STATE OF CONNECTICUT CONNECTICUT SITING COUNCIL.

IN RE:

APPLICATION OF MESSAGE CENTER MANAGEMENT, INC. (MCM) AND NEW CINGULAR WIRELESS PCS, LLC FOR A CERTIFICATE OF ENVIRONMENTAL COMPATIBILITY AND PUBLIC NEED FOR THE CONSTRUCTION, MAINTENANCE AND OPERATION

DOCKET NO. 436

April 24, 2013

OF A TELECOMMUNICATIONS TOWER FACILITY AT 465 HILLS STREET OR 56 HILLS STREET IN THE TOWN OF EAST HARTFORD, CONNECTICUT

RESPONSES OF MESSAGE CENTER MANAGEMENT AND NEW CINGULAR WIRELESS TO CONNECTICUT SITING COUNCIL PRE-HEARING QUESTIONS, SET ONE

- Q1. 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?
- A1. Confirmation of receipt for all but six (6) addressees was received either by certified mail receipts or by confirmation through the United States Postal Service website tracking system. On February 26, 2013 a follow-up letter with a copy of the original notice and a copy of the original letter sent on February 7, 2013 was sent by First Class Mail to the following:

Paul and Regina Senecal

Irrevocable Trust Jane Peters

Trustee

220 Monroe St.

East Hartford, CT 06118

Lydia Cassarino 67 Schaffer Dr.

East Hartford, CT 06118

Otis Rodgers 41 Schaffer Dr

East Hartford, CT 06118

Peter Hydock 31 Schaffer Dr

East Hartford, CT 06118

John M. Schreiber

172 Greenwood St.

East Hartford, CT 06118

Herbert E. Bynum and Carlos A. Vargas

Marti

152 Greenwood St

East Hartford, CT 06118

Of the six (6) follow up letters sent, one (1) notice was returned as undeliverable/unable to forward. The address of John M. Schreiber was again confirmed as up to date through available tax assessor records as well as through publically available telephone/address

directories available online. A third notice was sent first class mail on March 15, 2013. This third notice attempt was also returned as undeliverable.

- Q2. Is the <u>Journal Inquirer</u> a daily publication?
- A2. The <u>Journal Inquirer</u> is published Monday through and including Saturday. The <u>Journal Inquirer</u> is the official paper utilized for publication of notices by the Town of East Hartford including the notices for public hearings conducted by the Town of East Hartford Planning and Zoning Commission.
- Q3. Which frequencies are New Cingular Wireless PCS, LLC (AT&T) licensed to utilize in Hartford County?
- A3. In Hartford County, AT&T's licenses include:

850 b Transmit: 880-895MHz; Receive: 835-850 MHz 1900 A3 Transmit 1930-1935MHz; Receive 1850-1855MHz; 1900 D Transmit 1945-1950MHz; Receive 1865-1870MHz 1900 E Transmit 1965-1970MHz; Receive 1885-1890MHz 750B Transmit 704-710MHz; Receive 734-740MHz 750C Transmit 710-716 MHz; Receive 740-746MHZ

- Q4. What is the signal strength for which AT&T designs its system? For in-vehicle coverage? For in-building coverage?
- A4. AT&T's design criteria in Connecticut for reliable in-building coverage is -74 dBm and AT&T's design criteria for reliable in-vehicle coverage is -82 dBm.
- Q5. When were the AT&T and Message Center Management search rings first initiated for towers in this area? Provide the size, shape, and location of the centers of the two search rings.
- A5. AT&T issued search ring S2022 on November 3, 2010 with the center of an approximately 1 mile diameter search ring located at coordinates N41° 44' 41.8" and W72° 35' 45.7".

MCM did not establish a specific search ring but instead became aware of AT&T's own site search and kept abreast of AT&T's activities in East Hartford. This included an understanding of the difficulties with the rejected proposal for a location at Gorman Park which the Town of East Hartford declined to lease. In early 2011, MCM received an unsolicited call regarding a potential site in East Hartford at 63 Wickham Drive (Candidate # 3 in the Search Ring Summary). As a result of the unsolicited call, and with an understanding of AT&T's need in the area, MCM began investigating potential alternate locations in the Hills Street area and southeastern East Hartford to identify possible alternate candidates.

MCM leased the 465 Hills Street site, included in this application as Alternate A, which is an abutting property to the unsolicited site that originally brought MCM to the area. Subsequently MCM and AT&T agreed to work cooperatively on development of the candidate facilities and MCM obtained the lease rights to the Candidate B Facility at 56 Hills Street.

- Q6 Provide the tower/structure heights for the facilities listed on page 9 of the Radio Frequency Analysis Report in the Application.
- A6. Please see table provided in Attachment 1.
- Q7. 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.
- A7. AT&T intends to provide initial coverage in the 1900 (PCS), 850 (cellular) and 700 (LTE) bands.
- Q8. Would the battery backup provide "seamless" uninterrupted power until the generator starts?
- A8. As noted, AT&T's proposed backup generator is a diesel generator. AT&T will also have a battery backup required to prevent the facility from experiencing a "re-boot" condition during the generator start-up delay period thus allowing for continued or "seamless" provision of service where signal levels allow.
- Q9 How long would the battery backup last in the event that the backup generator fails to start?
- A9. The typical total run time of the battery on its own is approximately 4-8 hours.
- Q10. Is the 48 hour generator run time based on full load? Explain.
- A10. The estimated 48 hour runtime assumes full load and 200 gallons of fuel available.
- Q11. Has AT&T considered using a fuel cell as a backup power source for the proposed site? Explain.
- A11. With respect to a fuel cell as a backup power source, 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. Given the significant costs associated with fuel cells and lack of an established fuel distribution system, they are not considered by AT&T as a backup power source at this time.

- Q12. Does AT&T anticipate the use of the backup generator as a temporary power source until permanent electrical service is provided?
- A12. No, it is anticipated that the generator will only be used during power outage conditions.
- Q13. Identify the safety standards and/or codes by which equipment, machinery, or technology would be used or operated at the proposed facility.
- A13. 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.
- Q14. What is the tower design wind speed for this area (Hartford County)?
- A14. The current adopted Connecticut code, which is the 2003 International Building Code (IBC) with Connecticut amendments, requires the use of ANSI/TIA-222-F. The basic wind speed for this area (Hartford County) is 80 mph. Either tower would be designed to meet this criteria.
- Q15. Pursuant to Connecticut General Statutes §16-500, provide copies of any lease agreements associated with Site A and Site B.
- A15. The lease agreements are being provided to the Siting Council under separate letter submission with these responses to interrogatories.
- Q16. In site Search section (Tab 2) of the Application, "Properties Investigated by MCM" numbers 4 and 5 are repetitive, but are shown on the map on the following page in different locations. Clarify.
- A16. The information for property number four (4) in the Application was inadvertently repeated for number five (5) which is 441 Hills Street, East Hartford. The correct entry for property number four (4) is as follows:

4. Address: 370 May Rd

Owner: Church of Our Lady of Peace

Map/Block/Lot: 52-185 Lot Size: 9.78 AC

The property owner was not interested in leasing space for use as a cell tower.

