

III. B.

Memorandum Department of Planning and Public Works



To: Planning and Public Works Committee

From: Kristian Corbin, Project Planner

Date: October 6, 2011

Re: **T.S.P. 30-2011 AT&T (16641 Old Chesterfield Road)**: A request to obtain approval for a Telecommunication Facility Siting Permit for a collocation of additional antennas and equipment on an existing monopole in a "C7" General Extensive Commercial District – zoned property located on the north side of Old Chesterfield Road east of Baxter Road (17T310247).

Summary

AT&T has requested an amendment to a telecommunications siting permit to allow for the location of upgraded antennas to facilitate 4G LTE data service on an existing monopole tower located on the north side of Old Chesterfield Road east of Baxter Road.

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 September 26, 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

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

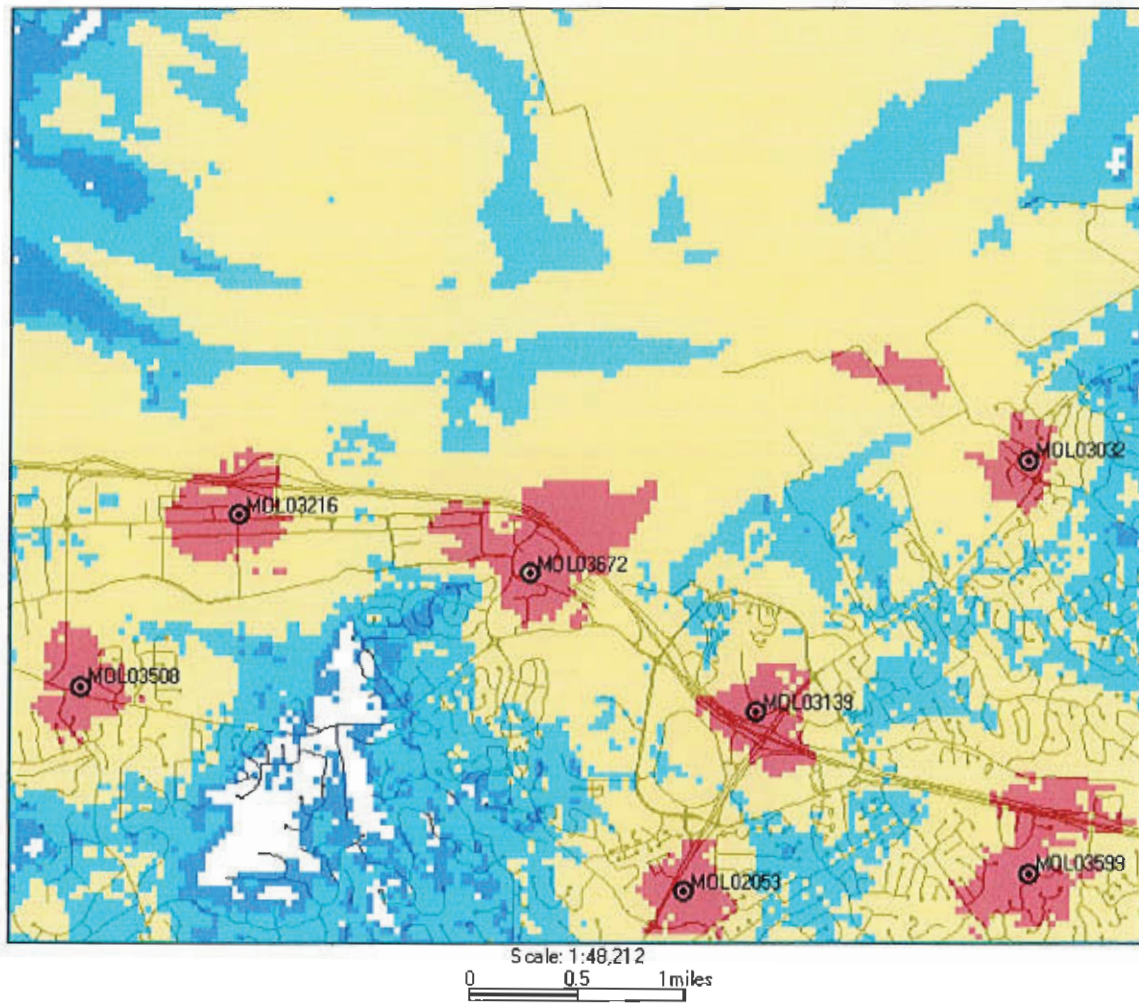
The following is a brief explanation of why AT&T Mobility is proposing to have the current wireless communication facility at 16643 Chesterfield Airport Road modified. This facility is labeled as MOL03672 on Map 1. Currently this facility is only capable of broadcasting our older technologies.

