

## Memorandum Department of Planning & Public Works



**To:** Planning and Public Works Committee

**From:** Shawn Seymour, AICP  
Senior Planner

**Date:** October 17, 2011

**RE:** **T.S.P. 40-2011 AT&T (17850 Wild Horse Creek Road)**: A request to obtain approval to amend a Telecommunications Siting Permit for the purpose of upgrading existing facilities to accommodate and provide 4G LTE data service on an existing telecommunications tower on a "LLR" Large Lot Residential District-zoned tract of land located on the south side of Wild Horse Creek Road west of its intersection with Wild Horse Parkway Drive (18V120155).

### Summary

AT&T, has requested an amendment to a telecommunications siting permit to allow the location of upgraded antennas to facilitate 4G LTE data service on an existing tower located on south side of Wild Horse Creek Road west of its intersection with Wild Horse Parkway Drive.

City of Chesterfield Ordinance 2391, which governs telecommunications and facilities siting, permits applications for equipment upgrades to be submitted for sites that currently hold a telecommunications siting permit without the need for a public hearing. Staff has reviewed the request by AT&T and has determined that the proposed addition of the 4G LTE antennas are indeed an upgrade to an existing and permitted site and may amend said existing permit without the need for a public hearing.

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

Respectfully submitted,

Shawn Seymour, AICP  
Senior Planner

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



June 24, 2011

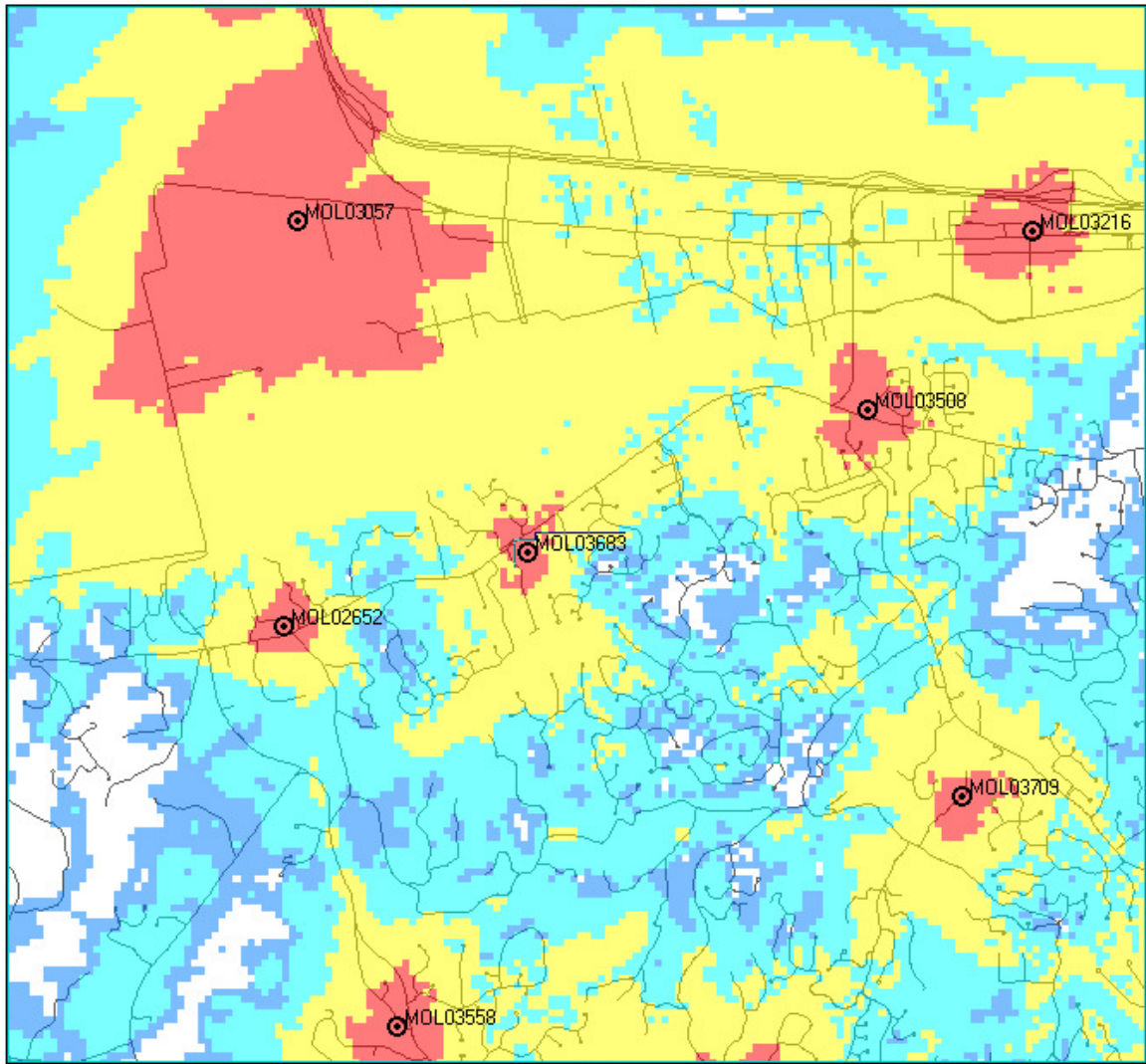
The following is a brief explanation of why AT&T Mobility is proposing to have the current wireless communication facility at 17801 Wild Horse Creek Road modified. This facility is labeled as MOL03683 on Map 1. Currently this facility is only capable of broadcasting our older technologies.