Please note that the above corrected entry for property number four (4) matches the entry included in the Technical Report to the Town of East Hartford, bulk filed with the Council.

Questions for Site A: 465 Hills Street, East Hartford

- Q17. What is the existing signal strength in the areas AT&T is seeking to cover from Site A?
- A17. Signal strength varies from measured levels of just below -74 dBm down to less than -100 dBm.
- Q18. Does AT&T have any statistics on dropped calls in the vicinity of Site A? If so, what do they indicate? Does AT&T have any other indicators of substandard service in this area?
- A18. Yes. While dropped calls can be an excellent representation of how effectively existing coverage is being utilized in an area of very poor coverage, such as here, dropped call statistics are not a reliable indicator of an inadequate network for various reasons:
 - 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 only a partial indicator of quality sometimes you can hold a call but the person on the other end cannot hear you.

AT&T currently experiences spotty and unreliable coverage in this area which is not acceptable for users of the AT&T network. Overall, reliable coverage relates directly to the customer experience and AT&T customers are highly 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, particularly since the service carries 911 calls.

- Q19. Would Site A be needed for coverage, capacity, or both? Explain.
- A19. This site is principally needed for coverage though the site would provide some fill-in for capacity as well.
- Q20. Provide the lengths of the existing coverage gaps on any roads that AT&T seeks to provide coverage to from Site A.
- A20. The primary coverage gap that these candidate sites are intended to cover comprises 0.43 miles of major roads and 9.15 miles of secondary roads. It should be noted that Site A may provide additional coverage outside this primary coverage gap.
- Q21. Provide the lengths of the proposed coverage of any roads that AT&T seeks to provide

coverage to from Site A based on the tower's proposed height, as well as ten and twenty feet shorter.

A21. The incremental coverage at the three heights is as follows:

	In-Vehicle (-82 dBm)		
100'	Main Roads	0.58	miles
	Secondary Roads	7.97	miles
90'	Main Roads	0.54	miles
	Secondary Roads	7.02	miles
80'	Main Roads	0.49	miles
	Secondary Roads	5.37	miles

Q22. Provide the areas to be covered (in square miles) assuming the Site A tower is at the proposed height and also ten and twenty feet shorter.

A22. The incremental coverage is as follows:

	In Building	In Vehicle	
100'	1.26	0.78	square miles
90'	1.05	0.65	square miles
80'	0.84	0.49	square miles

Q23. Using the same scale as the coverage plots in the Radio Frequency Analysis Report, provide separate coverage plots using the same scale provided in the Application assuming the Site A tower is ten and twenty feet shorter.

A23. Please see requested plots included as Attachment 2.

Q24. What is the minimum antenna centerline height required to meet AT&T's coverage objectives from Site A?

A24. 100' AGL is the minimum centerline required as coverage is lost if the centerline is lowered. More coverage could, in fact, be provided by higher centerline heights however AT&T is requesting 100'AGL in the interest of minimizing environmental impact while providing coverage to the area of need.

Q25. Provide a Federal Aviation Administration determination regarding whether marking and/or lighting the Site A tower would be required.

A25. Please see FAA determination included as Attachment 3.

- Q26. Would all of the sites listed on page 9 of the Radio Frequency Analysis Report in the Application interact with Site A?
- A26. The Table on page 9 shows all sites in the vicinity of Site A for which interaction is possible, erring on the side of including some sites that are not particularly likely to regularly handoff to Site A. The sites most likely to handoff to Site A are depicted in Attachment 4.
- Q27. Describe the land uses abutting Site A.
- A27. Site A is abutted by residential properties in all directions, including those across Hills Street to the north, with some wooded area and pasture/fields in the immediate area.
- Q28. Could the Site A tower be designed with a yield point to ensure that the setback radius remains within the boundaries of the subject property?
- A28. Yes, the tower could be designed with a yield point.
- Q29. Would any blasting be required to develop Site A?
- A29. The presence of ledge is not anticipated but will be confirmed upon completion of a geotechnical investigation. If ledge is encountered, removal by mechanical means is first attempted. If mechanical removal methods are unsuccessful, blasting will be utilized as required to remove the ledge.
- Q30. Is Site A located within a 100-year or 500-year flood zone?
- A30. No. Site A is located outside of both the 100-year flood zone ($\pm 1,800$ feet away) and the 500 year flood zone (± 300 feet away).
- Q31. Is Site A located within an "Important Bird Area" as designated by the National Audubon Society?
- A31. No. Site A is not located within a National Audubon Important Bird Area. Please see the Avian Resources Evaluation dated April 15, 2013 and prepared by All Points Technology Corporation (APT) included as Attachment 5.
- Q32. Would the proposed Site A tower comply with recommended guidelines of the United States Fish and Wildlife Service for minimizing the potential for telecommunications towers to impact bird species?
- A32. Yes. The proposed Site A tower would comply with recommended guidelines of the United States Fish and Wildlife Service for minimizing the potential for telecommunications towers to impact bird species. Please see the Avian Resources

- Evaluation dated April 15, 2013 and prepared by All Points Technology Corporation (APT) included as Attachment 5.
- Q33. Provide a new viewshed map similar to the one in Tab 3C, but, for clarity, use the same shaded color scheme for year-round and seasonal visibility that was used for Site B.
- A33. Please see the revised viewshed map included here as Attachment 6.
- Q34. Provide the year-round and seasonal visibility areas in acres.
- A34. The total acreages of visibility for the site are as follows.
 - 1. Year-round = 32 acres
 - 2. Seasonal = 165 acres

Questions for Site B: 56 Hills Street, East Hartford

- Q35. What is the existing signal strength in those areas AT&T is seeking to cover from Site B?
- A35. Signal strength varies from measured levels of just below -74 dBm down to less than -100 dBm.
- Q36. Does AT&T have any statistics on dropped calls in the vicinity of Site B? If so, what do they indicate? Does AT&T have any other indicators of substandard service in this area?
- A36. Yes. While dropped calls can be an excellent representation of how effectively existing coverage is being utilized in an area of very poor coverage such as here dropped call statistics are not a reliable indicator of an inadequate network for various reasons:
 - 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 only a partial indicator of quality sometimes you can hold a call but the person on the other end cannot hear you.

AT&T currently experiences spotty and unreliable coverage in this area which is not acceptable for users of the AT&T network. Overall, reliable coverage relates directly to the customer experience and AT&T customers are highly 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, particularly since the service carries 911 calls.

- Q37. Would site B be needed for coverage, capacity, or both? Explain.
- A37. This site is principally needed for coverage though the site would provide some fill-in for capacity as well.
- Q38. Provide the lengths of the existing coverage gaps on any roads that AT&T seeks to Provide coverage to from Site B.
- A38. The primary coverage gap that these candidate sites are intended to cover comprises 0.43 miles of major roads and 9.15 miles of secondary roads. It should be noted that Site B may provide additional coverage outside this primary coverage gap.
- Q39. Provide the lengths of the proposed coverage of any roads that AT&T seeks to provide coverage to from Site B based on the tower's proposed height, as well as ten and twenty feet shorter.
- A39. The incremental coverage at the three heights is as follows:

	In-Vehicle (-82 dBm)		-
100'	Main Roads	0.41	miles
	Secondary Roads	2.79	miles
90'	Main Roads	0.35	miles
	Secondary Roads	2.46	miles
80'	Main Roads	0.33	miles
	Secondary Roads	2.15	miles

Q40. Provide the areas to be covered (in square miles) assuming the Site B tower is at the proposed height and also ten and twenty feet shorter.

