



BOARD OF COUNTY COMMISSIONERS

Planning and Development Department

2725 Judge Fran Jamieson Way

Building A, Room 114

Viera, Florida 32940

(321)633-2070 Phone / (321)633-2074 Fax

<https://www.brevardfl.gov/PlanningDev>

STAFF COMMENTS

23Z00015

Terrence A. Cronin, Jr. and Kathleen M. Hubbard

CUP (Conditional Use Permit) for a 199-ft. monopole Wireless Telecommunication Facility (WTCF) in a GU (General Use) Zoning Classification

Tax Account Number: 2324077

Parcel I.D.s: 23-34-25-00-752

Location: East of intersection of SR 407 and SR 528 (District 1)

Acreage: 29.17 acres

Planning & Zoning Board: 6/12/2022

Board of County Commissioners: 7/13/2022

Consistency with Land Use Regulations

- Current zoning can be considered under the Future Land Use Designation, Section 62-1255.
- The proposal can be considered under the Future Land Use Designation, Section 62-1255.
- The proposal would maintain acceptable Levels of Service (LOS) (XIII 1.6.C)

| | CURRENT | PROPOSED |
|--|--------------------|------------------------------------|
| Zoning | GU | GU with CUP for 199' monopole WTCF |
| Potential* | 1 SF lot | 1 SF lot |
| Can be Considered under the Future Land Use Map | YES Agriculture | YES Agriculture |

* Zoning potential for concurrency analysis purposes only, subject to applicable land development regulations.

Background and Purpose of Request

The applicant is requesting a Conditional Use Permit (CUP) for a 199-foot tall monopole Wireless Telecommunication Facility (WTCF) and accessory equipment on a 0.146-acre (80' X 80') leased area portion of a 29.17-acre parcel. The subject parcel is undeveloped and is currently utilized as grazing land.

The GU zoning is the original zoning of the parcel. Site access will be by easement to the north along SR 407. The current property owners also own the adjacent parcels to the east for extra land area or buffer.

Land Use

The subject property is currently designated Agriculture Future Land Use (FLU) and allows up to one dwelling unit per five (5) acres. The GU zoning classification can be considered consistent with the Agriculture FLU designation.

Applicable Land Use Policies

FLUE Policy 4.1

Appropriate and adequate lands shall be designated Agricultural on the Future Land Use Map. Agricultural activities include, but are not limited to, row, vegetable and fruit crop production; dairy, poultry and livestock production; aquaculture, silviculture, horticulture, and apiariculture. Large lot residential development which does not impede the use of lands for agricultural purposes shall be permitted in this land use designation. The following minimum criteria shall govern activities in this land use designation:

Criteria:

A. Residential densities shall not exceed one dwelling unit per five (5) acres.

This request is for a WTCF cell tower and is not anticipated to have residential density.

B. The County shall not extend public utilities and services outside of the service areas to Agricultural areas for new development, unless there is an overriding public benefit which accrues to an area larger than the specific Agricultural area. However, the County will accept facilities through dedication, and provide services and utilities through MSBU's, MSTU's and other means through which the recipients pay for the service or facility.

The proposed WTCF will serve existing transportation corridors such as SR 528 and SR 407.

C. The County shall actively promote Transfer of Development Rights from Agricultural Lands and restrict Open Space Subdivisions and corresponding density bonuses in those areas designated as Agricultural Future Land Use Map.

This criterion is not applicable to this request.

The existing General Use (GU) zoning classification can be considered consistent with this FLU designation.

The Board should evaluate the compatibility of this application within the context of Administrative Policies 2 – 8 of the Future Land Use Element.

Analysis of Administrative Policy #3 - Compatibility between this site and the existing or proposed land uses in the area.

Compatibility shall be evaluated by considering the following factors, at a minimum:

Criteria:

- A. Whether the proposed use(s) would have hours of operation, lighting, odor, noise levels, traffic, or site activity that would significantly diminish the enjoyment of, safety or quality of life in existing neighborhoods within the area which could foreseeably be affected by the proposed use;

The proposed CUP is not anticipated to diminish the enjoyment of, safety or quality of life in existing vacant or unimproved agricultural lands within the area. The closest residential development is located approximately 2 miles to the east of the subject site on Date Palm Street. All WTCF uses will need to comply with Brevard County's Performance Standards defined by Sections 62-2251 through 62-2272.

- B. Whether the proposed use(s) would cause a material reduction (five per cent or more) in the value of existing abutting lands or approved development.

Only a certified MAI appraisal can determine if material reduction has or will occur due to the proposed request.

- C. Whether the proposed use(s) is/are consistent with an emerging or existing pattern of surrounding development as determined through an analysis of:

1. historical land use patterns;

The subject property is currently utilized as grazing land. The parcel to the east is also owned by the current property owners and is utilized for grazing land. To the south lies SR 528, a limited access roadway.

2. actual development over the immediately preceding three years; and

There has not been any actual development within this area in the preceding three (3) years.

3. development approved within the past three years but not yet constructed.

There has not been any development approved but not yet constructed within a half mile in the preceding three (3) years.

- D. Whether the proposed use(s) would result in a material violation of relevant policies in any elements of the Comprehensive Plan.

No material violation of relevant policies has been identified.

Analysis of Administrative Policy #4 - Character of a neighborhood or area.

There is an existing pattern of General Use (GU) and Agricultural Residential (AU) zoning on parcels surrounding the subject property with a use of grazing land. The closest residential development is located approximately 2 miles to the east of the subject property.

Administrative Policy #5 - the impact of the proposed use or uses on transportation facilities either serving the site or impacted by the use(s) shall be considered.

The proposed tower will generate minimal trips to SR 407 after the initial construction (for maintenance only). SR 528 is a limited access roadway and no access is provided to/from that roadway.

Administrative Policy #6 - application for development approval must be consistent with (a) all written land development policies set forth in these administrative policies; and (b) the future land use element, coastal management element, conservation element, potable water element, sanitary sewer element, solid waste management element, capital improvements element, recreation and open space element, surface water element and transportation elements of the comprehensive plan.

Staff did not find any inconsistencies during review of this application. The proposed CUP appears to meet land development policies noted above.

Surrounding Area

| | Existing Use | Zoning | Future Land Use |
|--------------|---------------------|---------------|------------------------|
| North | Vacant Land | AU | Agriculture |
| South | Grazing Land | GU | Agriculture |
| East | Borrow Pit | AU | Agriculture |
| West | SR 528 ROW | NA | NA |

The subject property is surrounded to the north and east by AU zoning with a use of grazing or vacant lands. The parcel to the south is zoned GU and is being used as grazing land.

The GU classification is a holding category, allowing single-family residences on five acre lots with a minimum width and depth of 300 feet. The minimum house size in GU is 750 square feet.

The AU zoning classification permits single-family residences and agricultural uses on 2.5 acre lots, with a minimum lot width and depth of 150 feet. The minimum house size in AU is 750 square feet. The AU classification also permits the raising/grazing of animals and plants nurseries. Conditional uses in AU include hog farms, zoological parks, and land alteration.

There have been no zoning actions within a half-mile radius of the subject property within the last three years.

Preliminary Concurrency

The closest concurrency management segment to the subject property is SR 407, between SR 528 and I-95, which has a Maximum Acceptable Volume (MAV) of 8,820 trips per day, a Level of Service (LOS) of D, and currently operates at 77.78% of capacity daily. The maximum development potential

from the proposed CUP increases the percentage of MAV utilization by 0.54%. The corridor is anticipated to operate at 78.32% of capacity daily. The request is not anticipated to create a deficiency in LOS.

No school concurrency information has been provided as the development potential of this site falls below the minimum number of new residential lots that would require a formal review.

The parcel is not within the Brevard County utilities service area for public water or sewer.

Environmental Constraints

- Hydric Soils/Wetlands Protection
- Floodplain Protection
- Protected and Specimen Trees
- Protected Species

The subject parcel contains mapped wetlands and hydric soils; indicators that wetlands may be present on the property. Please refer to all comments provided by the Natural Resource Management Department at the end of this report.

Special Considerations for CUP (Conditional Use Permit)

The Board should consider the compatibility of the proposed CUP pursuant to Section 62-1151(c) and to Section 62-1901, as outlined below.

