

## Memorandum Department of Planning and Public Works



**To:** Planning and Public Works Committee

**From:** Kristian Corbin, Project Planner

**Date:** November 17, 2011

**Re:** **T.S.P. 37-2011 AT&T (14804 Clayton Road):** A request to obtain approval for a Telecommunication Facility Siting Permit for a collocation of additional antennas and equipment on an existing stealth tower in a "PC" Planned Commercial District – zoned property located at 14804 Clayton Road on the south side of Clayton Road west of Wildwood Parkway (21R420714).

### **Summary**

AT&T has requested an amendment to a telecommunication siting permit to allow for the location of upgraded antennas to facilitate 4G LTE data service on a stealth tower located on the south side of Clayton Road west of Wildwood Parkway.

City of Chesterfield Ordinance 2391, which governs telecommunications and facilities siting, requires that the Planning Commission provide a venue for public hearing for Telecommunications Siting Permits. Please note, the Planning Commission does not provide a recommendation to the City Council, but rather generates a list of issues during the hearing. At the public hearing on October 24, 2011, there were no issues identified with this request.

Attached are copies of the site plan, elevations, boundary plat, and propagation study.

Respectfully Submitted,

Kristian Corbin  
Project Planner

TSP 37-2011 AT&T (14804 Clayton Road)  
Planning and Public Works Committee  
November 17, 2011

CC: Michael G. Herring, City Administrator  
Rob Heggie, City Attorney  
Michael O. Geisel, Director of Planning & Public Works  
Aimee Nassif, Planning & Development Services Director

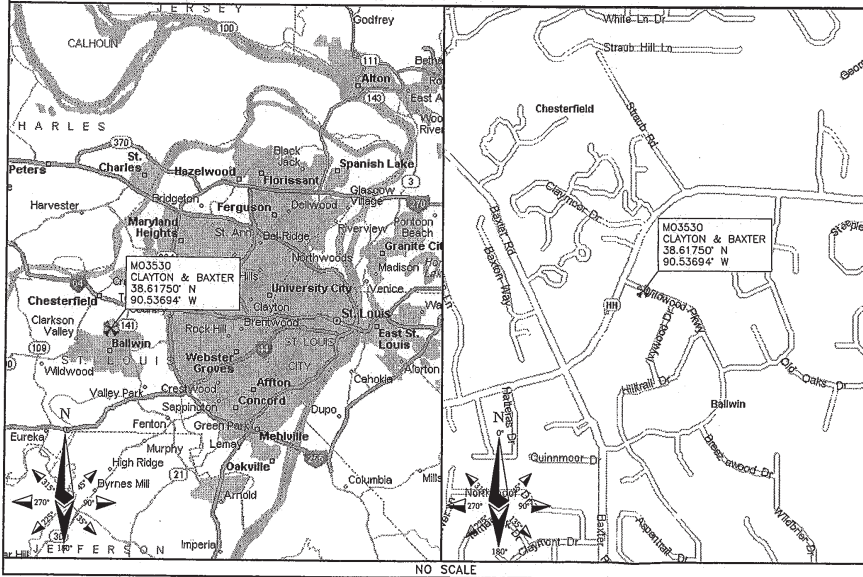
Attachments: AT&T 4G LTE Upgrade Packet

# MO3530 CLAYTON & BAXTER



## LTE 80'-REPLACEMENT FLAGPOLE

### LOCATION MAPS



### DRIVING DIRECTIONS

DIRECTIONS FROM NEAREST INTERSTATE:  
FROM I-64, TAKE EXIT 24, GO STRAIGHT ON S MASON ROAD RAMP, TURN LEFT ONTO S MASON ROAD, TURN RIGHT ONTO MASONRIDGE ROAD, TURN RIGHT ONTO CLAYTON ROAD, TURN LEFT ONTO WILDWOOD PKY, SITE IS ON THE RIGHT.

### APPROVALS

THE FOLLOWING PARTIES HEREBY APPROVE AND ACCEPT THESE DOCUMENTS AND AUTHORIZE THE SUBCONTRACTOR TO PROCEED WITH THE CONSTRUCTION DESCRIBED HEREIN. ALL DOCUMENTS ARE SUBJECT TO REVIEW BY THE LOCAL BUILDING DEPARTMENT AND MAY IMPOSE CHANGES OR MODIFICATIONS.

