STATE OF CONNECTICUT CONNECTICUT SITING COUNCIL

IN RE:

APPLICATION BY HOMELAND TOWERS, LLC DOCKET NO. 512 AND NEW CINGULAR WIRELESS PCS, LLC d/b/a AT&T FOR A CERTIFICATE OF ENVIRONMENTAL COMPATIBILITY AND PUBLIC NEED FOR THE CONSTRUCTION MAINTENANCE AND OPERATION OF A WIRELESS TELECOMMUNICATIONS FACILITY AT 60 VALE ROAD, BROOKFIELD, CONNECTICUT

October 26, 2022

RESPONSES OF HOMELAND TOWERS LLC AND NEW CINGULAR WIRELESS PCS, LLC ("AT&T") TO CONNECTICUT SITING COUNCIL **PRE-HEARING INTERROGATORIES**

General

- Q1. Is the project, or any portion of the project, proposed to be undertaken by state departments, institutions or agencies, or to be funded in whole or in part by the state through any contract or grant?
- A1. No.
- Referencing Application Attachment 11, of the letters sent to abutting property owners, 02. how many certified mail receipts were received? If any receipts were not returned, which owners did not receive their notice? Describe any additional attempts to contact those property owners.
- A2. Certified mail receipts were sent to all abutting property owners and nine certified mail receipts were received. The Applicants re-sent notice to five abutting property owners by first class mail on September 27, 2022. A copy of this mailing is included in Attachment 1.
- Pursuant to CGS §16-500, please submit a copy of the unredacted lease for the proposed Q3. site.
- A3. The unreducted lease was filed under Motion for Protective Order on October 24, 2022.
- Referencing Application p. 22, how is the construction cost of the facility recovered for Q4. both Homeland Towers, LLC (Homeland) and New Cingular Wireless PCS, LLC (AT&T)?
- Homeland anticipates recovering its construction cost of the facility through rent *A*4. income received from its tenant carriers. Similar to other market participants that provide facilities-based wireless telecommunications services, AT&T anticipates recovering its installation/co-location costs through its fees charged to customers to access AT&T's wireless network.

- Q5. Referencing Application p. 22, how many residents attended the June 15, 2022, public information meeting? What concerns were raised by residents and town officials and how were these concerns addressed?
- A5. Less than 10 residents attended the public information meeting held at the Town of Brookfield Town Hall on June 16, 2022 at 6:00pm. The public and town officials raised questions pertaining to the facility's ability to improve coverage at the Town's schools, radiofrequency emissions, and alternative tower locations considered. The Applicants responded to each of these comments by referring to the Tech Report and explaining the information contained therein.

Site Search

- Q6. Referencing Application Attachment 2 Site Search Summary, when did Homeland and AT&T commence a site search for the proposed service area? Identify the approximate center and radius of the site search area.
- A6. Homeland commenced their site search in November of 2020. The AT&T Search ring was created in March 2020 and is centered at 41.425963, -73.4065175. There was no radius identified on the Search Ring Form, but search rings are generally .25 miles in radius. SAI on behalf of AT&T commenced site search efforts in March 2020.
- Q7. Referencing Application Attachment 2 Site Search Summary, please provide the distances from the sites investigated from the proposed site.
- Site #2, 93 Grays Bridge Road, Brookfield, CT is .28 +/- miles from the proposed site. A7. Site #3, 35 Graus Bridge Road, Brookfield CT is .43 +/- miles from the proposed site. Site #4, 1 Sand Cut Road, Brookfield, CT is .14 +/- miles from the proposed site. Site #5, 105 Grays Bridge Road, Brookfield, CT is .27 +/- miles from the proposed site. Site #6, 61 Grays Bridge Road, Brookfield, CT is .31 +/- miles from the proposed site. Site #7, 56 Vale Road, Brookfield, CT is .19 +/- miles from the proposed site. Site #8, 120 Park Ridge Road, Brookfield, CT is .53 +/- miles from the proposed site. Site #9, 65 Vale Road, Brookfield, CT is .12 +/- miles from the proposed site. Site #10, 93 Vale Road, Brookfield, CT is .13 +/- miles from the proposed site. Site #11, 107 Vale Road, Brookfield, CT is .18 +/- miles from the proposed site. Site #12, 234 Grays Bridge Road, Brookfield, CT is .64 +/- miles from the proposed site. Site #13, 86 Candlewood Lake Rd, Brookfield, CT is .95 +/- miles from the proposed site Site #14, 14 Research Drive, Bethel, CT is .69 +/- miles from the proposed site. Site #15, Stadley Rough/Rockwell Rd, Danbury is 2.2 +/- miles from the proposed site Site #16, 100 Pocono Road, Brookfield, CT is 1.89 +/- miles from the proposed site. Site #17, Park Ridge Road, Brookfield, CT is .48 +/- miles from the proposed site. Site #18, Park Lawn Drive, Bethel, CT is .64 +/- miles from the proposed site. Site #19, Park Ridge Road, Bethel, CT is .59 _/- miles from the proposed site. Site #20, 111 Park Ridge Road, Brookfield, CT is .57 +/- miles from the proposed site. Site #21, 12 River View Drive, Danbury, CT is .79 +/- miles from the proposed site.

Site/Tower

- Q8. What is the distance from the proposed tower center to the nearest railroad track?
- A8. The distance from the center of the proposed tower to the nearest railroad track is approximately 54'.
- Q9. Would any blasting be required to develop the site?
- A9. Homeland does not anticipate the need for blasting to construct the proposed Facility. The geotechnical investigation will evaluate subsurface conditions. If ledge is encountered, chipping is preferred to blasting. If blasting were required, an appropriate protocol would be followed in accordance with state and municipal regulations.
- Q10. Would the tower be designed for EIA/TIA-222 structural standards version G, H, or both? Would the tower be designed for the 2022 Connecticut State Building Code (effective October 1, 2022)?
- A10. The tower will be designed in accordance with the ANSI/TIA-222-H standard and the 2022 Connecticut State Building Code.
- Q11. What is the maximum wind speed tolerance for antennas on the proposed monopole?
- A11. Based on our review of various antenna specifications, the wind speed is generally listed as 150 miles per hour which exceeds the ANSI/TIA-222-H design wind speed of 120 miles per hour specific to the proposed Facility.
- Q12. Referencing Application Attachment F, Sheet CP-1, what is the structural design standard applicable to the proposed antenna mount?
- A12. The structural design standards applicable to the proposed antenna mount is ANSI/TIA-222-H "Structural Standard for Antenna Supporting Structures and Antennas and Small Wind Turbine Support Structures" and TIA-5053 "Mounting System Classification".
- Q13. Would the tower and foundation be designed to accommodate an increase in tower height?
- A13. As a matter of practice, Homeland typically designs their towers to accommodate a future increase in height should the need arise.
- Q14. What measures are proposed for the site to ensure security and deter vandalism? (Including alarms, gates, locks, anti-climb fence design, etc.)
- A14. The tower and related equipment would be surrounded by an eight-foot-tall security fence and a locked gate. Homeland installs combination locks on the compound gate at all their sites to ensure security and deter vandalism. In addition, anti-climb fencing with a $<2^{\circ}$ mesh/weave is proposed at this site.

AT&T's radio equipment cabinets are equipped with silent intrusion alarms that are monitored remotely. An AT&T technician will be alerted, and the local police will be contacted.

- Q15. Pursuant to CGS §16-50p(a)(3)(G), identify the safety standards and/or codes by which equipment, machinery or technology that would be used or operated at the proposed facility.
- A15. The facility would be constructed and maintained in accordance with the following standards and/or codes:
 - 2021 International Building Code.
 - 2020 National Electric Code (NFPA 70).
 - 2021 International Mechanical Code.
 - 2022 Connecticut State Fire Prevention Code.
 - 2022 Connecticut State Fire Safety Code (NPFA 101).
 - ANSI/TIA-222-H "Structural Standard for Antenna Supporting Structures and Antennas and Small Wind Turbine Support Structures".
 - Occupational Safety and Health Administration (OSHA).
- Q16. Have any other wireless carriers (other than AT&T) expressed an interest in co-locating on the proposed facility to date?
- A16. Cellco Partnership d/b/a Verizon Wireless, by correspondence to the Council dated October 6, 2022, stated that the proposed facility would allow Verizon to provide its customers with improved wireless service in Brookfield, however, the site is not currently a priority in Verizon's build program budget.
- Q17. Does the proposed site contain any Farmland Soils? If so, what acreage of farmland soils would the facility and associated equipment be located on?
- A17. The proposed site does not contain any Farmland Soils.

AT&T Coverage/Capacity

- Q18. Are all frequencies used to transmit voice and data?
- A18. Yes, all frequencies will be used to transmit voice and data.
- Q19. Would the proposed antennas be capable of offering 5G services? If yes, at what frequencies?
- A19. AT&T delivers two methods of 5G service:
 - AT&T 5G, using low-band spectrum (700 MHZ, 850 MHz, 1900 MHz, 2100 MHz and 2300 MHz)
 - AT&T 5G+, which is broadband 5G delivered via millimeter wave spectrum (24 GHz to 39 GHz).

The antennas that will be installed at the proposed site will support 5G in the low-band spectrum. The antennas that will be installed at the proposed site do not support the millimeter wave spectrum where broadband 5G+ operates.

- Q20. Referencing Application, Attachment 1 Radio Frequency Analysis Report (RF Report), pages 10 and 11, provide existing and proposed coverage plots for any proposed frequencies other than 700 MHz.
- A20. Plots are attached as Attachment 2.
- Q21. Can AT&T's coverage objectives be met by installing antennas at a lower tower height? Identify the lowest possible antenna height and describe how this height would affect coverage needs and/or capacity relief within the proposed service area.
- A21. The lowest antenna height for AT&T to fill the existing gap in coverage and handoff to adjacent sites is the proposed antenna height.
- Q22. Referencing page 12 of the Application, approximately how many small cells would be needed to replace the macro tower? And how much would that cost?
- A22. Approximately 38 small cells would be needed to provide coverage to this area. However, as noted in the Application, small cell or DAS systems are not a feasible or practical alternative for addressing the coverage gap in this area.

The approximate capital costs per small cell node/facility range from \$50,000 to \$70,000 depending upon the amount of make-ready work including pole replacements. These costs do not include front haul fiber connection to the node, which averages \$50,000 to \$70,000 per node.

