

**Regular Workshop – October 15, 2012
Agenda Item 8**

Agenda Item: Update Regarding Telecommunications Study Report

Presenter: Town Manager and Staff

Summary: At the April 19, 2012 Regular Workshop Meeting TE Connectivity presented the results of their telecommunications study which included information on signal strength and quality, results of propagation studies, alternative solutions, cost estimates, and information on emerging technology. The Town Commission directed staff to follow up with service providers regarding solutions they may propose, review the Town's legal obligations, and conduct a review of the Town Code as related to telecommunications. Staff will present an update on these issues.

Attachments: 10-8-12 Memo, Public Works Project Manager to Town Manager;
10-9-12 Memo, Town Attorney to Town Manager;
8-23-12 Email, Giacomo to Town Manager;
PowerPoint Presentation.

Recommended

Action: Pending discussion, provide direction to Manager.

M E M O R A N D U M

Date: October 8, 2012

TO: Dave Bullock, Town Manager
FROM: James Linkogle, Public Works Project Manager
THROUGH: Juan J Florensa, Public Works Director
SUBJECT: Update Regarding Telecommunications Study Report

The Town contracted TE Connectivity to perform an analysis of public input and cellular reception issues on Longboat Key. As a result of their analysis and the April 19, 2012 presentation to the Town Commission, it was determined that the Town's Comprehensive Plan and Town Zoning Code needed further examination regarding compliance with Federal and State telecommunication laws. In addition the Town Commission directed Staff to contact the cell service providers and ascertain their concurrence with the study results.

The Town Attorney has reviewed State and Federal telecommunication laws and their correlation with the current Town Comprehensive Plan and Zoning Code. A memo from Kelly M. Fernandez, Assistant Town Attorney, discussing the legal issues associated with the telecommunications issue for the Town is attached. The Town Comprehensive Plan and Zoning Code documents will need to be amended to fully comply with the established laws. Town Staff, in conjunction with the Town Attorney, have reviewed the necessary modifications and possible options. This presentation summarizes the rules the Town must comply with on the Federal and State level, then presents areas in the Town's Comprehensive Plan and Zoning Code that should be amended to bring the Plan and Code into compliance with those regulations. A memo from Thomas Giacomo representing Verizon Wireless to the Town Manager clarifying Verizon's plans and requirements for improving service to Longboat Key is also attached.

An update will also be presented regarding communication with cellular service providers and the information gathered.

MEMORANDUM

DATE: October 9, 2012

TO: David Bullock, Town Manager
FROM: Kelly M. Fernandez, Assistant Town Attorney
THRU: David P. Persson, Town Attorney
SUBJECT: Telecommunications

The siting of wireless communications facilities in the Town of Longboat Key is governed by four regulatory layers: 1) federal law via the Telecommunications Act of 1996; 2) state law; 3) the Town's Comprehensive Plan; and 4) the Town's Zoning Code. This memorandum will briefly summarize the key provisions of each and make recommendations for changes to the Comprehensive Plan and Zoning Code needed to maintain consistency with state and federal law and meet the Town's wireless communications goals.

Federal Law

The Telecommunications Act of 1996 (the "Act"), which amended the Communications Act of 1934, governs personal wireless services and facilities. "Tower builders", i.e. those companies that construct towers and rent space on them to wireless service providers but do not hold an FCC license themselves, are not covered or protected by the Act. However, if a tower builder partners with a personal wireless service provider on the application then the Act will apply. One of the key components of the Act is its specific preservation of a local government's zoning authority, albeit with some limitations as will be discussed below.

Applications for wireless service facilities covered by the Act are governed by "shot clocks" or timeframes within which the local government should complete its processing of the application or risk having a court rule that the application is deemed granted as applied for. Applications for colocations should be processed within 90 days and applications for new cell towers should be processed within 150 days. Any time needed by the applicant to respond to a local government's request for additional information is not included within these timeframes if the local government requested the information within 30 days of the filing of the application. The timeframes can be tolled by mutual agreement.

The Act also requires a written final decision on the application and a separate record. Most courts have interpreted this to mean that the local government must provide a sufficient explanation for the court to be able to conduct a meaningful review of the record. The local government's decision must be supported by "substantial evidence".