AT&T RF: \_\_\_\_\_ DATE: \_\_\_\_\_  
 AT&T OPERATIONS: \_\_\_\_\_ DATE: \_\_\_\_\_  
 AT&T SITE AQ: \_\_\_\_\_ DATE: \_\_\_\_\_  
 OCI: \_\_\_\_\_ DATE: \_\_\_\_\_  
 PROPERTY OWNER: \_\_\_\_\_ DATE: \_\_\_\_\_  
 MUNICIPAL: \_\_\_\_\_ DATE: \_\_\_\_\_

### DRAWING INDEX

SHEET NO:	SHEET TITLE
T-1	TITLE SHEET
Z-1	SITE SURVEY
Z-2	OVERALL SITE PLAN
Z-3	EXISTING SITE PLAN
Z-4	PROPOSED SITE PLAN
Z-5	SITE ELEVATION
Z-6	ANTENNA MOUNT DETAIL

### DO NOT SCALE DRAWINGS

SUBCONTRACTOR SHALL VERIFY ALL PLANS & EXISTING DIMENSIONS & CONDITIONS ON THE JOB SITE & SHALL IMMEDIATELY NOTIFY THE ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH SAME



TO OBTAIN LOCATION OF PARTICIPANTS UNDERGROUND FACILITIES BEFORE YOU DIG IN MISSOURI, CALL MISSOURI ONE CALL  
 TOLL FREE: 1-800-344-7483 OR  
 www.mo1call.com

MISSOURI STATUTE REQUIRES MIN OF 2 WORKING DAYS NOTICE BEFORE YOU EXCAVATE



13075 MANCHESTER RD, SUITE 100  
 ST LOUIS, MO 63131



**BLACK & VEATCH**

10950 GRANDVIEW DRIVE  
 OVERLAND PARK, KANSAS 66210  
 (913) 458-2000

PROJECT NO: 166986  
 DRAWN BY: AK  
 CHECKED BY: GPX

REV	DATE	DESCRIPTION
0	09/16/11	ISSUED FOR ZONING



P. H. DOYLE E-28899  
 PROFESSIONAL ENGINEER  
 IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

MO3530  
 CLAYTON & BAXTER  
 14800 CLAYTON ROAD  
 CHESTERFIELD, MO 63017  
 LTE

SHEET TITLE  
 TITLE SHEET

SHEET NUMBER  
**T-1**

### ENGINEERING

2009 INTERNATIONAL BUILDING CODE  
 2008 NATIONAL ELECTRIC CODE  
 ANSI/TIA-222-G OR LATEST EDITION

### GENERAL NOTES

THE FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. A TECHNICIAN WILL VISIT THE SITE AS REQUIRED FOR ROUTINE MAINTENANCE. THE PROJECT WILL NOT RESULT IN ANY SIGNIFICANT DISTURBANCE OR EFFECT ON DRAINAGE; NO SANITARY SEWER SERVICE, POTABLE WATER, OR TRASH DISPOSAL IS REQUIRED AND NO COMMERCIAL SIGNAGE IS PROPOSED.

### PROJECT DESCRIPTION

THE PROJECT CONSISTS OF THE INSTALLATION AND OPERATION OF ANTENNAS AND ASSOCIATED EQUIPMENT CABINETS FOR AT&T'S CONDUCTORLESS TELECOMMUNICATIONS NETWORK. INSTALLATION OF (3) RRHS, (1) FIBER CABLE, (2) DC POWER CABLES, (1) RAYCAP SURGE PROTECTOR, (1) LTE RACK, (9) PIPE MOUNTED PANEL ANTENNAS INCLUDING (18) COAX, (9) TMA'S, (1) GPS ANTENNA ARE PROPOSED.