A40. The incremental coverage is as follows:

	In Building	In Vehicle	
100'	0.89	0.36	square miles
90'	0.84	0.33	square miles
80'	0.73	0.28	square miles

- Q41. Using the same scale as the coverage plots in the Radio Frequency Analysis Report, provide separate coverage plots using the same scale provided in the Application assuming the Site B tower is ten and twenty feet shorter.
- A41. The requested plots are included as Attachment 7.
- Q42. What is the minimum antenna centerline height required to meet AT&T's coverage objectives from Site B?
- A42. 100' AGL is the minimum centerline required as coverage is lost if the centerline is lowered. More coverage could, in fact, be provided by higher centerline heights however AT&T is requesting 100' AGL in the interest of minimizing environmental impact while providing coverage to the area of need.
- Q43. Would all of the sites listed on page 9 of the Radio Frequency Analysis Report in the Application interact with Site B?
- A43. The Table on page 9 shows all sites in the vicinity of Site B, erring on the side of including some sites that are not particularly likely to handoff to Site B on a regular basis but nevertheless can do so. The sites most likely to handoff to Site B are depicted in Attachment 4.
- Q44. Describe the land uses abutting Site B.
- A44. Site B is abutted by residential properties in all directions, including those across Hills Street to the south.
- Q45. Could the Site B tower be designed with a yield point to ensure that the setback radius remains within the boundaries of the subject property?
- A45. Yes, the tower could be designed with a yield point.
- Q46. Would any blasting be required to develop Site B?
- A46. As with Site A, the presence of ledge at Site B is not anticipated but will be confirmed upon completion of a geotechnical investigation if it is approved. If ledge is encountered, removal by mechanical means is first attempted. If mechanical removal methods are unsuccessful, blasting will be utilized as required to remove the ledge.
- Q47. Is Site B located within a 100-year or 500-year flood zone?
- A47. No. Site B is located outside of both the 100-year flood zone (± 925 feet away) and the 500-year flood zone (± 625 feet away).
- Q48. Is the proposed Site B tower located within an "Important Bird Area" as designated by the National Audubon Society?

- A48. No. Site B is not located within a National Audubon Important Bird Area. Please see the Avian Resources Evaluation dated April 15, 2013 and prepared by All Points Technology Corporation (APT) included as Attachment 5.
- Q49. Would the proposed Site B tower comply with recommended guidelines of the United States Fish and Wildlife Service for minimizing the potential for telecommunications towers to impact bird species?
- A49. Yes. The proposed Site B tower would comply with recommended guidelines of the United States Fish and Wildlife Service for minimizing the potential for telecommunications towers to impact bird species. Please see the Avian Resources Evaluation dated April 15, 2013 and prepared by All Points Technology Corporation (APT) included as Attachment 5.

CERTIFICATE OF SERVICE

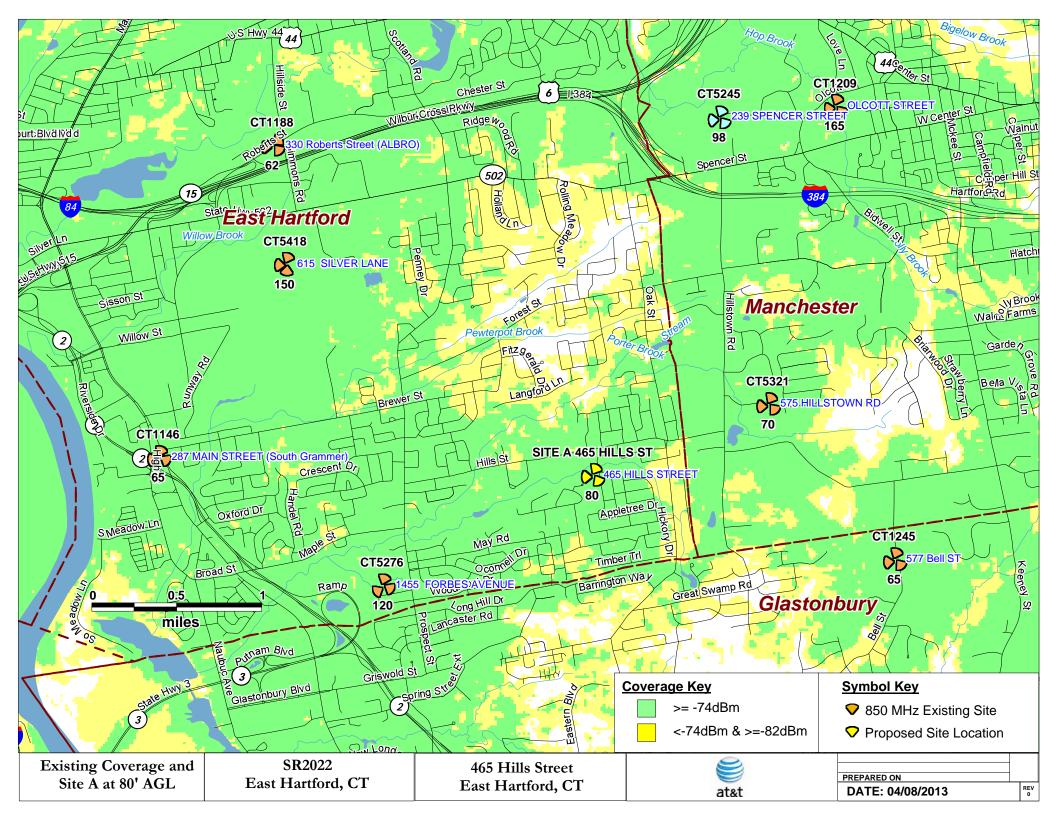
I hereby certify that on this day, an original and twenty copies of the foregoing was sent electronically and by overnight delivery to the Connecticut Siting Council.

