regarding cut and fill quantities is not available at this time.

Q53. What is the fuel source for the backup generator? How many hours of run time would the generator have based on its fuel tank capacity? Has AT&T considered using a fuel cell as a backup power source for the proposed facility? Explain.

A53. AT&T deploys a diesel generator with a 210 gallon fuel capacity which provides and approximately 48 hour runtime. AT&T has not considered use of a fuel cell as a backup power source for the proposed facility based on overall operational desires for the site and the network.

Q54. Does AT&T anticipate the use of the backup generator as a temporary power source until permanent electrical service is provided?

A54. No.

Q55. Would any blasting be required to develop the site?

A55. No need for blasting is anticipated at this time for any of the sites. A geotechnical survey of the project site would be completed once a Facility is approved by the Siting Council and would be provided to the Siting Council as a part of a Development and Management ("D&M") Plan. Chipping would be the first preferred method of removal if rock/ledge removal is required.

Q56. Is the proposed site within an "Important Bird Area" as designated by the National Audubon Society?

A56. No. The nearest Important Bird Area to the site is the Barn Island Wildlife Management Area located approximately 9.5 miles to the south/southeast. This island is open to the general public and maintained by the Connecticut Department of Energy and Environmental Protection; it represents the single largest State-owned coastal property. Based on the distance between the proposed Facility and this IBA, no impacts to avian species are anticipated. Please find included as Attachment D a report on avian resources. Please note this attachment also includes correspondence from the Connecticut Department of Energy and Environmental Protection (DEEP) indicating that the Natural Diversity Data Base has been reviewed and no impacts to specie of concern are anticipated.

Q57. Would the proposed facility comply with recommended guidelines of the United States Fish and Wildlife Service for minimizing the potential for telecommunications towers to impact bird species?

A57. Yes. The proposed Facility at this location would comply with the U.S. Fish & Wildlife Service guidelines. Please see the report included in Attachment D.

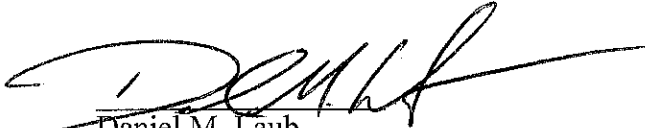
Q58. What is the status of the review of this site by the SHPO?

A58. VHB, on behalf of SBA, submitted site- and area-specific information to the Connecticut State Historic Preservation Office (SHPO) to obtain a preliminary determination regarding potential visual effects on historic resources. No adverse visual effects were identified by the Connecticut State Historic Preservation Office (SHPO). The area of the site does possess the potential for cultural resources to be present. If this site is selected as the preferred alternative, SBA will coordinate with the SHPO to determine what, if any, additional research or investigations would be required to obtain a "no adverse effect" determination for below-ground resources.

CERTIFICATE OF SERVICE

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

Dated: September 15, 2011



Daniel M. Laub

cc: Hollis Redding, SBA
Michele Briggs, AT&T
David Vivian, SAI
Dan Goulet, C Squared
Carlo Centore, Centek
Michael Libertine, VHB
Dean Gustafson, VHB
Christopher B. Fisher, Esq.

Attachment A

Road Coverage Analysis at 187', 177' and 167' AGL for Proposed Alternative Sites (in miles)

Road Coverage Analysis (Incremental \geq -82 dBm) at 187' centerline			
	Mountain Avenue	Cossaduck Hill Road	Northwest Corner Road
State Hwy 201 (Glasgo Rd)	2.79	2.71	2.34
State Hwy 49 (Pendleton Hill Rd, Voluntown Rd)	1.18	0.88	0.17
State Hwy 164	0.00	0.12	0.00
State Hwy 216 (High St)	0.00	0.06	0.00
Norwich Voluntown Rd	0.31	0.05	0.00
I 395 (Governor John Davis Lodge Tpke)	0.00	0.00	0.00
State Hwy 138	0.00	0.00	0.00
Secondary Roads	21.31	18.48	12.02
Road Coverage Analysis (Incremental \geq -82 dBm) at 177' centerline			
	Mountain Avenue	Cossaduck Hill Road	Northwest Corner Road
State Hwy 201 (Glasgo Rd)	2.56	2.60	2.24
State Hwy 49 (Pendleton Hill Rd, Voluntown Rd)	1.11	0.88	0.16
State Hwy 164	0.00	0.00	0.00
State Hwy 216 (High St)	0.00	0.03	0.00
Norwich Voluntown Rd	0.29	0.04	0.00
I 395 (Governor John Davis Lodge Tpke)	0.00	0.00	0.00
State Hwy 138	0.00	0.00	0.00
Secondary Roads	20.58	17.70	11.30
Road Coverage Analysis (Incremental \geq -82 dBm) at 167' centerline			
	Mountain Avenue	Cossaduck Hill Road	Northwest Corner Road
State Hwy 201 (Glasgo Rd)	2.24	2.55	2.24
State Hwy 49 (Pendleton Hill Rd, Voluntown Rd)	1.11	0.83	0.16
State Hwy 164	0.00	0.00	0.00
State Hwy 216 (High St)	0.00	0.01	0.00
Norwich Voluntown Rd	0.29	0.04	0.00
I 395 (Governor John Davis Lodge Tpke)	0.00	0.00	0.00
State Hwy 138	0.00	0.00	0.00
Secondary Roads	20.34	17.22	10.52

Attachment B

Areas of Coverage

Antennas at 187' Centerline

Area Coverage (Square Miles)	Mountain Avenue	Cossaduck Hill Road	Northwest Corner Road
In-Vehicle (≥ -82 dBm)	12.96	11.44	7.70

Antennas at 177' Centerline





Area Coverage (Square Miles)	Mountain Avenue	Cossaduck Hill Road	Northwest Corner Road
In-Vehicle (≥ -82 dBm)	12.53	11.18	7.40

Antennas at 167' Centerline



Area Coverage (Square Miles)	Mountain Avenue	Cossaduck Hill Road	Northwest Corner Road
In-Vehicle (≥ -82 dBm)	12.11	10.75	7.05

