TOWN OF
SOUTHOLD
NEW YORK

Wireless Communications Master Plan

JUNE 27, 2025
SECOND DRAFT

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CONSULTANTS, INC.

INTRODUCTION

90% smartphone penetration **in** United States[1]

100 trillion MBs **wireless data** used in 2023[2]

76% Adults live in **wireless only** households[3]

Each year, an estimated 240 million calls are made to 9-1-1 in the United States, with over 80% originating from wireless devices.[4] Smartphones and other wireless devices have become indispensable tools in daily life, offering instant access to the internet, navigation, files, videos, news, and countless applications. Consumers using these devices expect fast and uninterrupted connections for their internet, maps, files, music, and other applications.

Given the prevalence of mobile technology, it is essential for both local responders and residents to understand the availability and coverage of commercial wireless networks within their communities.

The Wireless Communications Master Plan (Plan) has been developed as a resource to efficiently address the need for improved wireless services in the Town of Southold (Town) while preserving its unique character. This Plan includes maps of existing wireless facilities, simulations of current wireless coverage, the identification of areas with gaps in wireless service and potential scenarios for filling in wireless coverage gaps. The conceptual scenarios illustrate what may be needed in the future to support strategic planning and design of future wireless communications infrastructure throughout the Town.

This analysis explores how deficiencies in wireless service impact consumers, businesses, and, most critically, the ability to contact first responders during emergencies.

Wireless definitions of certain technical terms used within the Plan can be found in *Appendix A*.

1 Pew Research Center, Americans' Use of Mobile Technology and Home Broadband (2024)
2 CTIA Annual Survey (2024)
3 Wireless Substitution: Early Release of Estimates from the National Health Interview Survey (July-December 2023)
4 National Emergency Number Association (NENA) www.nena.org/page/911statistics

PROCESS

The Town-Wide Wireless Communications Master Plan for commercial wireless services begins with a comprehensive evaluation of the existing wireless infrastructure within the Town and a one-mile radius beyond its jurisdictional boundary, collectively referred to as the Study Area.

Mapping the existing commercial wireless infrastructure forms the foundation for understanding the current state of wireless deployment throughout the Town. Simulating wireless coverage from existing infrastructure provides a visual representation of areas with little to no service, helping to identify critical coverage gaps.

The analysis of these identified gaps enables a strategic and well-informed approach to improving wireless coverage across the Town. This approach guides the wireless industry in deploying solutions to enhance service reliability for everyday users and emergency responders alike.

The Plan presents conceptual scenarios to effectively address wireless coverage deficiencies and ensure the wireless network is robust enough to meet community demands. Particularly for those requiring access to emergency services.

Field Assessment

WIRELESS INFRASTRUCTURE

According to the Code of Federal Regulations a personal wireless facility means, in part, an antenna facility or a structure that is used for the provision of personal wireless service. This is a system of antennas and ancillary equipment on supporting structures classified either a tower or base station.

- **Towers:** Typically monopole, lattice, or guyed structures specifically designed and constructed to support antennas.
- **Base Stations:** Refer to non-tower structures, such as utility poles, rooftops, water tanks, or other similar fixed structures, that serve as mounting supports for antennas and associated equipment.

Both towers and base stations can be designed in various ways to integrate with their surroundings:

- **Non-concealed:** Structures are fully visible without any attempt to blend in to surrounding area.
- **Semi-concealed:** Structures use paint or design elements to harmonize with the environment.
- **Concealed:** Structures are hidden behind radio frequency-transparent materials, disguising their purpose or mimicking other objects.

These facilities provide wireless communication services for mobile phone calls, text, internet and data connectivity for individual users. Wireless facilities can be installed on private or public property, within street rights-of-way, or on electrical utility easements, depending on the specific needs and community regulations.

Sample types of towers and base stations within the Town's Study Area:

ANTENNA TYPE

Macro Cell Wireless Facilities

Macro cell wireless facilities are typically taller structures designed to provide wide-area coverage and flexibility for service providers. These facilities can cover a radius of up to two miles in densely populated urban areas and up to four miles in suburban or rural locations, assuming minimal terrain or vegetation obstructions. Their height allows for the collocation of multiple service providers on a single structure, supporting various generations of technology (e.g., 4G, LTE, 5G). However, their large size often makes them highly visible, which can raise concerns in certain communities.

Small Cell Wireless Facilities

In contrast to macro cell towers, small cell wireless facilities are shorter, more compact, and designed to provide focused coverage over smaller areas. These facilities are commonly deployed in densely populated zones or along busy roadways to offload traffic from larger cell towers or to address aesthetic concerns in sensitive areas. Small cell facilities have a limited coverage radius, generally spanning a few hundred feet to a few blocks. Antennas are often mounted on existing infrastructure, such as utility poles, streetlights, or building rooftops, but they can also be installed as standalone structures.

Public Safety Wireless Facilities

Public safety wireless facilities are equipped with omnidirectional and, at times, microwave antennas to support communication for police, fire, ambulance, and other state and local public safety agencies. These facilities enable seamless communication within agencies and, when necessary, between different agencies to ensure effective coordination during emergencies.

Examples of Macro Wireless Facilities

Examples of Small Wireless Facilities

*picture courtesy of Raycap

WIRELESS INFRASTRUCTURE ASSESSMENT

The assessment process includes identifying the locations of all towers and base stations within the Study Area and cataloging the type of equipment present at each facility.

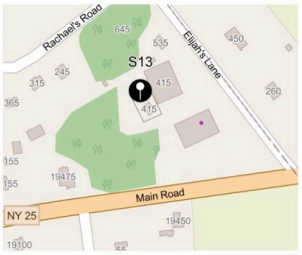
In October 2024, a comprehensive assessment of all known existing wireless facilities servicing the Town was conducted. This assessment serves as the baseline for creating inventory maps, wireless coverage maps, and conducting further analysis.

A total of 19 wireless facility locations were identified within the defined Study Area. Sixteen of these facilities are located within the Town, while three fall outside the Town's zoning jurisdiction. Of the three outside facilities, two are located within the Village of Greenport.

The Wireless Inventory Catalog in Appendix B, provides detailed information for each site, including a photograph of the tower or base station, a location map, ownership of the facility, service providers operating at the site, structure type and height, geographic coordinates (latitude and longitude), and associated tenant and property identifiers. An excerpt from the Catalog is provided below.

Site #: S13	415 Elijahs Ln, Southold
STRUCTURE TYPE:	Tower
FACILITY TYPE:	Monopole
ANTENNA TYPE:	Macro Cell
DESIGN TYPE:	Non-Concealed
LOCATION:	Private Property
FACILITY OWNER/ID:	Crown Castle / 843211
FACILITY SITE NAME:	Mattituck / Baxter
SERVICE PROVIDERS:	AT&T, Dish, T-Mobile, Verizon
FCC ASR:	1219856
HEIGHT:	110'
LATITUDE/LONGITUDE:	40.9994649, -72.511223
SCTM #:	1000-108.4-11.3
ZONING:	LB
NOTES:	NYNYNY0228 (AT&T)

TOWN OF SOUTHOLD NEW YORK



WIRELESS INVENTORY

The following *Table 1* summarizes the wireless inventory throughout the Town by category.

TOWN OF SOUTHOLD		
19 TOTAL SITES	**IN**	**OUT**
STRUCTURE TYPE		
Towers	14*	2
Base Stations	2	1
ANTENNA TYPE		
Macro Wireless	9	0
Small Wireless	0	0
Public Safety/Macro	7*	3
LOCATION		
Private Property	11	2
Public Property	5*	1
DESIGN TYPE		
Concealed	9*	0
Semi-Concealed	0	1
Non-Concealed	7	2

Table 1: Wireless Inventory

*Site S12 in this category is proposed and under review

The wireless inventory is categorized and illustrated on the following maps in *Figures 1 - 4.*

WIRELESS INFRASTRUCTURE MAPS

Structure Type

The maps in *Figures 1 and 2* display the inventory of wireless infrastructure within the Study Area, categorizing by Structure Type:

● Tower
◯ Base station

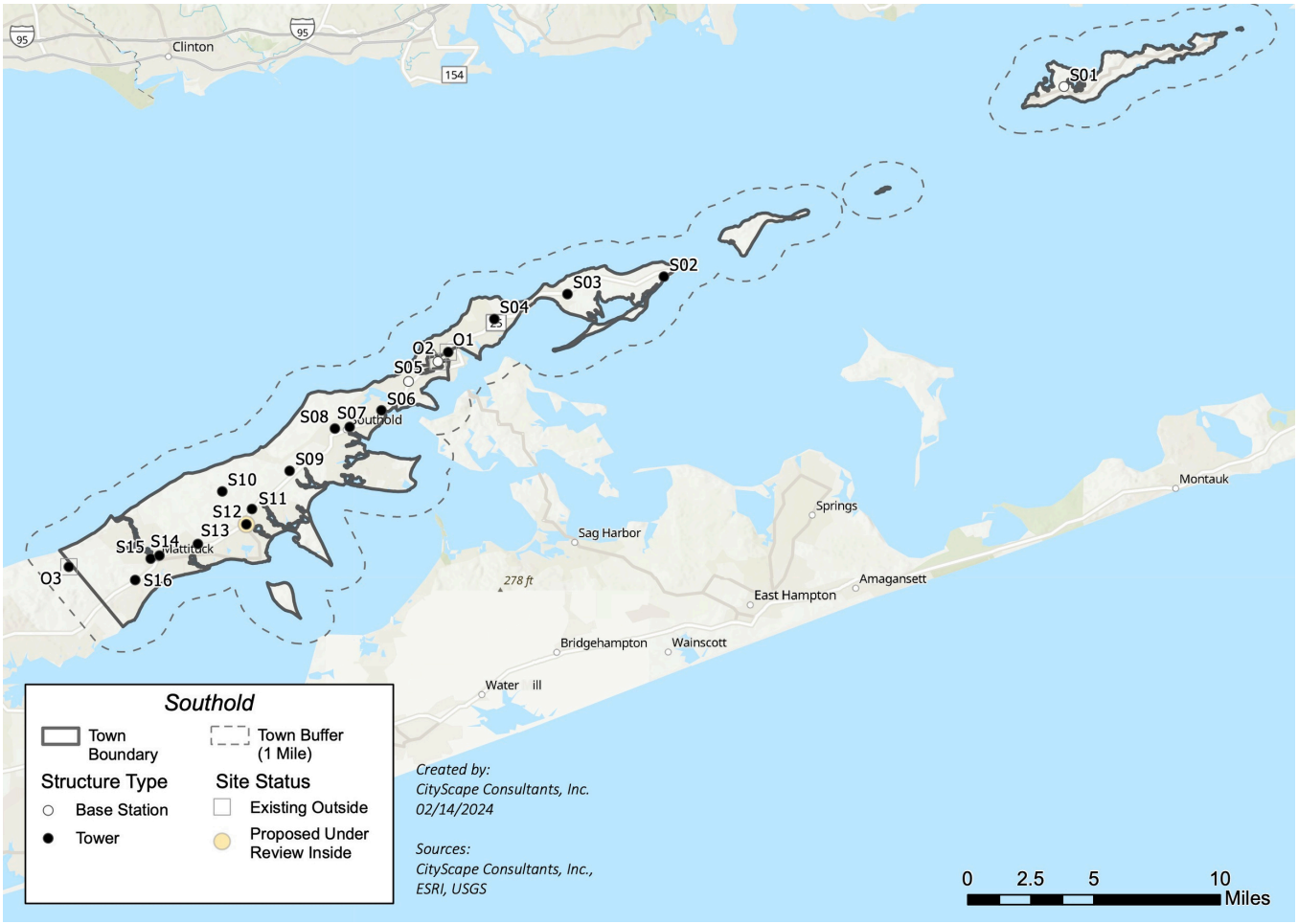


Figure 1: Map of Inventory by Structure Type
For the exact site locations please refer to Appendix B