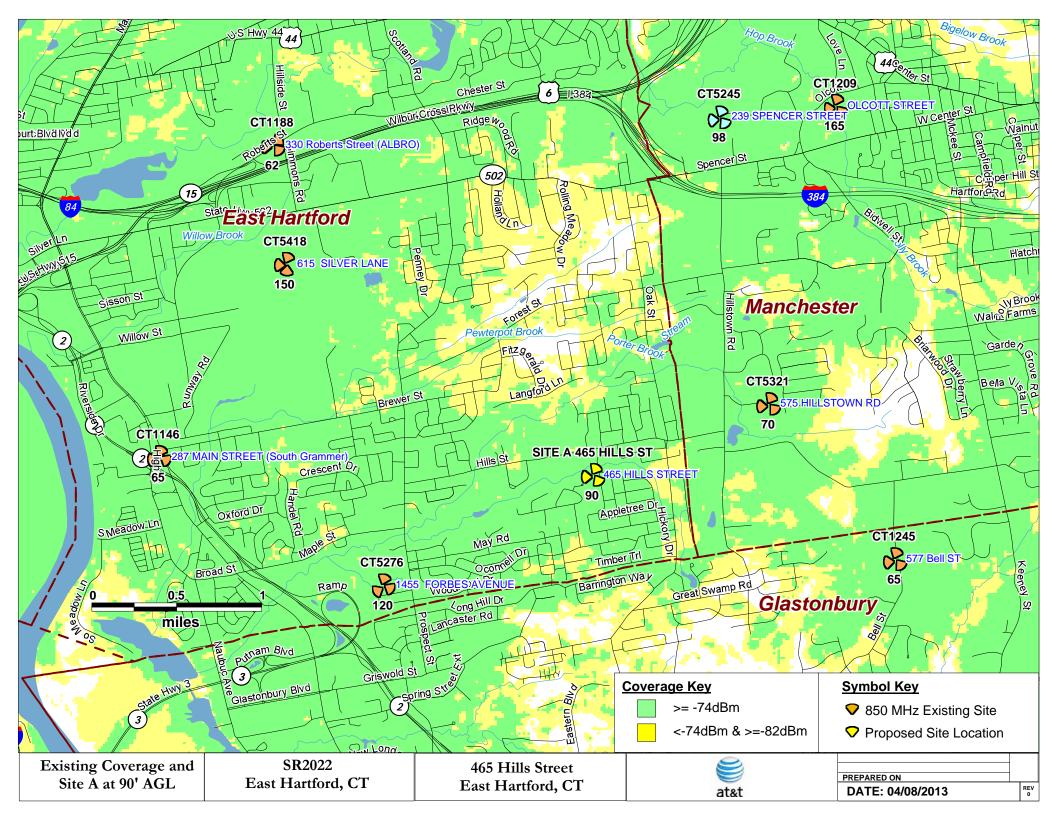
Dated: April 24, 2013

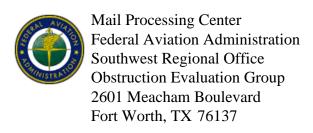
C&F: 2127769.2

TABLE OF SURROUNDING SITES WITH STRUCTURE HEIGHTS

Site Name	Address	Town	Structure Type	Latitude	Longitude	Antenna Centerline (feet)	Distance from Site A (miles)	Distance from Site B (miles)	Ground Elevation	Structure Height (feet)
CT1002	2 Prestige Park Road	East Hartford	Monopole	41.7883	-72.6005	154	3.37	3.23	63	167
CT1083	2108 Main St (Glby Police)	Glastonb ury	Self- Supporting	41.7062	-72.6069	166	2.66	2.46	45	169
CT1099	99 East River Drive	East Hartford	Rooftop	41.7685	-72.6627	131	4.50	3.6	37	119
CT1146	287 Main Street	East Hartford	Stealth Flagpole	41.7424	-72.6337	65	2.56	1.61	64	83
CT1147	309 Wawarme Ave	Hartford	Rooftop	41.7514	-72.6597	78	3.96	3.06	36	+/- 86
CT1188	330 Roberts Street	East Hartford	Rooftop	41.769	-72.6207	62	2.71	2.11	18	50
CT1196	95 Goodwin Street	East Hartford	Smokestac k	41.7885	-72.6247	71	3.90	3.45	53	80
CT1209	Olcott Street	Manchest er	CL&P structure	41.7724	-72.5564	165	2.61	3.18	85	200
CT1245	577 Bell St	Glastonb ury	Self- Supporting	41.7336	-72.5497	65	1.84	2.78	349	104
CT5418	615 Silver Land	East Hartford	Stadium	41.7589	-72.6192	150	2.19	1.46	32	+/-125
CT5273	2577 Main Street	Glastonb ury	Self- Supporting	41.7142	-72.6133	108	2.37	2.01	26	130
CT5321	575 Hillstown Rd	Manchest er	CL&P structure	41.7469	-72.5641	70	1.17	1.98	167	80
CT5245	239 Spencer St	Manchest er	Stealth Pole	41.7714	-72.5697	98	2.24	2.65	76	125
CT5276	1455 Forbes Avenue	East Hartford	Monopole	41.7314	-72.6081	120	1.39	0.78	68	130







Issued Date: 11/14/2012

Maria A. Scotti Message Center Management 40 Woodland Street Hartford, CT 06405

** DETERMINATION OF NO HAZARD TO AIR NAVIGATION **

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure: Monopole East Hartford

Location: East Hartford, CT

Latitude: 41-44-26.56N NAD 83

Longitude: 72-35-02.78W

Heights: 89 feet site elevation (SE)

127 feet above ground level (AGL) 216 feet above mean sea level (AMSL)

This aeronautical study revealed that the structure does not exceed obstruction standards and would not be a hazard to air navigation provided the following condition(s), if any, is(are) met:

It is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed any time the project is abandoned or:

	At least 10 days prior to start of construction (7460-2, Part I)
X	Within 5 days after the construction reaches its greatest height (7460-2, Part II)

Based on this evaluation, marking and lighting are not necessary for aviation safety. However, if marking/lighting are accomplished on a voluntary basis, we recommend it be installed and maintained in accordance with FAA Advisory circular 70/7460-1 K Change 2.

This determination expires on 05/14/2014 unless:

- (a) the construction is started (not necessarily completed) and FAA Form 7460-2, Notice of Actual Construction or Alteration, is received by this office.
- (b) extended, revised, or terminated by the issuing office.
- (c) the construction is subject to the licensing authority of the Federal Communications Commission (FCC) and an application for a construction permit has been filed, as required by the FCC, within 6 months of the date of this determination. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or the date the FCC denies the application.

NOTE: REQUEST FOR EXTENSION OF THE EFFECTIVE PERIOD OF THIS DETERMINATION MUST BE E-FILED AT LEAST 15 DAYS PRIOR TO THE EXPIRATION DATE. AFTER RE-EVALUATION OF CURRENT OPERATIONS IN THE AREA OF THE STRUCTURE TO DETERMINE THAT NO SIGNIFICANT AERONAUTICAL CHANGES HAVE OCCURRED, YOUR DETERMINATION MAY BE ELIGIBLE FOR ONE EXTENSION OF THE EFFECTIVE PERIOD.

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights, and frequencies or use of greater power will void this determination. Any future construction or alteration, including increase to heights, power, or the addition of other transmitters, requires separate notice to the FAA.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of the structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

This determination concerns the effect of this structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

Any failure or malfunction that lasts more than thirty (30) minutes and affects a top light or flashing obstruction light, regardless of its position, should be reported immediately to (877) 487-6867 so a Notice to Airmen (NOTAM) can be issued. As soon as the normal operation is restored, notify the same number.

A copy of this determination will be forwarded to the Federal Communications Commission (FCC) because the structure is subject to their licensing authority.

If we can be of further assistance, please contact our office at (817) 321-7751. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2012-ANE-1470-OE.

