



STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

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January 19, 2018

TO: Parties and Intervenors

FROM: Melanie Bachman, Executive Director *MAB*

RE: **DOCKET NO. 475** - Cellco Partnership d/b/a Verizon Wireless application for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance, and operation of a telecommunications facility located adjacent to the maintenance building at the Skungamaug Golf Course, south of Folly Lane, at Coventry Tax Assessor's Map 006, Block 0026, Lot 0101, Coventry, Connecticut.

As stated at the hearing in Coventry on October 24, 2017, after the Connecticut Siting Council (Council) issues its draft findings of fact, parties and intervenors may identify errors or inconsistencies between the Council's draft findings of fact and the record; however, no new information, evidence, argument, or reply briefs will be considered by the Council.

Parties and Intervenors may file written comments with the Council on the Draft Findings of Fact issued on this docket by January 26, 2018.

MB/RDM/lm

Enclosure

<p>DOCKET NO. 475 - Cellco Partnership d/b/a Verizon Wireless } application for a Certificate of Environmental Compatibility and } Public Need for the construction, maintenance, and operation of a } telecommunications facility located adjacent to the maintenance } building at the Skungamaug Golf Course, south of Folly Lane, at } Coventry Tax Assessor's Map 006, Block 0026, Lot 0101, Coventry, } Connecticut.</p>	<p>Connecticut Siting Council January 5, 2018</p>
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DRAFT Findings of Fact

Introduction

1. Cellco Partnership d/b/a Verizon Wireless (Cellco), in accordance with provisions of Connecticut General Statutes (C.G.S.) § 16-50g, et seq, applied to the Connecticut Siting Council (Council) on June 28, 2017 for a Certificate of Environmental Compatibility and Public Need (Certificate) for the construction, maintenance, and operation of a 140-foot monopole wireless telecommunications facility at the Skungamaug Golf Course, south of Folly Lane, in Coventry, Connecticut (refer to Figure 1). (Cellco 1, pp. 1-2)
2. Cellco is a Delaware Partnership with an administrative office located at 99 East River Drive, East Hartford, Connecticut. Cellco is licensed by the Federal Communications Commission (FCC) to provide personal wireless communication service to Tolland County, Connecticut. (Cellco 1, pp. 2, 6, Tab 5)
3. The party in this proceeding is Cellco. (Transcript 1- October 24, 2017, 3:00 p.m. [Tr. 1], p. 5)
4. The purpose of the proposed facility is to increase network capacity and provide reliable wireless service to existing gaps in the northern Coventry and southern Tolland area. (Cellco 1, Tab 6)
5. Pursuant to C.G.S. § 16-50/ (b), Cellco provided public notice of the filing of the application by publishing notification in The Chronicle on June 22, and June 23, 2017. (Cellco 2)
6. Pursuant to C.G.S. § 16-50/ (b), notice of the application was provided to all abutting property owners by certified mail. All certified mail return receipts were received. (Cellco 1, Tab 4; Cellco 4, response 1)
7. On June 28, 2017, Cellco provided notice to all federal, state and local officials and agencies listed in C.G.S. § 16-50/ (b). (Cellco 1, Tab 2)

Procedural Matters

8. Upon receipt of Cellco's application, the Council sent a letter to the Town of Coventry on July 24, 2017, as notification that the application was received and is being processed, in accordance with C.G.S. § 16-50gg. (Record)
9. During a regular Council meeting on July 20, 2017, the application was deemed complete pursuant to Connecticut Regulations of State Agencies (R.C.S.A.) § 16-50/-1a and the public hearing schedule was approved by the Council. (Record)
10. Pursuant to C.G.S. § 16-50m, on July 28, 2017 the Council published legal notice of the date and time of the public hearing in The Chronicle. (Record)

11. Pursuant to C.G.S. § 16-50m, on July 24, 2017, the Council sent a letter to the Town of Coventry to provide notification of the scheduled public hearing and to invite the Town to participate. (Record)
12. On August 23, 2017, the Council held a pre-hearing conference on hearing procedural matters at the Council's office for parties and intervenors to discuss the requirements for pre-filed testimony, exhibit lists, administrative notice lists, expected witness lists, filing of pre-hearing interrogatories and the logistics of the public inspection of the proposed site. (Record)
13. In compliance with R.C.S.A. § 16-50j-21, on October 6, 2017, Cellco installed a four-foot by six-foot sign along the south side of Folly Lane that presented information regarding the project and the Council's public hearing. (Cellco 7)
14. The Council and its staff conducted an inspection of the proposed site on October 24, 2017, beginning at 2:00 p.m. During the field inspection, Cellco attempted to fly a 4.5-foot diameter red balloon at the proposed site to simulate the height of the proposed tower; however, high winds prevented the balloon from reaching its intended height for a sustained period of time. Additionally, Cellco attempted to fly balloons throughout the day, but high winds caused several balloons to be blown into nearby trees. (Council's Hearing Notice dated July 24, 2017; Tr. 1, pp. 14-15)
15. Pursuant to C.G.S. § 16-50m, the Council, after giving due notice thereof, held a public hearing on October 24, 2017, beginning with the evidentiary session of the hearing at 3:00 p.m. and continuing with the public comment session at 7:00 p.m. at the Coventry Town Hall Annex, 1712 Main Street, Coventry, Connecticut. (Council's Hearing Notice dated July 24, 2017; Tr. 1, p. 1; Transcript 2 – October 24, 2017, 7:00 p.m. [Tr. 2], p. 72)

State Agency Comment

16. Pursuant to C.G.S. § 16-50j (g), on July 24, 2017, the following State agencies were solicited by the Council to submit written comments regarding the proposed facility: Department of Energy and Environmental Protection (DEEP); Department of Public Health (DPH); Council on Environmental Quality (CEQ); Public Utilities Regulatory Authority (PURA); Office of Policy and Management (OPM); Department of Economic and Community Development (DECD); Department of Agriculture (DOAg); Department of Transportation (DOT); Connecticut Airport Authority (CAA); Department of Emergency Services and Public Protection (DESPP); and State Historic Preservation Office (SHPO). (Record)
17. The Council received a response from the DOT's Bureau of Engineering and Construction on August 30, 2017 indicating that the DOT had no comments. (DOT Comments received August 30, 2017)
18. The following agencies did not respond to the Council with comment on the application: DEEP, DPH, CEQ, PURA, OPM, DECD, DOAg, CAA, DESPP, and SHPO. (Record)

Municipal Consultation

19. On February 22, 2017, Cellco commenced the 90-day pre-application municipal consultation process by meeting with Town representatives and by providing copies of the project technical report. (Cellco 1, p. 18)

20. At the request of the Town, on April 10, 2017 Cellco appeared before the Coventry Planning and Zoning Commission to discuss the proposed facility. Notice of the public meeting was published in The Chronicle and notice was provided to eight property abutters by mail. (Cellco 1, p. 19)
21. The Town of Coventry Fire Administrator, James McLoughlin, made a limited appearance statement at the October 24, 2017 3:00 p.m. public hearing stating that he would like more time to review the proposal to determine if there is a specific emergency communication need. (Tr. 1, pp. 6-7)
22. Doug Racicot, operations director of Tolland County 911 dispatch, made a limited appearance statement at the October 24, 2017 7:00 p.m. public comment session to requesting reservation of space on the tower to support emergency communication equipment. Cellco is amenable to reserving space on the tower for use by Town and Tolland County emergency services. (Tr. 1, pp. 64-65; Tr. 2, pp. 79-80)

Public Need for Service

23. In 1996, the United States Congress recognized a nationwide need for high quality wireless telecommunications services, including cellular telephone service. Through the Federal Telecommunications Act of 1996, Congress seeks to promote competition, encourage technical innovations, and foster lower prices for telecommunications services. (Council Administrative Notice Item No. 4 – Telecommunications Act of 1996)
24. In issuing cellular licenses, the Federal government has preempted the determination of public need for cellular service by the states, and has established design standards to ensure technical integrity and nationwide compatibility among all systems. Cellco is licensed by the Federal Communications Commission (FCC) to provide personal wireless communication service to Tolland County, Connecticut. (Council Administrative Notice Item No. 4 – Telecommunications Act of 1996; Cellco 1, p. 6)
25. Section 253 of the Telecommunications Act of 1996 prohibits any state or local statute or regulation, or other state or local legal requirement from prohibiting or having the effect of prohibiting the ability of any entity to provide any interstate or intrastate telecommunications service. (Council Administrative Notice Item No. 4 – Telecommunications Act of 1996)
26. Section 704 of the Telecommunications Act of 1996 prohibits local and state entities from discriminating among providers of functionally equivalent services and from prohibiting or having the effect of prohibiting the provision of personal wireless services. This section also requires state or local governments to act on applications within a reasonable period of time and to make any denial of an application in writing supported by substantial evidence in a written record. (Council Administrative Notice Item No. 4 – Telecommunications Act of 1996)
27. Section 704 of the Telecommunications Act of 1996 also prohibits any state or local entity from regulating telecommunications towers on the basis of the environmental effects of radio frequency emissions, which include effects on human health and wildlife, to the extent that such towers and equipment comply with FCC's regulations concerning such emissions. (Council Administrative Notice Item No. 4 – Telecommunications Act of 1996)
28. In February 2009, as part of the American Recovery and Reinvestment Act, Congress directed the FCC to develop a National Broadband Plan to ensure every American has "access to broadband capability." Congress also required that this plan include a detailed strategy for achieving affordability and maximizing use of broadband to advance "consumer welfare, civic participation, public safety and homeland security, community development, health care delivery, energy independence and