Section 62-1151(c) directs the Board to consider the character of the land use of the property and its surroundings; changes in the conditions of the land use being considered; impact upon infrastructure; compatibility with land use plans for the area; and appropriateness of the CUP based upon consideration of applicable regulations relating to zoning and land use within the context of public health, safety and welfare.

Section 62-1901 provides that the approval of a conditional use shall authorize an additional use for the affected parcel of real property in addition to those permitted in the applicable zoning classification. **The initial burden is on the applicant to demonstrate that all applicable standards and criteria are met. Applications which do not satisfy this burden cannot be approved.** The applicant's responses and staff observations, if any, are indicated below.

The applicant has submitted documentation in order to demonstrate consistency with the standards set forth in Section 62-1901 and Section 62-1953, Wireless Telecommunication Facilities and Broadcast Towers as well as Division 7 - Communication Facilities.

Staff analysis: The applicant has provided a letter from T-Mobile expressing a statement of need and design objective for the general area. As provided in the County's consultant's report, this primary purpose of the proposed facility is to improve T-Mobile's existing service by providing additional capacity for subscriber travelers along State Road 407 and 528. While a significant coverage issue was not determined during review, the consultant confirms that data indicates a capacity gap, and that a new facility can be justified on lack of capacity basis alone.

This request should be evaluated in the context of **Section 62-1953** which outlines conditions for wireless telecommunication facilities which states:

Wireless telecommunication facilities and broadcast towers may be permitted as a conditional use subject to the applicable requirements of article VI, division 7, section 62-1901(c) and this section.

- (1) In addition to the general review criteria in section 62-1901(c), the board shall consider the following:
 - a. The aesthetic effects of the proposed tower on surrounding areas as well as mitigating factors concerning aesthetics.
 - b. The Board may disapprove an application on the grounds that the proposed tower's aesthetic effects are incompatible, or may condition approval on changes in tower height, design, style, buffers, or other features of the wireless communications facility or its surrounding area. Such changes in non-broadcast installations need not result in performance identical to that of the original application.
 - c. Factors relevant to aesthetic effects include: the protection of the view in sensitive or scenic areas and areas specially designated in adopted plans such as unique natural features, scenic roadways and historic sites; the concentration of towers in the proposed area; and whether the height, design, placement or other characteristics of the proposed tower could be modified to have a less intrusive visual impact.
 - d. If the Board determines that the proposed additional service of non-broadcast facilities, coverage, or capacity to be achieved by the location of the proposed facility can be achieved by use of one or more alternative existing wireless communications facilities addressed in this section, which better serve the stated goals set forth in section 62-2402, it may deny the proposed antenna support facility application.

Staff analysis: The County's Wireless Communications Master Plan identifies a county-owned site proximity 1.52 miles to the NE of this proposed location along the north side of SR 407. The recommendation for the county-owned site is as a Monopole tower with height limitation at 175' or Slick Stick at 140'.

- (2) A waiver to the maximum tower heights for wireless telecommunications facilities established in section 62-2422(2) may be considered. The applicant must demonstrate the technical necessity for the proposed tower height in excess of the maximum designation and provide written certification from a radio frequency (RF) engineer licensed in the state stating that the maximum height recommendation will not satisfy the proposed service network objective and that the proposed height is the minimum necessary to satisfy those needs.
- (3) A conditional use permit or building permit for a wireless communication facility or broadcast tower shall expire if a site plan for the tower (if required) is not submitted within one year of approval or if construction does not commence within three years of approval.
- (4) Prior to effecting the removal of any tower, the county shall provide notice and an opportunity to be heard to both the landowner and the CUP holder who shall show cause why the tower should not be removed in accordance with the provisions and requirements of the ordinance. A notice describing the reason for removal and the date of a hearing before the county commission shall be served by certified mail, fax, actual delivery, or U.S. mail (if

otherwise undeliverable) at least 21 days prior to the hearing. The time for effecting removal shall be tolled pending a final determination by the board or, if an action is filed, by a court with jurisdiction.

Staff analysis: As provided in the County's consultant's report, this request is for a *non-concealed* monopole, meaning that the antenna and auxiliary equipment proposed by individual carriers would be mounted outside the structure.

Other Considerations: The applicant is requesting a Conditional Use Permit (CUP) for a 199-foot monopole communications tower and accessory equipment. The tower will accommodate up to four antenna carriers and the facility will be unmanned with occasional visits by service technicians. The site will be accessed via SR 407. The proposed lease area on the subject property will be approximately 80 feet wide and 80 feet deep compound.

Pursuant to Florida State Statutes, § 365.172, the County may request that information or materials directly related to an identified land development or zoning issue be required. The information or materials required may include, but are not limited to, evidence that no existing structure can reasonably be used for the antennae placement instead of the construction of a new tower, that residential areas cannot be served from outside the residential area, or that the proposed height of a new tower or initial antennae placement or collocation is necessary to provide the provider's designed service. The applicant has provided information stating that T-Mobile will be one of the possible carriers that will have antenna on the proposed tower.

State statutes do not prohibit the local government from reviewing any applicable land development or zoning issue addressed in its adopted regulations that does not conflict with the statutes, "including but not limited to aesthetics, landscaping, land use-based location priorities, structural design, and setbacks. Any setback or distance separation required of a tower may not exceed the minimum distance necessary, as determined by the local government, to satisfy the structural safety or aesthetic concerns that are to be protected by the setback or distance separation". The applicant has submitted a site plan and photo simulations from different perspectives for visual impact analysis.

General Standards of Review

Section 62-1901(c)(1)(a): The proposed conditional use will not result in a substantial and adverse impact on adjacent and nearby properties due to: (1) the number of persons anticipated to be using, residing or working under the conditional use; (2) noise, odor, particulates, smoke, fumes and other emissions, or other nuisance activities generated by the conditional use; or (3) the increase of traffic within the vicinity caused by the proposed conditional use.

Applicant's Response: The proposed project is for an unmanned communication tower facility. (1) The project is located in a rural undeveloped area with surrounding AU and GU zoning districts; (2) There will be no noise, odor, particulates, smoke, fumes and other emissions or other nuisance activities; (3) At full capacity the tower will accommodate 4 wireless tenants with an average trip count of once per quarter (16-trips per year total).

Staff analysis: Any noise generated in conjunction with the operation of the business would need to comply with the performance standards of Section 62-2251 through 62-2272, including

the noise regulations of Section 62-2271. The adjacent lands are used for agriculture and will not be substantially nor adversely impacted by the proposed activities.

Section 62-1901(c)(1)(b): The proposed use will be compatible with the character of adjacent and nearby properties with regard to use, function, operation, hours of operation, type and amount of traffic generated, building size and setback, and parking availability.

Applicant's Response: The proposed use will serve as infrastructure for mobile communications and E911 service, common in coastal, urban and rural areas. The proposed tower is consistent with the County's LDC with respect to height for rural areas and meets all setback requirements. It is an unmanned facility with minimal traffic (16 annual trips).

Staff analysis: The applicant has proposed their intent to comply with code provisions. If the Board desires additional information or conditions beyond these standards, it should be identified at the public hearing.

Section 62-1901(c)(1)(c): The proposed use will not cause a substantial diminution in value of abutting residential property. A substantial diminution shall be irrebuttable presumed to have occurred if abutting property suffers a 15 percent reduction in value as a result of the proposed conditional use. A reduction of ten percent of the value of abutting property shall create a reputable presumption that a substantial diminution has occurred. The board of county commissioners carries the burden to show, as evidenced by either testimony from or an appraisal conducted by a MAI certified appraiser, that a substantial diminution in value would occur. The applicant may rebut the findings with his own expert witnesses.

Applicant's Response: The proposed use will serve as infrastructure for mobile communications and E911 service, common in coastal, urban and rural areas. The proposed tower is consistent with the County's LDC with respect to tower height for rural areas and meets all setback requirements. The project is located in a rural undeveloped area with surrounding AU and GU zoning districts.

Staff analysis: The parcel is located adjacent to property under agricultural operations; should this neighboring use change due to proposed residential development of the abutting sites, it may be necessary to re-evaluate the potential impacts that this site may propose.

Section 62-1901(c)(2)(a): Ingress and egress to the property and proposed structures thereon, with particular reference to automotive and pedestrian safety and convenience, traffic flow and control, and access in case of fire and catastrophe, shall be: (1) adequate to serve the proposed use without burdening adjacent and nearby uses, and (2) built to applicable county standards, if any.