### SITE INFORMATION

PROPERTY OWNER: SHELL OIL COMPANY  
 ADDRESS: NA

TOWER OWNER: AT&T  
 SITE NAME: CLAYTON & BAXTER  
 SITE NUMBER: MO3530  
 SITE CONTACT: NA

SITE ADDRESS: 14800 CLAYTON ROAD  
 AKA 14804 CLAYTON ROAD  
 CHESTERFIELD, MO 63017  
 ST. LOUIS COUNTY

COUNTY: ST. LOUIS COUNTY

LATITUDE (NAD 83): 38° 37' 3.00" N  
 38.61750

LONGITUDE (NAD 83): 90° 32' 12.98" W  
 -90.53694

GROUND ELEVATION: 646' AMSL  
 RAD CENTER: 86', 76', 66' AGL

ZONING JURISDICTION: CITY OF CHESTERFIELD, MO

ZONING DISTRICT: PC-PLANNED COMMERCIAL DISTRICT

PARCEL #: Z1R420714

OCCUPANCY GROUP: U

CONSTRUCTION TYPE: V-B

POWER COMPANY: AMEREN MO

TELEPHONE COMPANY: AT&T

SITE ACQUISITION CONTACT: MARY KREPS  
 (636) 532-1051 EXT. 113

RF ENGINEER: RON HUMPHREY

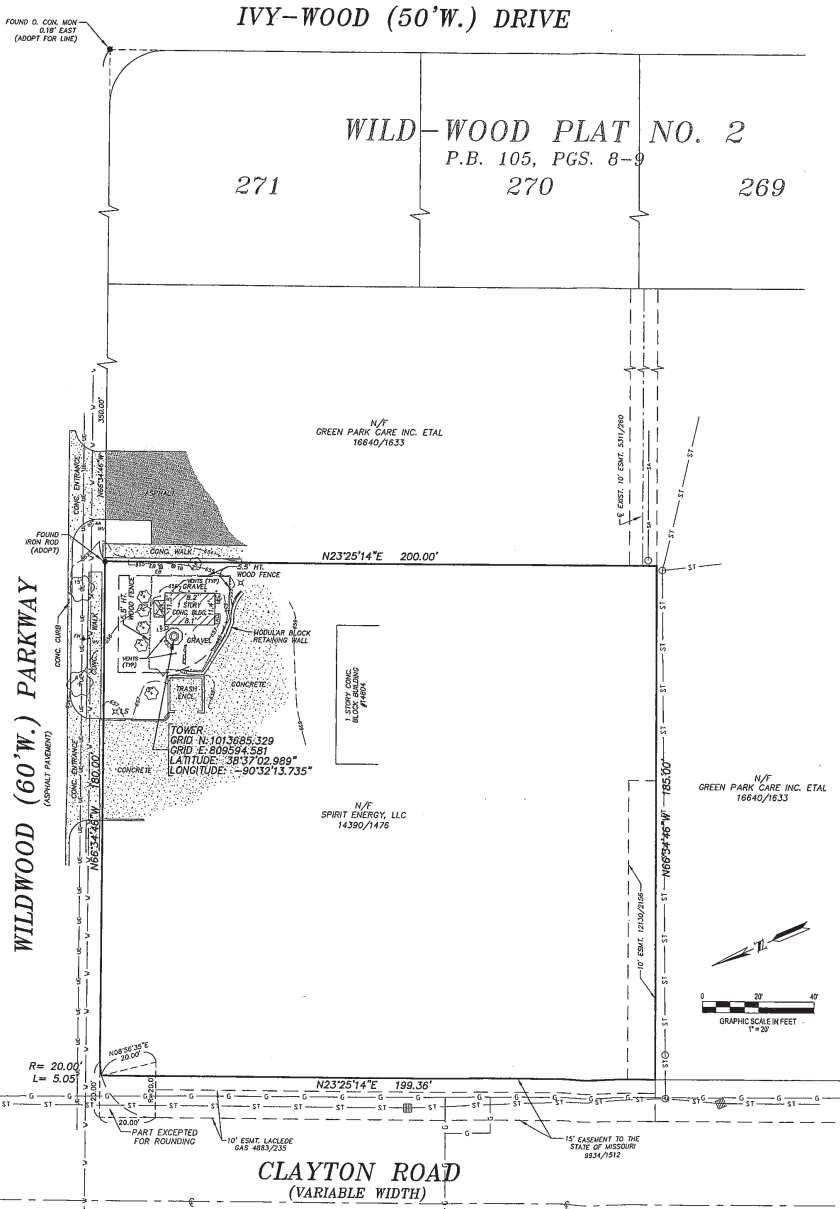
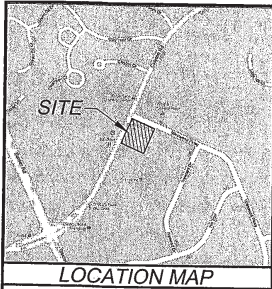
CONSTRUCTION MANAGER: MATT DEAN  
 (913) 458-4531