- efficiency, education, employee training, private sector investment, entrepreneurial activity, job creation and economic growth, and other national purposes.” (Council Administrative Notice Item No. 18 – The National Broadband Plan)
29. Section 706 of the Telecommunications Act of 1996 requires each state commission with regulatory jurisdiction over telecommunications services to encourage the deployment on a reasonable and timely basis of advanced telecommunications capability to all Americans, including elementary and secondary schools, by utilizing regulating methods that promote competition in the local telecommunications market and remove barriers to infrastructure investment. (Council Administrative Notice Item No. 4 – Telecommunications Act of 1996)
 30. In December 2009, President Barack Obama recognized cell phone towers as critical infrastructure vital to the United States. The Department of Homeland Security, in collaboration with other federal stakeholders, state, local, and tribal governments, and private sector partners, has developed the National Infrastructure Protection Plan to establish a framework for securing our resources and maintaining their resilience from all hazards during an event or emergency. (Council Administrative Notice Item No. 11 –Presidential Proclamation 8460, Critical Infrastructure Protection)
 31. In February 2012, Congress adopted the Middle Class Tax Relief and Job Creation Act to advance wireless broadband service for both public safety and commercial users. The Act established the First Responder Network Authority to oversee the construction and operation of a nationwide public safety wireless broadband network. Section 6409 of the Act contributes to the twin goals of commercial and public safety wireless broadband deployment through several measures that promote rapid deployment of the network facilities needed for the provision of broadband wireless services. (Council Administrative Notice Item No. 8 – Middle Class Tax Relief and Job Creation Act of 2012)
 32. In June 2012, President Barack Obama issued an Executive Order to accelerate broadband infrastructure deployment declaring that broadband access is a crucial resource essential to the nation’s global competitiveness, driving job creation, promoting innovation, expanding markets for American businesses and affording public safety agencies the opportunity for greater levels of effectiveness and interoperability. (Council Admin Notice Item No. 20 – FCC Wireless Infrastructure Report and Order; Council Admin Notice Item No. 12 – Presidential Executive Order 13616, Accelerating Broadband Infrastructure Development)
 33. Pursuant to Section 6409(a) of the Middle Class Tax Relief and Job Creation Act of 2012, also referred to as the Spectrum Act, a state or local government may not deny and shall approve any request for collocation, removal or replacement of equipment on an existing wireless tower provided that this does not constitute a substantial change in the physical dimensions of the tower. The Federal Communications Commission defines a substantial change in the physical dimensions of a tower as follows:
 - a) An increase in the existing height of the tower by more than 10% or by the height of one additional antenna array with separation from the nearest existing antenna not to exceed twenty feet, whichever is greater. Changes in height should be measured from the dimensions of the tower, inclusive of originally approved appurtenances and any modifications that were approved prior to the passage of the Spectrum Act.
 - b) Adding an appurtenance to the body of the tower that would protrude from the edge of the tower more than twenty feet, or more than the width of the tower structure at the level of the appurtenance, whichever is greater.
 - c) Installation of more than the standard number of new equipment cabinets for the technology involved, but not to exceed four, or more than one new equipment shelter.
 - d) A change that entails any excavation or deployment outside the current site.
 - e) A change that would defeat the concealment elements of the tower.

- f) A change that does not comply with conditions associated with the siting approval of the construction or modification of the tower, provided however that this limitation does not apply to any modification that is non-compliant only in a manner that would exceed the thresholds identified in (a) – (d).

(Council Administrative Notice Item No. 8 – Middle Class Tax Relief and Job Creation Act of 2012; Council Administrative Notice Item No. 20 – FCC Wireless Infrastructure Report and Order)

- 34. According to state policy, if the Council finds that a request for shared use of a facility by a municipality or other person, firm, corporation or public agency is technically, legally, environmentally and economically feasible, and the Council finds that the request for shared use of a facility meets public safety concerns, the Council shall issue an order approving such shared use to avoid the unnecessary proliferation of towers in the state. (Conn. Gen. Stat. §16-50aa)
- 35. On July 24, 2017, the Council sent correspondence to telecommunications carriers to request that carriers notify the Council by October 17, 2017 if they are interested in locating on the proposed tower in the foreseeable future. No carriers responded to the Council’s inquiry. (Record)

Existing and Proposed Wireless Services

- 36. Cellco’s proposed facility would provide coverage to existing service gaps and would provide capacity relief to adjacent Cellco sites. Cellco would identify the site as “Coventry NW ”. (Cellco 1, pp. 7-9, Tab 1)
- 37. Existing adjacent Cellco telecommunications facilities include:

Cellco Site Name	Site Address	Distance and Direction from Proposed Tower	Antenna Height (agl)	Structure Type
Coventry North	400 Riley Mount Rd, Coventry	1.8 miles south	127 feet	monopole tower
Mansfield North	1725 Stafford Rd, Mansfield	2.2 miles northeast	170 feet	monopole tower
Tolland	56 Rouns Rd., Tolland	3.3 miles northeast	142 feet	monopole tower
Tolland 2	208 Reed Road, Tolland	3.5 miles northeast	127 feet	monopole tower
Bolton East	49 South St., Bolton	4.7 miles northwest	107 feet	monopole tower
Bolton	130 Vernon Rd., Vernon	4.9 northeast	112 & 120 feet	guyed lattice tower
Columbia	104 Bunker Hill Road Andover	5.8 miles south	158 feet	monopole tower

(Cellco 1, pp. 8-9; Council telecommunications facility database)

- 38. Cellco would initially deploy Long Term Evolution (LTE) voice and data service equipment utilizing the 700 MHz and 2100 MHz frequency bands at the proposed Coventry NW site. Cellco designs its LTE network using a -105 dB Reverse Link Operational Path Loss standard for in-vehicle service and -95 Reverse Link Operational Path Loss standard for in-building service. (Cellco 4, response 2, response 4)

39. Additional service in other frequency bands (850 MHz and 1900 MHz) would be deployed in the future if necessary to meet future network demands. (Cellco 4, response 2, response 3)
40. The site would also provide capacity relief at 700 MHz to Cellco's existing Coventry North (Gamma sector) and existing Tolland (Gamma sector) facilities. Capacity relief for each sector is expected to be greater than five percent. More precise measurements of capacity relief would be made once the proposed site is on-line and optimized to the preferred performance configuration. (Cellco 1, p. 7; Tr. 1, pp. 21, 60, 61)
41. In order to define the extent of its wireless service requirements in this area, Cellco used propagation modeling and baseline drive test data. The propagation modeling and drive test data indicates deficient wireless service in the hilly terrain along the Coventry and Tolland town line. (Cellco 1, Tab 6; Cellco 5; Tr. 1, pp. 10, 19-22)
42. Existing coverage gaps in the proposed service area total 2.72 square miles for 700 MHz service and 2.97 square miles for 2100 MHz service (refer to Figures 2 and 4). (Cellco 5)
43. The proposed facility would provide a service area footprint of 10.28 square miles at 700 MHz and 3.83 square miles at 2100 MHz. Approximately 6,000 people live within the 700 MHz service area footprint (refer to Figures 3 and 5). (Cellco 1, p. 8; Cellco 4, response 7; Cellco 5)
44. Due to hilly terrain, the proposed facility would not be able to provide adequate service to short segments on Interstate 84 northwest of the site or on Route 195 northeast of the site. (Cellco 1, Tab 6; Tr. 1, pp. 22-23)