Note: Burdening adjacent and nearby uses means increasing existing traffic on the closest collector or arterial road by more than 20 percent, or ten percent if the new traffic is primarily comprised of heavy vehicles, except where the affected road is at level of service A or B. New traffic generated by the proposed use shall not cause the adopted level of service for transportation on applicable roadways, as determined by applicable county standards, to be exceeded. Where the design of a public road to be used by the proposed use is physically inadequate to handle the numbers, types or weights of vehicles expected to be generated by the proposed use without damage to the road, the conditional use permit cannot be approved without a commitment to improve the road to a standard

adequate to handle the proposed traffic, or to maintain the road through a maintenance bond or other means as required by the board of county commissioners.

Applicant's Response: At full capacity the tower will accommodate 4 wireless tenants with an average trip count of once per quarter (16 trips per year total).

Staff analysis: The site has direct access to SR 407. Traffic speeds may need to be addressed for the safe acceleration or deceleration from the property and will be reviewed as part of the site plan review process.

Section 62-1901(c)(2)(b): The noise, glare, odor, particulates, smoke, fumes or other emissions from the conditional use shall not substantially interfere with the use or enjoyment of the adjacent and nearby property.

Applicant's Response: There will be no noise, glare, odor, particulates, smoke, fumes and other emissions and will not substantially interfere with the use or enjoyment of the adjacent and nearby properties.

Staff analysis: Except for the initial construction and the appropriate use of up-shielding for required pole lighting at the mid-point and top of the tower, nuisance issues may be minimal.

Section 62-1901(c)(2)(c): Noise levels for a conditional use are governed by section 62-2271.

Applicant's Response: Note: The proposed project will comply with the above listed maximum noise level.

Staff analysis: The "performance standards" will be reviewed as part of the site plan review process.

Section 62-1901(c)(2)(d): The proposed conditional use shall not cause the adopted level of service for solid waste disposal applicable to the property or area covered by such level of service, to be exceeded.

Applicant's Response: There will be no solid waste created by this project.

Staff analysis: The request should not cause the level of service for solid waste disposal for the property or area covered by such level of service to be exceeded.

Section 62-1901(c)(2)(e): The proposed conditional use shall not cause the adopted level of service for potable water or wastewater applicable to the property or the area covered by such level of service, to be exceeded by the proposed use.

Applicant's Response: There will be no potable water or wastewater created by this project.

Staff analysis: The parcel is not within the Brevard County utilities service area for public water or sewer. The service for potable water or wastewater will require application and review through the Florida State Department of Environmental Health.

Section 62-1901(c)(2)(f): The proposed conditional use must have existing or proposed screening or buffering, with reference to type, dimensions and character to eliminate or reduce substantial, adverse nuisance, sight, or noise impacts on adjacent and nearby properties containing less intensive uses.

Applicant's Response: The proposed project will meet all County LDC requirements for screening and buffering in terms of type, dimensions and character.

Staff analysis: The screening or buffering aspects have been identified on the concept plan and entails a 15-foot wide perimeter buffer of shade trees and shrubs. Should the Board determine that additional measures become necessary, the Board may wish to request the applicant provide for those additional measures.

Section 62-1901(c)(2)(g): Proposed signs and exterior lighting shall not cause unreasonable glare or hazard to, traffic safety, or interference with the use or enjoyment of adjacent and nearby properties.

Applicant's Response: This project will not have exterior lighting. All required signage to be placed on the facility fence will be in accordance with County LDC standards.

Staff analysis: No electrical current signage has been identified on the concept plan. Should the Board determine that additional measures become necessary, the Board may wish to request the applicant provide for those additional measures. Signage must comply with Article IX of the Brevard County Code of Ordinances.

Section 62-1901(c)(2)(h): Hours of operation of the proposed use shall be consistent with the use and enjoyment of the properties in the surrounding residential community, if any. For commercial and industrial uses adjacent to or near residential uses, the hours of operation shall not adversely affect the use and enjoyment of the residential character of the area.

Applicant's Response: The proposed tower facility is located in a rural undeveloped area with surrounding AU and GU zoning districts and is unmanned with limited vehicular trips per month.

Staff analysis: The WTCF use is a 24/7 operation.

Section 62-1901(c)(2)(i): The height of the proposed use shall be compatible with the character of the area, and the maximum height of any habitable structure shall be not more than 35 feet higher than the highest residence within 1,000 feet of the property line.

Applicant's Response: The proposed tower is consistent with the County's LDC with respect to tower height for rural areas and meets all setback requirements.

Staff analysis: Under the County's Wireless Communications Master Plan, the site is designated as "rural" which corresponds to a 199-foot maximum height recommendation. As provided in the County's consultant's report, if the County, with the consent of the applicant and the landowner, desires to legally prohibit the tower owner from ever increasing the tower height above 200 feet AGL through the eligible facility provisions of the FCC for administrative approval, the County could require the establishment of a restrictive covenant to run with the land.

Section 62-1901(c)(2)(J): Off-street parking and loading areas, where required, shall not be created or maintained in a manner which adversely impacts or impairs the use and enjoyment of adjacent and nearby properties. For existing structures, the applicant shall provide competent, substantial evidence to demonstrate that actual or anticipated parking shall not be greater than that which is approved as part of the site plan under applicable county standards.

Note: for existing structures, the applicant shall provide competent, substantial evidence to demonstrate that actual or anticipated parking shall not be greater than that which is approved as part of the site plan under applicable county standards.

Applicant's Response: Off-street parking and loading areas are not required as part of this project.

Staff analysis: One parking space is noted within the proposed plan.

The County's consultant's report and findings are attached hereto for the Board's consideration.

For Board Consideration

The Board may wish to consider if the request for the proposed CUP is consistent and compatible with the surrounding area. The Board may wish to consider additional conditions beyond those cited in section 62-1901 in order to mitigate potential impacts to abutting properties, such as:

- Applicant should provide final Construction Documents and Site Plans for review;
- Applicant should obtain, and provide proof of, NEPA and SHPO approvals for the new structure;
- Applicant should provide a Structural Analysis based on the final construction parameters with the monopole elevation at 193 feet, signed and sealed by a Florida Registered Professional Engineer; and,
- All feed lines shall be installed within the support structure, and the antenna ports shall be sealed in a manner to prevent access by birds and other wildlife.

NATURAL RESOURCES MANAGEMENT DEPARTMENT
Rezoning Review & Summary
Item # 23Z00015

Applicant: Gulfstream Towers LLC

Zoning Request: Conditional Use Permit (CUP)

Note: CUP for monopole cellular tower

P&Z Hearing Date: 06/12/23; **BCC Hearing Date:** 07/13/23

Tax ID No: Part of 2324077

- This is a preliminary review based on best available data maps reviewed by the Natural Resources Management Department (NRM) and does not include a site inspection to verify the accuracy of the mapped information.
- In that the rezoning process is not the appropriate venue for site plan review, specific site designs submitted with the rezoning request will be deemed conceptual. Board comments relative to specific site design do not provide vested rights or waivers from Federal, State or County regulations.
- **This review does not guarantee whether or not the proposed use, specific site design, or development of the property can be permitted under current Federal, State, or County Regulations.**

Summary of Mapped Resources and Noteworthy Land Use Issues:

- Hydric Soils/Wetlands Protection
- Floodplain Protection
- Protected and Specimen Trees
- Protected Species

The subject parcel contains mapped wetlands and hydric soils; indicators that wetlands may be present on the property. A wetland determination will be required prior to any land clearing activities, site plan design or building permit submittal. Section 62-3694(f) states that utility corridors developed or maintained by governmental or investor owned regulated utilities are permitted in wetlands. Any adverse impact, degradation or destruction of wetlands must be mitigated as provided in section 62-3696.

Land Use Comments:

Wetlands/Hydric Soils

The subject parcel contains mapped National Wetlands Inventory (NWI) and St. Johns River Water Management District (SJRWMD) wetlands and hydric soils (Delray sand, occasionally flooded; and Immokalee sand, 0 to 2 percent slopes) – indicators that wetlands may be present on the property. A wetland determination will be required prior to any land clearing activities, site plan design or building permit submittal. Section 62-3694(f) states that utility corridors developed or maintained by governmental or investor owned regulated utilities are permitted in wetlands. Any adverse impact, degradation or destruction of wetlands must be mitigated as provided in section 62-3696. The applicant is encouraged to contact NRM at (321) 633-2016 prior to any site plan design or permit submittal.

