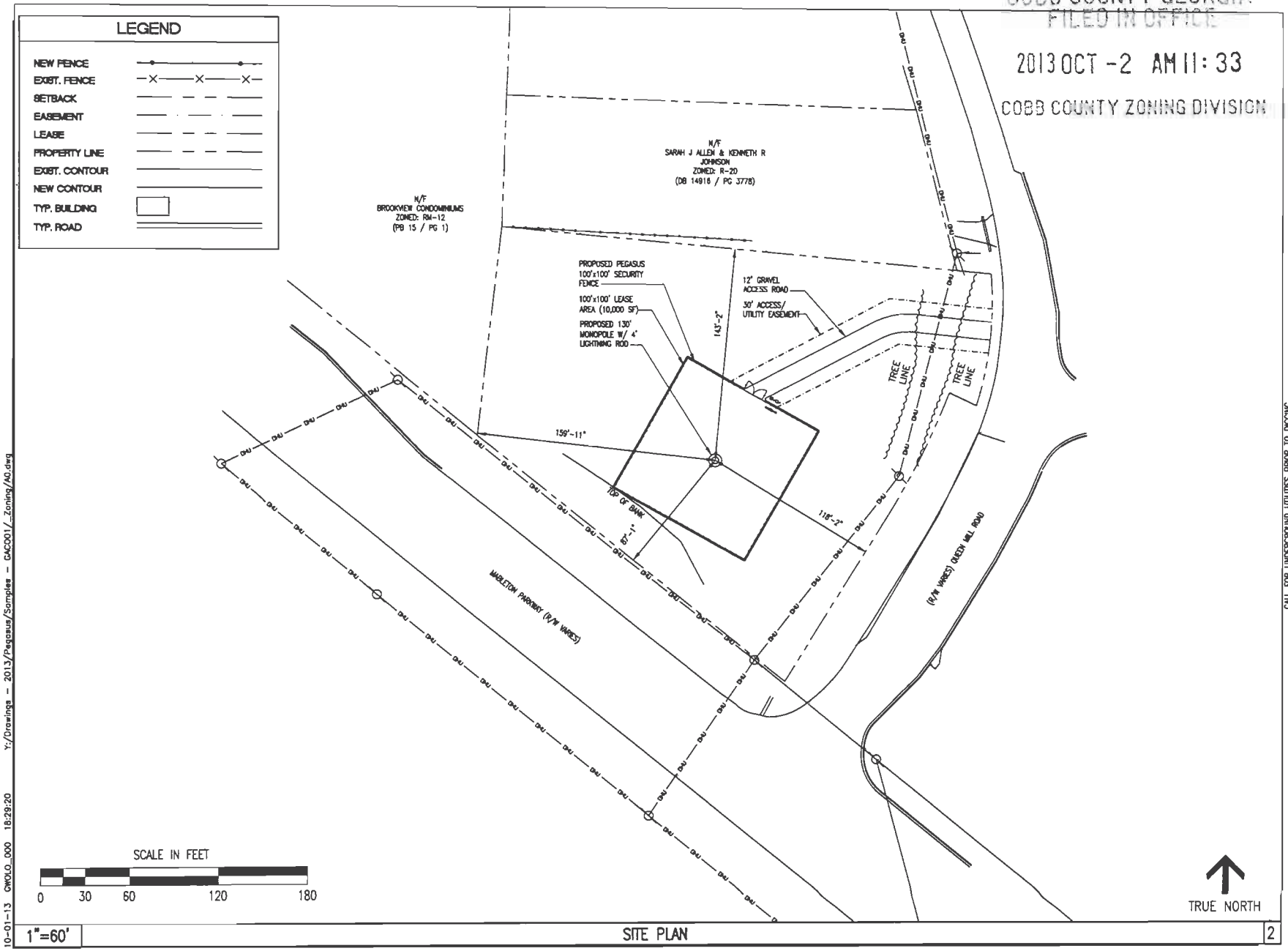


1"=60'

SITE PLAN

2

PEGASUSTOWERS
PEGASUS TOWER CO., LLC
548 EAST RIVERSIDE DRIVE SUITE D
NORTH TAZEWELL, VA 24630
TEL: (276) 964-7416
FAX: (276) 963-2567

BC
architects
engineers
9881 COLUMBIA PIKE, SUITE 200
FALLS CHURCH, VA 22041-2886
TEL: (703) 671-8000
FAX: (703) 671-4300

SHEET REVISION

NO.	DESCRIPTION	BY	DATE
1			
2			
3			
4			
5			

SITE NUMBER: GACO
SITE NAME: SAMPL
SITE ADDRESS: 6900 BLOCK MABLETON MABLETON, GA

CALL FOR UNDERGROUND UTILITIES PRIOR TO DIGGING

STAMP HERE:

STATE OF GEORGIA
REGISTERED
No. 26087
PROFESSIONAL
10.1.13
ENGINEER
CHRISTOPHER D. MORIN

DRAWN BY:	GMW
CHECKED BY:	MB
DATE DRAWN:	10-01-13
SUBMISSION:	ZONING

SHEET TITLE:

SITE PLAN

SHEET NUMBER: A-0

REV. 1

SLUP-13
(2013)

10-01-13 GWOLO_000 18:29:20 Y:/Drawings - 2013/Pegasus/Samples - GAC001/_Zoning/A0.dwg

APPLICANT: Pegasus Tower Company, LLC

276-963-1818

REPRESENTATIVE: Tony Stewart

864-915-1122

TITLEHOLDER: Carter T. Samples, Jr. and Mildred B. Samples

PROPERTY LOCATION: Northwest intersection of Mableton Parkway and Queen Mill Road