A local government is preempted from denying or conditioning cell tower zoning based upon "environmental effects of radio frequency emissions." But substantive zoning regulations may still be applied, including those governing height, aesthetics, impact on property values, safety, and environmental impacts. While a local government cannot

take action that prohibits or has the effect of prohibiting personal wireless services, some gaps in coverage are expressly allowed. Furthermore, a local government cannot unreasonably discriminate among providers of functionally equivalent services, but does have some flexibility to treat differently facilities that create different visual, aesthetic, or safety effects. See 47 U.S.C. §332(7)(B)(i)(I)&(II).

In summary, the Act provides a local government with the discretion to set its own policy on the type of wireless communication facilities it wishes to have within its jurisdiction. An explicit or implicit prohibition on a certain type of facility, such as towers, would likely be viewed as a violation of the Act and should be avoided. Due care should also be taken to ensure that the application review process is set-up to accommodate the rather strict timelines that have evolved from the Act.

State Law

Florida applies its own regulations to the provision of wireless services through Section 365.172, Florida Statutes. Primarily, it provides the scope of review that can be applied by a local government to applications for the placement, construction, or modification of a “wireless communications facility”. A “wireless communication facility” is defined as “any equipment or facility used to provide service and may include, but is not limited to, antennae, towers, equipment enclosures, cabling, antenna brackets, and other such equipment.” A “wireless provider” is defined as any person who provides wireless service and is subject to the requirements of certain orders issued by the FCC related to wireless 911 services. In general, a wireless provider is the entity covered by Florida law for an application submitted to the local government.

The statute provides a number of items that can and cannot be addressed by a local government during its review of an application for a wireless communication facility. Information on or an evaluation of a provider’s business decisions about its service, customer demand for its service, or quality of its service to or from a particular area or site can only be obtained if voluntarily provided. Evidence can be obtained showing that no existing structure can reasonably be used for antennae placement, that residential areas cannot be served from outside the residential area, and that the proposed height of a new tower or initial antennae placement or proposed height increase of a modified tower, replacement tower, or collocation is necessary to provide the provider’s designed service.

Furthermore, a local government can address aesthetics, landscaping, land use based location priorities, structural design, and setbacks, but cannot impose construction standards beyond those adopted pursuant to Chapter 553, Florida Statutes. Wireless communication facilities can be excluded from a residential area/zoning district, but only in manner that does not constitute an actual or effective prohibition of the provider’s service. It is important to note that Section 365.172 does not “apply to or control a local government’s actions as a property or structure owner in the use of any property or structure owned by such entity for the placement, construction, or modification of wireless communications facilities.” See §365.172(12), Fla. Stat. Nonetheless, a local government cannot “use its regulatory authority so as to avoid compliance with, or in a manner that does not advance, the provisions of [Section 365.172(12)].”

As with the Act, Florida has adopted timeframes in which a local government must act upon an application. A collocation application must be granted or denied within 45 days of being deemed complete or it will automatically be deemed approved. Any other application must be granted or denied within 90 days. An application will be automatically deemed complete if the applicant is not notified of deficiencies within 20 business days of submission. These timeframes can only be voluntarily waived or extended in certain circumstances and since they are more stringent than those provided by the Act, they control.

Town Regulations

The main way the Town regulates wireless communication facilities is through its Zoning Code. As with any other type of development though, wireless communication facilities must be consistent with the Comprehensive Plan. Policy 1.1.10 of the Comprehensive Plan, as amended by Ordinance 2012-06, provides that the height restrictions established by the Comprehensive Plan for each land use category do not apply to antennae. Cell towers are not referenced. Therefore, in the only land use category in which cell towers are allowed – Institutional – they currently cannot exceed 30 feet.

The Town Code contains a number of provisions governing the siting of wireless communication facilities. Chapter 57 of the Town Code defines “utility” to include telecommunication services. A permit is required for any work in the right-of-way; however, pursuant to Section 57.06(E), telecommunication antennae located on existing or replacement utility poles (i.e. DAS) are exempt from the permit requirement if they do not extend more than 10 feet from the top of the pole and the equipment and cabinet structures in the right-of-way are attached to the utility pole and do not exceed three feet in height, one foot in width, one foot in depth. Section 158.157(F) provides additional criteria for DAS and allows approval of the ground level mechanical equipment to serve DAS by site plan exception or by site plan review granted by the Planning and Zoning Board.

Section 158.097(W) addresses the site plan approval requirements for personal wireless service facilities. An antenna on a rooftop or the exterior of building requires the least amount of additional information. All other types of personal wireless service facilities, including towers, must show, in part, that an existing tower/structure within a 2 mile radius is not sufficient to provide service, the results of a balloon test, and that FCC regulations regarding radio frequency emissions and electromagnetic radiation standards are met.