Floodplain Protection

The northern corner portion of the project area is mapped as being within the St. Johns Riverine floodplain as identified by the Federal Emergency Management Agency and as shown on the FEMA Flood Map. The property may be subject to the development criteria in Conservation Element Objective 4, its subsequent policies, and the Floodplain Ordinance, including compensatory storage and filled footprint restrictions. Chapter 62, Article X, Division 6 states, "No site alteration shall adversely affect the existing surface water flow pattern." Chapter 62, Article X, Division 5, Section 62-3723 (2) states, "Development within floodplain areas shall not have adverse impacts upon adjoining properties."

Protected and Specimen Trees

Aerials indicate that Protected (greater than or equal to 10 inches in diameter) and Specimen Trees (greater than or equal to 24 inches in diameter) may be present on subject property. A tree survey will be required at time of a site plan submittal. Per Brevard County Landscaping, Land Clearing and Tree Protection ordinance, Section 62-4341(18), Protected and Specimen Trees shall be preserved or relocated on site to the Greatest Extent Feasible. Per Section 62-4332, Definitions, Greatest Extent Feasible shall include, but not be limited to, relocation of roads, buildings, ponds, increasing building height to reduce building footprint or reducing Vehicular Use Areas. The applicant is advised to refer to Article XIII, Division 2, entitled Land Clearing, Landscaping, and Tree Protection, for specific requirements for tree preservation and canopy coverage requirements. Land clearing is not permitted without prior authorization by NRM.

Protected Species

Information available to NRM indicates that federally and/or state protected species may be present on the property. Prior to any plan, permit submittal, or development activity, including land clearing, the applicant should obtain any necessary permits or clearance letters from the Florida Fish and Wildlife Conservation Commission and/or U.S. Fish and Wildlife Service, as applicable.

Brevard County, Florida
Telecommunications Site Review
New Wireless Telecommunication Tower



2423 S. Orange Avenue, #317
Orlando, FL 32806
Tel. 877.438.2851
Fax. 877.220.4593

March 3, 2023

Mr. Jeffrey Ball
Planning and Zoning Manager
Brevard County Planning & Development
2725 Judge Fran Jamieson Way, A-114
Viera, FL 32940

APPLICANT: Gulfstream Towers, LLC
PROVIDER: T-Mobile USA
SITE NAME: FL208
COUNTY PARCEL ID: 23-34-25-00-752
ADDRESS: Challenger Memorial Parkway (SR407), Cocoa, FL 32927
LATITUDE: 28° 27' 03.24" N **LONGITUDE:** 80° 52' 16.57" W
STRUCTURE: 193-foot Non-Concealed Monopole Tower (plus 6-foot Lightning Rod)

Dear Mr. Ball,

At your request, on behalf of Brevard County ("County"), CityScape Consultants, Inc. ("CityScape") in its capacity as telecommunications consultant for the County has considered the merits of the above-referenced application submitted by Gulfstream Towers, LLC ("Applicant"). The Applicant proposes to construct a new one hundred ninety nine (199) foot wireless telecommunications support structure and associated 2,500 square foot ground equipment compound located on Challenger Memorial Parkway (SR407, street number unknown), see *Figure 1*. The Applicant will lease a parcel of land for the purpose of constructing and operating the proposed new facility.

The Applicant is requesting to construct a *non-concealed* monopole tower of 193 feet in height with a 6-foot lightning rod on top, on a property that is zoned GU (General Use), which requires a Conditional Use Permit ("CUP"). The proposed facility is meant for use by Personal Wireless Providers, although the Applicant does not propose at this time the installation of wireless base station equipment on the tower and in the equipment compound. The Applicant has stated that T-Mobile USA ("T-Mobile" or "Provider") will be the anchor tenant at this site and T-Mobile will be applying for a separate permit to co-locate on the proposed new facility after the Applicant is granted a CUP. The proposed facility will be designed to accommodate up to four (4) tenants including T-Mobile.

Application Review Timeline

CityScape first received the application from the County in February 2022 and over the course of twelve months reviewed revised materials on four other dates. The Application was deemed incomplete several times because the Applicant did not address all the County's Code requirements with the original and subsequent resubmittals. CityScape deemed the application complete in February 2023. A summary of submittals and review dates by CityScape is provided in Table 1.

| Dates Application Materials Received by CityScape | Date Review Completed by CityScape | Summary of Comments |
|---|------------------------------------|--|
| 2/28/22 | 3/10/22 | Application deemed incomplete because a variety of items in the Code were not addressed including no mention of an anchor tenant. |
| 10/31/22 | 11/10/22 | Applicant deemed incomplete because Code items were not addressed including but not limited to landscaping, abandonment, maintenance, requirements related to location, concealment, and a sworn affidavit from T-Mobile regarding RF engineering items. |
| 12/30/22 and 2/2/23 | 2/3/23 | Application deemed incomplete due to a few outstanding question for Applicant. |
| 2/8/23 | 2/9/23 | Application deemed complete. |

Table 1: Summary of Review Timeline

Ground Compound Layout and Elevation Plans

The Applicant submitted a Ground Compound Layout Plan with minimal compound details. The proposed leased parcel is 6,400 square feet (80' x 80'). Within this leased area, there will be a proposed 50-foot by 50-foot compound to be enclosed by a 6-foot boarded fence with pre-fabricated pressure-treated wood boards on board fence panels. The layout plan drawing does not designate distinct areas for four total Service Providers but it appears that the ground equipment for four providers can be accommodated. There are plans for a utility pad-mounted transformer, a telco box and a utility H-frame, all for enabling utility connections. Shown also on the layout plan drawing is a 60-foot radius circle around the tower location, defined as the engineering-designed fall zone radius. See *Figure 2* depicting the proposed Layout Plan.

The Applicant provided a Tower Elevation Sketch showing a total of four (4) carrier arrays on the monopole support structure, *see Figure 3*. The centerline heights of the four carrier arrays are noted in the sketch as 193, 183, 173 and 163 feet AGL, although this may be a preliminary arrangement; however, according to the T-Mobile RF engineer, T-Mobile requested 180 feet as the centerline of its antennas which correlates roughly with the second antenna slot second from the top of the tower. The Applicant and/or T-Mobile should provide clarity on the exact proposed height of T-Mobile's antennas.

Although the Federal Aviation Administration ("FAA") is not requiring the installation of aviation obstruction lights on the tower, the County Ordinance requires dual-red lights at the mid-point of the tower and at the top of the tower, which are specified in the Applicant's plans, *see Figure 3*. The Applicant states that the top dual-red lights will flash at a rate not to exceed 20 flashes per minute (every three seconds), per the County Ordinance.

The County should be aware that the Application is for a *non-concealed monopole*, meaning that the antenna and auxiliary equipment proposed by the individual carriers would be mounted outside the structure. If the monopole is permitted and built as *non-concealed*, it may have the appearance of a *concealed* structure for an indeterminate length of time until the first

Wireless Provider, presumably T-Mobile, collocates¹ on the tower, but the tower would not be engineered as a concealed tower. In other words, while the tower is waiting for the first collocation, it should still be regarded as a non-concealed tower for permitting purposes. Thus, the first collocation can qualify as an *unsubstantial change* under Section 6409 of the Middle Class Tax Relief and Job Creation Act of 2012 because, being a non-concealed tower, no tower concealment aspects would be defeated by a first collocation meeting the requirements of an unsubstantial change. Thus, the first and, by extension, subsequent collocations can qualify for streamlined processing provided that all FCC rules and County ordinance provisions regulating eligible facility collocation/modification are followed. If the County, with the consent of the Applicant and the landowner, desires to legally prohibit the tower owner from ever increasing the tower height above 200 feet AGL through the eligible facility provisions of the FCC for administrative approval, the County could require the establishment of a restrictive covenant to run with the land.