ACCESS TO PROPERTY: Queen Mill Road

PHYSICAL CHARACTERISTICS TO SITE: Wooded, undeveloped

PETITION NO: SLUP-13

HEARING DATE (PC): 12-03-13

HEARING DATE (BOC): 12-17-13

PRESENT ZONING: GC, R-20

PROPOSED ZONING: Special Land Use Permit

PROPOSED USE: New 130 foot Monopole Telecommunications Tower

SIZE OF TRACT: 1.0573 acres

DISTRICT: 18

LAND LOT(S): 406, 497

PARCEL(S): 8

TAXES: PAID X **DUE** _____

COMMISSION DISTRICT: 4

CONTIGUOUS ZONING/DEVELOPMENT

NORTH: R-20/Single-family house

SOUTH: GC/Motorcycle Shop and R-20/Single-family house

EAST: CRC/Undeveloped and LI/Office-Warehouse

WEST: RM-12/Brookview Condos

OPPOSITION: NO. OPPOSED____PETITION NO:_____SPOKESMAN _____

PLANNING COMMISSION RECOMMENDATION

APPROVED_____MOTION BY_____

REJECTED_____SECONDED_____

HELD_____CARRIED_____

BOARD OF COMMISSIONERS DECISION

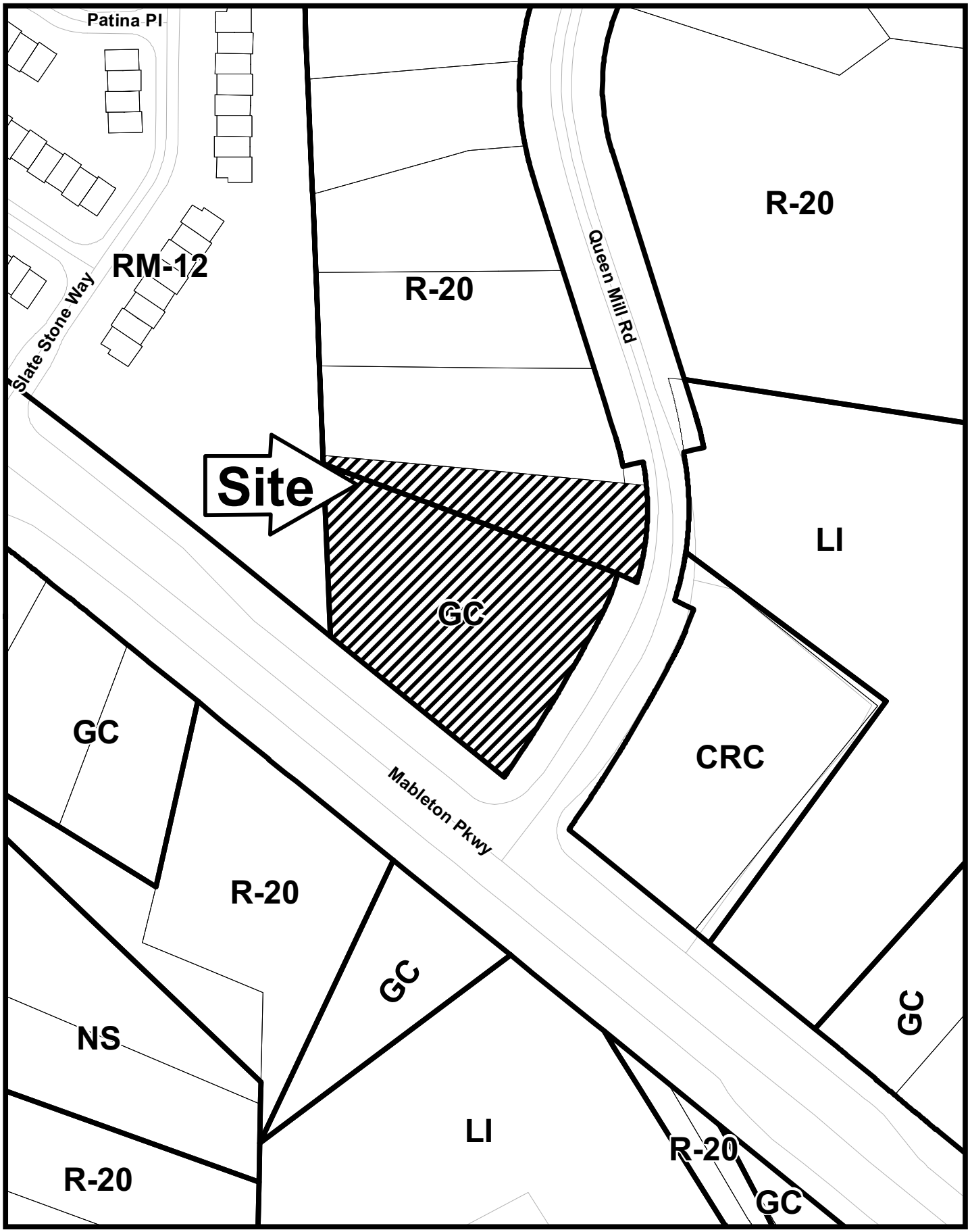
APPROVED_____MOTION BY_____

REJECTED_____SECONDED_____

HELD_____CARRIED_____

STIPULATIONS:

SLUP-13



This map is provided for display and planning purposes only. It is not meant to be a legal description.

0 100 200 Feet

City Boundary

Zoning Boundary

APPLICANT: Pegasus Tower Company, LLC **PETITION NO.:** SLUP-13

PRESENT ZONING: GC **PETITION FOR:** SLUP

* *

ZONING COMMENTS: **Staff Member Responsible:** Jason A. Campbell

Applicant is requesting a Special Land Use Permit for the purpose of erecting a wireless telecommunications tower with associated equipment. The facility will consist of a 130-foot monopole tower on a foundation, enclosed within a graveled and secured fenced compound. In addition, a 12-foot access road will be constructed from Queen Mill Road to the tower facility. The tower is a proposed to be situated on a 100 foot by 100 foot lease area within the 1.0573-acre site that is currently undeveloped.

Applicant's proposal adheres to the requirements of Sec. 134-273 in setback from residential properties (equal to height of tower plus 10%) and a security fence around the perimeter of the leased area.

The County's contracted consultant, CityScape Consultants, Inc. has provided an analysis that confirms the applicant's demonstrated need for the proposed tower. A copy of the consultant's report from CityScape is attached to this analysis for your review.

Historic Preservation: No comment.

Cemetery Preservation: No comment.

* *

WATER & SEWER COMMENTS:

No comments.

* *

TRAFFIC COMMENTS:

Recommend a FAA Airspace Study.

Recommend applicant be required to meet all Cobb County Development Standards and Ordinances related to project improvements.

* *

FIRE COMMENTS:

After analyzing the information presented for a Preliminary Review, the Cobb County Fire Marshal's Office is confident that all other items can be addressed during the Plan Review Stage.

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STAFF RECOMMENDATIONS

SLUP-13 (2013) PEGASUS TOWER COMPANY, LLC

Applicant is requesting a Special Land Use Permit for the purpose of erecting a wireless telecommunications tower with associated equipment. The facility will consist of a 130-foot monopole tower on a foundation, enclosed within a graveled and secured fenced compound. The application for this Special Land Use Permit has been deemed justified by the consultant's report based on meeting the requirements for such use.

Applicant's proposal adheres to the requirements of Sec. 134-273 in setback from residential properties (equal to height of tower plus 10%) and a security fence around the perimeter of the leased area.

The County's contracted consultant, CityScape Consultants, Inc. has provided an analysis that confirms the applicant's demonstrated need for the proposed tower. CityScape anticipates this facility should be sufficient to allow the necessary improvement of service to the wireless service providers within this area into the foreseeable future, and should be approved with the following conditions:

1. The applicant modify the support structure to a monopine type tower;
2. The applicant shall submit an as built photographic representation of the proposed monopine for approval;
3. The applicant shall design the support structure to accommodate no less than a total of four antenna arras of like design;
4. The applicant provide a detailed ground compound construction drawing, which may add more conditions;
5. The applicant submit prior to permitting satisfactory NEPA and SHPO documentation; and
6. All feed line access ports shall sealed in a manner to prevent access by birds and other wildlife.

Based upon the above analysis as well as the Site Review provided by the County consultant, CityScape, Staff recommends APPROVAL subject to the following conditions:

- Site Plan received by the Zoning Division on October 2, 2013;
- The six stipulations listed above taken from the consultant's report;
- The height of the tower to be no more than 130 feet;
- Department of Transportation comments and recommendations.

The recommendations made by the Planning and Zoning Staff are only the opinions of the Planning and Zoning Staff and are by no means the final decision. The Cobb County Board of Commissioners makes the final decisions on all Rezoning and Land Use Permits at an advertised public hearing.

