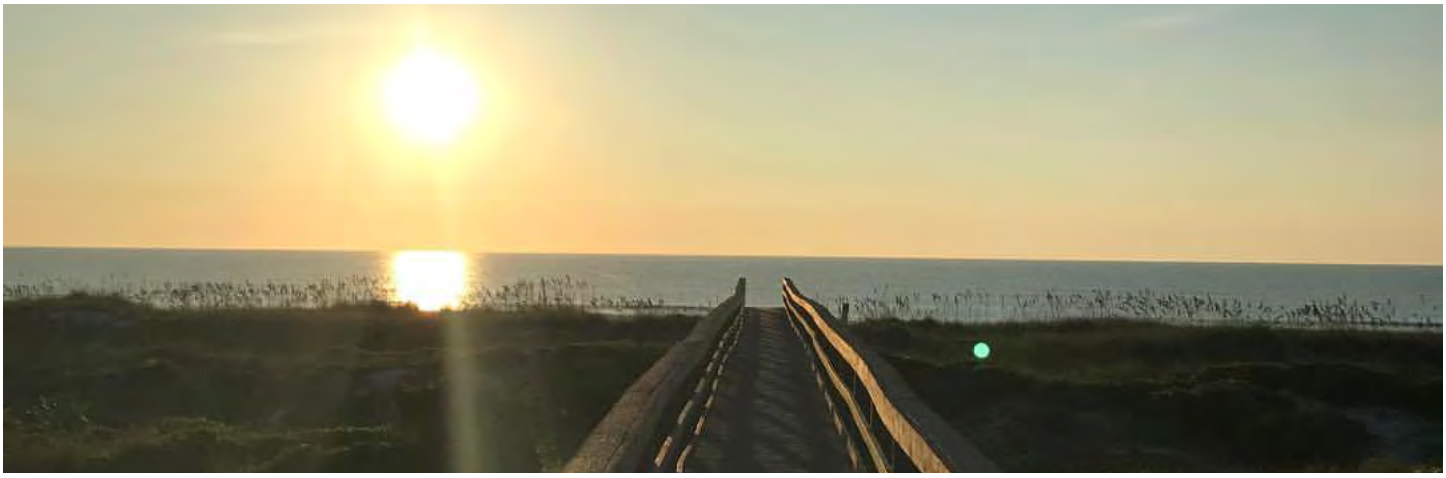

Nassau County and City of Fernandina Beach

Wireless Master Plan

THIRD DRAFT

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EXECUTIVE SUMMARY

The Wireless Master Plan was commissioned by Nassau County (County) and The City of Fernandina Beach (City) in a proactive effort addressing wireless infrastructure development throughout the County. The usage of smart wireless devices are growing and are an integral part of communications for residents, students, businesses and emergency services throughout the County. Because of this growing demand of services, the need for more infrastructure is increasing.

The Wireless Master Plan examines the existing infrastructure to define the deployment patterns and current wireless coverage. The areas in need of wireless services are determined and the numbers of facilities necessary to create a complete wireless representation is projected. Recent federal and state legislative changes prompted local ordinance revisions to uphold compliance and encourage deployment.

Throughout the Wireless Master Plan development there were public outreach meetings designed to educate the public on wireless industry trends, strategies and practices and offered polling to allow all stakeholders the opportunity to participate in the process. For convenience the meetings were held in three different areas of the County as follows:

Initial Public Outreach Meetings and polling:

- 8/15/17 - 7 pm, James S. Page Government Complex, Yulee
- 8/16/17 - 6 pm, American Beach Community Center, Fernandina Beach
- 8/17/17 - 6 pm, Callahan Fairground Multi-Purpose Facility

Second Public Outreach Series:

- 3/20/18 - 6 pm, James S. Page Government Complex, Yulee
- 3/22/18 - 6 pm, City Hall Commission Chambers, Fernandina Beach

The County and City's wireless communication infrastructure is the backbone for the impending development so all existing infrastructure was assessed and cataloged. Countywide there are a total of one hundred and one (101) towers and base stations which consisted of ninety nine (99) existing facilities and two (2) proposed facilities. Of those there are thirty five (35) within the City jurisdiction which included sixteen (16) small cell facilities and one (1) facility located south of the City boundary but within the one and a half mile perimeter.

Mapping was conducted throughout the process and presented at the Outreach meetings to illustrate the wireless service environment throughout the County and the City. The predicted high and low frequency maps identify the approximate coverage and showcase the areas that have limited wireless coverage or gaps in services. Approximate projections were determined taking into consideration the previous deployment pattern, trends of the technology, population density and variables of the area.

The projected number of new facilities needed in both the rural and urbanized areas of the County are estimated to be twenty (20) new macro towers at the height of approximately eighty (80') to one hundred fifty feet (150') tall. These macro towers are necessary as the backbone to fill in the network gaps to meet coverage and capacity needs County-wide over the next ten (10) years. It is estimated that hundreds of small cell antennas mounting at the height of approximately thirty-five (35') to forty feet (40') are needed to meet anticipated 5G demands over the next decade. It is probable that most of these small cell facilities will be in the rights-of-way (ROW) parallel to major thoroughfares and along local streets in the urban residential districts.

Updating the local wireless communication facility ordinance was completed in conjunction with the Wireless Master Plan. The local code was brought into compliance with the 2017 Florida State legislation HB 687 and new federal regulatory changes in the Federal Communication Commissions (FCC) First and Third Report and Orders through January 2019. Highlights of the update includes:

- Standards for small wireless facilities in the ROW
- Promotes the use of concealed antenna and towers
- Provides a wireless facility siting table listing collocation as the preferred type of installation and a non-concealed tower as the last preferred option
- Siting table developed from the citizen responses at the Initial Public Outreach meetings
- Development standards to promote a balance between the needed wireless infrastructure while maintaining aesthetic integrity of the County and City, which was the sentiment voiced during the polling process

The Wireless Master Plan in its entirety is an in-depth study of the wireless communication service coverage throughout Nassau County and The City of Fernandina Beach. This plan offers projections and standards for the County that encourages complete wireless coverage taking into consideration all stakeholder input making this an all-inclusive plan to follow for the next decade.

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INTRODUCTION

Nassau County embarked on a county-wide Wireless Master Plan project as a proactive approach to address poor wireless service coverage, visual concerns of future additional wireless infrastructure and recent changes in federal and state legislation. The approach of the Wireless Master Plan provides strategies to address existing and future deployments in and around Nassau County (County) and the City of Fernandina Beach (City).

This illustrative document details planning guidelines specific to the study area of the City and County. The initial narratives and figures provide explanations on the fundamentals of wireless communication to emphasize the importance of how personal wireless services began and continues to improve and progress. The mapping and engineering analyses identify existing gaps in network coverage and indicate local areas with high demand capacity issues. The community outreach meetings facilitate stakeholder feedback offering guidance for design standards and siting preferences that created the framework for the updated public policy.

CityScape Consultants, Inc., an engineering firm specializing in radio frequency design, developed the Wireless Master Plan in partnership with the County and City to encourage deployment of a robust wireless network throughout the County with minimal visual impact to the landscape.

The Wireless Master Plan includes:

- A brief tutorial on wireless fundamentals;
- An analysis of existing wireless infrastructure throughout the study area;
- An overview on the methodology of network deployment practices;
- A synopsis of the considered characteristics of the study area;
- Theoretical propagation mapping indicating gaps in service;
- Ten year projection maps for potential future network deployment patterns; and
- Policy recommendations aligned with federal and state law amendments for managing future towers and base stations over the next ten to fifteen years.

WIRELESS COMMUNICATION FUNDAMENTALS

Generation Evolution

The **First Generation** of wireless telecommunications technology is known as 1G and was introduced in the 1980's. The first cellular phones operated in the low band 850 megahertz (MHz) frequency and allowed the radio signal from the antenna on the tower to travel beyond a five mile radius provided the signal was unobstructed by buildings or terrain.

Early 1992 marked the deployment of **Second Generation** known as 2G technologies which operated in the 1900 MHz frequency. The 1900 MHz frequency, also known as high band frequency, converted the technology from an analog to digital signal. Calls placed on the 1900 MHz system were audibly clearer. However, this high band signal did not travel as far as the low band signal, so the number of facilities required for this frequency range nearly tripled to provide basic 2G coverage.

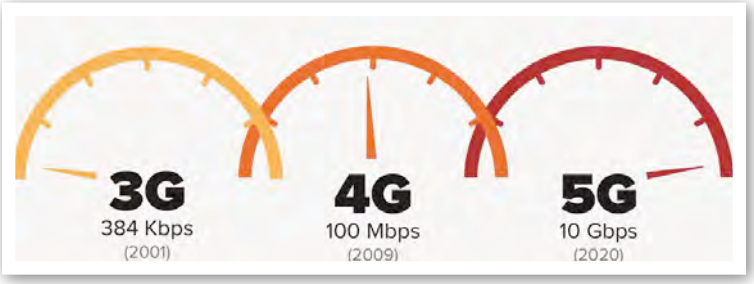
Third Generation, also known as 3G was launched in the early 2000's and introduced mobile download speeds and increased penetration of signal strength for indoor usage. This technology also permitted multi-media messaging (MMS), photo transfer, video conferencing and basic other applications. Network operating platforms, nationally and internationally, were inconsistent between markets during the implementation of 3G networks because of the adoption by different carriers of Time Division Multiple Access (TDMA) and Code Division Multiple Access (CDMA) as competing operating platforms.

In 2010 **Fourth Generation** (4G) Smartphones were introduced and offer a wide variety of services including e-mail, news, music, cameras for still photos and videos, global positioning services, Internet commerce and millions of downloadable applications for just about any use. One of 4G's greatest advancements of the global cellular network operating standard has been the transition to Long Term Evolution (LTE) services. The new universal LTE and LTE-Advanced platforms promote efficient use of spectrum, faster download speeds and continued development and use of smart devices. Technology advancements in 2015 resulted in upgraded, leading edge Smartphones and devices that support remote access to Internet based cloud data storage.

The future of the wireless industry will include continued upgrades to existing networks; improving and increasing network capacity and purchasing additional licenses in the 700, 1700-1800, and 2100-2400 MHz frequencies. The Federal Communications Commission (FCC) is opening more spectrum to be used on top of most of the initial frequencies assigned in all previous generations.

Fifth Generation known as 5G along with the future reassignment of some television frequencies will add more spectrum that is required to meet the growing demand.

The purpose of **Wireless Broadband** technology is to provide high-speed wireless Internet access or computer networking access over a wide area. The FCC revised the definition of wireless broadband to mean Internet access with download speeds of at least 25 megabits per second (Mbps) and upload speeds of at least 3 Mbps. High-speed broadband is necessary for Smartphones, tablets, laptops, hand held devices and machine to machine (M2M) devices. Because of this revised standard there are few wireless service providers that effectively meet the current definition. Fifth generation technology is intended to address this issue and offer high speed broadband. Future deployments will eventually exceed the FCC definition and focus on implementation into full broadband services.



Network design for 5G technology is in testing stages and network standards are not finalized but will expand with a focus on implementing full broadband services. It is anticipated that 5G will open opportunities for providers beyond those currently authorized in the County. The implementation of 5G is highly technical and while many existing frequencies will be used, providers will likely expand into the Super High Frequencies (SHF) between 3 gigahertz (GHz) to 30 GHz and Extremely High Frequencies (EHF), between 30 GHz and 300 GHz spectrum. Fifth generation networks will require smaller sized antenna mounted at lower heights on facilities spaced closer together. The spacing between facilities is predicted to be between 165 feet to 1,650 feet depending on the population density of the area to be served. Fifth generation networks are expected to sufficiently compete directly with today's fastest computer networks with download speeds well above 100 Mbps. The advanced technologies will allow all forms of communications and entertainment to be streamed, resulting in the eventual elimination of Digital Subscriber Lines (DSL) and cable/satellite television and will provide the underlying communication technology that will enable many wireless features including autonomous vehicles.

Types of Infrastructure

Macro Towers

As defined in the FCC Report and Order, released October 21, 2014 in WT Docket 13-283, commonly referred to as the FCC's "Report and Order", a wireless tower is "a structure built for the sole or primary purpose of supporting any commission licensed or authorized antennas and their associated facilities". **Macro Towers** are high powered sites intended to cover sizable geographic areas for basic voice service, texting capabilities and Internet access. These macro towers require a strong structure and have large antenna with coaxial

cables connecting the antenna to the ground equipment. The macrocell site footprint is large with infrastructure spaced between one and three miles apart and can accommodate between 1,750 and 2,500 devices simultaneously for voice and texting. When large amounts of data such as streaming video is being used many less devices can be used simultaneously. Macro towers can either be concealed or non-concealed and comprise the majority of the towers deployed and constructed to date within the County.

Figure 1: Monopole, Lattice, Guyed Non-Concealed Towers

Monopoles are freestanding towers consisting of a single shaft usually composed of two or more hollow sections attached to a foundation. They are designed so that all feed lines can be installed inside the structure so they are not visible. A lattice tower is tapered consisting of vertical and horizontal supports with multiple legs, cross bracing and metal strips or bars to support antennas. Guyed towers are a single truss assembly with cross bracing sections that are attached to each other and supported by a series of wires that are connected to anchors placed in the ground or on a building. Examples of non-concealed towers are shown in Figure 1.

Figure 2: Faux Tree, Unipole, Faux Silo Concealed Towers

A concealed tower is one that is not readily identifiable as a wireless facility and is designed to visually blend in with its surroundings. Concealed towers are disguised to look like something other than a tower. For example, a faux tree is painted and has manufactured branches covering the monopole and a unipole design is a monopole with fiberglass shields covering the antennas which may or may not have a flag affixed atop. Popular concealed tower examples are shown in Figure 2.

There are many other designs of camouflaged sites and as designed may be difficult to detect.

Base Stations

A **Base Station** as defined in the FCC Report and Order is, "a structure or equipment at a fixed location that enables Commission-licensed or authorized wireless communications between user equipment and a communications network. The term does not encompass a tower...". Non-concealed base stations are shown in Figure 3.

Figure 3: Water Tank, Rooftops Non-Concealed Base Stations

Base station examples include transmission equipment mounted on top of buildings, water tanks, tall signage, utility lines, existing silos or any other above ground structure not built for the sole purpose of supporting wireless equipment. Concealed base stations are shown in Figure 4. Some types of base station concealment include faux dormers and chimneys, elevator shafts encasing the equipment or just antenna and feed lines painted to match the color of a building or structure.

Figure 4: Faux Dormers Concealed Base Stations

Small Wireless Facilities

There are various types of infrastructure that is considered in the small cell category with many options for small cell design. **Small Cell** sites accommodate a much lower number of subscribers and are mainly used to fill in needed network capacity in areas of high demand. Small wireless facilities are typically installed in right-of-ways on light poles and street lights and in residential areas where macro sites are

Figure 5: Concealed Small Cell Towers

difficult to deploy. Small cell are also mounted on buildings and used indoors at sporting stadiums, malls, office buildings and convention centers.

The ground equipment consumes less space and can be mounted on the structure, on the ground or vaulted underground.

Figure 6: Non-Concealed Small Cell Base Stations

Small cell towers and base stations can be concealed, partially concealed or non-concealed as shown in Figures 5 and 6.

In Florida to be considered a small wireless facility the structure must meet both of the following qualifications:

1. Each antenna is located inside an enclosure of no more than six (6) cubic feet in volume or, in the case of exposed antenna elements, if enclosed could fit within an enclosure of no more than six (6) cubic feet; and
2. All other wireless equipment associated with the facility has a cumulative volume of no more than twenty-eight (28) cubic feet.

Distributed Antenna Systems (DAS) are also considered in the small cell category. This system is a series of low powered antennas connected by fiber optics and often used in higher density populated areas, see Figure 7 DAS diagram. Distributed antenna systems may be placed inside buildings (iDAS) for increasing wireless signals only within the building. Often they are placed within large structures such as stadiums or corporate headquarters where high demand capacity is needed. Outdoor distributed antennas systems (oDAS) can often be seen in the utility right-of-way (ROW) on top of utility poles, street light poles or traffic signal poles.

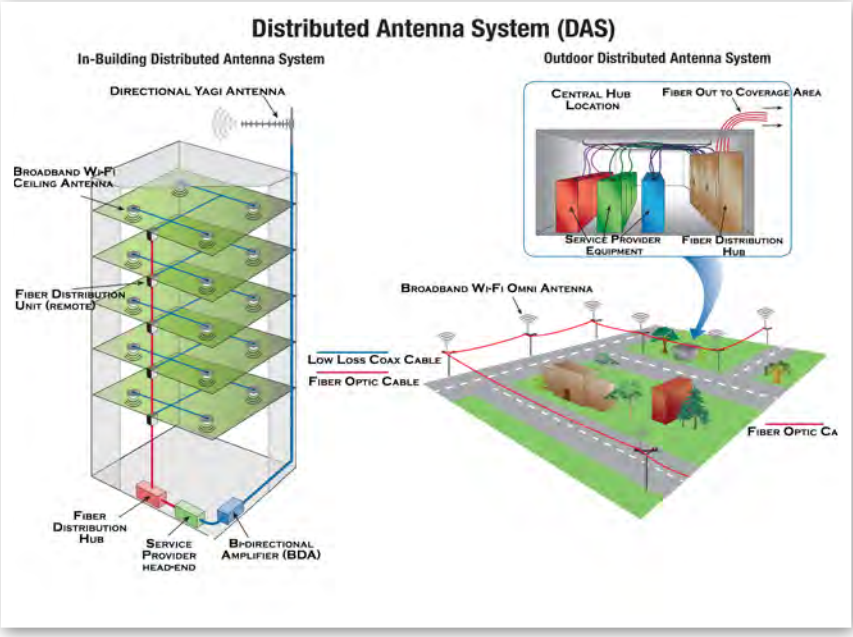


Figure 7: DAS Diagram

Technological advances and predicted demand have many small cell infrastructure developers racing to obtain leasing rights and approvals for facilities in right-of-ways. These companies are seeking quick approval processes and low cost for deployment. There are pros and cons to these types of installations. The upside of small cells in the ROW is its close proximity to residential dwellings and vehicles. The downside is that citizens may not want new small cell facilities in the ROW in their front yard. A combination of small cell and macro sites is necessary for a robust wireless network system throughout the County.

Wireless Spectrum and Frequency

Wireless telecommunications operate using frequencies on the radio spectrum as illustrated in Figure 8.

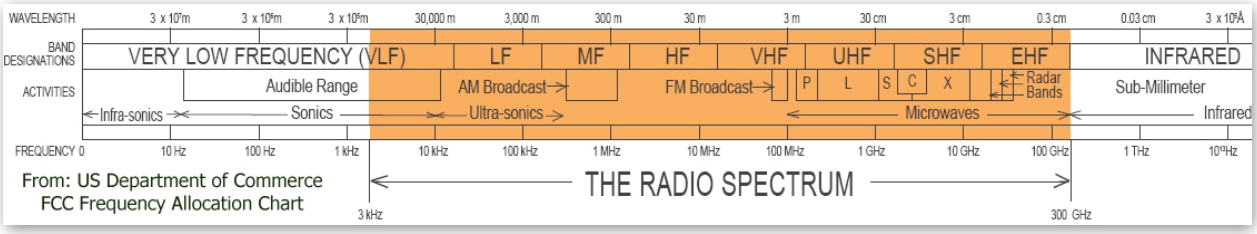


Figure 8: FCC Frequency Allocation Chart Image US Department of Commerce

These radio waves travel in space to and from the tower or base station to the mobile device to provide the necessary information for communication. The antennas at each end of the transmission are what create and intercept these radio waves and converted back to electrical signals as shown in Figure 9.

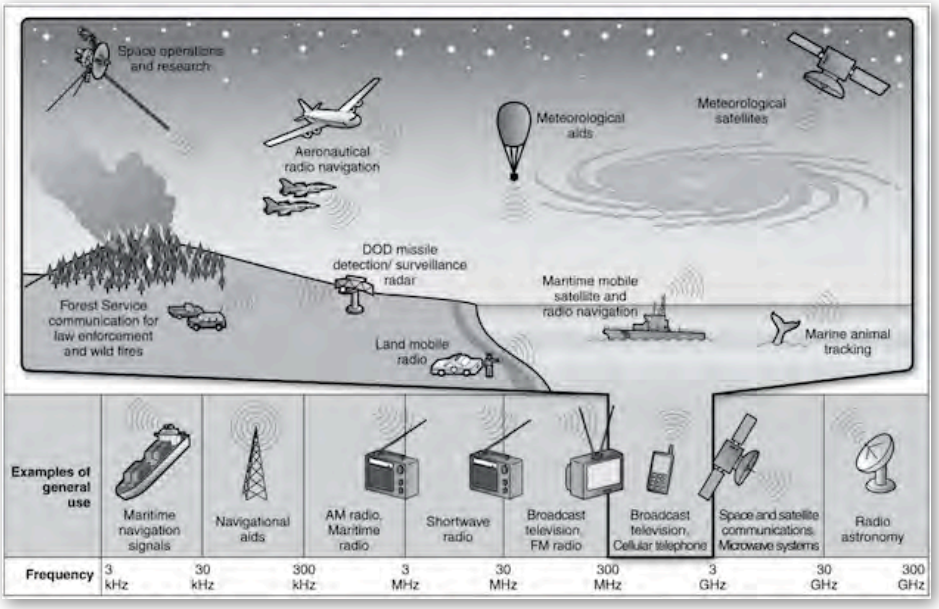


Figure 9: Radio Waves Diagram by Satcompost.com

Cellular communications is the concept of using a network of towers or base stations that are each responsible for service within a geographic "cell". Because the amount of radio spectrum is limited, it is the cellular design that allows the reuse of frequencies beyond a group of cells as depicted in Figure 10.

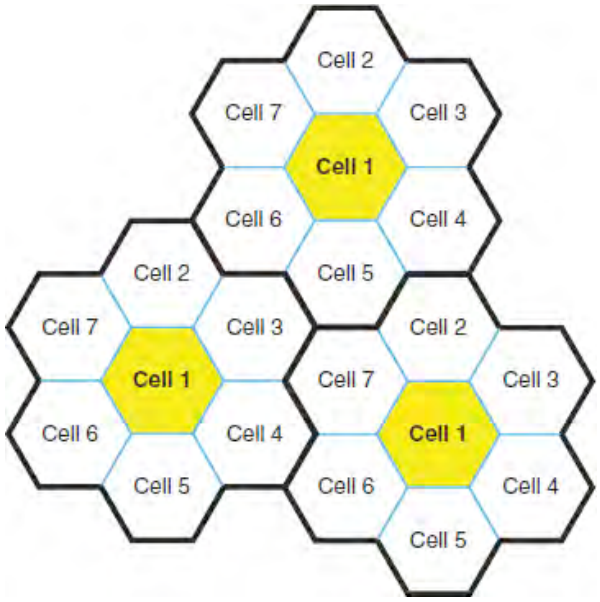


Figure 10: Cellular Design nap.edu

Personal wireless services currently use radio spectrum divided into two distinct bands, commonly described as low (700-850 MHz) and high (1,700-2,100 MHz). The different frequencies yield different overall areas of coverage and clutter penetration. Signals from antenna using low frequency networks cover larger geographic areas and can effectively penetrate through clutter better, allowing the signal to enter through windows and walls of buildings. Antenna using high frequency networks provide greater reception quality but have a smaller service area footprint and do not cut through clutter as effectively. As the demand for wireless broadband increases the FCC has had to allocate more spectrum in even branch out into other frequencies. The planned future evolution to 5G has initiated testing for these new frequencies that were previously thought to be unusable for cellular communications.

Community Information

Nassau County Characteristics

Nassau County is located in the northeast corner of Florida just north of the City of Jacksonville. The overall land area of Nassau County is 648.64 square miles with the eastern part of the County parallel to the Atlantic Ocean and the northern and western County lines contiguous to the State of Georgia.

The major north-south transportation corridors are Interstate 95 (I-95); US Highway 1 (Hwy 1)/ Old Dixie Highway/Lem Turner Road and US Highway 17 (Hwy 17). The primary east-west corridor is State Road 200 (SR 200) and Stadler Road. At the coast Florida State Road A1A (SR A1A) turns and serves as the north-south main corridor along the island area.

According to the United States Census Quick Facts, the population estimate for Nassau County in 2010 was 73,310 and the 2016 population estimate was 80,662. This equates to an estimated population increase of ten percent (10%) over the six year period.

Due to the significant contrast of population and land use characteristics countywide, the County is sectioned into five regions. These five regions are referenced as study areas and are delineated as listed below and as shown in Figure 11.

- Incorporated Island Area - the City of Fernandina Beach
- Unincorporated Island - areas outside of the City of Fernandina Beach corporate limits
- Incorporated Non-Island Area
- Unincorporated Non-Island Area - East of I-95
- Unincorporated Non-Island Area - West of I-95

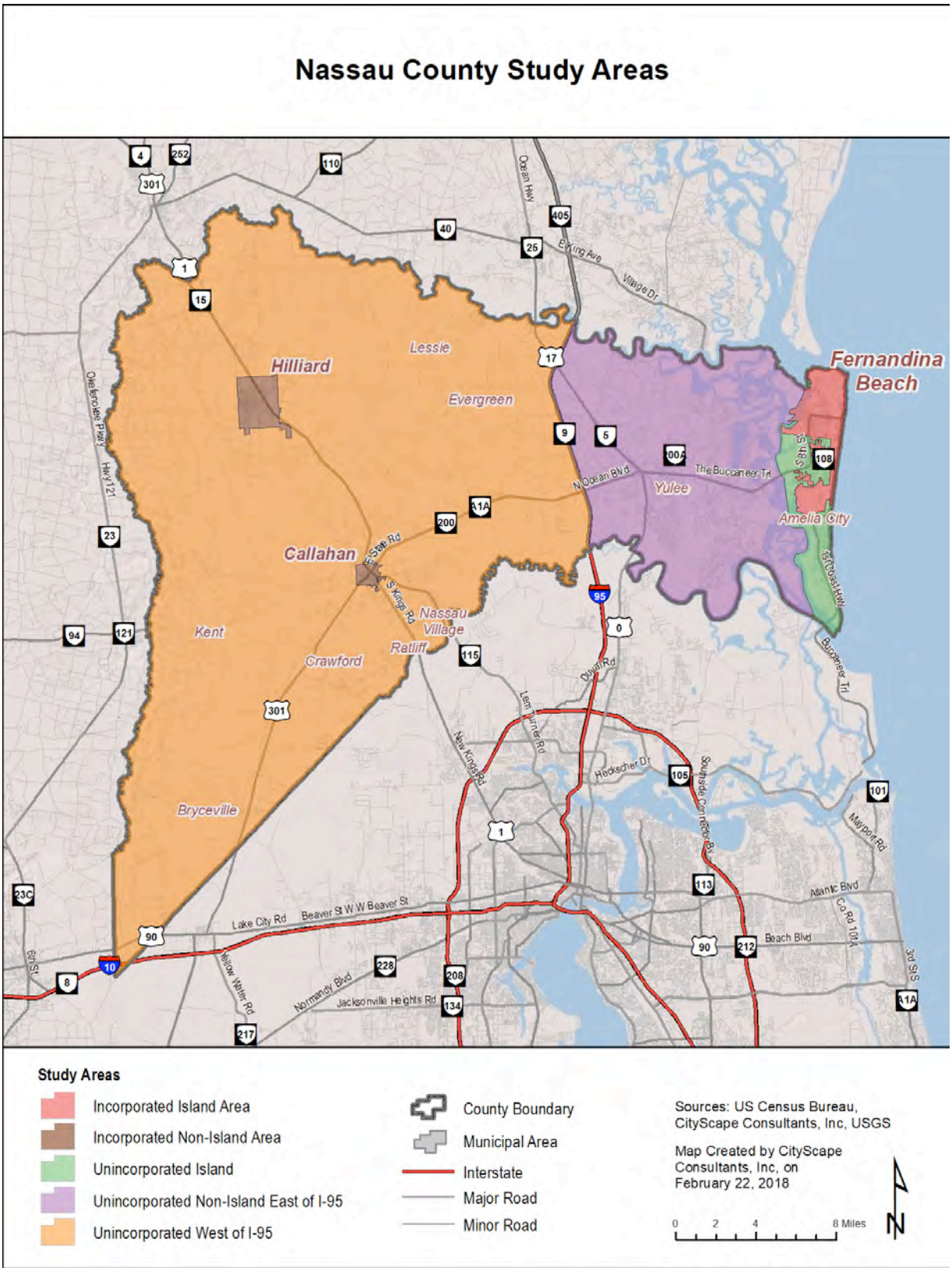


Figure 11: Nassau County Study Areas

The City of Fernandina Beach and the unincorporated area of Amelia City are the most densely populated areas within Nassau County. Other clusters of the more densely populated areas are found in the City of Yulee and to the east in the City of Callahan and to the south in the City of Hilliard and to the south and southeast. The remaining areas of the County have lower population densities.

Nassau County does not have current population estimates so the American Community Survey (ACS) of the US Census data was used as an approximate baseline population for each study area as depicted in Table 1. The land area in square miles excludes bodies of water and marshlands while the total square miles include these areas.

	Study Areas	Land Area Square Miles	Total Square Miles	Population	Population Density People/ Square Miles
	Incorporated Island Area	10.8	12.23	12,156	1,126
	Unincorporated Island	8.57	15.01	9,417	1,099
	Incorporated Non-Island Area	6.43	6.89	4,334	674
	Unincorporated Non-Island Area East of I-95	69.11	124.34	25,929	375
	Unincorporated Non-Island Area West of I-95	430.12	505.27	24,259	56

Table 1: Baseline Population by Study Areas

CityScape used road traffic data to determine the seasonal impact on the County's population along with the seasonal vacation home data from the 2010 Decennial to geographically distribute the influx of seasonal residents and tourists. Generally the County has the lowest population in late December that gradually builds and peaks during the month of May. The summer months of June and July also have population escalations due to tourists vacationing at Nassau County beaches. In August the seasonal population declines and plateaus to the off peak numbers until around Thanksgiving through late December.

Figures 12 and Figure 13 demonstrate the population density variations between the peak and off peak times throughout the County.