IF USING 11"X17" PLOT, DRAWINGS  
 WILL BE HALF SCALE

### CONTACT INFORMATION

ENGINEER: 15450 S OUTER FORTY DR, SUITE 200  
 CHESTERFIELD, MO 63017

CONTACT: GEORGE P. XENOS  
 PHONE: (913) 687-9233

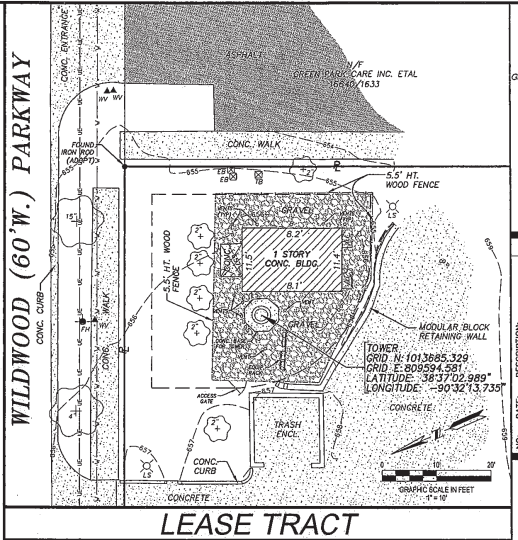


**SYMBOLS & ABBREVIATIONS**

PP	POWER POLE W/UTILITY WIRE	AC	ACRES
PP	POWER POLE	ASPH	ASPHALT
SB	STREET SIGN	BY	BOOK
GV	GAS VALVE	BLDG	BUILDING
GM	GAS METER	CLF	CHAIN LINK FENCE
WV	WATER VALVE	CONC	CONCRETE
WM	WATER METER	DB	DEED BOOK
WV/W	WATER FAUCET OR SPRINKLER	E	EAST
OC	CLEAN OUT	E.M.	ELECTRIC MANHOLE
OD	YARD DRAIN	ELEV	ELEVATION
EB	ELECTRIC BOX OR METER	FF	FISHED FLOOR
MB	MAIL BOX	FL	FLOW LINE
TB/CA	TELEPHONE OR CABLE BOX	L	LENGTH
LS	LIGHT STANDARD	MH	MANHOLE
FH	FIRE HYDRANT	N	NORTH
TS	TRAFFIC SIGNAL	NTS	NOT TO SCALE
EYL	ELECTRIC YARD LIGHT	PLB	PLAT BOOK
CM	COIN METER	PA	PAVE
TH	TEST HOLE	PVC	POLY-VINYL CHLORIDE
OL	OVERHEAD UTILITY LINE	PAV	PAVEMENT
GL	GAS LINE	R	RADIUS
UL	UNDERGROUND UTILITY LINE	RCP	REINFORCED CONCRETE PIPE
ST	STORM SEWER	REC	RECORD
FL	FENCE LINE	RR	RAIL ROAD TIE WALL
TR	TREE OR W/RADIUS	S	SOUTH
TR	TREE OR W/US	SBM	SITE BENCHMARK
TR	TREE W/ SIZE	SF	SQUARE FEET
TR	TREE W/ SIZE	SR	SET 5/8" X 1/8" IRON ROD W/ PLASTIC CAP
TR	TREE W/ SIZE	ST	STORM
TR	TREE W/ SIZE	SURV	SURVEY
TR	TREE W/ SIZE	TRNS	TRANSFORMER
TR	TREE W/ SIZE	VCP	VITRIFIED CLAY PIPE
TR	TREE W/ SIZE	W	WEST
TR	TREE W/ SIZE	WH	WATER MANHOLE
TR	TREE W/ SIZE	W/	W/ DENOTES WITH

Missouri One Call System, Inc.  
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1-800-DIG-RITE  
(1-800-344-7483)

All the improvements & facilities, above ground and underground shown herein were plotted from available information and do not necessarily reflect the actual existence, nonexistence, elevation, size, type, number or location of these or other improvements, facilities, or utilities. The General Contractor and/or owner shall be responsible for verifying the actual location & elevation of all improvements, facilities, & utilities, located in the field prior to any grading, excavation or construction of any improvements. These provisions shall in no way obviate any part from complying with the Underground Facility Safety & Damage Prevention Act, Chapter 319, RSMo. CALL MISSOURI ONE-CALL, 1-800-DIG-RITE.



- SURVEYOR'S NOTES**
- A current Title Commitment has not been made available for our use. It is possible there are easements and other instruments of record that affect the subject tract that would be exposed in the Title Commitment Report and are unknown to this office at the time this Survey was executed and therefore not plotted hereon. This Survey does not constitute a Title Search by the Surveyor.
  - FLOODPLAIN INFORMATION: The tract of land described hereon is within the limits of Zone "X", areas determined to be outside the 500 year floodplain, as shown on FEMA Flood Insurance Rate Map Number \_\_\_\_\_ dated \_\_\_\_\_.
  - We have not performed a Property Boundary Survey on the Parent tract shown and described hereon.
  - The bearing system used is Geocentric and has been adopted from GPS Observation using the Missouri Department of Transportation CORS network.

This is to certify that at the request of Buck & Voths, we have during the month of June, 2011 executed a Property Boundary Survey in accordance with the current Standards for Property Boundary Surveys as established by the Missouri State Bar for Architects, Professional Engineers, and Professional Land Surveyors and the Missouri Department of Natural Resources, Division of Geology and Land Survey and in a manner consistent with the degree of care and skill ordinarily exercised by members of the said surveying profession, currently practicing and in similar circumstances, on a parcel of ground in Section 28, Township 48 North, Range 4 East in St. Louis County, Missouri as shown hereon and that the results of said survey are represented upon this plan. This survey meets the accuracy standards for an URBAN property as defined in said Standards.