Structure Type Continued

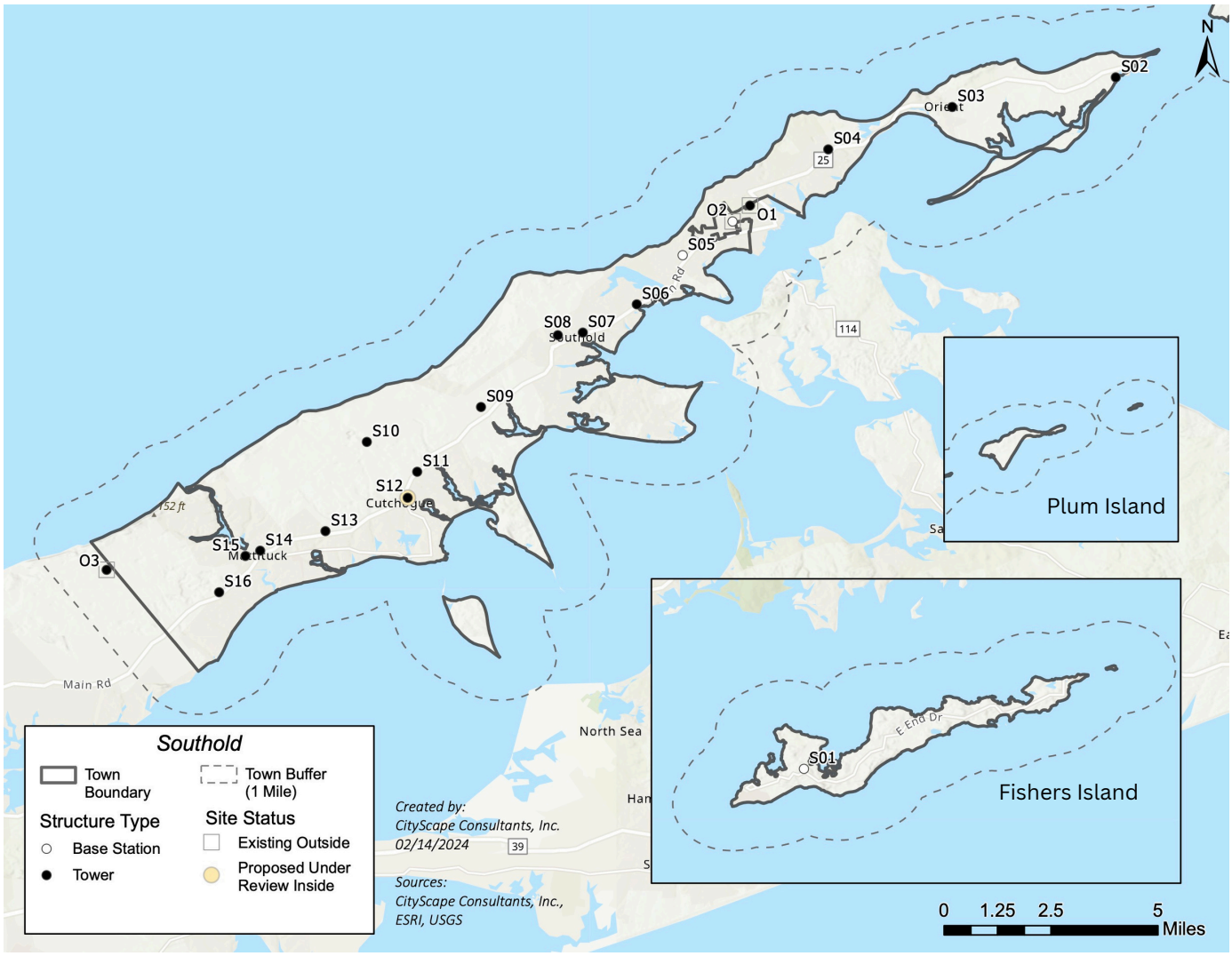


Figure 2: Zoomed In Map of Inventory by Structure Type

For the exact site locations please refer to Appendix B

Antenna Type

The maps in *Figure 3 and 4* depict the inventory of wireless infrastructure within the Study Area, categorizing by Antenna Type:

- Macro cell
- Small cell
- Public safety
- Public safety/Macro Cell combination

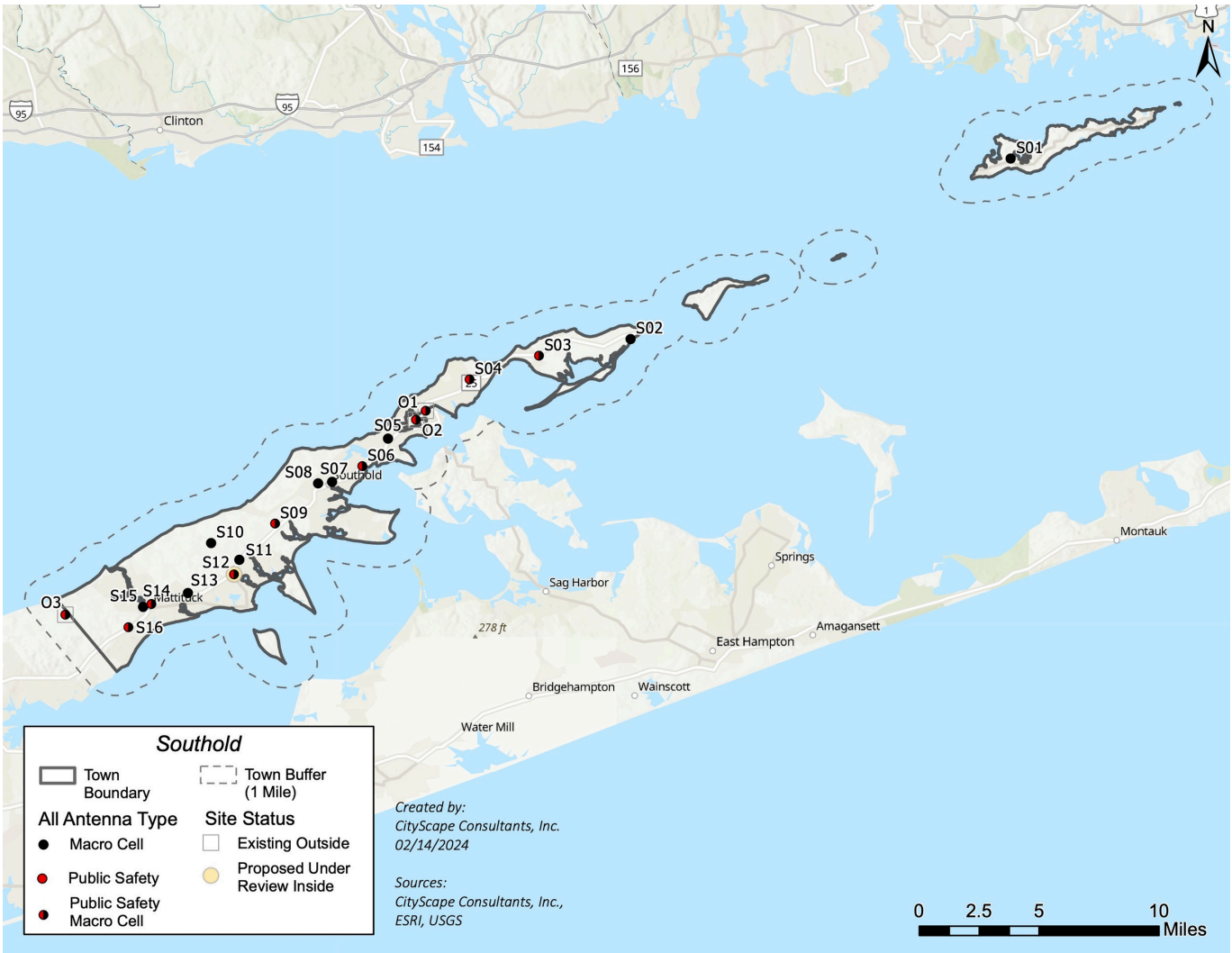


Figure 3: Map of Inventory by Antenna Type

For the exact site locations please refer to Appendix B

Antenna Type Continued

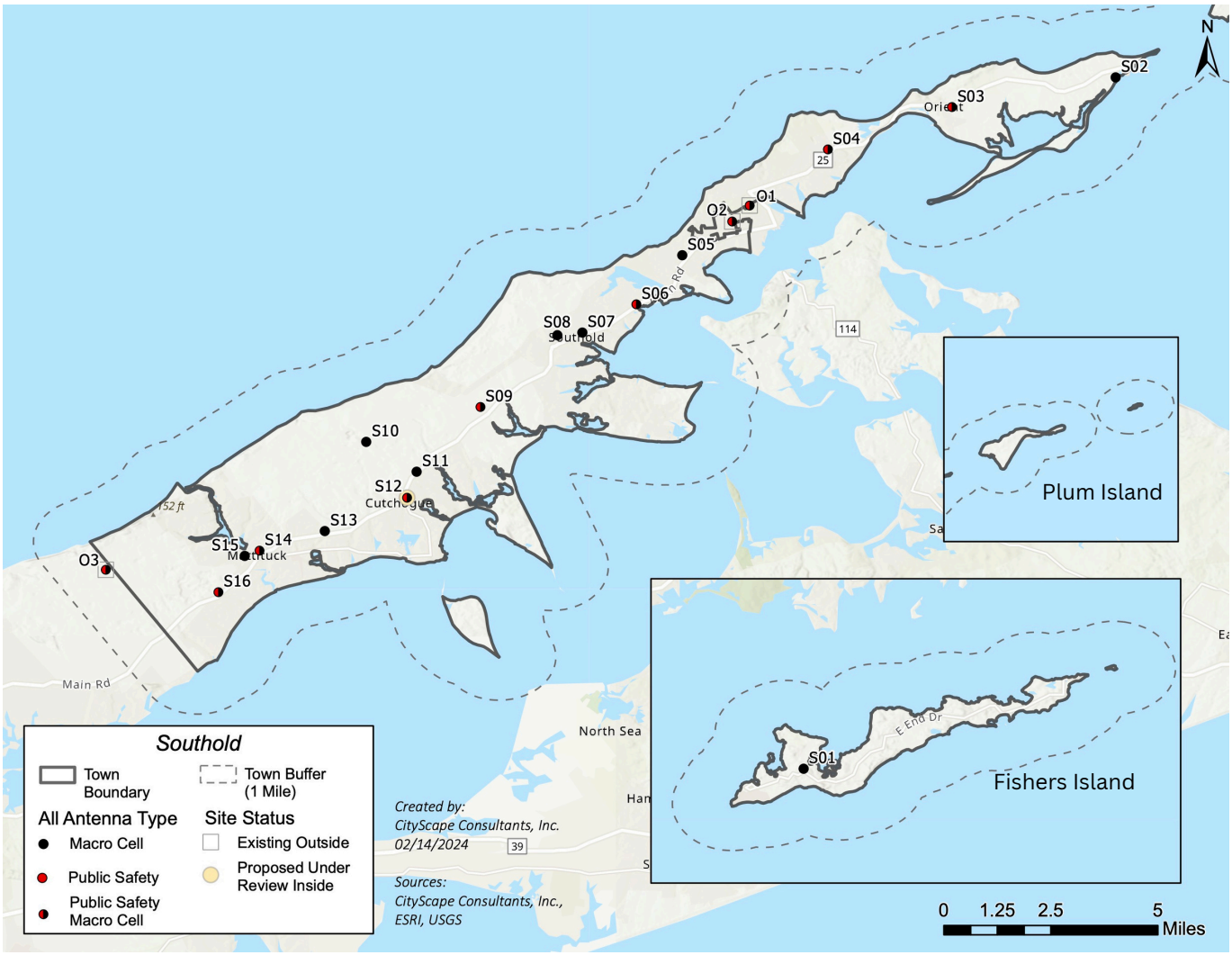


Figure 4: Zoomed In Map of Inventory by Antenna Type

For the exact site locations please refer to Appendix B

WIRELESS FUNDAMENTALS

Signal Strength

Signal strength refers to the power and reliability of a wireless connection, which directly affects how well devices like cell phones, tablets, and smartwatches function. Stronger signals allow for faster data speeds and more reliable connections, while weaker signals can result in dropped calls, slow downloads, or limited connectivity.

This concept is similar to how a lightbulb illuminates a room. When you stand close to the bulb, the light is bright and clear, just like a strong wireless signal near an antenna. But as you move farther away, the light begins to fade. Shadows appear, and visibility drops, especially if walls, furniture, or other obstacles are in the way. Likewise, wireless signals weaken as devices move toward the edge of the antenna's service area.

Just as thick curtains, walls, or different room layouts can block or absorb light, wireless signals can be disrupted by buildings, construction materials, vegetation, and changes in terrain. The performance of wireless devices also varies depending on whether they are used indoors or outdoors, as indoor environments often introduce more interference that weakens signal quality.

Network Capacity

Network capacity refers to the volume of wireless traffic a service provider's network can handle at any time, within a specific location. The amount of bandwidth being used simultaneously for calls and data can have an impact on the capacity the network can handle.

The wireless industry is moving from 4G to 5G with 6G on the horizon. At this time service providers are at different stages of 5G deployment. Both 4G and 5G networks support broadband (a high-speed internet connection that is always on), enabling innumerable applications on Smartphones. Navigation, banking, weather, music, games and online information, just to name a few, requires substantial data transmission within an antenna signal boundary.

To meet the growing demands, network densification is essential. This involves increasing network capacity through three main strategies:

1. Acquiring more spectrum
2. Enhancing spectrum efficiency
3. Adding additional wireless facilities in high-traffic areas

Wireless service providers employ a combination of these methods to fulfill user expectations.

Wireless Spectrum and FCC

The wireless spectrum refers to the range of electromagnetic frequencies used to transmit data, sound, and video. In wireless communications, radio waves, carry this information. Public safety and each commercial wireless service provider operate on different frequency bands.

5G operates across low-band (sub-1 GHz), mid-band (1-6 GHz), and high-band (24 GHz and above, often called mmWave) frequencies, which are used to transmit data between user devices and network infrastructure. These frequencies help deliver faster speeds (higher data throughput, especially in mid and high-band), lower latency (crucial for real-time applications), and improved reliability and capacity, (especially in dense areas) compared to previous generations of wireless networks. *Figure 5* provides an overview of wireless spectrum, frequencies and some of their uses.