Site Selection

45. Cellco established a search ring for the proposed facility in July of 2015. (Cellco 1, p. 11)
46. There are no other existing towers or other sufficiently tall structures available within Cellco's search area that Cellco could locate on to satisfy Cellco's network needs. (Cellco 1, p. 11, Tab 8)
47. Cellco focused on the Skungamaug Golf Course property given its large size, its location within the identified service gap area and the willingness of the landowner in hosting a tower on the property. Cellco initially considered a more northerly location on the property but after reviewing potential tower visibility, decided to move it to its present location to lessen visibility to the surrounding area. (Cellco 1, Tab 6, Tab 8)
48. The Town offered Cellco use of a Town park (Laidlaw Park) for a potential tower site if the proposed site did not go forward. Cellco has not examined the suitability of the park property for telecommunications use. (Cellco 1, Tab 8; Tr. 1, pp. 46-47)
49. Although it is technical possible to provide wireless service to the target service area using numerous small cells, the actual number of small cells necessary would be significant and not economically feasible due to the large size of the service area to be covered. Additionally, small cells require the presence of existing infrastructure such as electric distribution poles. If there are no existing poles in certain areas, property lease rights would be required to construct new construct poles for small cell attachments. Due to these complications, the use of a macro-cell installation at the proposed site is the most efficient and cost effective method for providing a large coverage footprint. (Cellco 4, response 6)

Facility Description

50. The proposed site is located on an approximately 24.2-acre parcel south of Folly Lane. (Cellco 1, Tab 1)
51. The property is owned by John Motycka and is used as part of the Skungamaug Golf Course. (Cellco 1, p. 17)
52. The subject property is zoned General Residential, (GR -80). (Cellco 1, p. 17)
53. The tower site is located in the central portion of the property, south of a golf course maintenance building. (Cellco 1, Tab 1, Site Plans C-1, C-2)
54. There are five residences within 1,000 feet of the proposed tower site. (Cellco 1, p. 14)
55. The nearest abutting property from the proposed tower is approximately 330 feet to the east at 445 Goose Lane. (Cellco 1, Tab 1, Site Plan C-1)
56. The tower site is at an approximate elevation of 540 feet above mean sea level (amsl). (Cellco 1, Tab 1, Site Plan C-3)
57. The site property abuts other parcels used for the golf course to the north and south. Residential properties abut the site to the west and east. (Cellco 1, Tab 1, Tab 12)
58. The proposed facility would consist of a 140-foot monopole within a 100-foot by 100-foot leased area (refer to Figure 6). The tower would be approximately 54 inches wide at the base tapering to 24 inches wide at the top. The tower would be designed to support four levels of wireless carrier antennas as well as municipal emergency services antennas. (Cellco 1, pp. 11-12)
59. The tower would be designed to be expandable in height by up to 20 feet. (Cellco 1, p. 12)
60. The monopole would have a grey, galvanized steel finish. (Tr. 1, p. 62)
61. Cellco would install nine panel antennas and nine remote radio heads at a centerline height of 140 feet above ground level (agl). The total height of the facility with antennas would be 143 feet agl (refer to Figure 7). (Cellco 1, Tab 1, Sheet A-1)
62. Access to the tower site would utilize an existing gravel driveway that extends 520 feet to the existing maintenance building area from Folly Lane. The tower site is located in an open area adjacent to an exterior equipment storage yard at the end of the gravel driveway. (Cellco 1, p. iii, Tab 1)
63. A 60-foot by 40-foot equipment compound enclosed by an eight-foot high chain link fence would be established at the base of the tower. The size of the compound area would be able to accommodate the equipment of other wireless carriers. (Cellco 1, Tab 1, Site Plan C-3)
64. Within the compound, Cellco would install two radio equipment cabinets, an emergency power battery, and an emergency propane-fueled generator on a 12-foot by 26-foot elevated steel platform covered by a canopy. A 500-gallon propane tank would be installed on an eight-foot by four-foot concrete pad at ground level to serve the emergency generator. (Cellco 1, pp. 2, 7, Tab 1, Site Plan C-3; Tr. 1, p. 40)

65. The compound area is located on a small natural mound with subsurface materials consisting of stable glacial outwash. Blasting to install the foundation is not anticipated. (Cellco 4, response 14; Tr. 1, pp. 32-33)
66. The compound area would require some grading and cut and fill to attain a level surface. A one to five-foot high retaining wall would be constructed on three sides of the compound to stabilize the graded surface. (Cellco 1 Tab 1, Sheet C-3; Tr. 1, pp. 45-46)
67. The retaining wall would consist of precast concrete block and would have weep holes connected to backflow pipes to allow water to drain out of subsurface compound soils during rain events. (Tr. 1, pp. 63-64)
68. Utilities would be installed underground from an existing Eversource utility pole on Folly Lane. The utilities would be installed along the south edge of the existing gravel drive. (Cellco 1, Tab 1, Site Plan C-2)
69. The estimated cost of the proposed facility is:

Cell site radio equipment	\$150,000
Tower, coax, antennas	250,000
Power Systems	50,000
Equipment	98,000
Site development	\$45,000

Total Estimated Costs **\$593,000**
(Cellco 1, pp. 20-21)

70. Construction of the site would take approximately six weeks, depending on scheduling and site conditions. Once radio equipment and antennas are installed, cell site integration and system testing would require another two weeks before the site is fully operational within Cellco's wireless network. (Cellco 1, p. 21)

Public Safety

71. The Wireless Communications and Public Safety Act of 1999 (911 Act) was enacted by Congress to promote and enhance public safety by making 9-1-1 the universal emergency assistance number, by furthering deployment of wireless 9-1-1 capabilities, and by encouraging construction and operation of seamless ubiquitous and reliable networks for wireless services. (Council Administrative Notice Item No. 6 - Wireless Communications and Public Safety Act of 1999)
72. The proposed facility would be in compliance with the requirements of the 911 Act and would provide Enhanced 911 services. (Cellco 1, p. 5)
73. Wireless carriers have voluntarily begun supporting text-to-911 services nationwide in areas where municipal Public Safety Answering Points (PSAP) support text-to-911 technology. Text-to-911 will extend emergency services to those who are deaf, hard of hearing, have a speech disability, or are in situations where a voice call to 911 may be dangerous or impossible. However, even after a carrier upgrades its network, a user's ability to text to 911 is limited by the ability of the local 911 call center to accept a text message. The FCC does not have the authority to regulate 911 call centers; therefore, it cannot require them to accept text messages. (Council Administrative Notice Item No. 19 – FCC Text-to-911: Quick Facts & FAQs)

74. Cellco's facility would be capable of supporting text-to-911 service as soon as the PSAP is capable of receiving text-to-911. However, no PSAPs in the vicinity of the proposed tower site are able to accept text-to-911 service at this time. (Cellco 4, response 9)
75. Pursuant to the Warning, Alert and Response Network Act of 2006, "Wireless Emergency Alerts" (WEA) is a public safety system that allows customers who own certain wireless phone models and other enabled mobile devices to receive geographically-targeted, text-like messages alerting them of imminent threats to safety in their area. WEA complements the existing Emergency Alert System that is implemented by the FCC and FEMA at the federal level through broadcasters and other media service providers, including wireless carriers. (Council Administrative Notice No. 5 – FCC WARN Act; Cellco 4, response 10)
76. Pursuant to CGS §16-50p(a)(3)(G), the tower, and associated antennas/mounts, would be constructed in accordance with the American National Standards Institute "Structural Standards for Steel Antenna Towers and Antenna Support Structures" Revision G, the governing standard in the State of Connecticut for tower design in accordance with the currently adopted International Building Code. (Cellco 1, Tab 1, p. 6; Tr. 1, p. 29)
77. The proposed tower would not constitute an obstruction or hazard to air navigation and would not require any obstruction marking or lighting. (Cellco 1, p. 19)
78. The equipment compound would have security fencing and a locked access gate. The equipment cabinets would be equipped with silent intrusion alarms. (Cellco 4, response 11)
79. The tower radius would remain within the boundaries of the subject property. (Cellco 1, Tab 1-Site Plan C-2)
80. The cumulative worst-case maximum power density from the radio frequency emissions from the operation of all approved antennas and Cellco's proposed antennas is 33.7 percent of the standard for the General Public/Uncontrolled Maximum Permissible Exposure, as adopted by the FCC, at the base of the proposed tower. This calculation was based on methodology prescribed by the FCC Office of Engineering and Technology Bulletin No. 65E, Edition 97-01 (August 1997) that assumes all antennas in a sector would be pointed at the base of the tower and all channels would be operating simultaneously, which creates the highest possible power density levels. Under normal operation, the antennas would be oriented outward, directing radio frequency emissions away from the tower, thus resulting in significantly lower power density levels in the area around the base of the tower. (Cellco 1, p. 16; Council Administrative Notice Item No. 2 – FCC OET Bulletin No. 65)