Surveyed and Plotted: JUNE 2011

By: *Lee C. Ferrenbach III*  
(Seal) Lee C. Ferrenbach III PLS - 2310  
Vice President

MO3530  
CLAYTON & BAXTER  
18404 CLAYTON ROAD  
CHESTERFIELD, MO 63017



PROJECT REVISION:

NO.	DATE	DESCRIPTION

PROPERTY BOUNDARY SURVEY  
SECTION 28, TOWNSHIP 48 NORTH, RANGE 4 EAST  
ST. LOUIS COUNTY, MISSOURI  
CITY OF CHESTERFIELD

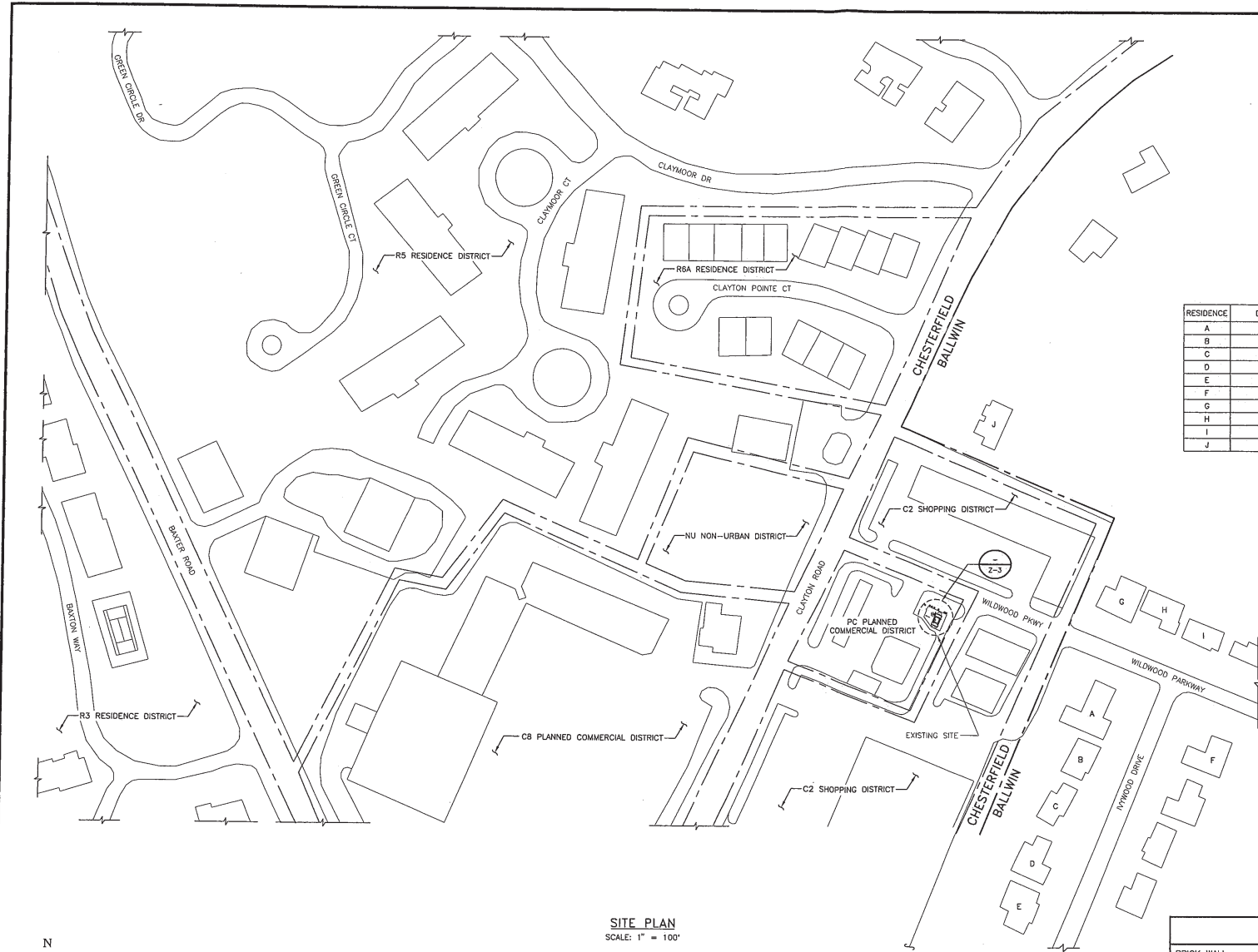
DATE: 6/30/11  
BOOK NO.:  
DRAFTED BY: JNW  
APPRVD. BY: LCF  
FILE NAME: 11-100

SHEET TITLE:  
PROPERTY BOUNDARY SURVEY

SHEET NUMBER:  
SUV-1

SHEET NO: 1 OF 1

PROJECT NO: 11-100



RESIDENCE	DISTANCE FROM CL. OF TOWER
A	261'-0"±
B	313'-0"±
C	339'-0"±
D	391'-0"±
E	442'-0"±
F	460'-0"±
G	260'-0"±
H	332'-0"±
I	401'-0"±
J	282'-0"±

