

September 22, 2017

Town of Edgartown
Edgartown Planning Board
70 Main Street
Edgartown, MA 02539

RE: *New Cingular Wireless PCS, LLC (AT&T) special permit to construct a 117 foot monopole at 14 Sampson Avenue and their response to the Planning Board's request for additional information concerning alternate locations.*

Dear Planning Board Members:

On behalf of AT&T with respect to the above-referenced special permit application, (the "Application") and in response to the Board's request for additional information concerning the two potential alternate candidates, "Q8" – 2 Majane Lane (Map/Lot 34/17.1) and "X8" – 14 Jeremiah Road (Map/Lot 34/257) for which AT&T has Option and Lease Agreements in place.

Attached please find Exhibits 3, 6 and 7 showing AT&T's respective coverage from the proposed 14 Sampson Ave facility and the two alternate locations cited above, along with a brief narrative explaining the comparative coverage of each. (Please note that Exhibit 3 titled: "MA2712 Chappaquiddick - AT&T 850 MHz UMTS Coverage with Proposed Site" was previously provided in the original Application but is being included here for ease of access and comparison to the attached Exhibits 6 and 7.)

Please note that for the purpose of this analysis, the tower height, equipment configurations and radio frequency parameter (antenna models, azimuths, transmit power, etc.) used to generate the plots remained constant across all candidates.

Attachments:

Sincerely:

Dan Goulet
RF Engineer, Representing AT&T

cc: Brian Grossman, Esq., Anderson & Kreiger
Dan Bilezikian

Coverage Analysis and Propagation Plots

The signal propagation coverage plots provided below show coverage for the 850 MHz frequency range and were produced using deciBel Planner™, a Windows-based RF propagation computer modeling program and network planning tool. The propagation models used to generate these plots are based on the tuned models derived from actual drive test data collected in the subject area on February 3, 2016.

The plots included as attachments in this report show coverage based on the minimum required received signal code power (RSCP) needed to support AT&T's 3G service offerings in a rural area.

- The green areas indicate signal strengths of -75 dBm or greater, the threshold associated with reliable indoor coverage, high data rates and enhanced customer experience.
- The orange areas indicate signal strengths of -75 dBm to -85 dBm. In a rural area like Chappaquiddick this range may still be suitable for indoor coverage during the off-season but could have potentially slower data speeds and less reliable coverage during the peak season when demand on the network is high.
- The red areas indicate signal strengths within the range of -85 dBm to -90 dBm and represents areas of less reliable coverage and slower data speeds. Service in these areas will be more susceptible to degradation during peak seasons when wireless usage demand is high.
- All other areas (depicted in white) fall within coverage areas characterized by poor service quality, low data throughput, and the substantial likelihood of unreliable service or the complete inability to connect to the network.

All of the exhibits described below show the composite coverage of the subject site combined with the coverage from the existing AT&T neighboring sites whose signals may be covering parts of Chappaquiddick.

Exhibits & Narrative

Exhibit 3 titled: “MA2712 Chappaquiddick - AT&T 850 MHz UMTS Coverage with Proposed Site” shows the composite coverage of the proposed “Facility” combined with the coverage from the existing AT&T neighboring sites. As can be seen, the proposed site will bring the much needed coverage to a substantial portion of Chappaquiddick and the residential area defined by Chappaquiddick, Pocha and Dike Roads, where many permanent residents are located.

Exhibit 6 titled: “MA2712 Chappaquiddick - AT&T 850 MHz UMTS Coverage with Alt Q8 (2 Majane Ln)” shows the composite coverage of the alternate location at 2 Majane Lane. This site is approximately .6 mile west of the proposed location. Although a facility at this location would provide coverage to much of the Coverage Objective as defined in my prior report, the propagation map demonstrates that much of the

targeted area defined by Chappaquiddick, Pocha and Dike Roads, where many of the permanent residents are located, would now be served by much weaker signals. In addition, the site provides redundant coverage to an area of Edgartown where AT&T has a planned site near Katama Rd. In contrast, the proposed Facility provides solid coverage to this same area. Additionally, comparative analyses of the incremental population counts for both sites shows a 10.1% decrease in covered POP's with the alternate Q8 2 Majane Lane location.

Exhibit 7 titled: "MA2712 Chappaquiddick - AT&T 850 MHz UMTS Coverage with Alt X8 (14 Jeremiah Rd)" shows the composite coverage of this second alternate location. This candidate is .6 mile southwest of the proposed location and provides less favorable coverage than the proposed, opening new gaps along Narragansett Ave and, as with the alternate Q8, provides much weaker signal levels to the residential neighborhoods within the Chappaquiddick, Pocha and Dike Road area referenced earlier. Additionally, comparative analysis of the incremental population counts for this location shows an 11.2% decrease as compared to the proposed 14 Sampson Ave location.