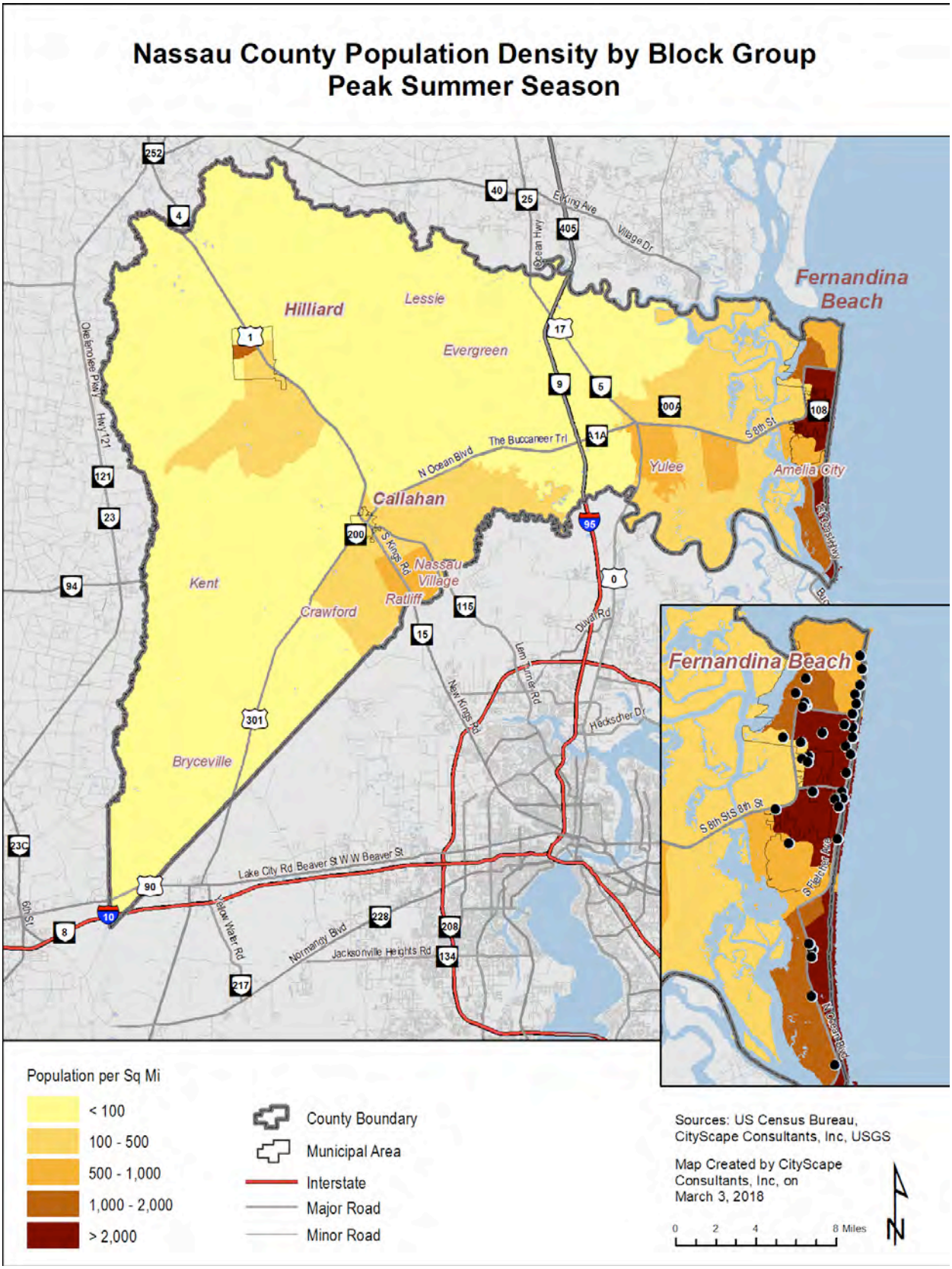


Figure 12: Nassau County Population Density Peak Season

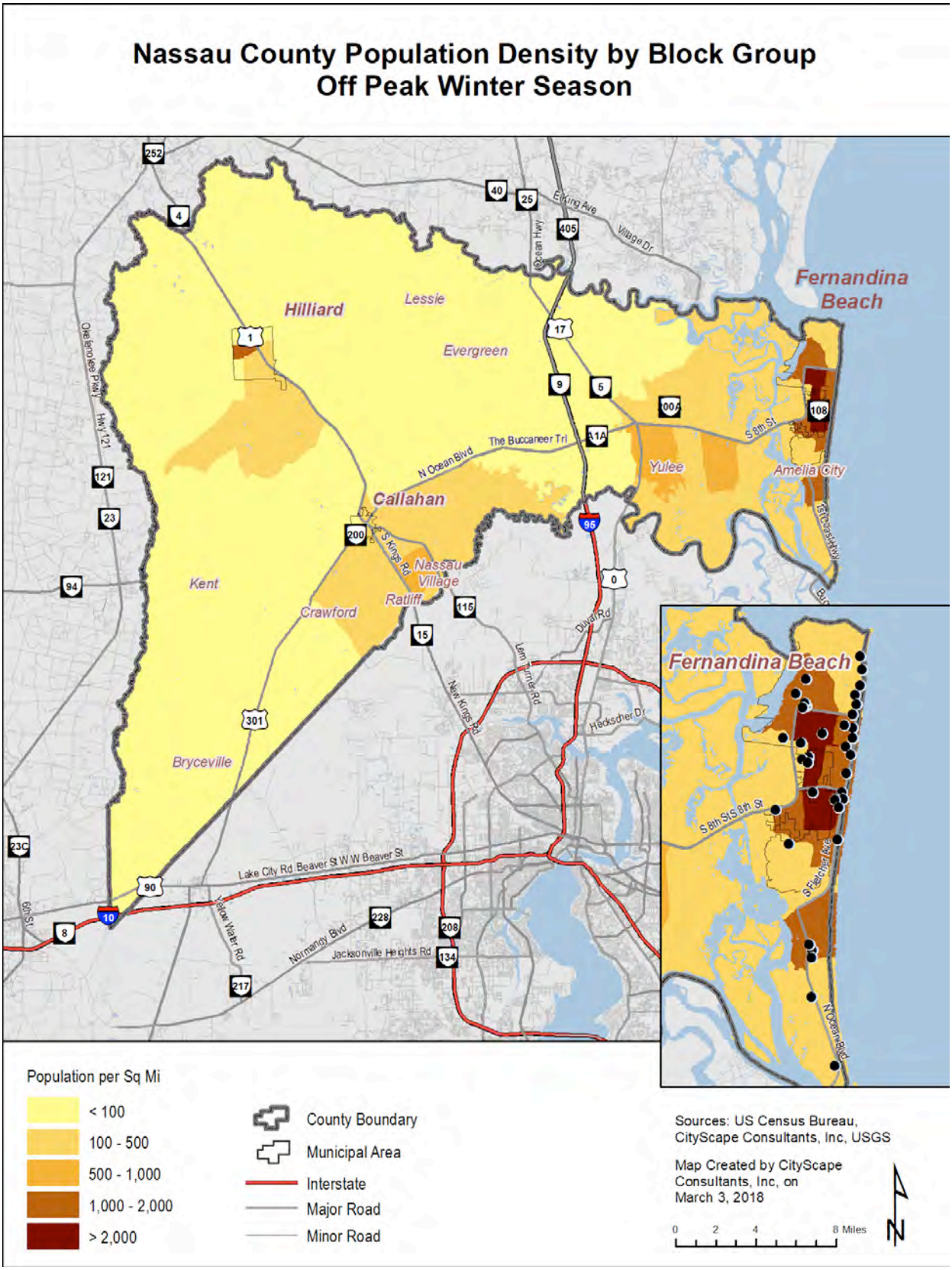


Figure 13: Nassau County Population Density Off Season

Nassau County Wireless Industry Stakeholders

Prior to granting cellular licenses in 1980, the United States was divided into 51 regions by Rand McNally and Company. These regions are described as Metropolitan Trading Areas (MTA). The spectrum auction conducted by the federal government for the 1900 MHz bands for 2G, further divided the United States into 493 geographic areas called Basic Trading Areas (BTA). Nassau County is located in the "Jacksonville" MTA 37 and the "Jacksonville, FL" BTA 212.

The following wireless service providers have purchased licenses to offer broadband, fixed wireless services, mobile radio, phone and or television in the low MHz frequencies (600-800 MHz) in Nassau County: AT&T; BPC Spectrum LLC, Continuum 700, Dish; and; Verizon Wireless.

Wireless service providers operating in the high operating frequencies (1700- 2690 MHz) include: AT&T Wireless; Clearwire; MetroPCS Communications, Inc.; Sprint; T-Mobile; and Verizon Wireless.

Most network service providers do not own the structures on which they attach their equipment. Tower owner companies typically construct and market tower space for lease to wireless service providers. A service provider may also contract with a tower owner to construct a tower in a particular location and once the facility is constructed, the service provider will lease back space on the newly constructed tower.

There are several tower companies within the County who own and lease vertical real estate including but not limited to: Affinity LLC, American Tower Corporation (ATC); CTI; Crown Castle International (CCI); Insite; JEA; NexTower; SBA Communications Corporation; Skyway Towers; Vertical Bridge and a variety of public agencies and broadcast companies.

Nassau County Wireless Inventory

The wireless inventory is created from the data retrieved through CityScape's assessment process. The assessment process includes an extensive online research and collection of assessment data from numerous sources, including but not limited to, County wireless infrastructure permits, FCC registration and wireless service provider and tower owner direct information. Using the collected assessment data, CityScape prepared mapping using GIS shape files provided by the County. CityScape assessed each individual site by visiting each location and acquiring all available information about the facilities including ownership, tenants, type of structure, condition of site, signage, etc. All information was assembled into a data table to create the wireless inventory.

The inventory catalog is used as the baseline for current, and future deployment patterns.

CityScape assessed a total of one hundred and one (101) towers and base stations countywide. These antenna sites are documented in the Inventory Catalog provided in Appendix A. There are a total of ninety-eight (98) numbered sites in the inventory because one site contains multiple towers and two facilities were identified after the completion of the assessments and were given a numeric and alphabetical identification. The summary of the infrastructure types, owners and heights are shown in Table 2.

LOCATION	INFRASTRUCTURE TYPE	#	INFRASTRUCTURE OWNER	#	INFRASTRUCTURE HEIGHT	#
Outside ROW	Guyed Tower	15	Affiniti, LLC	12	30' - 40'	17
Outside ROW	Lattice Tower	35	American Tower Corporation	16	60' - 105'	9
Outside ROW	Monopole Tower	12	Crown Castle International	36	118' - 153'	21
Outside ROW	Concrete Tower	13	SBA	7	160' - 199'	13
Outside ROW	Base Station	5	CTI, JEA, NexTower, Skyway (2 towers each)	8	200' - 250'	12
Outside ROW	Concealed Towers	3	Public	5	310' - 400'	5
Inside ROW	Non-Concealed Small Cell Towers	14	Other	2	253' - 300'	16
Inside ROW	Concealed Small Cell Towers	2	Not Built	3	420' - 500'	3
Proposed	Approved But Not Constructed	2	Unknown	3	Unknown	3
	TOTAL	101	TOTAL	101	TOTAL	101

Table 2: Nassau County Infrastructure Type, Owner and Height

The current wireless deployment pattern throughout Nassau County is predominately in and around the population centers and along the major traffic corridors. The rural areas have minimal wireless infrastructure. The majority of the towers are non-concealed macro sites with the only concealed towers in the Island areas of the County.

There are sixteen (16) small cell wireless facilities that have recently been installed within the City of Fernandina Beach. The northern portion of this network is north of Atlantic Avenue and runs parallel to Fletcher and Tarpon Avenues. The southern portion of the network is south of Atlantic Avenue with facilities on side streets that are perpendicular to Fletcher Avenue. All of these small wireless facilities are maintained within the City right-of-ways.

There are a number of geographic areas with an abundance of towers. In the vicinity of the intersection of SR 200, SR A1A and I-95 there are five lattice towers, site numbers 44,45, 46, 47 and 48 ranging in heights from two hundred twenty nine feet (229') to three hundred three feet (303'). The tower at site number 46 is possibly in the Florida Department of Transportation right-of-way and the other four towers are within a mile of each other. This type of deployment pattern is typical when land use development standards do not strongly

promote collocation or the new tower application and review process is favorable to new tower construction.

The lack of continuous infrastructure parallel to I-95 and along SR 15 and SR 115, south of Callahan, is unusual since most wireless service providers tend to have continuous in-vehicle coverage along major transportation corridors. The population densities south of Callahan and around Amelia Island justify the need for additional wireless infrastructure, as does the rural areas of the County that contain no existing towers or base stations. The Nassau County complete map of the tower and base station inventory is shown in Figure 14.

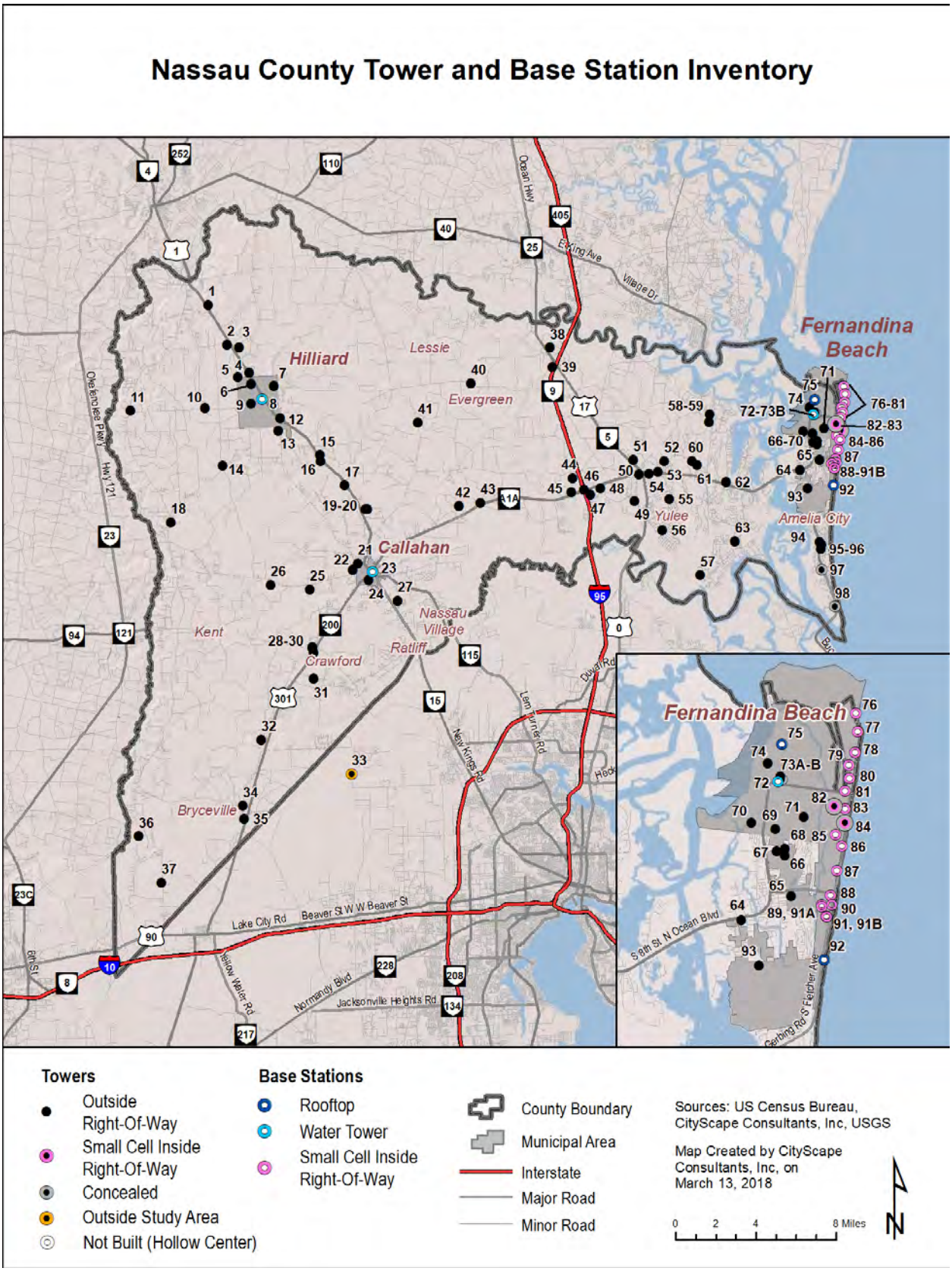


Figure 14: Nassau County Tower and Base Station Inventory

City of Fernandina Beach

The City of Fernandina Beach, also referenced as the Incorporated Island Study Area, is approximately 11.13 square miles in size and according to the 2016 US Census Quick Facts has an estimated population of 12,459. Thirty-five (35) wireless communication facilities are identified within the City's jurisdictional boundary and one (1) is located south of the City within the included one and a half mile study perimeter. A summary of the infrastructure types, heights and owners are shown in Table 3 while Figure 15 shows the location of the tower and base station inventory within the study area.

Most of the wireless infrastructure is either in the right-of-way along the ocean shoreline or in the western part of the City. Large voids of wireless infrastructure are found north of Atlantic Avenue and south of Sadler Road. Four of the tallest towers have more than one wireless tenant on the tower; four have only one tenant; and four have no tenants. Maximizing the use of these existing structures going forward will help reduce the number of new macro towers needed inside the City's jurisdictional boundary.

LOCATION	INFRASTRUCTURE TYPE	#	INFRASTRUCTURE OWNER	#	INFRASTRUCTURE HEIGHT	#
Outside ROW	Guyed Tower	2	Affiniti, LLC	4	30' - 40'	15
Outside ROW	Lattice Tower	3	American Tower Corporation	15	60' - 105'	3
Outside ROW	Monopole Tower	4	Crown Castle International	6	118' - 153'	5
Outside ROW	Concrete Tower	4	Insite	1	160' - 199'	5
Outside ROW	Base Station	3	SBA	2	=230'	1
Outside ROW	Concealed Tower	1	Unknown	4	Unknown	3
Inside ROW	Small Cell Facilities	15	Proposed	3	Proposed	3
Inside ROW	Proposed Small Cell Facilities	3				
	TOTAL	35	TOTAL	35	TOTAL	35

Table 3: City of Fernandina Beach Infrastructure Type, Owner and Height

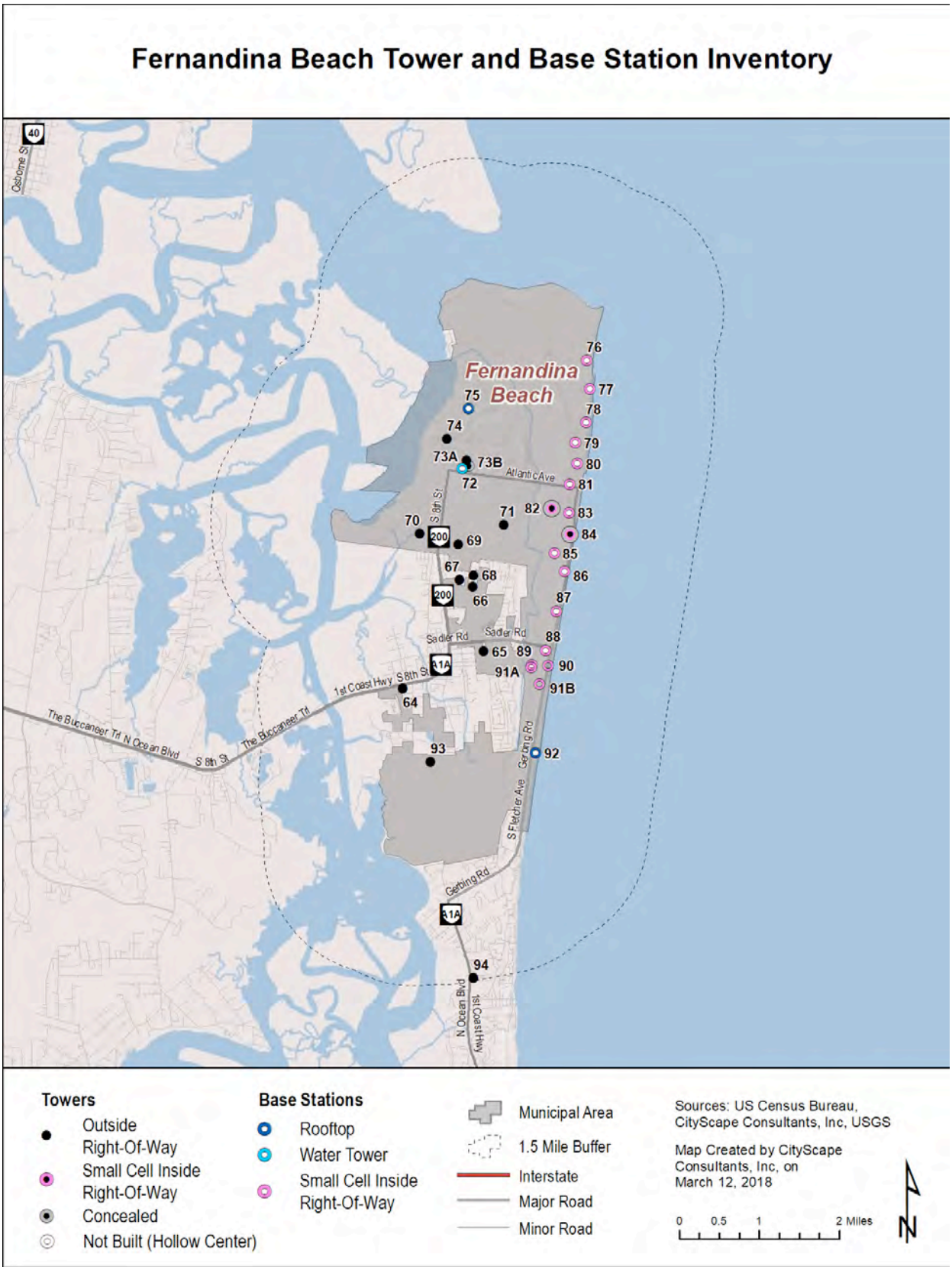


Figure 15: Nassau County Tower and Base Station Inventory

Wireless Infrastructure Analysis

Wireless Network Planning

As previously explained, wireless service providers utilize radio spectrum to provide service through a network of towers or base stations. Ideally, the service should be seamless, however seamless coverage can only occur when a provider's facilities are properly placed. It is understandably not possible to populate the entire earth with towers and base stations, so as subscriber needs are addressed, a new site or sites are commissioned. Many times, the number of subscribers within a particular cell can exceed the limits creating an overload of that cell, therefore additional infrastructure is needed to break up the cell to make it smaller to accommodate the high demand of less subscribers.

There are many complex variables which affect network planning, including:

- Effective Antenna Height and Topography
- Impact of Ground Clutter
- Capacity and Peak Subscriber Usage and Bandwidth
- Search Area Radii

Antenna Height, Topography and Ground Clutter

Ground elevation and antenna heights play a significant role in the engineering analysis for estimating future projections. Typically the higher the antenna the larger the geographic area serviced by the wireless signal. However, terrain and ground elevation needs to be factored in to the equation of antenna height. For example, a set of antennas mounted on a tower at two hundred feet (200') could provide less coverage than antennas mounted at one hundred feet (100') on a different tower if the latter tower is located on a hill that would effectively raise the antennas above their surroundings. Nassau County is relatively flat and in the western part of the County higher antenna mounting elevations is necessary due to the lower ground elevation. These higher antenna elevations allow for a larger area to be covered. Nassau County has minimal variations in topography which allows for a clearer line-of-sight signal.

An unobstructed line-of-sight pathway between elevated antennas and wireless devices is ideal for optimal performance. However, in actuality many natural and manmade obstructions are within a signal's path. In addition to topography, ground clutter such as trees, vegetation and buildings are typical obstructions affecting the signal. Ground clutter is an important consideration in the network analysis and many factors are contemplated when determining the actual impact of clutter. Tree density, types of trees and seasonal changes are just a few of those factors. Although Nassau County has limited seasonal changes, the rainy season is taken into consideration. Also contemplated in the analysis are the density of buildings and the effective height of the antenna. Higher antenna height in relationship to the user's device will reduce the impact of clutter. From a wireless engineering perspective, the antenna height

is the primary factor for best overall wireless service, both in providing coverage and minimizing clutter effect. To demonstrate the clutter effect, a wireless facility operating across open water will provide better coverage than that of the same type of facility located in a downtown setting with tall buildings.

Capacity, Peak Subscriber Usage and Bandwidth

Base population estimates and subscriber data are used for wireless network planning. Engineers use this information to determine if additional infrastructure is needed in a prescribed area. While there are generic planning tools for locating sites, other factors such as subscriber density, usage profiles, peak subscriber usage and available antenna heights each contribute to the required distance spacing between each facility. As a rule of thumb, each site is estimated to facilitate the usage of approximately 1,750 to 2,500 separate devices at any given time. This number varies depending on the amount of bandwidth being used due to the activities of each device (i.e. talk, text, streaming, etc.). As the bandwidth usage increases, each antenna site will reach capacity and need to decrease its geographic footprint to service a smaller number of subscribers to avoid overloading the network. Over the next ten years as 5G technologies are developed, one macro site will service significantly less devices. That estimated number of devices is predicted to be between only 500 and 1,200 separate devices at any given time. This prediction is based on the ever-increasing customer demand and usage of wireless devices. Because the number of subscribers will be lower per site, Nassau County can expect to see an increase in the number of macro sites. The number of small cell sites will also increase and take some of the load off of the larger macro facilities. Small cell deployment is underway with the small wireless facility network currently in the Incorporated Island Study Area. This type of deployment will continue in order to keep up with the demand for wireless services throughout the rest of the County over the next ten years.

Search Rings For Proposed Coverage Areas

When a wireless service provider identifies an area needed for improved service a radio frequency (RF) engineer designs a search ring. The search ring is designated to either fill in a gap of service or to provide relief for over capacity networks within that designated ring. From an engineering perspective, any location within the search ring is considered acceptable for the new infrastructure. The location of the selected property relative to the ideal location within the search ring typically dictates the required antenna height taking into consideration the previously described variables.

Generally, in areas where signal coverage is the objective, taller macro towers are preferred to allow for greater antennas heights to serve a larger geographic coverage area. Taller towers also provide collocation opportunities for other wireless service providers. The shorter the facility, the smaller the coverage area of the facility, which then results in a greater number of towers or base stations required within each search area.

Search Area Radii for Macro Sites

Search ring calculations for the low and high band frequencies are shown in Tables 4 and 5. The tables utilize the "Okumura-Hata" propagation path loss formula for low band frequencies and the "COST-231" formula for high band frequencies, respectively. Maximum coverage radii for typical in-vehicle coverage is calculated for various tower heights, reduced by twenty percent (20%) to account for a reasonable handoff zone, then divided by four to obtain a search area radius for each tower height. For example, an antenna mounted at one hundred feet (100') would have a search ring radius of 0.72 miles for low band antennas, and a 0.36-mile radius for high band antenna.

LOW FREQUENCY ANTENNA MOUNTING HEIGHT	50'	100'	150'	200'
Radius, miles	2.5	3.6	4.4	5.0
Allow for handoff	2.0	2.9	3.5	4.0
Search ring, miles	0.51	0.72	0.88	1.00

Table 4: Okumura-Hata Propagation Low Band Frequency Formula

HIGH FREQUENCY ANTENNA MOUNTING HEIGHT	50'	100'	150'	200'
Radius, miles	1.3	1.8	2.1	2.5
Allow for handoff	1.1	1.5	1.7	2.0
Search ring, miles	0.27	0.36	0.43	0.5

Table 5: COST-231 Propagation High Band Frequency Formula

Site Planning Analysis

Theoretical Root Mean Square Maps

CityScape provides a series of maps to illustrate the number of antenna locations that would be necessary to provide wireless coverage across the geographic study area. Theoretical Root Mean Square (RMS) maps represent facilities with a connected pattern of overlapping circles that illustrate the coverage area for a tower or base station, without consideration of terrain, clutter, subscriber base or network capacity. A wireless device trying to communicate with another device or with the Internet must be within this network coverage area. Wireless devices outside the coverage area will not function reliably. To design the wireless network, RF engineers overlay circular cells over the geographic area intended for wireless service. The center dot in the middle of the smaller circle is the preferred location for a facility to serve an intended coverage area, while the outer circles represent the overall coverage area. The smaller circle within each larger circle is called the search area and is considered to be the best location for new infrastructure. In reality, site patterns are not exactly circular because topography, clutter, climate, type of site being constructed and the size and location of the subscriber base.

These maps are used to indicate the number of antenna locations necessary to provide wireless service for a given geographic study area. This hypothetical network identifies the minimum number of tower or base station locations required for one service provider to provide service.

CityScape reviewed the existing tower and base station inventory and applicable height regulations for the County and City determining the average tower height for wireless communications purposes to be approximately eighty feet (80') in the urban areas of the City and County and one hundred fifty feet (150') in the suburban and rural areas of the County.

Figures 16 through19 represent a hypothetical theoretical build-out of equally apportioned antennas mounted at a height of either eighty feet (80') or one hundred fifty feet (150') for a single service provider excluding topographic, clutter and population density considerations.

The dots on the maps indicate ideal antenna locations. The smaller circle around each dot represents the acceptable search ring for locating the antennas and the overall green shaded circle around each dot and search ring is representative of the coverage area of the antenna.

Figure 16 illustrates that thirty eight (38) antenna locations all mounted at either eighty feet (80') or one hundred fifty feet (150') would be needed for complete countywide coverage by a low frequency service provider; and Figure 17 shows it would take one hundred and three (103) locations to cover the same area for a high frequency coverage provider.

Inside the City of Fernandina Beach limits it will take two (2) antennas mounted at eighty feet (80') in the low frequency spectrum and eight (8) in the high frequency spectrum as shown in Figures 18 and 19.

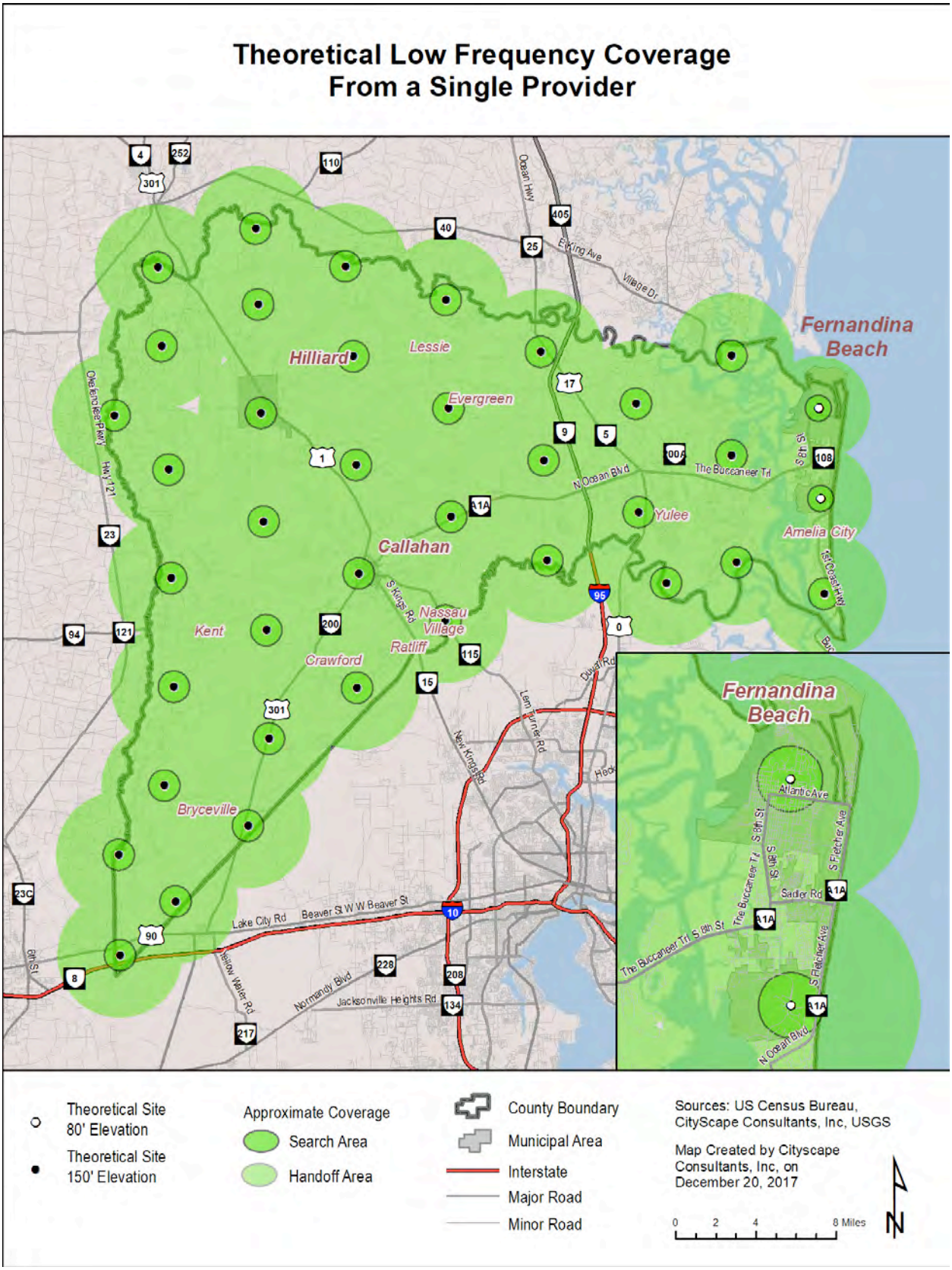


Figure 16: Nassau County Hypothetical Build-Out - Low Frequency Without Terrain Considerations

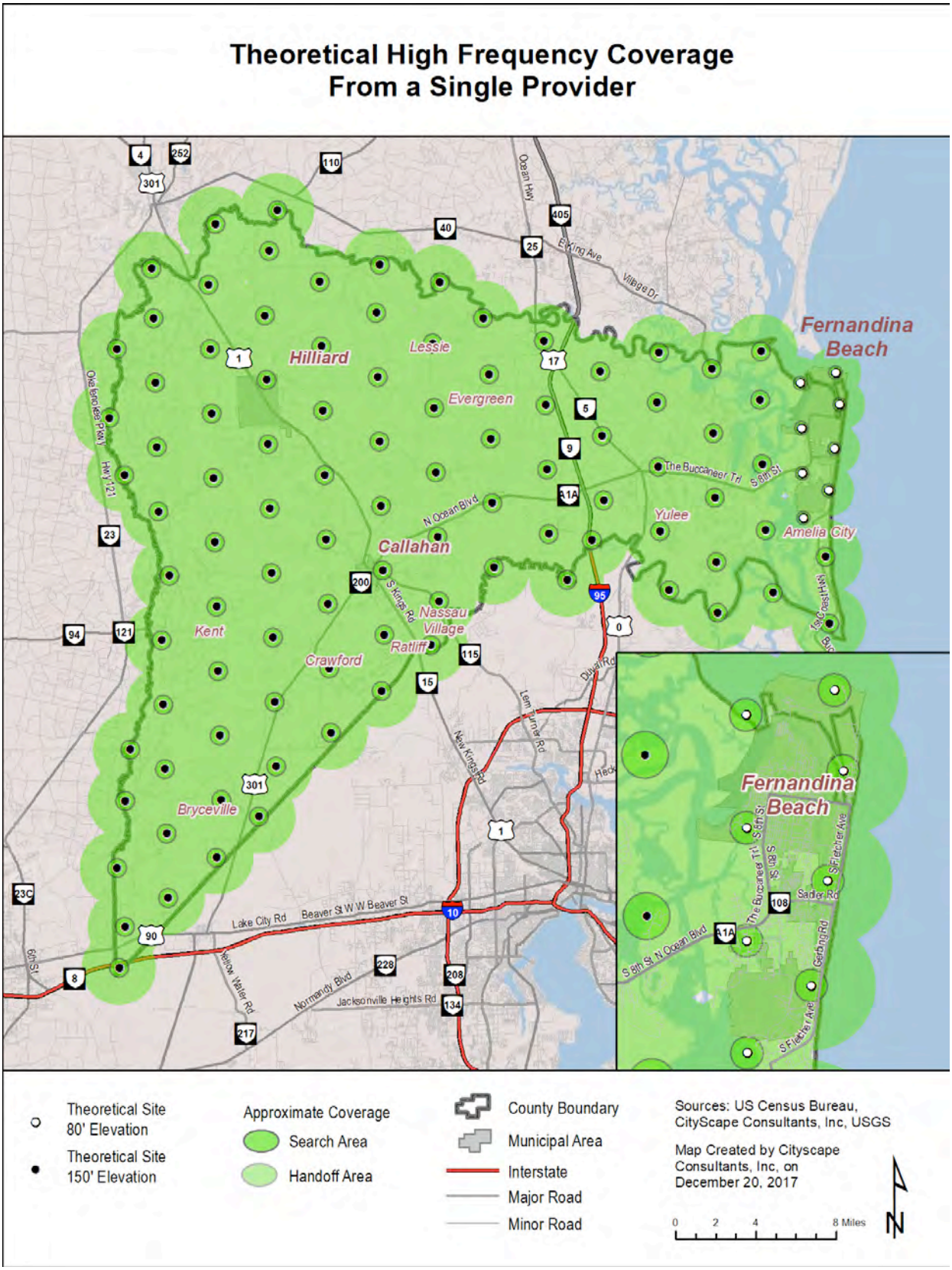


Figure 17: Nassau County Hypothetical Build-Out - High Frequency Without Terrain Considerations