Emergency Backup Power

81. In response to two significant storm events in 2011, Governor Malloy formed a Two Storm Panel (Panel) that was charged with an objective review and evaluation of Connecticut's approach to the prevention, planning and mitigation of impacts associated with emergencies and natural disasters that can reasonably be anticipated to impact the state. (Final Report of the Two Storm Panel, Council Administrative Notice Item No. 46)
82. In response to the findings and recommendations of the Panel, and in accordance with C.G.S. §16-50//, the Council, in consultation and coordination with the Department of Energy and Environmental Protection, the Department of Emergency Services and Public Protection and the Public Utilities Regulatory Authority (PURA), studied the feasibility of requiring backup power for telecommunications towers and antennas as the reliability of such telecommunications service is considered to be in the public interest and necessary for the public health and safety. The study was

completed on January 24, 2013. (Council Administrative Notice Item No. 25 – Council Docket No. 432)

83. The Council reached the following conclusions in the study:
- a) “Sharing a backup source is feasible for CMRS providers, within certain limits. Going forward, the Council will explore this option in applications for new tower facilities;” and
 - b) “The Council will continue to urge reassessment and implementation of new technologies to improve network operations overall, including improvements in backup power.”
- (Council Administrative Notice Item No. 25 – Council Docket No. 432)
84. Cellco proposes to use a battery unit and a 25-kilowatt propane-fueled generator to provide emergency backup power. Emergency power could run for four to five days before re-fueling is required. A propane generator was selected in this location over a typical diesel generator to avoid liability issues related to the potential for pre-existing contaminated soils at the site. (Tr. 1, pp. 23-24, 33-34)
85. The 500 gallon propane tank would hold a maximum of 400 gallons of propane gas. The tank would be located opposite Cellco’s platform, in accordance with the National Fire Protection Association requirement to maintain a minimum 10-foot distance from the tank to any electrical equipment. (Tr. 1, p. 40; Tr. 2, p. 94)
86. Generator specifications indicate the unit would emit noise at 60 dBA at a distance of 23 feet from the unit under normal operation. (Cellco 1, Tab 7)
87. According to R.C.S.A. §22a-69-1.8, noise created as a result of, or relating to, an emergency, such as an emergency backup generator, is exempt from the State Noise Control Regulations. (R.C.S.A. §22a-69-1.8)
88. Pursuant to R.C.S.A. §22a-174-3b, the generator would be managed to comply with DEEP’s “permit by rule” criteria, and therefore, operation of the generator would be exempt from general air permit requirements. (Cellco 1, p. 20)

Environmental Considerations

89. No historic properties would be affected by the proposed facility. The site development area does not possess the potential for archeological deposits. (Cellco 7)
90. The site is located in the Federal Emergency Management Agency Zone X, an area outside of the 500-year flood zone. (Cellco 1, Tab 4; Tr. 1, p. 42)
91. The nearest wetland to the proposed site is an intermittent stream approximately 40 feet southeast of the compound area. The stream extends in a north-south direction along the edge of a fairway. The stream was most likely a former wetland seep that has been altered to function as a drainage ditch for the golf course. (Cellco 1, Tab 11; Tr. 1, pp. 35-36)
92. A large forested wetland system is located over 300 feet west of the compound site, across two fairways. It is unlikely that any vernal pool species, if present within this wetland, would migrate across the golf course to the compound area due to the lack of suitable intervening habitat. (Tr. 1, pp. 37-38)
93. One oak tree would be removed to construct the site. (Tr. 1, p. 38)

94. According to the DEEP Natural Diversity Database, the site is not within an area known to contain records of State endangered, threatened or special concern species. (Cellco 1, p. 15)
95. Connecticut is within the range of the northern long-eared bat (NLEB), a federally-listed Threatened species and State-listed Endangered species. There are no known NLEB hibernacula or known maternity roost trees near the project area and thus the proposed facility is not likely to adversely impact the NLEB. The United States Fish and Wildlife Service (USFWS) did not respond to Cellco's NLEB submittal, and in accordance with USFWS rules, the project is thus deemed in compliance and no further action is necessary. (Cellco 1, p. 15, Tab 10)
96. There are no National Audubon Society designated Important Bird Areas within ten miles of the proposed site. (Council Administrative Notice Item No. 67)
97. The design of the proposed facility would comply with United States Fish and Wildlife Service guidelines for minimizing the potential impact of telecommunications towers to bird species. The guidelines recommend that towers be less than 199 feet tall, avoid the use of aviation lighting, and avoid guy-wires as tower supports, among others. (Cellco 1, Tab 10)
98. The proposed project would comply with the *2002 Connecticut Guidelines for Soil Erosion and Sedimentation Control*. (Cellco 1, Tab 11)
99. Existing soils in the compound area contain low levels of petroleum contaminants, below regulatory action requirements. Soils that are excavated from this area would be removed from the site and disposed of in accordance with regulatory criteria. (Tr. 1, pp. 34-35)

Visibility

100. The proposed tower would be visible year-round from approximately 77 acres within a two-mile radius of the site (8,042 acres), mostly from the open areas of the Skungamaug golf course and immediate surrounding properties (refer to Figure 8). (Cellco 1, Tab 9)
101. An area of year-round tower visibility would occur from a residential area along North Farms Road, a road along the side of a hill approximately 0.8 miles west of the site. (Cellco 1, Tab 9)
102. The tower would be seasonally visible from approximately 190 acres within a two-mile radius of the site, mostly limited to an area within 0.6 mile of the site. (Cellco 1, Tab 9)
103. Approximately five residential properties within 1,000 feet of the site would have seasonal (leaf-off) views of the upper portions of the tower. (Tr. 1, pp. 16-18)
104. Pursuant to CGS § 16-50p(a)(3)(F), no schools or day care facilities are located within two miles of the site. (Cellco 1, Tab 9 – Visibility Analysis, p. 6)
105. A hiking trail, the Willimantic River Trail is located approximately 1.75 miles to the east of the site, within the Willimantic River valley. No visibility of the tower is expected from the trail due to intervening, hilly terrain. (Cellco 1, Tab 9)
106. There are no state or locally-designated scenic roads located within the two-mile study area. (Cellco 1, Tab 9)