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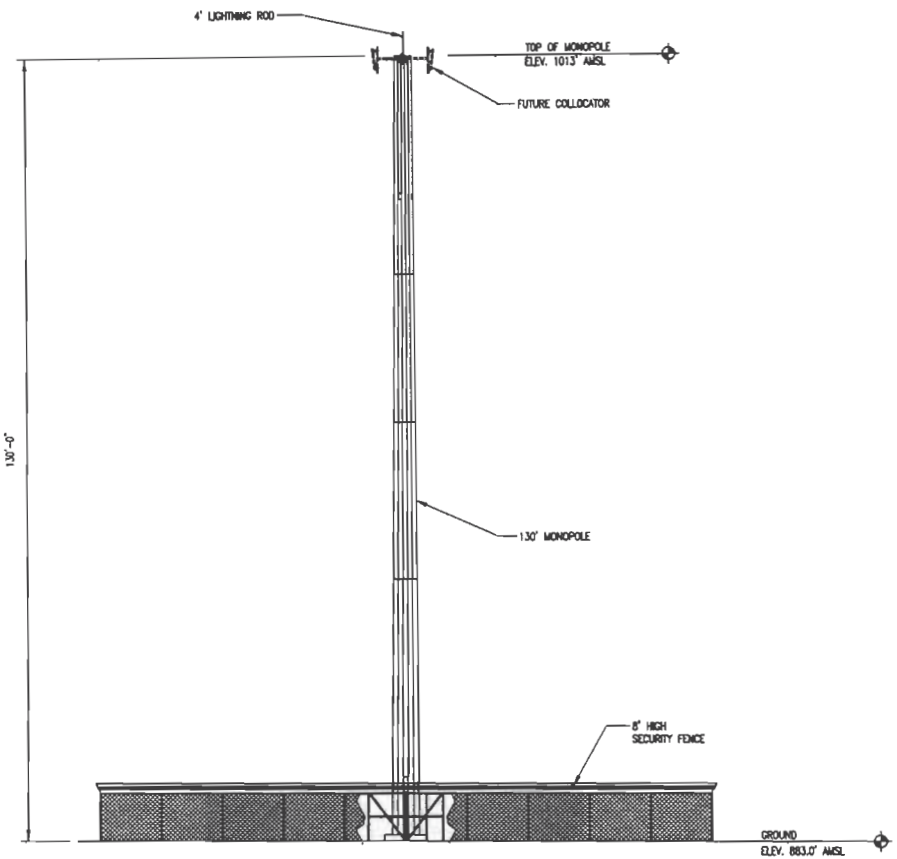
SLUP-13 (2013)
Statement of
Intent

STATEMENT OF INTENT

Pegasus Tower Company, LLC is proposing to construct a new 130' Monopole tower, to provide new cellular coverage in Cobb County, GA. The facility will consist of a 130' Monopole Tower on a Foundation, enclosed within a graveled and secured fenced compound. A 12' access road will be constructed from Queens Mill Road to the tower facility for access. Power and Telco Utilities services will be brought to the site and will be installed per provider, state, and local requirements.



SCALE IN FEET

0 10 20 40 60

1"=20'

TOWER ELEVATION 1

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CALL FOR UNDERGROUND UTILITIES PRIOR TO DIGGING

PEGASUSTOWER
PEGASUS TOWER CO., LLC
548 EAST RIVERSIDE DRIVE SUITE D
NORTH TAZEWELL, VA 24630
TEL: (276) 964-7416
FAX: (276) 963-2567

BC
architects
engineers
5661 COLUMBIA PIKE, SUITE 200
FALLS CHURCH, VA 22041-2888
TEL: (703) 671-4300
FAX: (703) 671-4300

SHEET REVISION

NO.	DESCRIPTION	BY	DATE
1			
2			
3			
4			
5			
6			

SITE NUMBER:
GAC001

SITE NAME:
SAMPLES

SITE ADDRESS:
8900 BLOCK OF
MABLETON PKWY
MABLETON, GA 30126

STAMP HERE:

STATE OF GEORGIA
REGISTERED
No. 28087
PROFESSIONAL
10.1.13
ENGINEER
CHRISTOPHER D. MORIN

DRAWN BY:	GMW
CHECKED BY:	MB
DATE DRAWN:	10-01-13
SUBMISSION:	ZONING

SHEET TITLE:
TOWER ELEVATION

SHEET NUMBER:
A-2

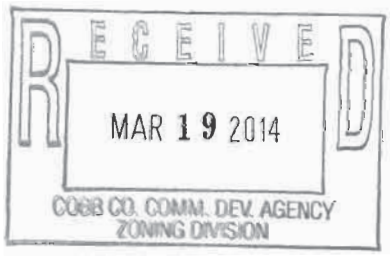
SLUP-13 (2013)
Tower Elevation

SLUP-13 (2013)
Consultant's Report

State of Georgia
Telecommunications Site Review
New Facility

CityScape Consultants, Inc.
7050 West Palmetto Park Road #15-652
Boca Raton, FL 33433
Tel: 877.438-2851 Fax: 877.220-4593

March 18, 2014



Mr. John Pederson
Cobb County Zoning Division Manager
191 Lawrence Street, Suite 300
Marietta, GA 30060

RE: AT&T Mobility Application
Cobb County, Georgia

Dear Mr. Pederson,

At your request on behalf of Cobb County, Georgia, CityScape Consultants, in its capacity as telecommunications consultant for the County, has considered the merits of an application submitted by AT&T Mobility ("Applicant"), to construct a new one hundred thirty (130) foot Monopole type tower. The facility is intended to accommodate the antennas of up to four (4) wireless service providers. The proposed facility will be owned by Pegasus Towers, Inc., the ground area is owned by Carter T. Samples & Mildred B. Samples and is located at 6900 Mapleton Parkway in Cobb County Georgia, see *figure 1*.

This application for a new antenna support structure and is intended to initially supply antenna space for AT&T Mobility and additional wireless service collocations. AT&T intends to improve reliability of their general service and to upgrade the facility for advancing technologies. This application qualifies under the Telecommunications Act of 1996. The County must make a qualified decision as to the approval or denial for this application based on the information submitted. CityScape has reviewed all of the documents to assure the necessary federal, state and county codes and regulations are met, and we will describe our method and reasoning of the information along with considerations of any existing support structures that could be utilized to reasonably duplicate the intended service area.

CityScape recognizes that Cobb County is a high target location for upgraded technologies and has become a rapid growth area for new wireless services. The County will be in need of more elevated support structures in the future to accommodate the five FCC licensed carriers.

The Applicant has proposed a one hundred thirty foot monopole design tower, see *figure 2*. A monopole does have some advantages such as normally allowing a single carrier to utilize a single antenna elevation whereas some concealed facilities, such as flagpoles or slick-sticks (flagpole without the flag) will require some carriers to use more than a single antenna elevation which will reduce the total number of collocations at a site. In this situation the need for some level of concealment is heightened. The best case would be a recommendation of an approved monopine installation. The height is limited by the proximity of the Fulton County Airport. Runway 14 is 4533 feet from the site.