- Q23. Referencing Application, Attachment 1 Radio Frequency Analysis Report (RF Report), page 2, for proposed frequencies other than 700 MHz and 1900 MHz LTE, what is the signal strength for which AT&T designs its system? For in-vehicle coverage? For in-building coverage?
- A23. For 850 MHz, the thresholds are -83 dBm and -93 dBm. For 2100, 2300, and 3700 MHz, the thresholds are -86 dBm and -96 dBm.
- Q24. What are the existing signal strengths for 700 MHz and other proposed frequency bands within the area AT&T is seeking to cover from this site?
- A24. For the areas AT&T is seeking to cover from this site, the current signal strengths are below the thresholds specified in response to Q23.
- Q25. Referencing Application, Attachment 1 RF Report, page 8, would the proposed facility interact with all 8 of the neighboring sites depicted? Explain.
- A25. The sites depicted in the table on page 8 of the RF Report are the first-tier of neighbor sites to the proposed facility. To varying extents based on proximity to the proposed site and the layout of roads in the area, each of these sites would handoff users into and out of the proposed site as the users move about the area.

- Q26. Does AT&T have any statistics/indicators of substandard service in this area? If so, what are they and what do they indicate?
- A26. Please see response to Q29.
- Q27. Provide existing coverage gaps in miles for the proposed frequencies for the nearby portion of the Route 7, Gray's Bridge Road and the surrounding local roads, the overall existing coverage footprints in square miles and the proposed coverage mileage and square miles as represented in the example below:

Street Name	700 MHz Coverage Gap	1900 MHz Coverage Gap	2100 MHz Coverage Gap
Route 2	2.5 miles	5 miles	4.5 miles
Route 32	1.0 mile	3 miles	2 miles
Route 87	0.5 mile	2.5 miles	1 mile
Interstate 395	2.5 miles	2.5 miles	2.5 miles
State Road Total	6.5 miles	13 miles	10 miles

Overall Coverage Footprint	49 square miles	6 square miles	7.5 square miles

A27. 700 MHz – New Coverage

Main Roads

Street Name	Length (miles)
Candlewood Lake Rd	0.6
Federal Rd	0.1
US Hwy 202	0.1
US Hwy 7	0.8
White Turkey Road Ext	0.4

Secondary Roads

Street Name	Length (miles)
1st St	0.1
Appleblossom Ln	0.1
Aspen Way	0.2
Bayberry Ln	0.1
Beverly Dr	0.2
Brittania Dr	0.1
Butternut Ln	0.1
Candlewood Trailer Park	0.1
Clearview Ave	0.1
Dogwood Ln	0.1

Golfview Dr	0.1
Grays Bridge Rd	0.9
Homestead Ave	0.1
Homestead Ln	0.1
Juniper Ln	0.1
Linden Tree Ln	0.1
Longview Ave	0.1
N Nabby Rd	0.1
Nabby Ln	0.2
Nabby Rd	0.1
Old Forty Acre Mountain Rd	0.1
Old Grays Bridge Rd	0.2
Old Sherman Tpke	0.2
Old State Rd	0.1
Old White Turkey Rd	0.1
Parkwood Terrace Dr	0.3
Pleasant Valley Ln	0.1
Princess Pine Ln	0.1
Ridge Rd	0.1
Sand Cut Rd	0.2
Sandy Ln	0.1
Shady Ln	0.2
Shephard Rd	0.1
Southview Ave	0.1
Stony Hill Rd	0.3
Tulip Tree Cir	0.1
Twin Oaks Ln	0.1
Vale Rd	0.6
Virginia Ave	0.1
W Whisconier Rd	0.1
White Birch Ln	0.1

1900 MHz – New Coverage

Main Roads

Street Name	Length (miles)
Candlewood Lake Rd	0.4
Federal Rd	0.8
184	0.1
US Hwy 202	0.2
US Hwy 7	1.9
White Turkey Road Ext	0.3

Secondary Roads

Street Name	Length (miles)
Acorn Ln	0.1
Arlington Ct	0.1
Beverly Dr	0.3
Canterbury Ct	0.1
Chatham Ct	0.1
Deer Trail Dr	0.1
Dogwood Ln	0.1
Edwards Dr	0.1
Golfview Dr	0.1
Grays Bridge Rd	1.3
Heatherwoodd Dr	0.2
Homestead Ave	0.1
Homestead Ln	0.1
Hunting Ridge Rd	0.1
Jeffrey Ln	0.1
Knollcrest Dr	0.2
Lexington Dr	0.2
Long Hill Rd	0.1
Mobar Rd	0.1
Nabby Ln	0.1
Nabby Rd	0.1
Old Grays Bridge Rd	0.2
Old Sherman Tpke	0.1
Old State Rd	0.3
Park Ln	0.1
Parkwood Dr	0.2
Ridge Rd	0.2
Rollingwood Dr	0.3
Sand Cut Rd	0.2
Sand Pit Rd	0.1
Sandy Ln	0.3
Secor Rd	0.1
Spruce Dr	0.1
Stony Brook Rd	0.1
Stony Farm Ln	0.2
Stony Hill Rd	0.8
Tead Rd	0.1
Tulip Tree Cir	0.3
Vale Rd	1.1
W Whisconier Rd	0.3
Willow Run	0.1

Q28. What is AT&T's existing and predicted coverage footprint from the proposed site (in square miles), at each frequency that would be installed?

A28.

Frequency	New Coverage (sq mi)
700 MHz	1.42
850 MHz	1.71
1900 MHz	1.91
2100 MHz	1.83
2300 MHz	1.72
3700 MHz	1.50

- Q29. Would AT&T's proposed co-location be needed for coverage, capacity, or both? If the project is needed for capacity, please respond to the following:
 - a) What nearby AT&T wireless facilities (or sectors) are nearing capacity limits, and at what frequencies?
 - b) Please include a projected exhaustion date for each of these sectors.
 - c) Would the deployment of the proposed facility be sufficient to address AT&T's capacity concerns or would an additional facility be required in the near term to off-load traffic?
- A29. The Alpha sector of CT2157 and the Alpha sector of CT5073 have already exhausted capacity. For these sectors, 700 and 850 MHz are overloaded with users that cannot be offloaded to higher band frequencies (1900, 2100, 2300 and 3700 MHz) due to the limited coverage at those higher frequencies. AT&T believes that the proposed facility will address this capacity exhaustion in the near term.

Backup Power

- Q30. Would a battery backup (if applicable) be used to provide uninterrupted power? How long could the battery backup alone supply power to the facility in the event that the generator fails to start?
- A30. Battery backup will be used at the site and should provide power for 3-4 hours.
- Q31. Referencing Application, Attachment 5, Environmental Assessment Statement, the emergency backup generator would be exercised once per week. For approximately how long would the generator run when it is exercised? Would this be scheduled for daytime hours?
- A31. The generator runs for approximately 30 minutes when exercised. This is typically scheduled for Monday or Tuesday during daytime hours.

Public Safety

- Q32. Would the proposed facility support text-to-911 service? Is additional equipment required for this purpose?
- A32. Yes, the proposed Facility will support text-to-911 service and no additional equipment is required.
- Q33. Would the deployment of FirstNet at this facility require additional equipment? Explain.
- A33. FirstNet services will be supported by the equipment already proposed for the facility. No additional equipment is necessary. FirstNet operates on spectrum known as Band 14. Band 14 is part of the 700 MHz band that all the major wireless operators use in their networks. This specific portion of the 700 MHz spectrum is deployed by AT&T as part of the FirstNet Public-Private Partnership. Under normal circumstances, this spectrum is available to both public safety users and AT&T customers, but priority is given to public safety use. In the case of a major emergency, the entire Band 14 can be dedicated to public safety users. If Band 14 is dedicated to public safety users, 700 MHz Band 5/12 will still be available to non-public-safety AT&T customers.
- Q34. Referencing Attachment 7 of the Application, provide a cumulative far-field power density analysis per the Council's memo dated September 23, 2022. (See attached.) Include the Town's public safety antennas in this analysis if such data is available.
- *A34.* The requested MPE report is included in **Attachment 3.**

Environment

- Q35. Referencing Application Attachment 8 Visibility Assessment, estimate the number of residences that would have seasonal and/or year-round views within 0.5 miles of the proposed tower.
- A35. Collectively, visibility of the tower (year-round and/or seasonally) is predicted from 14 residential properties within 0.5 mile of the site, including eight (8) with year-round visibility and an additional six (6) with seasonal views.
- Q36. What, if any, stealth tower design options would be feasible to employ at this site? Please provide costs related to each stealth tower design.
- A36. Homeland believes the proposed monopole, as designed, represents the best option at this site. It is possible to employ an alternate design option, however there would be little benefit achieved in reducing the visibility of the tower. The tower would have a relatively small visual impact (±1.63% of the Study Area), as documented in Attachment 8 of the Application. The monopole would be consistent with the character of the site and surrounding area, where the presence of existing utility infrastructure and transportation corridors are the prominent features.

Traditional alternate tower designs (e.g., monopine or unipole) would not reduce visibility. There are very few locations that would benefit from a traditional monopine due to the lack of tall, mature coniferous trees in the vicinity of the proposed tower. The majority of views of the proposed tower extend significantly above the treeline; a monopine would appear larger and draw additional attention due to the increased width created by the faux branches. A unipole design would also widen the monopole to accommodate internally mounted antennas. Any benefit gained by eliminating exterior antenna arrays would likely be overshadowed by the need for a height increase for additional vertical antenna space within the pole to achieve coverage objectives. A height increase would also need to be evaluated for potential marking/lighting requirements (by the FAA) which, if needed, would further intensify the tower's visibility.

Q37. Please submit photographic site documentation with notations linked to the site plans or a detailed aerial image that identifies locations of site-specific and representative site features. The submission should include photographs of the site from public road(s) or publicly accessible area(s) as well as Site-specific locations depicting site features including, but not necessarily limited to, the following locations as applicable:

For each photo, please indicate the photo viewpoint direction and stake or flag the locations of site-specific and representative site features. Site-specific and representative site features include, but are not limited to, as applicable:

- 1. wetlands, watercourses and vernal pools;
- 2. forest/forest edge areas;
- 3. agricultural soil areas;
- 4. sloping terrain;
- 5. proposed stormwater control features;
- 6. nearest residences;
- 7. site access and interior access road(s);
- 8. tower location/compound;
- 9. clearing limits/property lines;
- 10. mitigation areas; and
- 11. any other noteworthy features relative to the Project.

A photolog graphic must accompany the submission, using a site plan or a detailed aerial image, depicting each numbered photograph for reference. For each photo, indicate the photo location number and viewpoint direction, and clearly identify the locations of site specific and representative site features shown (e.g., physical staking/flagging or other means of marking the subject area).

The submission shall be delivered electronically in a legible portable document format (PDF) with a maximum file size of <20MB. If necessary, multiple files may be submitted and clearly marked in terms of sequence.