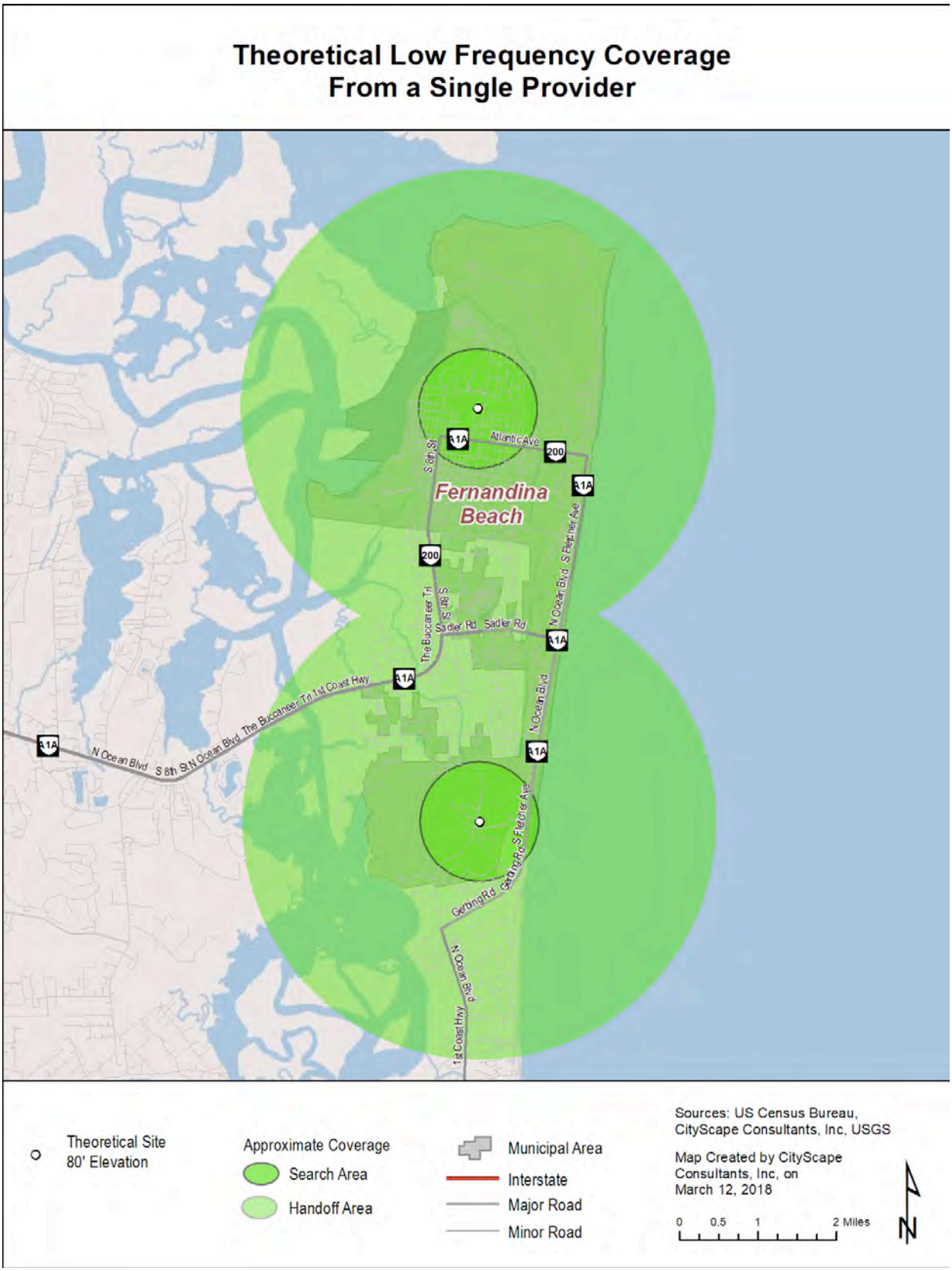


Figure 18: City of Fernandina Beach Hypothetical Build-Out - Low Frequency Without Terrain Considerations

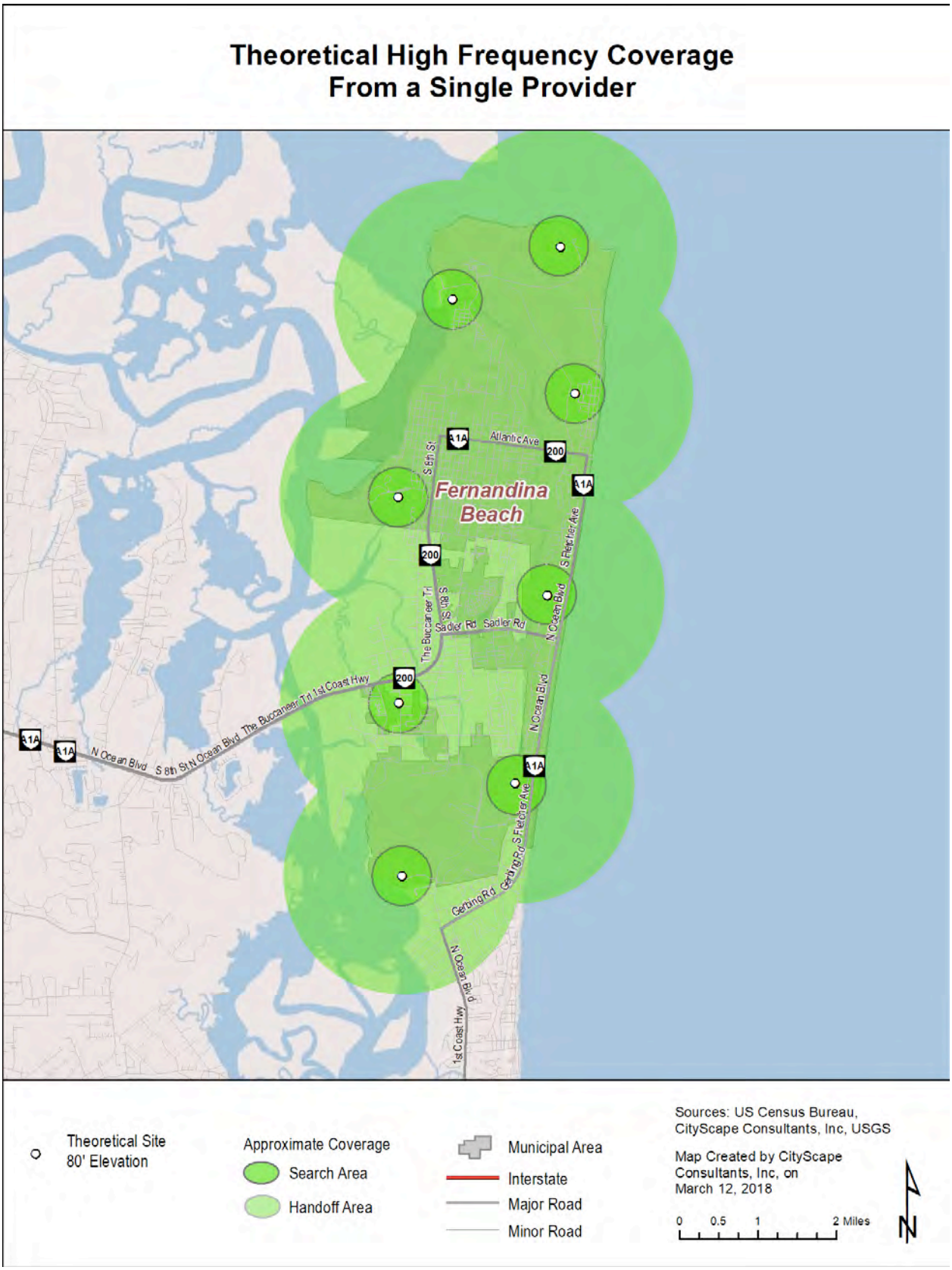


Figure 19: City of Fernandina Beach Hypothetical Build-Out - High Frequency Without Terrain Considerations

Predicted Coverage Mapping

Predicted coverage mapping is a process where software is used to predict the level of wireless service coverage within a designated area. Signal strength is a term used to describe the quality of operability between the antenna and the wireless device. The stronger the signal, the better the wireless device and all the application features will work. A reduced signal means a better chance of dropped or failed calls or a malfunction of the application features. The distance between the antennas on the infrastructure and the location of the person using the device and the location of the person whether indoors or outdoors are two variables that affect signal strength.

The level of propagation signal strength is shown through the gradation of colors from yellow to blue. The closer the proximity to the antenna, the brighter shade of yellow appears and the better quality of wireless service. As distance increases between the wireless device and the antenna, shades of green, blue and gray appear indicating geographic service areas with average, acceptable, and unacceptable signal strength, respectively. Table 6 provides further explanation of the color-coding relative to the propagation signals.

SIGNAL STRENGTH	SIGNAL STRENGTH COLOR	SIGNAL STRENGTH DESCRIPTION
Superior	Yellow	Strong enough to operate within most buildings
Average	Green	Strong enough to operate in a vehicle, but not inside most buildings
Acceptable	Blue	Strong enough to operate outside, but not in vehicles or buildings
Unacceptable	Gray	Marginal or no service

Table 6: Propagation Signal Description

The predicted modeling of coverage from all existing facilities using the known antenna locations and heights illustrate the propagation levels of coverage for low and high frequencies, with considerations for topography, clutter and population density. The areas in blue, green and gray represent geographic areas with minimal coverage or areas indicating a network at capacity overload, which is resulting in diminished or unacceptable service. These coverage areas in gray are a visual representation of gaps in service and indicate the need for additional wireless services in order to improve wireless coverage and capacity overload.

The predicted modeling methodology or process assumes the same wireless service provider is on each tower and base station in the existing inventory. This assumption is for modeling purposes only and it is recognized that not all service providers are on every facility however; the infrastructure is in place to possibly accommodate future collocations.

The mapping in Figures 20 through 31 illustrated by study area shows that most of the incorporated areas of Fernandina Beach, Hilliard, Callahan, Yulee and Amelia Island have more continuous coverage compared to the rural areas of the County. The Hwy15/301 corridor north of Callahan and SR 200/A1A west of Yulee has average service with no significant gaps in coverage. The remaining geographic areas and corridors throughout the County have minimal, incomplete or no wireless network coverage. The geographic areas with no service areas and average/acceptable service areas are indicators where new infrastructure will be needed over the next decade.