Finally, Section 158.200 is the primary Code provision that addresses personal wireless service facilities. It provides that except in the Open Space, Single-Family, and Island Preserve zoning districts, antennae are allowed on the rooftop, exterior, or interior of buildings or structures that are at least 40 feet in height by site plan review. The maximum height of the antennae is 10 feet above the tallest portion of the structure. Antennae done as collocations generally only require site plan review and building permit review if the space being utilized is not increased. Towers meanwhile require site plan review and a special exception approved by the Planning and Zoning Board. In addition they are subject to a variety of limitations including that they can only be located in the Institutional Zoning District, they must have a collapse zone from adjoining residential property equal to the greater of at least twice the height of the tower or 200 feet, they

must be camouflaged, and they must be designed to accommodate a certain number of users based on height. The maximum tower height allowed is 200 feet.

Recommendations

In general, the Town Code and Comprehensive Plan are consistent with state and federal law. However, a priority should be placed on amending the Town's Comprehensive Plan to include cell towers in the list of items for which height restrictions do not apply or, alternatively, to provide a specific maximum height for cell towers and other wireless communication facilities. As currently worded the Comprehensive Plan might be interpreted as prohibiting the construction of new towers because their height is limited to 30 feet in the Institutional future land use category. This may be an actionable violation of state and federal law.

As for the Zoning Code, the timeframes in which applications must be reviewed pursuant to state and federal law are not specifically set out in the Code. Doing so would ensure that these important deadlines are kept in the forefront of staffs' minds when processing an application. This may also be a good opportunity to consolidate the Town's various regulations related to wireless communications facilities into one cohesive area of the Code. (See example from Town of Cutler Bay attached hereto.) As part thereof the Town could develop and provide its preferences for types of facilities and their location. For instance, the Town may wish to consider broadening the properties on which towers are allowed to non-conservation, publicly-owned parcels so that it can exert greater control over the type of facility constructed. The Town could also review whether the current criteria enable the types of facilities most desired and are broad enough to encompass the latest technological advances, including small cells. Increasing the allowed height of rooftop antenna is but one area where some flexibility could be warranted.

Finally, the TE Connectivity report provides a number of recommendations, some of which are primarily technical in nature. One recommendation speaks to the required collapse zone for towers, which is currently difficult, if not impossible, to meet in the limited properties available for tower construction. If it is indeed a standard that is impossible to meet, providers could allege that the Town is prohibiting towers in contravention of state and federal law. Therefore, the Town may wish to re-examine and reduce the required minimum collapse zone. One possibility commonly used is to have the setback or collapse zone equal to the height of the tower. The TE Connectivity report also suggests modifying the allowable equipment and cabinet structure size to aid in the attractiveness of a DAS system. By building in more flexibility to this DAS regulation and others in consultation with the industry, the Town can help encourage its usage.

From: Giacomo, Thomas [<mailto:Thomas.Giacomo@VerizonWireless.com>]
Sent: Thursday, August 23, 2012 10:36 AM
To: Dave Bullock
Subject: RE: DAS study

Dave,

My answers in green bold below.....

Tom

From: Dave Bullock [<mailto:dbullock@longboatkey.org>]
Sent: Friday, August 17, 2012 8:53 AM
To: Giacomo, Thomas
Subject: DAS study

Tom: Thank you for coming to our meeting earlier this week to discuss Verizon's plans and requirements for improving service to Longboat Key. I have summarized my understanding of your statements below in bullet point form. If I have mischaracterized any of your points please feel free to correct.

- Verizon conducted a DAS study in Aug, 2011 – Yes 8/17/11.
- The results of that study led Verizon to conclude that DAS was not an appropriate technical or economic solution for LBK – True.
- Verizon requires a macro (tower) solution in order to invest in any service improving equipment on LBK – Not sure what is meant by this statement, but A macro tower is the only feasible alternative with the current technology available.
- Such a tower must provide a height of at least 106 feet for the Verizon equipment – need 110'. 106' to 108' was marginal.
- Without a tower Verizon will not enhance its service on LBK - Once again, A macro tower is the only feasible alternative with current technology available.
- Verizon believes it has modeled the island in greater detail than anyone and its decisions about future enhancements are based on the results of that modeling. – True.