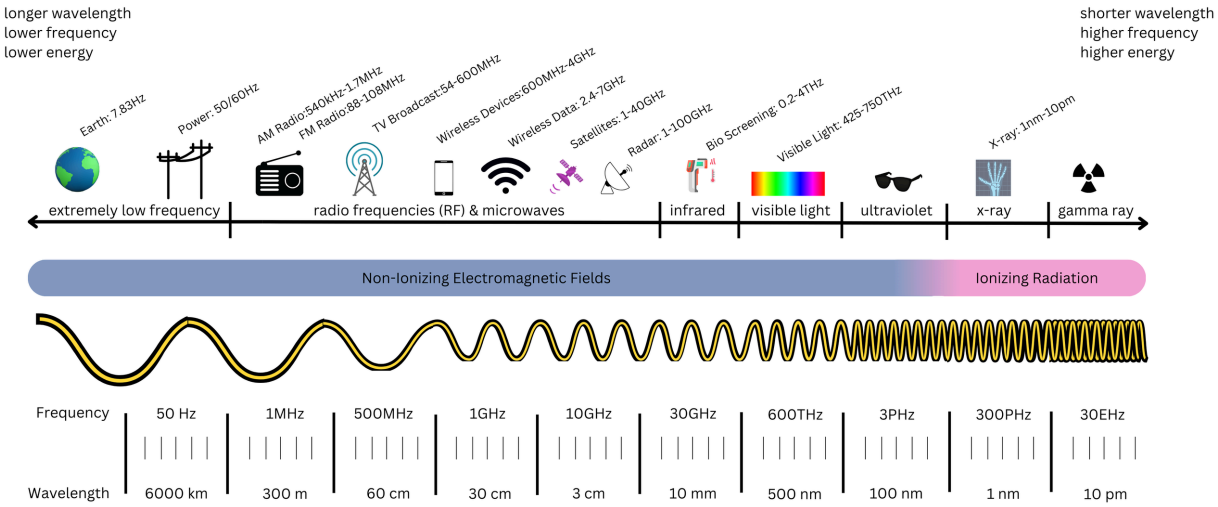


Figure 5: Wireless Spectrum Depiction

The Federal Communications Commission (FCC) serves as the primary regulatory authority for all wireless communication systems in the United States. The FCC manages the allocation of radio frequencies, sets standards for wireless devices, and ensures fair competition among service providers. Service providers pay licensing fees to the Federal Communications Commission (FCC) for access of specific frequency bands within designated geographic regions.

Federal regulations are designed to foster competition among service providers, and the FCC has implemented nationwide policies that prevent the Town from indiscriminately restricting the deployment of commercial wireless communications within their zoning jurisdiction.

COMMUNITY CHARACTERISTICS

Town of Southold

The Town of Southold encompasses the Mainland, Plum Island, and Fishers Island. The mainland is located in northeastern Suffolk County on Long Island's North Fork, bordered by Long Island Sound to the north and Peconic Bay to the south. It includes ten hamlets: Cutchogue, East Marion, Fishers Island, Greenpoint West, Laurel, Mattituck, New Suffolk, Orient, Peconic, and Southold. Plum Island and Fishers Island are located to the east and northeast of the mainland, respectively, in Long Island Sound.

The mainland terrain is predominantly flat, with some elevation changes along the northern edge. Land use is primarily Agricultural, Residential, and Open Space & Recreational. Plum Island is entirely designated for Institutional use, while Fishers Island is characterized by Residential, Open Space & Recreational, and Vacant land uses. Fishers Island also features low rolling hills and steep coastal slopes.

Mainland access is primarily by vehicle via Highways 25 and 25A, as well as by the Long Island Railroad, which terminates in Greenport. Two ferry systems also serve the area: the North Ferry connects Southold to Shelter Island, and the Cross Sound Ferry operates seasonally between Orient Point and New London, Connecticut. Access is also available via the Mattituck Airport. While privately owned, it is available for small planes and helicopters.

Access to Plum Island, which is owned by the U.S. government, is restricted to authorized personnel and is primarily limited to water transportation. Fishers Island is accessible via the Cross Sound Ferry from New London, Connecticut, by private boat, or by small aircraft through Elizabeth Field, located on the island's southeast end.

Southold is a key part of Long Island's North Fork agricultural region, known for its fertile soil, maritime climate, and growing number of vineyards and wineries. The wine industry contributes to the local economy and rural character, with vineyards playing a prominent role in land use and influencing seasonal traffic patterns.

According to the 2020 Census, Southold has a population of approximately 23,732. This number increases significantly during the summer and holiday seasons due to tourism and the occupancy of seasonal second homes.

Much of Southold lies within designated flood zones, coastal erosion hazard areas, and state-regulated wetlands. These environmental constraints limit development opportunities, including the placement of new wireless towers or base stations.

Community characteristics play a critical role in wireless planning, as local land use patterns, transportation corridors, housing density, architectural styles, and zoning preferences all directly influence the placement and design of wireless infrastructure.

MAPPING AND ANALYSIS

Wireless Coverage Prediction Maps

The following coverage prediction maps represent simulated wireless coverage throughout the Town. The maps are based on LTE standards in the mid-band frequency spectrum (1700-2400 MHz) and assume maximum operating power from each tower or base station. These maps provide an estimated view of wireless signal reach represented by colors.

The minimum usable LTE coverage level is -115 dBm RSRP (Reference Signal Received Power), which is adequate for outdoor coverage but insufficient for reliable indoor or in-vehicle service. The typical minimum level for dependable outdoor coverage is -105 dBm, supporting reliable calls, texts, and data sessions. Signal strength tends to decrease by 10-20 dB indoors compared to outdoor levels because different building materials absorb and block radio waves. As a result, reliable indoor service generally requires a minimum of -95 dBm RSRP, with a 5 dB margin added to ensure consistent performance.

The wireless coverage predicition maps use the color gradient, ranging from yellow to blue, indicating the varying levels of signal strength emanating from each personal wireless service facility. The geographic areas in yellow identify the strongest signal providing superior coverage both indoors and outdoors; green indicates moderate or in-vehicle signal strength; blue denotes weaker signal strength which may be sufficient for basic outdoor connectivity; and unshaded areas highlight regions with marginal, spotty or no signal suggesting poor or non-existent coverage.

The following *Table 2* provides an easy reference of the wireless signal strength across the mapped areas, helping to quickly interpret the coverage quality based on color gradation.

SIGNAL STRENGTH COLOR	dBm	SIGNAL STRENGTH DESCRIPTION
Yellow	> -90	In Building
Green	-90 to -105	In Vehicle
Blue	-105 to -115	Outdoor

Table 2: Signal Strength Description

Wireless Coverage Analysis

Figure 6 presents a simulated wireless coverage map illustrating predicted signal propagation from sixteen cell sites. These sites either currently host all four major wireless providers or have sufficient structural and ground space capacity to accommodate additional providers in the future.

Black dots indicate towers and base stations with macro cell equipment, while black and red dots represent towers that support both public safety and commercial macro cell equipment. Of the sixteen sites, thirteen are located on Southold's mainland, one is situated just outside the jurisdiction within the one-mile buffer and two are on Shelter Island just outside the one-mile buffer. These two sites, on Shelter Island provide service to certain areas within Southold.

The map depicts varying levels of wireless signal strength across the Study Area.

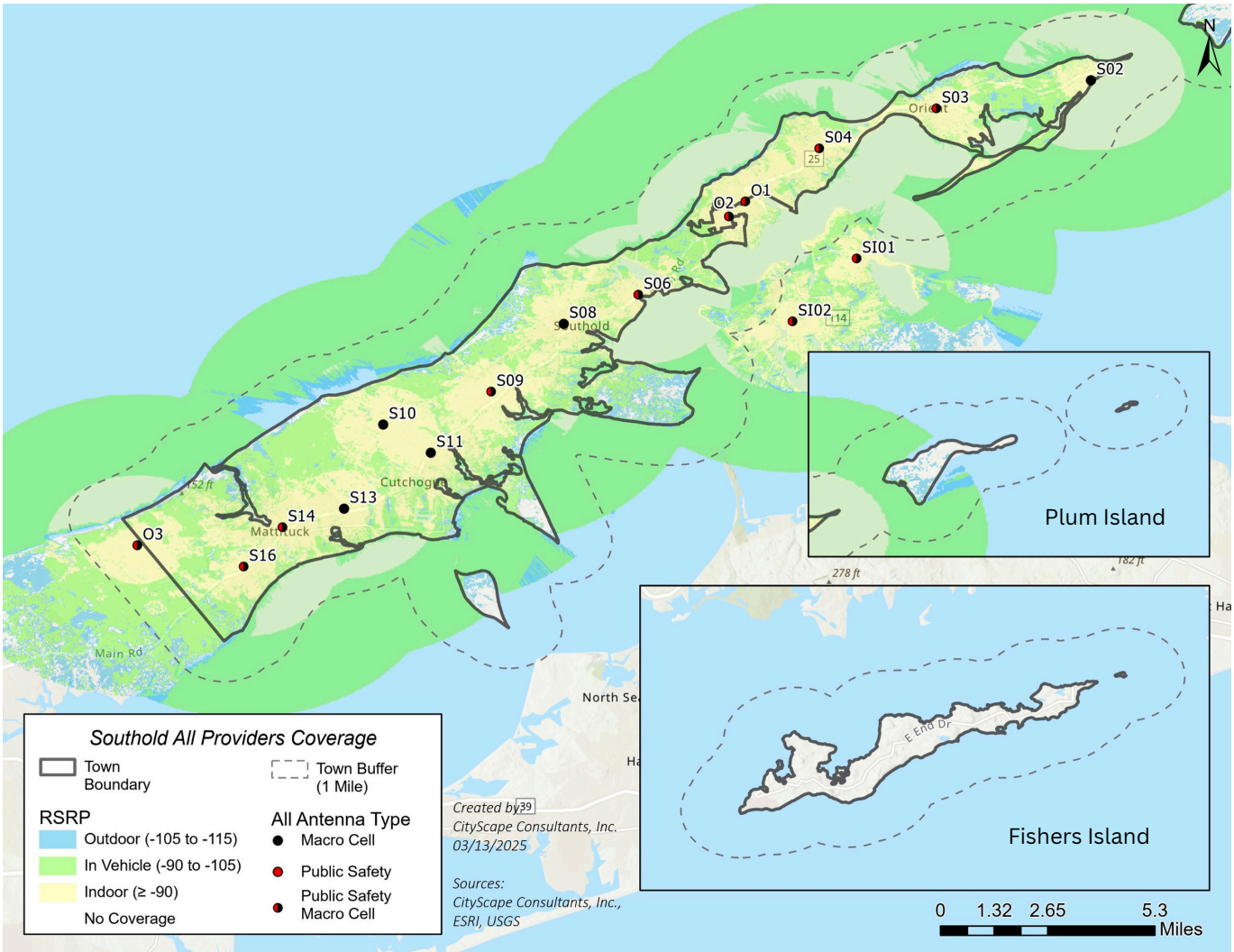


Figure 6: Map of Simulated Wireless Coverage

Simulated Coverage with Town-Wide Address Points

Figure 7 shows the projected wireless coverage pattern in relation to address points throughout the Town. Each small circle represents an individual address based on the data from the National Geospatial Data Asset (NGDA) provided by the U.S. Department of Transportation feature layer. The color of each circle indicates the estimated quality of in-building wireless coverage. While this scenario is theoretical, it offers a visual estimate of expected indoor coverage within the Town.

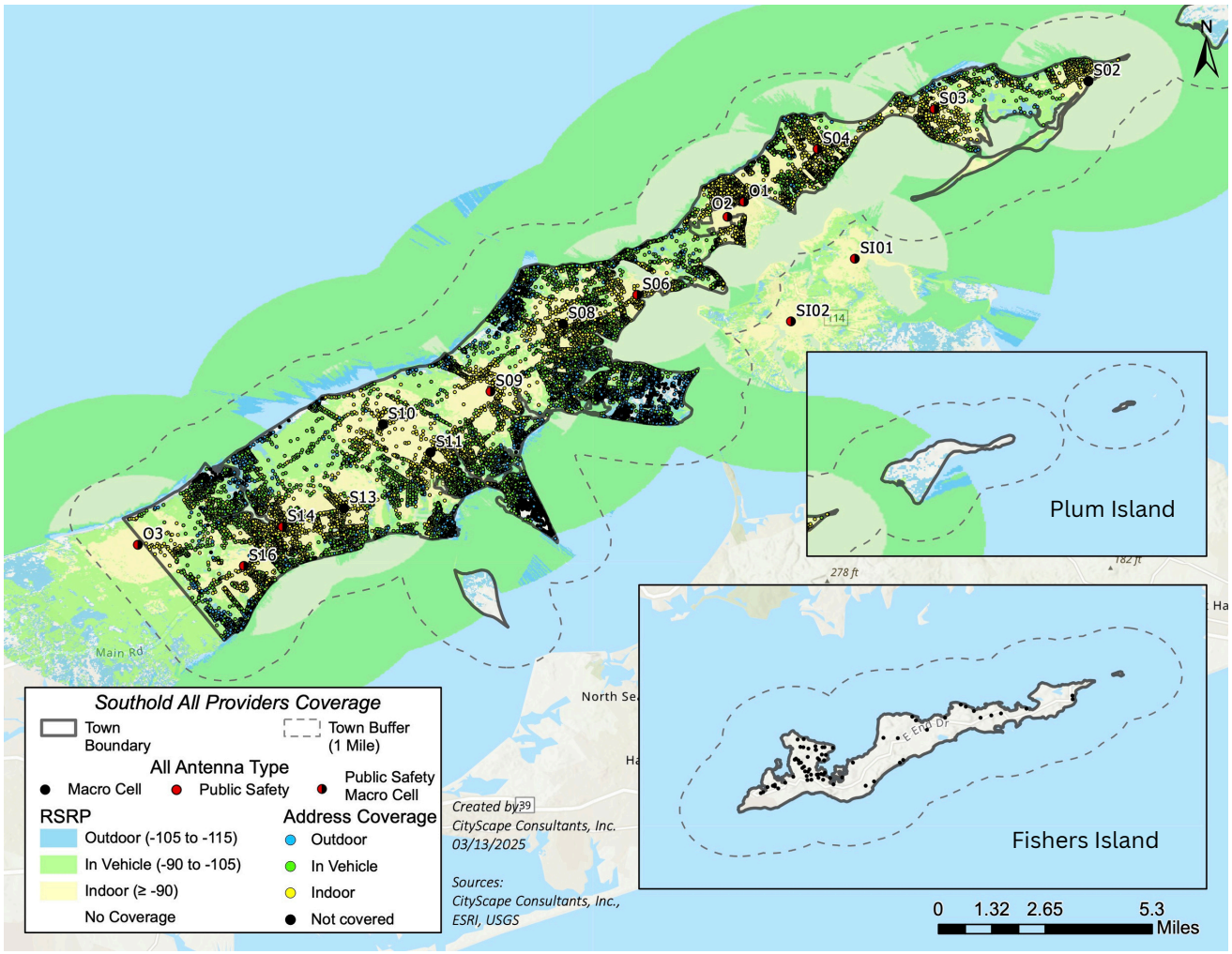


Figure 7: Map of Simulated Wireless Coverage by Address Point

Coverage levels are represented by the following colors:

- Black: Minimal or no in-building coverage
- Blue and Green: Outdoor coverage only; users may need to stand near a window or step outside for a stable condition.
- Yellow: Strong in-building connectivity, typically a addresses located closer to a tower or base station.