In summary, AT&T must design each new cell site based on the existing and planned network. They must be strategically placed to strike a balance between the target area, the overall geographic coverage area it will serve, and the site's capacity to support the usage within the coverage footprint. Given AT&T's current network plan, the proposed 14 Sampson Ave location substantially meets their coverage objectives for Chappaquiddick and Edgartown. In my professional opinion, by providing the most reliable coverage to the greatest number of residents, as well as providing coverage to areas of public concern such as the beaches, the Facility at 14 Sampson Avenue best meets AT&T's coverage needs for the Coverage Objective on Chappaquiddick.



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Exhibits

Exhibit 3: MA2712 Chappaquiddick - AT&T 850 MHz UMTS Coverage with Proposed Site

Site Data

Site: Map/Lot 34-197
Lat: 41-22-20.79 N
Long: 70-28-14.61W
GE: 19 Ft.
CL: 113 Ft.

Plot Information

UMTS 850 MHz
FCC License: KNKN705

Symbol Key

- ★ Existing Site
- ★ Proposed Site
- ★ Planned Site

Coverage Key

- Greater than -75 dBm
- 75 to -85 dBm
- 85 to -90 dBm
- Less than -90 dBm

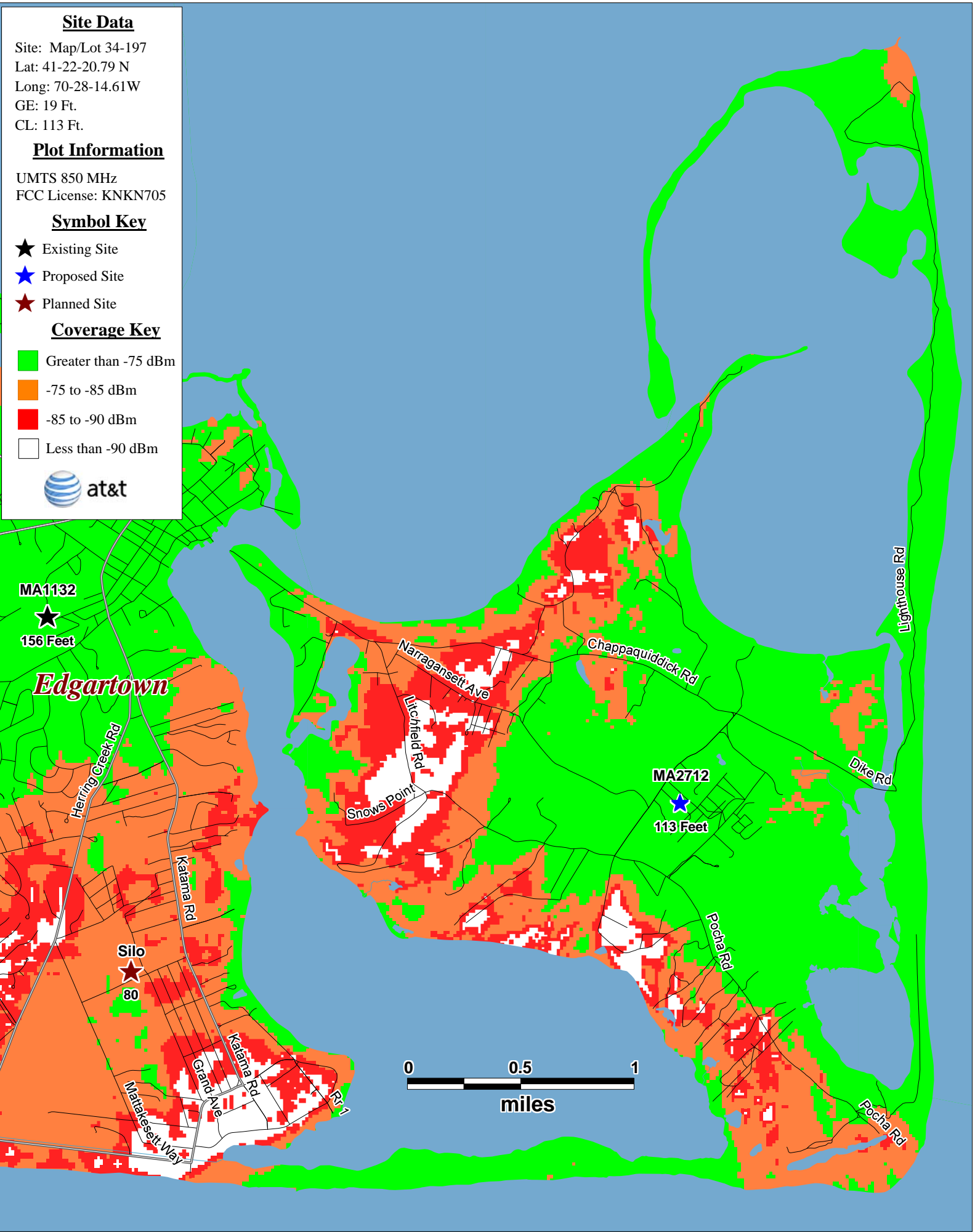


Exhibit 6: MA2712 Chappaquiddick - AT&T 850 MHz UMTS Coverage with Alt Q8 (2 Majane Ln)

Site Data

Site: Map/Lot 34-17.1
Lat: 41-22-24.02 N
Long: 70-28-53.04W
GE: 56 Ft.
CL: 113 Ft.