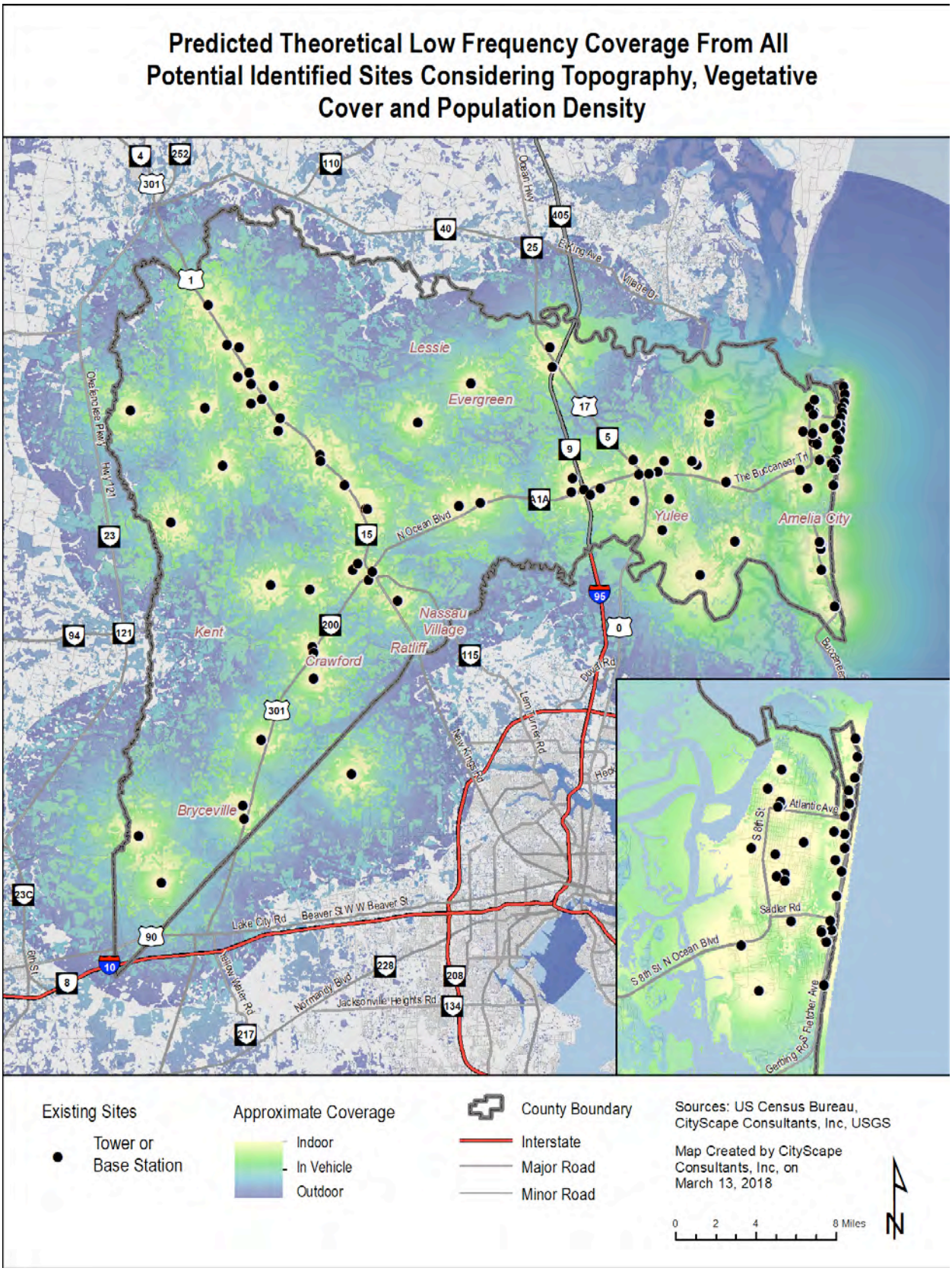


Figure 20: Nassau County Low Frequency Predicted Coverage

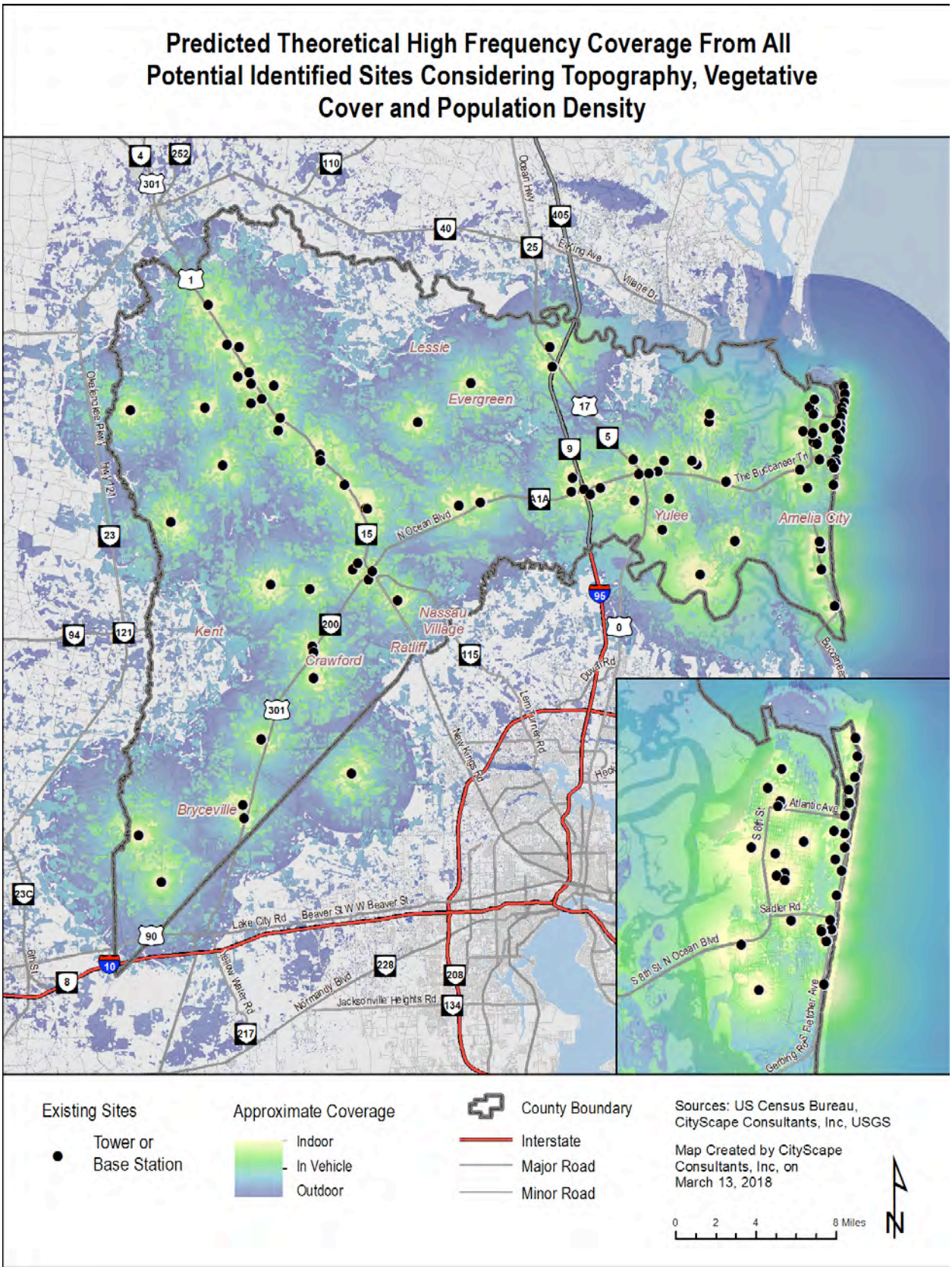


Figure 21: Nassau County High Frequency Predicted Coverage

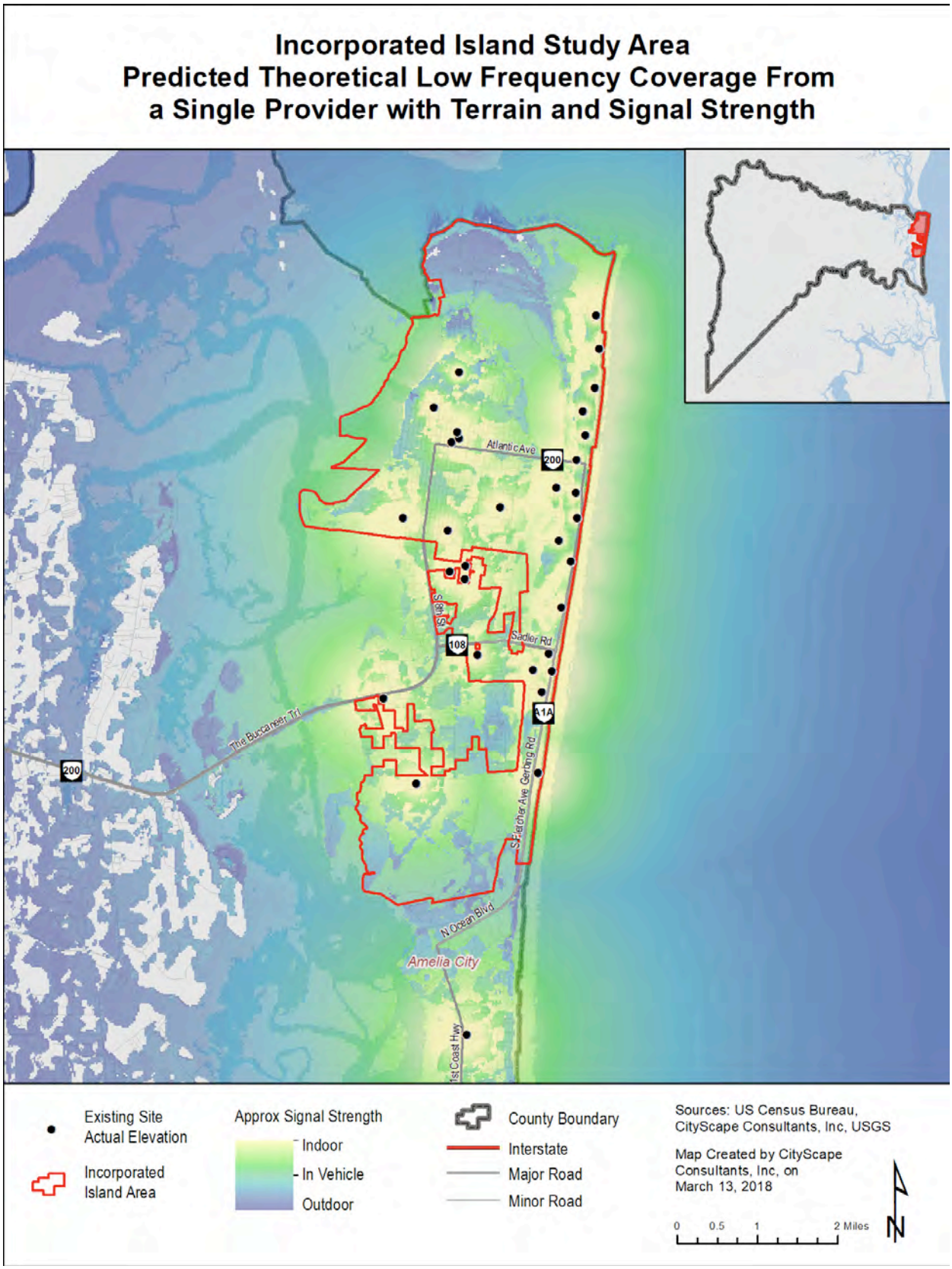


Figure 22: Incorporated Island Low Frequency Predicted Coverage

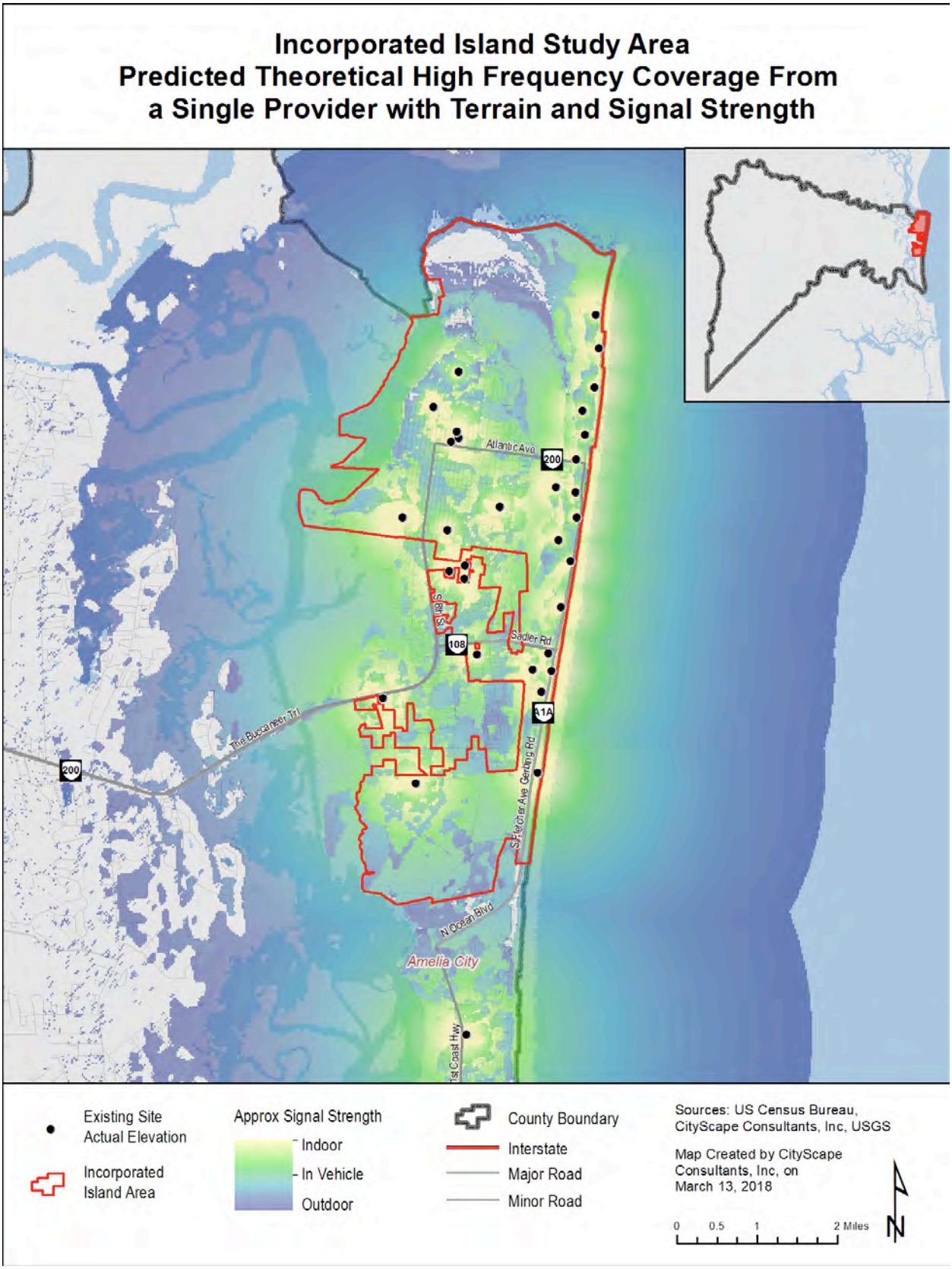


Figure 23: Incorporated Island High Frequency Predicted Coverage

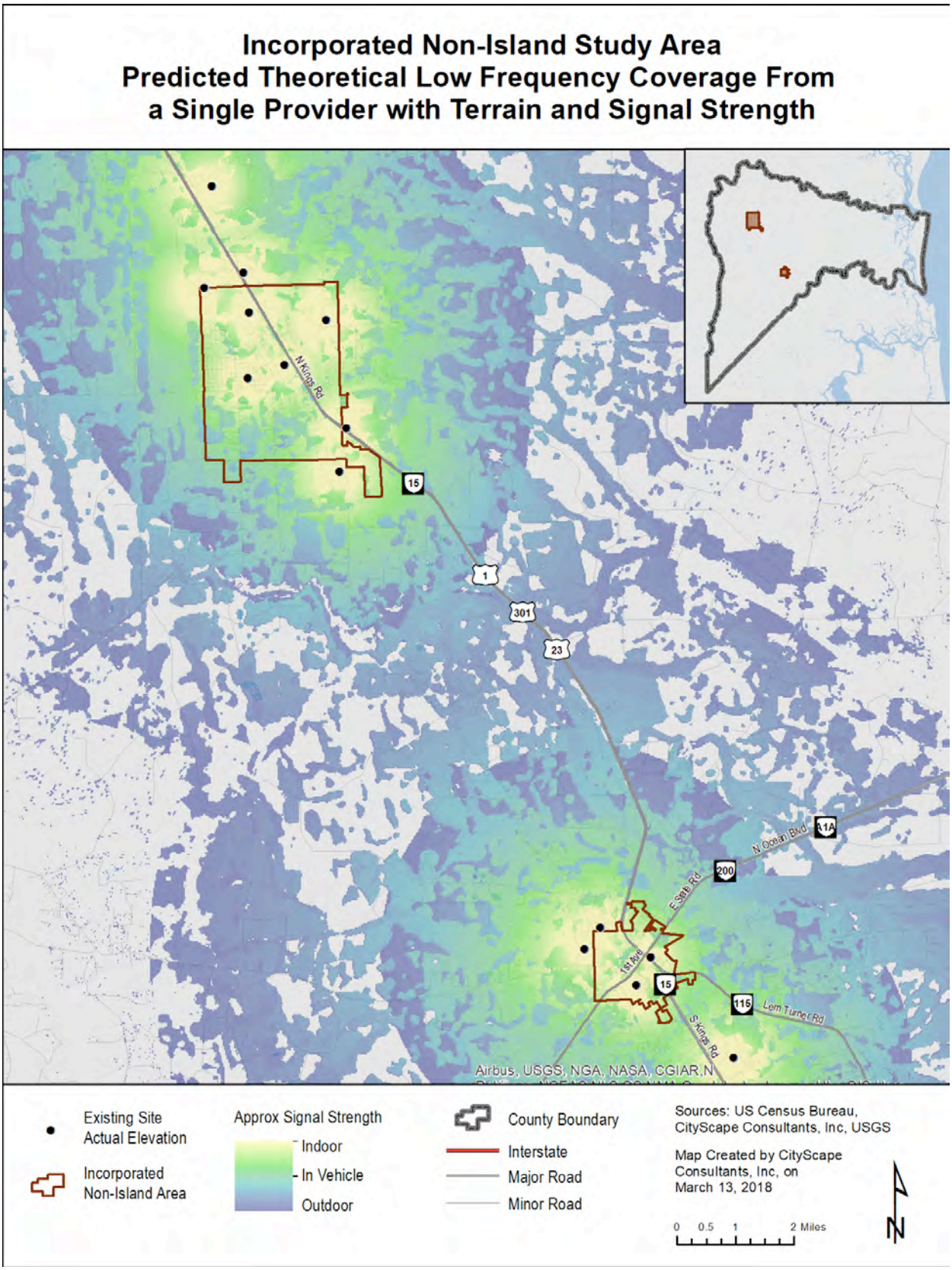


Figure 24: Incorporated Non Island Low Frequency Predicted Coverage

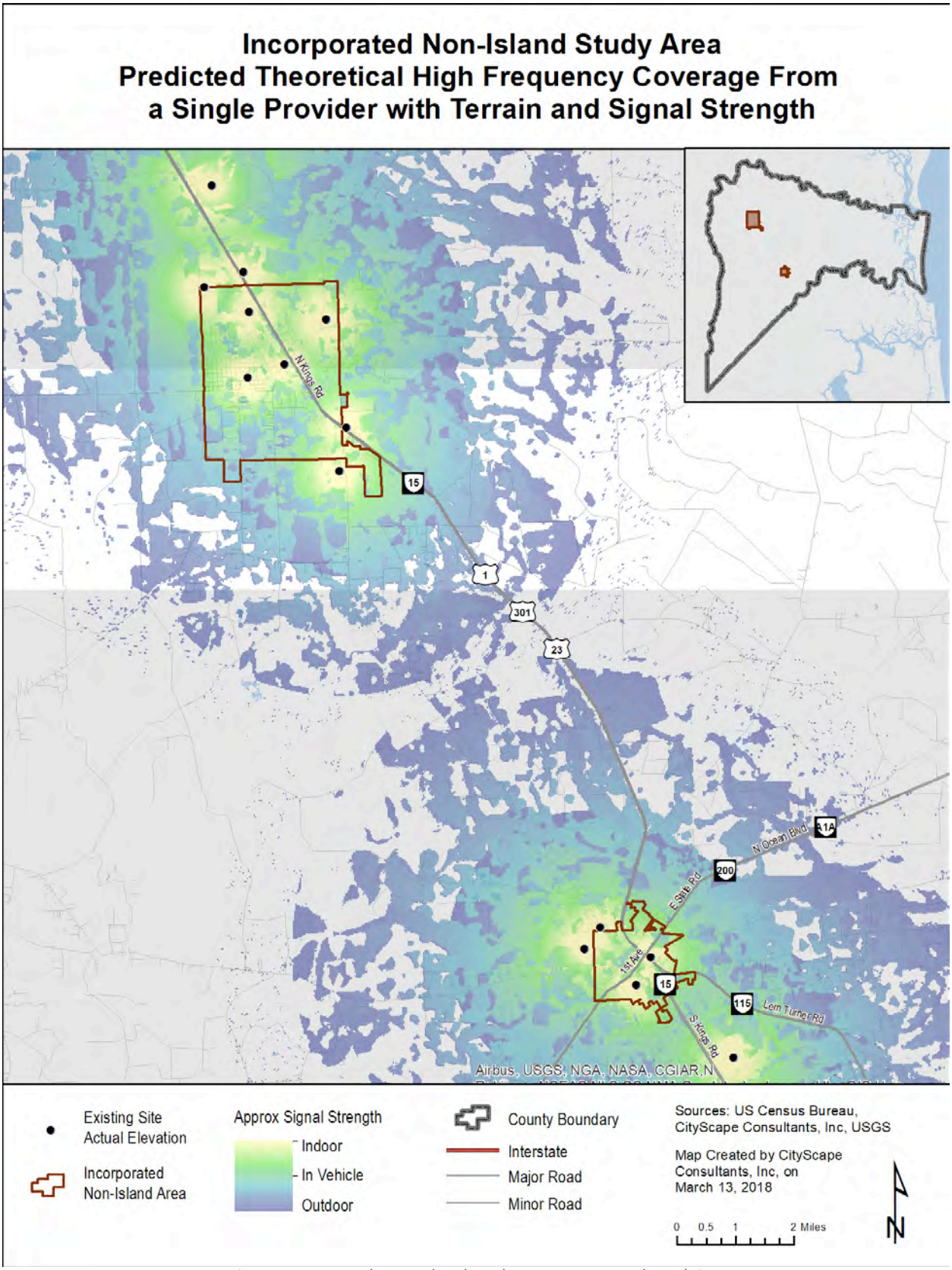


Figure 25: Incorporated Non Island High Frequency Predicted Coverage

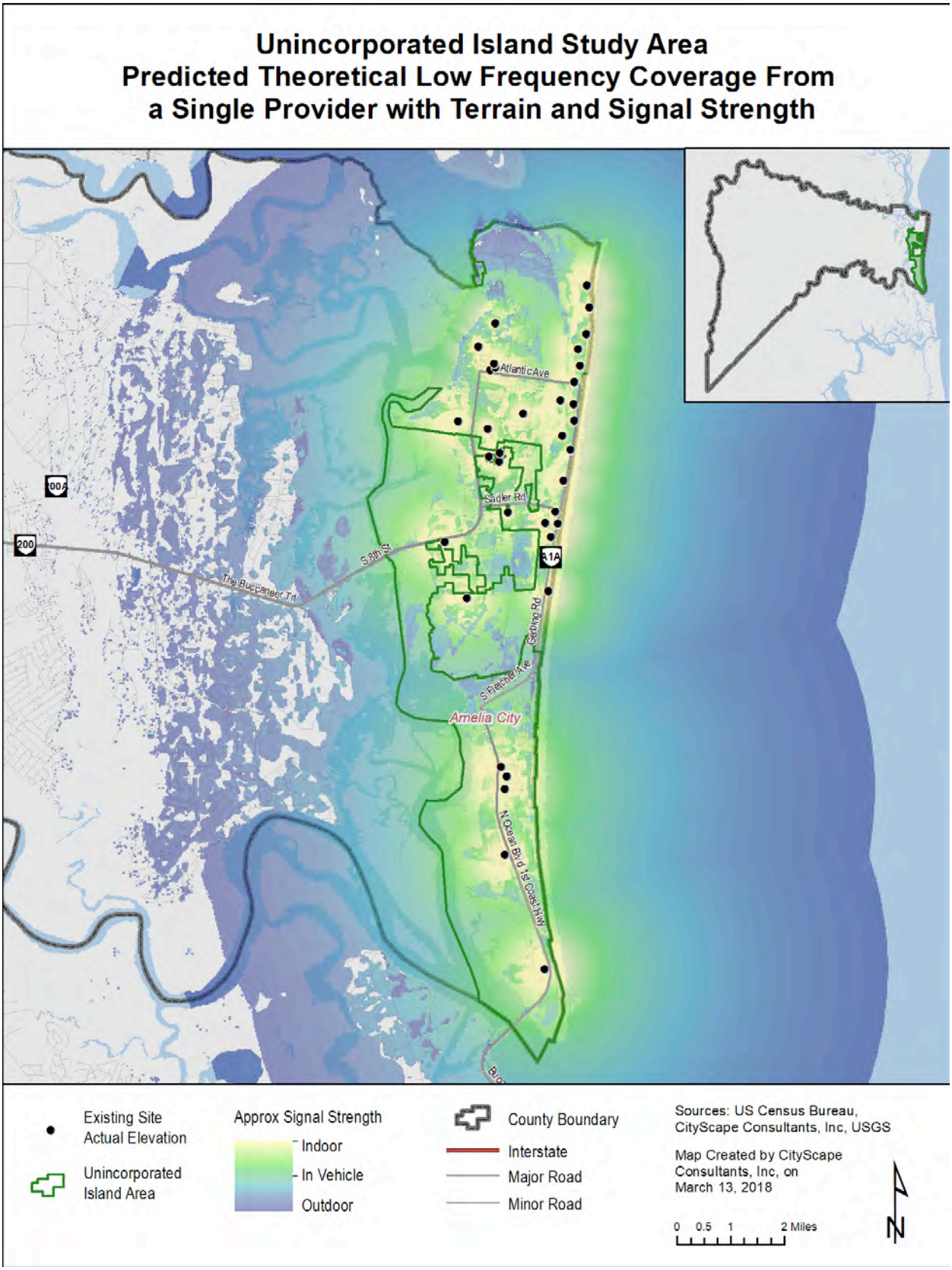


Figure 26: Unincorporated Island Low Frequency Predicted Coverage

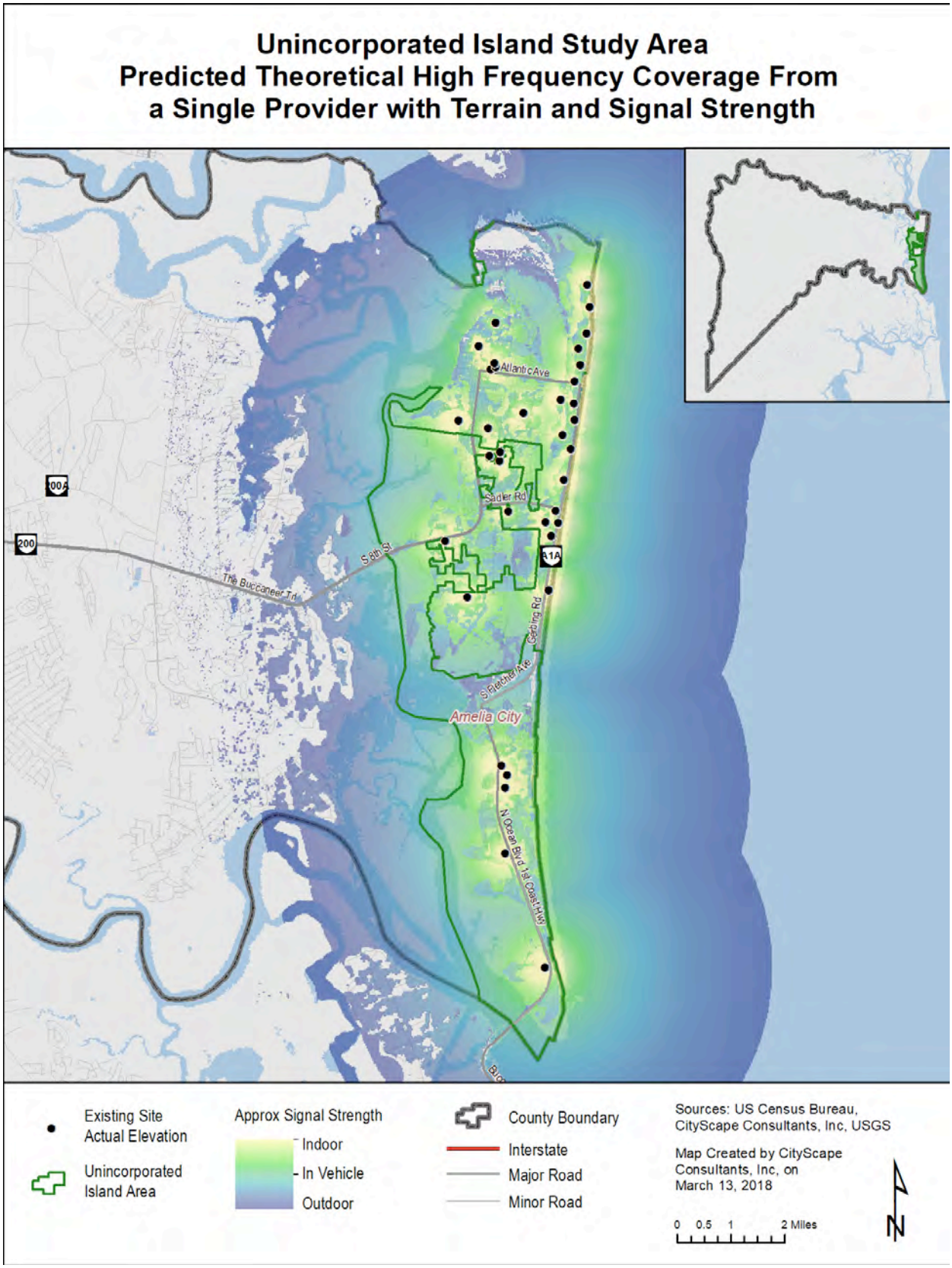


Figure 27: Unincorporated Island High Frequency Predicted Coverage

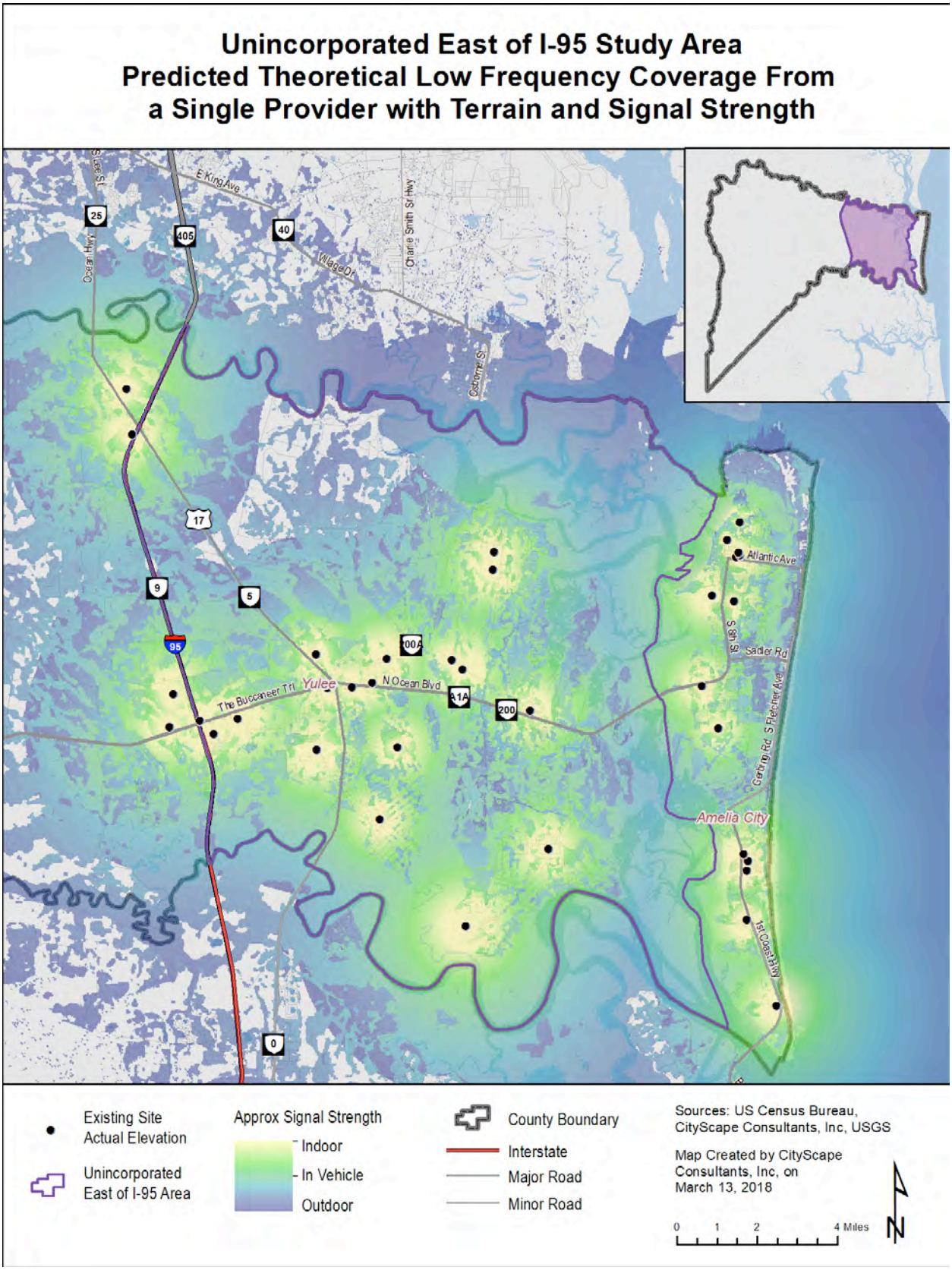


Figure 28: Unincorporated East of I-95 Low Frequency Predicted Coverage

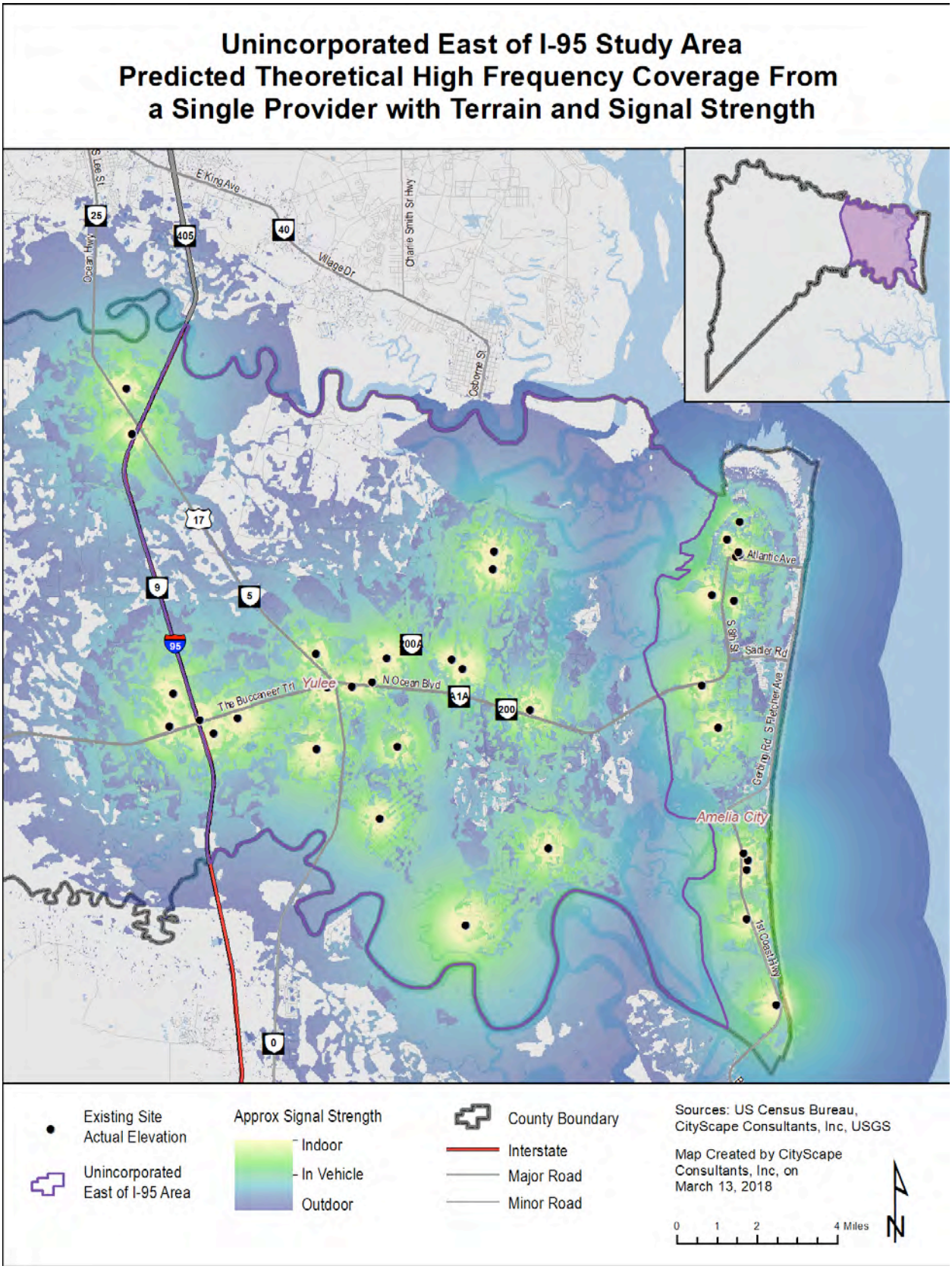


Figure 29: Unincorporated East of I-95 High Frequency Predicted Coverage

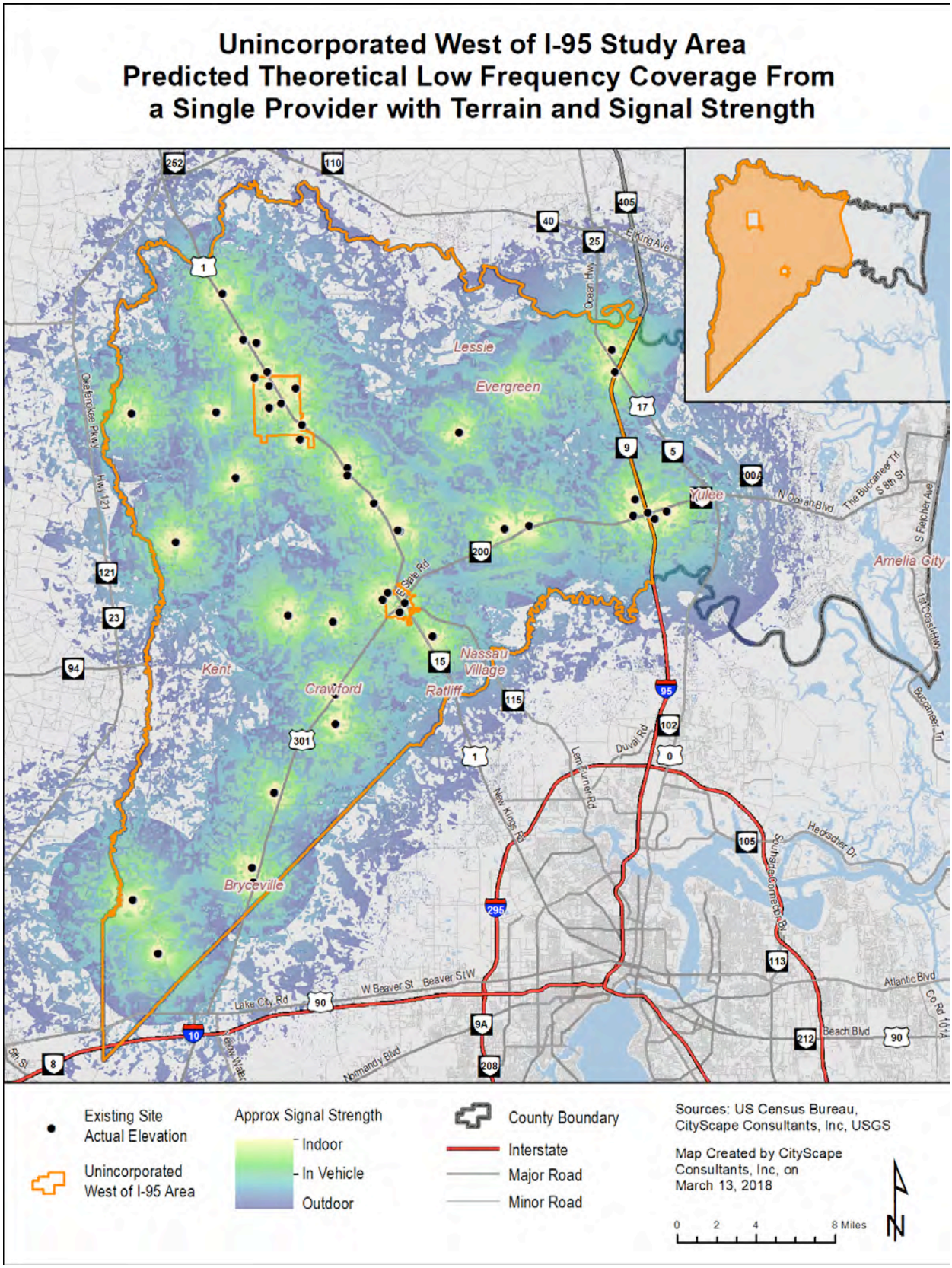


Figure 30: Unincorporated West of I-95 Low Frequency Predicted Coverage

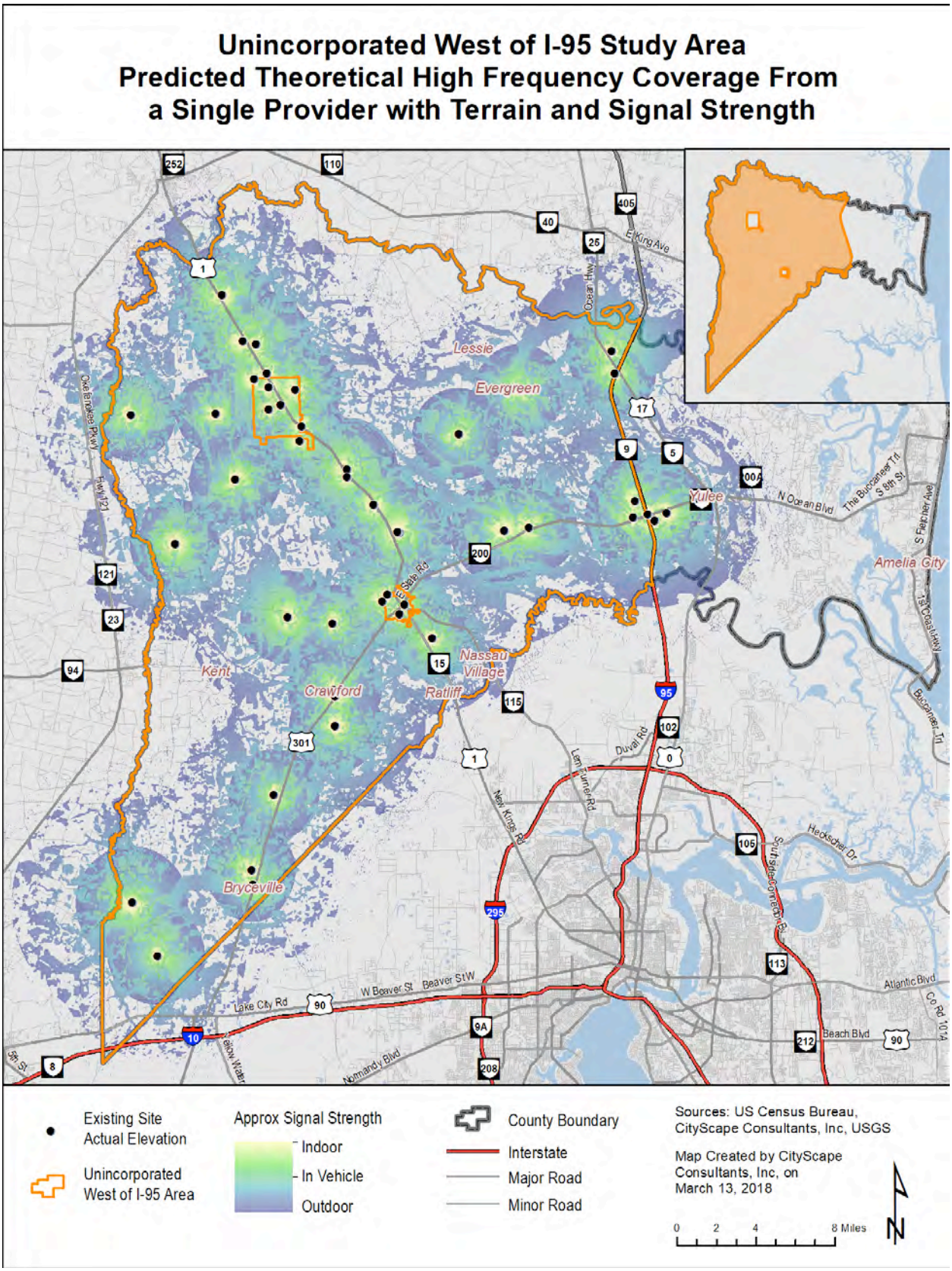


Figure 31: Unincorporated West of I-95 High Frequency Predicted Coverage

10-Year Projections

In general Nassau County is underserved when it comes to wireless service coverage. Continuous wireless service is an issue in many areas throughout the County. CityScape estimates that over the next ten year period the County will require around twenty (20) new macro towers, approximately eighty feet (80') to one hundred fifty feet (150') tall to meet coverage and capacity network objectives. In order to effectively meet the County's anticipated 5G demands over the next decade the estimated number of small cell facilities is expected to be in the hundreds along the roadways and on rooftops with the antenna mounting approximately thirty five feet (35') to forty feet (40') in height. It is important to emphasize that the mounting height for small cells is dependent on the number of collocations desired for each facility. If the proposed facility is a neutral host facility, then multiple service providers would be able to share the same technology platform or same set of antennas and therefore, collocations would not require additional height. The estimated number of required facilities is based on the mathematics of the population density, subscriber base and usage, transient movement throughout the County and the demand volume served simultaneously per site.

As subscriber demand increases, network providers will continue to develop sites to meet these needs. Providers tend to address service issues where the majority of customer complaints exist. Thus, locations with poor service and/or capacity, but growing population density will be the primary focus for new infrastructure.

Figure 32 illustrates the average daily traffic impact during the heaviest seasonal related traffic flows throughout the County during the month of May (the most populated month of the year in Nassau County). The Seasonal Factor values presented in the "2016 Peak Season Factor Category Report - Report Type: All, Category: 7400 Nassau Countywide" referenced in both the Nassau Crossing and Sadler Road Traffic Studies was the data used for this map. These traffic counts were incorporated with the peak seasonal population variations to facilitate the estimated number of new wireless facilities needed over the next ten years throughout the County.

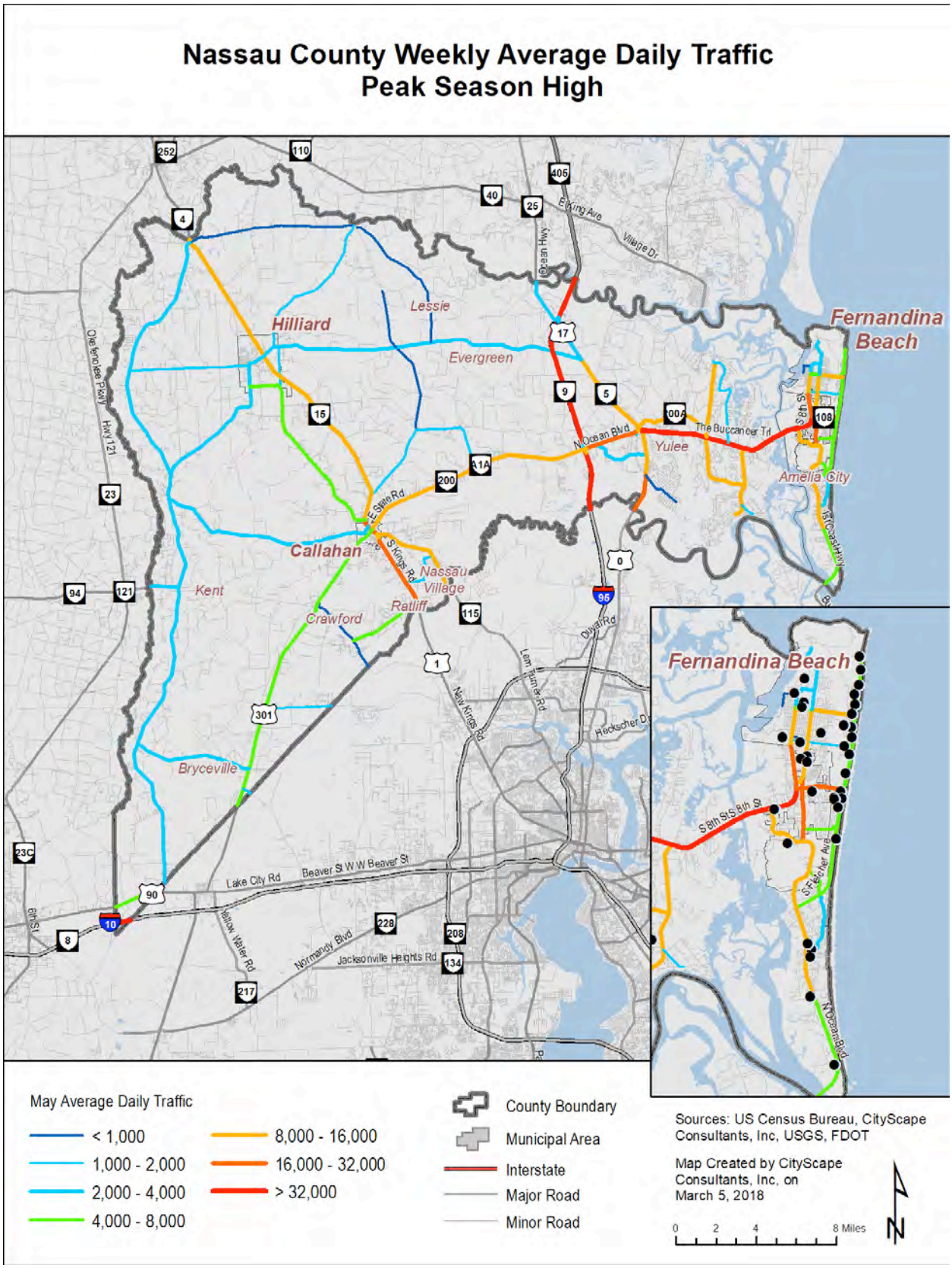


Figure 32: Nassau County Average Daily Traffic Impact in May

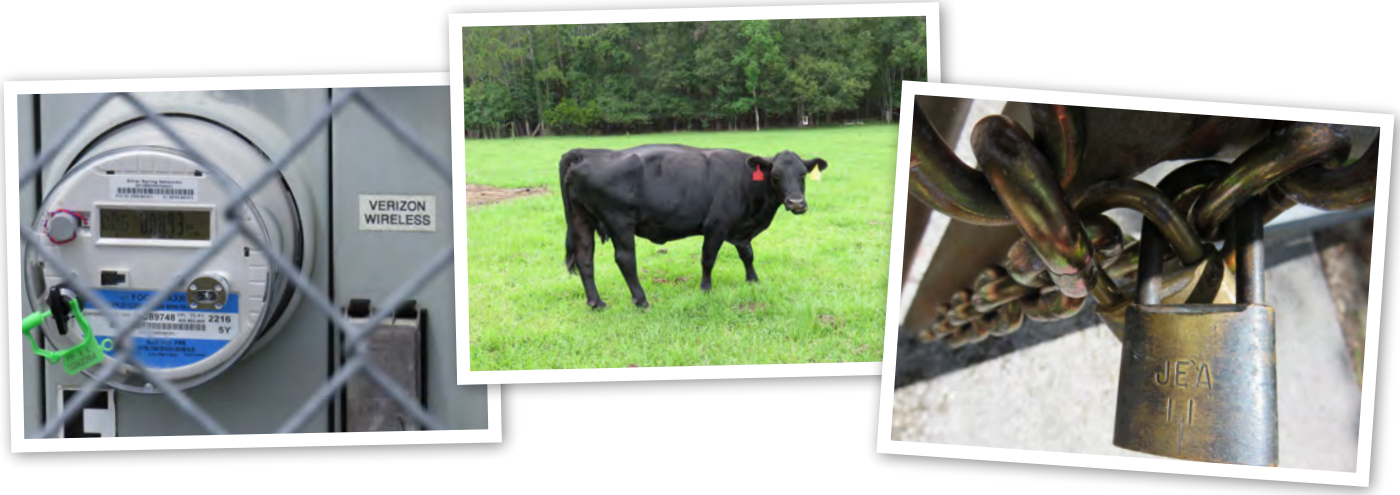
The traffic counts were incorporated with the peak seasonal population variations to facilitate the estimated number of new wireless facilities needed over the next ten years throughout the County. Figure 33 illustrates Nassau County and Figure 34 illustrates the City of Fernandina Beach and is the visual representation of the future estimated projections where new macrocell tower an base stations will be needed.

According to the census data, fifty percent (50%) of the vacation homes reported in the County are located within the Unincorporated Island Area. These dwelling units are most likely to be occupied during the peak travel season, with a potential influx of an additional 10,000 people. Small wireless facilities are needed in these areas to accommodate the overload of network capability during this time.

The highest population density in Yulee is within the vicinity of the Amelia National Golf and Country Club. Vacation homes in this area are minimal but many year-round residential dwelling units are constructed or planned to be in close proximity to each other. This center of population will benefit from a small wireless facility network to improve and meet the demands of network capacity.

The City of Fernandina Beach has an existing small wireless facility and can expect this network pattern to grow and expand to other areas of the City.

Figures 35 and 36 estimate the areas likely to experience deployments of small wireless facilities. The darker shades of red indicate the most densely populated areas during peak seasons and where small wireless facilities are likely to be deployed first. The areas shown in the lighter shades of pink are also likely to have small wireless facility networks installed over the next ten years. Rural Unincorporated Areas West of I-95 are not likely candidates for small wireless facility networks due to the lower density of population in this area.