Zooming in a specific section of the wireless coverage by address point, provides a more detailed look at the in-building coverage patterns. However, some address point markers may not align with the predicted coverage. This discrepancy becomes evident when a fill color of an address point differs from the surrounding propagation color, indicating signal degradation.

For example, in the circled area shown in *Figure 8*, several address points located within the yellow propagation zone appear green,or blue. This suggests the presence of obstructions that may be interfering with signal strength. Contributing factors may include terrain elevation, tree canopy density, types of vegetation (e.g., deciduous vs evergreen), or the construction materials and architectural design of the building itself. Ideally, the fill color of each address point should correspond with the predicted propagation color, reflecting optimal signal performance.

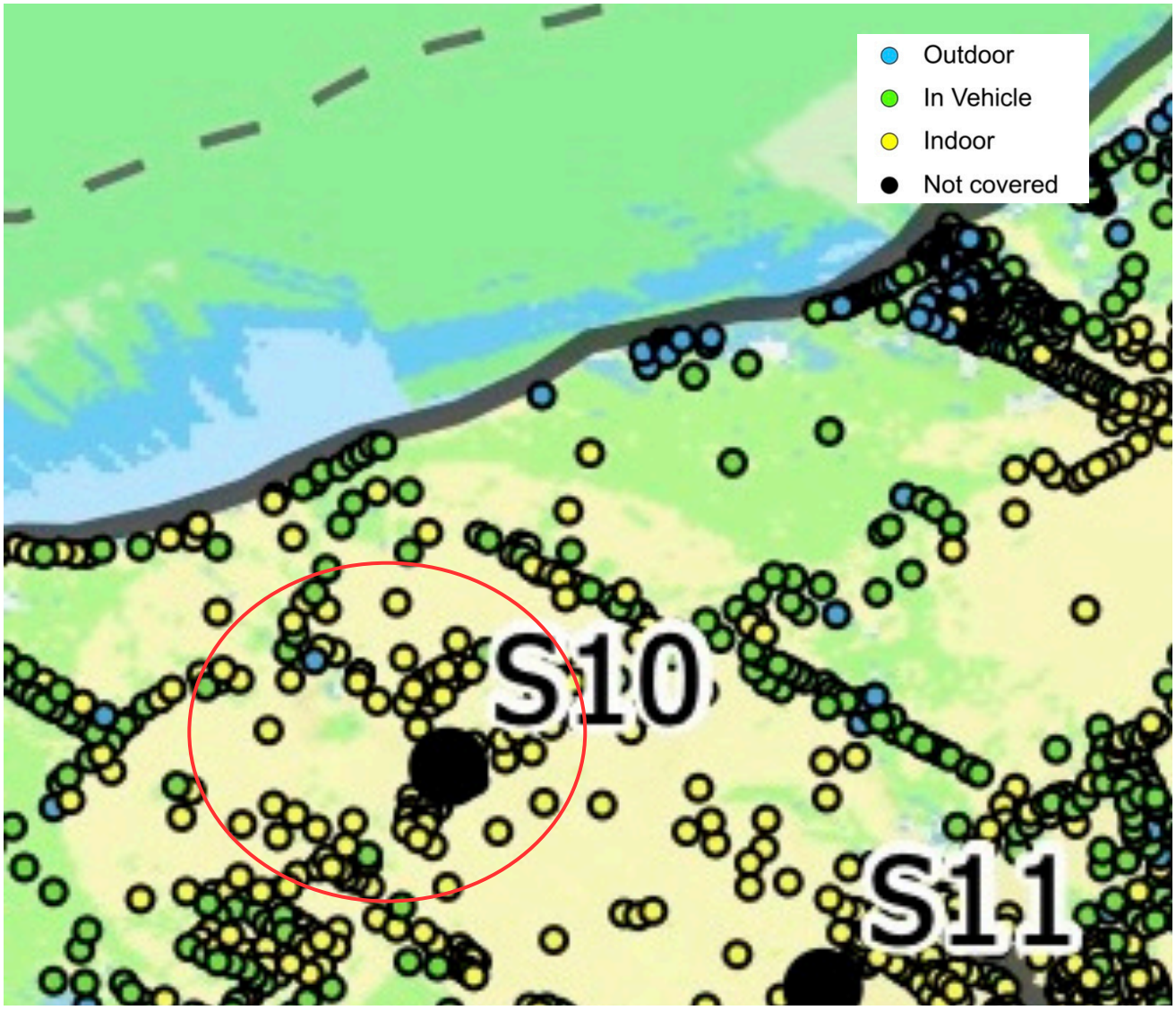


Figure 8: Zoomed in Portion of Figure 7

Wireless Coverage Analysis

Plum Island

Plum Island is considered to be within the Town of Southold's borders but it is not part of the Town's zoning authority or subject to local land use regulations as it is federal property. It owned by the United States government and primarily managed by the U.S. Department of Homeland Security through its Science and Technology Directorate, which operates the Plum Island Animal Disease Center. Public access is prohibited due to the island's sensitive research activities and national security considerations. Consequently, there is no wireless infrastructure development on the Island.

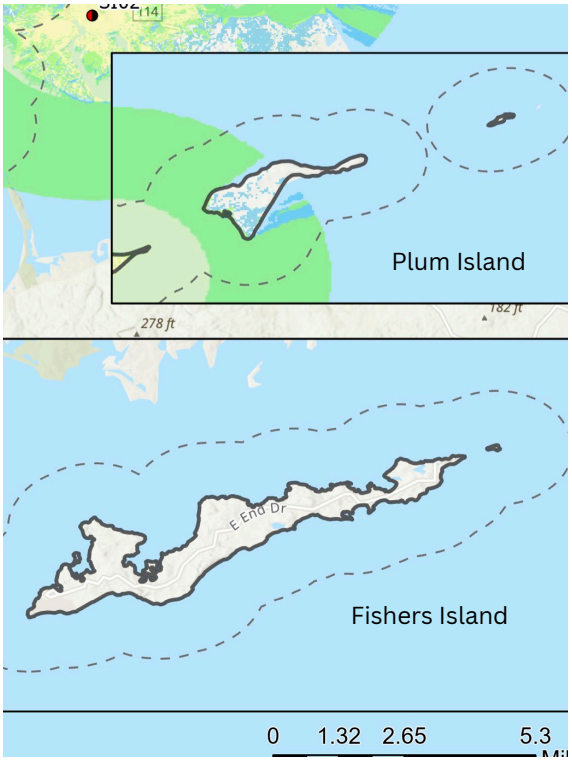


Figure 9: No Coverage Fishers and Plum Island

Fishers Island

Site S01 is the only facility on Fishers Island and it currently supports one wireless service provider. The antennas for this site are mounted and concealed within the church steeple.

A second wireless service provider has expressed interest in installing antennas on the rooftop of an adjacent church building, located on the same zoned lot. There is no other collocation opportunity at this site.

Because this site cannot support all major wireless providers, *Figure 9* illustrates no wireless coverage for Fishers Island.

Wireless Coverage Analysis Continued

Mainland

In eastern Southold, particularly near Orient and East Marion, tower sites S02, S03 and S04 provide both indoor and in-vehicle wireless service. Site S02 delivers coverage across the eastern tip of Southold's peninsula and the adjacent waterways. Sites S03 and S04 extend this coverage westward along the Main Road (also known as: NY State Route 25, NY-25 or Route 25) corridor. Indoor coverage along this route is generally strong, with only minor signal degradation near the coastline, where terrain and vegetation may obstruct line-of-sight transmission, see *Figure 10*.

Figure 10: Eastern Southold

The central part of Southold is served by towers S06, S08, S09, S10 and S11 all located within the Town's zoning jurisdiction. The Greenport hamlet receives coverage from Sites O1 and O2, which are located within the Village of Greenport. Additionally, Sites SI01 and SI02 on Shelter Island help supplement coverage west of East Marion, extending service toward the commercial areas of Greenport and central Southold, see *Figure 11*.

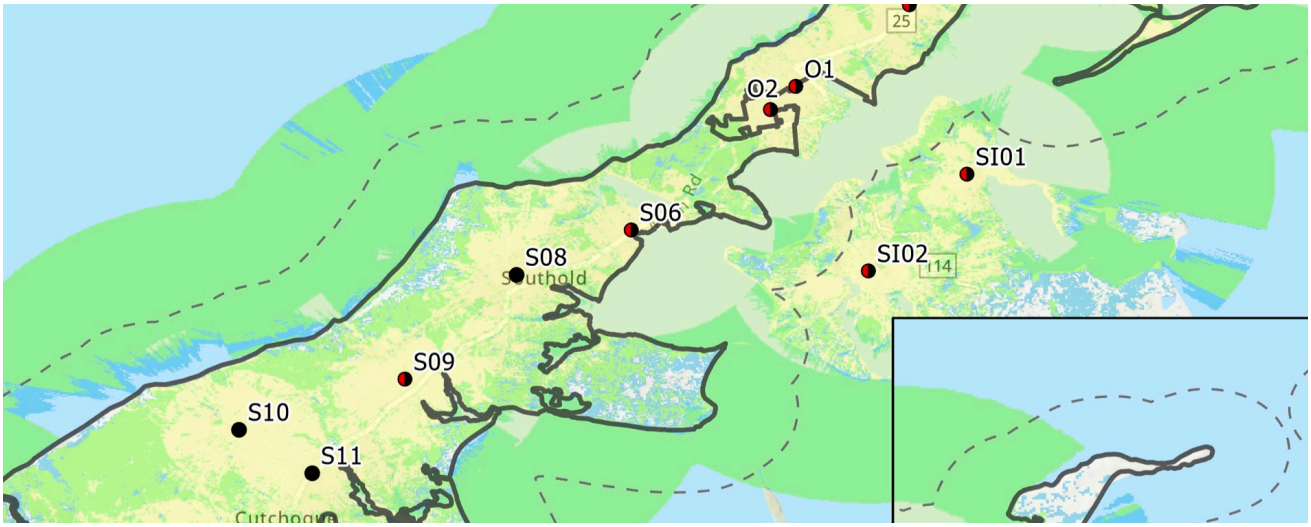


Figure 11: Central Southold

Wireless Coverage Analysis Continued

Site S09 provides a moderate level of in-building coverage to the Peconic Hamlet. Overall, this central area of the Town demonstrates generally strong in-building coverage (represented in yellow) along Main Road (NY-25). As distance from the tower increases, in-building coverage transitions to in-vehicle coverage (green), then to outdoor-only coverage (blue), and eventually to areas with little or no coverage, particularly away from the major roadway corridors.
beyond this main travel route, see *Figure 12*.