Figure 1 – Site Location

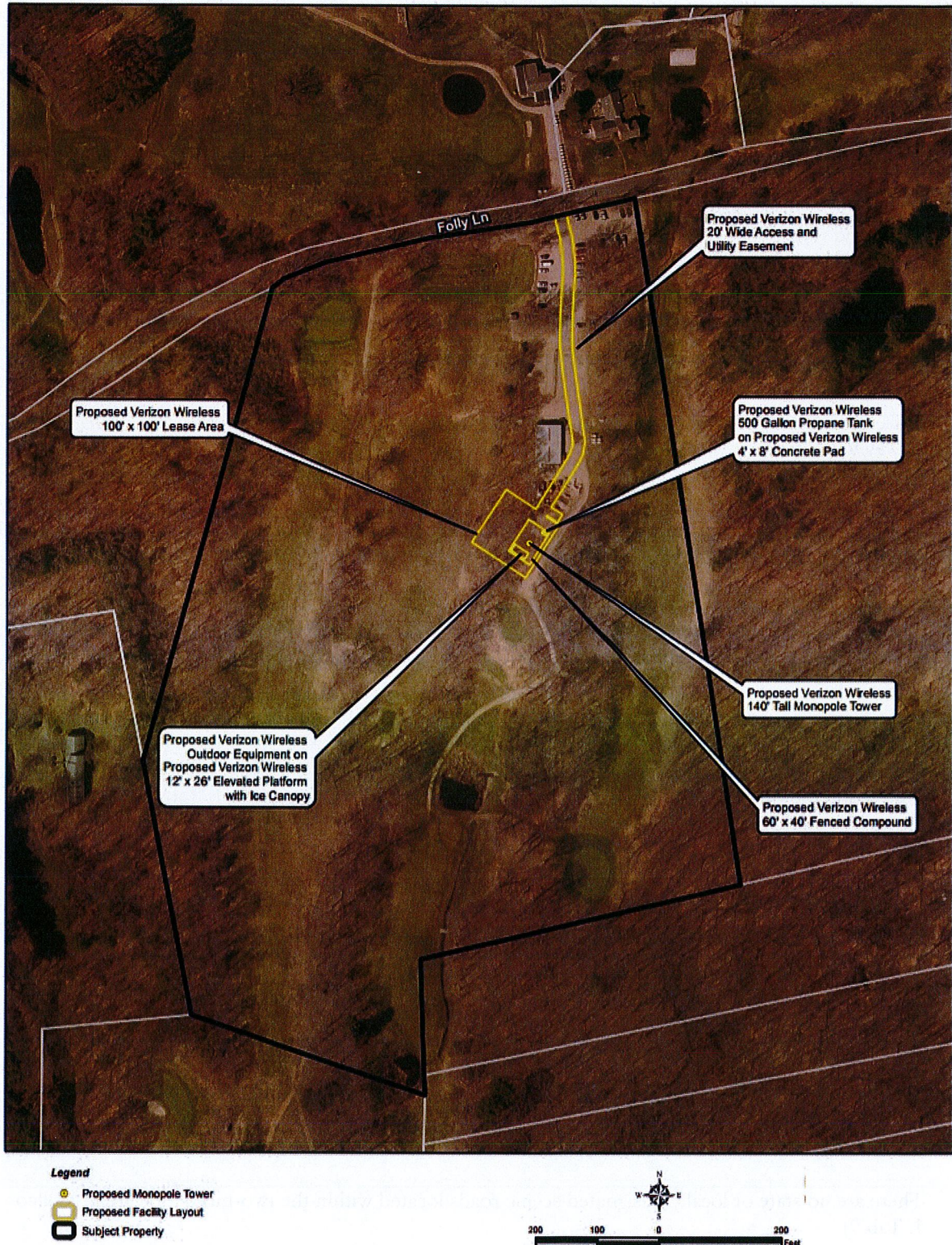
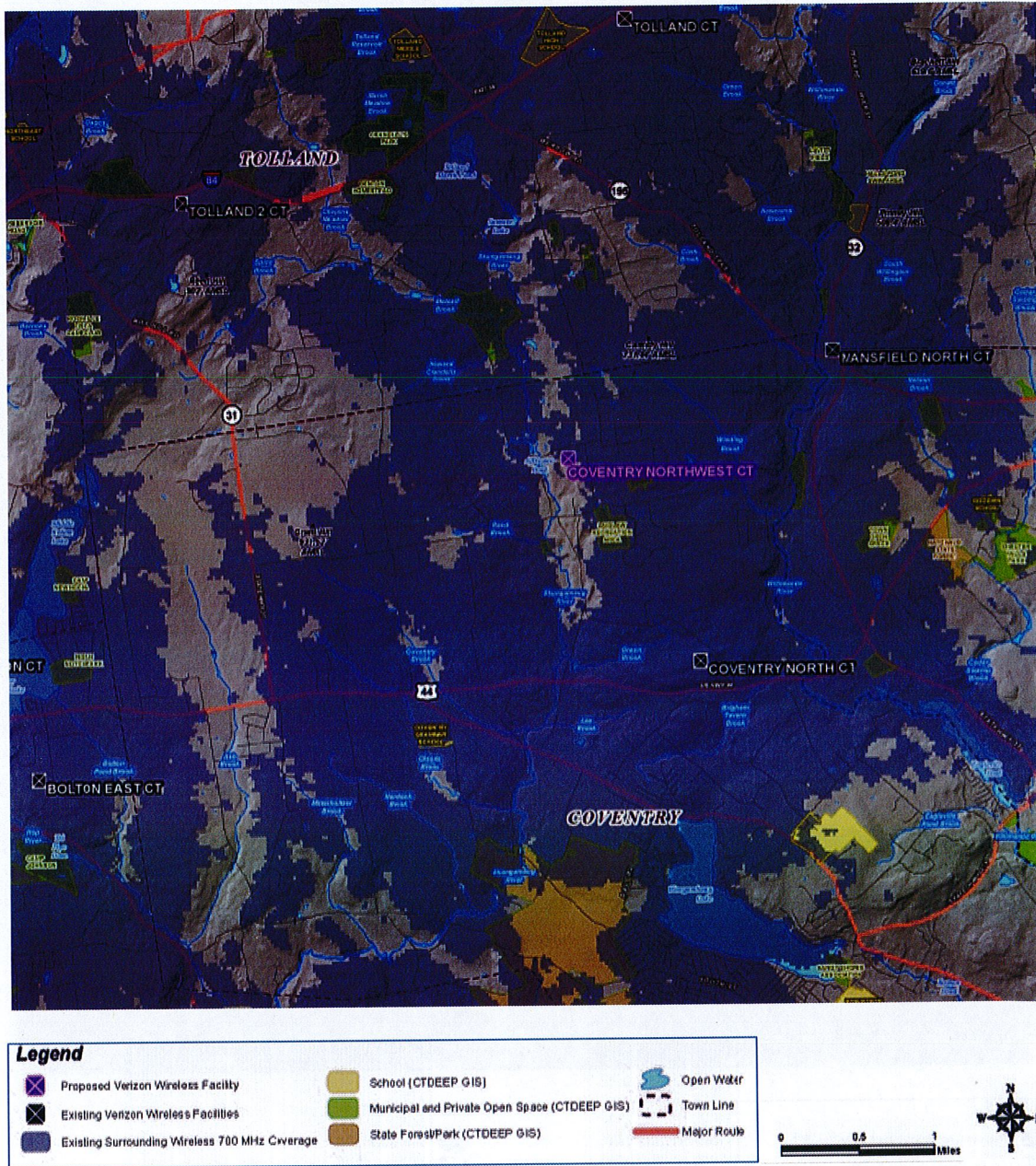
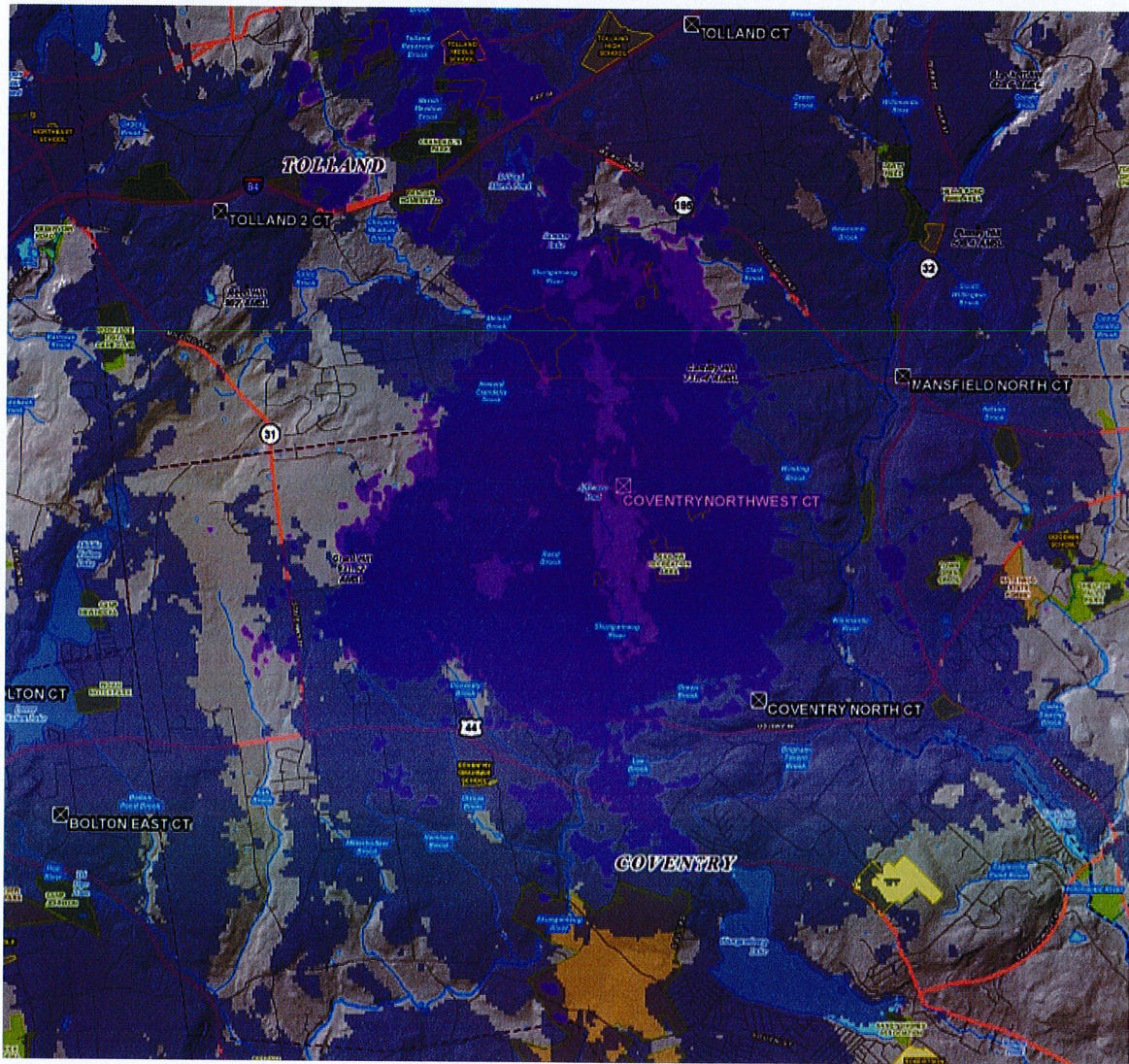