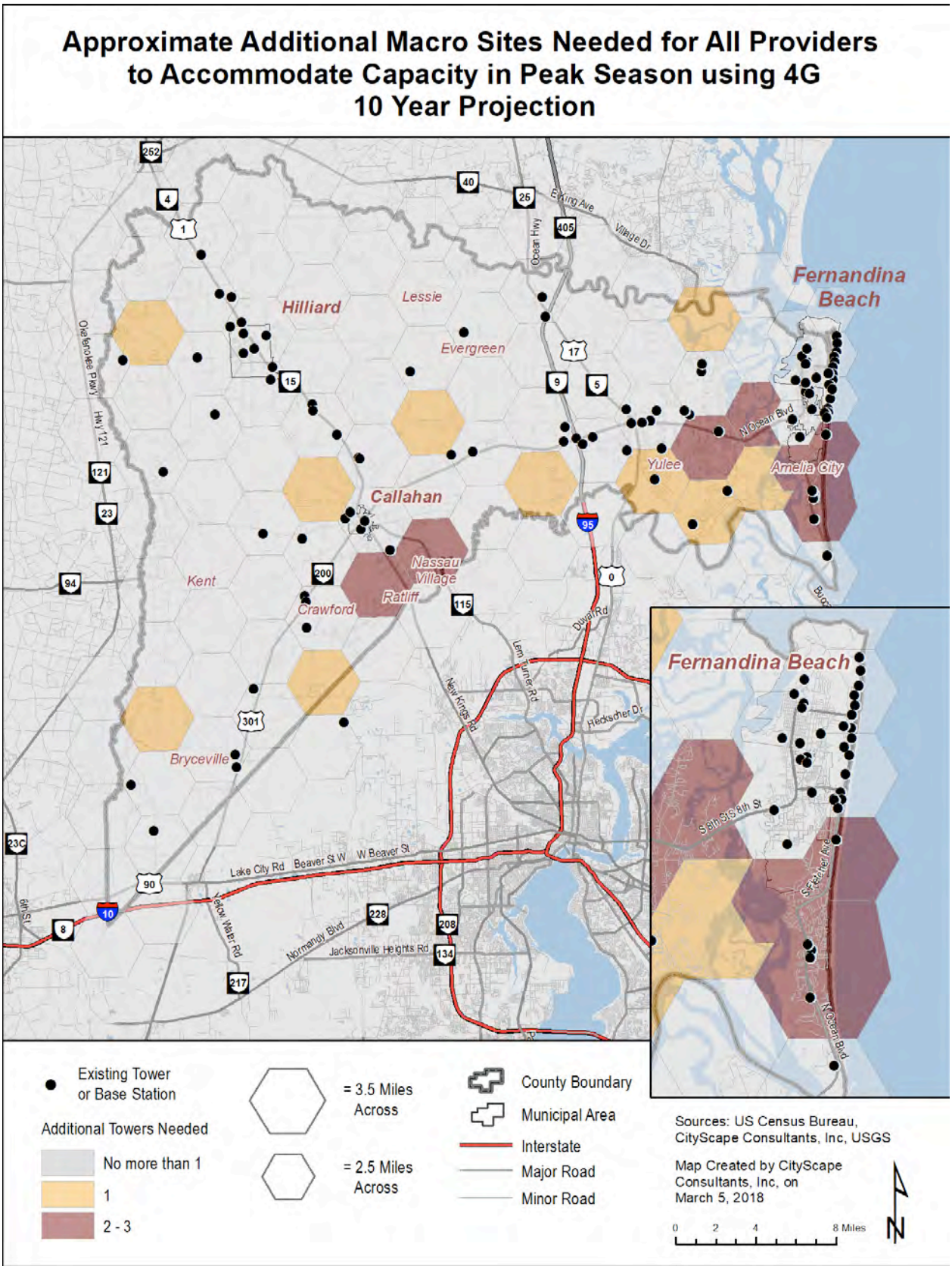


Figure 33: Nassau County Macro Site Fill In Projections

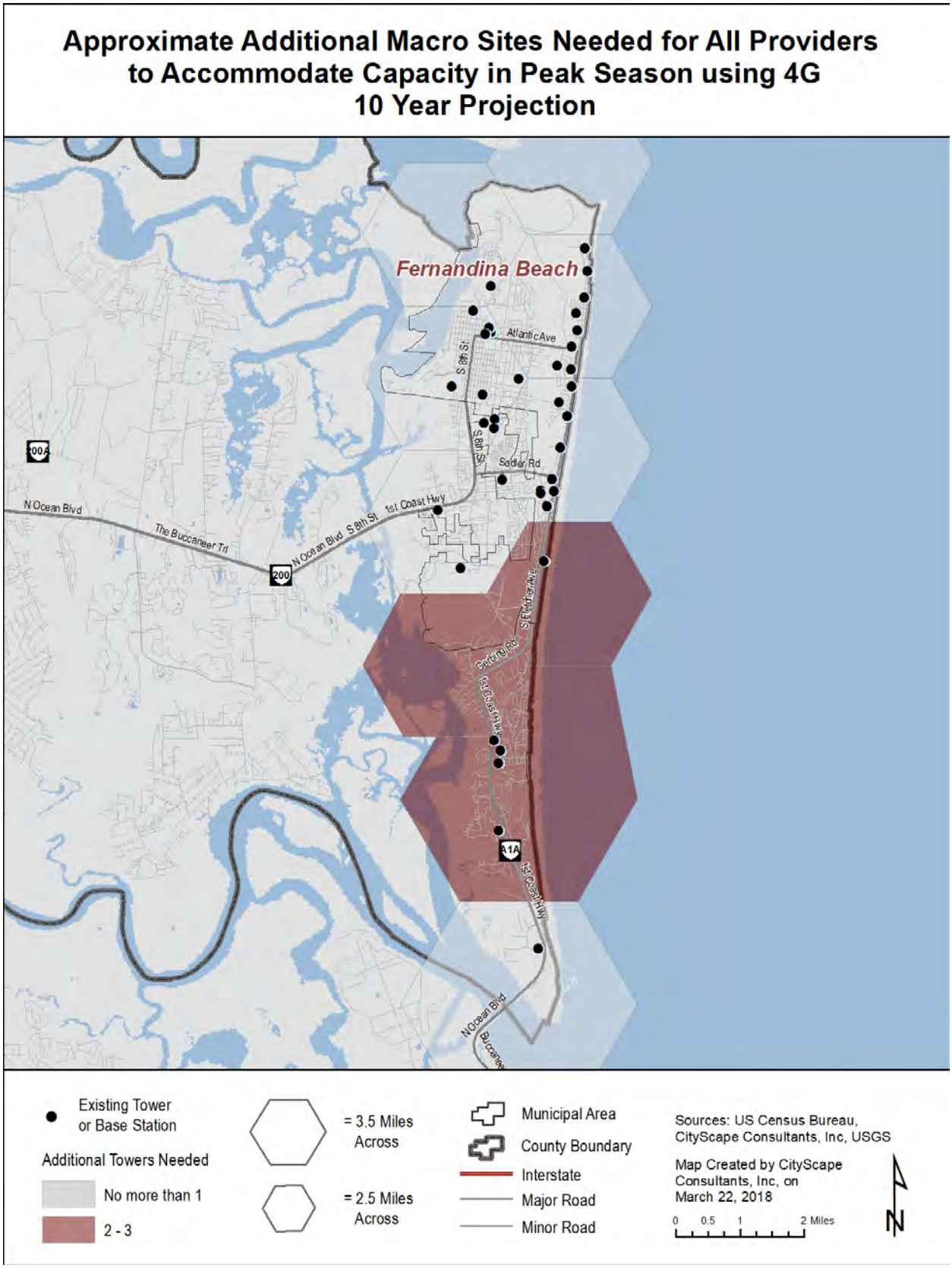


Figure 34: City of Fernandina Beach Macro Site Fill In Projections

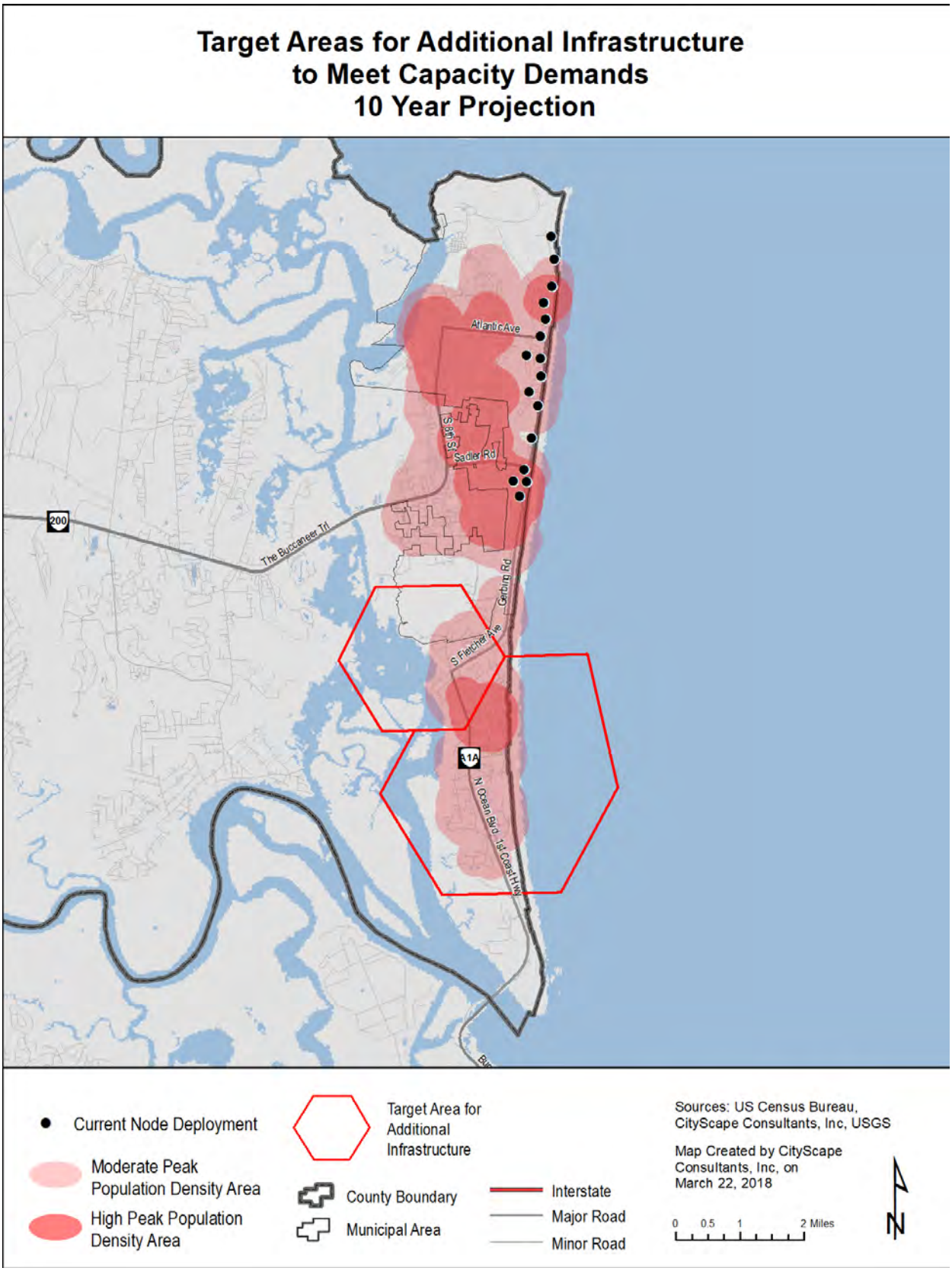


Figure 35: Nassau County Theoretical Small Wireless Facility Fill In

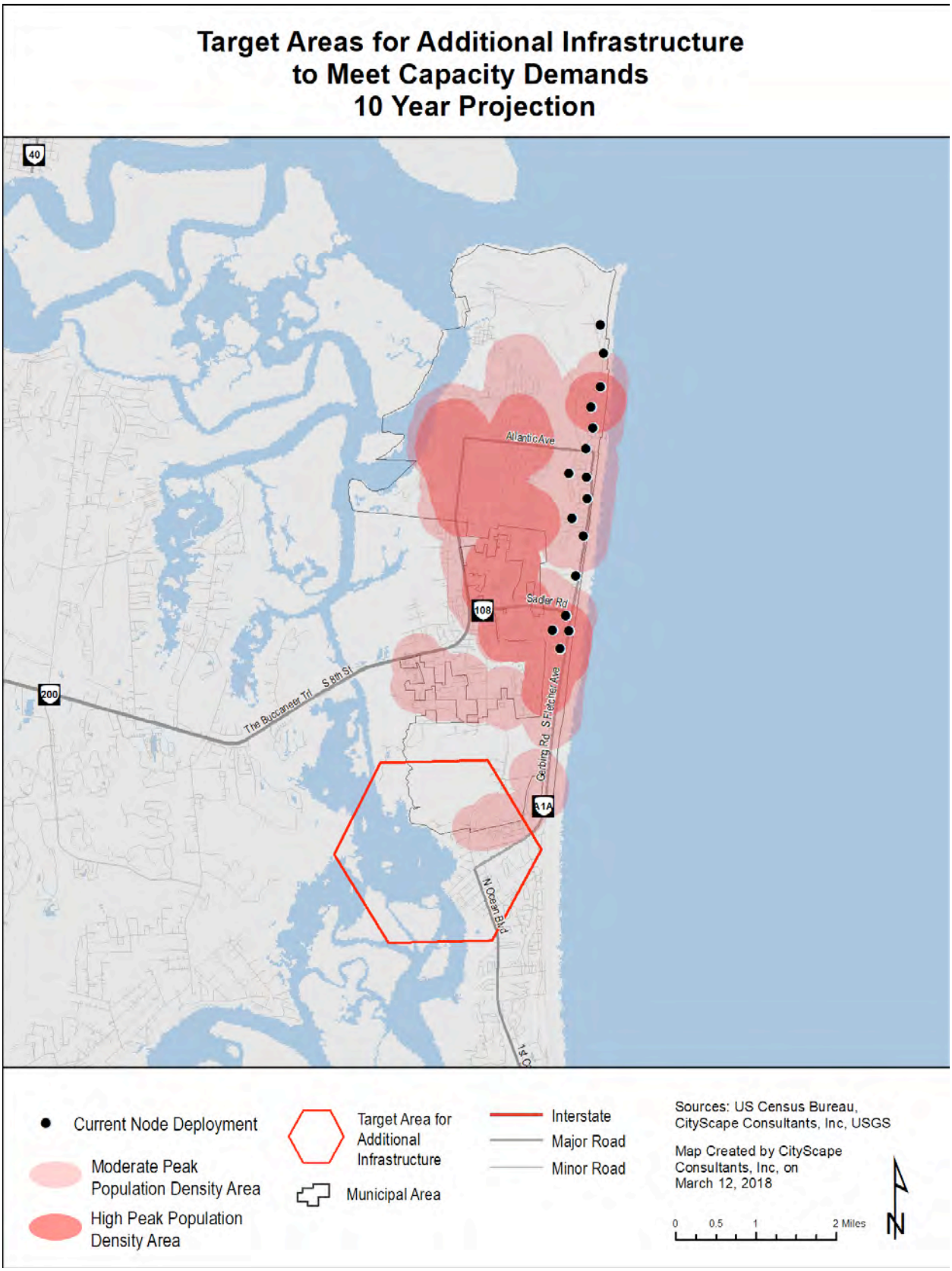


Figure 36: City of Fernandina Beach Theoretical Small Wireless Facility Fill In

WIRELESS POLICY SOLUTIONS

Forecast Statement

Management and regulation of the twenty (20) macro towers and hundreds of small wireless facilities predicted for Nassau County over the next ten years must be done within legal parameters established by the Federal and State governments.

Federal Regulations

Section 704 (47 USC §332(c)(7)

The 1996 Telecommunications Act includes Section 704 (47 USC §332(c)(7), (commonly referenced as 47 USC §332(c)(7) or Section 704) grants local governments ability to regulate wireless infrastructure. Section 704 says in relevant part:

- Land use development standards may not unreasonably discriminate among the wireless providers, and may not prohibit or have the effect of prohibiting the deployment of wireless infrastructure
- Local governments must act on applications for new wireless infrastructure within a "reasonable" amount of time, but didn't specify what "reasonable" meant.
- Land use policies may be adopted to promote the location and siting of telecommunications facilities in certain designated areas.
- Encourages the use of third party professional review of site applications.
- Prohibits local government from denying an application for a new wireless facility or the expansion of an existing facility on the grounds that radio frequency emissions are harmful to human health provided the wireless service provider met federal standards.

"Shot Clock" Declaratory Ruling

Following the enactment of Section 704 in 1996, wireless infrastructure deployment began across the United States, subject to various local and state regulations enacted in the wake of Section 704. The infrastructure industry eventually appealed to the FCC for assistance in expediting local government review of infrastructure applications, and as a result, the FCC issued what is known as the "Shot Clock" ruling in 2009 which requires infrastructure collocation decisions to be made within 90 days and new tower decisions to be made within 150 days, or the applicant could take the local government to court and request a judicial grant of their application. The US Supreme Court later affirmed that the FCC could impose these timelines on local governments.

(47 USC §1455) Section 6409(a) in the Middle Class Tax Relief and Job Creation Act

While the infrastructure industry benefited from the Shot Clock ruling, they still sought additional federal relief from local regulations. In 2012, Congress enacted legislation known as Section 6409(a) (commonly referred to as the **Spectrum Act**) to promote wireless

broadband for public safety and commercial purposes.

Section 6409(a) says, in relevant part:

> "…a State or local government may not deny, and shall approve, any eligible facilities request for a modification of an existing wireless tower or base station that does not substantially change the physical dimensions of such tower or base station."

Because of a lack of explanation or definitions in Section 6409(a), the FCC was called upon to provide clarification, definitions and guidance to what Congress intended. In a Report and Order released October 21, 2014 in W.T. Docket 13-238, commonly called the "2014 Report and Order" the FCC provided clarifying definitions to the terms used in Section 6409(a).

2014 Report and Order

The introduction of the 2014 Report and Order the FCC states:

> "Demand for wireless capacity is booming: more consumers are accessing mobile broadband every year, driving more innovation and expanding access to public safety. But our ability to meet this demand depends on the infrastructure that supports the services. We therefore take concrete steps to facilitate the deployment of the infrastructure necessary to support surging demand, expand broadband access, support innovation and wireless opportunity, and enhance public safety - all to the benefit of consumers and the communities in which they live. (Paragraph 2)…Accordingly, our actions are intended to encourage deployments on existing towers and structures - rather then entirely new towers in recognition that collocations almost always result in less impact or no impact at all." (Paragraph 3)

The affect on local government planning:

> "[n]otwithstanding section 704 of the Telecommunications Act of 1996 or any other provision of law, a State or local government **may not deny, and shall approve**, any eligible facilities request for a modification of an existing wireless tower or base station that does not substantially change the physical dimensions of such tower or base station. An eligible facilities request is one that requests modification of an existing wireless tower or base station that involves (a) collocation of new transmission equipment; (b) removal of transmission equipment; or (c) replacement of transmission equipment."

The 2014 Report and Order reaffirms that broadcasting infrastructure is also considered a wireless tower or base station for purposes of Section 6409(a) and that transmission equipment includes antennas, cables, and auxiliary power equipment, such as generators. It also defined "existing" as:

> "…the term "existing" requires that wireless towers or base stations have been reviewed and approved under the applicable local zoning or siting process or that the deployment of existing transmission equipment on the structure received another form of affirmative State or local regulatory approval (e.g., authorization from a State public utility commission). Thus, if a tower or base station was constructed or deployed without proper review, was not required to undergo siting review, or does not support transmission equipment that received another form of affirmative State or local regulatory approval, the

governing authority is not obligated to grant a collocation application under Section 6409(a)."

A wireless tower that does not have a permit because it was not in a zoned area when it was built, but was lawfully constructed is considered an "existing" tower. In other words, a collocation application that "shall be approved" under Section 6409(a) has to be for a location that has been previously reviewed and approved through the local regulatory approval process and is not a "substantial change" to the original approval.

Under the new FCC definition a "**substantial change**" to an eligible tower or base station is as follows:

> (1) (a) for towers outside of public right-of-ways, it increases the height of the tower by more than 10%, or by the height of one additional antenna array with separation from the nearest existing antenna not to exceed twenty feet, whichever is greater; (b) for those towers in the right-of-ways and for all base stations, it increases the height of the tower or base station by more than 10% or 10 feet, whichever is greater; or
>
> (2) (a) for towers outside of public right-of-ways, it protrudes from the edge of the tower more than twenty feet, or more than the width of the tower structure at the level of the appurtenance, whichever is greater; (b) for those towers in the right-of-ways and for all base stations, it protrudes from the edge of the structure more than six feet; or
>
> (3) it involves installation of more than the standard number of new equipment cabinets for the technology involved, but not to exceed four cabinets; or
>
> (4) it entails any excavation or deployment outside the current site of the tower or base station;
>
> (5) it would defeat the existing concealment elements of the tower or base station; or
>
> (6) it does not comply with conditions associated with the prior approval of construction or modification of the tower or base station unless the non-compliance is due to an increase in height, increase in width, addition of cabinets, or new excavation that does not exceed the corresponding "substantial change" thresholds identified above. We further provide that the changes in height resulting from a modification should be measured from the original support structure in cases where the deployments are or will be separated horizontally, such as on buildings' rooftops; in other circumstances, changes in height should be measured from the dimensions of the tower or base station inclusive of originally approved appurtenances and any modifications that were approved prior to the passage of Section 6409(a).

For example, provided the request is not a substantial change then, if the County previously approved a non ROW macro tower (a.k.a. eligible facility) to be constructed at one hundred feet (100') then under Section 6409(a) that tower height can be increased by ten percent (10%) or by the height of one additional antenna array with separation from the nearest existing antenna not to exceed twenty feet (20'), whichever is greater. In the case where twenty feet (20%) is the greater, then that eligible one hundred foot (100') tower could be increased to one hundred twenty feet (120') in height to accommodate an additional collocation (provided the modification does not exceed the six substantial change criteria). For eligible towers in the ROW and for all eligible base stations the height can be increased by ten percent (10%) or ten feet (10'), whichever is greater. Thus an existing eligible one

hundred foot (100') tower in the ROW or any eligible one hundred foot (100') base station could be increased in height by right to one hundred and ten feet (110').

The 2014 Report and Order affirm that these standards apply equally to legally nonconforming structures in the jurisdiction. They too will be eligible for Section 6409(a) modifications.

Wireless facility modifications under Section 6409(a) should remain subject to building codes and other non-discretionary structural and safety codes. In particular, the FCC clarified that Section 6409(a) does not "preclude States and localities from continuing to require compliance with generally applicable health and safety requirements on the placement and operation of backup power sources, including noise control ordinances if any."

As for timelines, local government has sixty (60) days to review a new collocation application for an eligible facility under Section 6409(a). The timeline starts when the application is submitted. Local government can then "stop" or "toll" the clock within the initial thirty (30) days if the application is incomplete. The local government's request for additional information "must specify the code provision, ordinance, application instruction, or otherwise publicly stated procedures that require the information to be submitted."

The time clock restarts when the applicant resubmits with the missing information. If the application is still incomplete local government can then "stop" or "toll" the process again by again identifying, in writing, missing information. The clock will restart again upon the second resubmission. After that local government cannot stop the clock because of incompleteness.

If the local government does not complete the application review within sixty (60) days (subject to the tolling provisions above), the 2014 Report and Order adopts a "deemed granted" remedy.

If, after reviewing a proposed Section 6409(a) application, the local government determines that the application request is not eligible for Section 6409(a) processing because it constitutes a "substantial change", then the ninety (90) day timeline from the 2009 Shot Clock ruling applies, starting from the day the County decides the application is not Section 6409(a) eligible. The 2014 Report and Order does suggest that the "deemed granted" isn't necessarily the last word on the subject. Acknowledging that judicial determination may be necessary, the 2014 Report and Order states:

> "…. a State or local authority may challenge an applicant's written assertion of a deemed grant in any court of competent jurisdiction when it believes the underlying application did not meet the criteria in [Section 6409(a)] for mandatory approval, would not comply with applicable building codes or other non-discretionary structural and safety codes, or for other reasons is not appropriately "deemed granted".

The 2014 Report and Order emphasizes that Section 6409(a) applications must be tailored to request permissible information and then must be acted upon quickly in order to avoid a "deemed granted" remedy.

The 2014 Report and Order points out that Section 6409(a) applies only to local government in its regulatory capacity and NOT as a landlord. Should the County choose, in the capacity as landlord, to limit the number and type of infrastructure applicants on County property, Section 6409(a) will not apply. Furthermore, specific to the use of publicly owned property for the use of wireless communications equipment, the FCC states in the Report and Order:

> "We find insufficient evidence in the record to make a determination that municipal property preferences are per se unreasonably discriminatory or otherwise unlawful under Section 332(c)(7). To the contrary, most industry and municipal commenters support the conclusion that many such preferences are valid."

Thus, local governments can continue the practice of promoting a preference for siting wireless infrastructure on public property in local regulations.

2018 Report and Order

The FCC's Declaratory Ruling and Third Report and Order adopted September 26, 2018 becomes effective nationwide on January 14, 2019.

"In this document, the FCC issues guidance and adopts rules to streamline the wireless infrastructure siting review process to facilitate the deployment of next-generation wireless facilities. Specifically, the FCC identifies specific fee levels for the deployment of Small Wireless Facilities, and it addresses state and local consideration of aesthetic concerns that effect the deployment of small wireless facilities. The FCC also addresses the "shot clocks" governing the review of wireless infrastructure deployments and established two new shot clock for small wireless facilities."

The following are the timelines for action by local government established by the FCC's Third Report and Order:

- 60 days to collocate a small wireless facility on an existing structure
- 90 days to collocate a facility other than a small wireless facility on an existing structure
- 90 days to deploy a small wireless facility using a new structure
- 150 days to deploy a facility other than a small wireless facility using a new structure

After the submission of a small wireless facility application, the local government has ten (10) days from the date of filing to determine if the application is complete or incomplete and notify the applicant. If the application is incomplete, then the shot clock stops and then restarts again from zero when the supplemental information is provided to the local government. As stated in paragraph 143 of the Third Report and Order, "…once the applicant submits the supplemental information in response to a siting authority's timely request, the shot clock resets, effectively giving the siting authority an additional 60 days to act on the small wireless facilities collocation application." After the initial notice and response period, the standard tolling process then starts, meaning if the application remains incomplete, the County must notify the applicant in detail as to the remaining insufficient items and the shot clock stops on that date and restarts from when the applicant resubmits until the application is finalized.

The shot clock and tolling system for facilities other than small wireless sites starts when an application is submitted to the local government. The local government has thirty (30) days to review the application to determine if the materials are complete or incomplete. If the application is not complete, the locality must provide in writing to the applicant a detailed summary of deficiencies. At that point the shot clock stops and then restarts from the point where it stopped when the applicant submits revised materials, and so forth until the application process is finalized.

The FCC also addressed zoning related practices that could be interpreted as an effective prohibition of small wireless deployments and cautioned local government to avoid land use regulatory practices that could appear to create a barrier to entry or efficient deployment of this type of infrastructure. Two specific areas, fees and aesthetics, were discussed in the document.

The FCC determined that aesthetics requirements are not preempted if they are (1) reasonable, (2) no more burdensome than those applied to other types of infrastructure deployments, and (3) objective and published in advance (paragraph 86). A local government's aesthetics requirements must be objective, clearly defined and ascertainable (paragraph 88) and cannot be so costly that the design standards could be a deterrent (effective prohibition) to the cost of the small wireless facility deployment.

While the FCC did not mandate a certain fee for small wireless facility application permits or third party reviews, the FCC did provide parameters for what it deemed to be "reasonable" fees for the following matters:

- $500 (non-recurring) for a single application that includes up to five (5) small wireless facilities and an additional $100 for each additional small wireless facility beyond the initial five (5) sites.
- $1,000 (non-recurring) for a new pole (not a collocation) for a small wireless facility.
- $270 (recurring) per small wireless facility per year for each collocation, new pole and subsequent collocations on said facilities.

Any possible ROW access fee or fee for attachment to municipally-owned structures in the ROW; provided they are (1) a reasonable approximation of costs, (2) those costs themselves are reasonable, and (3) are non-discriminatory (paragraphs 79-80).

The FCC did allow that while the above fee parameters were their interpretation of "reasonable" under applicable federal laws, there was room for some variance from same, stating:

"…there should be only very limited circumstances in which localities can charge higher fees consistent with the requirements of Section 253. In those limited circumstances, a locality could prevail in charging fees that are above this level by showing that such fees nonetheless comply with the limits imposed by Section 253—that is, that they are (1) a reasonable approximation of costs, (2) those costs themselves are reasonable, and (3) are non-discriminatory. Allowing localities to charge fees above these levels upon this showing recognizes local variances in costs."

State of Florida Regulations

The Florida legislature has also chosen to regulate the wireless infrastructure field, primarily through two separate statutory provisions.

First, Florida enacted §365.172(13), which built upon the provisions in the FCC's 2009 "Shot Clock" and provided state law requiring certain collocations to be approved by local governments with nothing more than "building permit review". §365.172(13) says a Florida collocation that does not increase the height of the tower, does not increase the ground compound size of the facility approved in the original site plan, and adds antenna and equipment in design and configuration consistent with those in the original construction and installation of the facility gets only building permit review. If the collocation does increase the ground compound (but not more than 400 square feet or 50% larger than the original compound, whichever is greater) then the collocation application can get land development review and building permit review, but no public hearing is allowed on the application. The Florida law also restricts local government from considering anything other than land development or zoning issues for ANY infrastructure application. Local government cannot consider or require information on quality of service, or customer demand for service from a particular location UNLESS it relates to a specific land development or zoning issue or the applicant volunteers the information. §365.172(13) does allow exclusion of wireless infrastructure from residential areas or residential zoning districts IF that exclusion does not create an effective prohibition of that applicant's service in that area, and allows local government to impose design requirements, permitting and review fees, and require provision of FCC and Federal Aviation Administration approvals from applicants as part of the review process.

The legislature also recently further amended §337.401, which was originally enacted in 2001 to address the underground use of public rights of way by wired communications providers, and to provide a compensation scheme for use of the ground in public rights of way. The infrastructure industry, as part of a nationwide effort to pass legislation at state levels on siting infrastructure in public rights of way, caused the introduction and passage of HB687, captioned the "Advanced Wireless Infrastructure Deployment Act".

This legislation added a new subsection (7) to §337.401, relating to use of public rights of way ("ROW") for wireless above ground infrastructure and adopted certain infrastructure definitions that are diametrically opposite of the federal definitions, primarily in an effort to bootstrap the tower industry (which are not "wireless service providers") into the same category as actual wireless service providers like ATT, Verizon, etc., to obtain some of the protections of that industry provided by the 1996 Telecommunications Act. Hence, tower owners like Mobilitie, Crown Castle International and American Tower can register as "communications providers" under state law and submit applications for certain type of infrastructure and be treated the same as AT&T, T-Mobile and Verizon (regardless of whether they have a launch tenant for the proposed tower).

The list below identifies some of the key elements of HB 687 that the County and Cities in Nassau County will need to (A) integrate into local regulations and (B) apply in connection with the processing of wireless infrastructure applications within a county or municipal ROW:

- HB 687 only applies to small cells, as defined in the legislation – not macro towers and not macro cell sites on poles in the ROW.
- If the applicant meets the small cell parameters as defined, a County or City cannot deny an application, but can require concealment of the facility and landscaping/ screening of the ground equipment.
- Local government agencies must charge everyone installing "collocations" on utility poles the same fee.
- Rent or use fee is allowed up to $150 per new pole in ROW per year.
- Applicant can submit up to 30 sites on a single application.
- Applicant can modify an existing utility pole up to 10' above the existing height of the pole to add their equipment.
- New poles cannot exceed either the height of the tallest pole within 500' linear feet from site or 50' AGL unless local government chooses to waive this provision.

Unknown is the effect of Section 6409 on this infrastructure once built. The state law requires communities allow the installation of initial wireless services on utility poles. Once installed, you now have a new pole that is fifty feet (50') (Forty feet (40') original height plus the ten feet (10') addition permitted by state law). Along comes a second applicant wanting to put their equipment on the same pole (assuming it can handle it structurally). Section 6409 says the second applicant is entitled to use that structure and increase it another ten percent (10%) or ten feet (10') (within a ROW) and you "shall approve and may not deny" such an application if they meet the other "non-substantial change" parameters. So the end result could potentially be a sixty foot (60') structure in the ROW with two (or more) wireless facilities on it (fortunately, Section 6409 permits only a one time increase in height). This is another reason to require concealment of ROW wireless infrastructure because one of the Section 6409 "substantial change" conditions is that the modification/addition doesn't have the effect of destroying or defeating the existing "concealment" technology being utilized.

Comments On Existing County Ordinance

The County's existing tower and antenna ordinance provides a comprehensive approach to regulating towers and antenna throughout the County. The definitions and application review process portions of the Ordinance do need amending to address the most recent Federal and State definitions application process timelines. **Section 28.19 (3)(b) 4.** states Antenna to be located on existing structure in public road rights-of-way may only be located in collector, arterial or limited access road rights-of-way. The recent adoption and implementation of §337.401(7) now prohibits the County from having this type of restriction in the Ordinance.

Camouflaged structures in certain zoning districts are encouraged over non-concealed type wireless infrastructure through the administrative approval process. Towers that are not concealed must get approval of a conditional use permit. Having a more arduous process for

the less desirable infrastructure is one method to have the industry deploy the more preferable type of equipment. Presently, the number of camouflaged structures is minimal and only in the Island Study Area. Requiring applicants to demonstrate why non-concealed towers are a necessity over camouflaged facilities should be added to the Ordinance. Doing so may give the County more leverage to deny non-concealed towers.