Site Justification and Coverage

In order to confirm that the Applicant is qualified to submit a permit application for a new wireless communication facility, CityScape initially refers to the Telecommunications Act of 1996, the Brevard County ordinance as it applies to this application, and all other pertinent federal and state laws and any relevant historic factors that would impact our recommendations. Most important is the Applicant, which must be a licensed or unlicensed personal wireless service provider, as defined by the FCC, or its registered agent. In this case, the Applicant, as a tower company, is not a qualified service provider; however, a significant amount of the engineering documentation in the Application, including that which justifies the proposed facility, has been provided by T-Mobile, who is a qualified service provider. Therefore, Gulfstream Towers is deemed qualified to submit an application for this facility and is entitled to provisions of the relevant portions of Part 704 of the Telecommunications Act of 1996 (47 USC §332).

The proposed site is located about 1,300 feet east of the point where State Route 407 joins with State Route 528 in an 18.1-acre parcel. An RF Engineer for T-Mobile South LLC in the Orlando-Tampa Market, Jason Paulley, explained the need for a new facility in a notarized letter to County Planning & Development with the following statements:

(Edited) "The site is needed to improve road coverage and capacity. The next site west along SR528 is 6 miles west and has a 245' antenna center line [height]. The site also needs to cover 2 miles NE along SR407 and SE along SR528. The next T-Mobile site to the east has an [antenna height] AGL of 205'. T-Mobile's requested 180' AGL on this planned 199' tower is in line with surrounding site AGLs and needed for the inter-site distances present."

The above statement, together with T-Mobile's submitted documentation, meets the threshold required to justify the need for a new facility. CityScape can confirm a capacity gap with the Provider's supporting documentation, but CityScape, even with the supporting before/after propagation maps, see *Figures 4 and 5*, cannot confirm a significant coverage issue; according these maps, the coverage improvement is primarily an upgrade from in-vehicle

¹ The FCC ruled that "collocation" includes the *first* placement of transmission equipment on a "wireless tower" or "base station."

coverage to in-building residential coverage over unpopulated areas, thus resulting in no material new coverage. Nevertheless, the Wireless Provider must justify either a coverage gap or a capacity gap.

Generally, a Provider can increase its geographic service area with antennas mounted higher on the support structure. However, the ground equipment has a limit as to how many connection requests (phone calls, texts, internet access, etc.) it can process at any given time because the amount of RF spectrum available to a Provider is limited. As population growth and urban/suburban expansion occur, the demand for wireless service increases, and each wireless facility becomes less capable of meeting network service demands, even if the geographic service area does not change. In areas where wireless communication is intense and airtime minutes are high (typically in urban/suburban areas and along roads with high traffic levels), high volumes of connection requests will exceed the designed network capacity, resulting in busy signals, dropped calls and slow data speeds. To help remedy this situation, a Provider will build a new base station situated in between existing base stations that are approaching maximum capacity; the added base station is akin to a “relief valve” to which excess wireless traffic in the existing base stations’ service areas is offloaded.

Generally, new wireless communication facilities are roughly equidistant to nearby existing sites. However, network capacity problems and/or other factors may necessitate a facility that it is *not* equally spaced with respect to existing sites. In the case of capacity problems, when siting a new facility, consideration must be given to areas where connection traffic is overwhelming existing sites.

This is the primary purpose of the proposed facility, which is to improve T-Mobile’s existing service by providing additional capacity for subscriber travelers along State Roads 407 and 528 which otherwise would overwhelm existing T-Mobile sites to the northeast, east, southeast and west of the proposed site. This is especially important in times of incoming hurricanes because, as stated by the Applicant, the area to be served by the proposed facility encompasses major evacuation routes for motorists traveling in many directions. T-Mobile provided data volume utilization graphs indicating the need for a new support structure to which to offload data from the existing T-Mobile sites. Although some terminology appearing on the graphs is unknown to CityScape, the graphs do indicate that the levels of data handled by the existing nearby T-Mobile sites are on the threshold of exceeding their capacities. The capacity gap is established and it can be resolved by the proposed facility. Thus, CityScape confirms that a new facility can be justified on a lack of capacity basis alone. The remaining task is to determine if there are alternative solutions, which is discussed in the next section.

Because of the ever-increasing wireless demand mentioned above, it is reasonable to expect T-Mobile and other carriers to request additional sites in the Orlando market. As the number of personal wireless devices grows and new mobile device applications are introduced, it is clear that the “minutes” used by wireless devices will increase, all requiring an increase in the number of wireless facilities.

Regarding the justification for the proposed tower height, the T-Mobile RF engineer stated in his affidavit that 180-foot antenna centerline height is needed at the proposed site of the 199-foot tower, saying that this is “in line with surrounding [centerline heights] and needed for the inter-site distances present.” Only a Provider’s RF engineer is qualified to submit statements

for justifying the height and location of a new wireless facility and CityScape has determined these assessments to be true.

Alternative Sites Analysis

The analysis and our recommendations herein are limited to the specific information which can be directly attributed to T-Mobile. CityScape is reasonably comfortable accepting this information and intends to analyze the proposal as submitted and to determine if there are any another viable alternative locations allowing T-Mobile to meet their service objectives within the requirements of the Brevard County ordinance.

A reasonable search area map, also known as a “search ring” map, is a key element in assuring that a site is justified. T-Mobile **did not** provide its search area map despite requests by CityScape. CityScape then had to estimate the location and size of a circle representing the worst-case search area as follows: Based on the highest frequency band that T-Mobile operates on, that being 2500 MHz, we estimate that the average radius of the search area is one-half (0.5) mile. The selected site would likely be up to 0.75 mile from the center of the search area² (0.5 mile plus 0.25 mile for selection adaptability). Since the center of the search area is not known, it could be in any direction from the proposed site. Thus, we have estimated the worst-case search area as a circle of 1.5-miles radius (0.75 times 2) centered at the proposed site.

While collocation on an existing structure is preferred over new construction, currently the Applicant states this is not an option. According to Mr. Paulley’s supplemental letter dated December 29, 2022, there are no viable candidates for collocation in the proposed service area. Says Mr. Paulley, there are three existing towers west of the proposed site ranging in height from 20 to 28 feet, but these heights are inadequate for the service improvement needed, and CityScape agrees. CityScape has verified that there are no existing tall structures less than 1.5 miles within the proposed site, see *Figure 6*. Searching both public and private communication tower databases, Cityscape has determined and plotted on a Google Earth map all existing towers within a 4-mile radius of the proposed site, see *Figure 6*. The nearest structure, identified by the applicant, is 2.33 miles east of the proposed site shown in *Figure 6*, which is far beyond the search ring that may have been originally determined by the T-Mobile RF engineer. This site and two other sites within the 4-mile circle are existing T-Mobile sites; collocation on an existing T-Mobile to solve its capacity problem is neither practical nor beneficial. Thus, the Applicant appears to have met the preponderance of evidence threshold for justifying new construction for the proposed facility.

Concealed Tower Versus Non-Concealed Tower

Mr. Paulley, the T-Mobile RF engineer, in his affidavit addressed the option of constructing a concealed tower rather than a non-concealed tower, such as a monopole that resembles a flag pole with the antenna systems enclosed in 10-foot canisters mounted inside the monopole so as not to be visible. Mr. Paulley states: “Any concealed tower application that restricts the antenna equipment on the tower is not technically feasible, practical or justified given the location of the proposed wireless telecommunications facility.” This statement is confusing because the technical feasibility or practicality of a concealed monopole has nothing to do with the location of the site. If the meaning of the statement is that it is not technically feasible or practical to use a concealment monopole, CityScape does not agree, as this is a

2 The center of a Search Area is rarely at or in the immediate vicinity of the selected site.

commonly used concealment solution for all the major Providers, including T-Mobile. If the inference is that the extreme rural nature of the proposed site does not justify the use of a concealed monopole, then this is plausible argument against building a concealed tower.

One disadvantage of the canister system for a concealed monopole is that only up to eight antennas can be mounted in one 10-foot canister, while in typical Wireless Provider installations two canisters with a total height of 20 feet may be needed. This requires more vertical space per Provider on the tower and thus lowers the centerline of the antennas for each provider. Taking the subject proposal as an example, the fourth collocation spot down from the tower top could have an antenna centerline height as low as 123 feet AGL instead of the 163 feet AGL elevation that is possible using exterior platform mounts. Whenever possible, a multi-carrier wireless tower should be designed so that all carriers have similarity of antenna elevations. Otherwise, there is a disparity of wireless coverage among the carriers.