Attachment C

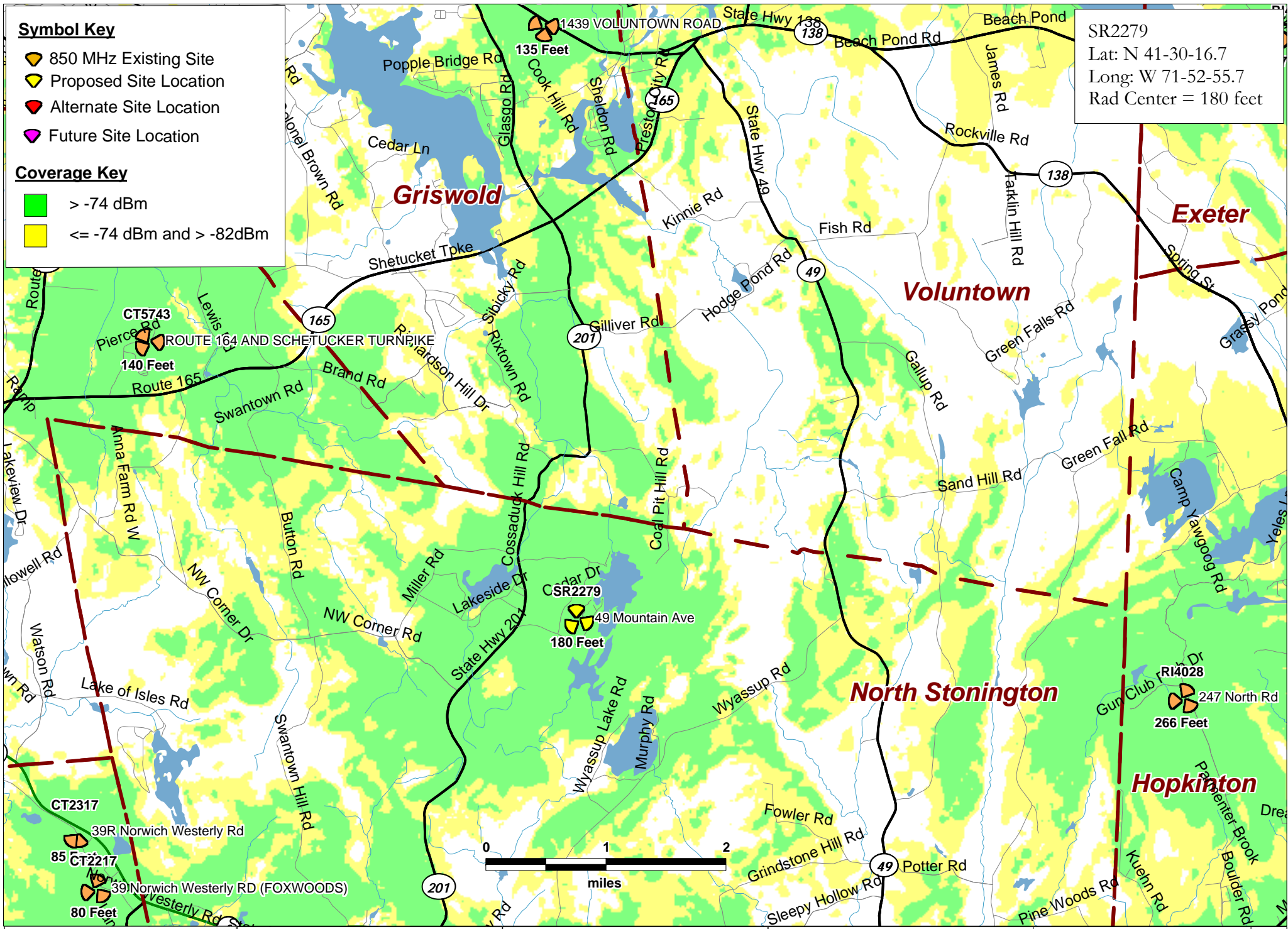
Symbol Key

-  850 MHz Existing Site
-  Proposed Site Location
-  Alternate Site Location
-  Future Site Location

Coverage Key

-  > -74 dBm
-  <= -74 dBm and > -82dBm

SR2279
 Lat: N 41-30-16.7
 Long: W 71-52-55.7
 Rad Center = 180 feet



Existing And
 Proposed @ 180 feet AGL





North Stonington, CT





PREPARED ON
 DATE: 09/07/2011

REV 0

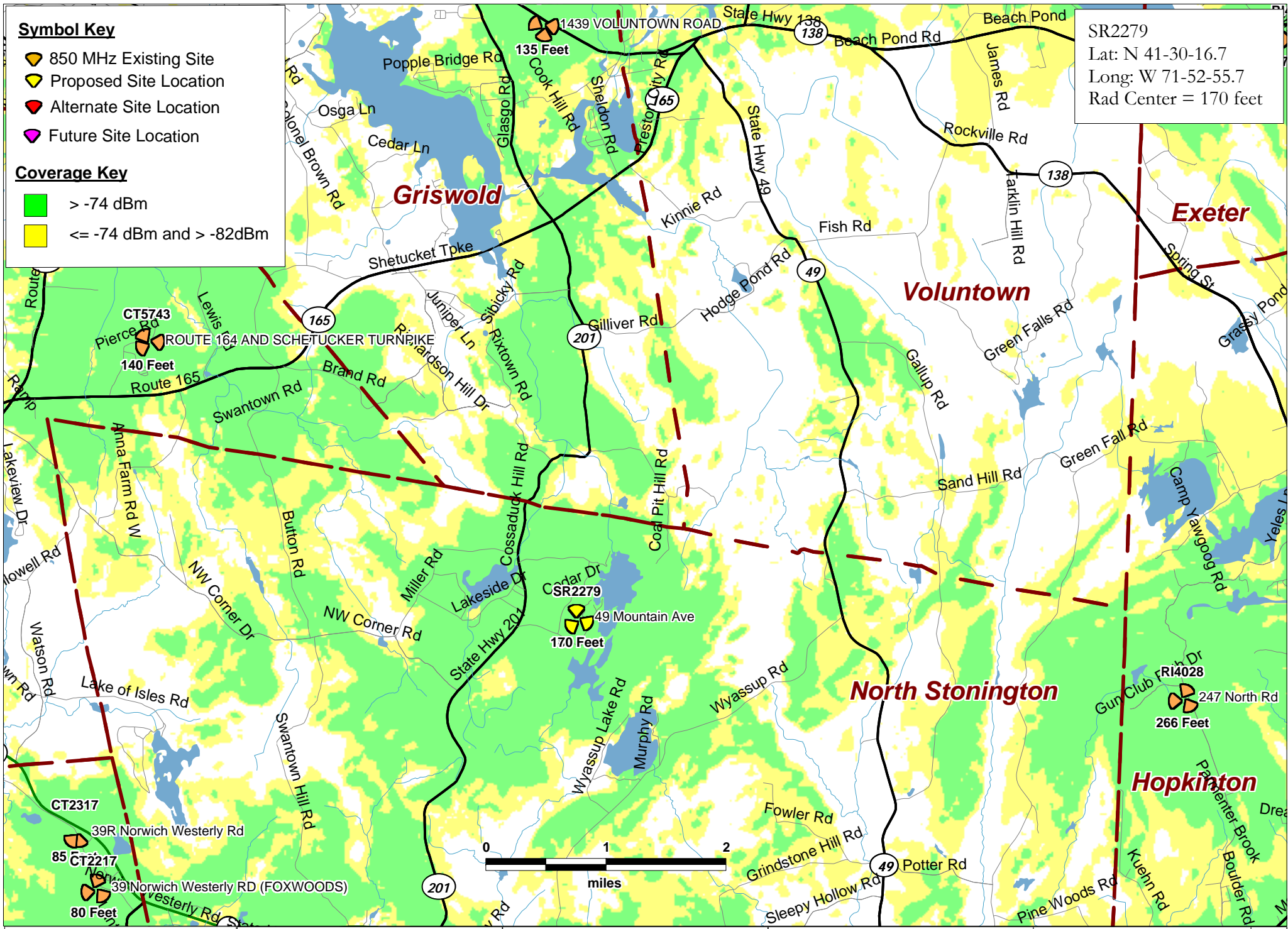
Symbol Key

-  850 MHz Existing Site
-  Proposed Site Location
-  Alternate Site Location
-  Future Site Location