This facility currently is broadcasting our "2G" technology (called GSM) and our "3G" technology (called UMTS). 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 4th 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. These technologies require that we use a total of 3 antennas for each direction covered. This site, like most of our locations, serves three directions creating a need for 9 antennas. This requires us to add 3 additional antennas for this location.

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

MO3672 FAWCETT



LTE 100' - MONOPOLE

RECEIVED
SEP - 9 2011
DEPT. OF TRANSPORTATION
& PUBLIC SAFETY

at&t
13075 MANCHESTER RD, SUITE 100
ST LOUIS, MO 63131

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 TRUNK CABLE, (2) DC POWER TRUNK CABLES, (1) RAYCAP SURGE PROTECTOR, (1) LTE RACK, (3) LTE ANTENNAS INCLUDING (1) GPS ANTENNA ARE PROPOSED.

SITE INFORMATION

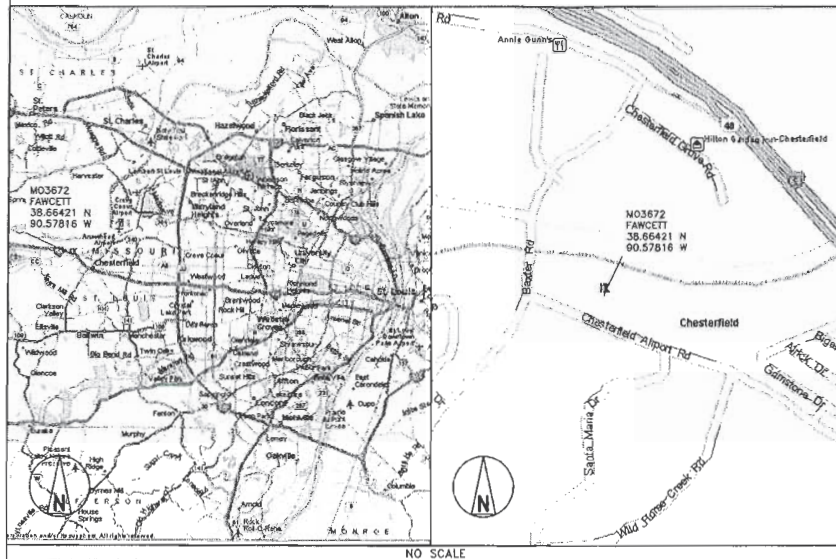
PROPERTY OWNER: CHARLES W. FAWCETT
ADDRESS: NA
TOWER OWNER: AT&T
SITE NAME: FAWCETT
SITE NUMBER: MO3672
SITE CONTACT: NA
SITE ADDRESS: 16643 CHESTERFIELD AIRPORT RD, CHESTERFIELD, MO 63017
AKA 16641 OLD CHESTERFIELD RD.
COUNTY: ST. LOUIS COUNTY
LATITUDE (NAD 83): 38° 39' 51.16" N
38.66421
LONGITUDE (NAD 83): 90° 34' 41.38" W
-90.57818
GROUND ELEVATION: 485' AMSL
RAD CENTER: 98' AGL
ZONING JURISDICTION: CITY OF CHESTERFIELD, MO
ZONING DISTRICT: PI (PLANNED INDUSTRIAL)
PARCEL #: 177310247
OCCUPANCY GROUP: U
CONSTRUCTION TYPE: V-B
POWER COMPANY: AMEREN MO
TELEPHONE COMPANY: AT&T
SITE ACQUISITION CONTACT: DOUC KONRATH
(314) 803-7542
RF ENGINEER: RON HUMPHREY
CONSTRUCTION MANAGER: KEN SHAW
(314) 210-8929

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) 887-9233

LOCATION MAPS



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: _____
OC: _____ DATE: _____
PROPERTY OWNER: _____ DATE: _____
MUNICIPAL: _____ DATE: _____