Residential areas are going to need wireless towers and base stations. The County Ordinance does not clearly state the process for new towers in these zoning districts and this should be amended to promote the type and development standards of this infrastructure in residential districts.

Polling Results

Between August 15 - 17, 2017 Nassau County and the City of Fernandina Beach held a series of Initial Public Outreach meetings. These meetings were held at James S. Page Government Complex in Yulee; American Beach Community Center in Fernandina Beach and the Callahan Fairground Multi-Purpose Facility in Callahan. At each of these meetings CityScape presented:

- The history of the wireless industry and typical types of infrastructure;
- An introduction to the mapping process including network coverage from existing wireless facilities illustrating network gaps and theoretical propagation coverage maps;
- An overview of the federal and state regulations pertaining to wireless infrastructure.

The presentation concluded with a wireless communication survey during which attendees were invited to cast a vote on the types of wireless communication infrastructure they thought was preferable in the five different study areas. After the meetings online polling continued and was available via the County's web site along with paper copies available at the County offices. A summary of the fifty-seven (57) participants is as follows with an at a glance look in Tables 7 and 8:

1. Fifty-five percent (55%) of all voters felt the wireless network coverage was just generally acceptable where they live with seventeen percent (17%) of residents in the Unincorporated Area West of I-95 indicating coverage was unacceptable where they live.

2. Over fifty-six percent (56%) of all voters feel the wireless network coverage when traveling within Nassau County is only moderately acceptable.

3. The preference in the non-concealed category was the monopole by an average of fifty percent (50%) over the lattice or guyed tower for all five-study areas; but almost sixty percent (60%) of the voters that live in the Unincorporated Area West of I-95 preferred the lattice tower for their area.

4. Light stanchions, which is the use of existing outdoor lights at ballparks and schools, was generally preferred over tower wraps and painted towers with many casting a "no preference" vote as their second choice in all areas.

5. For concealed type towers the preferences are as follows:

    - Overall the majority voted for flagpoles for the Incorporated Area and for slick sticks in the Unincorporated Areas. However, the residents of those areas voted differently. In fact, the residents of the Incorporated Island Area have a fifty/fifty split preference between the slick stick and no preference; the Unincorporated Area East of I-95 was slightly higher for slick sticks; and the citizenry from the Unincorporated Area West of I-95 have a slight "no preference" over the flagpole.

    - There was not a distinct variation between the total votes and the votes of those stakeholders that live in the actual areas in relationship to the clock tower, banner pole and faux dormer options with the exception of the Incorporated Island Area. For this area the overall survey showed a preference of the clock tower but the residents in that area preferred the faux dormer. The Incorporated Non-Island Area preferred the clock tower while the Unincorporated Island and Unincorporated Area East of I-95 voters prefer the clock tower. The Unincorporated Area West of I-95 voters preferred the banner pole.

    - The monopine (faux tree) was preferable over the faux fire tower and silo in all of the study areas except for the Unincorporated Island Area where forty-seven percent (47%) cast a "None of these" vote followed by eighteen percent (18%) voting for the faux tree.

6. Regarding the use of high tension electric transmission poles, 56 percent (56%) in the Incorporated Island have "no preference", 56 percent (56%) in the Unincorporated Island Area like none of these options and the majority of voters from the Unincorporated Areas East and West of I-95 prefer the additional pole in the utility easement.

7. Regarding base stations, all individual study area voters preferred concealed antenna mounted above the rooftop over non-concealed base stations inside their respective study areas.

8. The majority of votes prefer concealed small wireless facilities to semi-concealed and non-concealed facilities.

NON-CONCEALED TOWERS	MONOPOLE LATTICE GUY	ELECTRIC TRANSMISSION LINES	BASE STATION	SMALL CELL
Incorporated Island	Overall/Residents: Monopole	Residents: No Preference Overall: Attachment	Overall: Concealed	Overall: Concealed
Incorporated Non-Island	Overall: Monopole	Overall: New Pole in Utility Easement	Overall: Non-Concealed	Overall: Concealed
Unincorporated Island	Overall/Residents: Monopole	Residents: None Overall: Attachment	Overall/Residents: Concealed	
Unincorporated Non-Island East of I-95	Overall/Residents: Monopole	Overall: New Pole in Utility Easement	Residents: Concealed Overall No Preference	
Unincorporated Non-Island West of I-95	Overall: Monopole Residents: Lattice	Residents: New Pole in Utility Easement Overall: No Preference		

Table 7: Non-Concealed Tower Preference Polling Results At A Glance

CONCEALED AND PARTIALLY CONCEALED TOWERS	LIGHT STANCHION WRAPPED POLE PAINTED POLE	FLAGPOLE SLICK STICK 3-LEGGED POLE	CLOCK TOWER BANNER POLE FAUX DORMER	FAUX TREE FAUX FIRE TOWER FAUX SILO
Incorporated Island	Residents: No preference Overall: Light Stanchion	Residents: ½ Slick Stick and ½ No Preference Overall: Flagpole	Residents: Faux Dormer Overall: Clock Tower	Overall: Faux Tree
Incorporated Non-Island	Overall: Light Stanchion	Overall: Flagpole	Overall: Clock Tower	Overall: Faux Tree
Unincorporated Island	Overall: Light Stanchion	Overall: Flagpole	Overall: Clock Tower	Residents: None of These Overall: No Preference
Unincorporated Non-Island East of I-95	Overall: Light Stanchion	Overall: Slick Stick	Residents: Clock Tower Overall: Banner Pole	Overall: Faux Tree
Unincorporated Non-Island West of I-95	Overall: Light Stanchion	Overall: No Preference	Residents: Banner Pole Overall: No Preference	Overall: Faux Tree

Table 8: Concealed And Partially Concealed Tower Preference Polling Results At A Glance

Proposed Policy Changes

The definitions sections of the County and City land development regulations require updates to track the new and revised definitions in both Federal and State regulations. Unfortunately, many definitions for wireless infrastructure in Florida statutes are inconsistent with the Federal definitions for the same item and certain State statutes are only applicable to small wireless facilities in the ROW. For this reason, the proposed ordinance includes two sets of definitions: one, for communications facilities within a public ROW and a second for communication facilities not located in rights-of way.

A second distinguishing change to the existing code is the inclusion of regulations addressing deployment of small wireless facilities within the ROW. Some local governments in Florida have opted to locate regulations for small cells in the ROW in parts of their code that deal specifically with street design standards and other related activities specific to sidewalks and streets. However, keeping all wireless deployment regulations in one section of the Code can help manage the

installations of all wireless infrastructure and prevent small cells from inadvertently being permitted without planning review as afforded local governments in Florida statutes.

Based on the community's responses to the polling questions the preferred wireless structure types are generally 1) concealed; 2) non-concealed light stanchions; and 3) the monopole. The overall preference is a dual-purpose concealed tower. A dual-purpose tower is a structure built to serve two primary purposes; one of which is a wireless facility. Examples of these include, but are not limited to, clock towers, flagpoles, light poles and faux trees as shown in Figure 37.

The survey results also showed that overall concealed antennas mounted on existing base stations and concealed new base stations are preferred over non-concealed base stations. Non-residential locations are preferred over residential areas because such facilities would be less noticeable and more accepted by the public.

In response to the polling results, it is recommended the County and City add a preferred infrastructure type list to the zoning ordinance. The most preferred option is listed first with the least preferred option last. When a lower ranked alternative is proposed the applicant must demonstrate through relevant information why the higher ranked options are not technically feasible, practical or justified given the location of the proposed facilities. This includes, but is not limited to, an affidavit by a radio frequency engineer demonstrating that despite diligent efforts to adhere to the established preferences within the geographic search area and by clear and convincing evidence it is not possible. The applicant must provide such evidence in its application in order for the application to be considered complete.

The zoning matrix is a table that lists the zoning districts, the various types of wireless facilities and which type of facility is allowed in each zoning district and the review process applicable to that request. The rest of the regulations in the code provide for land use development standards to the greatest extent permitted by applicable Florida and Federal regulations. The purpose and intent of the regulations is to minimize adverse visual effects of wireless facilities through thoughtful design and siting strategies by the entire wireless infrastructure industry, including service providers, infrastructure developer, contractor, owner or management organization.

Figure 37: Nassau County Overall Preference Examples

Potential Public Properties as Fill In Sites for Network Gaps

When publicly owned non ROW property is used for wireless infrastructure the County or City become the landlord and has ultimate control over the design, placement and maintenance of the infrastructure. Many creative concealment techniques are available to the infrastructure industry and some are more aesthetically pleasing and practical than other types. As local government adopts preferred design standards for publicly owned property, these installations become the precedent and standard for future sites developed within the County or City's zoning jurisdiction. Leasing public properties for new wireless infrastructure can also generate new sources of revenue along with creating assets for the County or City. Additionally, there could be potential availability on the new infrastructure for the use of emergency services and public safety communications equipment.

It is recommended the County and City set a preference list of publicly owned locations and types of infrastructure to be used to fill in the identified network service gaps. The overall goal of this list is to allow the County and City the most discretion in location and design so the wireless facilities are as inconspicuous as possible and fits within the surrounding aesthetics.

APPENDIX A
EXISTING INVENTORY

Inventory Catalog of Existing Infrastructure

Procedure

CityScape's assessment process began by conducting extensive online research and collecting assessment data from numerous sources, including but not limited to, City and County wireless infrastructure permits, FCC registration and wireless service provider and tower owner direct information. Once the assessment data was collected CityScape prepared mapping using the GIS shape files provided by the County. CityScape assessed each individual site by visiting each location and acquired all available information about the facility including ownership, tenants, type of structure, condition of site, signage etc. All information was assembled into a data table to create the following inventory.

Evaluation

Each site was inspected for verification of all data and overall site notations are included in the inventory. CityScape made an observation by visual inspection only, whether each support structure has the space to accommodate potential collocations by means of antennas, ancillary equipment and other wireless antenna platform(s) as noted for each facility. In this consideration and prior to mounting any new equipment, CityScape recommends the structure be fully analyzed by a structural engineer for its structural capability to support any proposed addition or collocation(s).

Representation

The infrastructure is listed in numeric order and shown on the map in Figure 1. Colored dots represent specific types of wireless infrastructure as follows:

- Macro tower outside the right-of-way
- Concealed macro tower
- Tower outside the study area
- Rooftop base station
- Water tank base station
- Small cell tower inside the right-of-way
- Small cell base station inside the right-of-way

A catalog of the wireless infrastructure inventory includes a photograph and vicinity map of each tower tower or base station, along with detailed information from all data as referenced.

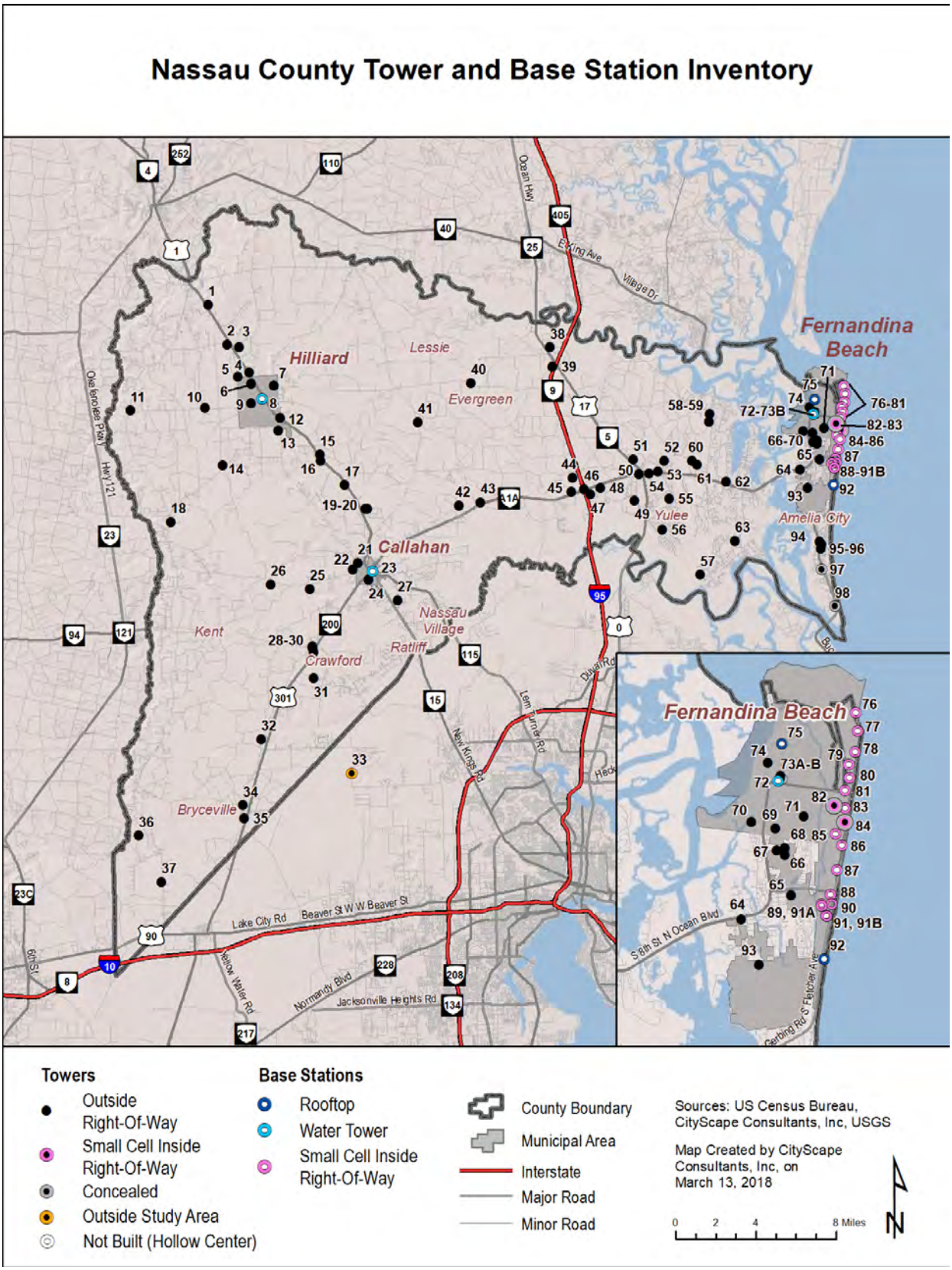


Figure 14: Nassau County Tower and Base Station Inventory

SITE 1: 554400 US Highway 1, Hilliard

ELIGIBLE:	Yes	**LOCATION:**	Private Property
CATEGORY:	Tower	**TYPE:**	Lattice
ZONING:	Open Rural	**PARCEL PIN#:**	41-4N-23-1210-0005-0000
FACILITY OWNER:	American Tower Corporation	**FACILITY OWNER ID:**	415246
FACILITY OWNER SITE NAME:	Hilliard FL SQA	**FCC ASR:**	1261896
LATITUDE:	30-45-30.600 N	**LONGITUDE:**	81-57-44.600 W
HEIGHT:	260’	**COLLOCATION POTENTIAL:**	4
SERVICE PROVIDERS:	Verizon		
COMMENTS:	None		

SITE 2: 173033 Andrews Road, Hilliard

ELIGIBLE:	Yes	**LOCATION:**	Private Property
CATEGORY:	Tower	**TYPE:**	Guy
ZONING:	Open Rural	**PARCEL PIN#:**	30-4N-24-0000-0003-0040
FACILITY OWNER:	American Tower Corporation	**FACILITY OWNER ID:**	9117
FACILITY OWNER SITE NAME:	Hilliard FL	**FCC ASR:**	1027629
LATITUDE:	30-43-46.400 N	**LONGITUDE:**	81-56-49.800 W
HEIGHT:	301’	**COLLOCATION POTENTIAL:**	3
SERVICE PROVIDERS:	Windstream		
COMMENTS:	None		

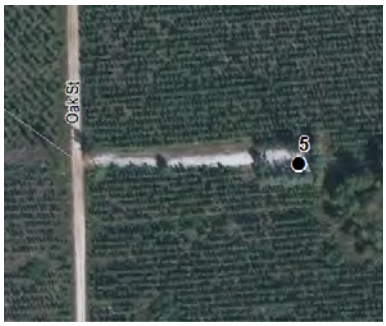
SITE 3: 28332 Sawmill Road, Hilliard

ELIGIBLE:	Yes	**LOCATION:**	Private Property
CATEGORY:	Tower	**TYPE:**	Guy
ZONING:	Open Rural	**PARCEL PIN#:**	32-4N-24-2020-0001-0010
FACILITY OWNER:	River City Broadcasting LLC	**FACILITY OWNER ID:**	None
FACILITY OWNER SITE NAME:	Not Listed	**FCC ASR:**	1240070
LATITUDE:	30-43-38.700 N	**LONGITUDE:**	81-56-13.500 W
HEIGHT:	420’	**COLLOCATION POTENTIAL:**	4
SERVICE PROVIDERS:	Broadcast		
COMMENTS:	No site identification at the facility.		

SITE 4: 27051 Hallman Road, Hilliard

ELIGIBLE:	Yes	**LOCATION:**	Private Property
CATEGORY:	Tower	**TYPE:**	Monopole
ZONING:	Commercial Intensive	**PARCEL PIN#:**	05-3N-24-2360-0001-0010
FACILITY OWNER:	Crown Castle International	**FACILITY OWNER ID:**	844136
FACILITY OWNER SITE NAME:	Hilliard	**FCC ASR:**	1212253
LATITUDE:	30-42-32.670 N	**LONGITUDE:**	81-55-45.239 W
HEIGHT:	180’	**COLLOCATION POTENTIAL:**	4
SERVICE PROVIDERS:	AT&T		
COMMENTS:			

SITE 5: 271511 Georgia Street, Hilliard



ELIGIBLE:	Yes	**LOCATION:**	Private Property
CATEGORY:	Tower	**TYPE:**	Lattice
ZONING:	Incorporated	**PARCEL PIN#:**	05-3N-24-2020-0009-0000
FACILITY OWNER:	Crown Castle International	**FACILITY OWNER ID:**	812681
FACILITY OWNER SITE NAME:	North Hilliard JKV088	**FCC ASR:**	1245048
LATITUDE:	30-42-20.747 N	**LONGITUDE:**	81-56-20.071 W
HEIGHT:	192’	**COLLOCATION POTENTIAL:**	4
SERVICE PROVIDERS:	None		
COMMENTS:	Tower has no active service providers on site.		

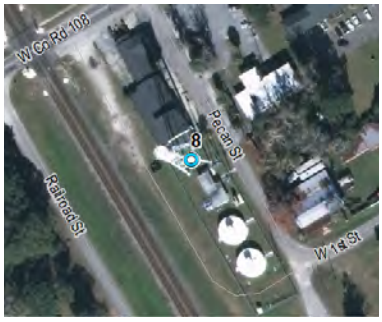
SITE 6: 371105 Oxford Street, Hilliard

ELIGIBLE:	Yes	**LOCATION:**	Private Property
CATEGORY:	Tower	**TYPE:**	Lattice
ZONING:	Incorporated	**PARCEL PIN#:**	05-3N-24-2340-0006-0010
FACILITY OWNER:	American Tower Corporation	**FACILITY OWNER ID:**	302821
FACILITY OWNER SITE NAME:	Hilliard FL 2	**FCC ASR:**	1218797
LATITUDE:	30-42-2.300 N	**LONGITUDE:**	81-55-40.080 W
HEIGHT:	254’	**COLLOCATIO N POTENTIAL:**	3
SERVICE PROVIDERS:	County PSRS, ITT, Metro PCS, Nextel, Verizon		
COMMENTS:			

SITE 7: 37075 Aviation Lane, Hilliard

ELIGIBLE:	Yes	**LOCATION:**	Private Property
CATEGORY:	Tower	**TYPE:**	Lattice
ZONING:	Incorporated	**PARCEL PIN#:**	09-3N-24-0000-0002-0000
FACILITY OWNER:	FAA	**FACILITY OWNER ID:**	None
FACILITY OWNER SITE NAME:	None	**FCC ASR:**	1250825
LATITUDE:	30-41-56.219 N	**LONGITUDE:**	81-54-31.140 W
HEIGHT:	249’	**COLLOCATION POTENTIAL:**	4
SERVICE PROVIDERS:	No PWSF, FAA Microwave		
COMMENTS:			

SITE 8: 3748 Pecan Street, Hilliard



ELIGIBLE:	Yes	**LOCATION:**	Public Property
CATEGORY:	Base Station	**TYPE:**	Water Tank
ZONING:	Incorporated	**PARCEL PIN#:**	09-3N-24-0000-0034-0000
FACILITY OWNER:	Town of Hilliard	**FACILITY OWNER ID:**	None
FACILITY OWNER SITE NAME:		**FCC ASR:**	1050356
LATITUDE:	30-41-22.000 N	**LONGITUDE:**	81-55-8.400 W
HEIGHT:	105’	**COLLOCATION POTENTIAL:**	Possibly
SERVICE PROVIDERS:	T-Mobile		
COMMENTS:			

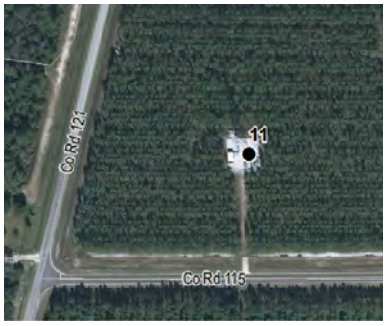
SITE 9: 1 Flashes Avenue, Hilliard

ELIGIBLE:	Yes	**LOCATION:**	Public Property
CATEGORY:	Tower	**TYPE:**	Concrete Monopole
ZONING:	Incorporated	**PARCEL PIN#:**	08-3N-24-2380-0142-0010
FACILITY OWNER:	Affiniti LLC	**FACILITY OWNER ID:**	None
FACILITY OWNER SITE NAME:	HILLIARD-755	**FCC ASR:**	1243755
LATITUDE:	30-41-11.800 N	**LONGITUDE:**	81-55-41.099 W
HEIGHT:	140’	**COLLOCATION POTENTIAL:**	1
SERVICE PROVIDERS:	Broadband		
COMMENTS:			

SITE 10: 27077 Pee Wee Lane, Hilliard

ELIGIBLE:	Yes	**LOCATION:**	Public Property
CATEGORY:	Tower	**TYPE:**	Concrete Monopole
ZONING:	Open Rural	**PARCEL PIN#:**	12-3N-23-2020-0017-0000
FACILITY OWNER:	Affiniti LLC	**FACILITY OWNER ID:**	None
FACILITY OWNER SITE NAME:	HILLIARD-855	**FCC ASR:**	1262855
LATITUDE:	30-41-1.897 N	**LONGITUDE:**	81-58-0.417 W
HEIGHT:	145’	**COLLOCATION POTENTIAL:**	1
SERVICE PROVIDERS:	None		
COMMENTS:	Tower appears to be abandoned.		

SITE 11: 170226 Bay Road, Hilliard



ELIGIBLE:	Yes	**LOCATION:**	Private Property
CATEGORY:	Tower	**TYPE:**	Lattice
ZONING:	Open Rural	**PARCEL PIN#:**	39-3N-23-2080-0005-0000
FACILITY OWNER:	American Tower Corporation	**FACILITY OWNER ID:**	415524
FACILITY OWNER SITE NAME:	Weinaug Woodlands Inc	**FCC ASR:**	1260953
LATITUDE:	30-40-58.200 N	**LONGITUDE:**	82-1-45.000 W
HEIGHT:	257’	**COLLOCATION POTENTIAL:**	4
SERVICE PROVIDERS:	Verizon		
COMMENTS:			

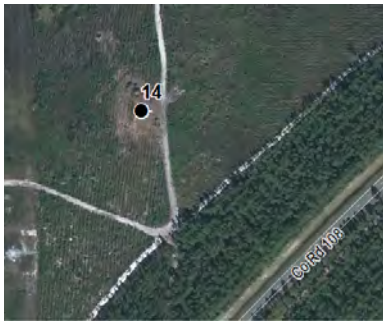
SITE 12: 3724 Clint Drive, Hilliard

ELIGIBLE:	Yes	**LOCATION:**	Public Property
CATEGORY:	Tower	**TYPE:**	Lattice
ZONING:	Open Rural	**PARCEL PIN#:**	15-3N-24-0000-0005-0000
FACILITY OWNER:	Division of Forestery	**FACILITY OWNER ID:**	None
FACILITY OWNER SITE NAME:		**FCC ASR:**	
LATITUDE:	30-40-33.300 N	**LONGITUDE:**	81-54-13.400 W
HEIGHT:	Unknown	**COLLOCATION POTENTIAL:**	1
SERVICE PROVIDERS:	Division of Forestery		
COMMENTS:	No PWSF on existing tower.		

SITE 13: 458414 Old Dixie Highway, Hilliard

ELIGIBLE:	No	**LOCATION:**	Private Property
CATEGORY:	Tower	**TYPE:**	Lattice
ZONING:	Industrial Warehouse	**PARCEL PIN#:**	21-3N-24-2020-0061-0020
FACILITY OWNER:	Okefenoke Rural Electric Membership Corporation	**FACILITY OWNER ID:**	None
FACILITY OWNER SITE NAME:		**FCC ASR:**	1227245
LATITUDE:	30-40-0.197 N	**LONGITUDE:**	81-54-19.455 W
HEIGHT:	118’	**COLLOCATION POTENTIAL:**	1
SERVICE PROVIDERS:	No PWSF, Microwave		
COMMENTS:			

SITE 14: 15200 CR 108, Hilliard



ELIGIBLE:	Yes	**LOCATION:**	Private Property
CATEGORY:	Tower	**TYPE:**	Lattice
ZONING:	Open Rural	**PARCEL PIN#:**	30-3N-24-2020-0009-0000
FACILITY OWNER:	American Tower Corporation	**FACILITY OWNER ID:**	415525
FACILITY OWNER SITE NAME:	CCRC Woodlands	**FCC ASR:**	1287708
LATITUDE:	30-38-31.930 N	**LONGITUDE:**	81-57-9.170 W
HEIGHT:	250’	**COLLOCATION POTENTIAL:**	4
SERVICE PROVIDERS:	Verizon		
COMMENTS:			

SITE 15: 36122 M Sikes Road, Callahan

ELIGIBLE:	Yes	**LOCATION:**	Private Property
CATEGORY:	Tower	**TYPE:**	Guy
ZONING:	Open Rural	**PARCEL PIN#:**	37-3N-24-0000-0004-0000
FACILITY OWNER:	American Tower Corporation	**FACILITY OWNER ID:**	88439
FACILITY OWNER SITE NAME:	Hilliard - AT&T ACQ	**FCC ASR:**	1032478
LATITUDE:	30-38-54.643 N	**LONGITUDE:**	81-52-14.480 W
HEIGHT:	357’	**COLLOCATION POTENTIAL:**	4
SERVICE PROVIDERS:	Sprint, State of FL, Verizon, Windstream		
COMMENTS:	Lattice tower with guy wire supports.		

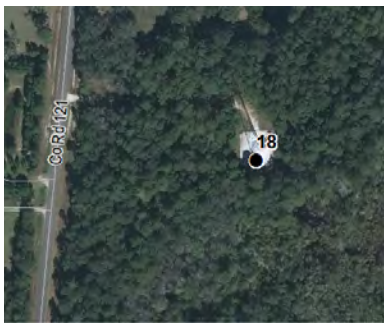
SITE 16: 36351 JW Elliott Drive, Callahan

ELIGIBLE:	Yes	**LOCATION:**	Private Property
CATEGORY:	Tower	**TYPE:**	Lattice
ZONING:	Open Rural	**PARCEL PIN#:**	37-3N-24-0000-0013-0020
FACILITY OWNER:	Crown Castle International	**FACILITY OWNER ID:**	812978
FACILITY OWNER SITE NAME:	South Hilliard (USI)	**FCC ASR:**	Not Required
LATITUDE:	30-38-37.900 N	**LONGITUDE:**	81-52-13.700 W
HEIGHT:	153’	**COLLOCATION POTENTIAL:**	4
SERVICE PROVIDERS:	AT&T		
COMMENTS:			

SITE 17: 544747 US Highway 1, Callahan

ELIGIBLE:	Yes	**LOCATION:**	Private Property
CATEGORY:	Tower	**TYPE:**	Guy
ZONING:	Open Rural	**PARCEL PIN#:**	37-3N-24-0000-0013-0020
FACILITY OWNER:	Crown Castle International	**FACILITY OWNER ID:**	874097
FACILITY OWNER SITE NAME:	Sauls Road	**FCC ASR:**	1216788
LATITUDE:	30-37-34.212 N	**LONGITUDE:**	81-51-3.096 W
HEIGHT:	300’	**COLLOCATION POTENTIAL:**	3
SERVICE PROVIDERS:	T-Mobile		
COMMENTS:	Could not access; got info from Crown Castle International.		

SITE 18: 23955 CR 121, Hilliard



ELIGIBLE:	Yes	**LOCATION:**	Private Property
CATEGORY:	Tower	**TYPE:**	Lattice
ZONING:	Open Rural	**PARCEL PIN#:**	10-2N-23-0000-0014-0010
FACILITY OWNER:	American Tower Corporation	**FACILITY OWNER ID:**	415526
FACILITY OWNER SITE NAME:	Clyde Mizell	**FCC ASR:**	1263149
LATITUDE:	30-36-5.350 N	**LONGITUDE:**	81-59-48.491 W
HEIGHT:	249’	**COLLOCATION POTENTIAL:**	3
SERVICE PROVIDERS:	Verizon		
COMMENTS:			

SITE 19: 46281 Landfill Road, Callahan

ELIGIBLE:	Yes	**LOCATION:**	Public Property
CATEGORY:	Tower	**TYPE:**	Lattice
ZONING:	Goverment/ Public Use	**PARCEL PIN#:**	08-2N-25-0000-0002-0000
FACILITY OWNER:	Crown Castle International	**FACILITY OWNER ID:**	844123
FACILITY OWNER SITE NAME:	Callahan	**FCC ASR:**	1272260
LATITUDE:	30-36-32.130 N	**LONGITUDE:**	81-49-59.610 W
HEIGHT:	280’	**COLLOCATION POTENTIAL:**	3
SERVICE PROVIDERS:	AT&T		
COMMENTS:			

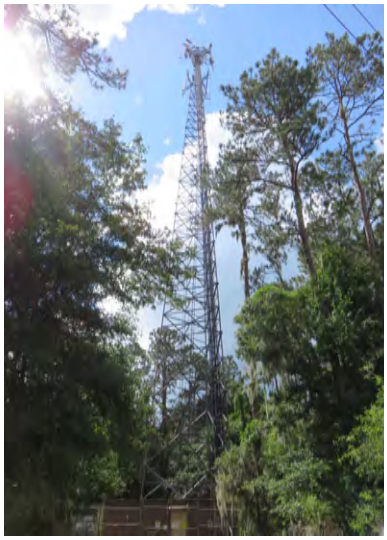
SITE 20: 46351 Landfill Road, Callahan

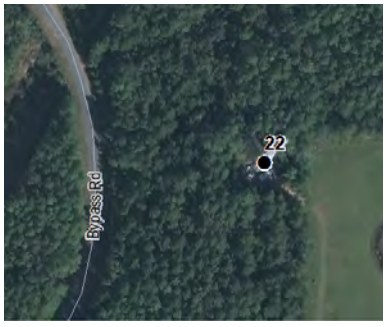
ELIGIBLE:	Yes	**LOCATION:**	Public Property
CATEGORY:	Tower	**TYPE:**	Guy
ZONING:	Goverment/ Public Use	**PARCEL PIN#:**	08-2N-25-0000-0002-0000
FACILITY OWNER:	State of FL Dept of General Services	**FACILITY OWNER ID:**	None
FACILITY OWNER SITE NAME:	None	**FCC ASR:**	1030776
LATITUDE:	30-36-30.849 N	**LONGITUDE:**	81-49-55.476 W
HEIGHT:	420’	**COLLOCATION POTENTIAL:**	3
SERVICE PROVIDERS:	No PWSF		
COMMENTS:	Did not see FAA number posted at site.		

SITE 21: 450155 Old Dixie Highway, Callahan

ELIGIBLE:	Yes	**LOCATION:**	Public Property
CATEGORY:	Tower	**TYPE:**	Concrete Monopole
ZONING:	Goverment/ Public Use	**PARCEL PIN#:**	19-2N-25-0000-0122-0000
FACILITY OWNER:	Affiniti LLC	**FACILITY OWNER ID:**	None
FACILITY OWNER SITE NAME:	None	**FCC ASR:**	Not Required
LATITUDE:	30-34-10.400 N	**LONGITUDE:**	81-50-27.000 W
HEIGHT:	100’	**COLLOCATION POTENTIAL:**	1
SERVICE PROVIDERS:	None		
COMMENTS:			

SITE 22: 616666 River Road, Callahan





ELIGIBLE:	Yes	**LOCATION:**	Private Property
CATEGORY:	Tower	**TYPE:**	Lattice
ZONING:	Open Rural	**PARCEL PIN#:**	30-2N-25-0000-0020-0020
FACILITY OWNER:	SpectraSite/ American Towers Corporation	**FACILITY OWNER ID:**	303045
FACILITY OWNER SITE NAME:	Callahan	**FCC ASR:**	1050954
LATITUDE:	30-33-54.000 N	**LONGITUDE:**	81-50-41.100 W
HEIGHT:	268’	**COLLOCATION POTENTIAL:**	4
SERVICE PROVIDERS:	Metro PCS, T-Mobile, Windstream		
COMMENTS:			

SITE 23: 542302 US Highway 1, Callahan

ELIGIBLE:	Yes	**LOCATION:**	Public Property
CATEGORY:	Base Station	**TYPE:**	Water Tank
ZONING:	Incorporated	**PARCEL PIN#:**	29-2N-25-0000-0015-0010
FACILITY OWNER:	Global Wireless	**FACILITY OWNER ID:**	9JK0256
FACILITY OWNER SITE NAME:	Callahan	**FCC ASR:**	Not Required
LATITUDE:	30-33-47.800 N	**LONGITUDE:**	81-49-42.300 W
HEIGHT:	Unknown	**COLLOCATION POTENTIAL:**	2
SERVICE PROVIDERS:	Unknown		
COMMENTS:	Could not access compound to determine PWSF providers.		