**SITE PLAN**  
SCALE: 1" = 100'



LEGEND	
BRICK WALL	=====
LEASE AREA	-----
ICE BRIDGE	XXXXXXXXXXXXXXXXXXXX
OVERHEAD POWER	—OHP— OHP— OHP—
UNDERGROUND POWER	—UGP— UGP— UGP—
OVERHEAD UTILITIES	—OHU— OHU— OHU—
UNDERGROUND TELCO	—UGT— UGT— UGT—

13075 MANCHESTER RD, SUITE 100  
ST LOUIS, MO 63131

10950 GRANDVIEW DRIVE  
OVERLAND PARK, KANSAS 66210  
(913) 458-2000

PROJECT NO: 168886  
DRAWN BY: AK  
CHECKED BY: GPX

REV	DATE	DESCRIPTION
0	09/16/11	ISSUED FOR ZONING

P. H. DOYLE E-28899  
PROFESSIONAL ENGINEER

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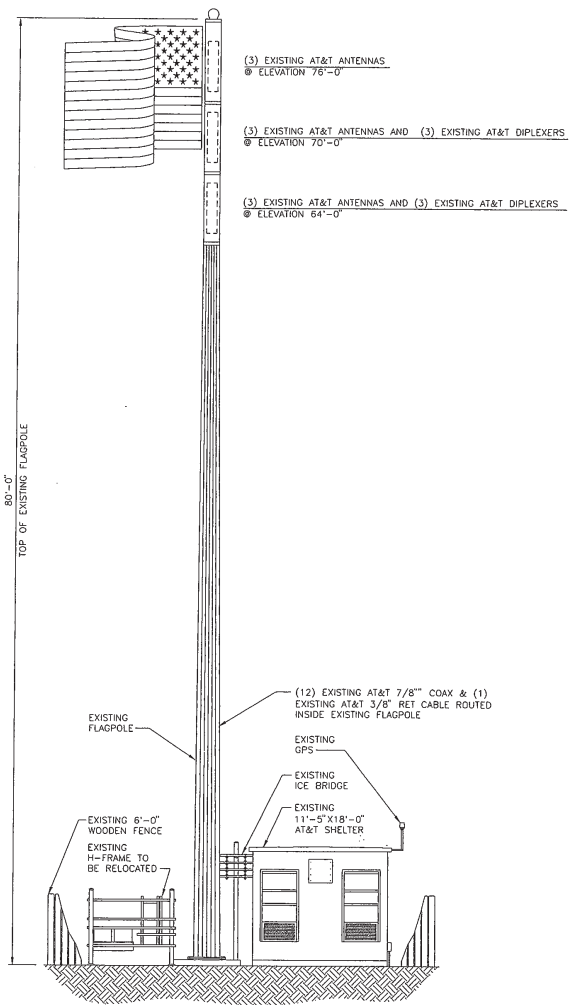
MO3530  
CLAYTON & BAXTER  
14800 CLAYTON ROAD  
CHESTERFIELD, MO 63017  
LTE