DRAWING INDEX

SHEET NO:	SHEET TITLE
T-1	TITLE SHEET
Z-1	SITE SURVEY (BY OTHERS)
Z-2	OVERALL SITE PLAN
Z-3	SITE PLAN
Z-4	SITE ELEVATION
Z-5	SITE ELEVATIONS
Z-6	ANTENNA/RRH 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 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.mofcall.com

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

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 19.5 MI, AT EXIT 19A, TAKE RAMP ONTO N OUTER FORTY DR FOR 0.5 MI, TURN LEFT ONTO CHESTERFIELD PKWY N FOR 120 YDS, BEAR RIGHT ONTO LOCAL ROAD FOR 120 YDS, KEEP STRAIGHT ONTO CHESTERFIELD AIRPORT RD FOR 0.7 MI, TURN RIGHT ONTO LOCAL ROADS FOR 43 YDS.

BLACK & VEATCH

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

BLACK & VEATCH PROFESSIONAL ENGINEERING CORPORATION
MISSOURI STATE CERTIFICATE OF AGENCY # 001846

PROJECT NO: 168986
DRAWN BY: MAK
CHECKED BY: GPX



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.

MO3672
FAWCETT
16643 CHESTERFIELD AIRPORT RD
CHESTERFIELD, MO 63017
AKA 16641 OLD CHESTERFIELD RD
LTE - MONOPOLE

SHEET TITLE
TITLE SHEET

SHEET NUMBER

T-1



13075 MANCHESTER RD, SUITE 100
ST LOUIS, MO 63131



BLACK & VEATCH

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

BLACK & VEATCH PROFESSIONAL ENGINEERING CORPORATION
MISSOURI STATE CERTIFICATE OF AUTHORITY # 001844

PROJECT NO: 168986

DRAWN BY: MAK

CHECKED BY: GPX

REV	DATE	DESCRIPTION
1	07/12/11	MISC REVISIONS
0	04/28/11	ISSUED FOR ZONING



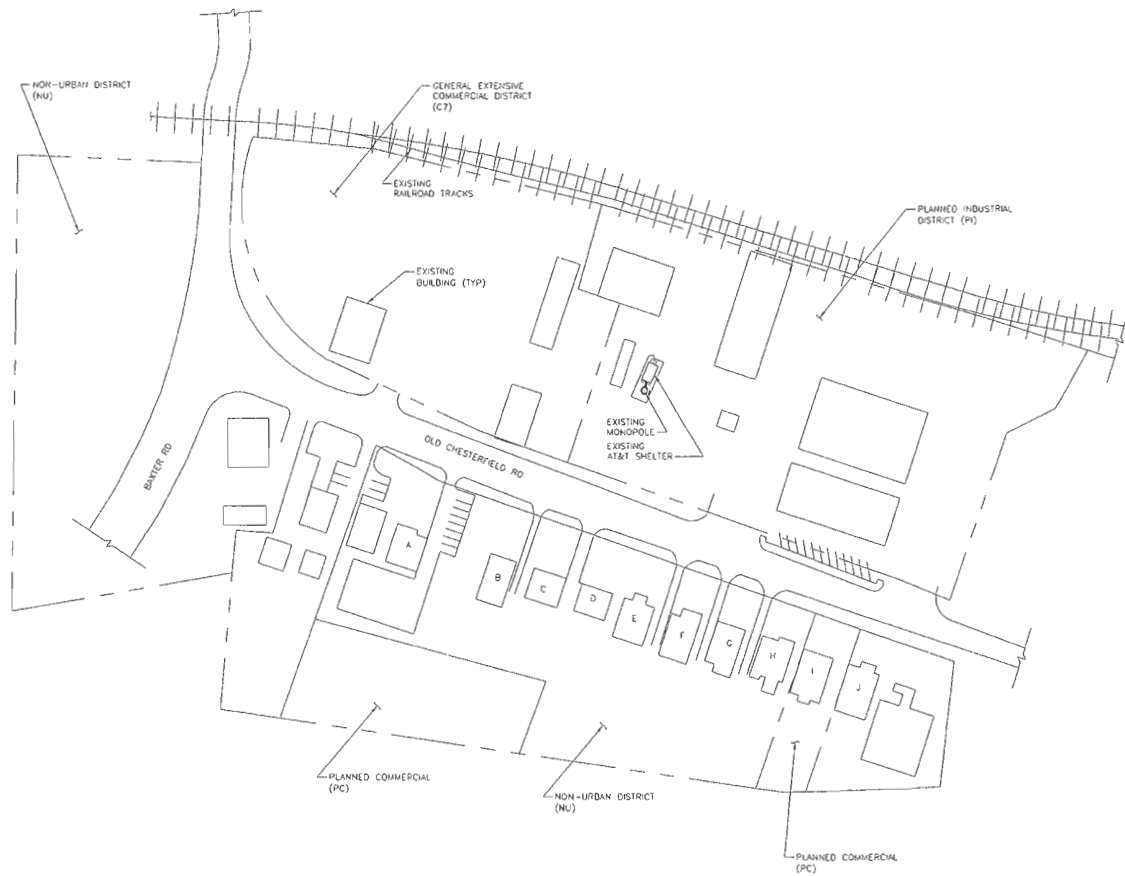
DARRYL E. CAIN E-29401
PROFESSIONAL ENGINEER
IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