A37. Please see the Remote Field Review in Attachment 4.

CERTIFICATE OF SERVICE

I hereby certify that on this day, one original and fifteen (15) hard copies of the foregoing was sent via overnight Federal Express and an electronically to the Connecticut Siting Council.

October 26, 2022

Lucie Chrocchio

Lucia Chiocchio, Esq. Daniel Patrick, Esq. Cuddy & Feder LLP 445 Hamilton Ave, 14th Floor White Plains, NY 10601 (914)-761-1300 Attorneys for the Applicant

cc: Homeland AT&T

ATTACHMENT 1



445 Hamilton Avenue, 14th Floor White Plains, New York 10601 τ 914 761 1300 F 914 761 5372 cuddyfeder.com

Lucia Chiocchio, Esq. lchiocchio@cuddyfeder.com

September 27, 2022

<u>VIA FIRST CLASS MAIL</u> Maybrook Railroad Company PO Box 537 Old Saybrook, CT 06475

Re: Homeland Towers, LLC ("Homeland Towers") and New Cingular Wireless PCS, LLC ("AT&T") Wireless Telecommunications Tower Facility <u>60 Vale Road, Town of Brookfield, Connecticut</u>

Dear Sir or Madam:

Our office previously attempted to contact you on behalf of our clients, Homeland Towers, LLC and New Cingular Wireless PCS, LLC, with respect to the above-referenced matter. A certified return receipt envelope was sent to your attention on August 3, 2022, but a signed receipt was not returned. The address listed for you corresponds with the records on file with the Town of Brookfield's Assessor's Office as an owner of property abutting the subject parcel detailed in the attached notice. This letter along with a copy of the notice sent on August 3, 2022, is being sent via first class mail in the hope that this method may be successful in reaching you.

If you have any questions concerning this information, please do not hesitate to contact us.

Very truly yours,

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Lucia Chiocchio

Enclosures

వాసు సముత్యాన సావార్ సాజుకాల తొరిసి తెలియు స్థాని సర్రీ క్రీకోల్స్ సౌకానించి, కోటింగు గొర్తికి సంసర్స్ జిమితాలు వివరాశివులు సౌకర్యాలి సౌకర్యాలు కార్ సాపార్థికి సాజా నిరితి క్రీక్షింగి సౌకర్యింగా స్రామికి కార్ర్ సాటు సంసరాజా సౌకర్యాలు సౌకర్యాల్ స్రామాలు సౌకర్యాలు కార్రి సౌకర్యాలు సౌకర్యాలు సౌకర్యాలు సౌకర్యాలు సౌకర్యాలు సౌ సౌకర్యాలో స్రామాత్రం సౌకర్యాల్ సంస్థ నిర్ధారణ్ సౌకర్యాలు సౌకర్యాలు సౌకర్యాలు సౌకర్యాలు సౌకర్యాలు సౌకర్యాలు సౌకర సౌకర్యాలు స్రామాత్రం సౌకర్యాలు సౌకర్యాలు

WESTCHESTER | NEW YORK CITY | HUDSON VALLEY | CONNECTICUT

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445 Hamilton Avenue, 14th Floor White Plains, New York 10601 T 914 761 1300 F 914 761 5372 cuddyfeder.com

August 3, 2022

VIA CERTIFIED MAIL/ RETURN RECEIPT REQUESTED MAYBROOK RAILROAD COMPANY PO BOX 537 OLD SAYBROOK, CT 06475

Re: Homeland Towers, LLC ("Homeland Towers") and New Cingular Wireless PCS, LLC ("AT&T") Wireless Telecommunications Tower Facility <u>60 Vale Road, Town of Brookfield, Connecticut</u>

Dear Sir or Madam:

We are writing on behalf of our clients Homeland Towers, LLC ("Homeland Towers") and New Cingular Wireless PCS, LLC ("AT&T") with respect to the above referenced matter and our clients' intent to file an application with the State of Connecticut Siting Council ("CSC") for approval of a proposed wireless communications tower (the "Facility") within the Town of Brookfield.

State Law requires that record owners of property abutting a parcel on which a facility is proposed be sent notice of an applicant's intent to file an application with the CSC. The Facility is proposed to be constructed at 60 Vale Road, identified as Parcel ID E16023 on the Town of Brookfield Tax Map. We are writing to you to provide notice as you are an abutting neighbor to 60 Vale Road. The Facility is proposed as a new self-supporting monopole that is 165' tall located within a 3,150 square-foot fenced equipment compound in the northern section of the approximately 3.99-acre parcel. AT&T's antennas would be installed at a centerline height of 161' above grade level. Additional details are provided in the notice included with this letter.

The location, height and other features of the Facility are subject to review and potential change by the CSC under the provisions of Connecticut General Statutes §16-50g et seq.

If you have any questions concerning this application, please contact the CSC or the undersigned after August 10, 2022, the date which the application is expected to be on file.

Very truly yours,

Lucie Chrocchio

Lucia Chiocchio

Enclosure

NOTICE

NOTICE IS HERBY GIVEN, pursuant to Section 16-50g et seq. of the Connecticut General Statutes, as amended, and Section 16-50j-1 et seq. of the Regulations of Connecticut State Agencies, as amended, of the intent of Homeland Towers, LLC ("Homeland Towers") and New Cingular Wireless PCS, LLC ("AT&T") (together the "Applicants") to file an Application for a Certificate of Environmental Compatibility and Public Need with the Connecticut Siting Council ("Siting Council") on or after August 10, 2022 to construct a wireless telecommunications tower facility ("Facility") at 60 Vale Road in the Town of Brookfield.

The Facility is proposed on an approximately 3.99-acre parcel of land owned by 70 Vale Road LLC identified as Parcel ID E16023 on the Town of Brookfield Tax Map.

The Facility consists of a new self-supporting monopole that is 165' tall located within a 3,150 square-foot fenced equipment compound in the northern section of the approximately 3.99-acre parcel. AT&T's antennas would be installed at a centerline height of approximately 161' above grade level and the Facility will be designed to support the antennas and equipment of other FCC licensed wireless carriers as well as local emergency communications equipment.

The Application explains the need, purpose and benefits of the Facility and also describes the environmental impacts of the proposed Facility.

Interested parties and residents of Brookfield, Connecticut are invited to review the Application during normal business hours after August 10, 2022 when the Application is anticipated to be filed, at the following offices:

Connecticut Siting Council 10 Franklin Square New Britain, CT 06051

Andrea DiStephan, CCTC Town Clerk 100 Pocono Road P.O. Box 5106 Brookfield, CT 06804

Or the offices of the undersigned. All inquiries should be addressed to the Connecticut Siting Council or to the undersigned:

> Lucia Chiocchio, Esq. Daniel Patrick, Esq. Cuddy & Feder LLC 445 Hamilton Ave, 14th Floor White Plains, NY 10601 (914) 761-1300



445 Hamilton Avenue, 14th Floor White Plains, New York 10601 T 914 761 1300 F 914 761 5372 cuddyfeder.com

Lucia Chiocchio, Esq. lchiocchio@cuddyfeder.com

September 27, 2022

<u>VIA FIRST CLASS MAIL</u> Maybrook Railroad Company 1 Federal Road Brookfield, CT 06804

Re: Homeland Towers, LLC ("Homeland Towers") and New Cingular Wireless PCS, LLC ("AT&T") Wireless Telecommunications Tower Facility <u>60 Vale Road, Town of Brookfield, Connecticut</u>

Dear Sir or Madam:

Our office previously attempted to contact you on behalf of our clients, Homeland Towers, LLC and New Cingular Wireless PCS, LLC, with respect to the above-referenced matter. A certified return receipt envelope was sent to your attention on August 3, 2022, but a signed receipt was not returned. The address listed for you corresponds with the records on file with the Town of Brookfield's Assessor's Office as an owner of property abutting the subject parcel detailed in the attached notice. This letter along with a copy of the notice sent on August 3, 2022, is being sent via first class mail in the hope that this method may be successful in reaching you.

If you have any questions concerning this information, please do not hesitate to contact us.

Very truly yours,

ucie Chocchio

Lucia Chiocchio

Enclosures

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445 Hamilton Avenue, 14th Floor White Plains, New York 10601 T 914 761 1300 F 914 761 5372 cuddyfeder.com

August 3, 2022

VIA CERTIFIED MAIL/ <u>RETURN RECEIPT REQUESTED</u> MAYBROOK RAILROAD COMPANY 1 FEDERAL ROAD BROOKFIELD, CT 06804

Re: Homeland Towers, LLC ("Homeland Towers") and New Cingular Wireless PCS, LLC ("AT&T") Wireless Telecommunications Tower Facility <u>60 Vale Road, Town of Brookfield, Connecticut</u>

Dear Sir or Madam:

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State Law requires that record owners of property abutting a parcel on which a facility is proposed be sent notice of an applicant's intent to file an application with the CSC. The Facility is proposed to be constructed at 60 Vale Road, identified as Parcel ID E16023 on the Town of Brookfield Tax Map. We are writing to you to provide notice as you are an abutting neighbor to 60 Vale Road. The Facility is proposed as a new self-supporting monopole that is 165' tall located within a 3,150 square-foot fenced equipment compound in the northern section of the approximately 3.99-acre parcel. AT&T's antennas would be installed at a centerline height of 161' above grade level. Additional details are provided in the notice included with this letter.

The location, height and other features of the Facility are subject to review and potential change by the CSC under the provisions of Connecticut General Statutes §16-50g et seq.

If you have any questions concerning this application, please contact the CSC or the undersigned after August 10, 2022, the date which the application is expected to be on file.

Very truly yours,

ucie Chrocchio

Lucia Chiocchio

Enclosure

NOTICE

NOTICE IS HERBY GIVEN, pursuant to Section 16-50g et seq. of the Connecticut General Statutes, as amended, and Section 16-50j-1 et seq. of the Regulations of Connecticut State Agencies, as amended, of the intent of Homeland Towers, LLC ("Homeland Towers") and New Cingular Wireless PCS, LLC ("AT&T") (together the "Applicants") to file an Application for a Certificate of Environmental Compatibility and Public Need with the Connecticut Siting Council ("Siting Council") on or after August 10, 2022 to construct a wireless telecommunications tower facility ("Facility") at 60 Vale Road in the Town of Brookfield.

The Facility is proposed on an approximately 3.99-acre parcel of land owned by 70 Vale Road LLC identified as Parcel ID E16023 on the Town of Brookfield Tax Map.

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The Application explains the need, purpose and benefits of the Facility and also describes the environmental impacts of the proposed Facility.