SHEET TITLE  
**OVERALL  
SITE PLAN**

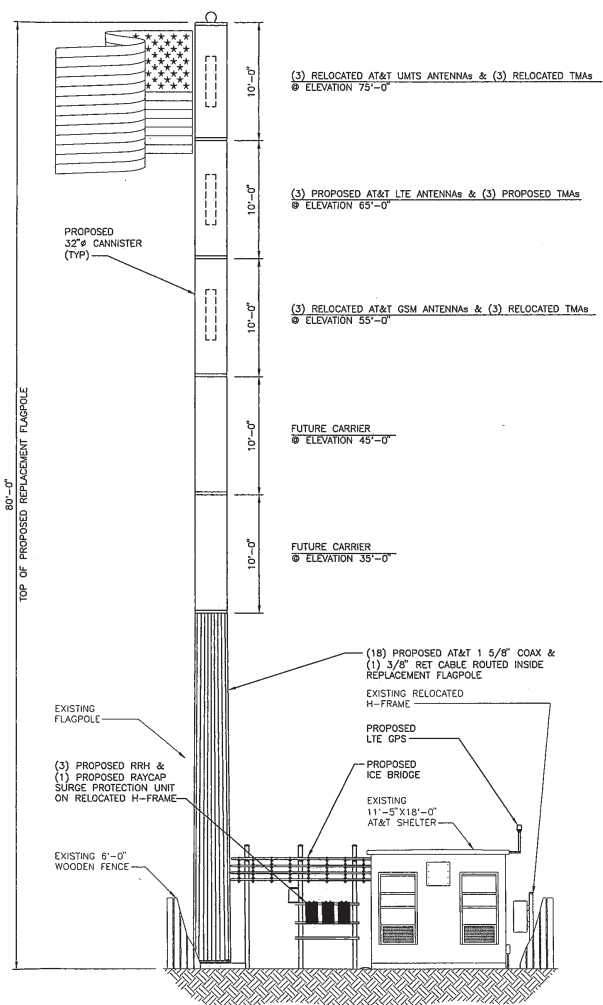
SHEET NUMBER  
**Z-2**







EXISTING SITE ELEVATION  
NO SCALE

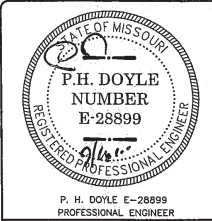


PROPOSED SITE ELEVATION  
NO SCALE



PROJECT NO:	168966
DRAWN BY:	AK
CHECKED BY:	GPX

REV	DATE	DESCRIPTION
0	09/16/11	ISSUED FOR ZONING



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M03530  
CLAYTON & BAXTER  
14800 CLAYTON ROAD  
CHESTERFIELD, MO 63017  
LTE

SHEET TITLE  
SITE ELEVATION

SHEET NUMBER  
**Z-5**







September 7, 2011

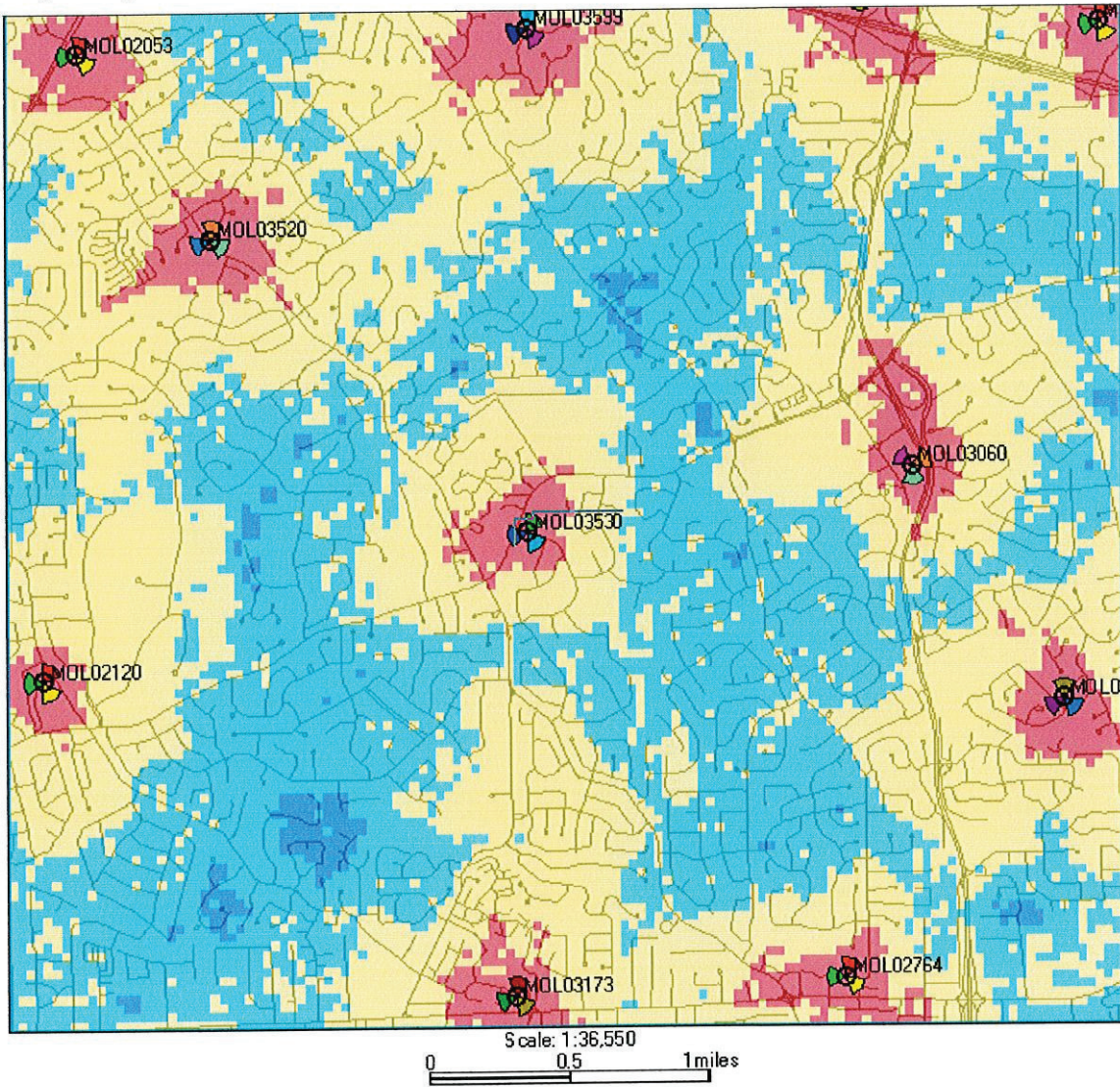
The following is a brief explanation of why AT&T Mobility is proposing to have the current wireless communication facility at 14800 Clayton Road modified. This facility is labeled as MOL03530 on Map 1. Currently this facility is only capable of broadcasting our older technologies.