Given that the proposed location is in a remote wetland and conservation area, for the reasons stated above, a non-concealed tower makes more sense from an engineering standpoint, and it can be argued that a non-concealed tower would not have a substantial visual impact. CityScape defers to the County to make this determination.

FAA Notification

The FAA's Determination of No Hazard to Air Navigation, dated February 9, 2022, for a tower height of 199 feet is included in the Application; however, after the issue date of the Notice, the Applicant changed the location of the tower, moving it slightly southwest in order to meet the minimum 400-foot setback from the property line to the east. It is suggested that the Applicant notify the FAA, on a 7460-1 form, of the new geographic coordinates of the proposed tower.

Landscape Buffering

The County has the right under its existing Ordinance to require visual screening and/or landscaping that the County deems necessary to minimize the aesthetic impact of this facility. The Applicant included a plan in the application to address landscaping to visually obscure the fenced tower and/or ground compound which entails a 15-foot wide perimeter buffer of a mix of shade trees and shrubs. The Applicant may be able to rely on the natural woods that mostly surround the leased area so that a minimized landscaping plan may be possible. In any case, the landscape plan is subject to the approval of the County. It should be noted, however, that if the general area around the subject parcel is developed in the future, the County would not be allowed to require landscaping retroactively.

Fall Zone and Structural

As referenced previously, and as seen on attached *Figure 3*, there is a 60-foot circle around the monopole and the 50' by 50' compound, designated as a 60-foot Engineered Fall Zone Radius. Design sheets from Sabre Industries, under cover of an undated letter from the Applicant, has general information about a monopole supporting the equipment of four collocators plus three microwave dish antennas, upon order would comply with ANSI/TIA-222-H, Risk Category II, Exposure Category C, and Topographic Category 1. The Sabre document does not mention the engineered fall radius (a/k/a "breakpoint technology"), but the Applicant's narrative statement says that the fall radius would be 60 feet. While the application makes references to a structural analysis, until the particulars of the proposal are approved and finalized

and a permit is issued, a complete structural analysis would be premature, but nevertheless should be provided to the County before construction commences.

Conclusions and Recommendations

CityScape studied all submitted information to determine if there are any alternatives to the proposed construction of a new tower. Based on the submitted information as well as CityScape's own investigations, there are no existing towers on which to collocate that would be feasible as solutions to T-Mobile's service gap, and the tower height is appropriate and is similar to many other Providers' wireless towers serving the County.

Should the County approve the subject application, CityScape recommends that the following conditions be required prior to permitting:

1. Applicant should provide final Construction Documents and Site Plans for review; and
2. Applicant should obtain, and provide proof of, NEPA and SHPO approvals for the new structure; and,
3. Applicant should provide a Structural Analysis based on the final construction parameters with the monopole elevation at 193 feet, signed and sealed by a Florida Registered Professional Engineer; and,
4. All feed lines shall be installed within the support structure, and the antenna ports shall be sealed in a manner to prevent access by birds and other wildlife.

I certify that, to the best of our knowledge, all of the information contained herein is accurate at the time of this report. CityScape only works exclusively for public entities and has unbiased opinions. CityScape does not provide any services or is associated in any way with any entity in the commercial wireless industry and therefore all recommendations are based on technical merits without prejudice per prevailing laws and codes.

Respectfully submitted,



B. Benjamin Evans
Senior Project Engineer
CityScape Consultants, Inc.



Susan Rabold
Project Manager
CityScape Consultants, Inc.