Signature Control No: 174303823-176914684

(DNE)

Chris Shoulders Specialist

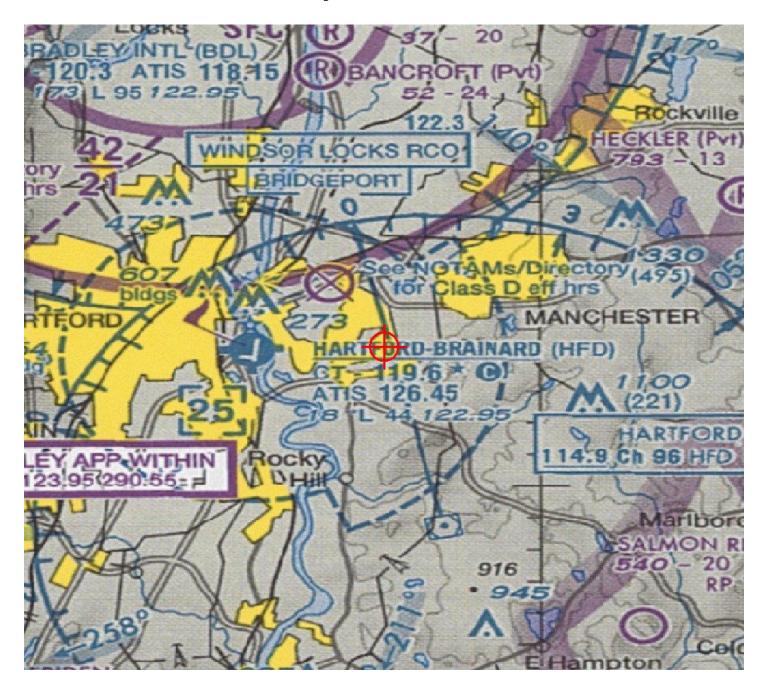
Attachment(s) Frequency Data Map(s)

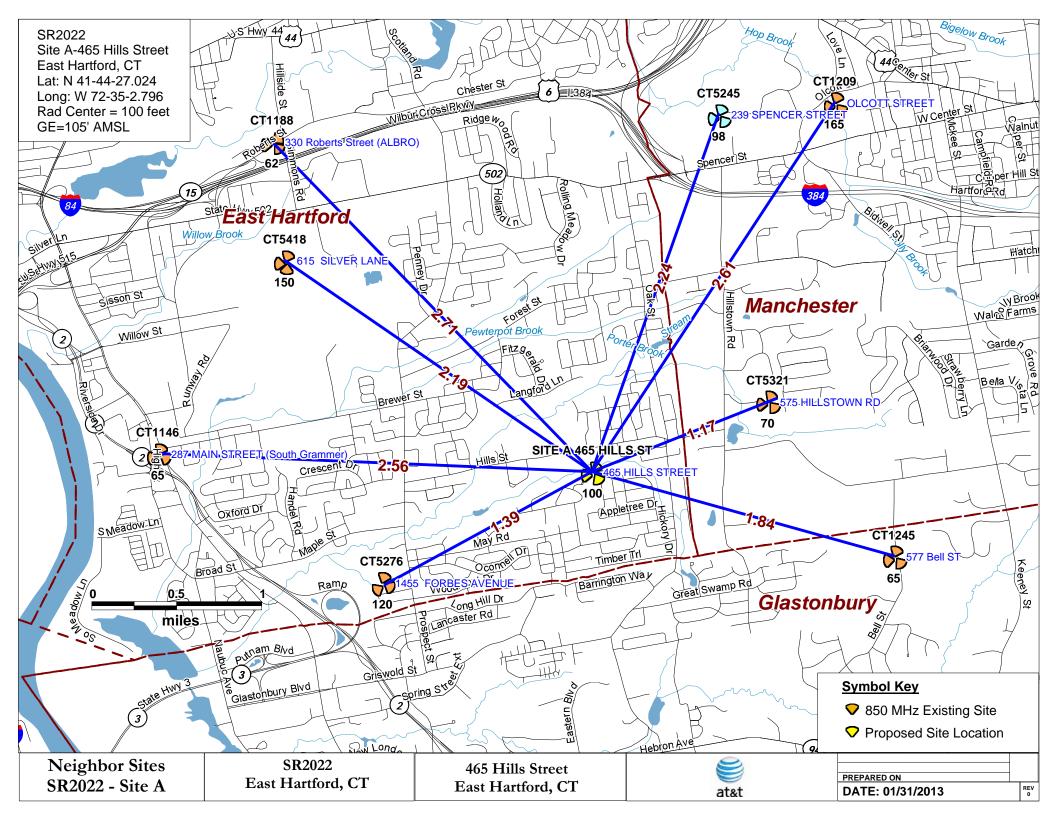
cc: FCC

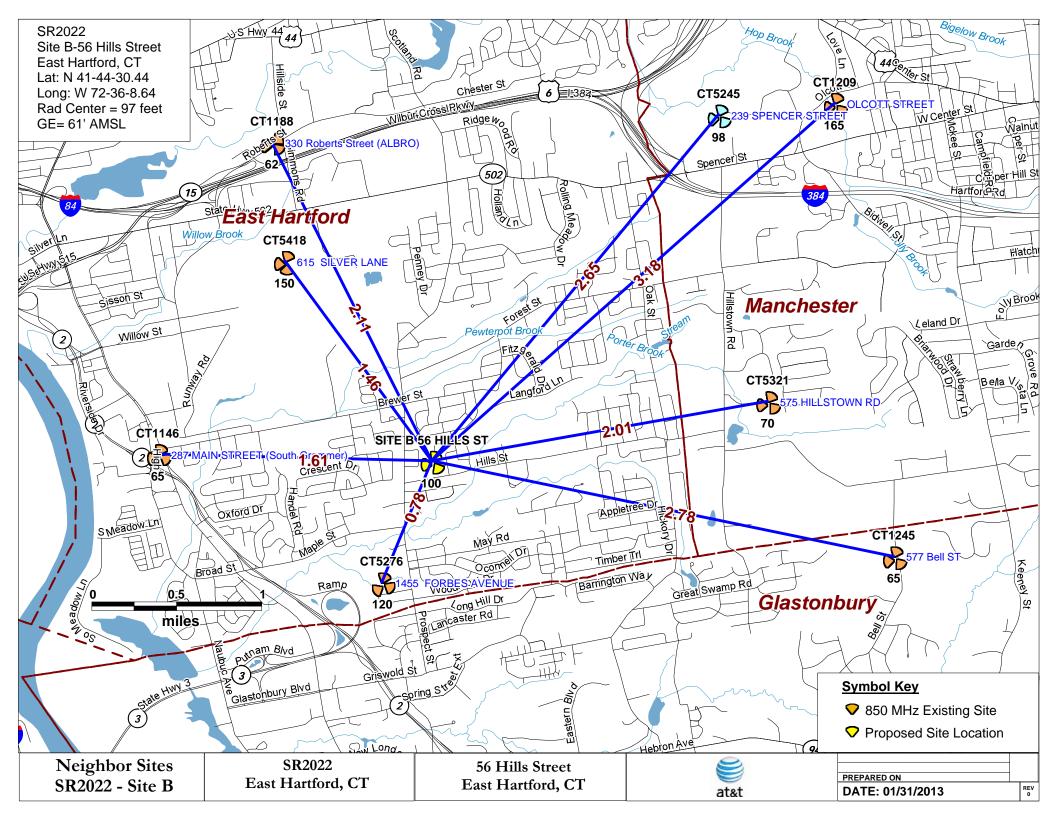
Frequency Data for ASN 2012-ANE-1470-OE

LOW FREQUENCY	HIGH FREQUENCY	ERP	ERP UNIT	
698	806	MHz	1000	W
806	824	MHz	500	W
824	849	MHz	500	\mathbf{W}
851	866	MHz	500	W
869	894	MHz	500	W
896	901	MHz	500	W
901	902	MHz	7	W
930	931	MHz	3500	W
931	932	MHz	3500	W
932	932.5	MHz	17	dBW
935	940	MHz	1000	W
940	941	MHz	3500	W
1850	1910	MHz	1640	W
1930	1990	MHz	1640	W
2305	2310	MHz	2000	W
2345	2360	MHz	2000	W