This facility currently is broadcasting our "2G" technology (called GSM) and our "3G" technology (called UMTS). Normally each technology uses its own antennas and equipment. The modification we are proposing is to add our "4G" technology (called LTE). Perhaps you have seen all the television commercials from various wireless carriers talking about their 4G systems. 4G, short for 4<sup>th</sup> generation of wireless technology, allows wireless carriers to provide much faster data speeds than our current networks. 4G is only for data at this point. All voice calls will still be served on older technologies. Currently AT&T still has the fastest data network. Although as other carriers implement and optimize their 4G networks we expect to lose that advantage and eventually fall behind other carriers unless we also launch our 4G network. The proposed modifications will allow us to implement our 4G technology by using additional antennas and equipment.

Because of national E911 requirements, this site needs to run other technologies. The 4G technology is not capable of handling voice calls at this time and all 911 calls made from a wireless device will be routed through our older technologies. Normally each technology uses its own antennas and equipment. The new 4G technology is on lower frequencies and therefore require slightly larger antennas than what we currently use. Because of this there is no way to fit these antennas in the existing enclosures. The best way to get these antennas concealed from view is to replace the current pole with another pole.

This plan will have no effect on our coverage for current technologies. Map 1 below shows the proposed coverage for our 4G network in the area. AT&T Mobility has acceptable coverage in most of the surrounding area. Because 4G is a data only service the different signal levels don't indicate whether service exists or not. In general on 4G the stronger the signal (to a point) the faster the data rates will be. It is expected that red, yellow and light blue will have data speeds faster than our 3G technology. The dark blue will likely have data speeds nearly identical to the 3G technology.

Map 1 Proposed AT&T "4G" coverage



Ron Humphrey

Radio Frequency Design Engineer  
AT&T Mobility Division

# PHOTO SIMULATION

## PROPOSED WIRELESS COMMUNICATIONS FACILITY

### SITE LOCATION MAP

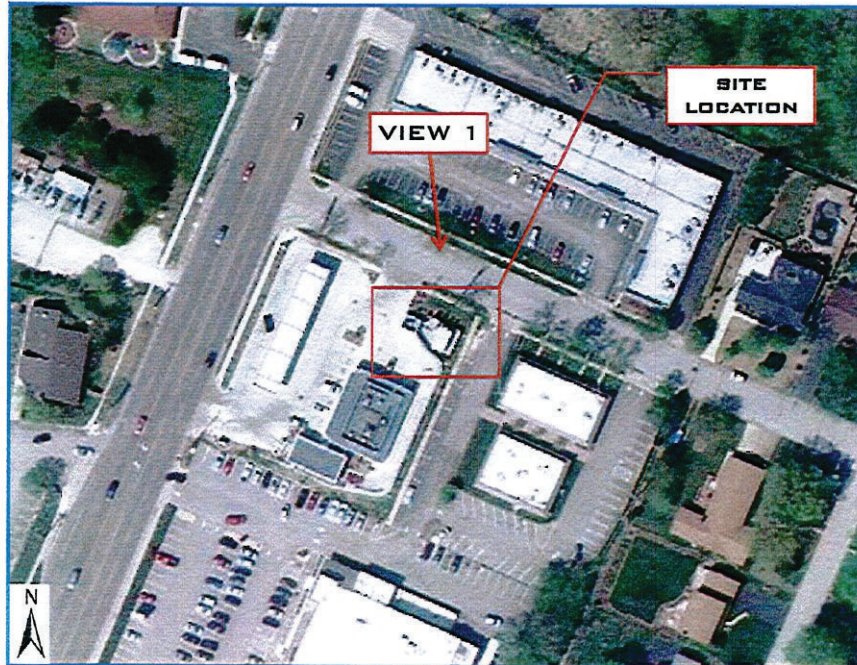


Image from GoogleMaps 2011©

**SITE NUMBER:** M03530 (8759)  
**SITE NAME:** CLAYTON & BAXTER  
**SITE ADDRESS:** 14800 CLAYTON ROAD  
CHESTERFIELD, MO 63017  
**DATE:** 09/15/11  
**APPLICANT:** AT&T WIRELESS  
**CONTACT:** GEORGE P. XENOS  
BLACK & VEATCH  
(913) 687 - 9233



**EXISTING  
FLAGPOLE AND  
CANISTERS**

**EXISTING VIEW -  
LOOKING SOUTH**

**PHOTO SIMULATION -  
LOOKING SOUTH**



**PROPOSED 80'-0"  
FLAGPOLE AND 32"  
DIAMETER  
CANISTERS**