I hope I have accurately captured your comments on behalf of Verizon and its plans and requirements for enhancing service on LBK.

Would you please send me the DAS study and model results. Since your study directly refutes the study the Town commissioned it is important to review your more detailed study so the Town understands the differences in the two. Verizon considers this information to be proprietary and will not be disclosing it. I'm not sure the Town would understand the differences. We did the best we could to bring the topics down to "layman's" terms in the meeting. This kind of information can help policy makers make better decisions.

Once again thank you for participating in the meeting. I look forward to reviewing the results of your study.

TOWN OF LONGBOAT KEY



UPDATE REGARDING TELECOMMUNICATIONS STUDY REPORT

TOWN COMMISSION WORKSHOP
OCTOBER 15, 2012



LEGAL CONSIDERATIONS

The Town's Comprehensive Plan and Zoning Code needs to be amended to be in full compliance with State and Federal laws regarding telecommunications



OBJECTIVE OF CHANGES

- Ensure the Town Comprehensive Plan and Zoning Codes are consistent with Federal and State Law
- Minimize the impacts of such facilities on surrounding properties
- Allow for quality telecommunication facilities while maintaining flexibility during Town review



LEGAL CONSIDERATIONS

- **Federal Law**
 - Applies to wireless service providers
 - Preserves local governments' zoning authority
 - Implicitly prohibits ban on cell towers
 - Establishes timeframes for processing applications
 - Requires written final decision based on "substantial evidence"



LEGAL CONSIDERATIONS

- State Law
 - Applies to “wireless providers” which is broadly defined
 - Local government cannot demand info on provider’s service decisions, customer demand, or quality of service
 - Local government can demand analysis of availability of existing structures and needed height for antennae or tower
 - Regulations based on aesthetics, land use based location priorities, setbacks, etc. are okay
 - Timelines for review are more restrictive than Federal law



TELECOMMUNICATION TOWER ISSUES

- Town's Comprehensive Plan
 - Currently can be interpreted to limit cell towers to 30 feet in height
 - Policy 1.1.10 should be amended to include cell towers in the list of items to which height restrictions do not apply or a maximum height for towers should be set