M03672
FANWETT
16643 CHESTERFIELD AIRPORT RD
CHESTERFIELD, MO 63017
AKA 16641 OLD CHESTERFIELD RD
LTE - MONOPOLE

SHEET TITLE
OVERALL SITE PLAN

SHEET NUMBER
Z-2

RESIDENTIAL BUILDING	DISTANCE (FT.)
A	290
B	231
C	217
D	215
E	214
F	234
G	258
H	288
I	322
J	362



SITE PLAN
SCALE: 1/8" = 1'-0"



13075 MANCHESTER RD, SUITE 100
ST LOUIS, MO 63131



BLACK & VEATCH

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

BLACK & VEATCH PROFESSIONAL ENGINEERING CORPORATION
MISSOURI STATE BOARD OF PROFESSIONAL ENGINEERS

PROJECT NO: 168986

DRAWN BY: MAK

CHECKED BY: GPX

REV	DATE	DESCRIPTION
1	07/12/11	MISC REVISIONS
0	04/29/11	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.

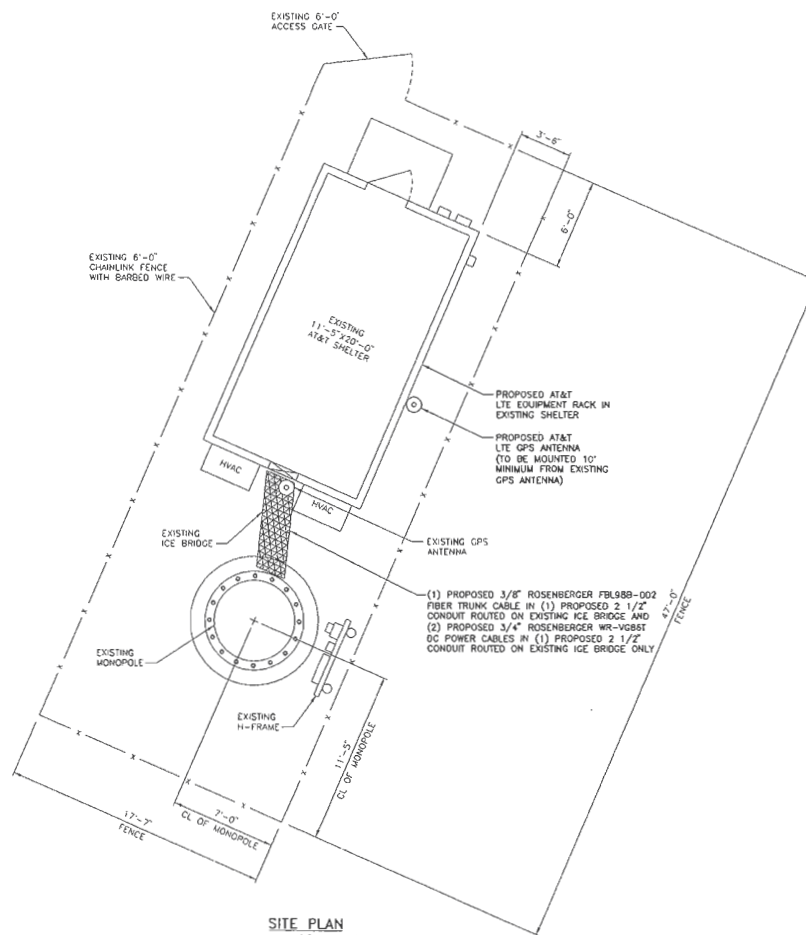
M03672
FAWCETT
16643 CHESTERFIELD AIRPORT RD
CHESTERFIELD, MO 63017
AKA 16641 OLD CHESTERFIELD RD
LTE - MONOPOLE