Interested parties and residents of Brookfield, Connecticut are invited to review the Application during normal business hours after August 10, 2022 when the Application is anticipated to be filed, at the following offices:

Connecticut Siting Council 10 Franklin Square New Britain, CT 06051 Andrea DiStephan, CCTC Town Clerk 100 Pocono Road P.O. Box 5106 Brookfield, CT 06804

Or the offices of the undersigned. All inquiries should be addressed to the Connecticut Siting Council or to the undersigned:

Lucia Chiocchio, Esq. Daniel Patrick, Esq. Cuddy & Feder LLC 445 Hamilton Ave, 14th Floor White Plains, NY 10601 (914) 761-1300



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Lucia Chiocchio, Esq. lchiocchio@cuddyfeder.com

September 27, 2022

VIA FIRST CLASS MAIL ABM LLC 65 Vale Road Brookfield, CT06804

Re: Homeland Towers, LLC ("Homeland Towers") and New Cingular Wireless PCS, LLC ("AT&T") Wireless Telecommunications Tower Facility <u>60 Vale Road, Town of Brookfield, Connecticut</u>

Dear Sir or Madam:

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August 3, 2022

VIA CERTIFIED MAIL/ RETURN RECEIPT REQUESTED APBM LLC 65 VALE ROAD BROOKFIELD, CT 06804

Re: Homeland Towers, LLC ("Homeland Towers") and New Cingular Wireless PCS, LLC ("AT&T")