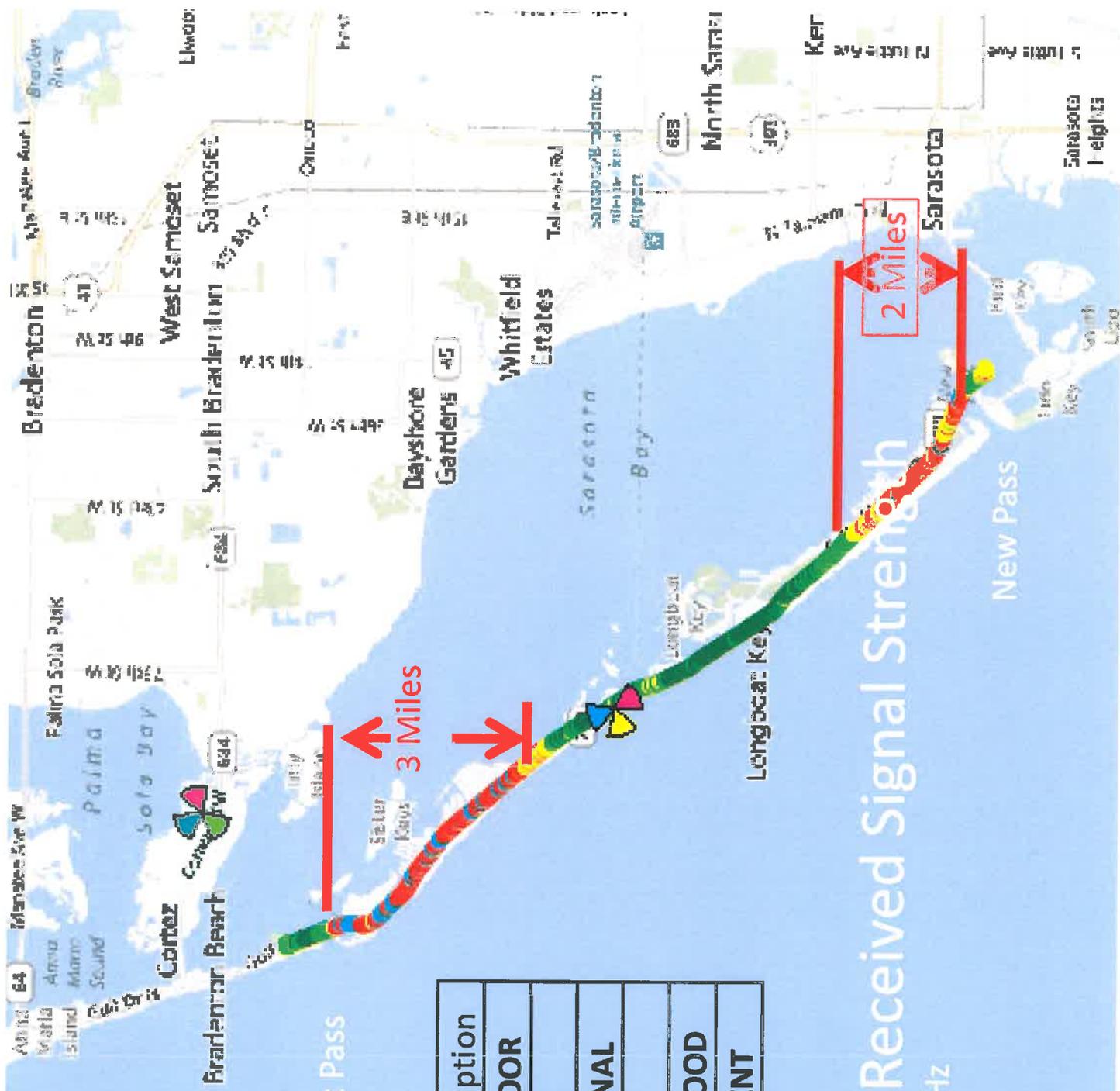
TELECOMMUNICATION TOWER ISSUES

- Town's Zoning Code
 - Cell towers allowed in Institutional district up to 200 feet; collapse zone must be greater of twice height of tower or 200 feet (Note: Potential conflict with Town Comprehensive Plan)
 - Antennae allowed in most districts up to 10 feet above tallest portion of structure
 - Telecommunication antennae on utility poles are encouraged, but certain restrictions may need to be readdressed
 - Timeframes for review established in Federal and State law are not set out
 - Provisions governing wireless communication facilities are not consolidated in one location



BACKGROUND

- Town issued RFP for telecommunications coverage study to obtain independent data, analysis, and recommendations
- TE Connectivity (TE) conducted a wireless services assessment analysis
- TE Identified a 3 mile segment of Northern LBK with marginal or poor service based on signal strength and quality tests



Color	Description
Blue	VERY POOR
Light Blue	POOR
Red	MARGINAL
Yellow	GOOD
Light Green	VERY GOOD
Green	EXCELLENT

Verizon Voice Received Signal Strength

At 1900 MHz



Color	Description
Blue	VERY POOR
Light Blue	POOR
Red	MARGINAL
Yellow	GOOD
Light Green	VERY GOOD
Green	EXCELLENT