SHEET TITLE

SITE PLAN

SHEET NUMBER

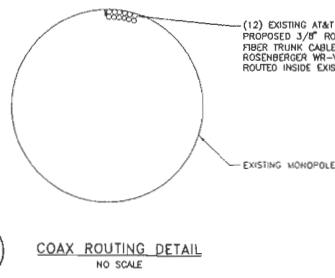
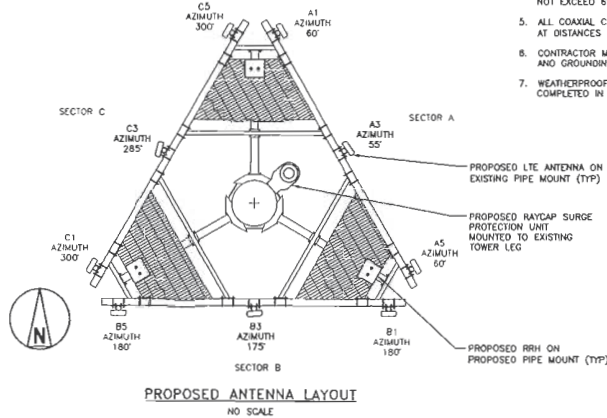
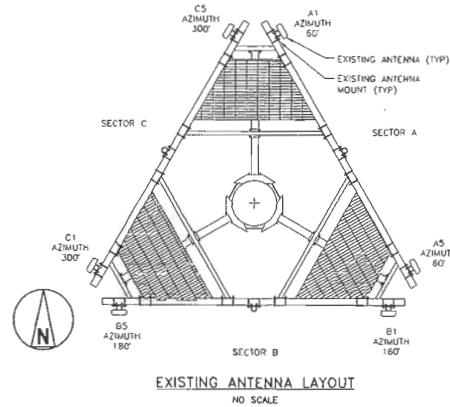
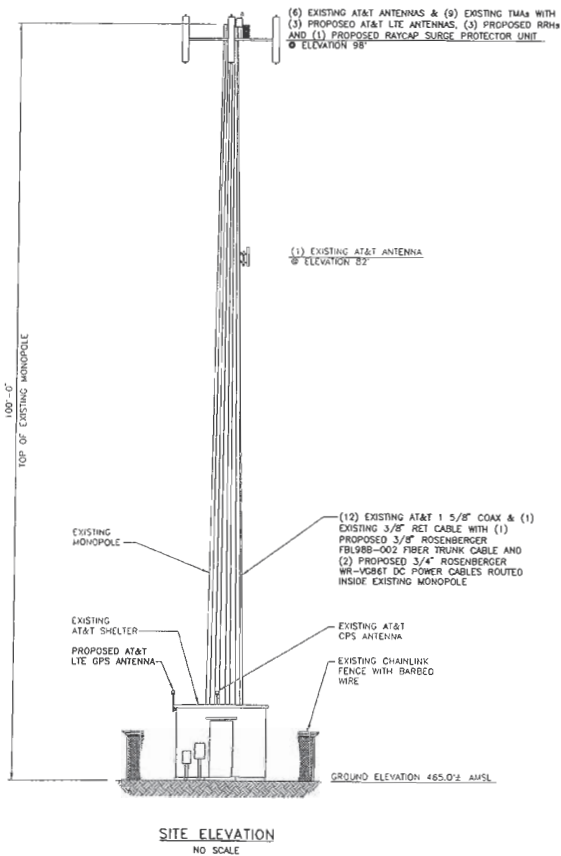
Z-3



SITE PLAN
SCALE: 1/4" = 1'-0"

LEGEND	
FENCE	— x — x — x —
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 —