Sectional Map for ASN 2012-ANE-1470-OE









MEMORANDUM

Date: April 15, 2013

Ms. Virginia King Message Center Management, Inc. 40 Woodland St Hartford, CT 06105 **APT Project No.: CT242286**

Re: Avian Resources Evaluation Proposed East Hartford Facility 465 & 56 Hills Street East Hartford, Connecticut

Message Center Management, LLC ("MCM") proposes to construct a new wireless telecommunications Facility ("Facility") at one of two potential locations, 465 Hills Street ("Site A") and 56 Hills Street ("Site B") in East Hartford, Connecticut (the "project area"). The Facility would provide needed wireless services in the Town of East Hartford as well as the surrounding area including northern Glastonbury and western Manchester. All-Points Technology Corporation, P.C. ("APT") is pleased to provide the following information with respect to potential impacts on migratory birds associated with the proposed development.

The area currently under consideration for Site A is located within an agricultural field in the central portion of an approximately 11.7-acre parcel off Hills Street, currently occupied by a residency and various outbuildings including a number of barns and a garage. MCM proposes to install a 63-foot by 75-foot gravel compound area enclosed with an 8-foot tall chain link fence at Site A. MCM is proposing a 107-ft tall monopine centered within this compound area. A 12-foot wide, approximately 350-foot long gravel access is proposed in order to gain admission to the Facility utilizing approximately 150 feet of existing gravel access and improving an additional 50 feet. The area currently under consideration for Site B is located within an open field in the central portion of an approximately 5.4-acre parcel at 56 Hills Street, currently occupied by a residency and a barn. Much of the northern portion of the site is forested. MCM proposes to install a similar Facility at this location, including a 107-foot tall monopine centered within a 50-foot by 50-foot gravel compound area. A 12-foot wide, approximately 450-foot long gravel access is proposed in order to gain admission to the Facility utilizing approximately 200 feet of existing gravel access.

This evaluation is provided in response to *Pre-hearing Questions Set One* submitted by the Connecticut Siting Council (the "Council") for Docket No. 436, specifically:

- Questions #31 and #48 Is the proposed Site A/B tower located within an "Important Bird Area" as designated by the National Audubon Society?
- Questions #32 and #49 Would the proposed Site A/B tower comply with recommended guidelines of the United States Fish and Wildlife Service for minimizing the potential for telecommunications towers to impact bird species?

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 of a Facility at either of the site locations. This desktop analysis and attached graphics identify avian resources and their proximities to the project area. Information within an approximate 2-mile radius of the project area 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 each of the site locations from avian 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 project area is the Station 43 Marsh/Sanctuary, located in South Windsor approximately 6.5 miles north of Site A and 6.2 miles north of Site B. Station 43 Marsh/Sanctuary is a 10-acre, primarily non-tidal freshwater marsh owned by the Hartford Audubon Society. The area is used for hunting, fishing, and nature and wildlife conservation. Due to its distance from the each of the site locations, 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 project area. Although these data sources may not represent habitat indicative of important bird areas, they may indicate possible bird concentrations² or migratory pathways.

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

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 are not necessarily indicative of habitat suitable for bird species. The nearest Critical Habitat to Site A is a shrub thicket area, denoted as the Addison Bog Poor Fen, located approximately 1.1 miles south in Glastonbury. The nearest Critical Habitat to Site B is a palustrine forested area, denoted as the Keeney Cove located approximately 1.3 miles to the west of Site B. Based on the distance separating these resources from either proposed Facility location, no adverse impacts are anticipated.

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. 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 either site is the Buckingham Breeding Bird Survey Route, which generally begins in Glastonbury and winds its way east through Hebron and Columbia before terminating in Lebanon, passing within approximately 4.4 miles southeast of Site A and 5.2 miles southeast of Site B. Since bird survey routes represent randomly selected data collection areas, they do not necessarily represent a potential restriction to development projects, including a Facility at either of the proposed locations.

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. The nearest Hawk Watch Site, Beelzebub Street, is located in Manchester along the Hockanum River, approximately 6.1 miles to the northeast of Site A and 6.6 miles to the northeast of Site B. Hawk Watch Sites may be an indicator of migratory routes for raptors.

Bald Eagle Site

Bald Eagle Sites 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 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 route begins in the City of Hartford along State Route 291 and extends north to the Massachusetts state border, located approximately 5.7 miles northwest of Site A and 4.8 miles northwest of Site B.

Flyways

The project area is located in Hartford County, approximately 30 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 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)³ 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 Survey⁴), 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 site is the Connecticut River, located approximately 1.9 miles west of Site A and 2.9 miles west of Site B. 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 migration⁵.

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)⁶. Either proposed Facility is not this type of tower, being an unlit,

³ Stokowski, J.T. 2002. Migratory Bird Stopover Habitat Project Finishes First Year. Connecticut Wildlife, November/December 2002. P.4.

⁴ The Silvio O. Conte National Fish & Wildlife Refuge Neotropical Migrant Bird Stopover Habitat Survey http://www.science.smith.edu/stopoverbirds/index.html

⁵ The Silvio O. Conte National Fish & Wildlife Refuge Neotropical Migrant Bird Stopover Habitat Survey. http://www.science.smith.edu/stopoverbirds/Chapter5_Conclusions&Recommendations.html

⁶ 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.

unguyed monopine structure only 107 feet in height. More recent studies of short communication towers (<300 feet) reveal that they rarely kill migratory birds⁷. 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)⁸.

Therefore, no adverse impacts to migrating bird species are anticipated as a result of the significant distances separating the proposed Facility locations from both the Connecticut River potential flyway corridors and the design of the 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 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 project area is the Connecticut River and Tidal Wetlands Complex area, located approximately 7.5 miles to the southwest of Site A and B. Please refer to the attached Connecticut Waterfowl Focus Areas Map. Based on the distance of these resources to the project area, no direct impacts would occur from development of the proposed Facility at either location.

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.

Two migratory waterfowl areas are located within the Town of East Hartford proximate to the project area. The nearest migratory waterfowl area to Site A is the Hockanum River and Laurel Lake area in East Harford and Manchester located approximately 2.1 miles north of Site A. The associated species are identified as American black duck, mallard, wood duck, and green wing teal. The nearest migratory waterfowl area to Site B is the Connecticut River area in Rocky Hill and Glastonbury located approximately 1.6 miles west of Site B. The associated species are identified as American black duck, bufflehead, mallard, common merganser, hooded merganser, wood duck, and green wing teal. Based on its distance to either site, no impacts to migratory waterfowl habitat are anticipated to result from development of the proposed Facility.