Plot Information

UMTS 850 MHz
FCC License: KNKN705

Symbol Key

- ★ Existing Site
- ★ Proposed Site
- ★ Alternate Site
- ★ Planned Site

Coverage Key

- Greater than -75 dBm
- 75 to -85 dBm
- 85 to -90 dBm
- Less than -90 dBm

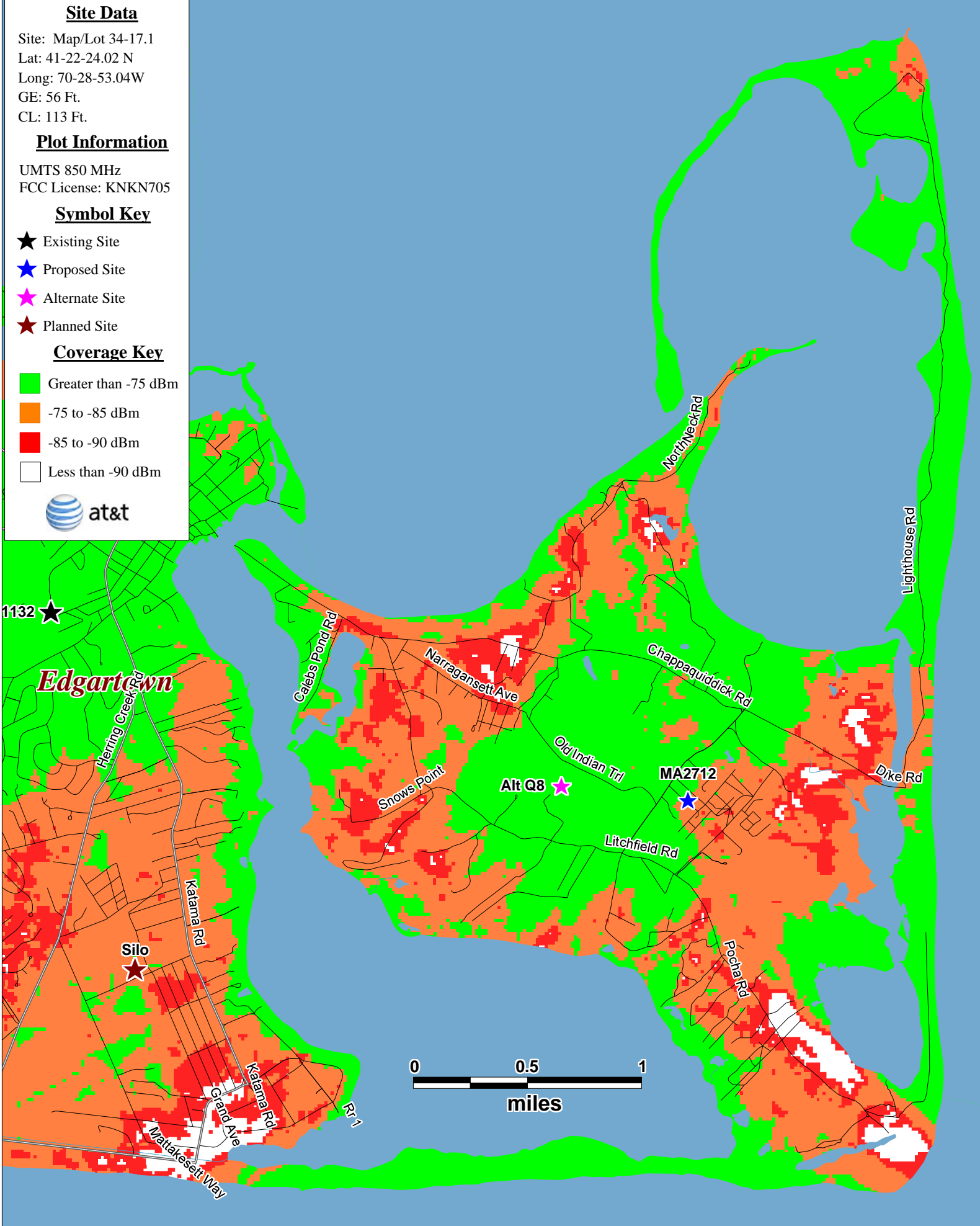


Exhibit 7: MA2712 Chappaquiddick - AT&T 850 MHz UMTS Coverage with Alt X8 (14 Jeremiah Rd)

Site Data

Site: Map/Lot 34-257
Lat: 41-22-2.45 N
Long: 70-28-48.98W
GE: 51 Ft.
CL: 113 Ft.

Plot Information

UMTS 850 MHz
FCC License: KNKN705

Symbol Key

- ★ Existing Site
- ★ Proposed Site
- ★ Alternate Site
- ★ Planned Site

Coverage Key

- Greater than -75 dBm
- 75 to -85 dBm
- 85 to -90 dBm
- Less than -90 dBm