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 all 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. In this case we are able to combine our 2G and 3G technologies onto one antenna. This allows us to only use 2 antennas for each direction covered instead of the typical 3. This site, like most of our locations, serves three directions creating a need for 6 antennas. Currently there is no solution that will allow less antennas.

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

# MO3683 ST THOMAS



## LTE 78'-6" - STEALTH POLE



13075 MANCHESTER RD, SUITE 100  
ST LOUIS, MO 63131



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

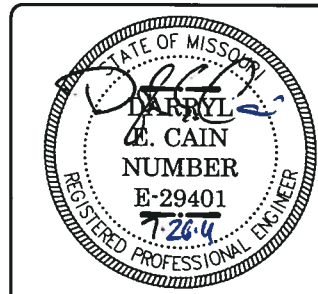
BLACK & VEATCH PROFESSIONAL ENGINEERING CORPORATION  
MISSOURI STATE CERTIFICATE OF AUTHORITY # 001848

PROJECT NO: 168986

DRAWN BY: MAK

CHECKED BY: GPX

REV	DATE	DESCRIPTION
0	07/26/11	ISSUED FOR ZONING



DARRYL E. CAIN E-29401  
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.

MO3683  
ST THOMAS  
17801 WILD HORSE CREEK RD  
CHESTERFIELD, MO 63005  
LTE - STEALTH

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, (6) COAX, (6) PIPE MOUNTED PANEL ANTENNAS INCLUDING (3) TMA'S, (1) GPS ANTENNA ARE PROPOSED.

### SITE INFORMATION

PROPERTY OWNER: CROWN CASTLE INTERNATIONAL  
ADDRESS: NA

TOWER OWNER: CROWN CASTLE INTERNATIONAL  
SITE NAME: ST. THOMAS CHURCH  
BU NUMBER: 880707

SITE CONTACT: PETE FAULHABER  
(314) 432-3158

SITE ADDRESS: 17801 WILD HORSE CREEK RD  
CHESTERFIELD, MO 63005

COUNTY: ST. LOUIS COUNTY

LATITUDE (NAD 83): 38° 38' 56.54" N  
38.64904

LONGITUDE (NAD 83): 90° 38' 40.99" W  
-90.64472

GROUND ELEVATION: 656' AMSL

RAD CENTER: 66° AGL

ZONING JURISDICTION: CITY OF CHESTERFIELD, MO

ZONING DISTRICT: LLR (LARGE LOT RESIDENTIAL DISTRICT)