 Wireless Telecommunications Tower Facility
 60 Vale Road, Town of Brookfield, Connecticut

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Lucia Chiocchio, Esq. lchiocchio@cuddyfeder.com

September 27, 2022

<u>VIA FIRST CLASS MAIL</u> APBM LLC 34 Charcoal Ridge Road Danbury, CT 06810

Re: Homeland Towers, LLC ("Homeland Towers") and New Cingular Wireless PCS, LLC ("AT&T") Wireless Telecommunications Tower Facility <u>60 Vale Road, Town of Brookfield, Connecticut</u>

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August 3, 2022

VIA CERTIFIED MAIL/ RETURN RECEIPT REQUESTED APBM LLC 34 CHARCOAL RIDGE ROAD DANBURY, CT 06810

Re: Homeland Towers, LLC ("Homeland Towers") and New Cingular Wireless PCS, LLC ("AT&T")
 Wireless Telecommunications Tower Facility
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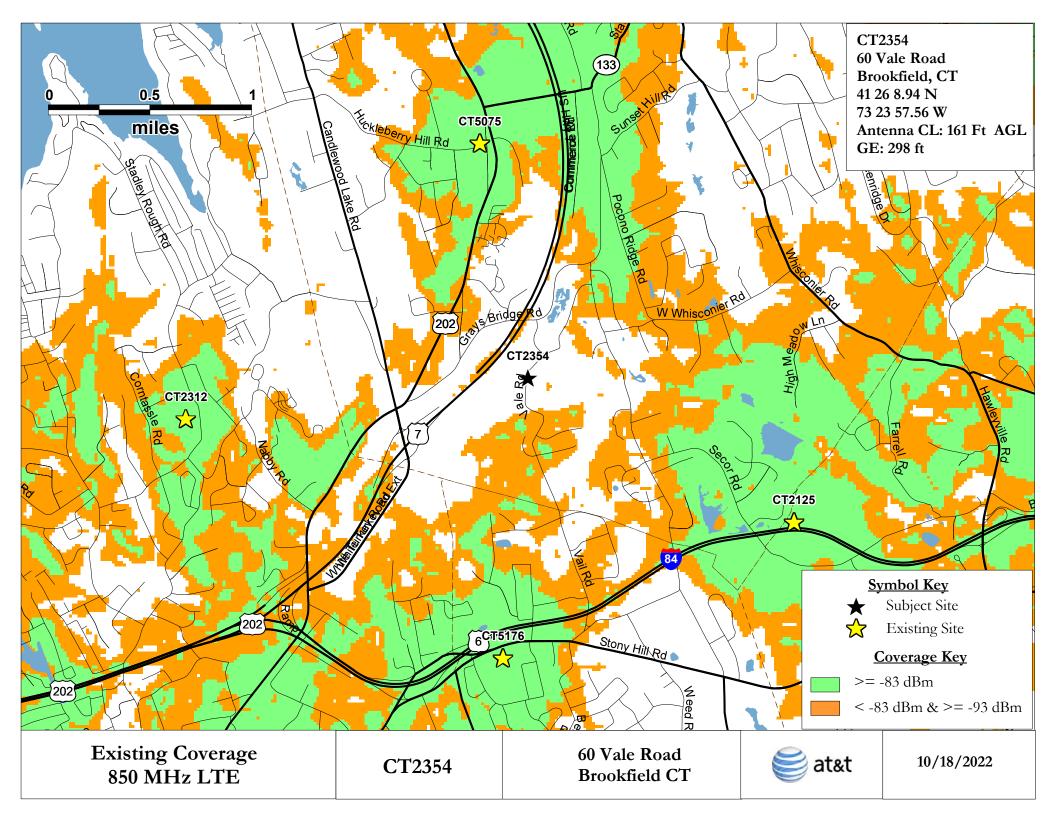
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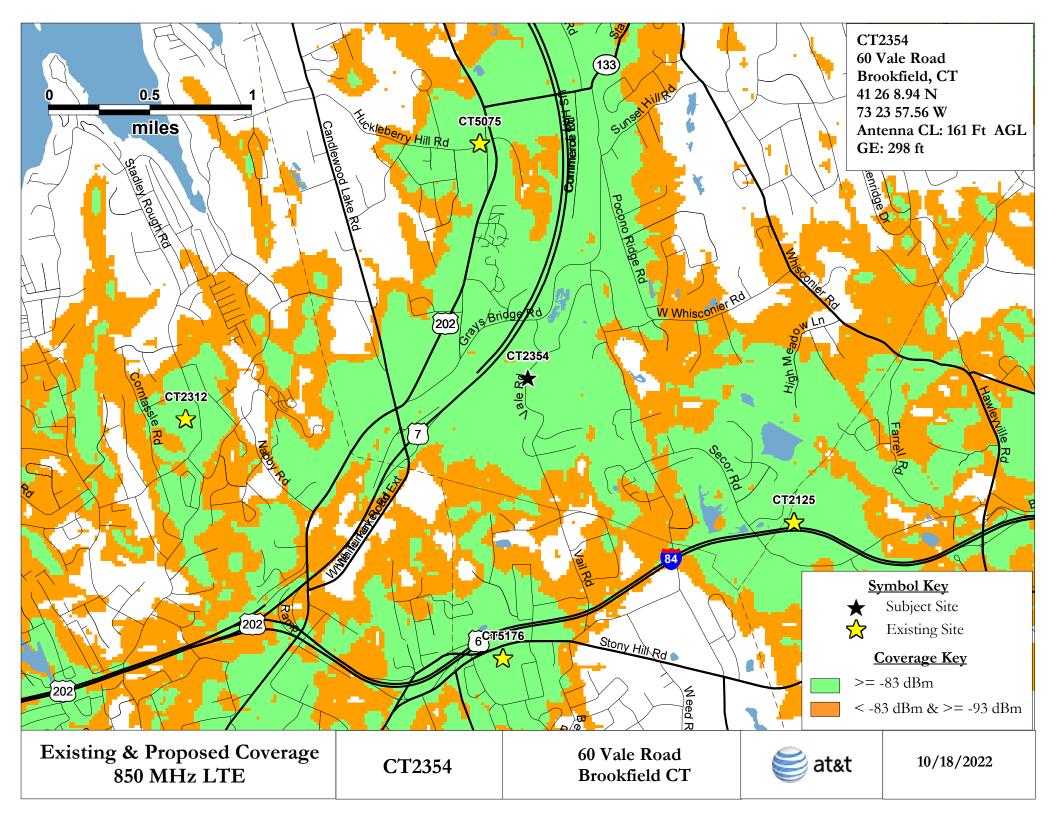
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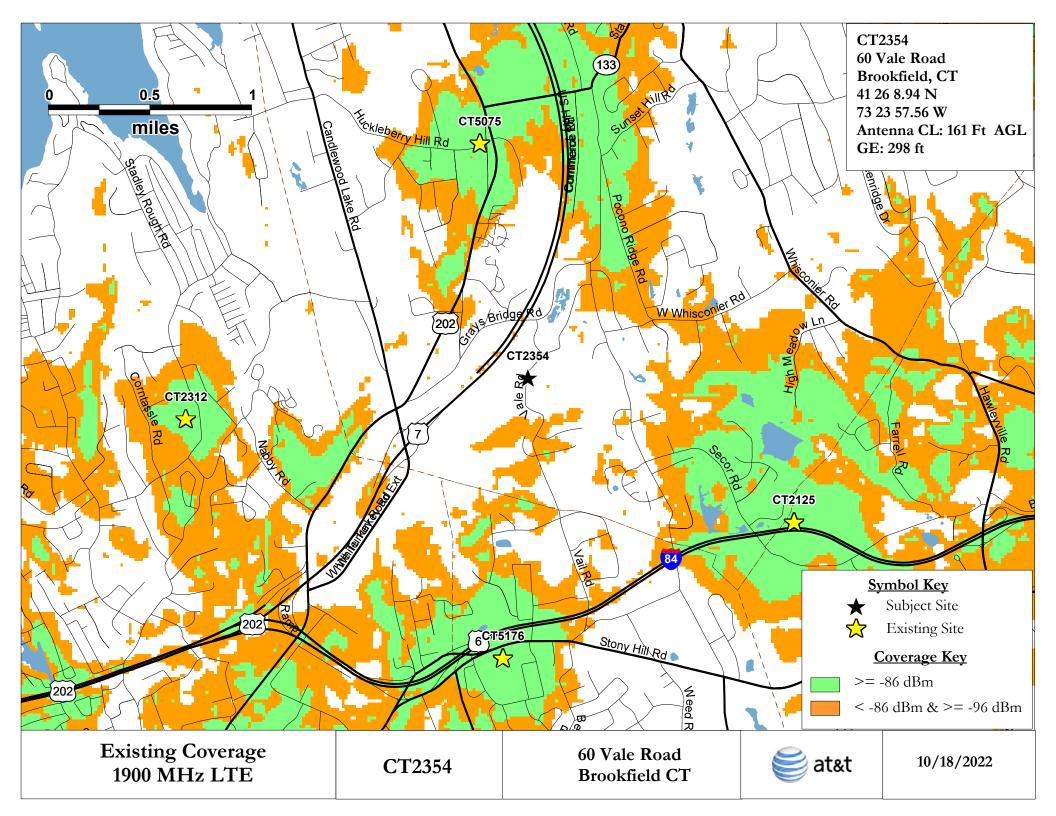
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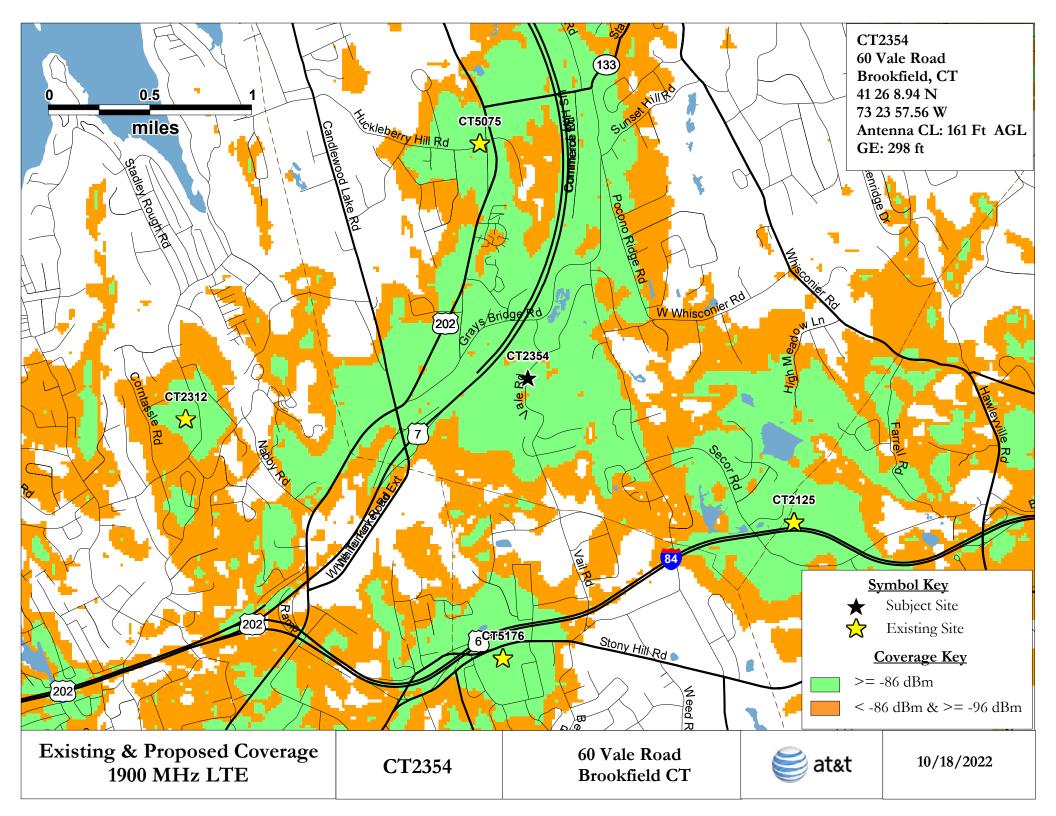
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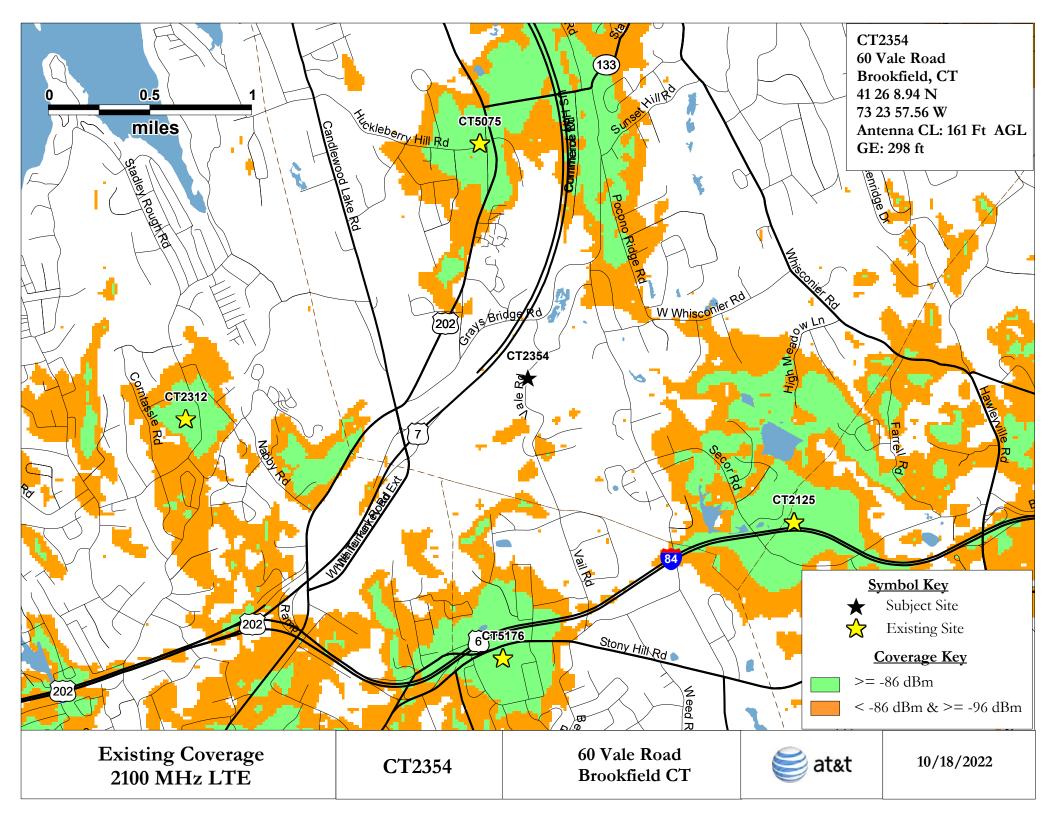
ATTACHMENT 2