Coverage Key

-  > -74 dBm
-  <= -74 dBm and > -82dBm

SR2279
 Lat: N 41-30-16.7
 Long: W 71-52-55.7
 Rad Center = 170 feet







Existing And
 Proposed @ 170 feet AGL

North Stonington, CT





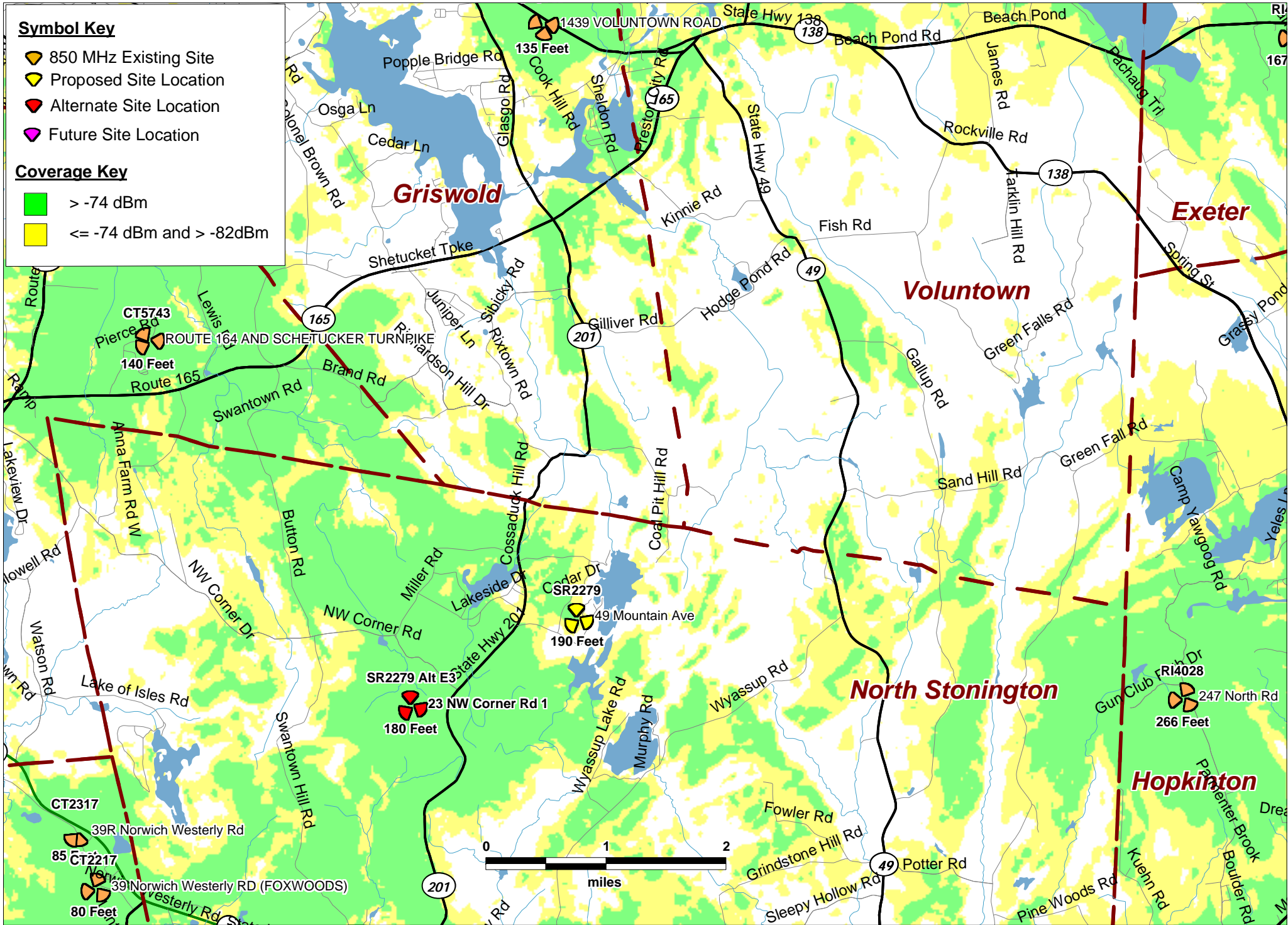
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DATE: 09/07/2011	REV 0

Symbol Key

-  850 MHz Existing Site
-  Proposed Site Location
-  Alternate Site Location
-  Future Site Location

Coverage Key

-  > -74 dBm
-  <= -74 dBm and > -82dBm







Existing And
 NW Corner @ 180 feet AGL
North Stonington, CT





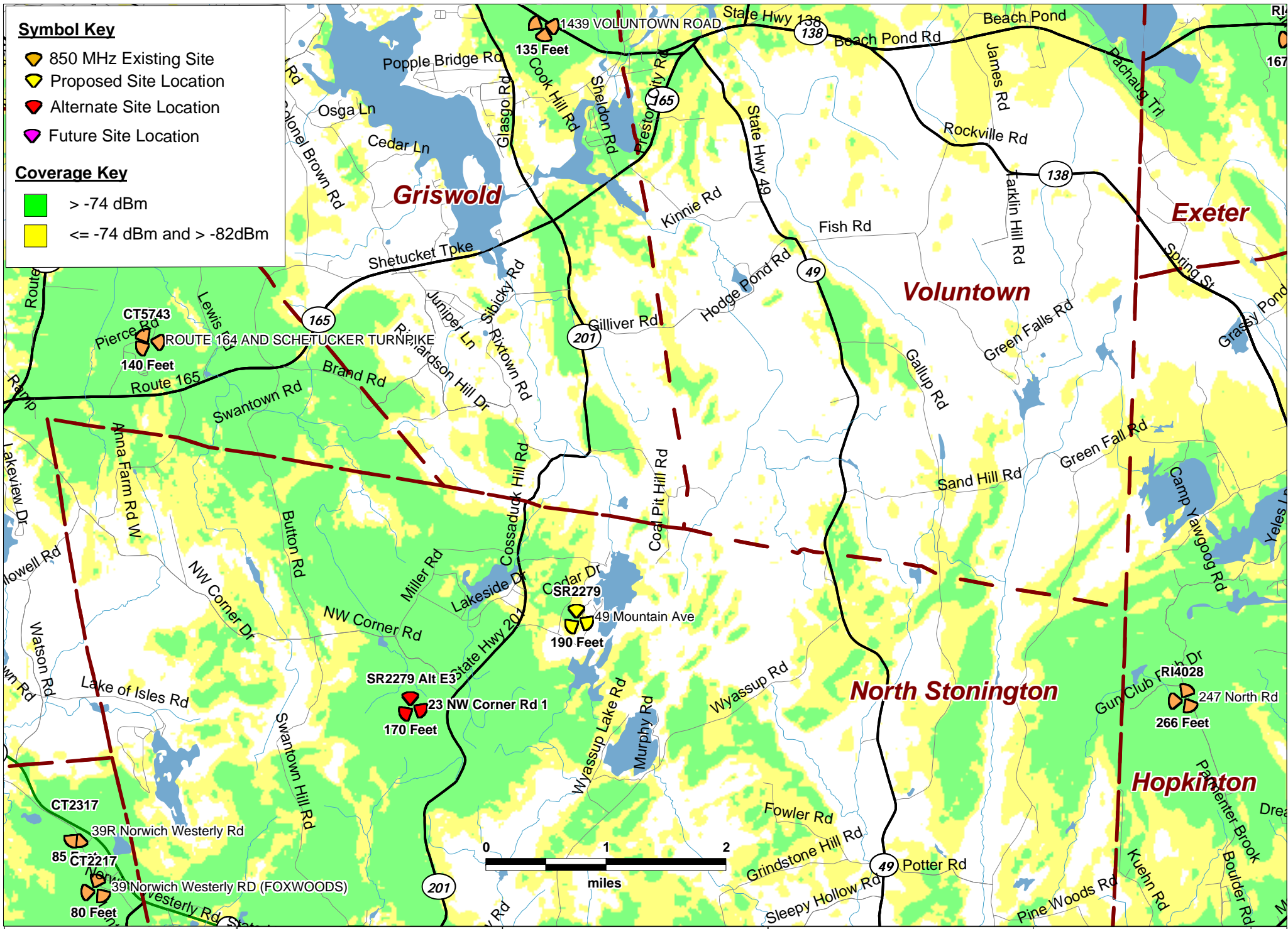
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DATE: 09/07/2011	REV 0