CityScape reviewed the application submittals from AT&T to determine what exists and what is required for the carrier to provide the service as mandated by the Federal Communications Commission. Making a qualified determination of need for new wireless services requires an understanding of the current conditions along with the projected network deployment concepts as are described in the following information. From this information and experience CityScape can offer an opinion and recommendations as to the validly of this application.

The proposed location is a highly traveled corridor and has substantial local residents surrounding the site, see *figure 3*. The newer targets for wireless services is neighborhood and getting the improved and especially the advanced new high speed data service into the very places people are located. As the nation's infrastructure is being converted to fiber-optic over the existing copper wire the benefits of the cellular backbone will become more obvious.

The future is all wireless technology; Cable/Satellite TV, newspapers, local television, 1st run movies, traffic information and every type of entertainment; plus home computers/laptops will be interconnected to a cell tower near you. The list of uses would more than fill up this report the public demand is already here, and the wireless infrastructure is not yet ready.

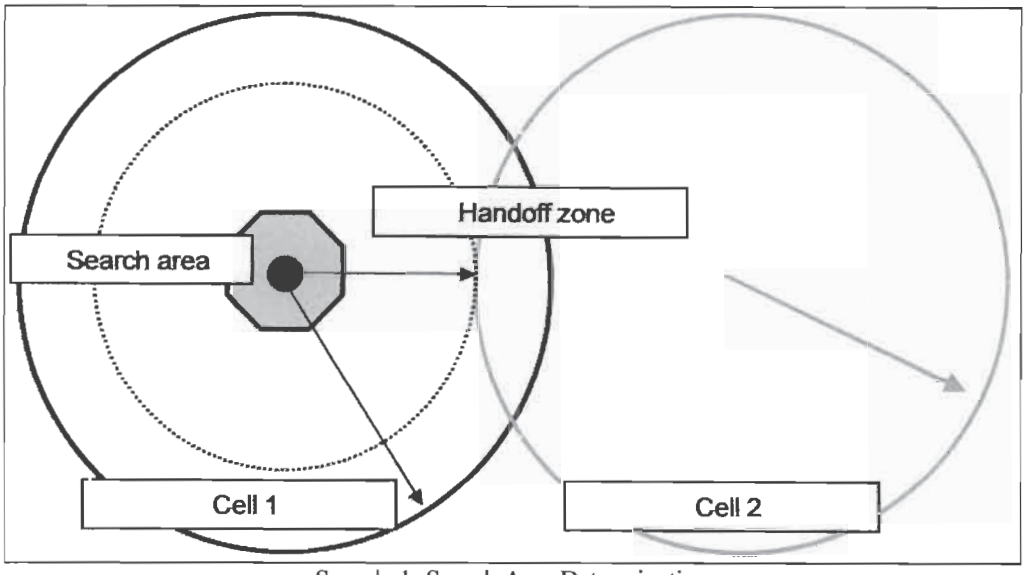
All wireless communications systems depend on the concept of resource re-use to achieve their great capacities. With some technologies, the individual channel frequencies are reused every few cells, but not too closely, since interference would result. In other systems, power from one base station interferes with the users on another, impacting network capacity. Therefore, it is undesirable for the wireless phones to communicate with more than a few base stations simultaneously.

Cobb County has four types of wireless service within the county, Wireless Broadband (Wi-Fi, WI-Max), Cellular (AT&T, Verizon, US Cellular), PCS (AT&T, Sprint, T-Mobile, Verizon) and EMSR (Nextel). These service providers attain coverage through ground equipment base stations and antennas mounted on towers or other elevated structures and buildings. The height and location of the elevated antenna platform is critical to two aspects of radio frequency (RF) engineering. The first of these is wireless network coverage.

Generally, the higher the antenna is mounted on the support structure, the farther the wireless signal penetrates a defined geographic area. This is the current status in Cobb County. In the future the County can anticipate an increased number of sites due to capacity limitations. When growth in the number of subscribers becomes a reality, the airtime minutes will expand and facilities become challenged to keep up with the growth. Caller volume will exceed the designed network capacity, resulting in busy signals or "no service" messages. To help remedy this situation, the antenna heights are mounted at lower elevations than would be necessary for coverage.

In the wireless system evolution, a provider will initially provide service with a few coverage base stations with relatively tall antenna elevations to maximize the "footprint" for minimal cost. Cobb County is presently in the increased-level stage of wireless deployment and primary concern includes reducing over-capacity system overloading and the transition to Fourth Generation (4G) technology. As subscriber totals grow, and network capacity for each base station is maximized, antennas must be lowered and the areas in between the former "tall" base stations will be filled in with lower-antenna or "capacity" base stations.

Such a stipulation is not difficult to achieve in a new system. In most cities and in all rural areas, wireless providers seek to maximize height in new systems in order to provide continuous coverage at the least expense to the provider. Yet, in urban-to-suburban areas, as demand increases, the base stations become less capable of meeting network objectives and wireless providers deploy antennas mounted at lower elevations.



Sample 1: Search Area Determination
The hexagonal search areas radius is one-quarter of the radius of the cells coverage less a 20 percent handoff overlap.

AT&T Application Specifics

Specifically, the undersigned has evaluated this AT&T Mobility proposal from the following perspectives: That,

1. The proposed facility will complement new network deployment and will accelerate the ability for all wireless services to further expand into Cobb County; and,
2. There is no other available support structure that can be utilized; and,
3. The Applicant has followed the guidelines of the Telecommunications Act of 1996 and all applicable aspects of the Cobb County Ordinance; and,
4. All designs and plans for the proposed new facilities were developed according to accepted practices of RF propagation engineering and the persons completing all work are sufficiently qualified within their disciplines.

In order to confirm the applicant is in compliance with good engineering practice, and the addition of a new facility is in concert with the desires and requirements of the County, the State and the Federal governments, we must learn of the intended purpose. Accordingly this facility is planned to improve AT&T service in all directions outward from the intersection of Mapleton Parkway and Queen Mill Road, but the areas has a substantial commercial population and the surrounding area has a high apartment concentration. So a base station should be located within a geographic distance from this center point. The industry term is called a search ring. AT&T supplied their search ring as shown in *Figure 4.* Therefore there should be a confirmation that the search ring is consistent with RF practices and facility design. These search areas are usually circles of approximately one-quarter the radius of the proposed cell. In practice it is fairly simple to determine whether the search area radius is reasonable. The distance from the closest existing site is determined, halved, and a handoff "overlap" of about 20 percent is added. One fourth of this distance is the search area radius. The search ring is determined by general mathematic formulas and graphically described in Sample 1 above.

A reasonable search area location is a key element in assuring that a site is justified. Generally, new wireless communication facilities are equally spaced with respect to existing sites. However, terrain, network capacity and other issues may necessitate a facility that it is *not* equally spaced with respect to existing sites. CityScape utilized propagation software that models the network deployment capabilities. .

Although the search ring is properly determined, CityScape did search for any other facilities that are reasonably within the targeted area and may need further investigation. There was one potential location found. This possible location is an existing American Tower facility located 3535 feet south from the search ring or 3642 feet south from the proposed location, see *figure 5*. The undersigned studied carefully the potential use of this existing tower and found the Applicant has some level of service at that location from an adjacent site to the Southeast of the American Tower site specifically directed into the Six Flags Over Georgia Center, and the use of the American Tower site would leave a substantial gap in the area north of the search ring. Without a Wireless Master Plan that would consolidate facilities the federal law will override local ordinances resulting in more towers than would be necessary under a comprehensive plan. Therefore it is our conclusion an additional tower is justified in this general location.