NOTES

1. ALL MAIN CABLES WILL BE GROUNDED W/ COAXIAL CABLE GROUNDING KITS AT:
 - A. THE ANTENNA LEVEL.
 - B. MID LEVEL IF TOWER IS OVER 200'.
 - C. BASE OF TOWER PRIOR TO TURNING HORIZONTAL.
 - D. OUTSIDE THE EQUIPMENT SHELTER AT ENTRY PORT.
 - E. INSIDE THE EQUIPMENT SHELTER AT THE ENTRY PORT.
2. ALL PROPOSED GROUNDING BAR DOWNLEADS ARE TO BE TERMINATED TO THE EXISTING ADJACENT GROUNDING BAR DOWNLEADS A MINIMUM DISTANCE OF 4'-0" BELOW GROUNDING BAR. TERMINATIONS MAY BE EXOTHERMIC OR COMPRESSION.
3. THE SUB CONTRACTORS SHALL BE RESPONSIBLE FOR VERIFYING THE ANTENNA AND THE COAX CONFIGURATION, MAKE AND MODELS, PRIOR TO INSTALLATION.
4. ALL CONNECTIONS FOR HANGERS, SUPPORTS, BRACING, ETC. SHALL BE INSTALLED PER TOWER MANUFACTURER'S STANDARD DETAILS.
5. THE EXISTING TOWER IS CURRENTLY BEING ANALYZED BY OTHERS TO DETERMINE ITS STRUCTURAL CAPACITY TO CARRY THE PROPOSED NEW COAX AND ANTENNAS. THESE DRAWINGS HAVE BEEN CREATED BASED ON THE ASSUMPTION THE STRUCTURAL ANALYSIS WILL SHOW THAT THE TOWER HAS SUFFICIENT CAPACITY TO SUPPORT THE PROPOSED NEW LOADS. INSTALLATION OF THE COAX AND ANTENNAS SHALL NOT COMMENCE UNTIL AN APPROVED STRUCTURAL ANALYSIS HAS BEEN RECEIVED BY THE OWNER OR AT&T AND HAS BEEN REVIEWED BY BLACK AND VEATCH.
6. SUBCONTRACTOR SHALL REFERENCE THE TOWER STRUCTURAL ANALYSIS/DESIGN DRAWINGS FOR DIRECTIONS ON CABLE DISTRIBUTION/ROUTING.

COAXIAL ANTENNA CABLE NOTES

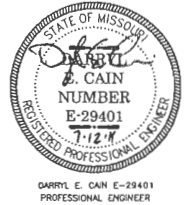
1. TYPES AND SIZES OF THE ANTENNA CABLE ARE BASED ON ESTIMATED LENGTHS. PRIOR TO ORDERING CABLE, SUBCONTRACTOR SHALL VERIFY ACTUAL LENGTH BASED ON CONSTRUCTION LAYOUT AND NOTIFY THE PROJECT MANAGER IF ACTUAL LENGTHS EXCEED ESTIMATED LENGTHS.
2. SUB CONTRACTOR SHALL VERIFY THE DOWN-TILT OF EACH ANTENNA WITH A DIGITAL LEVEL.
3. CONTRACTOR TO CONFIRM COAX COLOR CODING PRIOR TO CONSTRUCTION. REFER TO "ANTENNA SYSTEM LABELING STANDARD" NO-00027 REFER TO THE LATEST VERSION.
4. ALL JUMPERS TO THE ANTENNAS FROM THE MAIN TRANSMISSION LINE WILL BE 1/2" DIA. LDF AND SHALL NOT EXCEED 8'-0".
5. ALL COAXIAL CABLE WILL BE SECURED TO THE DESIGNED SUPPORT STRUCTURE, IN AN APPROVED MANNER, AT DISTANCES NOT TO EXCEED 4'-0" OC.
6. CONTRACTOR MUST FOLLOW ALL MANUFACTURER'S RECOMMENDATIONS REGARDING BOTH THE INSTALLATION AND GROUNDING OF ALL COAXIAL CABLES, CONNECTORS, ANTENNAS, AND ALL OTHER EQUIPMENT.
7. WEATHERPROOF ALL ANTENNA CONNECTORS WITH SELF AMALGAMATING TAPE. WEATHERPROOFING SHALL BE COMPLETED IN STRICT ACCORDANCE WITH AT&T STANDARDS.