SITE 24: 1 Warrior Drive, Callahan

ELIGIBLE:	Yes	**LOCATION:**	Public Property
CATEGORY:	Tower	**TYPE:**	Concrete Monopole
ZONING:	Incorporated	**PARCEL PIN#:**	29-2N-25-3200-0005-0000
FACILITY OWNER:	Affiniti LLC	**FACILITY OWNER ID:**	None
FACILITY OWNER SITE NAME:	Callahan-662	**FCC ASR:**	1262662
LATITUDE:	30-33-26.500 N	**LONGITUDE:**	81-49-55.301 W
HEIGHT:	140’	**COLLOCATION POTENTIAL:**	1
SERVICE PROVIDERS:	Trillium Broadband?		
COMMENTS:			

SITE 25: 34586 Ballpark Road, Callahan

ELIGIBLE:	Yes	**LOCATION:**	Public Property
CATEGORY:	Tower	**TYPE:**	Concrete Monopole
ZONING:	Goverment/ Public Use	**PARCEL PIN#:**	35-2N-24-0000-0001-0010
FACILITY OWNER:	Affiniti LLC	**FACILITY OWNER ID:**	
FACILITY OWNER SITE NAME:	Callahan-656	**FCC ASR:**	1262656
LATITUDE:	30-33-4.399 N	**LONGITUDE:**	81-52-52.702 W
HEIGHT:	140’	**COLLOCATION POTENTIAL:**	1
SERVICE PROVIDERS:	Broadband		
COMMENTS:			

SITE 26: 612448 River Road, Callahan

ELIGIBLE:	Yes	**LOCATION:**	Private Property
CATEGORY:	Tower	**TYPE:**	Guy
ZONING:	Open Rural	**PARCEL PIN#:**	28-2N-24-0000-0003-0010
FACILITY OWNER:	SBA Communications	**FACILITY OWNER ID:**	FL09483-S
FACILITY OWNER SITE NAME:	West Callahan	**FCC ASR:**	1259577
LATITUDE:	30-33-18.191 N	**LONGITUDE:**	81-54-50.242 W
HEIGHT:	280’	**COLLOCATION POTENTIAL:**	3
SERVICE PROVIDERS:	Verizon		
COMMENTS:			

SITE 27: 44304 Keme Road, Callahan

ELIGIBLE:	No	**LOCATION:**	Private Property
CATEGORY:	Tower	**TYPE:**	Lattice
ZONING:	Open Rural	**PARCEL PIN#:**	33-2N-25-0000-0013-0000
FACILITY OWNER:	Crown Castle International	**FACILITY OWNER ID:**	812472
FACILITY OWNER SITE NAME:	Lem Turner JKV087	**FCC ASR:**	Not Required
LATITUDE:	30-32-30.721 N	**LONGITUDE:**	81-48-28.249 W
HEIGHT:	182’	**COLLOCATION POTENTIAL:**	3
SERVICE PROVIDERS:	AT&T		
COMMENTS:			

SITE 28: 33588 Woods Lane, Callahan

ELIGIBLE:	Yes	**LOCATION:**	Private Property
CATEGORY:	Tower	**TYPE:**	Lattice
ZONING:	Open Rural	**PARCEL PIN#:**	11-1N-24-2180-0058-0030
FACILITY OWNER:	SBA Communications	**FACILITY OWNER ID:**	FL 05843-S
FACILITY OWNER SITE NAME:	Crawford	**FCC ASR:**	1221380
LATITUDE:	30-30-33.900 N	**LONGITUDE:**	81-52-48.400 W
HEIGHT:	255’	**COLLOCATION POTENTIAL:**	3
SERVICE PROVIDERS:	Sprint, Verizon		
COMMENTS:			

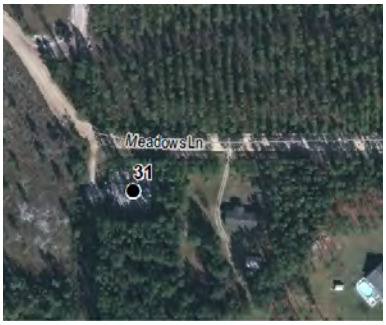
SITE 29: Crawford Road Ext, Callahan

ELIGIBLE:	No	**LOCATION:**	Private Property
CATEGORY:	Tower	**TYPE:**	Lattice
ZONING:	Open Rural	**PARCEL PIN#:**	14-1N-24-2180-0071-0020
FACILITY OWNER:	Unknown	**FACILITY OWNER ID:**	
FACILITY OWNER SITE NAME:		**FCC ASR:**	Not Required
LATITUDE:	30-30-31.830 N	**LONGITUDE:**	81-52-47.571 W
HEIGHT:	150’	**COLLOCATION POTENTIAL:**	3
SERVICE PROVIDERS:	Microwave		
COMMENTS:	No site identification posted on this tower.		

SITE 30: 34125 Pickett Family Court, Callahan

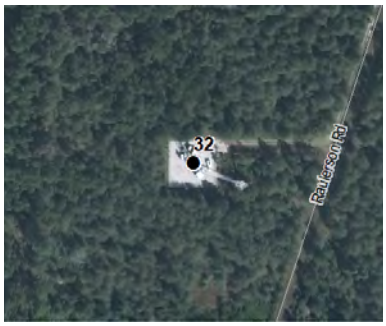
ELIGIBLE:	No	**LOCATION:**	Public Property or ROW?
CATEGORY:	Tower	**TYPE:**	Lattice
ZONING:	Open Rural	**PARCEL PIN#:**	14-1N-24-2180-0097-0000
FACILITY OWNER:	FAA	**FACILITY OWNER ID:**	None
FACILITY OWNER SITE NAME:		**FCC ASR:**	
LATITUDE:	30-30-19.45 N	**LONGITUDE:**	81-52-45.06 W
HEIGHT:	Unknown	**COLLOCATION POTENTIAL:**	Possibly
SERVICE PROVIDERS:	FAA		
COMMENTS:	Found tower during assessment process; very little information posted on site.		

SITE 31: 33386 Meadows Lane, Callahan



ELIGIBLE:	Yes	**LOCATION:**	Private Property
CATEGORY:	Tower	**TYPE:**	Lattice
ZONING:	Open Rural	**PARCEL PIN#:**	23-1N-24-2180-1296-0020
FACILITY OWNER:	Crown Castle International	**FACILITY OWNER ID:**	803657
FACILITY OWNER SITE NAME:	FL 301 North Bellsouth	**FCC ASR:**	1227772
LATITUDE:	30-29-11.300 N	**LONGITUDE:**	81-52-44.900 W
HEIGHT:	255’	**COLLOCATION POTENTIAL:**	2
SERVICE PROVIDERS:	Cingular, Metro PCS, T-Mobile		
COMMENTS:			

SITE 32: 11701 Old North Trail, Bryceville



ELIGIBLE:	Yes	**LOCATION:**	Private Property
CATEGORY:	Tower	**TYPE:**	Lattice
ZONING:	Open Rural	**PARCEL PIN#:**	05-1S-24-0000-0004-0150
FACILITY OWNER:	American Tower Corporation	**FACILITY OWNER ID:**	302641
FACILITY OWNER SITE NAME:	Dahoma	**FCC ASR:**	1056757
LATITUDE:	30-26-34.699 N	**LONGITUDE:**	81-55-27.480 W
HEIGHT:	250’	**COLLOCATION POTENTIAL:**	3
SERVICE PROVIDERS:	County PSRS, Nextel, Sprint		
COMMENTS:			

SITE 33: Diamond C Lane, Jacksonville

ELIGIBLE:	Yes	**LOCATION:**	Private Property
CATEGORY:	Tower	**TYPE:**	Lattice
ZONING:	Unknown	**PARCEL PIN#:**	DUVAL COUNTY
FACILITY OWNER:	Crown Castle International	**FACILITY OWNER ID:**	812215
FACILITY OWNER SITE NAME:	Garden Street	**FCC ASR:**	1028618
LATITUDE:	30-25-2.300 N	**LONGITUDE:**	81-50-56.100 W
HEIGHT:	253’	**COLLOCATION POTENTIAL:**	Possibly
SERVICE PROVIDERS:	AT&T		
COMMENTS:			

SITE 34: 8369 Spike Place, Bryceville

ELIGIBLE:	Yes	**LOCATION:**	Private Property
CATEGORY:	Tower	**TYPE:**	Lattice
ZONING:	Open Rural	**PARCEL PIN#:**	19-1S-24-0000-0003-0030
FACILITY OWNER:	SBA Communications	**FACILITY OWNER ID:**	FL 05844
FACILITY OWNER SITE NAME:	Bryceville	**FCC ASR:**	1220188
LATITUDE:	30-23-43.390 N	**LONGITUDE:**	81-56-26.459 W
HEIGHT:	250’	**COLLOCATION POTENTIAL:**	3
SERVICE PROVIDERS:	T-Mobile, Verizon		
COMMENTS:			

SITE 35: 6504 Church Avenue, Bryceville

ELIGIBLE:	Yes	**LOCATION:**	Public Property
CATEGORY:	Tower	**TYPE:**	Concrete Monopole
ZONING:		**PARCEL PIN#:**	30-1S-24-0000-0003-0010
FACILITY OWNER:	Affiniti LLC	**FACILITY OWNER ID:**	
FACILITY OWNER SITE NAME:	Bryceville-655	**FCC ASR:**	
LATITUDE:	30-23-9.899 N	**LONGITUDE:**	81-56-22.301 W
HEIGHT:	140’	**COLLOCATION POTENTIAL:**	1
SERVICE PROVIDERS:	Broadband		
COMMENTS:			

SITE 36: 1287 Boyd Road, Bryceville

ELIGIBLE:	Yes	**LOCATION:**	Private Property
CATEGORY:	Tower	**TYPE:**	Guy
ZONING:	Open Rural	**PARCEL PIN#:**	32-1S-23-0000-0002-0000
FACILITY OWNER:	West Jacksonville Baptist Church	**FACILITY OWNER ID:**	
FACILITY OWNER SITE NAME:		**FCC ASR:**	1236519
LATITUDE:	30-22-28.800 N	**LONGITUDE:**	82-1-41.200 W
HEIGHT:	499’	**COLLOCATION POTENTIAL:**	Possibly
SERVICE PROVIDERS:	WJGM		
COMMENTS:			

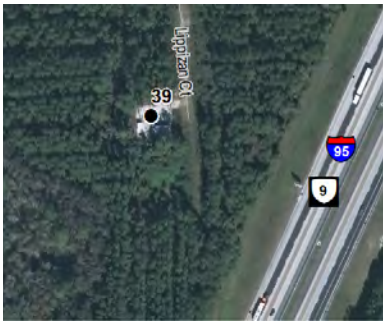
SITE 37: 5102 CR 121, Bryceville

ELIGIBLE:	Yes	**LOCATION:**	Private Property
CATEGORY:	Tower	**TYPE:**	Lattice
ZONING:	Open Rural	**PARCEL PIN#:**	09-2S-23-0000-0001-0010
FACILITY OWNER:	Yellow Water Land & Timber	**FACILITY OWNER ID:**	None
FACILITY OWNER SITE NAME:	None	**FCC ASR:**	1027945
LATITUDE:	30-20-27.000 N	**LONGITUDE:**	82-0-35.000 W
HEIGHT:	307’	**COLLOCATION POTENTIAL:**	4
SERVICE PROVIDERS:	None		
COMMENTS:			

SITE 38: 852500 US Highway 17, Yulee

ELIGIBLE:	Yes	**LOCATION:**	Private Property
CATEGORY:	Tower	**TYPE:**	Guy
ZONING:	Industrial Warehouse	**PARCEL PIN#:**	35-4N-26-0000-0001-0010
FACILITY OWNER:	SpectraSite/ American Towers Corporation	**FACILITY OWNER ID:**	303044
FACILITY OWNER SITE NAME:	Gross FL	**FCC ASR:**	1050953
LATITUDE:	30-43-23.981 N	**LONGITUDE:**	81-40-33.769 W
HEIGHT:	250’	**COLLOCATION POTENTIAL:**	3
SERVICE PROVIDERS:	Verizon		
COMMENTS:			

SITE 39: Near 77005 Lippizan Court, Yulee



ELIGIBLE:	Yes	**LOCATION:**	Private Property
CATEGORY:	Tower	**TYPE:**	Lattice
ZONING:	Open Rural	**PARCEL PIN#:**	02-3N-26-0000-0001-0000
FACILITY OWNER:	Crown Castle International	**FACILITY OWNER ID:**	812402
FACILITY OWNER SITE NAME:	I-95 NORTH	**FCC ASR:**	1028640
LATITUDE:	30-42-32.900 N	**LONGITUDE:**	81-40-26.602 W
HEIGHT:	202’	**COLLOCATION POTENTIAL:**	1-3
SERVICE PROVIDERS:	AT&T, T-Mobile		
COMMENTS:			

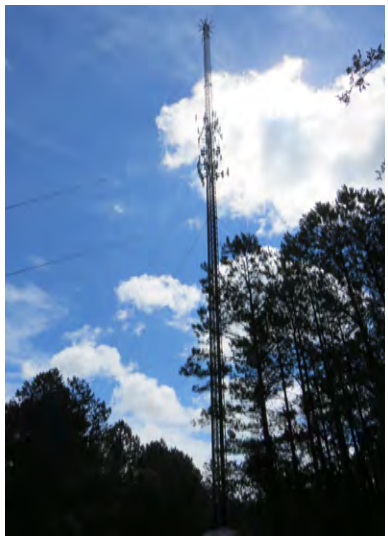
SITE 40: 57086 Lazy Aces Lane, Yulee

ELIGIBLE:	Yes	**LOCATION:**	Private Property
CATEGORY:	Tower	**TYPE:**	Guy
ZONING:	Open Rural	**PARCEL PIN#:**	44-3N-26-0000-0001-0000
FACILITY OWNER:	American Tower Corporation	**FACILITY OWNER ID:**	9015
FACILITY OWNER SITE NAME:	Jacksonville North I-95	**FCC ASR:**	1037538
LATITUDE:	30-41-54.900 N	**LONGITUDE:**	81-44-33.800 W
HEIGHT:	263’	**COLLOCATION POTENTIAL:**	1-2
SERVICE PROVIDERS:			
COMMENTS:	Microwave backhaul for American Tower Corporation.		

SITE 41: 462500 Middle Road, Callahan

ELIGIBLE:	Yes	**LOCATION:**	Private Property
CATEGORY:	Tower	**TYPE:**	Lattice
ZONING:	Open Rural	**PARCEL PIN#:**	22-3N-25-0000-0001-0000
FACILITY OWNER:	Crown Castle International	**FACILITY OWNER ID:**	811859
FACILITY OWNER SITE NAME:	Callahan	**FCC ASR:**	1028644
LATITUDE:	30-40-15.200 N	**LONGITUDE:**	81-47-18.000 W
HEIGHT:	260’	**COLLOCATION POTENTIAL:**	3
SERVICE PROVIDERS:	AT&T		
COMMENTS:			

SITE 42: 55500 Burns Road, Callahan



ELIGIBLE:	Yes	**LOCATION:**	Private Property
CATEGORY:	Tower	**TYPE:**	Guy
ZONING:	Open Rural	**PARCEL PIN#:**	12-2N-25-0000-0001-0000
FACILITY OWNER:	SpectraSite/ American Towers Corporation	**FACILITY OWNER ID:**	302698
FACILITY OWNER SITE NAME:	Burns Road	**FCC ASR:**	1028873
LATITUDE:	30-36-35.900 N	**LONGITUDE:**	81-45-17.800 W
HEIGHT:	423’	**COLLOCATION POTENTIAL:**	3
SERVICE PROVIDERS:	AT&T, Metro PCS, Verizon		
COMMENTS:			

SITE 43: 56905 Griffin Road, Callahan

ELIGIBLE:	Yes	**LOCATION:**	Private Property
CATEGORY:	Tower	**TYPE:**	Lattice
ZONING:	Open Rural	**PARCEL PIN#:**	07-2N-26-0000-0001-0010
FACILITY OWNER:	Florida Power and Light Company	**FACILITY OWNER ID:**	None
FACILITY OWNER SITE NAME:	#110	**FCC ASR:**	1061071
LATITUDE:	30-36-43.000 N	**LONGITUDE:**	81-44-13.000 W
HEIGHT:	320’	**COLLOCATION POTENTIAL:**	4
SERVICE PROVIDERS:			
COMMENTS:	Maybe Florida Power and Light Company		

SITE 44: 76164 Wildwood Road, Yulee

ELIGIBLE:	Yes	**LOCATION:**	Private Property
CATEGORY:	Tower	**TYPE:**	Lattice
ZONING:	Open Rural	**PARCEL PIN#:**	39-2N-26-0000-0001-0000
FACILITY OWNER:	Crown Castle International	**FACILITY OWNER ID:**	809377
FACILITY OWNER SITE NAME:	Hero J-FL-045-116	**FCC ASR:**	1000462
LATITUDE:	30-37-42.532 N	**LONGITUDE:**	81-39-33.109 W
HEIGHT:	256’	**COLLOCATION POTENTIAL:**	3
SERVICE PROVIDERS:	T-Mobile Verizon		
COMMENTS:			

SITE 45: 76059 Wildwood Road, Yulee

ELIGIBLE:	Yes	**LOCATION:**	Private Property
CATEGORY:	Tower	**TYPE:**	Lattice
ZONING:	Open Rural	**PARCEL PIN#:**	01-2N-26-0000-0006-0000
FACILITY OWNER:	Crown Castle International	**FACILITY OWNER ID:**	800818
FACILITY OWNER SITE NAME:	talia	**FCC ASR:**	1210177
LATITUDE:	30-37-5.700 N	**LONGITUDE:**	81-39-37.800 W
HEIGHT:	296’	**COLLOCATION POTENTIAL:**	4
SERVICE PROVIDERS:	AT&T		
COMMENTS:			

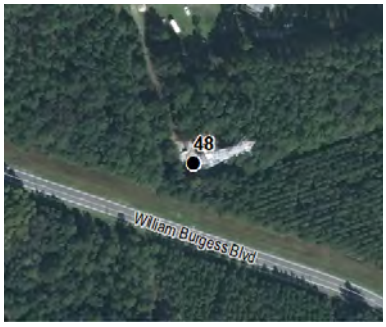
SITE 46: 462521 SR 200, Yulee

ELIGIBLE:	Yes	**LOCATION:**	FL DOT ROW?
CATEGORY:	Tower	**TYPE:**	Lattice
ZONING:	ROW	**PARCEL PIN#:**	I95 ROW
FACILITY OWNER:	American Tower Corporation	**FACILITY OWNER ID:**	302911
FACILITY OWNER SITE NAME:	Yulee Heights	**FCC ASR:**	1060072
LATITUDE:	30-37-12.760 N	**LONGITUDE:**	81-38-58.531 W
HEIGHT:	229’	**COLLOCATION POTENTIAL:**	3
SERVICE PROVIDERS:	Florida Department of Transportation		
COMMENTS:	FDOT microwave on tower.		

SITE 47: 75806 Mentoria Road, Yulee

ELIGIBLE:	Yes	**LOCATION:**	Private Property
CATEGORY:	Tower	**TYPE:**	Lattice
ZONING:	Open Rural	**PARCEL PIN#:**	06-2N-27-0000-0005-0040
FACILITY OWNER:	American Tower Corporation	**FACILITY OWNER ID:**	303078
FACILITY OWNER SITE NAME:	Becker FL 1	**FCC ASR:**	1050967
LATITUDE:	30-36-58.000 N	**LONGITUDE:**	81-38-40.300 W
HEIGHT:	262’	**COLLOCATION POTENTIAL:**	4
SERVICE PROVIDERS:	Metro PCS, Sprint		
COMMENTS:			

SITE 48: 462684 SR 200, Yulee



ELIGIBLE:	Yes	**LOCATION:**	Private Property
CATEGORY:	Tower	**TYPE:**	Lattice
ZONING:	Goverment/ Public Use	**PARCEL PIN#:**	44-2N-27-0000-0001-0110
FACILITY OWNER:	Crown Castle International	**FACILITY OWNER ID:**	844137
FACILITY OWNER SITE NAME:	Yulee	**FCC ASR:**	1029358
LATITUDE:	30-37-15.200 N	**LONGITUDE:**	81-38-9.100 W
HEIGHT:	303’	**COLLOCATION POTENTIAL:**	3
SERVICE PROVIDERS:	AT&T, Nassau County PSRS,		
COMMENTS:			

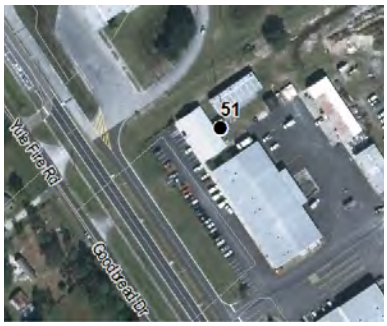
SITE 49: 85581 North Harts Road, Yulee

ELIGIBLE:	Unknown	**LOCATION:**	Private Property
CATEGORY:	Tower	**TYPE:**	Guy
ZONING:	Open Rural	**PARCEL PIN#:**	09-2N-27-0000-0001-0000
FACILITY OWNER:	American Tower Corporation	**FACILITY OWNER ID:**	24515
FACILITY OWNER SITE NAME:	Yulee	**FCC ASR:**	1206280
LATITUDE:	30-36-39.971 N	**LONGITUDE:**	81-36-26.219 W
HEIGHT:	272’	**COLLOCATION POTENTIAL:**	Possibly
SERVICE PROVIDERS:	Main Street Broadband, T-Mobile		
COMMENTS:			

SITE 50: 86035 Sowell Road, Yulee

ELIGIBLE:	Yes	**LOCATION:**	Private Property
CATEGORY:	Tower	**TYPE:**	Monopole
ZONING:	Commercial Intensive	**PARCEL PIN#:**	42-2N-27-0000-0056-0000
FACILITY OWNER:	SBA Communications	**FACILITY OWNER ID:**	None
FACILITY OWNER SITE NAME:	None	**FCC ASR:**	1251017
LATITUDE:	30-37-49.300 N	**LONGITUDE:**	81-36-12.400 W
HEIGHT:	230’	**COLLOCATION POTENTIAL:**	4
SERVICE PROVIDERS:	Metro PCS, Verizon		
COMMENTS:			

SITE 51: 86334 Goodbread Road, Yulee



ELIGIBLE:	Yes	**LOCATION:**	Public Property
CATEGORY:	Tower	**TYPE:**	Concrete Monopole
ZONING:	Open Rural	**PARCEL PIN#:**	50-3N-27-0000-0001-0030
FACILITY OWNER:	Affiniti LLC	**FACILITY OWNER ID:**	None
FACILITY OWNER SITE NAME:	Yulee-665	**FCC ASR:**	1262665
LATITUDE:	30-38-26.801 N	**LONGITUDE:**	81-36-27.500 W
HEIGHT:	140’	**COLLOCATION POTENTIAL:**	1
SERVICE PROVIDERS:	Broadband		
COMMENTS:			

SITE 52: 86370 Pages Dairy Road, Yulee

ELIGIBLE:	No	**LOCATION:**	Private Property
CATEGORY:	Tower	**TYPE:**	Monopole
ZONING:	Open Rural	**PARCEL PIN#:**	51-3N-27-0000-0011-0000
FACILITY OWNER:	NexTower LLC	**FACILITY OWNER ID:**	NXFL-109
FACILITY OWNER SITE NAME:	Timber Ridge	**FCC ASR:**	1296133
LATITUDE:	30-38-22.099 N	**LONGITUDE:**	81-34-55.600 W
HEIGHT:	199’	**COLLOCATION POTENTIAL:**	3
SERVICE PROVIDERS:	T-Mobile		
COMMENTS:			

SITE 53: 86207 Felmor Road, Yulee

ELIGIBLE:	Yes	**LOCATION:**	Public Property
CATEGORY:	Tower	**TYPE:**	Concrete Monopole
ZONING:	Goverment/ Public Use	**PARCEL PIN#:**	51-3N-27-0000-0055-0000
FACILITY OWNER:	CTI Towers	**FACILITY OWNER ID:**	11148
FACILITY OWNER SITE NAME:	Yulee-663	**FCC ASR:**	1262663
LATITUDE:	30-37-55.099 N	**LONGITUDE:**	81-35-13.898 W
HEIGHT:	80’	**COLLOCATION POTENTIAL:**	1
SERVICE PROVIDERS:	Broadband		
COMMENTS:			

SITE 54: 463260 SR 200, Yulee

ELIGIBLE:	Yes	**LOCATION:**	Private Property
CATEGORY:	Tower	**TYPE:**	Monopole
ZONING:	Open Rural	**PARCEL PIN#:**	42-2N-27-0000-0001-0120
FACILITY OWNER:	JEA	**FACILITY OWNER ID:**	None
FACILITY OWNER SITE NAME:		**FCC ASR:**	Not Required
LATITUDE:	30-37-50.400 N	**LONGITUDE:**	81-35-40.600 W
HEIGHT:	Unknown	**COLLOCATION POTENTIAL:**	2
SERVICE PROVIDERS:	Sprint		
COMMENTS:			

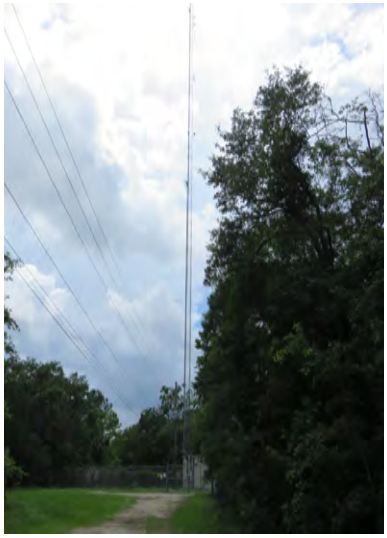
SITE 55: 85399 Miner Rad, Yulee

ELIGIBLE:	Yes	**LOCATION:**	Public Property
CATEGORY:	Tower	**TYPE:**	Concrete Monopole
ZONING:	Open Rural	**PARCEL PIN#:**	42-2N-27-0000-0001-0140
FACILITY OWNER:	Affiniti LLC	**FACILITY OWNER ID:**	None
FACILITY OWNER SITE NAME:	YULEE-664	**FCC ASR:**	1262665
LATITUDE:	30-36-43.200 N	**LONGITUDE:**	81-34-41.300 W
HEIGHT:	140’	**COLLOCATION POTENTIAL:**	1
SERVICE PROVIDERS:	Broadband		
COMMENTS:			

SITE 56: 85960 Wilson Neck Road, Yulee

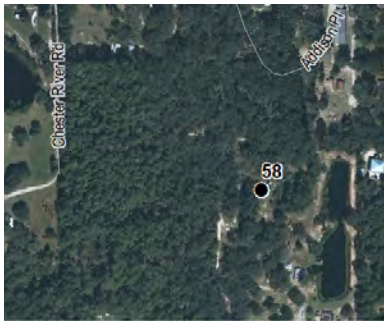
ELIGIBLE:	Yes	**LOCATION:**	Private Property
CATEGORY:	Tower	**TYPE:**	Monopole
ZONING:	Open Rural	**PARCEL PIN#:**	43-2N-27-0000-0001-0010
FACILITY OWNER:	JEA	**FACILITY OWNER ID:**	None
FACILITY OWNER SITE NAME:	None	**FCC ASR:**	Not Required
LATITUDE:	30-35-22.800 N	**LONGITUDE:**	81-35-4.100 W
HEIGHT:	Unknown	**COLLOCATION POTENTIAL:**	1
SERVICE PROVIDERS:	No PWSF, likely JEA data transmission facility.		
COMMENTS:			

SITE 57: 85002 Lina Road, Fernandina Beach



ELIGIBLE:	Yes	**LOCATION:**	Private Property
CATEGORY:	Tower	**TYPE:**	Guy
ZONING:	Open Rural	**PARCEL PIN#:**	36-2N-27-0000-0001-0010
FACILITY OWNER:	Vertical Bridge	**FACILITY OWNER ID:**	FL-5023
FACILITY OWNER SITE NAME:	FM JAX-027	**FCC ASR:**	1049478
LATITUDE:	30-33-22.990 N	**LONGITUDE:**	81-33-12.280 W
HEIGHT:	500’	**COLLOCATION POTENTIAL:**	3
SERVICE PROVIDERS:	iHeart Radio, Verizon		
COMMENTS:			

SITE 58: 97121 Po Folks Way, Yulee



ELIGIBLE:	No	**LOCATION:**	Private Property
CATEGORY:	Tower	**TYPE:**	Guy
ZONING:	Open Rural	**PARCEL PIN#:**	42-3N-28-5080-0038-0010
FACILITY OWNER:	Unknown	**FACILITY OWNER ID:**	
FACILITY OWNER SITE NAME:		**FCC ASR:**	
LATITUDE:	30-40-21.33 N	**LONGITUDE:**	81-32-35.47 W
HEIGHT:	Unknown	**COLLOCATION POTENTIAL:**	1-2
SERVICE PROVIDERS:	No PWSF		
COMMENTS:	Found tower during assessments with no site identification on site and appears to be abandoned.		