Symbol Key

-  850 MHz Existing Site
-  Proposed Site Location
-  Alternate Site Location
-  Future Site Location

Coverage Key

-  > -74 dBm
-  <= -74 dBm and > -82dBm



Existing And
North Stonington, CT
 NW Corner @ 170 feet AGL



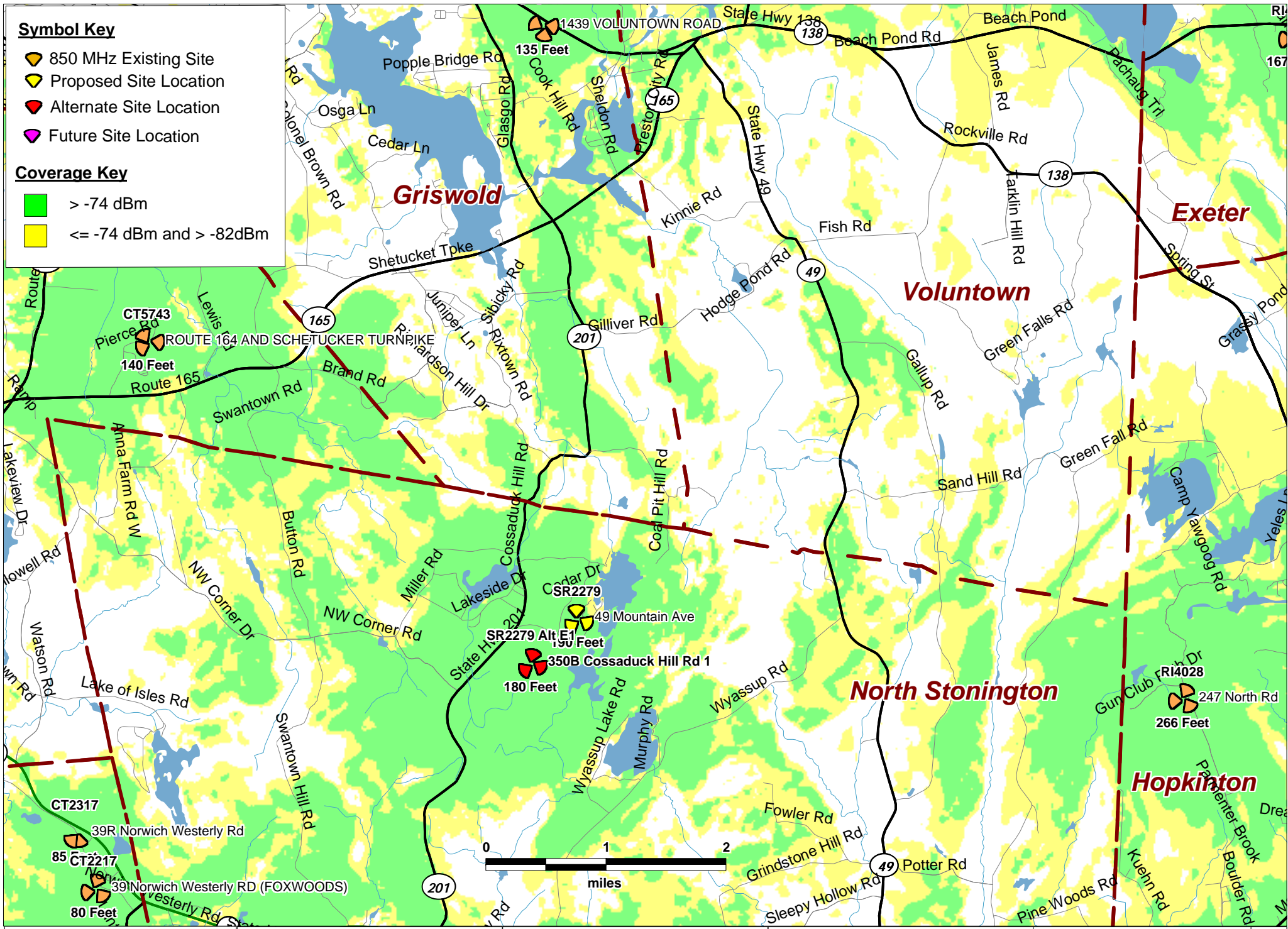
PREPARED ON	
DATE: 09/07/2011	REV 0

Symbol Key

- 850 MHz Existing Site
- Proposed Site Location
- Alternate Site Location
- Future Site Location