Verizon Voice Received Signal Strength
At 850 MHz



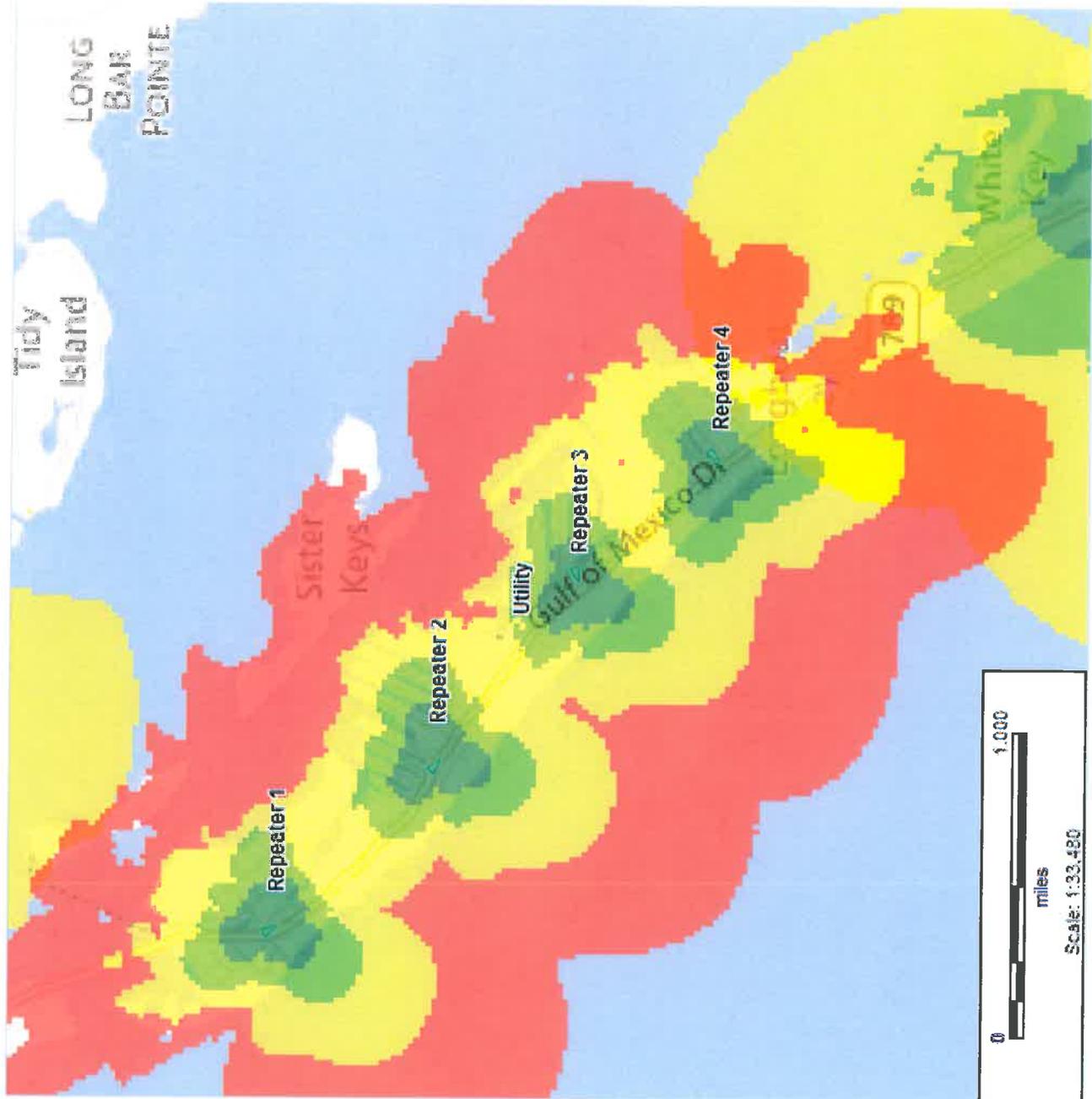
TE STUDY RESULTS FOR NORTH END

- Existing structures on North end are not tall enough for rooftop antenna solution
- Use of in-building solutions (Femtocell, Boosters, etc.)
- Tower solution is viable
- Distributed Antenna System technology is viable