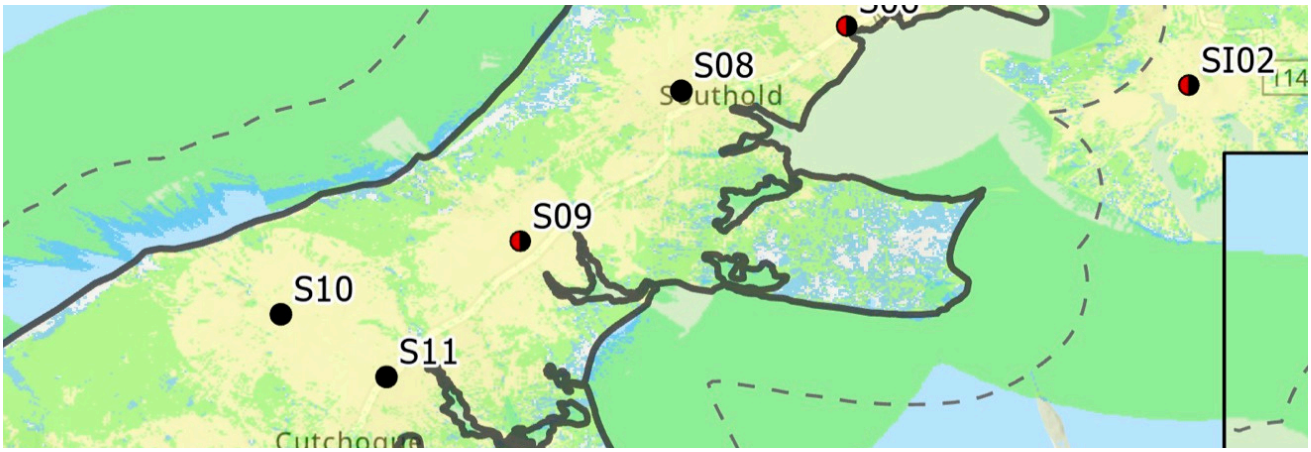


Figure 12: Peconic Hamlet Area

Western Southold includes the Hamlets of Cutchogue, Mattituck and Laurel. Wireless coverage in this area is primarily provided by Sites S13, S14, S16, and O3. Coverage generally follows the Main Road (Route 25) corridor, extending westward toward the Town boundary, with in-vehicle service concentrated just beyond this main travel route, see *Figure 13*.

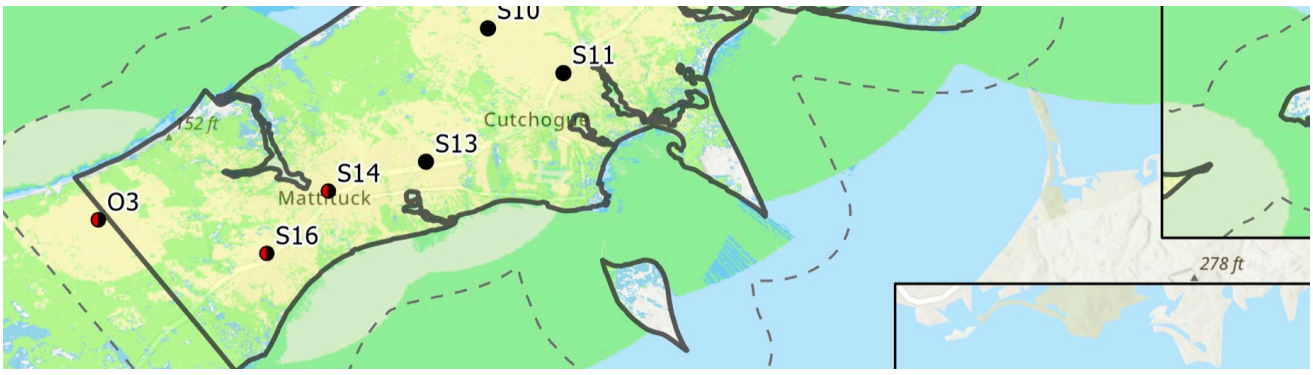


Figure 13: Cutchogue, Mattituck and Laurel Hamlets

Despite this coverage, gaps remain along the northern shoreline, where portions of the waterfront experience weak or no signal due to terrain limitations and distance from existing infrastructure. Similarly, peninsulas along the southern shoreline have little to no coverage, as there are no wireless facilities currently serving those areas.

Wireless Coverage Analysis Continued

Towers in Southold are effectively used for dual purposes, six of the Town's 16 commercial wireless towers also support public safety equipment. This represents an efficient use of public infrastructure. Although these towers are generally well distributed and provide a solid foundation for commercial coverage, they are not sufficient on their own to support a high-performing, long-term wireless network. Additional sites will be necessary to expand coverage, increase capacity, and to meet the seasonal demand placed on the existing network.

Several key areas have been identified for wireless infrastructure improvements, as shown in *Figure 14*. Fishers Island lacks basic outdoor coverage. The southern shoreline peninsulas experience weak or no signal due to the absence of nearby infrastructure. The northern shoreline suffers from signal loss due to the distance of the nearest wireless facility.

Addressing these coverage gaps will require the deployment of new wireless infrastructure to improve access and connectivity throughout the Town.

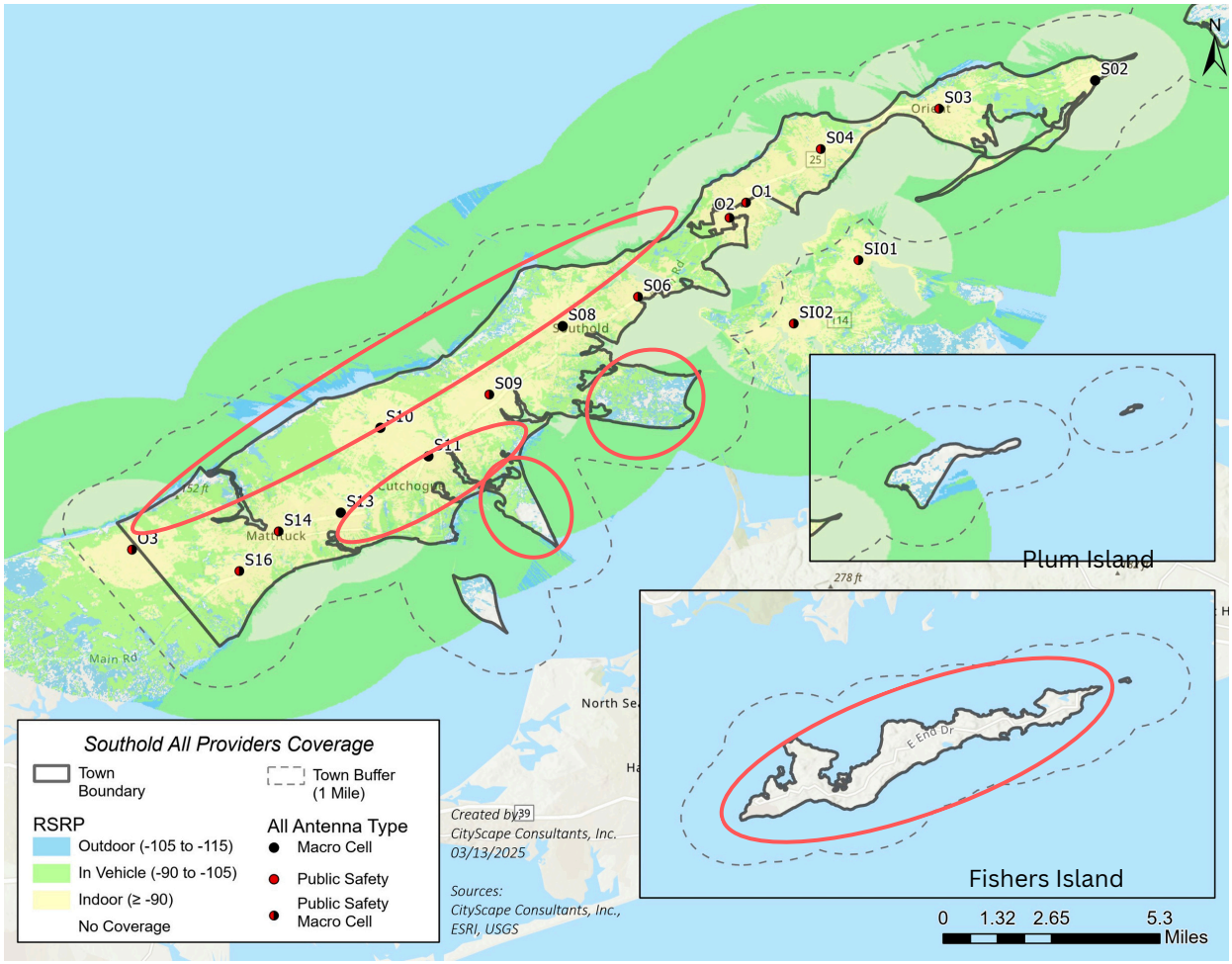


Figure 14: Improvement Areas

POTENTIAL SOLUTIONS

Planning Considerations

When identifying and planning solutions to address areas of poor and no wireless coverage in the Town, several key factors should be considered:

- Existing Facilities: Priority should be given to optimizing the use of existing and underutilized wireless facilities across the Town. Maximizing these resources may reduce the need for new tower construction and promote more efficient network expansion.

- Service Providers: All four major wireless service providers, AT&T, Dish Wireless, T-Mobile and Verizon hold licenses from the Federal Communication Commission (FCC) and have the right to deploy network infrastructure throughout the Town.

- Seasonal Variations: The Town experiences a significant population increase during peak seasons due to vacationers and part-time residents traveling to the North Fork and the Hamptons. This seasonal influx results in higher demand for wireless service and increased vehicular traffic. The network must be designed to handle peak usage periods to ensure reliable service for public safety, full-time residents, and business owners throughout the year.

- Future Technology: While still in development, 6G deployment is anticipated around 2030. As the next generation of wireless technology, 6G is expected to use higher frequencies to enable faster upload and download speeds. Although there is no immediate need to prepare for 6G, long-term planning should account for its eventual arrival.

- Antenna Type and Function: The size, height, and design of wireless facilities are significantly influenced by the type of antennas installed. Proper selection and placement of antennas are critical to maintaining performance while minimizing physical impact.

- Collocation Optimization: Collocation allows multiple service providers to share a single wireless facility, reducing the number of towers needed town-wide. However, this approach often requires taller, more prominent structures to support the combined equipment.

- Viewshed Preservation: Maintaining the Town's residential and rural character is essential. Wireless infrastructure should be designed to minimize visual impact and avoid introducing industrial-looking utility structures into sensitive or scenic areas.

Solution Strategies

Considering the Town's unique characteristics, the current wireless deployment pattern, the anticipated progression to 6G technology, and the need to establish a comprehensive ten-year wireless strategy that includes all service providers, two simulated engineering solutions have been developed for evaluation.

Each scenario incorporates the eleven existing macro cell sites within Southold that are capable of hosting all four major wireless service providers (S02, S03, S04, S06, S08, S09, S10, S11, S13, S14, and S16), as well as the five additional wireless facilities located just outside the Town's boundaries that contribute to the overall deployment pattern (O1, O2, O3, SH01, and SH02).

The two planning scenarios are:

- Macro Wireless Facilities Only
- Hybrid Macro and Small Wireless Facilities

These scenarios are intended solely as planning tools to illustrate potential strategies and the number and type of wireless facilities it may take to improve wireless connectivity throughout the Town.

These scenarios provide an illustration of the infrastructure, antenna types, and general locations that may be necessary to support a comprehensive wireless buildout over the next decade.

While not intended to replicate any specific service provider's deployment plan or predict future installations, these simulations offer valuable guidance for long-term infrastructure planning.

Scenario 1 - Macro Wireless Facilities Only

Macro cell antennas, along with their ancillary equipment, offer the greatest flexibility and coverage range for wireless service providers. These antennas are typically mounted on taller towers or structures to maximize elevation and signal reach; however, their required height can make them more difficult to visually conceal.

Scenario 1, illustrated in *Figure 15*, presents a macro cell-only fill-in solution based on LTE coverage projections. It suggests the addition of five new macro sites (PM01, PM02, PM04, PM06, and PM07). Additional suggestions include replacing the existing 80' utility pole at site Site S05 with a new 120' tower (PM03); redesigning Site S12 the proposed 145' tower (Cutchogue fire station) with PM05 a 160' tower; and increasing the height of the existing Site S09 from 145' tower to 199' to allow for higher antenna placement and better signal reach.