Coverage Key

- > -74 dBm
- <= -74 dBm and > -82dBm





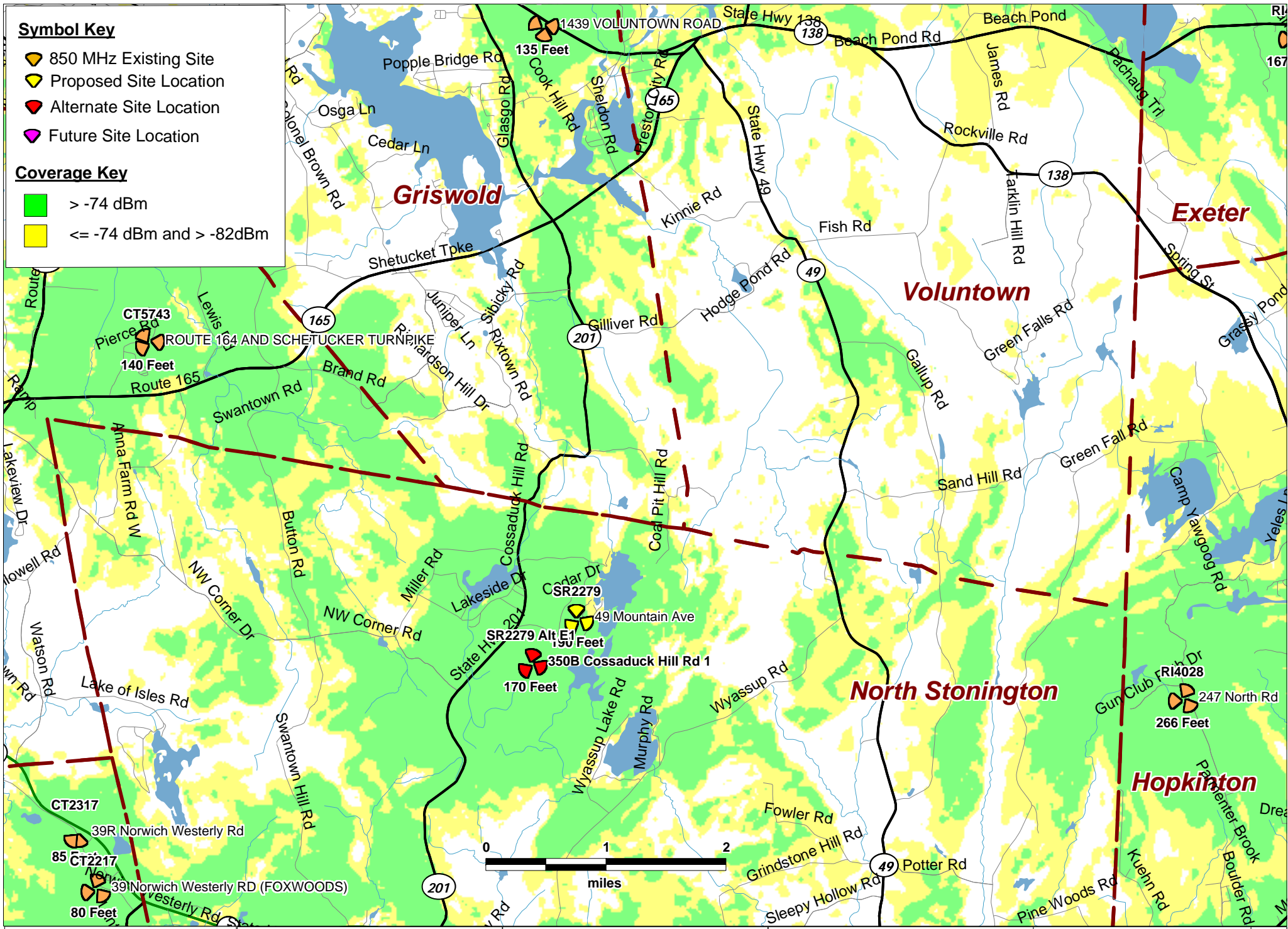
PREPARED ON	
DATE: 09/07/2011	REV 0

Symbol Key

-  850 MHz Existing Site
-  Proposed Site Location
-  Alternate Site Location
-  Future Site Location

Coverage Key

-  > -74 dBm
-  <= -74 dBm and > -82dBm



Existing And
Cossaduck @ 170 feet AGL
North Stonington, CT



PREPARED ON	
DATE: 09/07/2011	REV 0

Attachment D



Vanasse Hangen Brustlin, Inc.

54 Tuttle Place
Middletown, Connecticut 06457
860 632-1500
FAX 860 632-7879

Memorandum

To: Ms. Hollis M. Redding
SBA Network Services, Inc.
One Research Drive
Suite 200C
Westborough, MA 01581

Date: September 8, 2011

Project No.: 40999.37

From: Dean Gustafson
Senior Environmental Scientist

Re: Connecticut Siting Council Docket No. 420
Migratory Bird Impact Evaluation
Proposed AT&T/SBA Wireless Facility
350B Cossaduck Hill Road, 49 Mountain Road,
& 25 Northwest Corner Road
North Stonington, Connecticut

Vanasse Hangen Brustlin, Inc. (VHB) is pleased to provide the following information with respect to potential impacts on migratory birds at three potential candidate sites under consideration for the development of a wireless telecommunications facility (Facility) proposed by AT&T/SBA at either 350B Cossaduck Hill Road, 49 Mountain Road, or 25 Northwest Corner Road in North Stonington, Connecticut.

VHB understands that AT&T/SBA proposed to install a 190-foot tall wireless telecommunications monopole Facility to meet its coverage objectives in this area of North Stonington. AT&T/SBA's Facility would also include the installation of a single shelter designed to house AT&T's and other wireless service providers' equipment. The Facility would be located within a fence-enclosed compound area. Access to the project area at 350B Cossaduck Hill Road (Alternate Site 1) would follow an existing gravel driveway currently located on the host property then continuing along an existing woods road adjacent to the proposed compound area (to be improved). The proposed Facility would be located in a currently undeveloped upland forested area surrounded by low-density residential development and segments of Route 201.

A second Alternate Facility Site is being considered by AT&T/SBA at 49 Mountain Road in North Stonington, Connecticut (Alternate Site 2). The Facility would be accessed following a new gravel driveway off Mountain Avenue through upland woodlands. The proposed Facility would be located in a currently undeveloped upland forested area surrounded by low-density residential development and segments of Route 201.

A third Alternate Facility Site is being considered at 25 Northwest Corner Road in North Stonington, Connecticut (Alternate Site 3). The Facility would be accessed initially following an existing dirt driveway currently located on the host property (to be improved) then following an existing woods road adjacent to the proposed compound area (also to be improved). The proposed Facility would

be located in a currently undeveloped upland forested area surrounded by low-density residential development and agricultural land.

VHB's research revealed that each proposed Alternate Facility Site complies with the U.S. Fish and Wildlife Service (USFWS) guidelines for minimizing potential impacts to birds. As a result, no seasonal restrictions would be recommended in association with construction or operation of the proposed Facility.

Provided below is a detailed analysis of potential impacts to migratory birds associated with each of the proposed AT&T/SBA Alternate Facility Site and demonstrates compliance with the USFWS guidelines.

Flyways

Each candidate site is located on a residentially developed parcel located within upland forests near Route 201 approximately 10.2 miles north of Stonington Harbor. The Connecticut coast lies within the Atlantic Flyway, one of the four generalized regional migratory bird flyways (Mississippi, Central, and Pacific being the others). This regional flyway is used by migratory birds traveling 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 make their way further inland to their preferred breeding habitats.

The proposed AT&T/SBA Facility would be located within the existing development limits of its host property and would not impact significant areas of mature vegetation. The three candidate sites are not located in the Atlantic Flyway; therefore, no impact to avian habitat potentially used by migrating species would occur. As a result, no impact to migratory flyways would result from the proposed Facility and therefore no seasonal restriction is recommended for the project. In addition, the proposed Facility complies with the U.S. Fish and Wildlife Service guidelines (as discussed in a following section) for minimizing potential impacts to birds, no migratory bird species would be impacted by development of the proposed Facility

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 identified focus areas identifying the most important habitats for waterfowl within the Atlantic Flyway. Connecticut contains several of these focus areas. The proposed project is not located within one of them (refer to attached map of CT Waterfowl Focus Areas) and the nearest Focus Area is the Lower Thames River System Focus Area located approximately 10 miles to the southeast. Since the proposed project would occur on an existing developed property, not directly impact waterfowl habitat and is more than 10 miles from the nearest focus area habitat, no adverse impact to Waterfowl Focus Areas would result from the proposed tower replacement project.