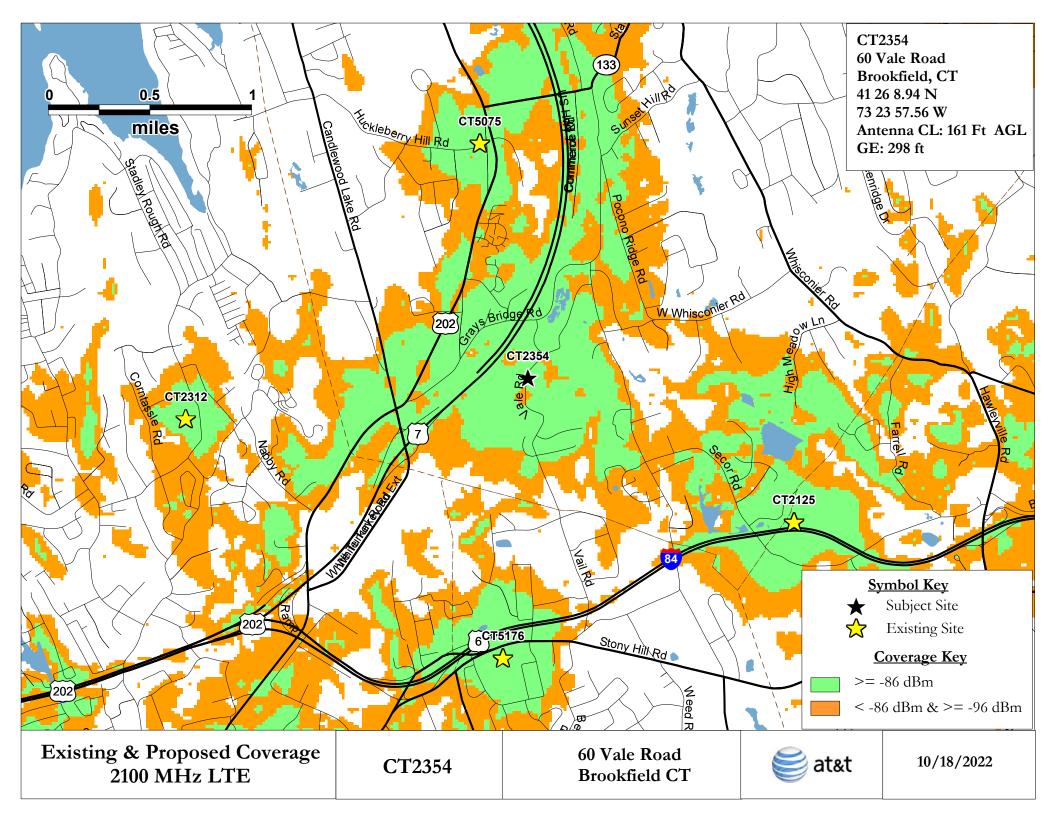


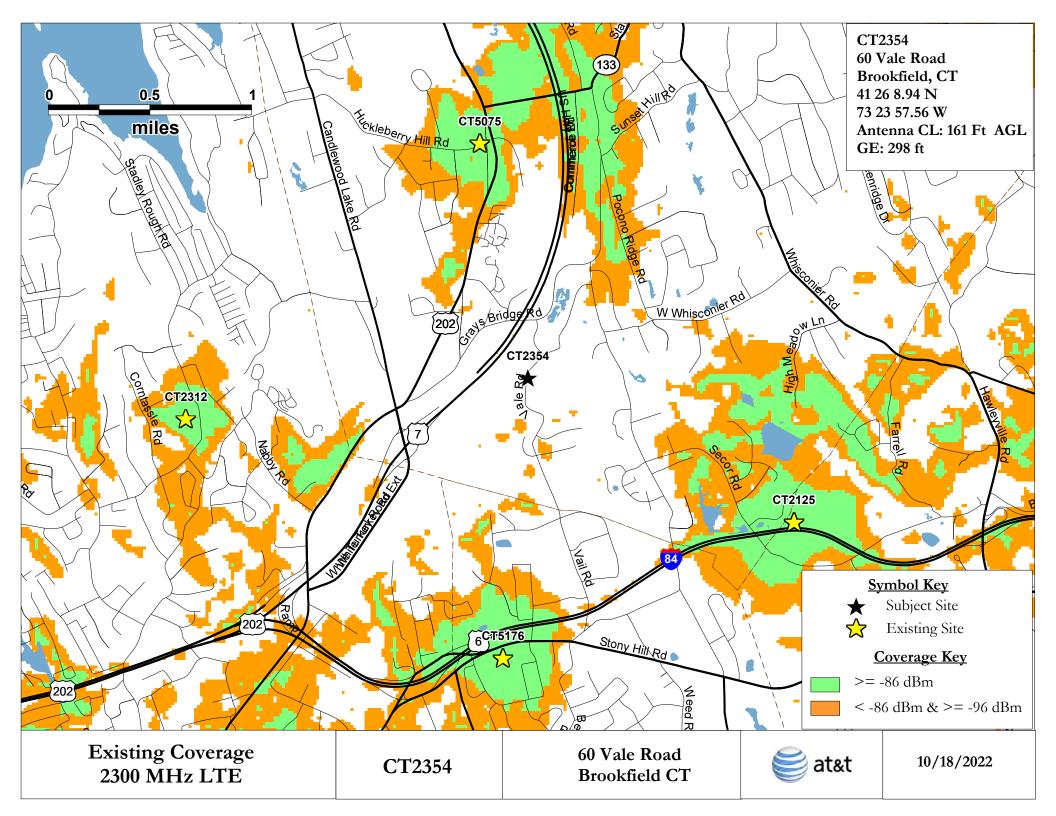


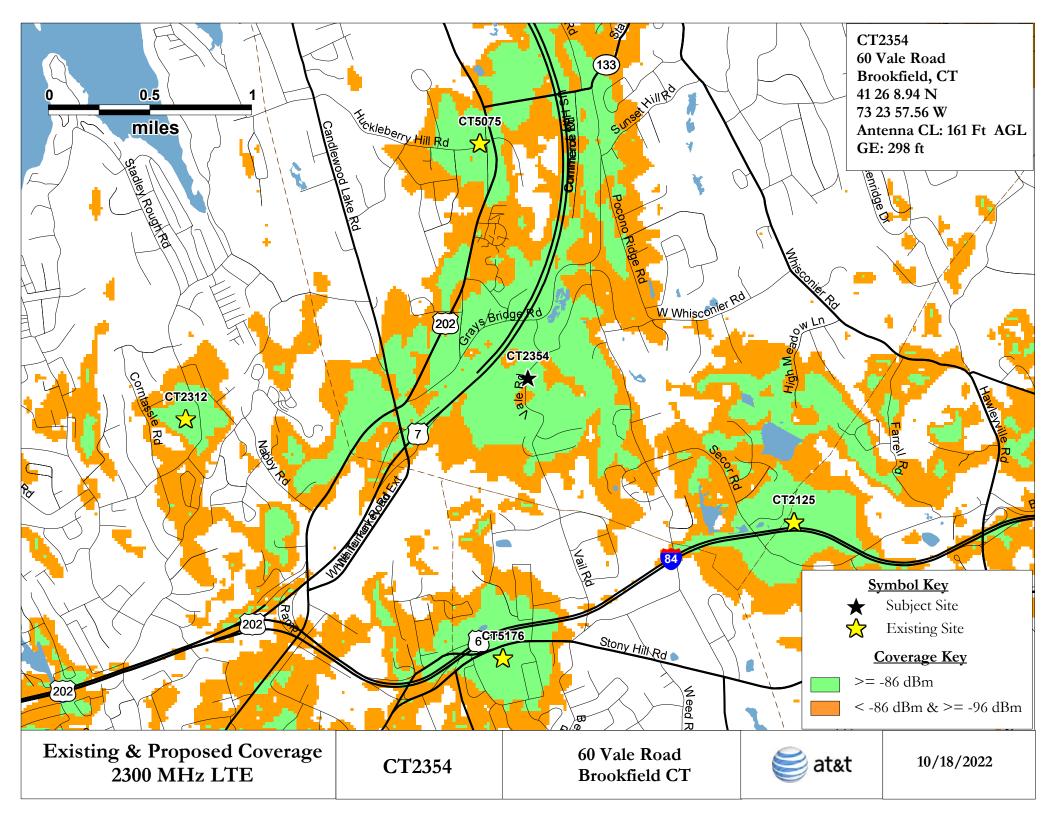


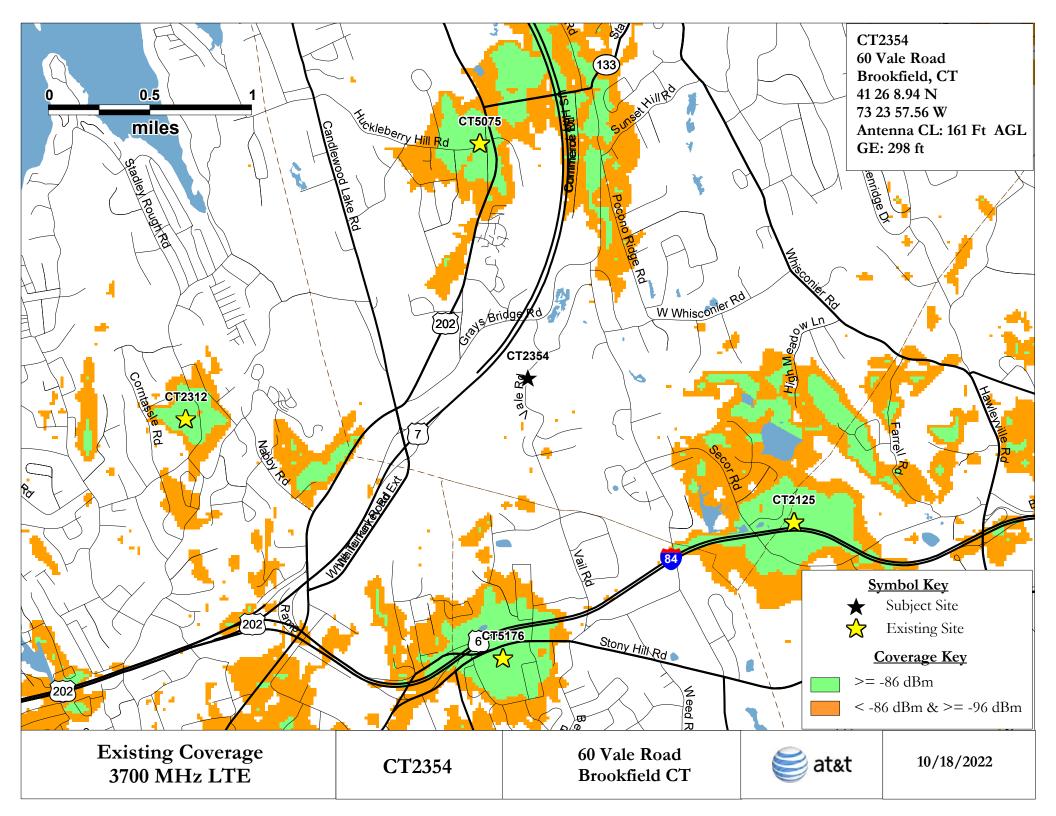


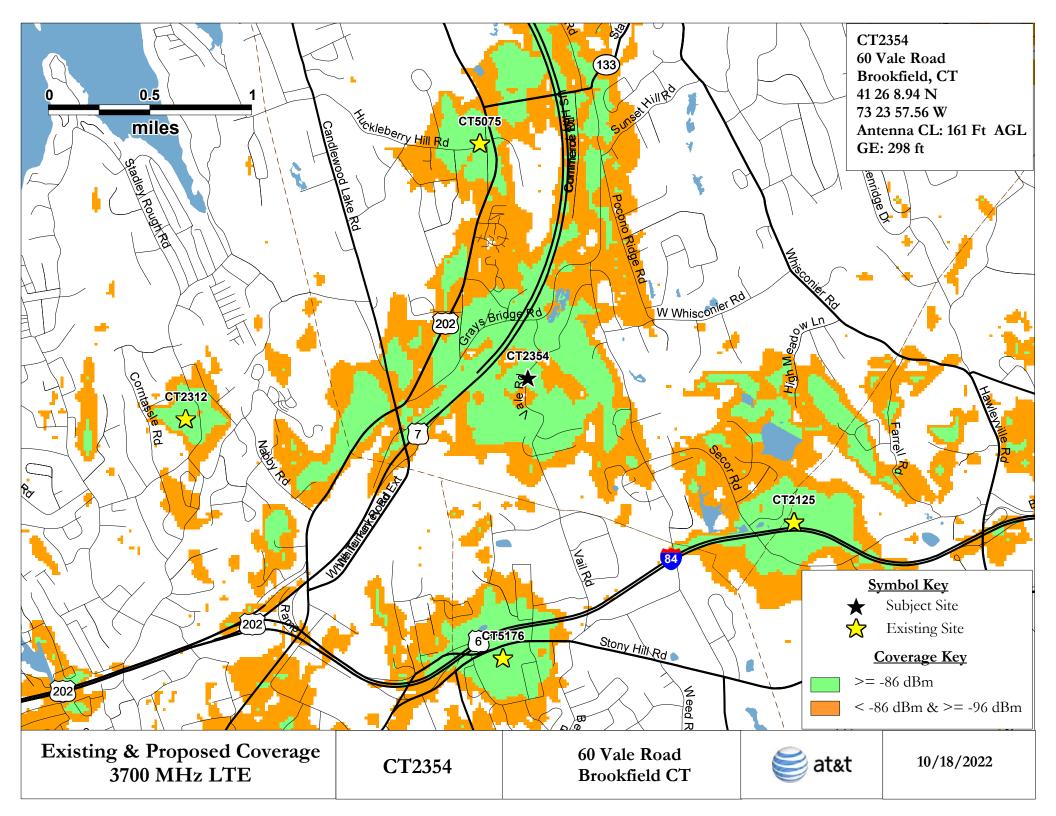












ATTACHMENT 3



C Squared Systems, LLC 65 Dartmouth Drive Auburn, NH 03032 (603) 644-2800 support@csquaredsystems.com

Calculated Radio Frequency Emissions Report



CT2354 60 Vale Road, Brookfield, CT

October 18, 2022

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1. Introduction

The purpose of this report is to investigate compliance with applicable FCC regulations for the proposed installation of AT&T antenna arrays on a new monopole tower located at 60 Vale Road in Brookfield, CT. The coordinates of the proposed tower are 41° 26' 08.94" N, 73° 23' 57.56" W.

AT&T is proposing the following:

1) Install nine (9) multi-band antennas (three (3) per sector) to support its commercial LTE network and the FirstNet National Public Safety Broadband Network ("NPSBN").

This report considers the planned antenna configuration for $AT\&T^1$ to derive the resulting % Maximum Permissible Exposure of its proposed installation.