PARCEL #: NA

OCCUPANCY GROUP: U

CONSTRUCTION TYPE: V-B

POWER COMPANY: AMEREN MO

TELEPHONE COMPANY: AT&T

SITE ACQUISITION CONTACT: DOUG KONRATH  
(314) 605-7542

RF ENGINEER: RON HUMPHREY

CONSTRUCTION MANAGER: KEN SHAW  
(314) 210-8629

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

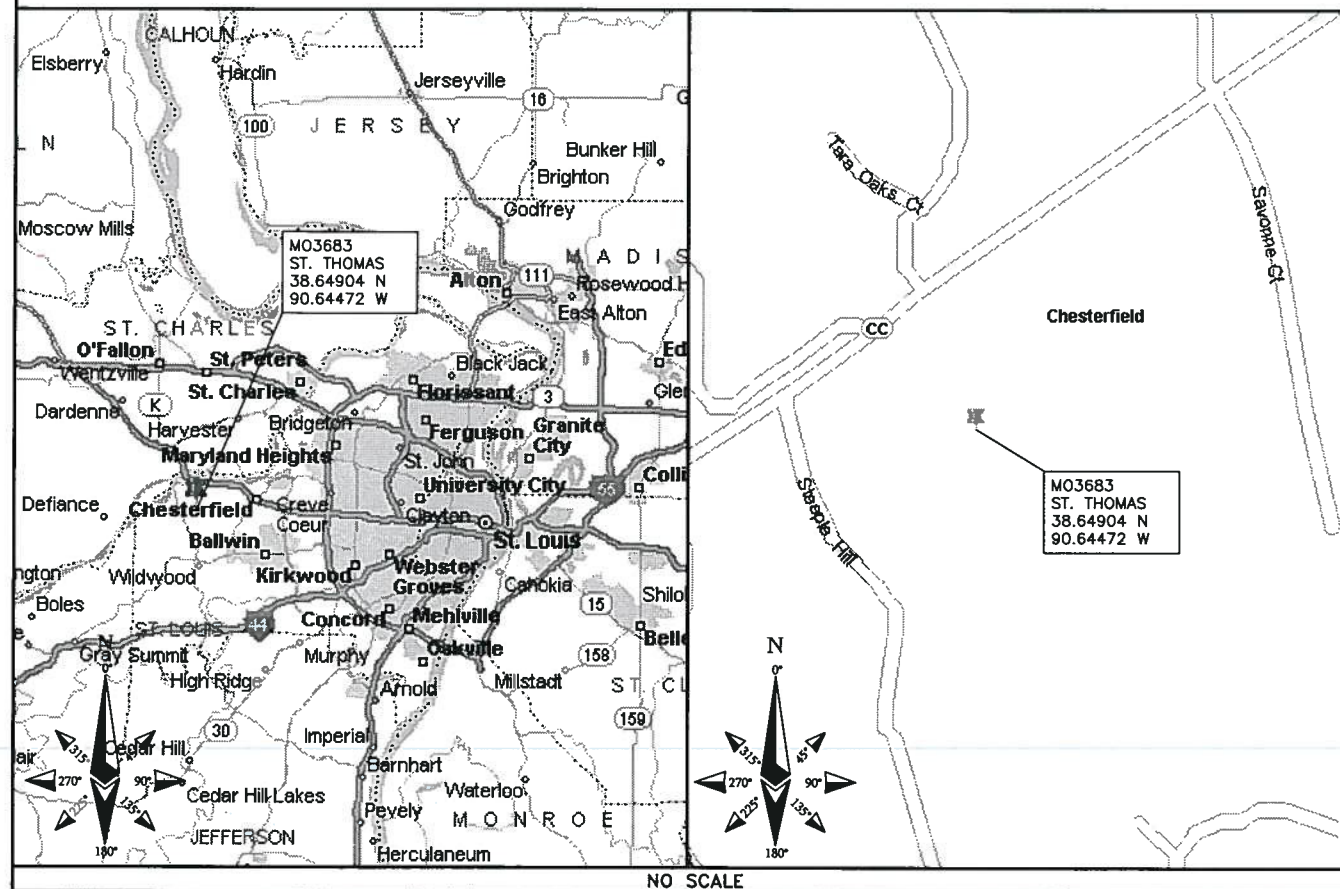
### CONTACT INFORMATION

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

CONTACT: GEORGE P. XENOS

PHONE: (913) 687-9233

### LOCATION MAPS



### DRIVING DIRECTIONS

DIRECTIONS FROM NEAREST AT&T OFFICE:

TURN LEFT ONTO PINE ST FOR 0.9 MI, KEEP LEFT ONTO RAMP FOR 0.2 MI, TAKE RAMP ONTO I-64 FOR 22.6 MI, AT EXIT 16, TURN RIGHT ONTO RAMP 0.6 MI, KEEP STRAIGHT ONTO LONG ROAD FOR 0.8 MI, TURN RIGHT ONTO WILD HORSE CREEK ROAD FOR 1.6 MI, TURN LEFT ONTO LOCAL ROAD FOR 131 YDS.

### APPROVALS

THE FOLLOWING PARTIES HEREBY APPROVE AND ACCEPT THESE DOCUMENTS AND AUTHORIZE THE CONTRACTOR 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	SITE PLAN
Z-4	SITE ELEVATION
Z-5	ANTENNA MOUNT DETAIL

### DO NOT SCALE DRAWINGS

CONTRACTOR SHALL VERIFY ALL PLANS & EXISTING DIMENSIONS & CONDITIONS ON THE JOB SITE & SHALL IMMEDIATELY NOTIFY THE ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR 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  
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MO3683  
ST THOMAS  
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CHESTERFIELD, MO 63005  
LTE - STEALTH

SHEET TITLE

OVERALL  
SITE PLAN

SHEET NUMBER

**Z-2**



RESIDENCE	DISTANCE FROM CL OF STEALTH POLE
A	876'-0"±
B	831'-0"±
C	742'-0"±
D	677'-0"±
E	659'-0"±
F	666'-0"±
G	722'-0"±
H	742'-0"±
I	871'-0"±
J	237'-0"±
K	353'-0"±
L	655'-0"±
M	659'-0"±