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.

The closest migratory waterfowl area is located along the Connecticut coast, approximately 10.2 miles southeast of the project area; beyond the extent of the enclosed Avian Resources Map. Species

utilizing this nearby coastal habitat (e.g., shallow marine waters, estuaries, bays) primarily for non-breeding wintering and migratory grounds include brant, bufflehead, red-breasted merganser, American black duck, and mallard. The exceptions to this group are the American Black Duck and Mallard which could potentially also use the identified migratory waterfowl area as breeding habitat. Black duck nesting preferences include a wide variety of wetland habitats with proximity to open water, dense ground cover and low human disturbance¹. Mallards are highly tolerant of human disturbance, using all types of wetlands including urban to rural, fresh to saline, reservoirs, rivers, urban park ponds and marinas.² Three important factors were considered in our determination that no impact to migratory, wintering or breeding waterfowl will result from the proposed development (and therefore no seasonal restrictions are recommended for the project), including: 1) the proposed project will not directly impact this migratory, wintering and breeding (limited to Black Duck and Mallard) waterfowl area; 2) there is sufficient buffer from this area to the proposed development; and, 3) the area surrounding the proposed Facility contains upland habitat and relatively high levels of human activity (e.g. adjoining residential properties and route 201) that would currently discourage most waterfowl usage.

Important Bird Areas and Sites

Audubon Connecticut has identified 27 Important Bird Areas and Sites (IBAs) in the state. The closest IBA to the three Alternative Facility Sites is Barn Island Wildlife Management Area located approximately 9.5 miles to the south/southeast. This IBA is not depicted on the enclosed Avian Resources Map because it is beyond the extent of the map. This island, owned by the CTDEEP and open to public recreation, is currently the site of Connecticut's single largest coastal property. Due to the distance between the proposed Facility and this IBA, no impact to this area will result from the proposed development and therefore no seasonal restrictions are recommended for the project.

Critical Habitat

Connecticut Critical Habitat data catalogs the classification and distribution of 25 rare and specialized wildlife habitats in the state resulting in the creation of habitat maps to be used in land use planning and natural resource protection. It represents a compilation of ecological information collected over many years by state agencies, conservation organizations and many individuals. The Connecticut Critical Habitats information can serve to highlight ecologically significant areas and to target areas of species diversity for land conservation and protection. The nearest Critical Habitat is associated with acidic Atlantic white cedar swamp habitat associated with Ashwillet Brook and properties owned by The Nature Conservancy located approximately 0.3 mile southwest of Alternate Site 1, 0.8 mile southwest of Alternate Site 2, and 0.5 mile east of Alternate Site 3. Due to the significant distance between the proposed Facility and this nearest Critical Habitat no impact to Critical Habitats will result from the proposed development and therefore no seasonal restrictions are recommended for the project.

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. 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 3-minute count is conducted. During the count, every bird seen within a 0.25-mile radius or heard is recorded. The resulting data are used by conservation managers, scientists, and the general public to estimate population trends and relative abundances and to assess bird conservation priorities.

¹ Bevier, L.R., The Atlas of Breeding Birds of Connecticut, (State Geological and Natural History Survey of Connecticut, Dept. of Environmental Protection, Bulletin 113, 1994), 74.

² Bevier, L.R., The Atlas of Breeding Birds of Connecticut, (State Geological and Natural History Survey of Connecticut, Dept. of Environmental Protection, Bulletin 113, 1994), 76.

The nearest survey route is located approximately 4.1 miles west of the proposed Alternate Sites. Bird survey routes do not represent a potential restriction to development, 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 two hundred affiliated raptor monitoring sites throughout the United States, Canada, and Mexico, identified as "Hawk Watch Sites." No Hawk Watch Sites are located within 5 miles of the proposed Facility. Since no Hawk Watch Sites are located near the proposed Facility, no adverse impact to migrating hawks is anticipated from the proposed development and therefore no seasonal restrictions are recommended for the project.

Bald Eagle Site

Bald Eagle Sites consist of locations of midwinter Bald Eagle counts (last update provided in 2008). This survey was initiated in 1979 by the National Wildlife Federation. This database includes data from 1986-2005 midwinter counts and includes some statewide, regional and national trends. Survey routes are included in the database only if they were surveyed consistently in at least 4 years and where at least 4 eagles were counted in a single year. No Bald Eagle Sites are located within 5 miles of the proposed Facility. Since there are not Bald Eagle Sites near the proposed Facility, no impact to Bald Eagles is anticipated from the proposed development and therefore no seasonal restrictions are recommended for the project. This conclusion is further supported by three correspondences dated September 17, 2010 (Alternate Site 2) and August 11, 2011 (Alternate Sites 1 & 3) received from the CTDEEP Natural Diversity Data Base indicating that "...there are no known extant populations of Federal or State Endangered, Threatened or Special Concern Species that occur at the site in question." Copies of these letters are enclosed. The bald eagle is a State Threatened species.

Compliance with USFWS's Interim Guidance on the Siting, Construction, Operation and Decommissioning of Communications Towers

The United States Fish and Wildlife Service's *Interim Guidance on the Siting, Construction, Operation and Decommissioning of Communications Towers* (September 14, 2000), recommends 12 voluntary actions be implemented in order to mitigate tower strikes caused by the construction of telecommunications towers:

1. *Any company/applicant/licensee proposing to construct a new communications tower should be strongly encouraged to collocate the communications equipment on an existing communication tower or other structure (e.g., billboard, water tower, or building mount). Depending on tower load factors, from 6 to 10 providers may collocate on an existing tower.*

Response: Collocation on an existing building, tower or non-tower structure is not available while achieving the required radio frequency (RF) coverage objectives of the proposed Facility.

2. *If collocation is not feasible and a new tower or towers are to be constructed, communications service providers should be strongly encouraged to construct towers no more than 199 feet above ground level (AGL), using construction techniques which do not require guy wires (e.g., use a lattice structure, monopole, etc.). Such towers should be unlighted if Federal Aviation Administration regulations permit.*

Response: The proposed AT&T/SBA Facility consists of a 190-foot tall monopole tower which requires neither guy wires nor lighting.

3. If constructing multiple towers, providers should consider the cumulative impacts of all of those towers to migratory birds and threatened and endangered species as well as the impacts of each individual tower.

Response: Multiple towers are not proposed. The proposed 190-foot tall monopole tower would accommodate two additional wireless telecommunications carriers to minimize the need to construct additional towers.

4. If at all possible, new towers should be sited within existing "antenna farms" (clusters of towers). Towers should not be sited in or near wetlands, other known bird concentration areas (e.g., state or Federal refuges, staging areas, rookeries), in known migratory or daily movement flyways, or in habitat of threatened or endangered species. Towers should not be sited in areas with a high incidence of fog, mist, and low ceilings.