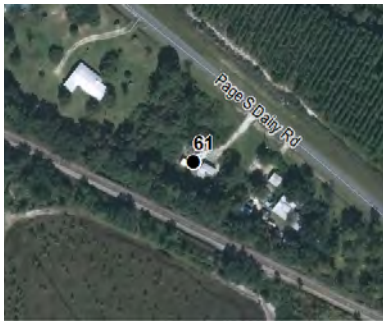
SITE 59: 96750 Lee Road, Yulee

ELIGIBLE:	Yes	**LOCATION:**	Private Property
CATEGORY:	Tower	**TYPE:**	Monopole
ZONING:	Open Rural	**PARCEL PIN#:**	44-3N-28-0000-0003-0000
FACILITY OWNER:	NexTower LLC	**FACILITY OWNER ID:**	NXFL-107
FACILITY OWNER SITE NAME:	Glenwood	**FCC ASR:**	1296132
LATITUDE:	30-40-1.600 N	**LONGITUDE:**	81-32-37.399 W
HEIGHT:	199’	**COLLOCATION POTENTIAL:**	3
SERVICE PROVIDERS:	T-Mobile		
COMMENTS:			

SITE 60: 86688 Pages Dairy Road, Yulee

ELIGIBLE:	Yes	**LOCATION:**	Private Property
CATEGORY:	Tower	**TYPE:**	Lattice
ZONING:	Open Rural	**PARCEL PIN#:**	51-3N-27-0000-0001-0120
FACILITY OWNER:	CTI Towers	**FACILITY OWNER ID:**	81148
FACILITY OWNER SITE NAME:	Yule 2	**FCC ASR:**	Not Required
LATITUDE:	30-38-20.357 N	**LONGITUDE:**	81-33-30.738 W
HEIGHT:	60’	**COLLOCATION POTENTIAL:**	2-3
SERVICE PROVIDERS:	Broadcast		
COMMENTS:			

SITE 61: 86756 Pages Dairy Road, Yulee

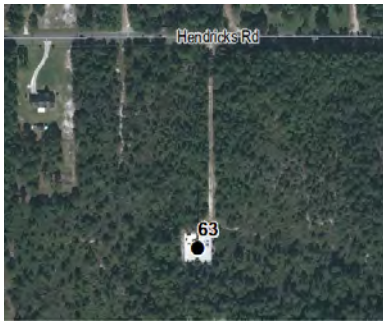


ELIGIBLE:	Yes	**LOCATION:**	Private Property
CATEGORY:	Tower	**TYPE:**	Lattice
ZONING:	Open Rural	**PARCEL PIN#:**	51-3N-27-4850-0007-0000
FACILITY OWNER:	Crown Castle International	**FACILITY OWNER ID:**	812807
FACILITY OWNER SITE NAME:	Pages Dairy Rd JKV082	**FCC ASR:**	1028612
LATITUDE:	30-38-10.300 N	**LONGITUDE:**	81-33-16.400 W
HEIGHT:	209’	**COLLOCATION POTENTIAL:**	3
SERVICE PROVIDERS:	AT&T, T-Mobile		
COMMENTS:			

SITE 62: 464061 SR 200, Yulee

ELIGIBLE:	Yes	**LOCATION:**	Private Property
CATEGORY:	Tower	**TYPE:**	Lattice
ZONING:	Open Rural	**PARCEL PIN#:**	25-2N-28-0000-0002-0010
FACILITY OWNER:	SBA Communications	**FACILITY OWNER ID:**	FL15884-A
FACILITY OWNER SITE NAME:	Yulee Heights	**FCC ASR:**	1038066
LATITUDE:	30-37-23.900 N	**LONGITUDE:**	81-31-48.600 W
HEIGHT:	247’	**COLLOCATION POTENTIAL:**	2
SERVICE PROVIDERS:	Sprint, T-Mobile, Verizon, WNLE		
COMMENTS:			

SITE 63: 95210 Hendricks Road, Fernandina Beach



ELIGIBLE:	Yes	**LOCATION:**	Private Property
CATEGORY:	Tower	**TYPE:**	Monopole
ZONING:	Open Rural	**PARCEL PIN#:**	32-2N-28-0000-0014-0020
FACILITY OWNER:	SBA Communications	**FACILITY OWNER ID:**	FL 09637
FACILITY OWNER SITE NAME:	Nassauville	**FCC ASR:**	1260529
LATITUDE:	30-34-49.069 N	**LONGITUDE:**	81-31-25.237 W
HEIGHT:	196’	**COLLOCATION POTENTIAL:**	3
SERVICE PROVIDERS:	AT&T, Metro PCS, Verizon		
COMMENTS:			

SITE 64: 3060 S 8th Street, Fernandina Beach

ELIGIBLE:	Yes	**LOCATION:**	Private Property
CATEGORY:	Tower	**TYPE:**	Monopole
ZONING:	Commercial Intensive	**PARCEL PIN#:**	00-00-30-044B-0096-0030
FACILITY OWNER:	SBA Communications	**FACILITY OWNER ID:**	FL40894
FACILITY OWNER SITE NAME:	St Patty	**FCC ASR:**	1254966
LATITUDE:	30-37-51.909 N	**LONGITUDE:**	81-28-5.385 W
HEIGHT:	150’	**COLLOCATION POTENTIAL:**	3
SERVICE PROVIDERS:	T-Mobile		
COMMENTS:			

SITE 65: 2200 Susan Drive, Fernandina Beach

ELIGIBLE:	Yes	**LOCATION:**	Public Property
CATEGORY:	Tower	**TYPE:**	Concrete Monopole
ZONING:	Incorporated	**PARCEL PIN#:**	29-3N-28-0000-0004-0010
FACILITY OWNER:	Affiniti LLC	**FACILITY OWNER ID:**	None
FACILITY OWNER SITE NAME:	None	**FCC ASR:**	1262659
LATITUDE:	30-38-16.600 N	**LONGITUDE:**	81-27-4.400 W
HEIGHT:	60’	**COLLOCATION POTENTIAL:**	1
SERVICE PROVIDERS:	Broadband		
COMMENTS:			

SITE 66: 1600 S 14th Street, Fernandina Beach

ELIGIBLE:	Yes	**LOCATION:**	Private Property
CATEGORY:	Tower	**TYPE:**	Guy
ZONING:	No zoning Between Commercial Intensive and Incorporated	**PARCEL PIN#:**	25-3N-28-0000-0001-0000
FACILITY OWNER:	Insite	**FACILITY OWNER ID:**	FL702
FACILITY OWNER SITE NAME:	Fernandina Beach	**FCC ASR:**	1227149
LATITUDE:	30-38-58.800 N	**LONGITUDE:**	81-27-12.400 W
HEIGHT:	177’	**COLLOCATION POTENTIAL:**	2
SERVICE PROVIDERS:	Comcast		
COMMENTS:			

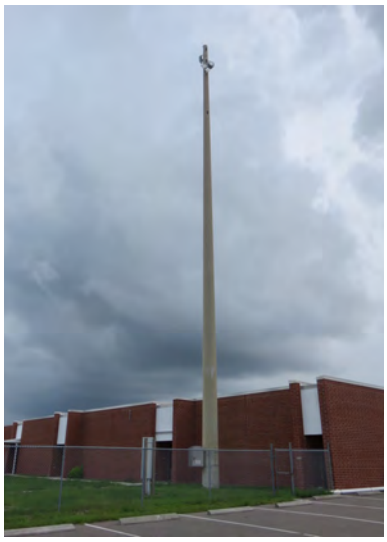
SITE 67: 1559 S 14th Street, Fernandina Beach

ELIGIBLE:	Yes	**LOCATION:**	Private Property
CATEGORY:	Tower	**TYPE:**	Lattice
ZONING:	Commercial Intensive	**PARCEL PIN#:**	00-00-30-0800-0004-0000
FACILITY OWNER:	Crown Castle International	**FACILITY OWNER ID:**	870926
FACILITY OWNER SITE NAME:	Fernandina Beach (14th St)	**FCC ASR:**	1030999
LATITUDE:	30-39-3.200 N	**LONGITUDE:**	81-27-22.399 W
HEIGHT:	230’	**COLLOCATION POTENTIAL:**	2
SERVICE PROVIDERS:	County PSRS, Metro PCS, Sprint, T-Mobile, Verizon		
COMMENTS:	Some racks are without antenna so one of the providers may have moved off the tower.		

SITE 68: 1412 Nectarine Street, Fernandina Beach

ELIGIBLE:	Yes	**LOCATION:**	Private Property
CATEGORY:	Tower	**TYPE:**	Lattice
ZONING:	Commercial Intensive	**PARCEL PIN#:**	00-00-31-1800-0267-0010
FACILITY OWNER:	Crown Castle International	**FACILITY OWNER ID:**	844001
FACILITY OWNER SITE NAME:	Fernandina Beach	**FCC ASR:**	1029321
LATITUDE:	30-39-6.278 N	**LONGITUDE:**	81-27-12.100 W
HEIGHT:	180’	**COLLOCATION POTENTIAL:**	3
SERVICE PROVIDERS:	AT&T		
COMMENTS:			

SITE 69: 1112 Jasmine Street, Fernandina Beach



ELIGIBLE:	Yes	**LOCATION:**	Public Property
CATEGORY:	Tower	**TYPE:**	Concrete Monopole
ZONING:	Incorporated	**PARCEL PIN#:**	00-00-31-1800-0212-0010
FACILITY OWNER:	Affiniti LLC	**FACILITY OWNER ID:**	None
FACILITY OWNER SITE NAME:	Fernandina Beach-661	**FCC ASR:**	1262661
LATITUDE:	30-39-26.201 N	**LONGITUDE:**	81-27-23.699 W
HEIGHT:	100’	**COLLOCATION POTENTIAL:**	1
SERVICE PROVIDERS:	Broadband		
COMMENTS:			

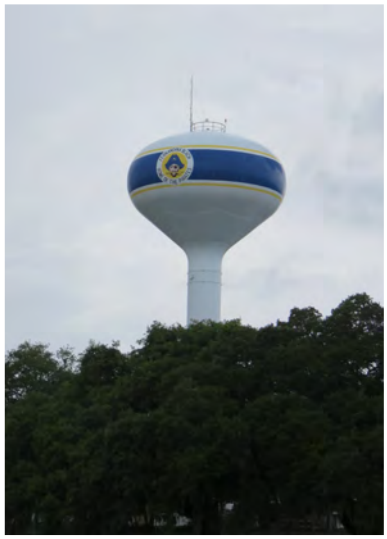
SITE 70: 1005 S 5th Street, Fernandina Beach

ELIGIBLE:	Yes	**LOCATION:**	Private Property
CATEGORY:	Tower	**TYPE:**	Lattice
ZONING:	Incorporated	**PARCEL PIN#:**	00-00-31-1800-0177-0000
FACILITY OWNER:	Crown Castle International	**FACILITY OWNER ID:**	812143
FACILITY OWNER SITE NAME:	Fernandina Beach JKV075	**FCC ASR:**	1206027
LATITUDE:	30-39-33.030 N	**LONGITUDE:**	81-27-52.621 W
HEIGHT:	180’	**COLLOCATION POTENTIAL:**	3
SERVICE PROVIDERS:	AT&T		
COMMENTS:			

SITE 71: 435 Citrona Drive, Fernandina Beach

ELIGIBLE:	Yes	**LOCATION:**	Public Property
CATEGORY:	Tower	**TYPE:**	Concrete Monopole
ZONING:	Incorporated	**PARCEL PIN#:**	00-00-31-1180-0017-0000
FACILITY OWNER:	Affiniti LLC	**FACILITY OWNER ID:**	None
FACILITY OWNER SITE NAME:	Fernandina Beach-658	**FCC ASR:**	1262658
LATITUDE:	30-39-39.200 N	**LONGITUDE:**	81-26-49.402 W
HEIGHT:	140’	**COLLOCATION POTENTIAL:**	1
SERVICE PROVIDERS:	Broadband		
COMMENTS:			

SITE 72: 20 Atlantic Avenue, Fernandina Beach



ELIGIBLE:	No	**LOCATION:**	Public Property
CATEGORY:	Base Station	**TYPE:**	Water Tank
ZONING:	Incorporated	**PARCEL PIN#:**	00-00-31-1800-0217-0WWL
FACILITY OWNER:	City? Water Authority?	**FACILITY OWNER ID:**	None
FACILITY OWNER SITE NAME:	Fernandina Beach	**FCC ASR:**	Not Required
LATITUDE:	30-40-15.65 N	**LONGITUDE:**	81-27-21.07 W
HEIGHT:	Unknown	**COLLOCATION POTENTIAL:**	2-3
SERVICE PROVIDERS:	No PWSF		
COMMENTS:			

SITE 73_A: 1201 Atlantic Avenue, Fernandina Beach

ELIGIBLE:	Yes	**LOCATION:**	Public Property
CATEGORY:	Tower	**TYPE:**	Concrete Monopole
ZONING:	Incorporated	**PARCEL PIN#:**	00-00-31-1800-0217-00SP
FACILITY OWNER:	Affiniti LLC	**FACILITY OWNER ID:**	None
FACILITY OWNER SITE NAME:	Yulee-132	**FCC ASR:**	1262660
LATITUDE:	30-40-21.095 N	**LONGITUDE:**	81-27-17.572 W
HEIGHT:	100’	**COLLOCATION POTENTIAL:**	1
SERVICE PROVIDERS:	Broadband		
COMMENTS:			

SITE 73_B: 1207 Atlantic Avenue, Fernandina Beach

ELIGIBLE:	Yes	**LOCATION:**	Public Property
CATEGORY:	Tower	**TYPE:**	Concealed Slick Stick
ZONING:	Incorporated	**PARCEL PIN#:**	00-00-31-1800-0217-00SP
FACILITY OWNER:	Crown Castle International	**FACILITY OWNER ID:**	824029
FACILITY OWNER SITE NAME:	Fernandina North	**FCC ASR:**	1238740
LATITUDE:	30-40-17.591 N	**LONGITUDE:**	81-27-16.175 W
HEIGHT:	124’	**COLLOCATIO N POTENTIAL:**	1
SERVICE PROVIDERS:	AT&T, Verizon		
COMMENTS:			

SITE 74: Near 310 Escambia Street, Fernandina Beach

ELIGIBLE:	Yes	**LOCATION:**	Private Property
CATEGORY:	Tower	**TYPE:**	Guy
ZONING:	Incorporated	**PARCEL PIN#:**	ROW
FACILITY OWNER:	1570 Radio The Winner	**FACILITY OWNER ID:**	None
FACILITY OWNER SITE NAME:	None	**FCC ASR:**	
LATITUDE:	30-40-38.800 N	**LONGITUDE:**	81-27-41.300 W
HEIGHT:	Unknown	**COLLOCATION POTENTIAL:**	2
SERVICE PROVIDERS:	1570 Radio The Winner		
COMMENTS:	AM radio tower		

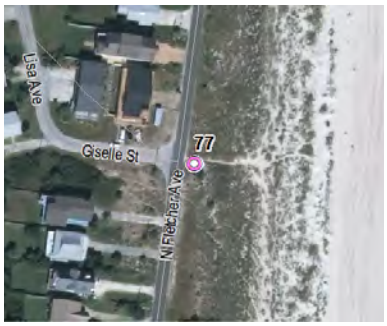
SITE 75: 600 N 8th Street, Fernandina Beach

ELIGIBLE:	Yes	**LOCATION:**	81°27'32.76"W
CATEGORY:	Base Station	**TYPE:**	Rooftop
ZONING:	Incorporated	**PARCEL PIN#:**	00-00-31-1860-0000-0000
FACILITY OWNER:	Preferred Networks Inc	**FACILITY OWNER ID:**	None
FACILITY OWNER SITE NAME:		**FCC ASR:**	
LATITUDE:	30-40-54.800 N	**LONGITUDE:**	81-27-16.300 W
HEIGHT:	Unknown	**COLLOCATION POTENTIAL:**	Possibly
SERVICE PROVIDERS:	Unknown		
COMMENTS:	Possibly no PWSF		

SITE 76: Near 1741 N Fletcher Avenue, Fernandina Beach

ELIGIBLE:	Yes	**LOCATION:**	Right-Of-Way
CATEGORY:	Base Station	**TYPE:**	oDAS on Utility Pole
ZONING:	Incorporated	**PARCEL PIN#:**	ROW
FACILITY OWNER:	Crown Castle International	**FACILITY OWNER ID:**	419548
FACILITY OWNER SITE NAME:	FRN001	**FCC ASR:**	
LATITUDE:	30-41-26.452 N	**LONGITUDE:**	81-25-47.190 W
HEIGHT:	Unknown	**COLLOCATION POTENTIAL:**	Possibly
SERVICE PROVIDERS:	Verizon		
COMMENTS:			

SITE 77: Near 1521 N Fletcher Avenue, Fernandina Beach



ELIGIBLE:	Yes	**LOCATION:**	Right-Of-Way
CATEGORY:	Base Station	**TYPE:**	oDAS on Utility Pole
ZONING:	Incorporated	**PARCEL PIN#:**	ROW
FACILITY OWNER:	Crown Castle International	**FACILITY OWNER ID:**	419549
FACILITY OWNER SITE NAME:	FRN002	**FCC ASR:**	
LATITUDE:	30-41-7.894 N	**LONGITUDE:**	81-25-44.836 W
HEIGHT:	Unknown	**COLLOCATION POTENTIAL:**	Possibly
SERVICE PROVIDERS:	Verizon		
COMMENTS:			

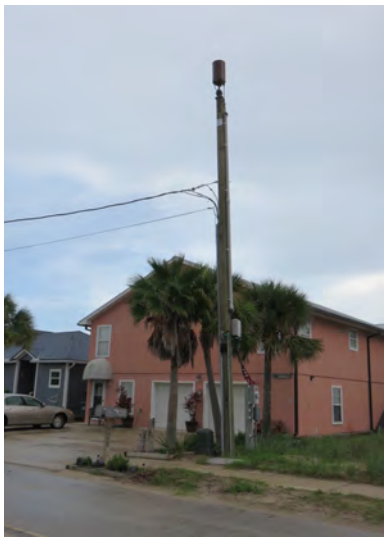
SITE 78: Near 940 N Fletcher Avenue, Fernandina Beach

ELIGIBLE:	Yes	**LOCATION:**	Right-Of-Way
CATEGORY:	Base Station	**TYPE:**	oDAS on Utility Pole
ZONING:	Incorporated	**PARCEL PIN#:**	ROW
FACILITY OWNER:	Crown Castle International	**FACILITY OWNER ID:**	419550
FACILITY OWNER SITE NAME:	FRN003	**FCC ASR:**	
LATITUDE:	30-40-45.984 N	**LONGITUDE:**	81-25-47.816 W
HEIGHT:	Unknown	**COLLOCATION POTENTIAL:**	Possibly
SERVICE PROVIDERS:	Verizon		
COMMENTS:			

SITE 79: Near 631 Tarpon Avenue, Fernandina Beach

ELIGIBLE:	Yes	**LOCATION:**	Right-Of-Way
CATEGORY:	Base Station	**TYPE:**	oDAS on Utility Pole
ZONING:	Incorporated	**PARCEL PIN#:**	ROW
FACILITY OWNER:	Crown Castle International	**FACILITY OWNER ID:**	419551
FACILITY OWNER SITE NAME:	FRN004	**FCC ASR:**	
LATITUDE:	30-40-32.844 N	**LONGITUDE:**	81-25-55.589 W
HEIGHT:	Unknown	**COLLOCATION POTENTIAL:**	Possibly
SERVICE PROVIDERS:	Verizon		
COMMENTS:			

SITE 80: 426 Tarpon Avenue, Fernandina Beach

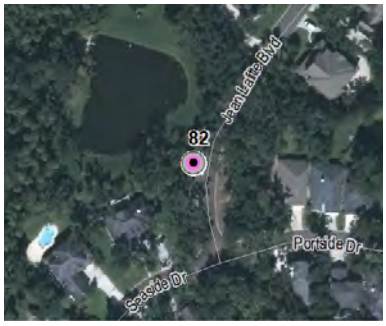


ELIGIBLE:	Yes	**LOCATION:**	Right-Of-Way
CATEGORY:	Base Station	**TYPE:**	oDAS on Utility Pole
ZONING:	Incorporated	**PARCEL PIN#:**	ROW
FACILITY OWNER:	Crown Castle International	**FACILITY OWNER ID:**	419552
FACILITY OWNER SITE NAME:	FRN005	**FCC ASR:**	
LATITUDE:	30-40-19.319 N	**LONGITUDE:**	81-25-54.239 W
HEIGHT:	Unknown	**COLLOCATIO N POTENTIAL:**	Possibly
SERVICE PROVIDERS:	Verizon		
COMMENTS:			

SITE 81: Near 2801 Atlantic Avenue, Fernandina Beach

ELIGIBLE:	Yes	**LOCATION:**	Right-Of-Way
CATEGORY:	Base Station	**TYPE:**	oDAS on Utility Pole
ZONING:	Incorporated	**PARCEL PIN#:**	ROW
FACILITY OWNER:	Crown Castle International	**FACILITY OWNER ID:**	419553
FACILITY OWNER SITE NAME:	FRN006	**FCC ASR:**	
LATITUDE:	30-40-5.774 N	**LONGITUDE:**	81-25-59.675 W
HEIGHT:	Unknown	**COLLOCATION POTENTIAL:**	Possibly
SERVICE PROVIDERS:	Verizon		
COMMENTS:			

SITE 82: Near 475 Starboard Lodge, Fernandina Beach



ELIGIBLE:	Yes	**LOCATION:**	Right-Of-Way
CATEGORY:	Tower	**TYPE:**	oDAS Monopole Pole
ZONING:	Incorporated	**PARCEL PIN#:**	ROW
FACILITY OWNER:	Crown Castle International	**FACILITY OWNER ID:**	428358
FACILITY OWNER SITE NAME:	FRN008	**FCC ASR:**	
LATITUDE:	30-39-50.108 N	**LONGITUDE:**	81-26-13.024 W
HEIGHT:	Unknown	**COLLOCATION POTENTIAL:**	Possibly
SERVICE PROVIDERS:	Verizon		
COMMENTS:			

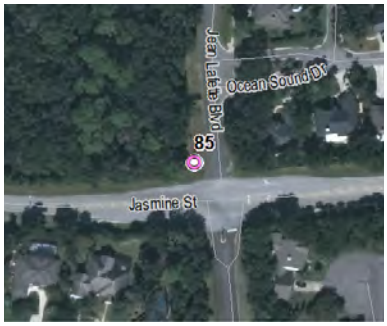
SITE 83: Near 400 Georgia Avenue, Fernandina Beach

ELIGIBLE:	Yes	**LOCATION:**	Right-Of-Way
CATEGORY:	Base Station	**TYPE:**	oDAS on Utility Pole
ZONING:	Incorporated	**PARCEL PIN#:**	ROW
FACILITY OWNER:	Crown Castle International	**FACILITY OWNER ID:**	419554
FACILITY OWNER SITE NAME:	FRN007	**FCC ASR:**	
LATITUDE:	30-39-47.336 N	**LONGITUDE:**	81-26-0.092 W
HEIGHT:	Unknown	**COLLOCATION POTENTIAL:**	Possibly
SERVICE PROVIDERS:	Verizon		
COMMENTS:			

SITE 84: Near 870 Atlantic View Dr,ive Fernandina Beach

ELIGIBLE:	Yes	**LOCATION:**	Right-Of-Way
CATEGORY:	Tower	**TYPE:**	oDAS Monopole Pole
ZONING:	Incorporated	**PARCEL PIN#:**	ROW
FACILITY OWNER:	Crown Castle International	**FACILITY OWNER ID:**	419555
FACILITY OWNER SITE NAME:	FRN009	**FCC ASR:**	
LATITUDE:	30-39-33.278 N	**LONGITUDE:**	81-25-59.513 W
HEIGHT:	Unknown	**COLLOCATION POTENTIAL:**	Possibly
SERVICE PROVIDERS:	Verizon		
COMMENTS:			

SITE 85: Near 2555 Jasmine Street, Fernandina Beach

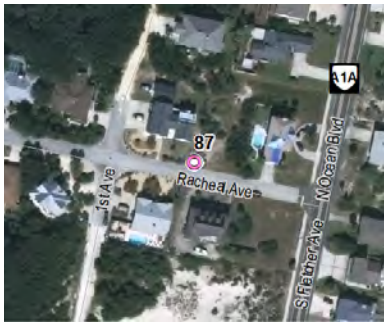


ELIGIBLE:	Yes	**LOCATION:**	Right-Of-Way
CATEGORY:	Base Station	**TYPE:**	oDAS on Utility Pole
ZONING:	Incorporated	**PARCEL PIN#:**	ROW
FACILITY OWNER:	Crown Castle International	**FACILITY OWNER ID:**	419556
FACILITY OWNER SITE NAME:	FRN010	**FCC ASR:**	
LATITUDE:	30-39-20.534 N	**LONGITUDE:**	81-26-11.357 W
HEIGHT:	Unknown	**COLLOCATION POTENTIAL:**	Possibly
SERVICE PROVIDERS:	Verizon		
COMMENTS:			

SITE 86: Near 2820 Kentucky Avenue, Fernandina Beach

ELIGIBLE:	Yes	**LOCATION:**	Right-Of-Way
CATEGORY:	Base Station	**TYPE:**	oDAS on Utility Pole
ZONING:	Incorporated	**PARCEL PIN#:**	ROW
FACILITY OWNER:	Crown Castle International	**FACILITY OWNER ID:**	419567
FACILITY OWNER SITE NAME:	FRS001	**FCC ASR:**	
LATITUDE:	30-39-8.791 N	**LONGITUDE:**	81-26-3.419 W
HEIGHT:	Unknown	**COLLOCATION POTENTIAL:**	Possibly
SERVICE PROVIDERS:	Verizon		
COMMENTS:			

SITE 87: Near 2801 Racheal Avenue, Fernandina Beach

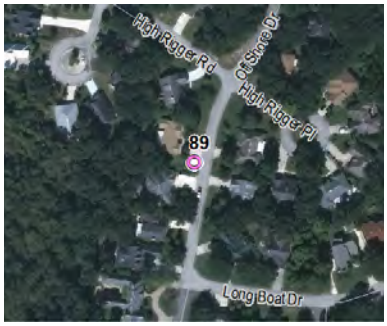


ELIGIBLE:	Yes	**LOCATION:**	Right-Of-Way
CATEGORY:	Base Station	**TYPE:**	oDAS on Utility Pole
ZONING:	Incorporated	**PARCEL PIN#:**	ROW
FACILITY OWNER:	Crown Castle International	**FACILITY OWNER ID:**	419560
FACILITY OWNER SITE NAME:	FRS002	**FCC ASR:**	
LATITUDE:	30-38-42.932 N	**LONGITUDE:**	81-26-9.690 W
HEIGHT:	Unknown	**COLLOCATION POTENTIAL:**	Possibly
SERVICE PROVIDERS:	Verizon		
COMMENTS:			

SITE 88: Near 2784 Sadler Road, Fernandina Beach

ELIGIBLE:	Yes	**LOCATION:**	Right-Of-Way
CATEGORY:	Base Station	**TYPE:**	oDAS on Utility Pole
ZONING:	Incorporated	**PARCEL PIN#:**	ROW
FACILITY OWNER:	Crown Castle International	**FACILITY OWNER ID:**	419561
FACILITY OWNER SITE NAME:	FRS003	**FCC ASR:**	
LATITUDE:	30-38-17.239 N	**LONGITUDE:**	81-26-17.704 W
HEIGHT:	Unknown	**COLLOCATION POTENTIAL:**	Possibly
SERVICE PROVIDERS:	Verizon		
COMMENTS:			

SITE 89: Near 2217 Off Shore Drive, Fernandina Beach



ELIGIBLE:	Yes	**LOCATION:**	Right-Of-Way
CATEGORY:	Base Station	**TYPE:**	oDAS on Utility Pole
ZONING:	Incorporated	**PARCEL PIN#:**	ROW
FACILITY OWNER:	Crown Castle International	**FACILITY OWNER ID:**	419562
FACILITY OWNER SITE NAME:	FRS004	**FCC ASR:**	
LATITUDE:	30-38-7.822 N	**LONGITUDE:**	81-26-28.064 W
HEIGHT:		**COLLOCATION POTENTIAL:**	Possibly
SERVICE PROVIDERS:	Verizon		
COMMENTS:			

SITE 90: PROPOSED Near 2242 S Fletcher Avenue, Fernandina Beach

ELIGIBLE:	Incorporated	**LOCATION:**	Proposed Right-Of-Way
CATEGORY:	Not Built	**TYPE:**	Proposed oDAS
ZONING:	Incorporated	**PARCEL PIN#:**	ROW
FACILITY OWNER:		**FACILITY OWNER ID:**	419564
FACILITY OWNER SITE NAME:	FRS006	**FCC ASR:**	
LATITUDE:	30-38-7.328 N	**LONGITUDE:**	81-26-15.720 W
HEIGHT:		**COLLOCATION POTENTIAL:**	Possibly
SERVICE PROVIDERS:			
COMMENTS:			

SITE 91: Near 2473 1st Avenue, Fernandina Beach

ELIGIBLE:	Yes	**LOCATION:**	Right-Of-Way
CATEGORY:	Base Station	**TYPE:**	oDAS on Utility Pole
ZONING:	Incorporated	**PARCEL PIN#:**	ROW
FACILITY OWNER:	Crown Castle International	**FACILITY OWNER ID:**	419563
FACILITY OWNER SITE NAME:	FRS005	**FCC ASR:**	
LATITUDE:	30-37-55.744 N	**LONGITUDE:**	81-26-22.474 W
HEIGHT:	Verizon	**COLLOCATION POTENTIAL:**	Possibly
SERVICE PROVIDERS:	Verizon		
COMMENTS:			

SITE 91A: PROPOSED, Fernandina Beach

ELIGIBLE:	Incorporated	**LOCATION:**	Proposed Right-Of-Way
CATEGORY:	Not Built	**TYPE:**	Proposed oDAS
ZONING:		**PARCEL PIN#:**	ROW
FACILITY OWNER:		**FACILITY OWNER ID:**	419565
FACILITY OWNER SITE NAME:	FRS007	**FCC ASR:**	
LATITUDE:	30-38-6 N	**LONGITUDE:**	-81-26-38.309 W
HEIGHT:		**COLLOCATION POTENTIAL:**	Possibly
SERVICE PROVIDERS:			
COMMENTS:			

SITE 91B: PROPOSED, Fernandina Beach

ELIGIBLE:	Incorporated	**LOCATION:**	Proposed Right-Of-Way
CATEGORY:	Not Built	**TYPE:**	Proposed oDAS
ZONING:		**PARCEL PIN#:**	ROW
FACILITY OWNER:		**FACILITY OWNER ID:**	419566
FACILITY OWNER SITE NAME:	FSR008	**FCC ASR:**	
LATITUDE:	30-37-55.20	**LONGITUDE:**	81-26-189
HEIGHT:		**COLLOCATION POTENTIAL:**	Possibly
SERVICE PROVIDERS:			
COMMENTS:			

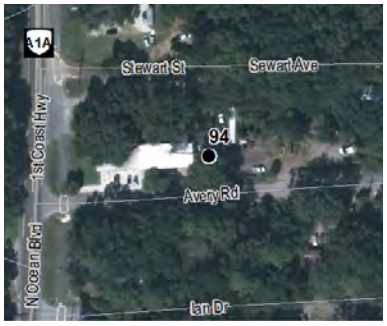
SITE 92: 3350 S Fletcher Avenue, Fernandina Beach

ELIGIBLE:	Yes	**LOCATION:**	Private Property
CATEGORY:	Base Station	**TYPE:**	Rooftop
ZONING:	Incorporated	**PARCEL PIN#:**	00-00-31-1030-0000-0000
FACILITY OWNER:	Amelia South Condominium and Verizon Wireless	**FACILITY OWNER ID:**	None
FACILITY OWNER SITE NAME:	None	**FCC ASR:**	Not Required
LATITUDE:	30-37-10.300 N	**LONGITUDE:**	81-26-24.800 W
HEIGHT:	Unknown	**COLLOCATION POTENTIAL:**	Unlimited on rooftop
SERVICE PROVIDERS:	Unknown		
COMMENTS:			

SITE 93: 3427 Citation Court, Fernandina Beach

ELIGIBLE:	Yes	**LOCATION:**	Private Property
CATEGORY:	Tower	**TYPE:**	Monopole
ZONING:	Incorporated	**PARCEL PIN#:**	06-2N-28-0000-0001-006 L
FACILITY OWNER:	Crown Castle International	**FACILITY OWNER ID:**	805807
FACILITY OWNER SITE NAME:	Fernandina Beach	**FCC ASR:**	1247764
LATITUDE:	30-37-4.469 N	**LONGITUDE:**	81-27-43.920 W
HEIGHT:	148’	**COLLOCATION POTENTIAL:**	2
SERVICE PROVIDERS:	AT&T, Nextel, Verizon		
COMMENTS:	MetroPCS meter box is empty and antennas are not on array.		

SITE 94: 1419 Avery Road, Fernandina Beach



ELIGIBLE:	Yes	**LOCATION:**	Private Property
CATEGORY:	Tower	**TYPE:**	Monopole
ZONING:	Commercial General	**PARCEL PIN#:**	00-00-30-0280-0023-0000
FACILITY OWNER:	Crown Castle International	**FACILITY OWNER ID:**	811540
FACILITY OWNER SITE NAME:	Amelia Island JKV007	**FCC ASR:**	1200985
LATITUDE:	30-34-43.500 N	**LONGITUDE:**	81-27-11.100 W
HEIGHT:	150’	**COLLOCATION POTENTIAL:**	2
SERVICE PROVIDERS:	AT&T		
COMMENTS:			

SITE 95: 5392 First Coast Highway, Fernandina Beach

ELIGIBLE:	Yes	**LOCATION:**	Private Property
CATEGORY:	Tower	**TYPE:**	Monopole
ZONING:	Commercial Professional Office	**PARCEL PIN#:**	14-2N-28-0000-0009-0010
FACILITY OWNER:	Crown Castle International	**FACILITY OWNER ID:**	870924
FACILITY OWNER SITE NAME:	Jacksonville (Amelia Island)	**FCC ASR:**	1057964
LATITUDE:	30-34-35.602 N	**LONGITUDE:**	81-27-5.501 W
HEIGHT:	160’	**COLLOCATION POTENTIAL:**	2
SERVICE PROVIDERS:	Sprint, T-Mobile, Verizon		
COMMENTS:	Active osprey nest on tower.		

SITE 96: 1431 Lewis Street, Fernandina Beach

ELIGIBLE:	Yes	**LOCATION:**	Private Property
CATEGORY:	Tower	**TYPE:**	Monopole
ZONING:	Commercial General	**PARCEL PIN#:**	00-00-30-0820-0005-0040
FACILITY OWNER:	American Tower Corporation	**FACILITY OWNER ID:**	21804
FACILITY OWNER SITE NAME:	Amelia City	**FCC ASR:**	1062208
LATITUDE:	30-34-25.039 N	**LONGITUDE:**	81-27-7.099 W
HEIGHT:	187’	**COLLOCATION POTENTIAL:**	3
SERVICE PROVIDERS:	AT&T, Metro PCS		
COMMENTS:			

SITE 97: 200 Sea Marsh Road, Fernandina Beach

ELIGIBLE:	Yes	**LOCATION:**	Private Property
CATEGORY:	Tower	**TYPE:**	Concealed Slick Stick
ZONING:	Planned Unit Development	**PARCEL PIN#:**	20-2N-28-0000-0006-0000
FACILITY OWNER:	Skyway Towers LLC	**FACILITY OWNER ID:**	FL-01020
FACILITY OWNER SITE NAME:	Amelia Island 1	**FCC ASR:**	
LATITUDE:	30-33-29.900 N	**LONGITUDE:**	81-27-6.900 W
HEIGHT:	160’	**COLLOCATION POTENTIAL:**	Possibly
SERVICE PROVIDERS:	Unknown		
COMMENTS:	Not able to access site through gated community.		

SITE 98: 1 Osprey Road, Fernandina Beach

ELIGIBLE:	Yes	**LOCATION:**	Private Property
CATEGORY:	Tower	**TYPE:**	Concealed Slick Stick
ZONING:	Planned Unit Development	**PARCEL PIN#:**	01-1N-28-0000-0005-0000
FACILITY OWNER:	Skyway Towers LLC	**FACILITY OWNER ID:**	FL-01021
FACILITY OWNER SITE NAME:	Amelia Island 2	**FCC ASR:**	1297450
LATITUDE:	30-31-53.699 N	**LONGITUDE:**	81-26-28.709 W
HEIGHT:	150’	**COLLOCATION POTENTIAL:**	1-2
SERVICE PROVIDERS:	T-Mobile, Verizon		
COMMENTS:			