⁷ 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.

⁸ 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.

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.

According to a October 26, 2012 (Site A) and March 25, 2013 (Site B) letters⁹ from the CTDEEP Natural Diversity Data Base NDDB, there are no known extant populations of avian state or Federal Endangered, Threatened or Special Concern Species at or proximate to the proposed Facility locations.

USFWS Communications Towers Compliance

The U.S Fish and Wildlife Service ("USFWS") prepared its *Interim Guidance on the Siting, Construction, Operation and Decommissioning of Communications Towers* (September 14, 2000), which recommends the 12 voluntary actions below be implemented in order to mitigate potential bird strikes that could result by the construction of telecommunications towers. With respect to Questions 32 and 49, APT offers the responses, specific to the proposed Facility at either location, following each of the recommended actions.

1. Any company/applicant/licensee proposing to construct a new communications tower should be strongly encouraged to collocate the communications equipment on an existing communications 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.

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 MCM's tenant, New Cingular Wireless PCS, LLC (AT&T).

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⁹ Both CTDEEP Review Request response letters identified only *Terrapene carolina carolina* (eastern box turtle)

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 Administration regulations permit.

The proposed Facility would consist of a 107-foot monopine structure 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.

Multiple towers are not proposed as part of this project.

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, or 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.

There are no existing "antenna farms" in the area. The sites are not within wetlands, known bird concentration areas, migratory or daily movement flyway, or habitat of threatened/endangered species. According to correspondence from the CTDEEP Natural Diversity Data Base NDDB, there are no known extant populations of avian state or Federal Endangered, Threatened or Special Concern Species at or proximate to the proposed Facility. 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 project area.

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.

The proposed Facility height (107 feet AGL) is less than 199 feet and would not require any aviation safety lighting.

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 migratory bird movement routes or stopover sites, should have daytime visual markers 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.

- 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.
 - The Facility has been sited and designed, and would be constructed, to accommodate proposed equipment and to allow for future collocations within the smallest footprint possible. Either site is located proximate to existing development 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.
 - Significant numbers of breeding, feeding, or roosting birds are not known to habitually use the proposed tower construction areas at either site.
- 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.
 - The Facility has been designed in accordance with this guidance, as it could accommodate a total of four antenna platform positions. The free-standing Facility would be neither lighted nor guyed.
- 10. Security lighting for on-ground facilities and equipment should be down-shielded to keep light within the boundaries of the site.
 - Security lighting for on-ground facilities would 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.

With prior notification to MCM USFWS personnel would be allowed access to the proposed Facility to conduct evaluations.

12	. Towers	no	longer	in	use	or	determined	to	be	obsolete	should	be	removed	within	12	months	of
	cessatio	n o	f use.														

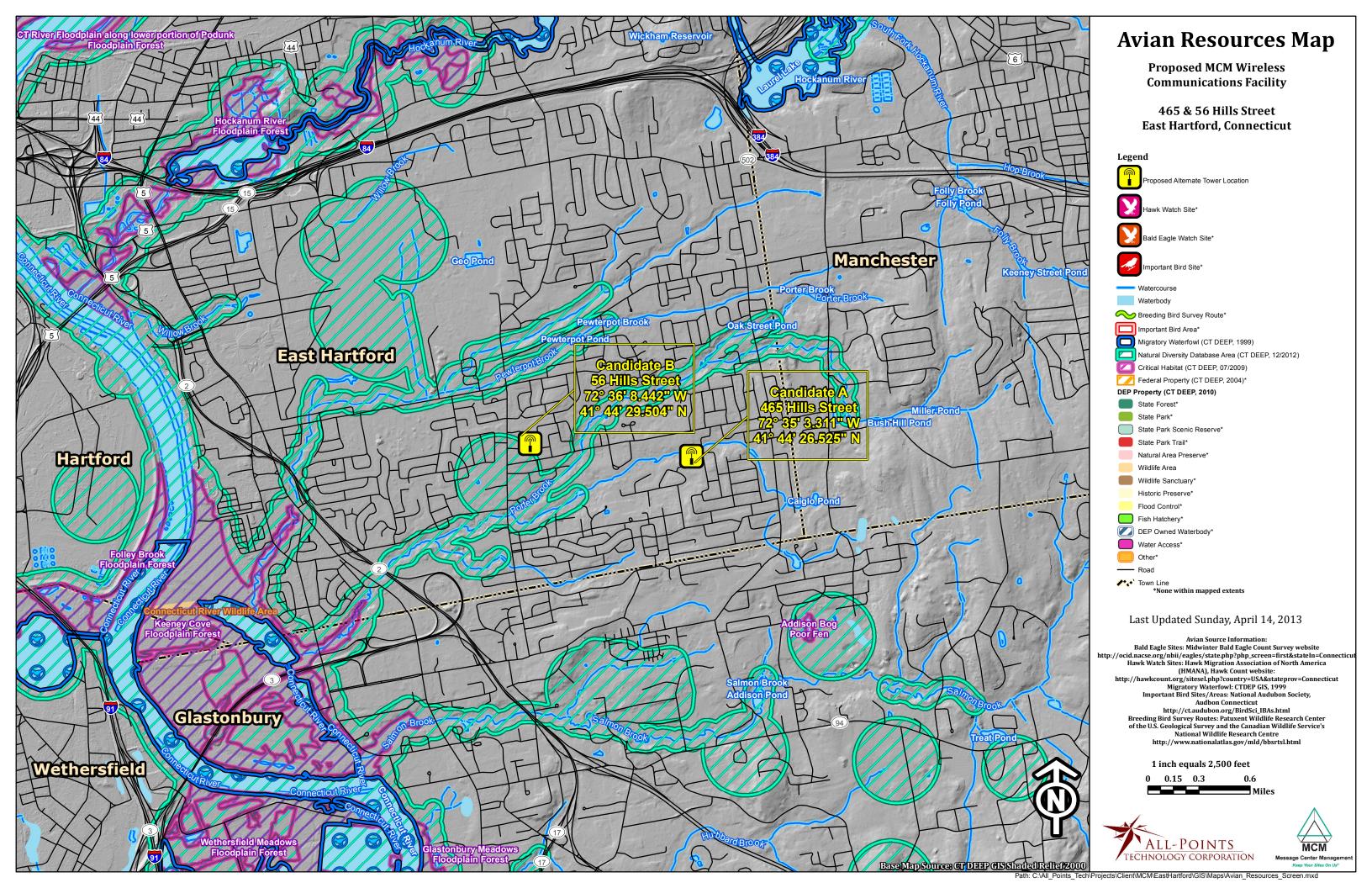
If the proposed Facility was no longer in use or determined to be obsolete, it would be removed within 12 months of cessation of use.