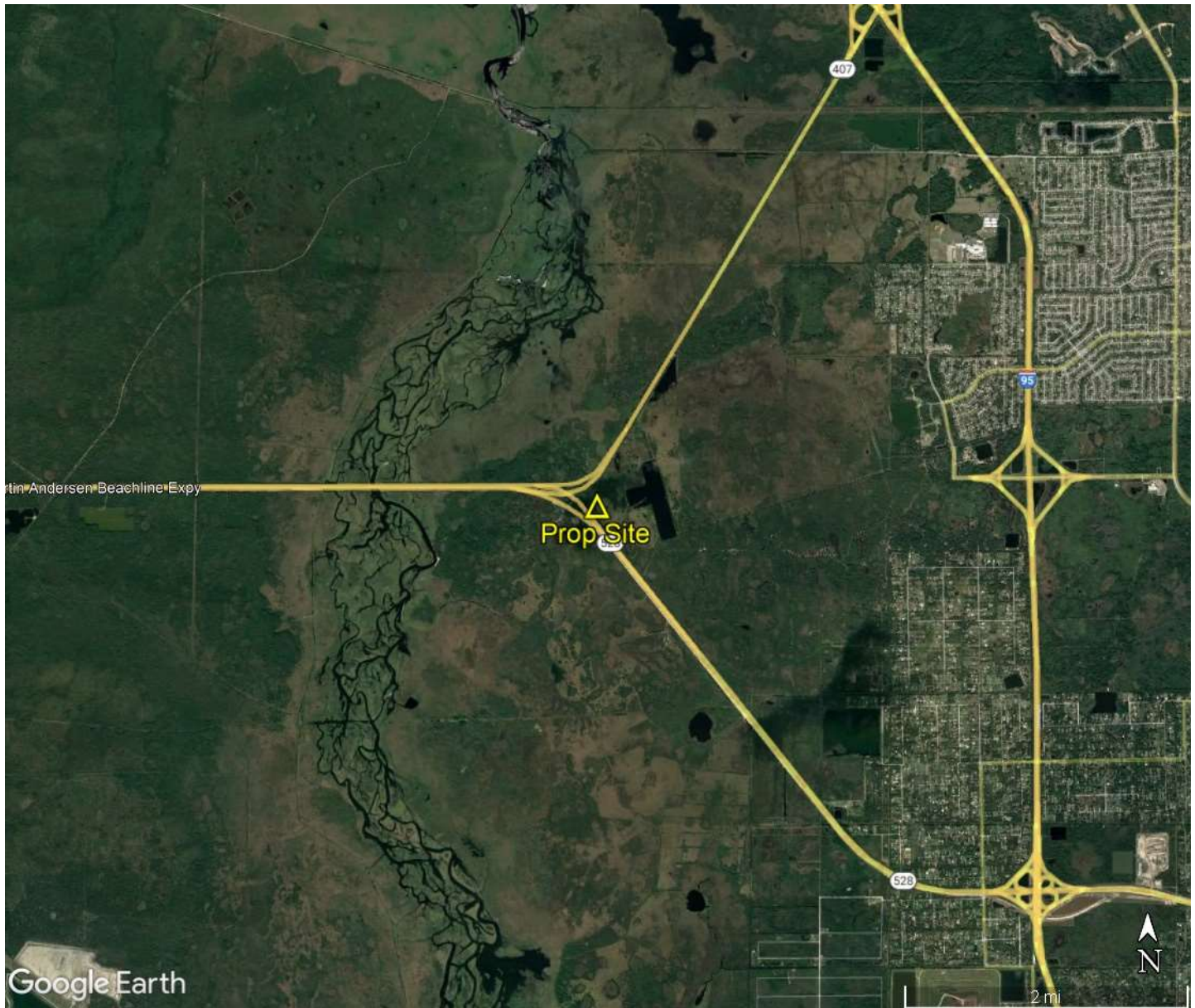


Figure 1 – Site Location Map

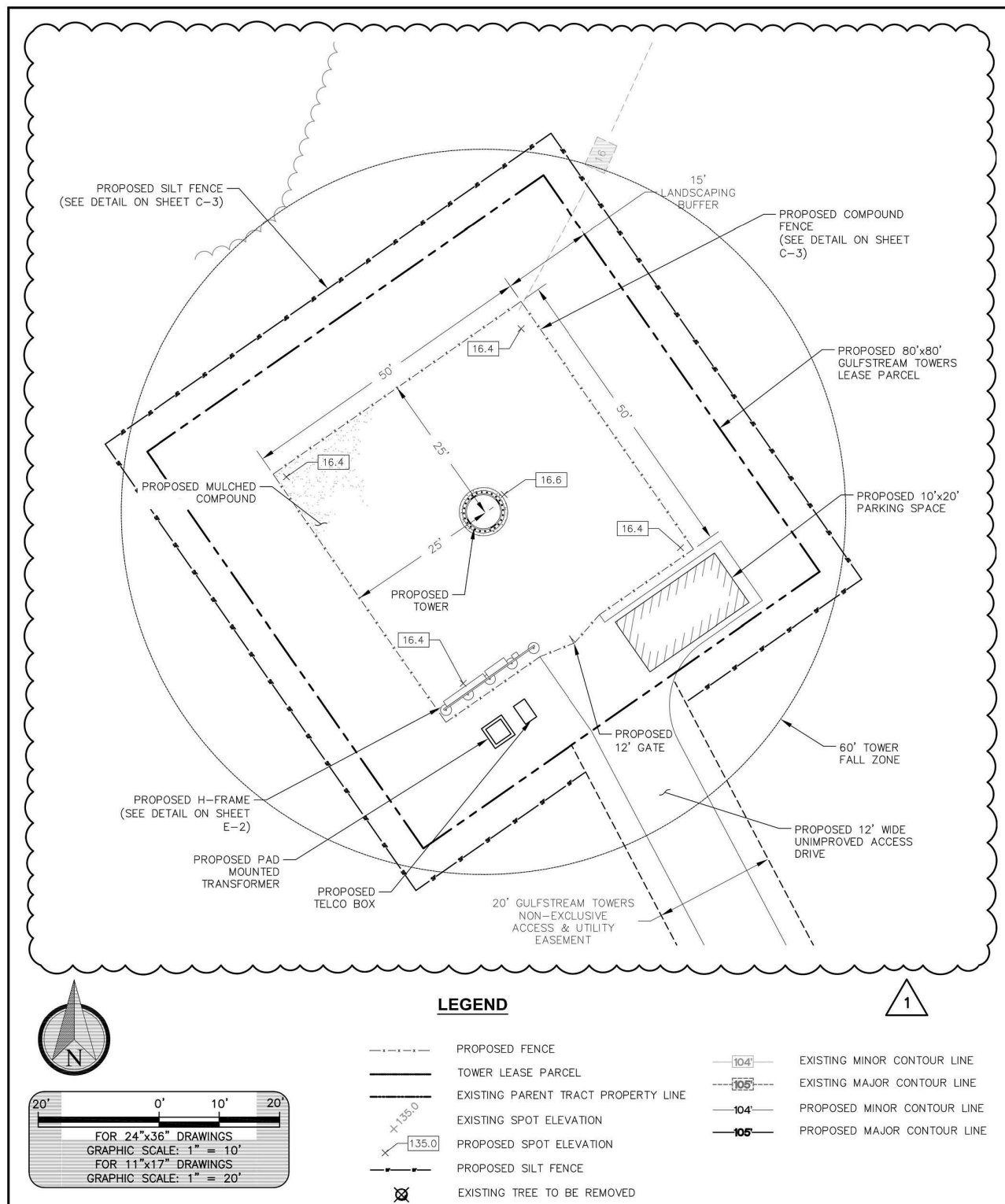


Figure 2 – Leased Parcel Plan and Proposed Compound

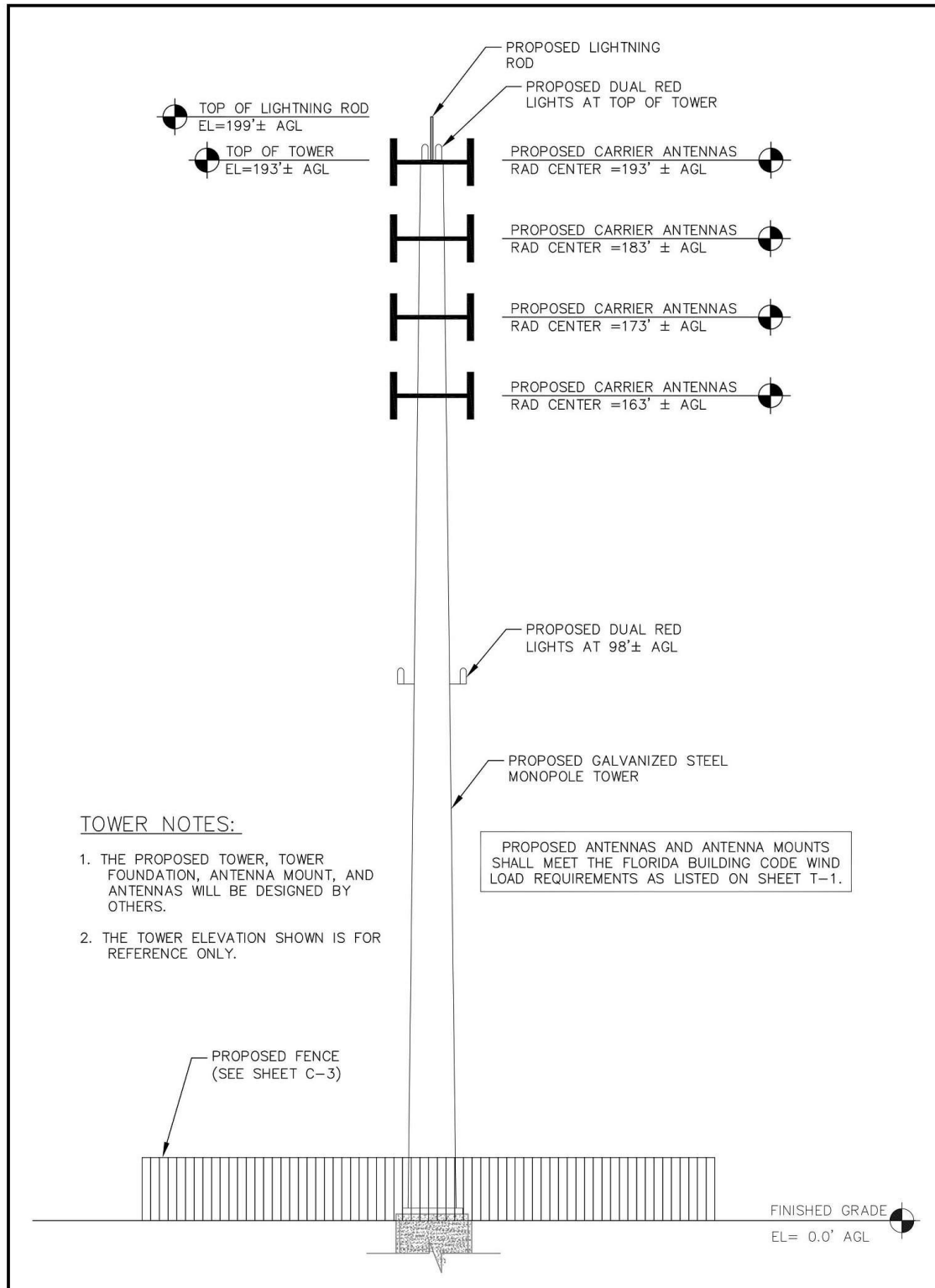


Figure 3 – Elevation Sketch of Proposed Monopole Tower