AT&T submitted a map showing of the existing service area and is shown in *figure 6*. The projected improvements are demonstrated in the submittal shown as *figure 7*.

The findings are clear and the threshold of proof for a new support structure has been achieved to justify need of a new facility in this general area. CityScape anticipates this facility should be sufficient to allow the necessary improvement of service to the wireless service providers within this area into the foreseeable future, and should be approved with the following conditions:

1. The Applicant modify the support structure to a monopine type tower; and ,
2. The Applicant shall submit an as built photographic representation of the proposed monopine for approval; and,
3. The Applicant shall design the support structure to accommodate no less than a total of four (4) antenna arras of like design; and,
4. The Applicant provide a detailed ground compound construction drawing, which may add more conditions; and,
5. The Applicant submit prior to permitting satisfactory NEPA and SHPO documentation; and,
6. All feed line access ports shall be sealed in a manner to prevent access by birds and other wildlife.

Respectfully submitted,

Richard L. Edwards
FCC Licensed
PCIA Certified
CityScape Consultants, Inc.

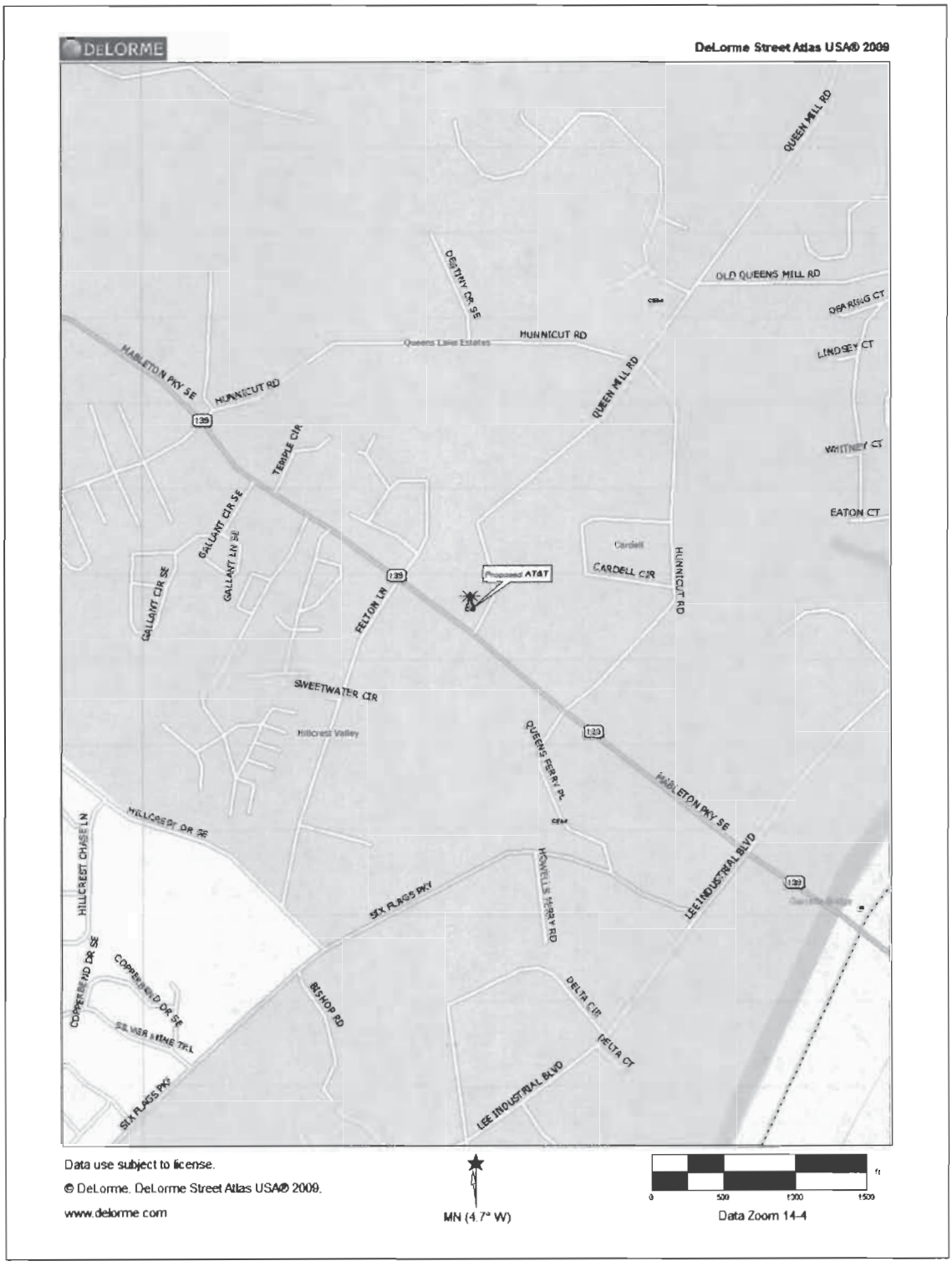


Figure 1. Proposed Facility Location

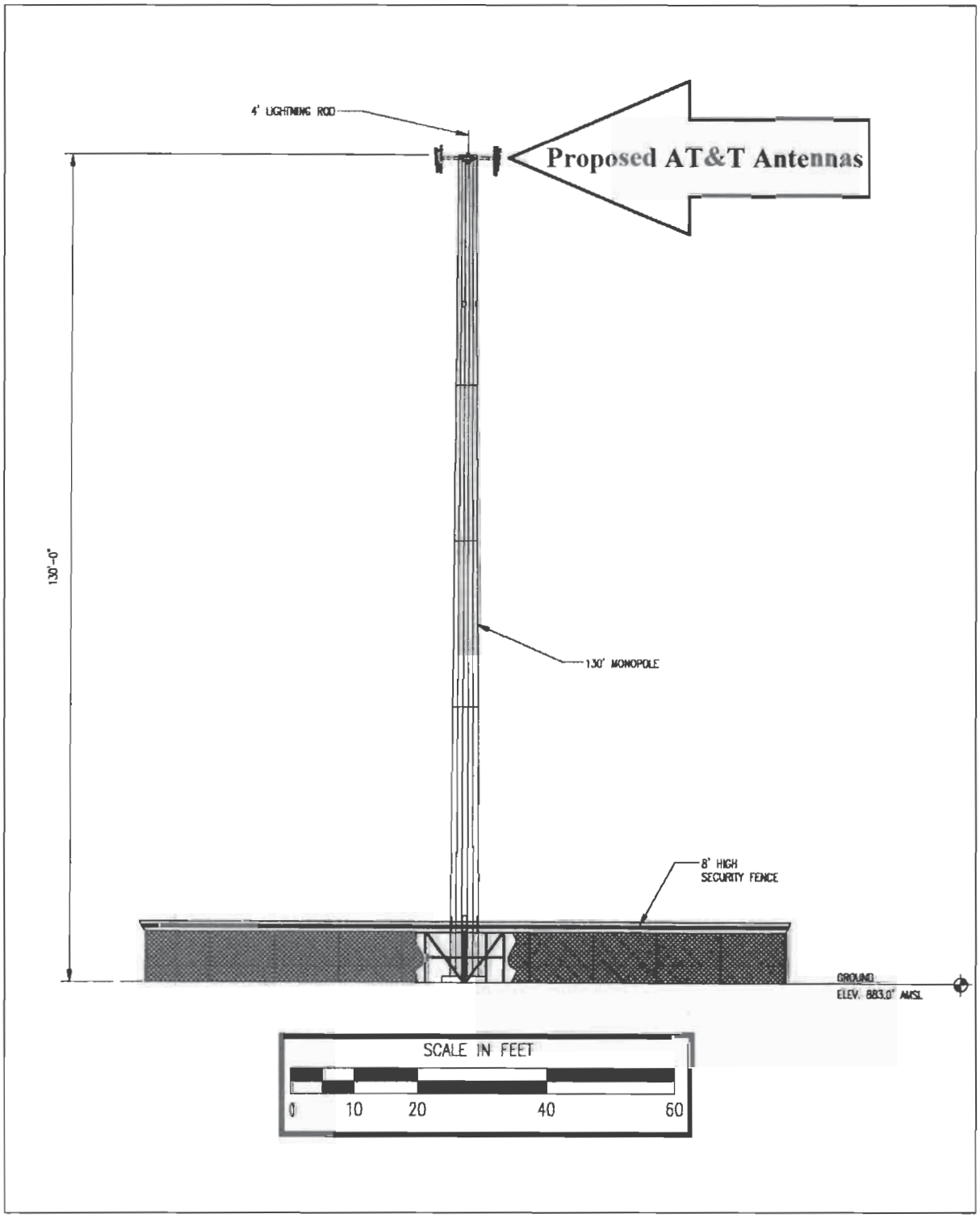


Figure 2. Proposed Monopole

Figure 3. Proposed Location

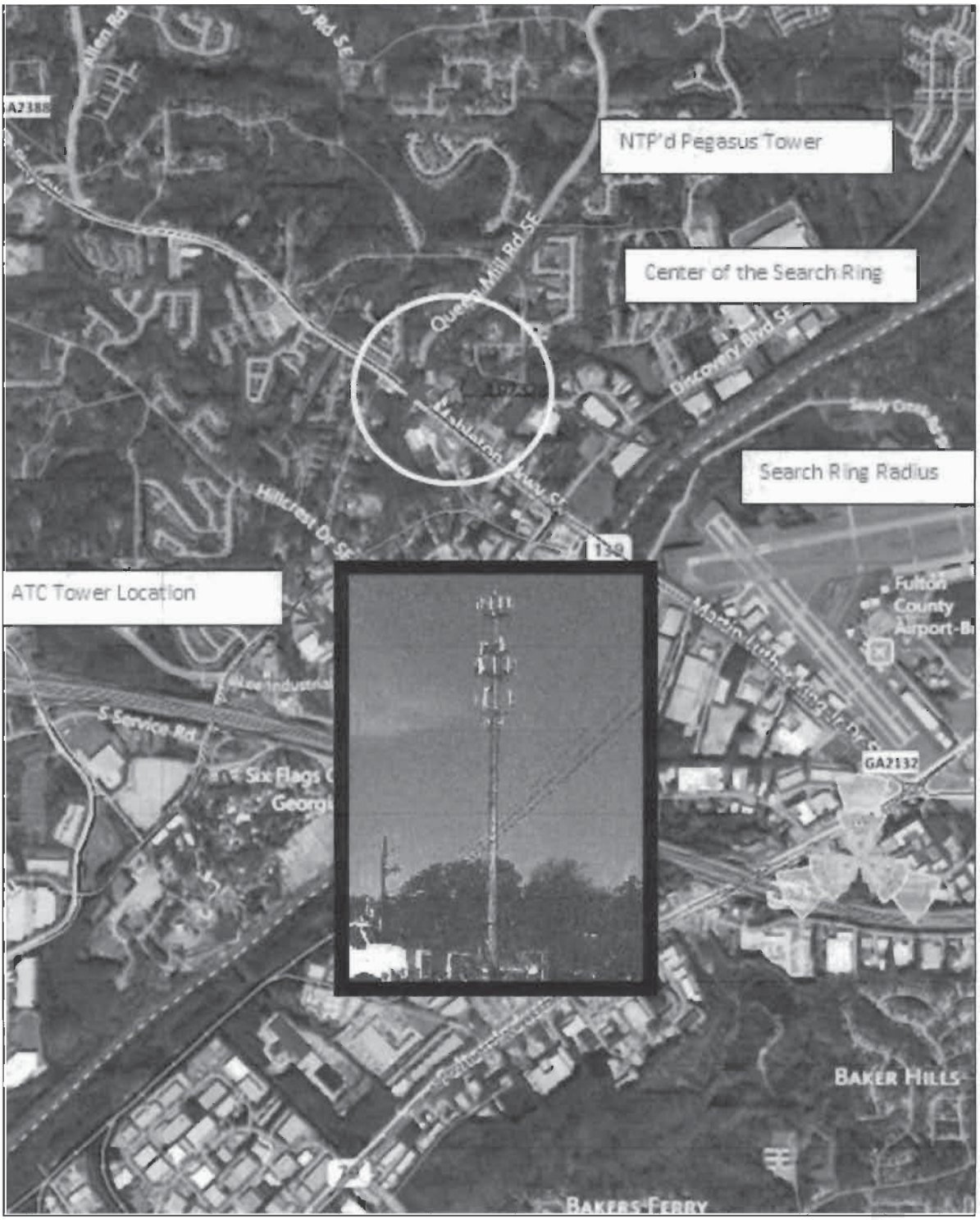


Figure 4. Search Ring

Figure 5. Adjacent Facilities

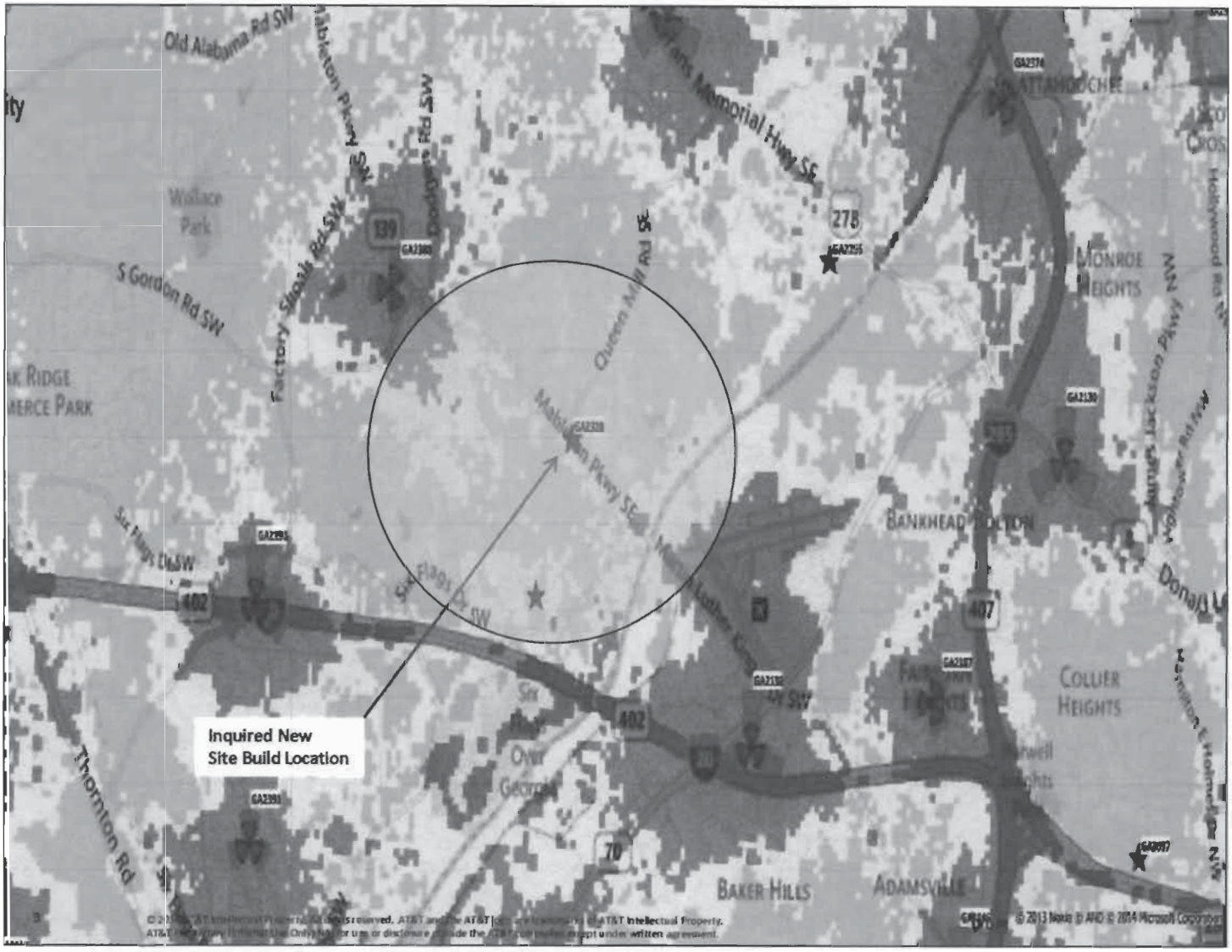


Figure 6. AT&T Current Service
(Grey Indicates Target)