TE RECOMMENDATIONS FOR NORTH END SOLUTIONS

- Distributed Antenna System (DAS)
- Tower at one of two locations



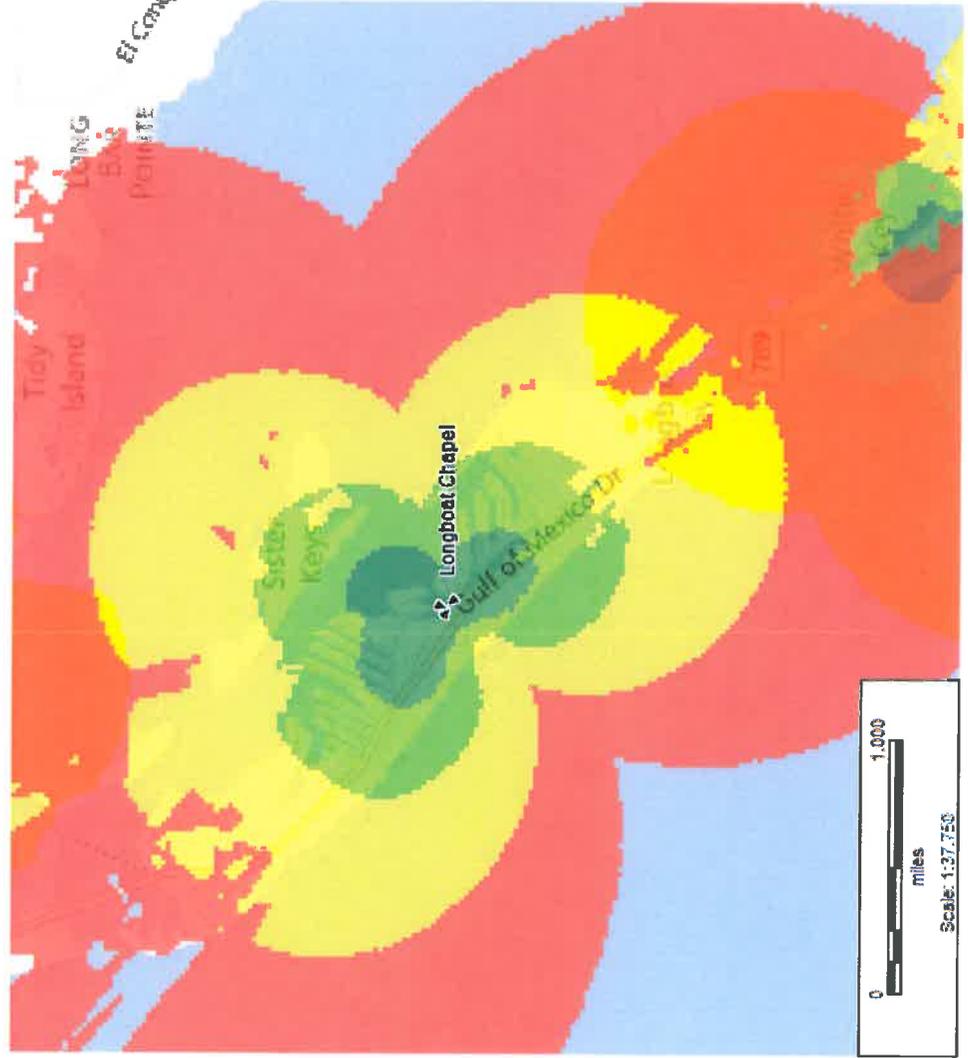
1900 MHz

DAS Repeater using existing utility poles

TOWN OF LONGBOAT KEY

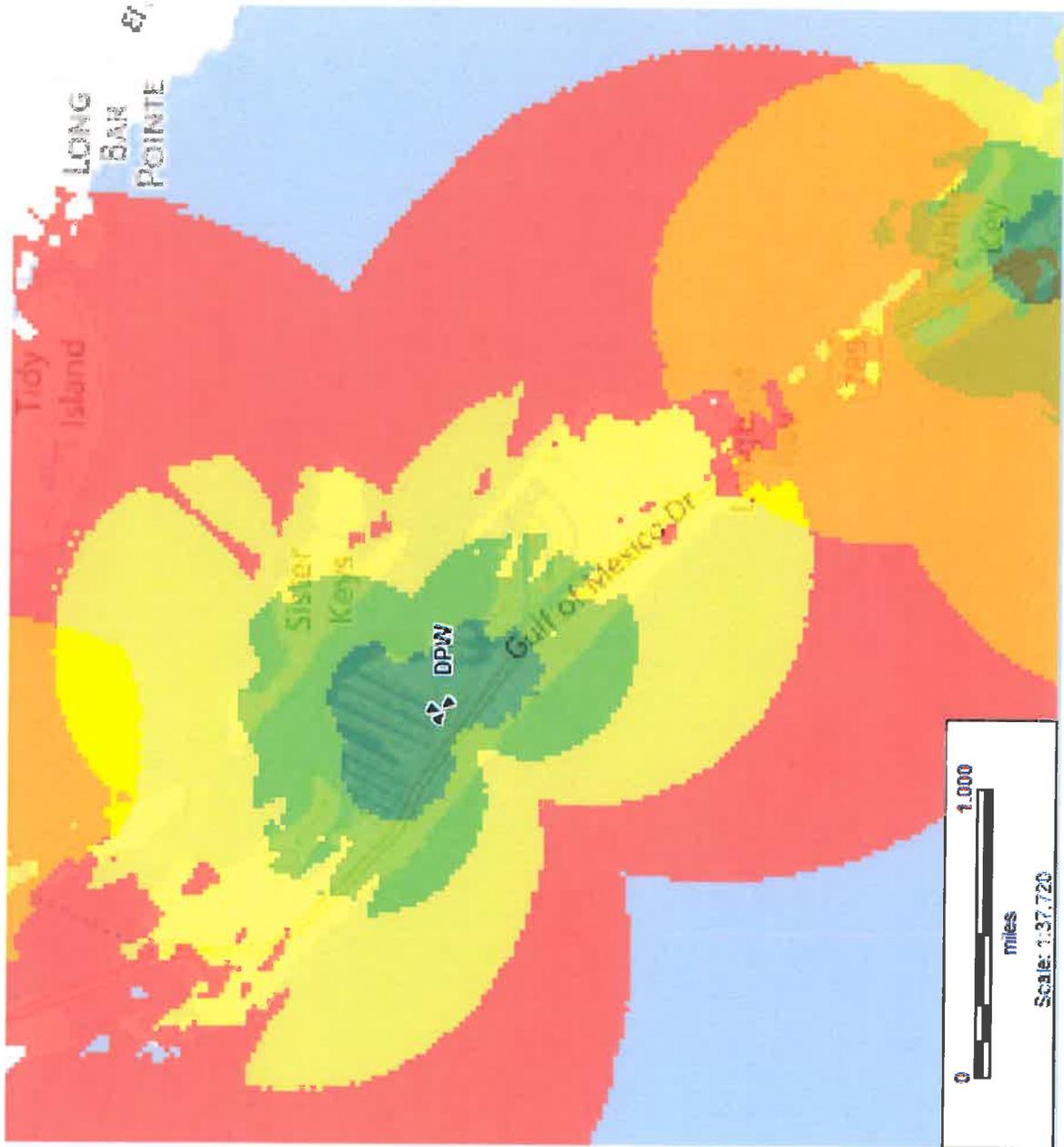


TE Study - Longboat Chapel 110' -85 dB Contour



1900 MHz

Coverage Quality	
MARGINAL	-85
GOOD	-75
VERY GOOD	-65
EXCELLENT	-55



1900 MHz

Coverage Quality	
MARGINAL	-85
GOOD	-75
VERY GOOD	-65
EXCELLENT	-55

TE Study - Public Works 100' 1900 MHz



THE FINAL REPORT

Tower Propagation Analysis

- Two Locations Considered
 - Longboat Chapel at **110** feet
 - Public Works Complex at **100** feet

▪ **Comment**

“As shown the site located at the Department of Public Works provides better coverage than the site location at the Longboat Chapel even at 100 feet. We believe this site is more strategically located to cover the northern part of the island”.



POST TE FINAL REPORT

- Town Staff met with several service providers
 - Requested their minimum tower height requirements
 - Requested their input on DAS viability for Longboat Key
 - Requested their input on potential North End tower locations
- Town Staff reviewed service provider input against final TE Connectivity report



TELECOMMUNICATION ISSUES

- Verizon, AT&T, T-Mobile said they would not entertain anything less than a 110 foot tower (height would increase for multiple service providers), at current proposed location of Longboat Chapel



TELECOMMUNICATION ISSUES

TE Study - Outdoor DAS Solution

Utilize the utility poles along GMD

- Assumptions are:
 - Utility company would agree to accommodate and perform make-ready work
 - Would initially accommodate Sprint, AT&T, and Verizon
 - Would support LTE