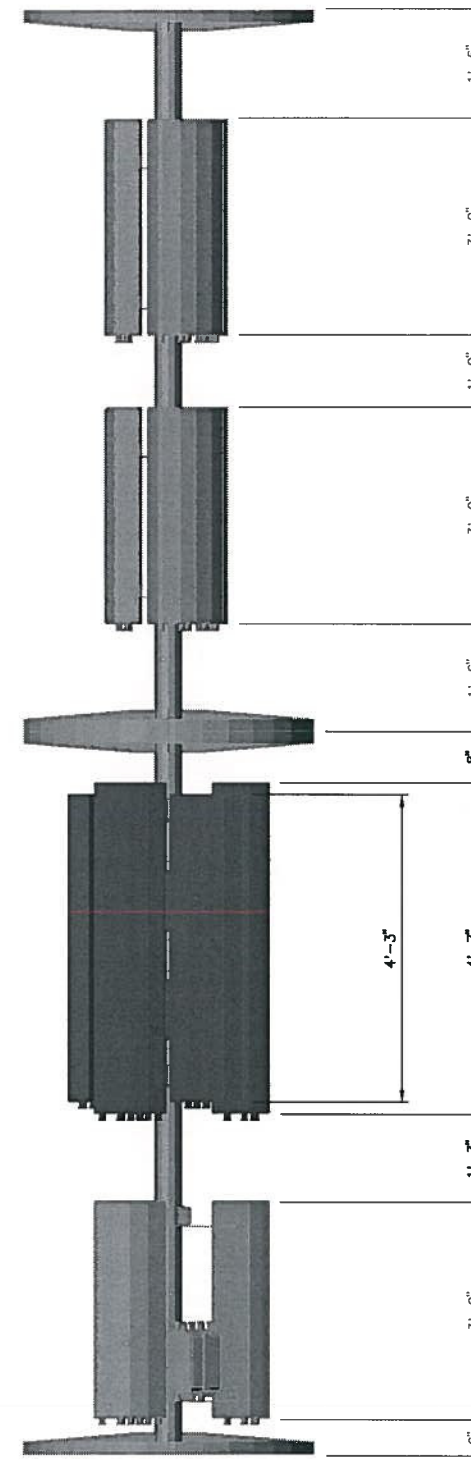
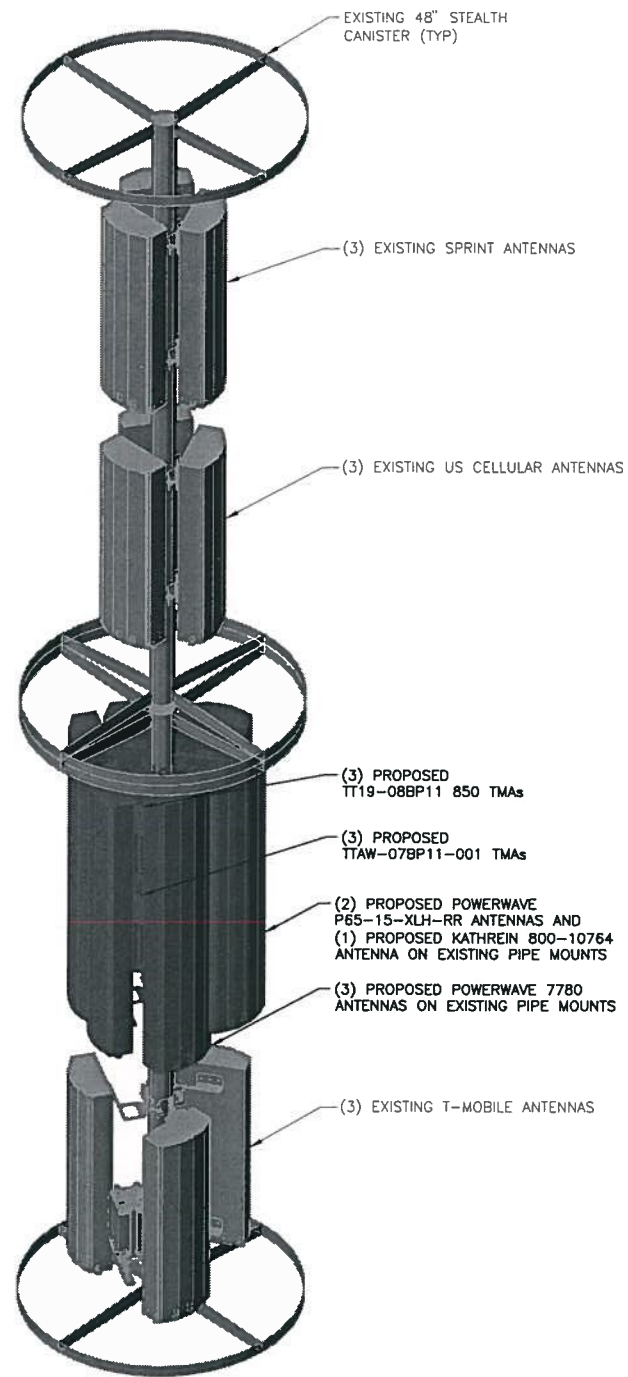
LEGEND	
FENCE	— x — x — x —
LEASE AREA	— — — — —
ICE BRIDGE	XXXXXX
OVERHEAD POWER	— OHP — OHP — OHP —
UNDERGROUND POWER	— UGP — UGP — UGP —
OVERHEAD UTILITIES	— OHU — OHU — OHU —
UNDERGROUND TELCO	— UGT — UGT — UGT —











ANTENNA MOUNT DETAIL  
NO SCALE



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