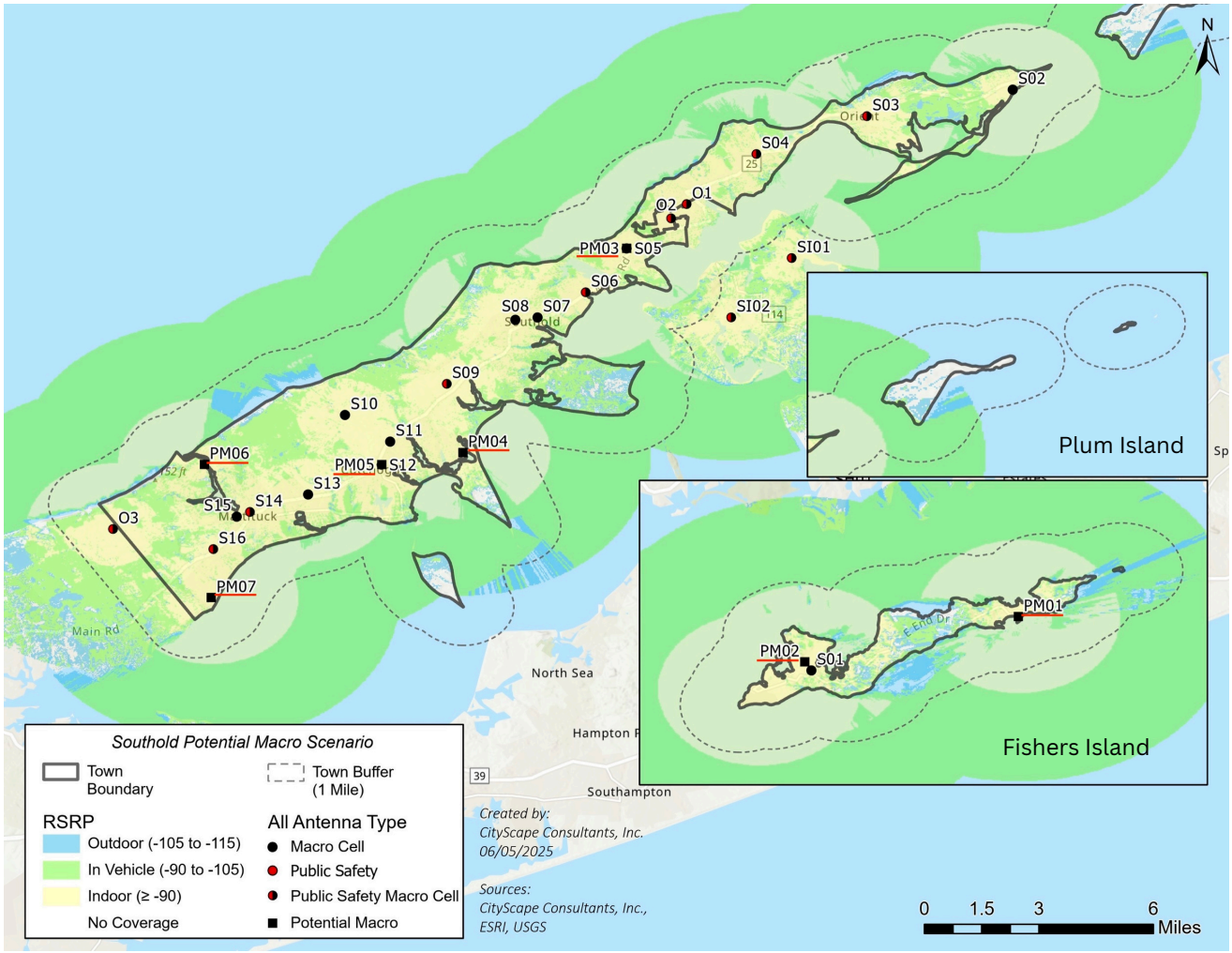


Figure 15: LTE Coverage Predictions Macro Wireless Deployment Only

Scenario 1 - Macro Wireless Facilities Only Continued

The contemplated new and replacement sites are strategically located outside of mapped wetlands, flood zones and residential land use areas. These potential locations are intended to serve areas with limited or no wireless coverage and to strengthen signals from existing towers. They also aim to improve overall coverage in zoning districts where current towers only provide indoor quality service along the major roadways.

Possible sites PM01 and PM02 are situated on Fishers Island, which currently lacks wireless coverage from three of the four major wireless cell phone service providers. The addition of these two suggested macro cell sites could provide much improved in-vehicle and partial in-building coverage across nearly the entire island. Although certain interior portions of the island may still experience limited indoor coverage due to terrain, vegetation or building materials, this deployment represents a substantial improvement over existing conditions.

PM03, located in central eastern Southold, would replace the single-tenant facility on the existing 80' wood pole at site S05 with a new 120' tower. The taller tower would accommodate the equipment of additional service providers and bridge gaps between existing sites O1 and O2 and S06. The new site could also strengthen the radio signals in areas that are currently underserved.

PM04 is positioned to extend coverage south of S09 and S11. Additionally, Cutchogue area would benefit from the redesign of the proposed tower at S12 (Cutchogue Fire Department).

If properly planned a new tower site at PM05 could triangulate with existing Sites S10, S11, and S13 to improve overall coverage and fill persistent gaps in this region.

PM06, located north of Mattituck, would address a significant coverage void in an area showing minimal to no signal propagation—indicated by the absence of mapped coverage colors.

PM07, situated near Laurel, would help extend service from Site S16 to rural and coastal areas west of Mattituck and into the southwestern corner of the Town, where coverage remains limited despite the presence of Site O3.

Scenario 1 - Macro Wireless Facilities Only Continued

Collectively, the addition of macro sites PM01 through PM07 would substantially enhance wireless coverage throughout Southold's mainland and associated islands. These sites would help establish more consistent service levels, close critical wireless coverage gaps in isolated areas, and strengthen connectivity for both consumer and public safety communications.

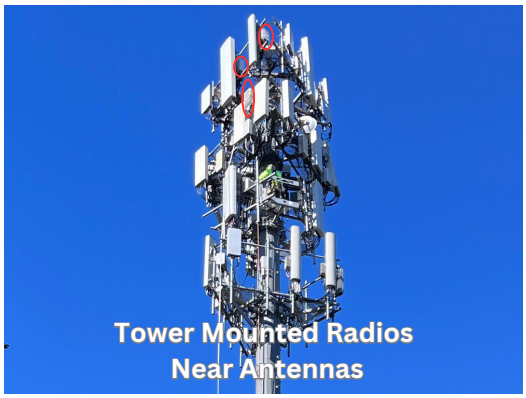
However, some areas of concern persist. Narrow coastal inlets, wetland zones, and remote areas, such as sections along East Main Road on Fishers Island, the north shore, and the far southeastern tips of the mainland peninsula, continue to show weak or absent coverage. These regions are often constrained by residential land uses, environmental protections, wetlands, challenging terrain, seasonal tree canopy and the tower design requirements, all of which hinder the siting of macro towers.

The Town Code mandates the use of shorter, concealed towers, specifically the unipole design. Of the sixteen wireless towers in the Town, nine are concealed unipole structures. This design features antennas mounted closely along a central shaft, which is enclosed within a radio frequency–transparent shroud that conceals both the antennas and cables. The result is a significantly reduced visual impact on the surrounding landscape.

However, unipole towers have functional limitations. The radios that amplify the antenna signals must be installed at ground level because they generate substantial heat, which could accumulate inside the enclosed collar if placed with the antennas. Moreover, mounting the radios on the shaft occupies valuable space, leaving little or no room for future antenna upgrades and additional collocations.


Antennas Under Unipole Shroud


Ground Mounted Radios on H-Frame

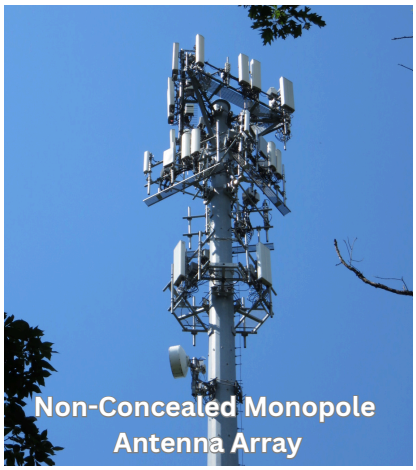

Tower Mounted Radios Near Antennas

Scenario 1 - Macro Wireless Facilities Only Continued

This separation between antennas and ground-based radios can reduce signal performance by up to 30%, often necessitating additional facilities to cover the resulting gaps, particularly in edge areas, thereby leading to more small cell or macro sites being necessary. Additionally, the custom fabrication, integrated concealment materials, and more restrictive mounting options for concealed unipoles drive up both material and labor costs. Due to these higher costs, limited tower-mounted equipment capacity, and reduced signal propagation, wireless carriers typically delay or avoid deployment in areas with limiting jurisdictional design mandates.

In contrast, non-concealed or concealed structures (other than a unipole) offer greater flexibility by allowing antennas and radios to be mounted together on full antenna arrays. This integration yields a stronger signal and broader coverage area.


Concealed Monopole Antenna Array


Non-Concealed Monopole Antenna Array

Southold's wireless communication regulations encourages the use of shorter towers. In the LI, LIO, MI, MII, B, and HB zoning districts, antenna support structures are permitted up to a maximum height of up to 80'. In more restrictive zones, such as AC, R-40, R-80, R-120, R-200, R-400, LB, RO, RR, HD, and ADH, the maximum allowable tower height is up to 45'.

These height restrictions present challenges for effective network design. A 45' tower typically cannot transmit signals above surrounding tree canopies or nearby building rooftops. Even 80' towers generally rise only slightly above the average height of the Town's coastal oak and holly trees.

According to FCC guidance and industry standards, antennas perform optimally when mounted above the "clutter layer", such as trees, buildings, and terrain. Achieving this line-of-sight positioning reduces signal loss and improves overall performance. Installing antennas above the clutter threshold can extend signal reach by 40-70% and increase coverage area by up to 90%. As such, height flexibility is critical for designing efficient and reliable wireless infrastructure.

Scenario 1 - Macro Wireless Facilities Only Continued

As an example from a community in Virginia, *Figure 16* illustrates coverage from a 100' tower with radios installed at ground level, resulting in approximately 0.9 miles of in-car wireless coverage. In contrast, *Figure 17* shows coverage from a 140' tower with radios mounted at the antenna elevation. Both the taller tower and radios mounted at the higher elevation extends wireless coverage to over 1.3 miles. This configuration increases the coverage distance by more than 40% and more than doubles the total coverage area, highlighting the performance advantages of taller tower height and mounting radios directly with the antennas on the structure.

Figure 16: Example 100' Tower Coverage Range with Radios on Ground

Figure 17: Example 140' Taller Tower Coverage Range with Radios on Tower

In summary, while shorter concealed towers may reduce visual impact, they come with a trade-off of reduced wireless coverage, limited capacity for future collocations and higher deployment costs. Towers that are too short or that require separation between radios and antennas often result in diminished signal strength and will necessitate more sites to fill coverage gaps. Conversely, taller towers, whether non-concealed or concealed, using alternative design options to the unipole, can accommodate antenna-radio configurations mounted directly on the structure. This setup enables stronger signals, broader coverage, and greater flexibility to support evolving network demands. As wireless service needs grow, particularly with 5G and future technologies, Southold will need to balance visual impact considerations with the delivery of dependable, reliable, high-performance coverage.

Scenario 2 - Hybrid Macro and Small Wireless Facilities

Small cell wireless facilities are typically installed within the public right-of-way on new, replacement, or existing utility poles. This deployment method is primarily used to increase network capacity or improve wireless coverage in areas where macro cell sites are limited due to zoning constraints or potential signal interference. Because small cell antennas have a much shorter propagation range than macro cells, multiple installations are required to achieve comparable coverage.

Scenario 2 builds upon the macro cell network shown in Scenario 1 by introducing 28 potential small cell locations. Five of these are located on Fishers Island, while the remaining sites are distributed across the mainland. Each proposed small wireless facility is intended to enhance the coverage provided by both existing and proposed macro towers.

Figure 18, displays the LTE coverage predictions based on a hybrid approach that combines the macro cell sites identified in *Figure 15* with the addition of 28 theoretical 45' small wireless facilities (represented by pink dots).

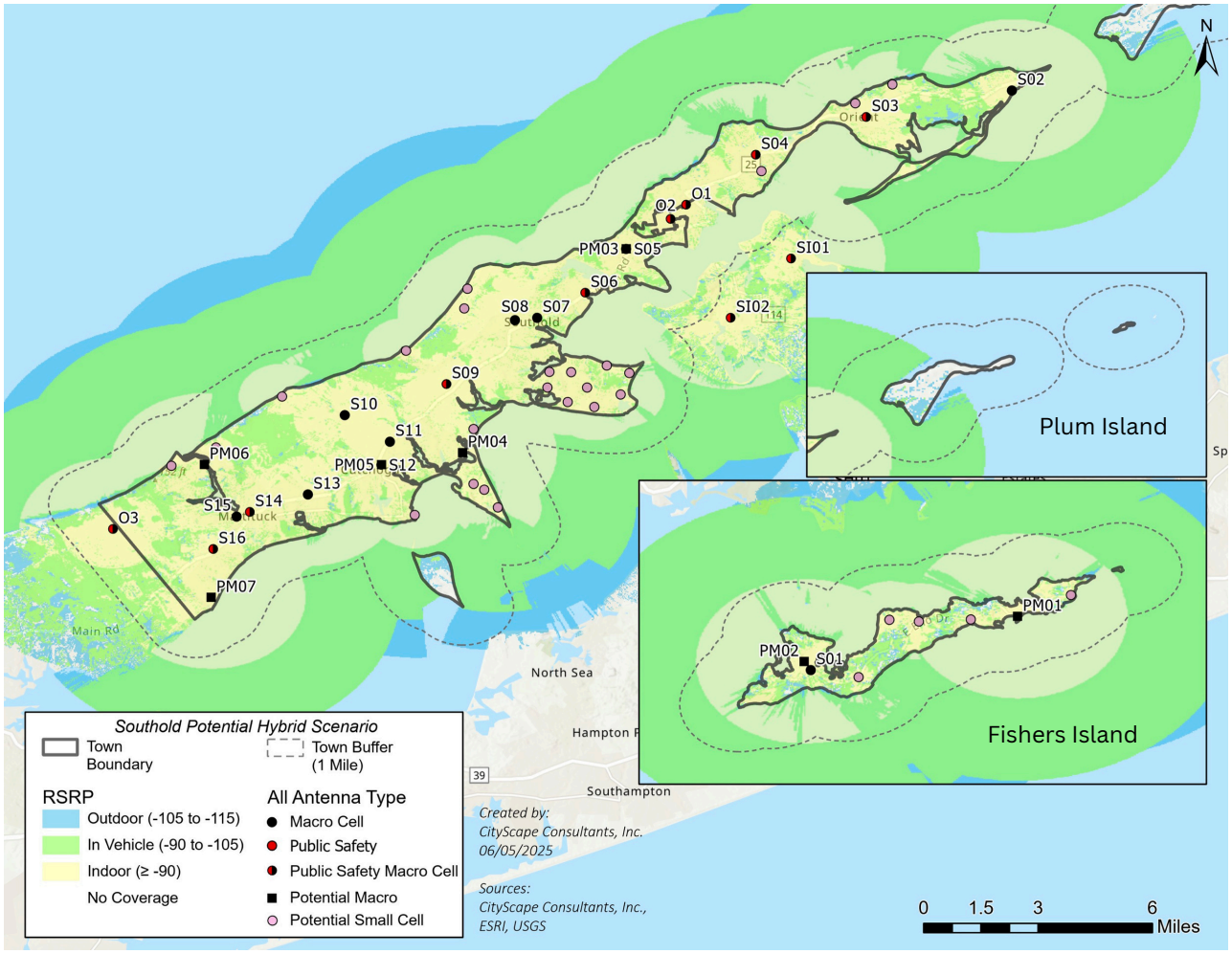


Figure 18: Coverage Predictions For Combination Macro and Small Wireless Deployment

Scenario 2 - Hybrid Macro and Small Wireless Facilities Continued

This hybrid wireless infrastructure scenario more comprehensively addresses the network coverage gaps identified across Southold. The integration of small cells enhances signal availability in fringe areas, particularly where macro cell signals weaken due to distance, terrain, or current and future land use constraints. Small wireless facilities serve as targeted solutions for hard-to-reach locations, including narrow peninsulas, residential areas or environmentally sensitive sites where macro tower siting is restricted by zoning.