Response: There are no existing antenna farms in the area that would satisfy the radio frequency coverage objectives for this portion of North Stonington. Due to the proposed Facility's proximity to the coast, incidence of fog, mist, and low ceilings are anticipated over the course of a typical year. The proposed Facility would not be located within the Atlantic Flyway, and its design and distance to known bird concentration areas (e.g., 10.2 miles north of migratory waterfowl concentration area) mitigate potential impacts to migratory avian species. According to CTDEEP, no federal and state endangered species are located in the vicinity of the proposed project.

5. 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.

Response: The proposed Facility height of 190 feet is less than 199 feet AGL and does not require lighting as determined by a FAA review.

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

Response: The proposed Facility will be unguyed and therefore visual markers are not required.

7. 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 and disturbance, and to reduce above ground obstacles to birds in flight.

Response: The proposed Facility is sited, designed, and constructed to accommodate proposed equipment and to allow for future collocations within the smallest footprint possible. The Facility is surrounded by a low-moderate level of human activity (e.g., residential properties, wildlife management area used for recreational purposes and route 201) and therefore will not result in habitat fragmentation.

8. If significant numbers of breeding, feeding, or roosting birds are known to habitually use the proposed tower construction area, relocation to an alternate site should be recommended. If this is not an option, seasonal restrictions on construction may be advisable in order to avoid disturbance during periods of high bird activity.

Response: Significant numbers of breeding, feeding, or roosting birds are not known to habitually use any of the candidate sites, which are subject to low-moderate levels of human activity that currently discourages significant bird activity.

9. *In order to reduce the number of towers needed in the future, providers should be encouraged to design new towers structurally and electrically to accommodate the applicant/licensee's antennas and comparable antennas for at least two additional users (minimum of three users for each tower structure), unless this design would require the addition of lights or guy wires to an otherwise unlighted and/or unguyed tower.*

Response: The proposed unguyed and unlit tower has been designed to accommodate two additional users' antennas for a total of three users on this tower.

10. *Security lighting for on-ground facilities and equipment should be down-shielded to keep light within the boundaries of the site.*

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

11. *If a tower is constructed or proposed for construction, Service personnel or researchers from the Communication Tower Working Group should be allowed access to the site to evaluate bird use, conduct dead-bird searches, to place net catchments below the towers but above the ground, and to place 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.*

Response: With prior notification to AT&T/SBA, USFWS personnel would be allowed access to the proposed Facility for evaluation.

12. *Towers no longer in use or determined to be obsolete should be removed within 12 months of cessation of use.*

Response: 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.

Summary

Potentially impacted waterfowl species: brant, bufflehead, red-breasted merganser, American black duck, and mallard (10.2 miles southeast)

Closest Important Bird Area: Barn Island Wildlife Management Area (9.5± miles south/southeast)

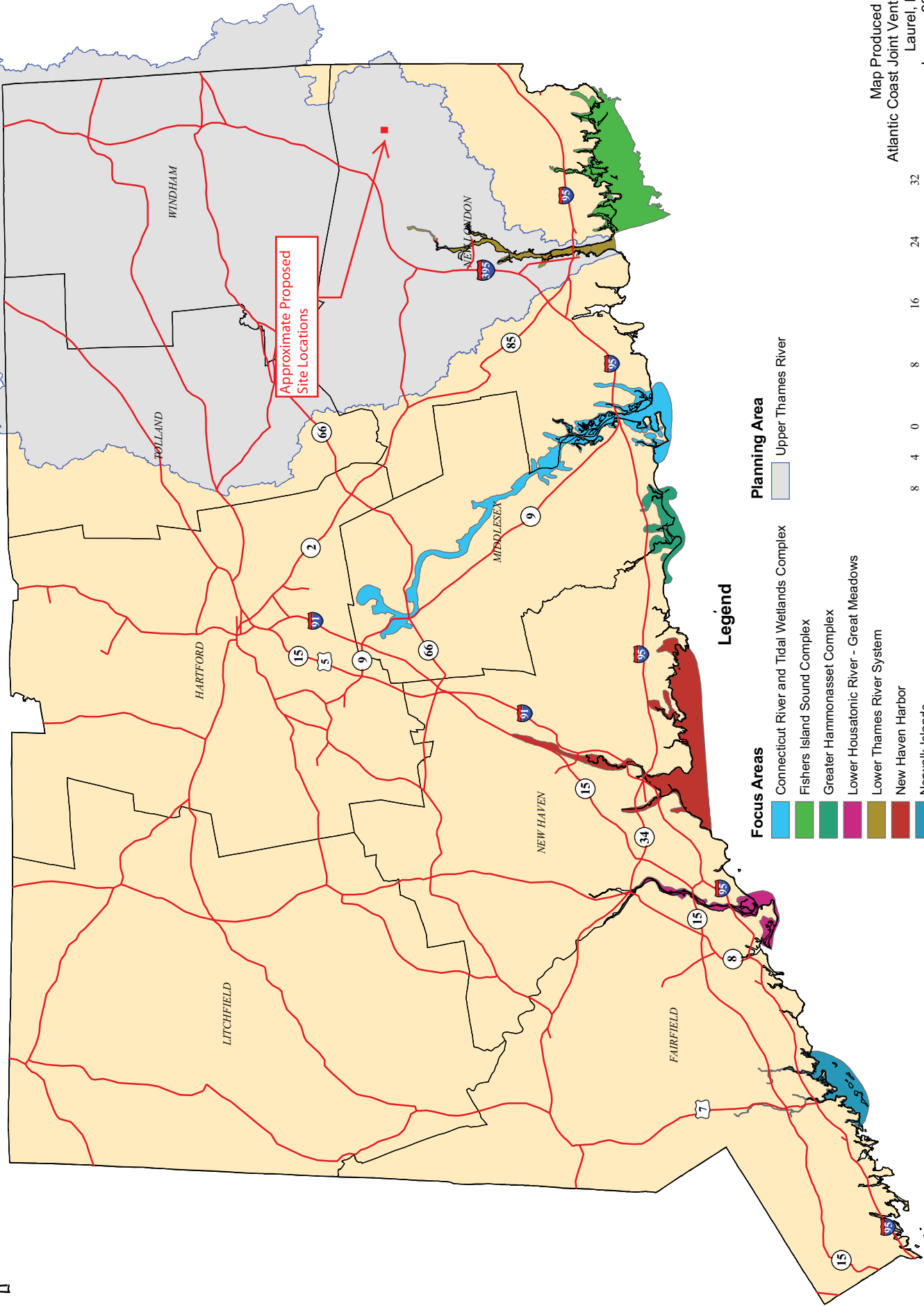
Closest CTDEP Critical Habitat: acidic Atlantic white cedar swamp habitat associated with Ashwillet Brook (0.3 mile southwest of Alternate Site 1, 0.8 mile southwest of Alternate Site 2, and 0.5 mile east of Alternate Site 3)

Recommended Seasonal Restriction: None

cc: Daniel M. Laub, Cuddy & Feder LLP

Enclosures

ATLANTIC COAST JOINT VENTURE CONNECTICUT WATERFOWL FOCUS AREAS



Approximate Proposed Site Locations

Legend

- | | |
|--|----------------------|
| Focus Areas | Planning Area |
| Connecticut River and Tidal Wetlands Complex | Upper Thames River |
| Fishers Island Sound Complex | |
| Greater Hammonasset Complex | |
| Lower Housatonic River - Great Meadows | |
| Lower Thames River System | |
| New Haven Harbor | |
| Norwalk Islands | |