- **Comment** “Based on our propagation analysis we could cover the northern underserved area with four remote nodes or repeaters”



TELECOMMUNICATION ISSUES

- Verizon does not consider Distributed Antennae System (DAS) as viable alternative (as a result of their own proprietary study) due to number of Nodes (6 plus sites) required, Right of Way use considerations, FDOT permits, required new poles and or reconfigured FPL poles, all driving cost factor as unfeasible.
- TE Connectivity maintains that DAS is a viable solution, although more costly. However, additional continuous wave studies may be required.



SUMMARY

- If there is a desire by the Town Commission to improve the marginal coverage on the North end policies could be developed to support
 - Encourage emerging technology for in-building solutions
 - Encourage providers to optimize existing facilities
 - Distributed Antenna Systems using rights-of-way
 - Tower in limited locations with height restriction



STAFF RECOMMENDATION

- Through the Zoning Code require telecommunications provider to investigate solutions in a preferential order
 - Hierarchy places incumbency on permit applicant to prove they are proposing the best option for the Town
 - Town Staff and expert consultants would review the permit applicants assertions
 - Can provide flexibility for Town review and comply with State and Federal laws



HIERARCHY EXAMPLE

1. Additional telecommunication facilities on existing building or existing structures
2. Telecommunication facilities on power poles in the right-of-way with a height limit
3. Use of Town Property for telecommunication facilities
4. Increase antenna height on existing buildings
5. Tower or similar structure with a maximum height in limited locations

TOWN OF LONGBOAT KEY



QUESTIONS?