On Fishers Island, where topography and dense tree canopy interfere with signal propagation and macro tower siting opportunities are limited, small wireless facilities offer a practical alternative. The five theoretical installations along East Main Road would help eliminate outdoor-only and no-service zones, providing more consistent and reliable coverage for both residents and visitors.

On the mainland, small cell locations have been strategically selected to serve areas where single-family residential patterns, restrictive zoning, or proximity to water bodies hinder the deployment of traditional macro towers. These conceptual installations would ensure signal continuity where macro infrastructure alone cannot support reliable indoor or in-vehicle service. In compact or visually sensitive areas, such as flat coastal stretches or neighborhoods with aesthetic limitations, small wireless facilities offer a lower-profile, supplemental solution to fill remaining wireless coverage gaps.

It is important to note that the 28 small cell fill-in sites illustrated in the plan represent a conservative deployment scenario. If some of the proposed macro sites in Scenario 1 are not constructed and each wireless provider deploys its own single-tenant small cell pole, the number of required small cell sites could increase significantly, potentially exceeding 100 small wireless facilities.

Community decisions regarding wireless zoning policies will play a critical role in determining the balance between macro and small cell deployments. For example, expanding macro tower siting eligibility into additional zoning districts, such as Agricultural, could reduce the overall need for small cell sites.

Conversely, in areas like Fishers Island, where topography and limited development make macro siting highly impractical, small cells may offer the most efficient and context-appropriate solution. Similarly, peninsulas on the mainland with predominantly single-family housing may be best served solely by small cell infrastructure located within the public right-of-way, since very few zoning districts on the island support new tower construction.

Next Steps:

- Public Outreach Online Survey and Presentations
- Regulatory Review
- Final Plan

APPENDIX A

WIRELESS DEFINITIONS

WIRELESS DEFINITIONS

For purposes of the Plan the following terms are used throughout and provided as reference as follows:

Bandwidth - A range of frequencies used to transmit a signal. The channel width (bandwidth) affects how much data can transmit per unit time. Each service provider has their own designated finite amount allocated to them by the Federal Communications Commission (FCC).

Base Station - Equipment and non-tower supporting structure at a fixed location that enables wireless telecommunications between user equipment and a communications network. Examples include transmission equipment mounted on a rooftop, water tank, silo or other above ground structure other than a tower. The term does not encompass a tower as defined herein or any equipment associated with a tower. “Base Station” includes, but is not limited to:

- Any structure other than a tower that supports or houses radio transceivers, antennas, coaxial or fiber optic cable, regular and back-up power supplies and comparable equipment, regardless of technological configuration; and

- Equipment associated with wireless telecommunications services such as private, broadcast, and public safety services, as well as license-free wireless services and fixed wireless services such as microwave backhaul and broadband.

Concealment - A tower, base station or utility pole that is not readily identifiable as a wireless communication facility and that is designed to be aesthetically compatible with existing and proposed building(s) and uses on a site or in the neighborhood or area. Some of the types of concealment found in the City are faux dormers, faux facades, parapets, steeples, faux chimneys and unipoles.

Macro Wireless Facilities - Traditional support structures for personal wireless service facilities (PWSF) identified as macro cell facilities consist of multiple provider use towers and base stations. Macro facilities are taller infrastructure usually between 50 and 100 feet in height and have been the most commonly utilized infrastructure over the last thirty years. Macro facilities are considered the backbone of the network and allow service providers the most flexible options when deploying their usable spectrum and providing signal over the greatest area. It also allows the flexibility to target the desired signal to a specific location.

Personal Wireless Service Facilities (PWSF) - Facilities for the provision of personal wireless services. Personal wireless service facilities include transmitters, antennas, structures supporting antennas and electronic equipment that is typically installed in close proximity to a transmitter that provides commercial wireless services.

Radio Frequency (RF) - A range of frequencies that are allocated to be transmitted/received through the air without wires, with the use of transmitters/receivers and associated antennas. Radio waves are generated for fixed and/or mobile communication. A frequency or band of frequencies suitable for use in telecommunications.

Small Wireless Facilities - Small wireless facilities have antennas mounted at lower heights, generally the height of a utility pole. The equipment is mounted on or inside these smaller poles and are interconnected with fiber optic cables which allows for greater bandwidth and faster transmission speeds. For a single service provider, the small wireless facilities are typically spaced every 650 feet, although there are many variations, creating a densification of the transmitting signals for the network. The ideal service area for a small cell is a specified corridor or neighborhood. According to the Code of Federal Regulations a small wireless facility must meet each of the following criteria:

- It must be mounted on structures that are 50' or less in height, including antennas, or on structures no more than 10% taller than adjacent structures. Alternatively, it must not extend existing structures to a height exceeding 50' or by more than 10%, whichever is greater.
- Each antenna associated with the deployment, excluding associated equipment, must not exceed three cubic feet in volume.
- All other wireless equipment related to the structure, including any pre-existing equipment, must not exceed a total volume of 28 cubic feet.
- The facilities must not require antenna structure registration.
- The facilities must not be located on Tribal lands.
- The facilities must not result in human exposure to radio frequency radiation exceeding the applicable safety standards set by the Federal Government.

Tower - Any support structure built for the primary purpose of supporting antennas and associated facilities for commercial, private, broadcast, microwave, broadband, public, public safety, licensed or unlicensed, and/or fixed or wireless services. A tower may be concealed or non-concealed.

Utility Pole - Any pole or structure designed to maintain, or used for the purpose of lines, cables, or wires for communications, cable, electricity, street lighting, other lighting standards, or comparable standards.

Wireless Spectrum - Consists of electromagnetic radiation and frequency bands. The wireless spectrum frequencies used in communication are regulated by national organizations, which specify which frequency ranges can be used by whom and for which purpose. Spectrum refers to the invisible radio frequencies that wireless signals travel over. These signals enable the use of wireless devices. The frequencies used by the wireless service providers are only a portion of what is considered electromagnetic spectrum. An invisible electro-magnetic transmitting and receiving resource determined and defined by wavelengths and found between the audible hearing range and light. The frequencies referenced for this purpose are located in spectrum used for personal wireless services and are only a small portion of what is called the electromagnetic spectrum.

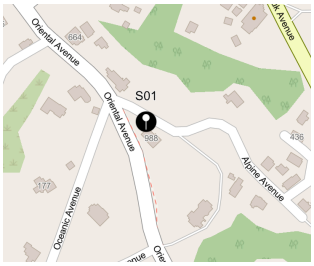
APPENDIX B

WIRELESS INFRASTRUCTURE CATALOG

Site #: S01	233 Alpine Ave	Fishers Island

STRUCTURE TYPE:	Base Station
FACILITY TYPE:	Steeple
ANTENNA TYPE:	Macro Cell
DESIGN TYPE:	Concealed
LOCATION:	Private Property
FACILITY OWNER/ID:	AT&T Mobility / NYNYNY0801
FACILITY SITE NAME:	Our Lady of Grace Catholic Church
SERVICE PROVIDERS:	AT&T, Verizon
FCC ASR:	
HEIGHT:	49’
LATITUDE/LONGITUDE:	41.261530, -72.014976
SCTM #:	1000-9.-7-10
ZONING:	R-80
NOTES:	VZW going on house behind church

TOWN OF SOUTHOLD NEW YORK



Site #: S02	40200 Main Rd	Orient

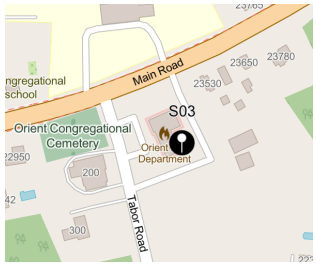
STRUCTURE TYPE:	Tower
FACILITY TYPE:	Unipole
ANTENNA TYPE:	Macro Cell
DESIGN TYPE:	Concealed
LOCATION:	Private Property
FACILITY OWNER/ID:	Octagon Towers / NY-1432
FACILITY SITE NAME:	East Orient Point / Orient By The Sea
SERVICE PROVIDERS:	AT&T, T-Mobile, Verizon
FCC ASR:	
HEIGHT:	89’
LATITUDE/LONGITUDE:	41.152648, -72.244205
SCTM #:	1000-15-9-8.1
ZONING:	MII
NOTES:	LI13882D (TMO)

TOWN OF SOUTHOLD NEW YORK

Site #: S03	23300 Rte 25	Orient

STRUCTURE TYPE:	Tower
FACILITY TYPE:	Unipole
ANTENNA TYPE:	Public Safety/Macro Cell
DESIGN TYPE:	Concealed
LOCATION:	Private Property
FACILITY OWNER/ID:	American Tower / 373337
FACILITY SITE NAME:	Orient Point / Oriental Fire Department
SERVICE PROVIDERS:	AT&T, Dish, T-Mobile, Verizon, Public Safety
FCC ASR:	
HEIGHT:	99’
LATITUDE/LONGITUDE:	41.142633, -72.299465
SCTM #:	1000-18-.5-13.8
ZONING:	R-40
NOTES:	NYCENY0735 (AT&T)

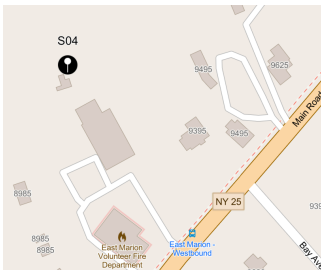
TOWN OF SOUTHOLD NEW YORK



Site #: S04	9245 Main Rd	East Marion

STRUCTURE TYPE:	Tower
FACILITY TYPE:	Unipole
ANTENNA TYPE:	Public Safety/Macro Cell
DESIGN TYPE:	Concealed
LOCATION:	Private Property
FACILITY OWNER/ID:	Crown Castle / 857111
FACILITY SITE NAME:	East Marion / Volunteer Fire District
SERVICE PROVIDERS:	AT&T, Dish, T-Mobile, Verizon, East Marion FD
FCC ASR:	
HEIGHT:	115’
LATITUDE/LONGITUDE:	41.128331, -72.341350
SCTM #:	1000-31.-3-11.31
ZONING:	R-40
NOTES:	NYCENY1017 (AT&T); NYNYC02242A (DISH)

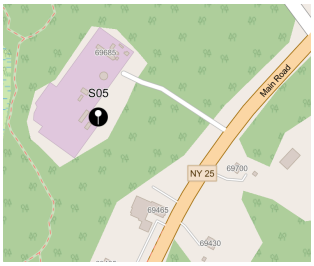
TOWN OF SOUTHOLD NEW YORK



Site #: S05	63455 Main Rd	Southold

STRUCTURE TYPE:	Base Station
FACILITY TYPE:	Utility Pole
ANTENNA TYPE:	Macro Cell
DESIGN TYPE:	Non-Concealed
LOCATION:	Private Property
FACILITY OWNER/ID:	T-Mobile / LI-13-058 / Southold-6841
FACILITY SITE NAME:	PSEG Long Island 8J Southold Generating Station
SERVICE PROVIDERS:	T-Mobile
FCC ASR:	
HEIGHT:	80’
LATITUDE/LONGITUDE:	41.092595, -72.390532
SCTM #:	1000-45.-1-14.1
ZONING:	R-80
NOTES:	