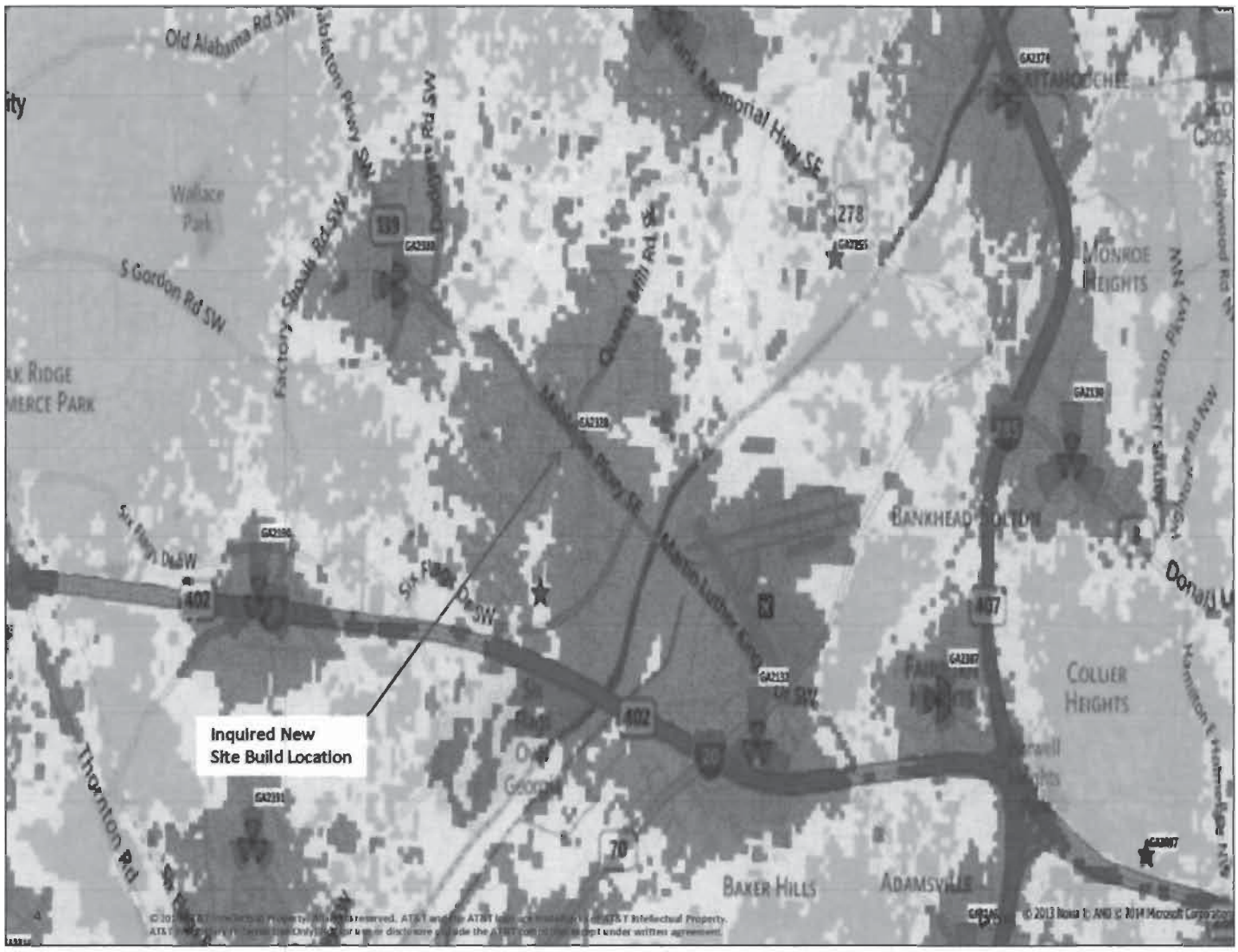


Figure 7. AT&T Projected Service

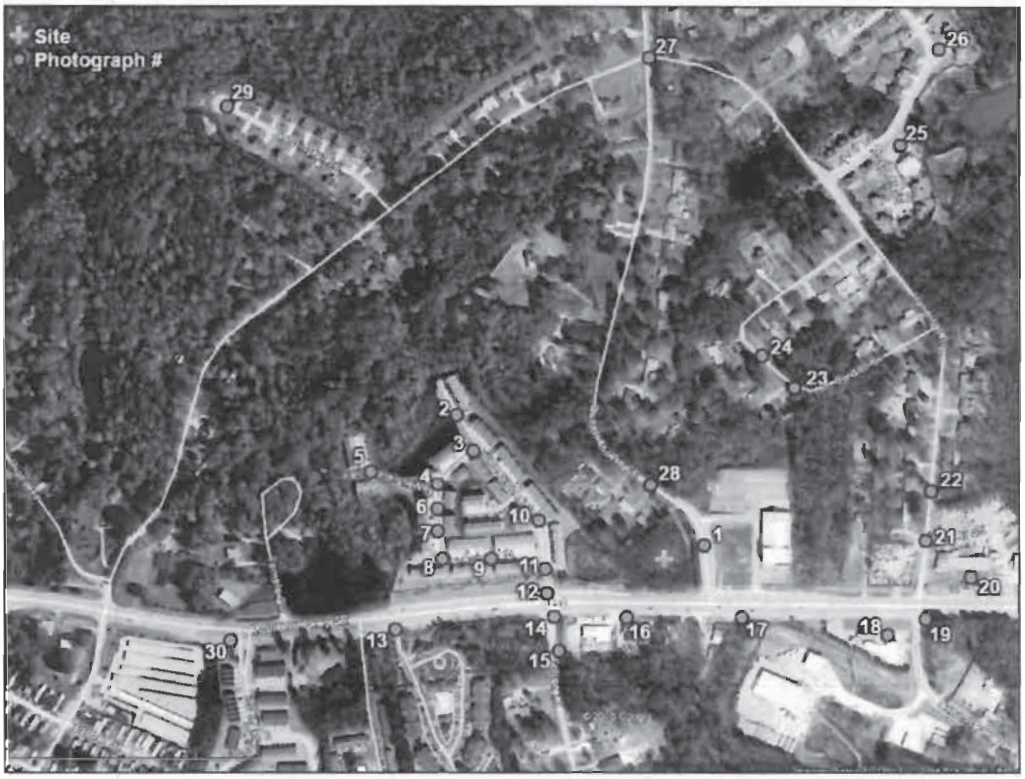


Exhibit A. Balloon Text Photo Locations

Exhibit B. Balloon Flight

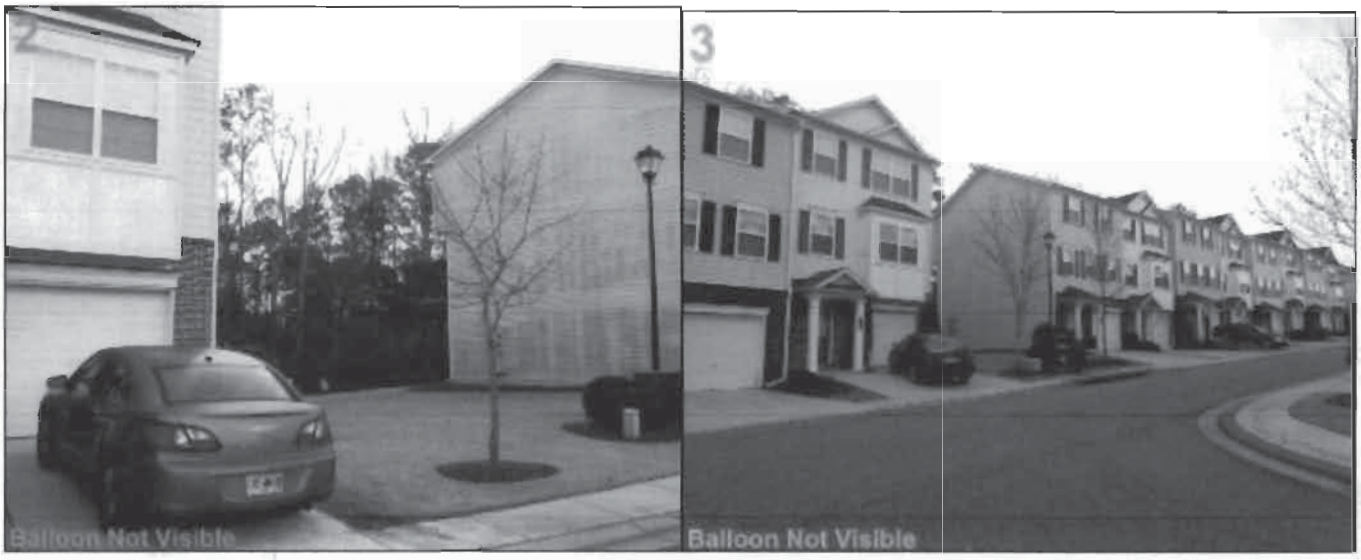


Exhibit C. Photo Shots # 2 & 3

Exhibit D. Photo Shots # 4 & 5

Exhibit E. Photo Shots # 7 & 8

Exhibit F. Photo Shots # 9 & 10