Figure 2 - Existing LTE 700 MHz Service



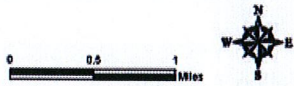
(Cellco 1, Tab 6)

Figure 3 - Proposed LTE 700 MHz Service



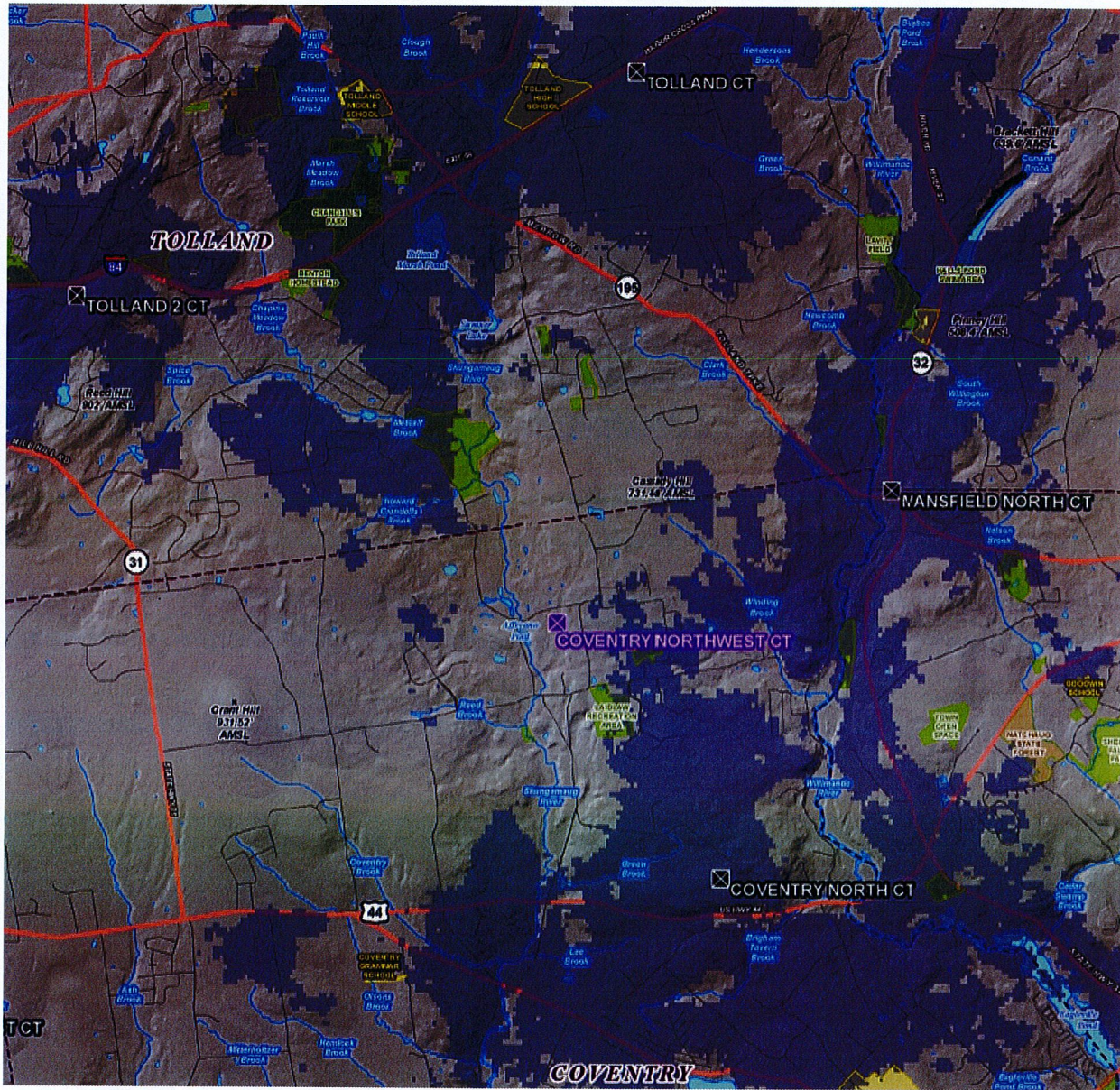
Legend

	Proposed Verizon Wireless Facility		School (CTDEEP GIS)		Open Water
	Existing Verizon Wireless Facilities		Municipal and Private Open Space (CTDEEP GIS)		Town Line
	Existing Surrounding Wireless 700 MHz Coverage		State Forest/Park (CTDEEP GIS)		Major Route
	Proposed Facility Wireless 700 MHz Coverage				



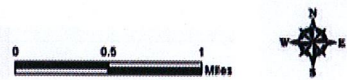
(Cellco 1, Tab 6)

Figure 4 - Existing LTE 2100 MHz Service



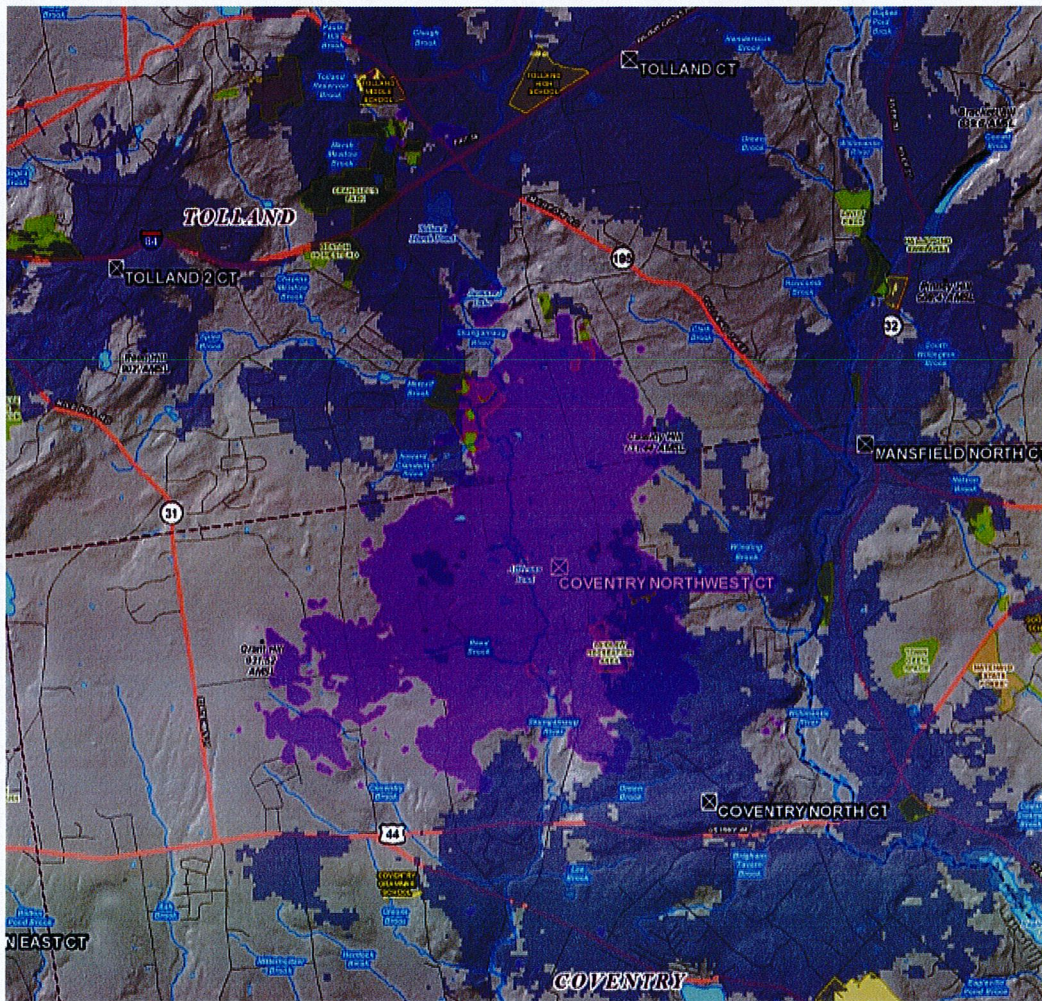
Legend

Proposed Verizon Wireless Facility	School (CTDEEP GIS)	Open Water
Existing Verizon Wireless Facilities	Municipal and Private Open Space (CTDEEP GIS)	Town Line
Existing Surrounding Wireless 2100 MHz Coverage	Slate Forest/Park (CTDEEP GIS)	Major Route