Map Produced by:
Atlantic Coast Joint Venture
Laurel, MD
January 2005



STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION



Bureau of Natural Resources
Wildlife Division
79 Elm Street, Sixth Floor
Hartford, CT 06106
Natural Diversity Data Base

September 17, 2010

Ms. Coreen Kelsey
Vanasse Hangen Brustlin, Inc.
54 Tuttle Place
Middletown, CT 06457

Re: Proposed New Wireless Telecommunications Facility, SBA Towers, CT11796-S/North Stonington 3, 49 Mountain Ave, N. Stonington, CT

Dear Ms. Kelsey:

I have reviewed Natural Diversity Data Base maps and files regarding the area delineated on the map you provided for the proposed new wireless telecommunications facility, SBA Towers, CT11796-S/North Stonington 3, 49 Mountain Ave, N. Stonington, CT. According to our information, there are no extant populations of Federal or State Endangered, Threatened or Special Concern Species that occur on this property.

Natural Diversity Data Base information includes all information regarding critical biological resources available to us at the time of the request. This information is a compilation of data collected over the years by the Department of Environmental Protection's Natural History Survey and cooperating units of DEP, private conservation groups and the scientific community. This information is not necessarily the result of comprehensive or site-specific field investigations. Consultations with the Data Base should not be substitutes for on-site surveys required for environmental assessments. Current research projects and new contributors continue to identify additional populations of species and locations of habitats of concern, as well as, enhance existing data. Such new information is incorporated into the Data Base as it becomes available.

Please contact me if you have further questions at (860) 424-3592. Thank you for consulting the Natural Diversity Data Base. Also be advised that this is a preliminary review and not a final determination. A more detailed review may be conducted as part of any subsequent environmental permit applications submitted to DEP for the proposed site.

Sincerely,

Heather Williams for Dawn McKay

Dawn M. McKay
Biologist/Environmental Analyst

Cc: NDDDB File # 18011

DMM/hpw





Connecticut Department of
**ENERGY &
ENVIRONMENTAL
PROTECTION**

Wildlife Division
Natural History Survey – Natural Diversity Data Base
79 Elm Street, 6th Floor
Hartford, CT 06106-5127

August 11, 2011



Coreen Kelsey
Environmental Coordinator
Vanasse Hangen Brustlin, Inc.
54 Tuttle Place
Middletown, CT 06457
(860) 632-1500

Subject: NDDDB Request #201106145
North Stonington 3, 350B Cossaduck Hill Road
North Stonington, CT


Dear Coreen Kelsey,

I have reviewed Natural Diversity Data Base maps and files regarding the area delineated on the map you provided. Based on our current records, we do not anticipate negative impacts to State-listed species (RCSA Sec. 26-306) resulting from your proposed activity at the site.

Natural Diversity Data Base information includes all information regarding critical biologic resources available to us at the time of the request. This information is a compilation of data collected over the years by the CT Department of Environmental Protection Bureau of Natural Resources and cooperating units of DEP, private conservation groups and the scientific community. This information is not necessarily the result of comprehensive or site specific field investigations. Consultations with the Data Base should not be substituted for on-site surveys required for environmental assessments. Current research projects and new contributors continue to identify additional populations of species and locations of habitats of concern, as well as, enhance existing data. Such new information is incorporated into the Data Base as it becomes available. If the proposed work has not been initiated within 12 months of this review, contact the NDDDB for an updated review.

Please contact me if you have any questions (nelson.debarros@ct.gov; 860-424-3585). Thank you for consulting the Natural Diversity Data Base and continuing to work with us to protect State-listed species.

Sincerely,


Nelson B. DeBarros
Botanist/Ecologist



Connecticut Department of

**ENERGY &
ENVIRONMENTAL
PROTECTION**

August 11, 2011

Coreen Kelsey
Vanasse Hangen Brustlin, Inc.
54 Tuttle Pl
Middletown, CT 06457

Project: North Stonington 3 Telecommunications facility at 23/25 Northwest Corner Rd., North Stonington
Request No.: 201106146

Dear Coreen Kelsey,

I have reviewed Natural Diversity Data Base maps and files regarding the area delineated on the map you provided for the proposed North Stonington 3 telecommunications facility at 23/25 Northwest Corner Rd., North Stonington, Connecticut. I have determined that the proposed activities will not impact any extant populations of Federal or State Endangered, Threatened or Special Concern Species that occur in the vicinity of this property.

Natural Diversity Data Base information includes all information regarding critical biological resources available to us at the time of the request. This information is a compilation of data collected over the years by the Department of Energy and Environmental Protection's Natural History Survey and cooperating units of DEEP, private conservation groups and the scientific community. This information is not necessarily the result of comprehensive or site-specific field investigations. Consultations with the Data Base should not be substitutes for on-site surveys required for environmental assessments. Current research projects and new contributors continue to identify additional populations of species and locations of habitats of concern, as well as, enhance existing data. Such new information is incorporated into the Data Base as it becomes available.

Please contact me if you have further questions at (860) 424-3592, or dawn.mckay@ct.gov. Thank you for consulting the Natural Diversity Data Base. Also be advised that this is a preliminary review and not a final determination. A more detailed review may be conducted as part of any subsequent environmental permit applications submitted to DEEP for the proposed site.

Sincerely,

Dawn M. McKay
Environmental Analyst 3



Avian Resources Map

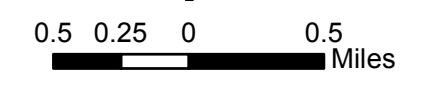
Proposed AT&T/
Proposed SBA Towers II, LLC.
North Stonington, Connecticut

Legend

-  Proposed Facility - 350B Cossaduck Hill Road
-  Proposed Facility - 25 Northwest Corner Road
-  Proposed Facility - 49 Mountain Road
-  Bald Eagle Site
-  Hawk Watch Site
-  Important Bird Site
-  Bat Site
-  Breeding Bird Survey Route
-  Natural Diversity Database (CTDEP, 07/2011)
-  Critical Habitat (CTDEP, 07/2009)
-  Migratory Waterfowl (CTDEP, 1999)
-  Important Bird Area
-  Preserved Open Space (CTDEP, 1997)
-  Federal Open Space (CTDEP, 2004)
- CT DEP Property (CT DEP, 12/2010)**
-  State Forest
-  State Park
-  DEP Owned Waterbody
-  State Park Scenic Reserve
-  Historic Preserve
-  Natural Area Preserve
-  Fish Hatchery
-  Flood Control
-  Other
-  State Park Trail
-  Water Access
-  Wildlife Area
-  Wildlife Sanctuary
-  Open Water
-  Town Boundary

Bird Data Sources:
 Bald Eagle Sites: U.S. Geological Survey, National Biological Information Infrastr. 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: CTDEP 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/mld/bbsrsl.html>

Base Map Source: 2004 aerial photograph with 0.5-foot resolution.



VHB Vanasse Hangen Brustlin, Inc.

Path: J:\40999.37\GIS\Project\All_Sites_Avian_Resources.mxd