Exhibit G. Photo Shots # 11 & 12

Exhibit H. Photo Shots # 13 & 14

Exhibit I. Photo Shots # 15 & 16

Exhibit J. Photo Shots # 17 & 18

Exhibit K. Photo Shots # 19 & 20

Exhibit L. Photo Shots # 21 & 22

Exhibit M. Photo Shots # 23 & 24

Exhibit N. Photo Shots # 25 & 26

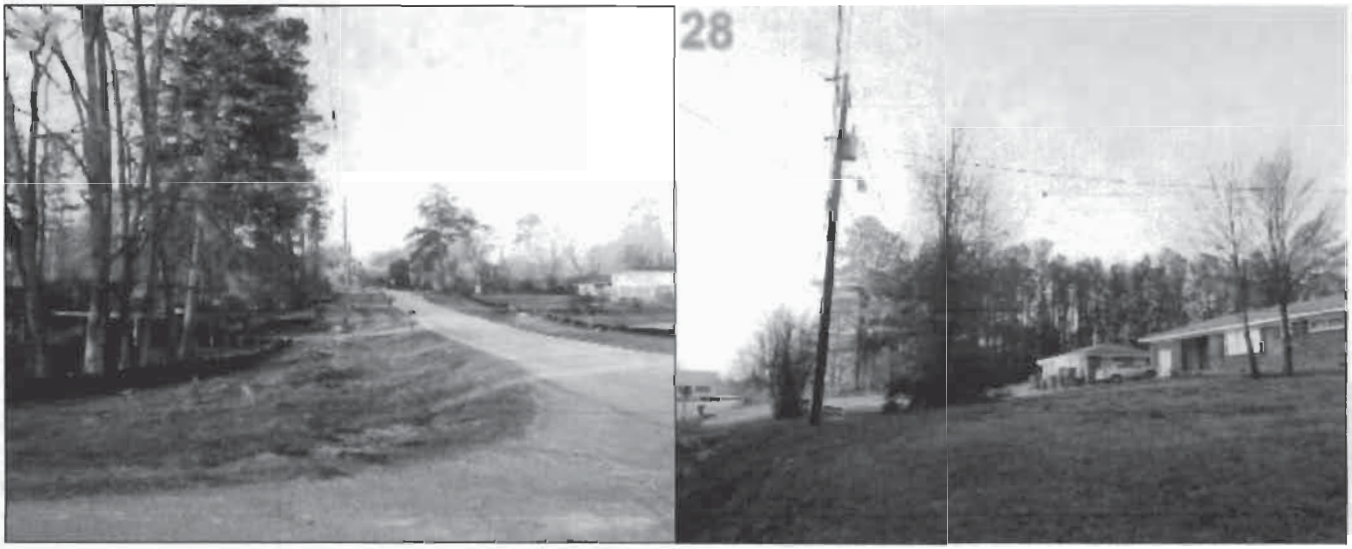


Exhibit O. Photo Shots # 27 & 28

Exhibit P. Photo Shots # 29 & 30