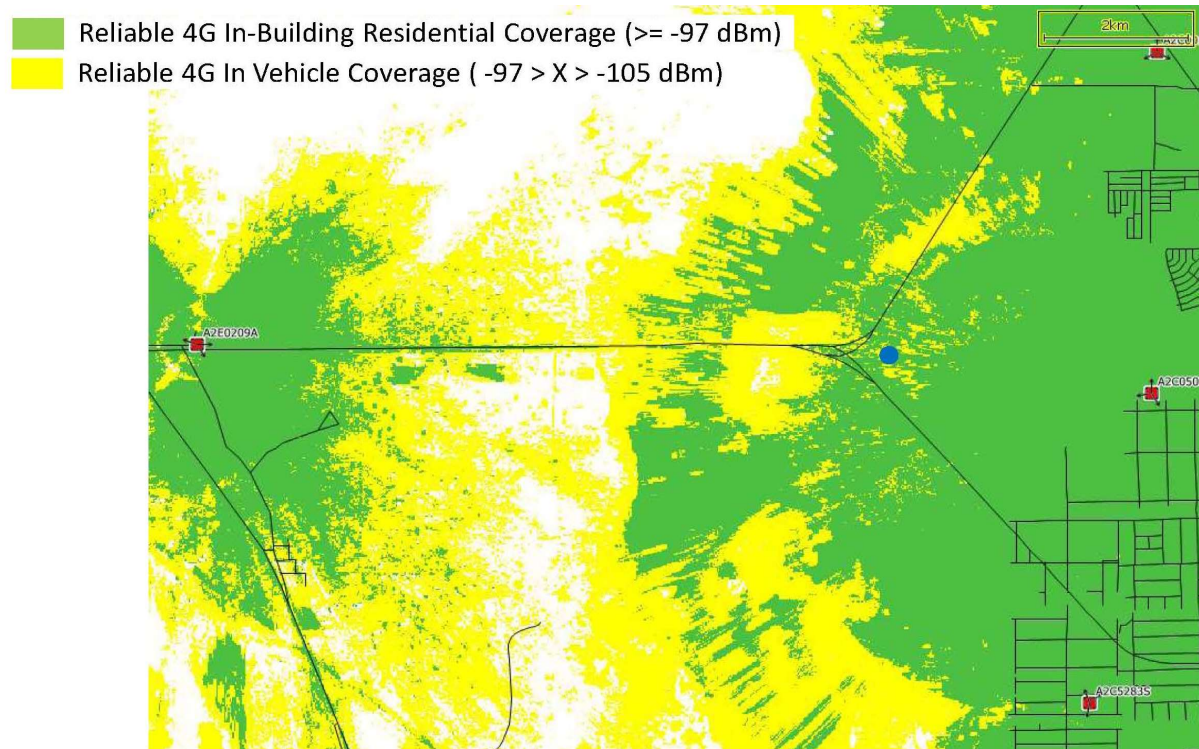


Figure 4 – Existing T-Mobile Coverage

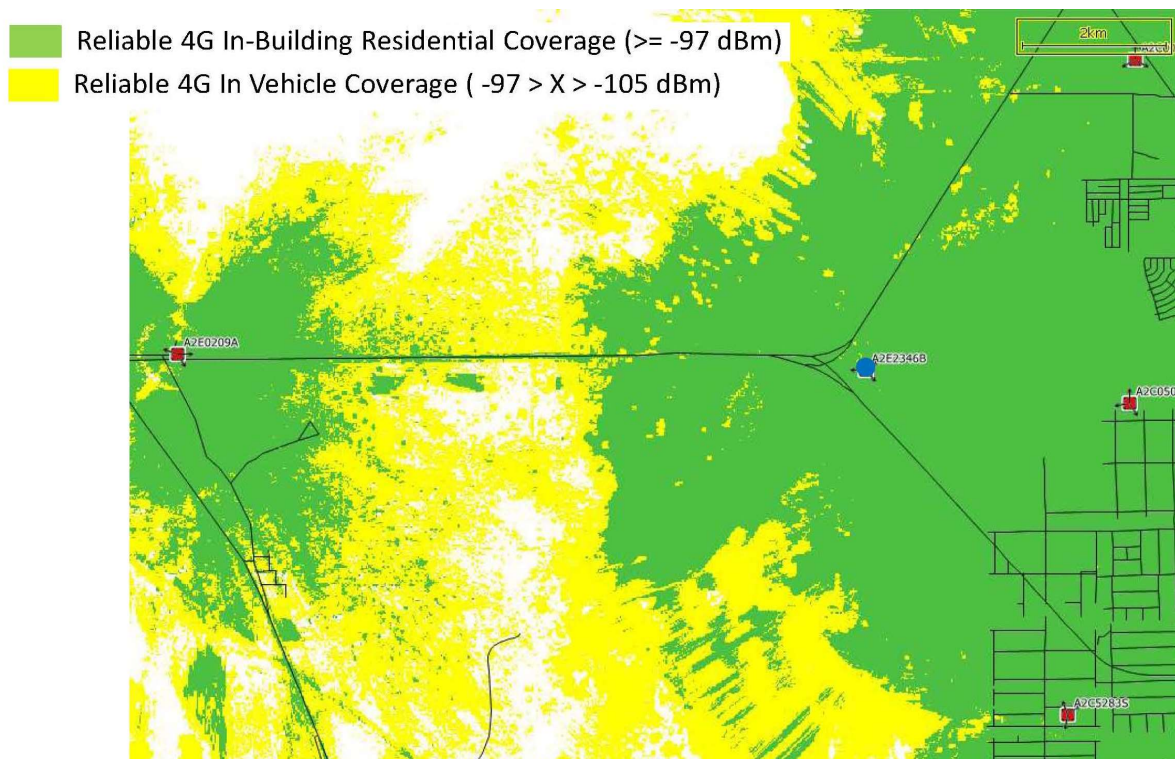


Figure 5 – Proposed T-Mobile Coverage

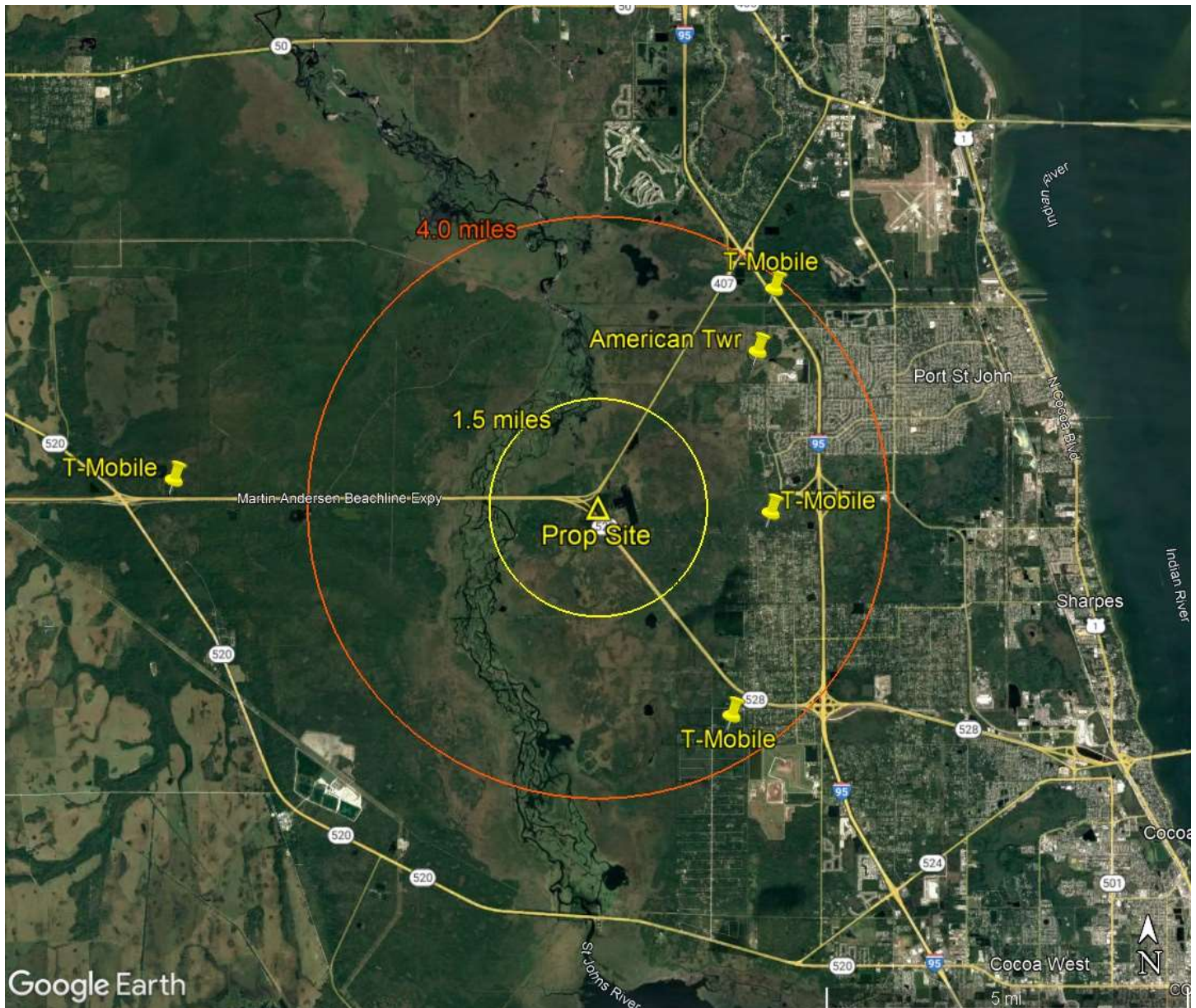


Figure 6 – Proposed Site and Nearby Existing Wireless Sites