TOWN OF SOUTHOLD NEW YORK



Site #: S06	61405 Main Rd	Southold

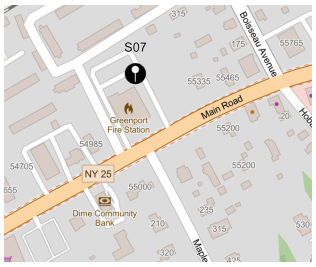
STRUCTURE TYPE:	Tower
FACILITY TYPE:	Unipole
ANTENNA TYPE:	Public Safety/Macro Cell
DESIGN TYPE:	Concealed
LOCATION:	Private Property
FACILITY OWNER/ID:	Elite Towers
FACILITY SITE NAME:	Albertson Marine
SERVICE PROVIDERS:	Dish, Verizon, Public Safety
FCC ASR:	
HEIGHT:	150’
LATITUDE/LONGITUDE:	41.076024, -72.406035
SCTM #:	1000-56.-3-15
ZONING:	MII
NOTES:	NYNYC02239 (DISH), Southold 4 (VZW)

TOWN OF SOUTHOLD NEW YORK

Site #: S07	55135 Route 25	Southold

STRUCTURE TYPE:	Tower
FACILITY TYPE:	Monopole
ANTENNA TYPE:	Macro Cell
DESIGN TYPE:	Non-Concealed
LOCATION:	Private Property
FACILITY OWNER/ID:	Crown Castle / 828062
FACILITY SITE NAME:	Southold Bay / Southold Fire District
SERVICE PROVIDERS:	T-Mobile
FCC ASR:	
HEIGHT:	59’
LATITUDE/LONGITUDE:	41.066484, -72.424265
SCTM #:	1000-62.-1-19.1
ZONING:	HB
NOTES:	

TOWN OF SOUTHOLD NEW YORK



Site #: S08	1040B Horton Ln	Southold

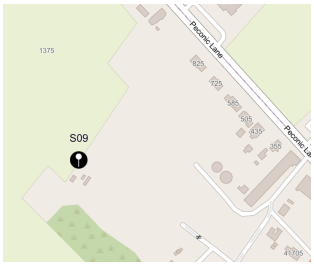
STRUCTURE TYPE:	Tower
FACILITY TYPE:	Unipole
ANTENNA TYPE:	Macro Cell
DESIGN TYPE:	Concealed
LOCATION:	Private Property
FACILITY OWNER/ID:	AT&T / LI-1025
FACILITY SITE NAME:	1040B Hortons Lane
SERVICE PROVIDERS:	AT&T
FCC ASR:	
HEIGHT:	90’
LATITUDE/LONGITUDE:	41.065592, -72.432700
SCTM #:	1000-63.-1-10
ZONING:	LI
NOTES:	NYNYC02239 (DISH), Southold 4 (VZW)

TOWN OF SOUTHOLD NEW YORK

Site #: S09	165 Peconic Ln aka 41405 Route 25	Peconic

STRUCTURE TYPE:	Tower
FACILITY TYPE:	Lattice
ANTENNA TYPE:	Public Safety/Macro Cell
DESIGN TYPE:	Non-Concealed
LOCATION:	Public Property
FACILITY OWNER/ID:	Town of Southold / 326825
FACILITY SITE NAME:	Peconic-6825 / Animal Shelter
SERVICE PROVIDERS:	AT&T, Dish, T-Mobile, Verizon, Public Safety
FCC ASR:	
HEIGHT:	145’
LATITUDE/LONGITUDE:	41.041367, -72.458660
SCTM #:	1000-75.-5-14.1
ZONING:	R-80
NOTES:	NYNYNY0229 (AT&T)

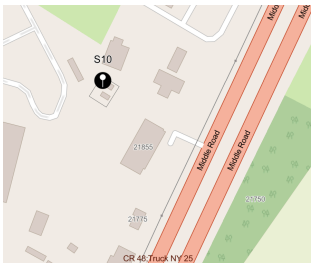
TOWN OF SOUTHOLD NEW YORK



Site #: S10	21855 County Rd	Cutchogue

STRUCTURE TYPE:	Tower
FACILITY TYPE:	Monopole
ANTENNA TYPE:	Macro Cell
DESIGN TYPE:	Non-Concealed
LOCATION:	Public Property
FACILITY OWNER/ID:	Crown Castle / 806579
FACILITY SITE NAME:	NY Cutchogue 958280 / Junge
SERVICE PROVIDERS:	AT&T, T-Mobile, Verizon, MTA
FCC ASR:	
HEIGHT:	112’
LATITUDE/LONGITUDE:	41.029583, -72.497239
SCTM #:	1000-96.-1-19.1
ZONING:	LI
NOTES:	NYCENY1027 (AT&T); LI-13-544-A (TMO)

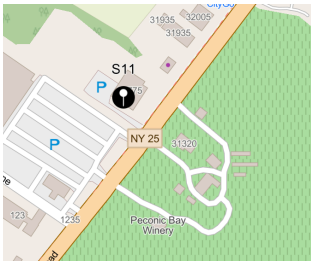
TOWN OF SOUTHOLD NEW YORK



Site #: S11	31775 Main Rd	Cutchogue

STRUCTURE TYPE:	Tower
FACILITY TYPE:	Monopole
ANTENNA TYPE:	Macro Cell
DESIGN TYPE:	Non-Concealed
LOCATION:	Private Property
FACILITY OWNER/ID:	Town of Southold / 326825
FACILITY SITE NAME:	Verizon / State 42, Switch 77, Cell #85491
SERVICE PROVIDERS:	Verizon
FCC ASR:	1007274
HEIGHT:	92’
LATITUDE/LONGITUDE:	41.019501, -72.480221
SCTM #:	1000-97.-5-11
ZONING:	B
NOTES:	

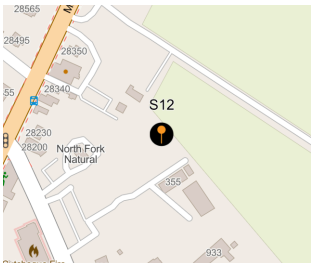
TOWN OF SOUTHOLD NEW YORK



Site #: S12	260 New Suffolk Rd	Cutchogue

STRUCTURE TYPE:	Tower
FACILITY TYPE:	Unipole
ANTENNA TYPE:	Public Safety/Macro Cell
DESIGN TYPE:	Concealed
LOCATION:	Public Property
FACILITY OWNER/ID:	LI Tower Partners
FACILITY SITE NAME:	Cutchogue FD / Cutchogue Fire District
SERVICE PROVIDERS:	AT&T, Public Safety
FCC ASR:	
HEIGHT:	140’
LATITUDE/LONGITUDE:	41.010726, -72.483438
SCTM #:	1000-102.-6-11.1
ZONING:	HB
NOTES:	**PROPOSED UNDER REVIEW**

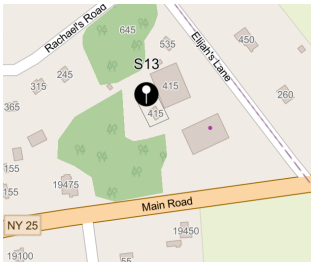
TOWN OF SOUTHOLD NEW YORK



Site #: S13	415 Elijahs Ln	Southold

STRUCTURE TYPE:	Tower
FACILITY TYPE:	Monopole
ANTENNA TYPE:	Macro Cell
DESIGN TYPE:	Non-Concealed
LOCATION:	Private Property
FACILITY OWNER/ID:	Crown Castle / 843211
FACILITY SITE NAME:	Mattituck / Baxter
SERVICE PROVIDERS:	AT&T, Dish, T-Mobile, Verizon
FCC ASR:	1219856
HEIGHT:	110’
LATITUDE/LONGITUDE:	40.9994649, -72.511223
SCTM #:	1000-108.4-11.3
ZONING:	LI
NOTES:	NYNYNY0228 (AT&T)

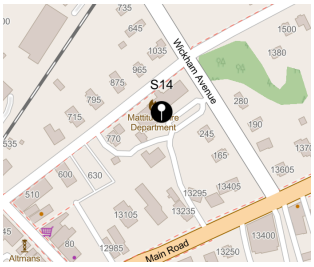
TOWN OF SOUTHOLD NEW YORK



Site #: S14	1000 Pike St	Mattituck

STRUCTURE TYPE:	Tower
FACILITY TYPE:	Unipole
ANTENNA TYPE:	Public Safety/Macro Cell
DESIGN TYPE:	Concealed
LOCATION:	Public Property
FACILITY OWNER/ID:	Tarpon Towers, LLC / NY1066
FACILITY SITE NAME:	Mattituck / Mattituck Fire District
SERVICE PROVIDERS:	Verizon, Mattituck Fire Department
FCC ASR:	
HEIGHT:	129’
LATITUDE/LONGITUDE:	40.992855, -72.533259
SCTM #:	1000-140.-3-11-1
ZONING:	HB
NOTES:	

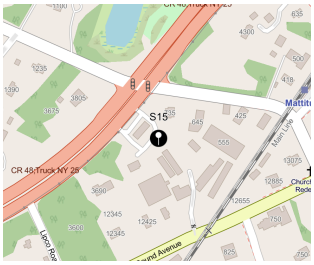
TOWN OF SOUTHOLD NEW YORK



Site #: S15	12585 Sound Ave	Mattituck

STRUCTURE TYPE:	Tower
FACILITY TYPE:	Monopole
ANTENNA TYPE:	Macro Cell
DESIGN TYPE:	Non-Concealed
LOCATION:	Private Property
FACILITY OWNER/ID:	Crown Castle / 825717
FACILITY SITE NAME:	Mattituck / Amagansett Lumber
SERVICE PROVIDERS:	Dish, T-Mobile
FCC ASR:	
HEIGHT:	100’
LATITUDE/LONGITUDE:	40.991077, -72.538262
SCTM #:	1000-141.-3-38.1
ZONING:	LI
NOTES:	LI13411B (TMO)

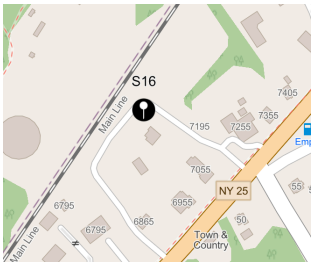
TOWN OF SOUTHOLD NEW YORK



Site #: S16	7055 Main Rd	Mattituck

STRUCTURE TYPE:	Tower
FACILITY TYPE:	Unipole
ANTENNA TYPE:	Public Safety/Macro Cell
DESIGN TYPE:	Concealed
LOCATION:	Private Property
FACILITY OWNER/ID:	K2 Towers / NY-3
FACILITY SITE NAME:	Laurel Stone
SERVICE PROVIDERS:	AT&T, Dish, T-Mobile, Public Safety
FCC ASR:	
HEIGHT:	110’ per reviews but had 120’
LATITUDE/LONGITUDE:	40.978832, -72.547133
SCTM #:	1000-122.-6-35.4
ZONING:	B
NOTES:	NYNYC02219A (DISH); LI-03-110-A (TMO)

TOWN OF SOUTHOLD NEW YORK



Site #: O01	Washington Ave	Greenport

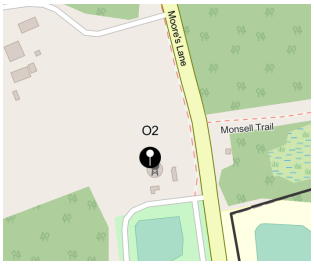
STRUCTURE TYPE:	Tower
FACILITY TYPE:	Guyed
ANTENNA TYPE:	Public Safety/Macro Cell
DESIGN TYPE:	Non-Concealed
LOCATION:	Private Property
FACILITY OWNER/ID:	Cablevision Communications
FACILITY SITE NAME:	Greenport-3627 / Village of Greenport
SERVICE PROVIDERS:	DISH, TMO, VZW, Public Safety
FCC ASR:	1033042
HEIGHT:	255’
LATITUDE/LONGITUDE:	41.109385, 72.367776
SCTM #:	1001-2.-1-21.2
ZONING:	R-1
NOTES:	Greenport

TOWN OF SOUTHOLD NEW YORK

Site #: O02	170 Moores Ln	Greenport

STRUCTURE TYPE:	Base Station
FACILITY TYPE:	Water Tank
ANTENNA TYPE:	Public Safety/Macro Cell
DESIGN TYPE:	Semi-Concealed
LOCATION:	Public Property
FACILITY OWNER/ID:	Suffolk County NY - Water Authority / Greenport-9820
FACILITY SITE NAME:	
SERVICE PROVIDERS:	AT&T, VZW, Public Safety
FCC ASR:	1039820
HEIGHT:	159’
LATITUDE/LONGITUDE:	41.103988, -72.373667
SCTM #:	1001-1.-1-1.1
ZONING:	R-1
NOTES:	

TOWN OF SOUTHOLD NEW YORK



Site #: O03	6180 Sound Ave	Jamesport

STRUCTURE TYPE:	Tower
FACILITY TYPE:	Guyed
ANTENNA TYPE:	Public Safety/Macro Cell
DESIGN TYPE:	Non-Concealed
LOCATION:	Private Property
FACILITY OWNER/ID:	KeySpan Corporation / Riverhead-2509
FACILITY SITE NAME:	National Grid USA Service CO, Inc
SERVICE PROVIDERS:	AT&T, TMO, VZW, Public Safety
FCC ASR:	1002509
HEIGHT:	400’
LATITUDE/LONGITUDE:	40.986397, -72.585156
SCTM #:	1000-33-1-16
ZONING:	
NOTES:	Jamesport

TOWN OF SOUTHOLD NEW YORK