2. FCC Guidelines for Evaluating RF Radiation Exposure Limits

In 1985, the FCC established rules to regulate radio frequency (RF) exposure from FCC licensed antenna facilities. In 1996, the FCC updated these rules, which were further amended in August 1997 by OET Bulletin 65 Edition 97-01. These new rules include Maximum Permissible Exposure (MPE) limits for transmitters operating between 300 kHz and 100 GHz. The FCC MPE limits are based upon those recommended by the National Council on Radiation Protection and Measurements (NCRP), developed by the Institute of Electrical and Electronics Engineers, Inc., (IEEE) and adopted by the American National Standards Institute (ANSI).

The FCC general population/uncontrolled limits set the maximum exposure to which most people may be subjected. General population/uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or cannot exercise control over their exposure.

Public exposure to radio frequencies is regulated and enforced in units of milliwatts per square centimeter (mW/cm²). The general population exposure limits for the various frequency ranges are defined in the attached "FCC Limits for Maximum Permissible Exposure (MPE)" in Attachment C of this report.

Higher exposure limits are permitted under the occupational/controlled exposure category, but only for persons who are exposed as a consequence of their employment and who have been made fully aware of the potential for exposure, and they must be able to exercise control over their exposure. General population/uncontrolled limits are five times more stringent than the levels that are acceptable for occupational, or radio frequency trained individuals. Attachment C contains excerpts from OET Bulletin 65 and defines the Maximum Exposure Limit.

Finally, it should be noted that the MPE limits adopted by the FCC for both general population/uncontrolled exposure and for occupational/controlled exposure incorporate a substantial margin of safety and have been established to be well below levels generally accepted as having the potential to cause adverse health effects.

¹ As referenced to AT&T's Radio Frequency Design Sheet updated 03/01/2022.



3. RF Exposure Prediction Methods

The emission field calculation results displayed in the following figures were generated using the following formula as outlined in FCC bulletin OET 65:

PowerDensity=
$$\left(\frac{EIRP}{\pi \times R^2}\right) \times Off BeamLoss$$

Where:

EIRP = Effective Isotropic Radiated Power

R = Radial Distance =
$$\sqrt{(H^2 + V^2)}$$

H = Horizontal Distance from antenna in meters

V = Vertical Distance from radiation center of antenna in meters

Off Beam Loss is determined by the selected antenna patterns

Ground reflection factor of 2.0

These calculations assume that the antennas are operating at 100 percent capacity, that all antenna channels are transmitting simultaneously, and that the radio transmitters are operating at full power. Obstructions (trees, buildings, etc.) that would normally attenuate the signal are not taken into account. The calculations assume even terrain in the area of study and do not take into account actual terrain elevations which could attenuate the signal. As a result, the predicted signal levels reported below are much higher than the actual signal levels will be from the final installations.



4. Antenna Inventory

Table 1 below outlines AT&T's proposed antenna configuration for the site. The associated data sheets and antenna patterns for these specific antenna models are included in Attachments C.

Operator	Sector / Call Sign	TX Freq (MHz)	Power at Antenna (Watts)	Ant Gain (dBi)	Power EIRP (Watts)	Antenna Model	Beam Width	Mech. Tilt	Length (ft)	Antenna Centerline Height (ft)
		763	160	15.6	5809		73			
		1900	160	18.1	10330	TPA65R-BU8D	66	0	8.0	
		2100	240	18.3	16226		66			
	Alpha /	739	160	15.1	5177		75			171
	10°	850	160	16.0	6370	DMP65R-BU8D	64	0	8.0	161
		2300	160	18.1	10330		54			
		3500	108	23.5	24178	AIR 6419	11	0	2.5	
		3500	108	23.5	24178	AIR 6449	11	0	2.5	
	Beta / 130°	763	160	15.6	5809	TPA65R-BU8D DMP65R-BU8D	73	0 8.	8.0	161
		1900	160	18.1	10330		66			
		2100	240	18.3	16226		66			
AT&T		739	160	15.1	5177		75	0	8.0	
mai		850	160	16.0	6370		64			
		2300	160	18.1	10330		54			
		3500	108	23.5	24178	AIR 6419	11	0	2.5	
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		763	160	15.6	5809		73			
		1900	160	18.1	3.1 10330 TPA65R-BU8D	TPA65R-BU8D	66	0 8.0	8.0	
		2100	240	18.3	16226		66			
	Gamma /	739	160	15.1	5177		75			161
	250°	850	160	16.0	6370	DMP65R-BU8D	64	0	8.0	101
		2300	160	18.1	10330		54			
		3500	108	23.5	24178	AIR 6419	11	0	2.5	
		3500	108	23.5	24178	AIR 6449	11	0	2.5	

Table 1: Proposed Antenna Inventory2 3

² Antenna heights are in reference to AT&T's Radio Frequency Design Sheet updated 03/01/2022.

³ Transmit power assumes 0 dB of cable loss.



5. Calculation Results

The calculated power density results are shown in Figure 1 below. For completeness, the calculations for this analysis range from 0 feet horizontal distance (directly below the antennas) to a value of 3,000 feet horizontal distance from the site. In addition to the other worst-case scenario considerations that were previously mentioned, the power density calculations to each horizontal distance point away from the antennas was completed using a local maximum off beam antenna gain (within \pm 5 degrees of the true mathematical angle) to incorporate a realistic worst-case scenario.

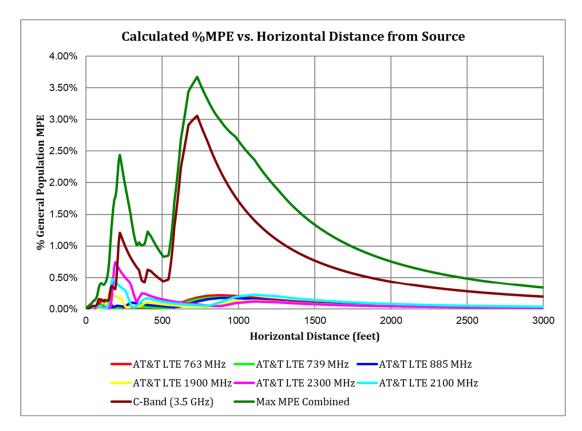


Figure 1: Graph of General Population % MPE vs. Distance

The highest percent of MPE (3.67% of the General Population limit) is calculated to occur at a horizontal distance of 729 feet from antennas. Please note that the percent of MPE calculations close to the site take into account off beam loss, which is determined from the vertical pattern of the antennas used. Therefore, RF power density levels may increase as the distance from the site increases. At distances of approximately 1500 feet and beyond, one would now be in the main beam of the antenna pattern and off beam loss is no longer considered. Beyond this point, RF levels become calculated solely on distance from the site and the percent of MPE decreases significantly as distance from the site increases.



Table 2 below lists percent of MPE values as well as the associated parameters that were included in the calculations. The highest percent of MPE value was calculated to occur at a horizontal distance of 729 feet from the site (reference Figure 1).

As stated in Section 3, all calculations assume that the antennas are operating at 100 percent capacity, that all antenna channels are transmitting simultaneously, and that the radio transmitters are operating at full power. Obstructions (trees, buildings etc.) that would normally attenuate the signal are not taken into account. In addition, a six-foot height offset was considered in this analysis to account for average human height. As a result, the predicted signal levels are significantly higher than the actual signal levels will be from the final configuration. The results presented in Figure 1 and Table 2 assume level ground elevation from the base of the tower out to the horizontal distances calculated.

Carrier	Number of Transmitters	Power out of Base Station Per Transmitter (Watts)	Antenna Height (Feet)	the Base of	Power Density (mW/cm ²)	Limit (mW/cm ²)	% MPE
AT&T LTE 1900 MHz	1	160.0	161.0	729	0.000362	1.000	0.04%
AT&T LTE 2100 MHz	1	240.0	161.0	729	0.000568	1.000	0.06%
AT&T LTE 2300 MHz	1	160.0	161.0	729	0.000744	1.000	0.07%
AT&T LTE 739 MHz	1	160.0	161.0	729	0.000739	0.493	0.15%
AT&T LTE 763 MHz	1	160.0	161.0	729	0.000912	0.509	0.18%
AT&T LTE 885 MHz	1	160.0	161.0	729	0.000693	0.590	0.12%
C-Band (3.5 GHz)	2	108.5	161.0	729	0.030578	1.000	3.06%
						Total	3.67%

Table 2: Maximum Percent of General Population Exposure Values



6. Conclusion

The above analysis verifies that RF exposure levels from the site with AT&T's proposed antenna configuration will be well below the maximum permissible levels as outlined by the FCC in the OET Bulletin 65 Ed. 97-01. Using the conservative calculation methods and parameters detailed above, the maximum cumulative percent of MPE in consideration of all transmitters is calculated to be **3.67% of the FCC limit (General Population/Uncontrolled)**. This maximum cumulative percent of MPE value is calculated to occur 729 feet away from the site.

7. Statement of Certification

I certify to the best of my knowledge that the statements in this report are true and accurate. The calculations follow guidelines set forth in ANSI/IEEE Std. C95.3, ANSI/IEEE Std. C95.1 and FCC OET Bulletin 65 Edition 97-01.

Report Prepared By:

Ram Acharya RF Engineer 1 C Squared Systems, LLC October 18, 2022 Date

Mait f Fand

Reviewed/Approved By:

Martin J. Lavin Senior RF Engineer C Squared Systems, LLC October 18, 2022 Date



Attachment A: References

<u>OET Bulletin 65 - Edition 97-01 - August 1997</u> Federal Communications Commission Office of Engineering & Technology

IEEE C95.1-2005, IEEE Standard Safety Levels With Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz IEEE-SA Standards Board

IEEE C95.3-2002 (R2008), IEEE Recommended Practice for Measurements and Computations of Radio Frequency Electromagnetic Fields With Respect to Human Exposure to Such Fields, 100 kHz-300 GHz IEEE-SA Standards Board



Frequency	Electric Field	Magnetic Field	Derrer Derreiter (C)	A succession of Times
Range	Strength (E)	Strength (E)	Power Density (S) (mW/cm ²)	Averaging Time $ E ^2$, $ H ^2$ or S (minutes)
(MHz)	(V/m)	(A/m)	(III w/cIII)	$ \mathbf{L} , \mathbf{\Pi} $ of S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842/f	4.89/f	$(900/f^2)^*$	6
30-300	61.4	0.163	1.0	6
300-1500	-	-	f/300	6
500-100,000	-	-	5	6

Attachment B: FCC Limits for Maximum Permissible Exposure (MPE)

(B) Limits for General Population/Uncontrolled Exposure⁵

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (E) (A/m)	Power Density (S) (mW/cm ²)	Averaging Time $ E ^2$, $ H ^2$ or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	$(180/f^2)^*$	30
30-300	27.5	0.073	0.2	30
300-1500	-	-	f/1500	30
1500-100,000	-	-	1.0	30

Table 3: FCC Limits for Maximum Permissible Exposure

⁴ Occupational/controlled limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. Limits for occupational/controlled exposure also apply in situations when an individual is transient through a location where occupational/controlled limits apply provided he or she is made aware of the potential for exposure.