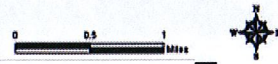
(Cellco 1, Tab 6)

Figure 5 - Proposed LTE 2100 MHz Service



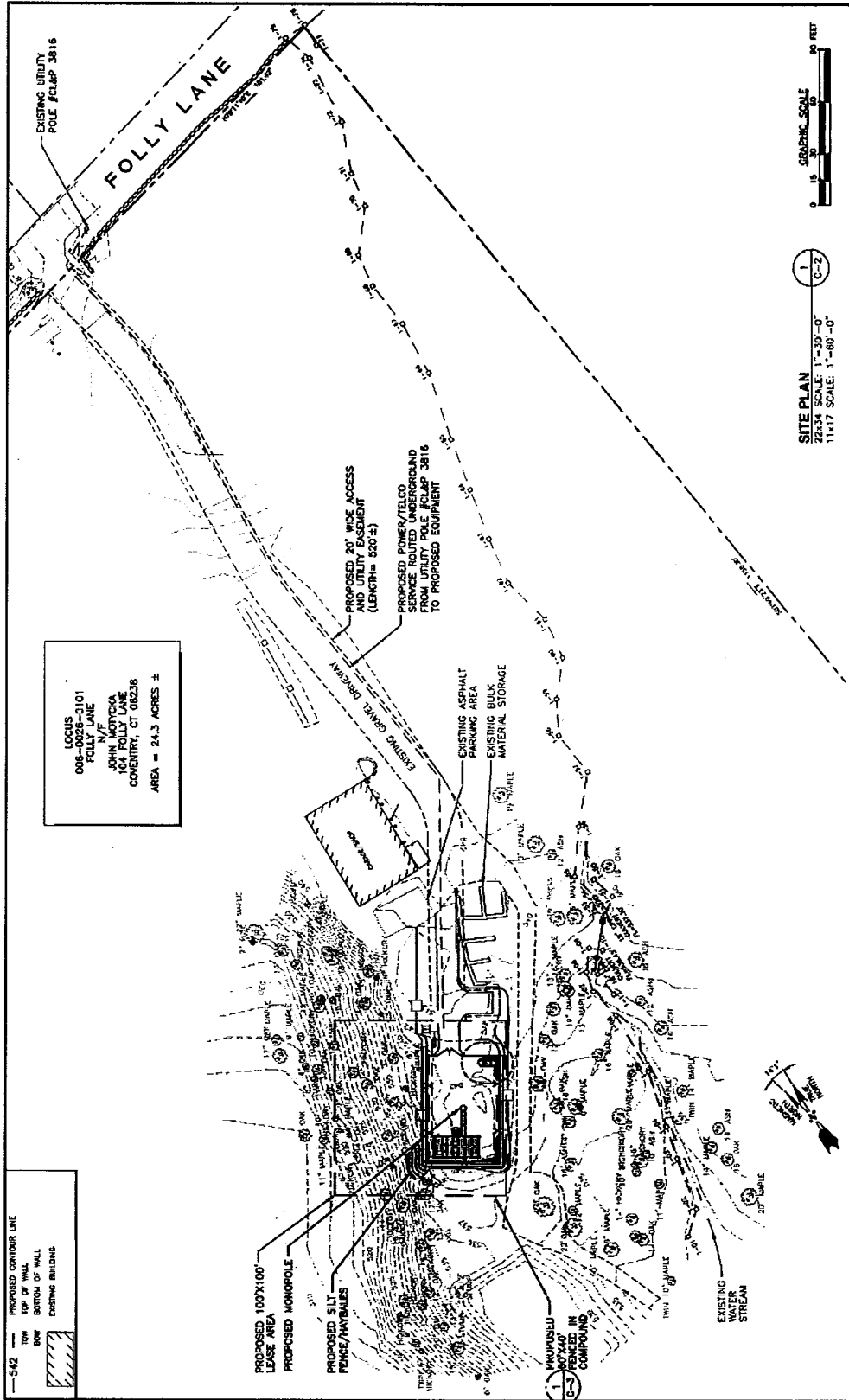
Legend

Proposed Verizon Wireless Facility	School (CTDEEP GIS)	Open Water
Existing Verizon Wireless Facilities	Municipal and Private Open Space (CTDEEP GIS)	Town Line
Existing Surrounding Wireless 2100 MHz Coverage	State Forest/Park (CTDEEP GIS)	Major Route
Proposed Facility Wireless 2100 MHz Coverage		



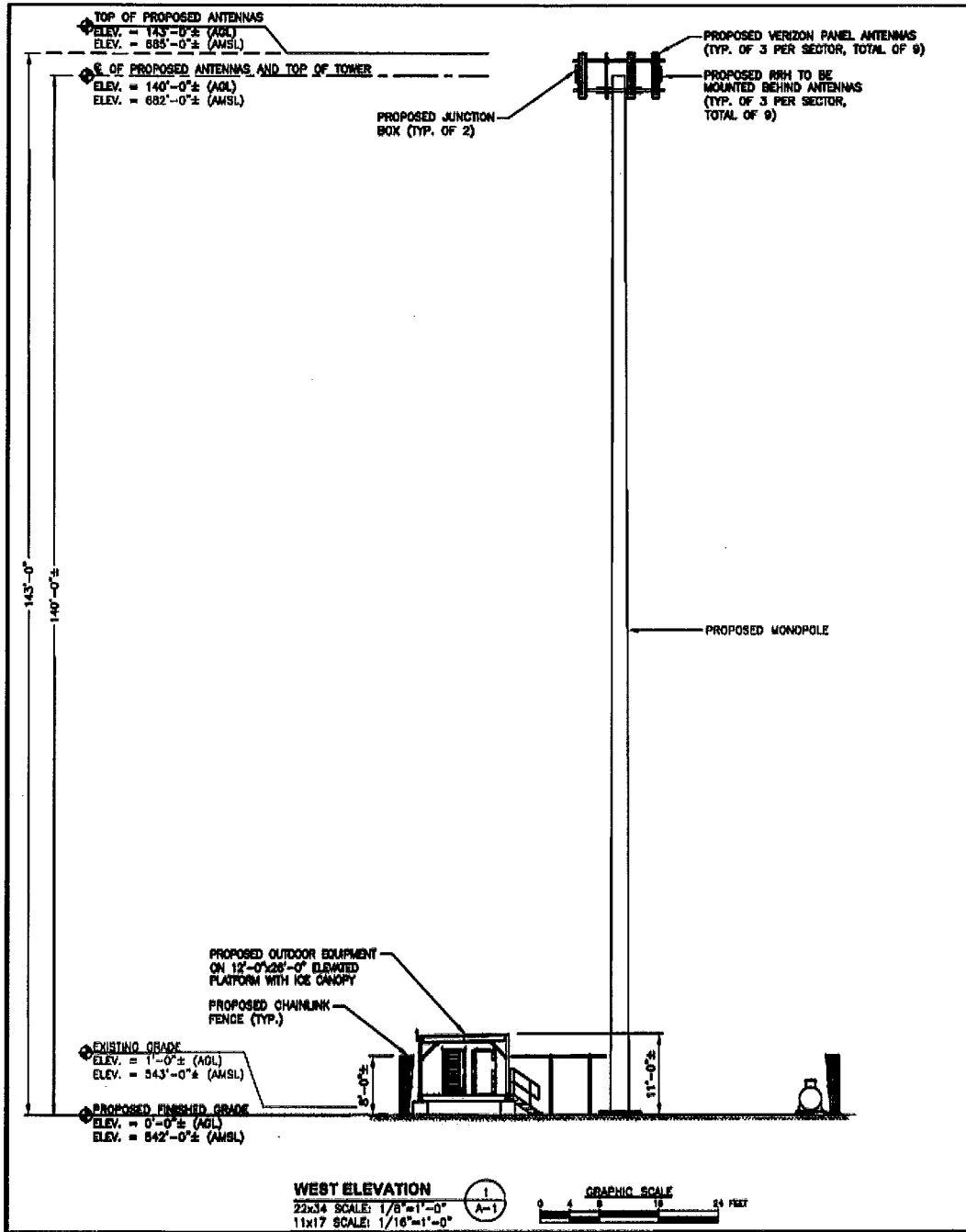
(Cellco 1, Tab 6)