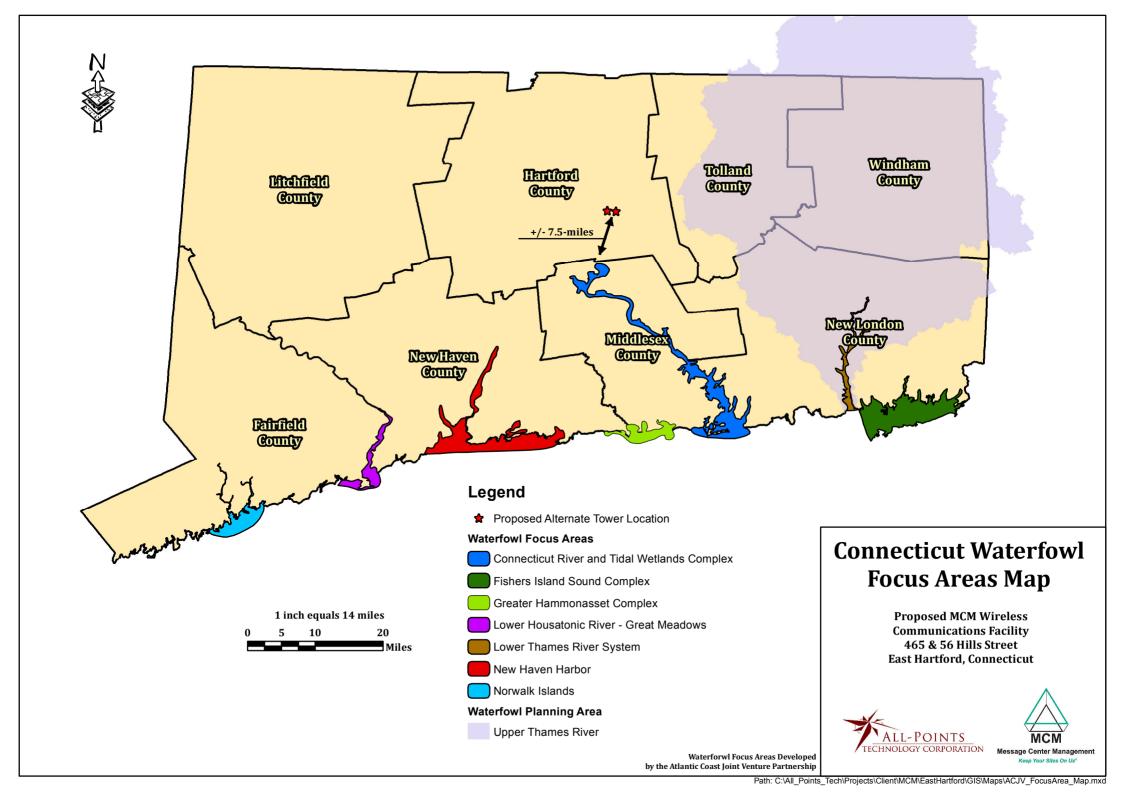
Summary and Conclusions

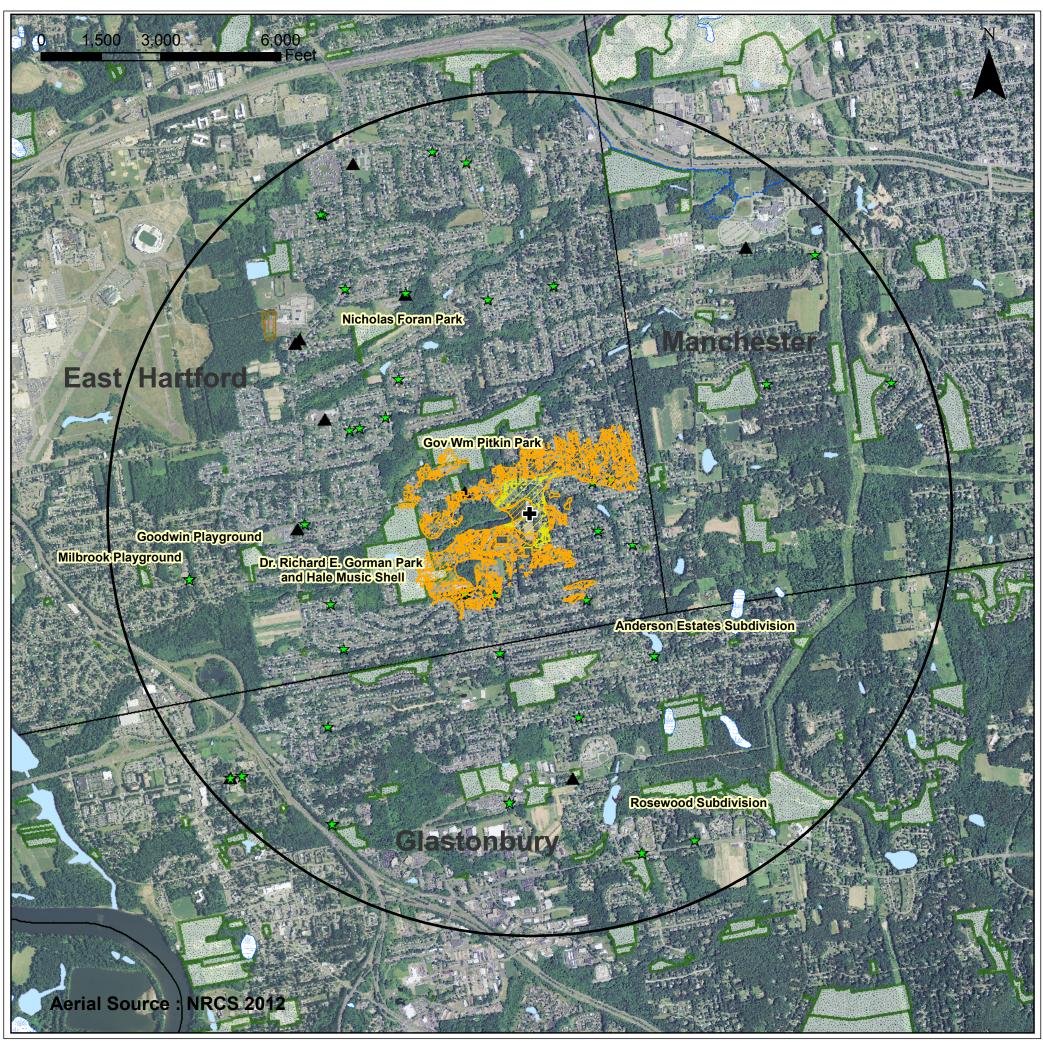
Based on the results of this desk-top evaluation, no migratory bird species are anticipated to be impacted by MCM's proposed development. The Facility is not proximate to an Important Bird Area and would comply with the USFWS guidelines for minimizing the potential impacts to birds.

Figures

- > Avian Resources Map
- > Connecticut Waterfowl Focus Areas Map









VISIBILITY ANALYSIS Proposed Wireless Telecommunications Facility

465 Hills Street East Hartford, CT

Not Visible

Season Around Views

Year Around Views

Proposed facility height is 107 feet AGL Existing tree canopy height estimated as 75

Photos Taken 9-7-2012

Map compiled 9/25/2012

Only those resources located within the Study Area are depicted. For a complete list of data sources consulted for this analysis, please refer to the Documentation Page.

Legend

Proposed Tower

2-Mile Study Area

Predicted Seasonal Visibility

Predicted Year-Round Visibility

★ Commercial Child Day Care Centers

▲ Schools

Open Water

Swamp Marsh

---- Trails

Municipal Private Open Space

Protected Open Space