⁵ General population/uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or cannot exercise control over their exposure.



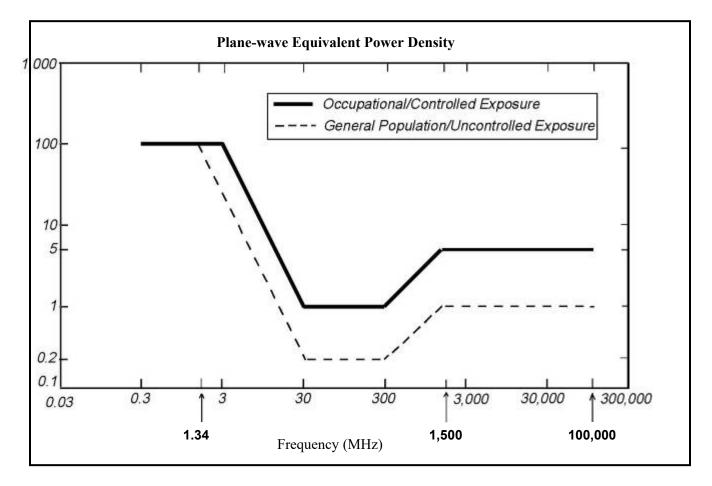
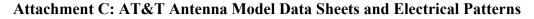
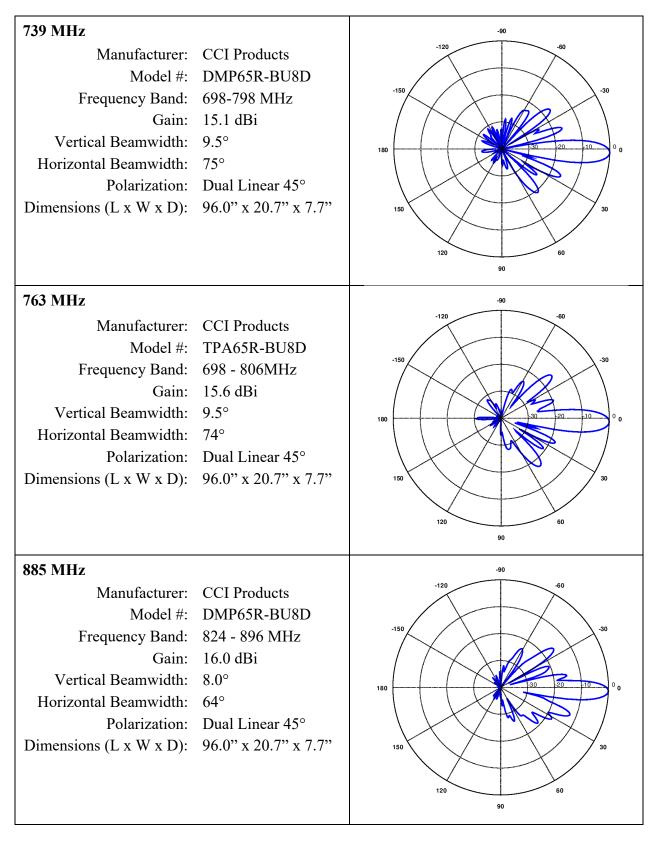


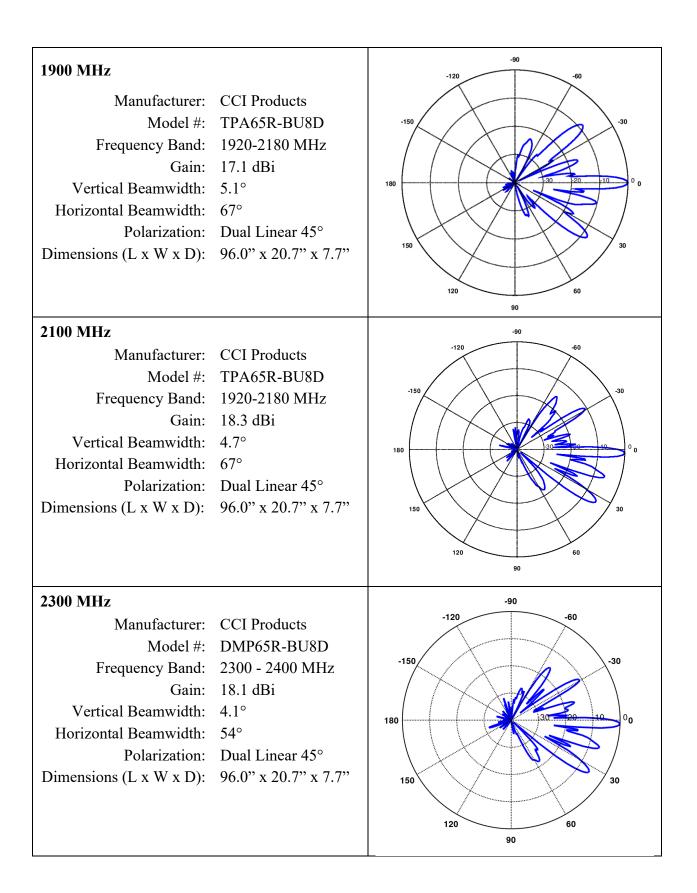
Figure 2: Graph of FCC Limits for Maximum Permissible Exposure (MPE)











ATTACHMENT 4

REMOTE FIELD REVIEW



CT SITING COUNCIL DOCKET NO. 512 RESPONSE TO INTERROGATORY 37 CT076 BROOKFIELD SOUTH 60 VALE ROAD BROOKFIELD, CT 068

PREPARED FOR:



PREPARED BY:

ALL-POINTS TECHNOLOGY CORPORATION, P.C. 567 Vauxhall Street Extension – Suite 311 Waterford, CT 06385



Photo Locations Photo Markers Proto Markers Proposed Compound Approximate Host Property Boundary Proposed Equipment Approximate Parcel Boundary

Proposed Lease Area

Proposed Utility Pole Proposed Overhead Utilities ----- Proposed Compound

1 inch = 120 feet

ALL-POINTS TECHNOLOGY CORPORATION Feet

120

Proposed Wireless Telecommunications Facility Brookfield South 60 Vale Road Brookfield, Connecticut



PHOTO 1 DESCRIPTION

VALE ROAD LOOKING NORTHWEST TOWARD ACCESS DRIVE







VALE ROAD LOOKING WEST TOWARD ACCESS DRIVE







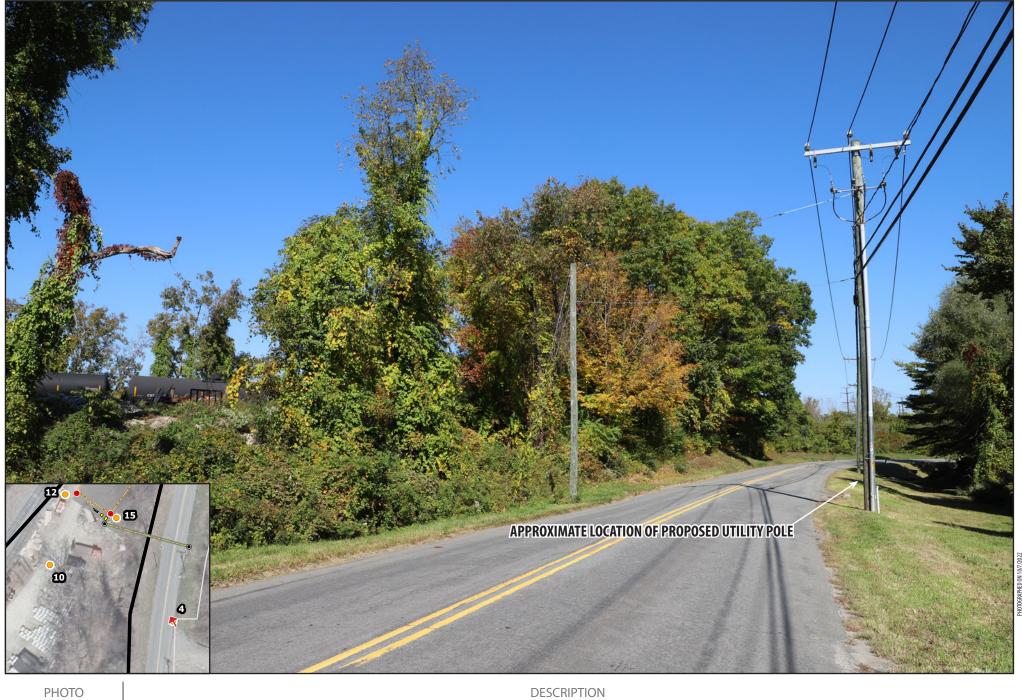
PHOTO

DESCRIPTION

VALE ROAD LOOKING SOUTHWEST TOWARD ACCESS DRIVE







DESCRIPTION

VALE ROAD LOOKING NORTHWEST







РНОТО	DESCRIPTION
5	EXISTING ACCESS DRIVE LOOKING WEST





PHOTO	
6A	EXISTING ACCESS DRIVE LOOKING EAST







6B	EXISTING ACCESS DRIVE LOOKING NORTH
рното	DESCRIPTION







РНОТО	DESCRIPTION
7	EXISTING ACCESS DRIVE LOOKING NORTH







EXISTING ACCESS DRIVE LOOKING NORTHEAST







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	9		

EXISTING ACCESS DRIVE LOOKING NORTHEAST

ALL-POINTS





РНОТО	DESCRIPTION
10	EXISTING ACCESS DRIVE LOOKING NORTHEAST





WEST OF PROPOSED COMPOUND LOOKING SOUTHEAST







РНОТО	DESCRIPTION
12	SOUTHWEST CORNER OF PROPOSED COMPOUND LOOKING NORTHWEST





рното	DESCRIPTION
13	NORTHWEST CORNER OF PROPOSED COMPOUND LOOKING SOUTHEAST





PHOTO	
14	

NORTH OF PROPOSED COMPOUND LOOKING SOUTHWEST







PHOTO

15

DESCRIPTION

SOUTHEAST CORNER OF PROPOSED COMPOUND LOOKING NORTHWEST



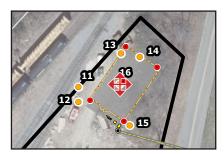












РНОТО **16** DESCRIPTION
VIEW FROM PROPOSED TOWER CENTER - FOUR CARDINAL POINTS





HOTOGRAPHED ON 10/7/2022