Figure 6 - Site Plan



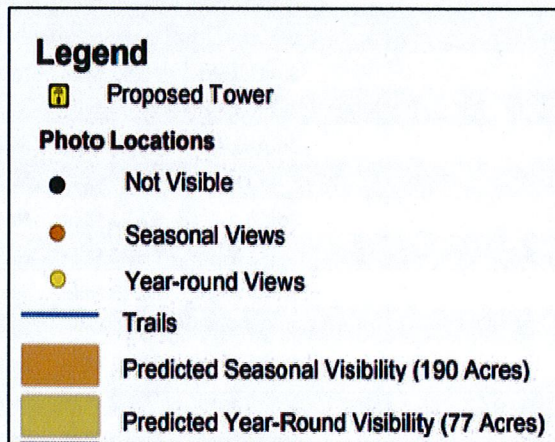
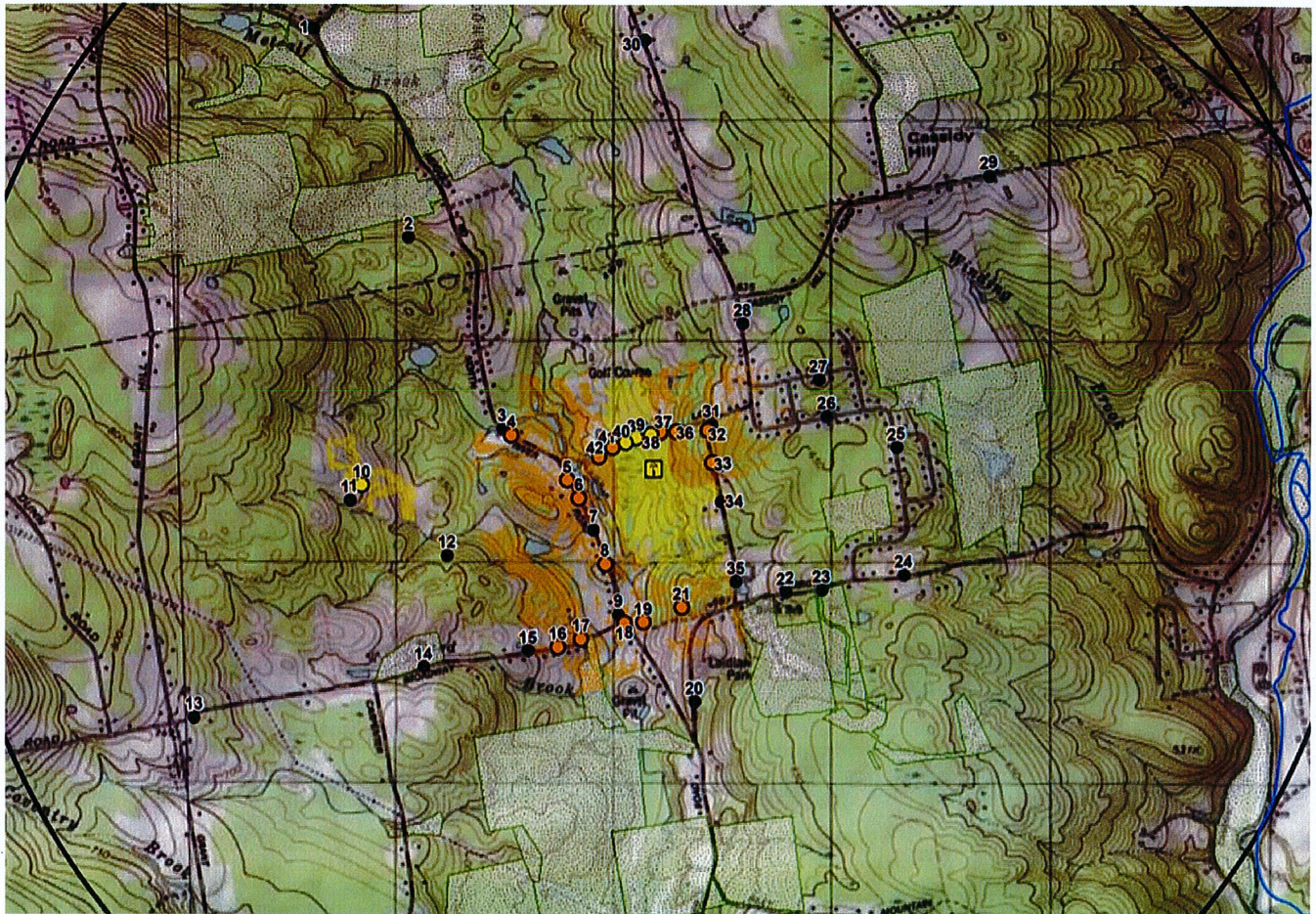
(Cellco 1, Tab 1 - Sheet C-2)

Figure 7 - Tower Plan



(Cellco 1, Tab 1 - Sheet A-1)

Figure 8 – Visibility Analysis



See next page for photo location description. (Cellco 1, Tab 9 – Viewshed Map)

Visibility Analysis photo log- corresponds to locations on visibility map

View	Location	Orientation	Distance to Site	View Characteristics
1	Weigold Road at Gehring Road Extension (Tolland)	Southeast	±1.58 Miles	Not Visible
2	Summerwood Ridge (Tolland)	Southeast	±0.96 Mile	Not Visible
3	North River Road	Southeast	±0.45 Mile	Not Visible
4	North River Road	Southeast	±0.42 Mile	Seasonal
5	North River Road	East	±0.25 Mile	Seasonal
6	North River Road	Northeast	±0.26 Mile	Seasonal
7	North River Road*	Northeast	±0.24 Mile	Not Visible
8	North River Road	Northeast	±0.30 Mile	Seasonal
9	North River Road	Northeast	±0.42 Mile	Not Visible
10	North Farms Road	East	±0.84 Mile	Year round
11	North Farms Road	East	±0.87 Mile	Not Visible
12	Barbara Drive	Northeast	±0.64 Mile	Not Visible
13	Broad Way	Northeast	±1.49 Miles	Not Visible
14	Broad Way	Northeast	±0.86 Mile	Not Visible
15	Broad Way	Northeast	±0.62 Mile	Not Visible
16	Broad Way	Northeast	±0.57 Mile	Seasonal
17	Broad Way	Northeast	±0.52 Mile	Seasonal
18	Merrow Road	Northeast	±0.44 Mile	Seasonal
19	Merrow Road	North	±0.43 Mile	Seasonal
20	Goose Lane	Northwest	±0.67 Mile	Not Visible
21	Deer Hill Lane	Northwest	±0.39 Mile	Seasonal
22	Merrow Road	Northwest	±0.51 Mile	Not Visible
23	Woodmont Drive at Merrow Road**	Northwest	±0.59 Mile	Not Visible
24	Merrow Road	Northwest	±0.77 Mile	Not Visible
25	Geraldine Drive	West	±0.69 Mile	Not Visible
26	Geraldine Drive	Southwest	±0.51 Mile	Not Visible
27	Eric Drive	Southwest	±0.54 Mile	Not Visible
28	Goose Lane	Southwest	±0.48 Mile	Not Visible
29	Cassidy Hill Road	Southwest	±1.27 Miles	Not Visible
30	Goose Lane (Tolland)	South	±1.21 Miles	Not Visible
31	Goose Lane	Southwest	±0.20 Mile	Not Visible
32	Goose Lane	Southwest	±0.19 Mile	Seasonal
33	Goose Lane	West	±0.17 Mile	Seasonal
34	Goose Lane	Northwest	±0.22 Mile	Not Visible
35	Goose Lane	Northwest	±0.39 Mile	Not Visible
36	Folly Lane	Southwest	±0.13 Mile	Seasonal
37	Folly Lane	South	±0.11 Mile	Seasonal
38	Folly Lane	South	±0.10 Mile	Year Round
39	Folly Lane**	Southeast	±0.10 Mile	Year Round
40	Folly Lane**	Southeast	±0.11 Mile	Year Round
41	Folly Lane**	Southeast	±0.13 Mile	Seasonal
42	Folly Lane	Southeast	±0.16 Mile	Seasonal