BLACK & VEATCH PROFESSIONAL ENGINEERING CORPORATION
MISSOURI STATE CERTIFICATE OF AUTHORITY # 091644

PROJECT NO:	188988
DRAWN BY:	MAX
CHECKED BY:	GPX

REV	DATE	DESCRIPTION
1	07/12/11	WISC REVISIONS
0	04/26/11	ISSUED FOR 2010HG

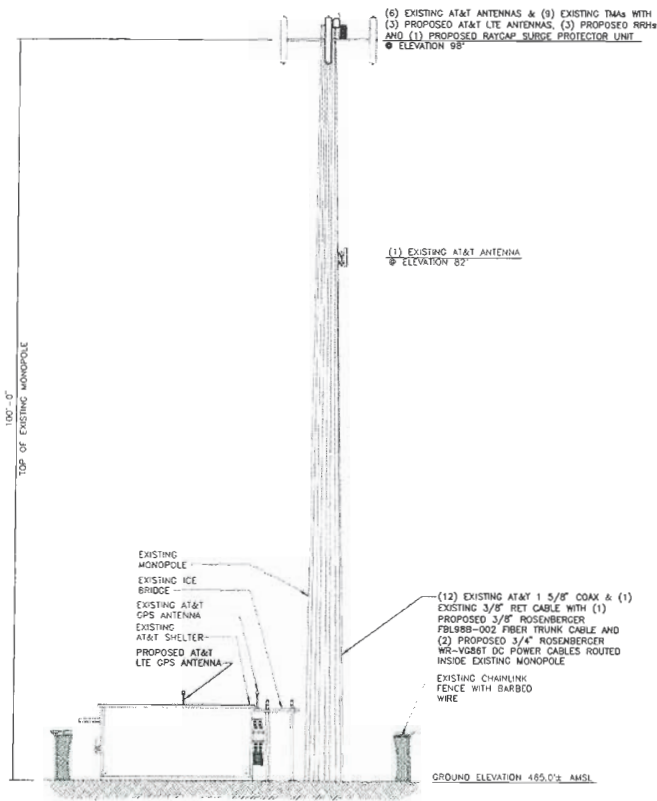


IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

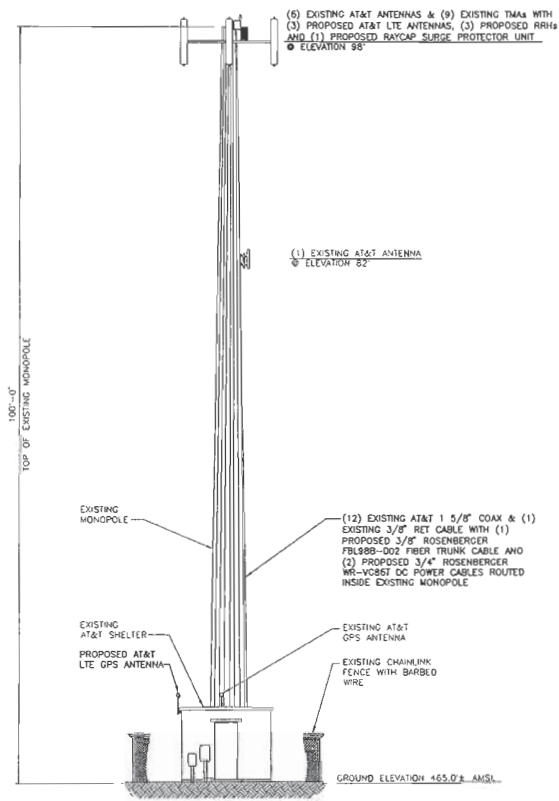
MO3672
FAWCETT
16643 CHESTERFIELD AIRPORT RD
CHESTERFIELD, MO 63017
AKA 16641 OLD CHESTERFIELD RD
LTE - MONOPOLE

SHEET TITLE
SITE ELEVATION

SHEET NUMBER
Z-4



EAST SITE ELEVATION
NO SCALE



NORTH SITE ELEVATION
NO SCALE



13075 MANCHESTER RD, SUITE 100
ST LOUIS, MO 63131



BLACK & VEATCH

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

BLACK & VEATCH PROFESSIONAL ENGINEERING CORPORATION
MISSOURI STATE CERTIFICATE OF AUTHORITY # 001614

PROJECT NO: 168986
DRAWN BY: MAK
CHECKED BY: GPX

REV	DATE	DESCRIPTION
1	07/12/11	WSC REVISIONS
2	04/26/11	ISSUED FOR ZONING



DARRYL E. CAIN E-29401
PROFESSIONAL ENGINEER

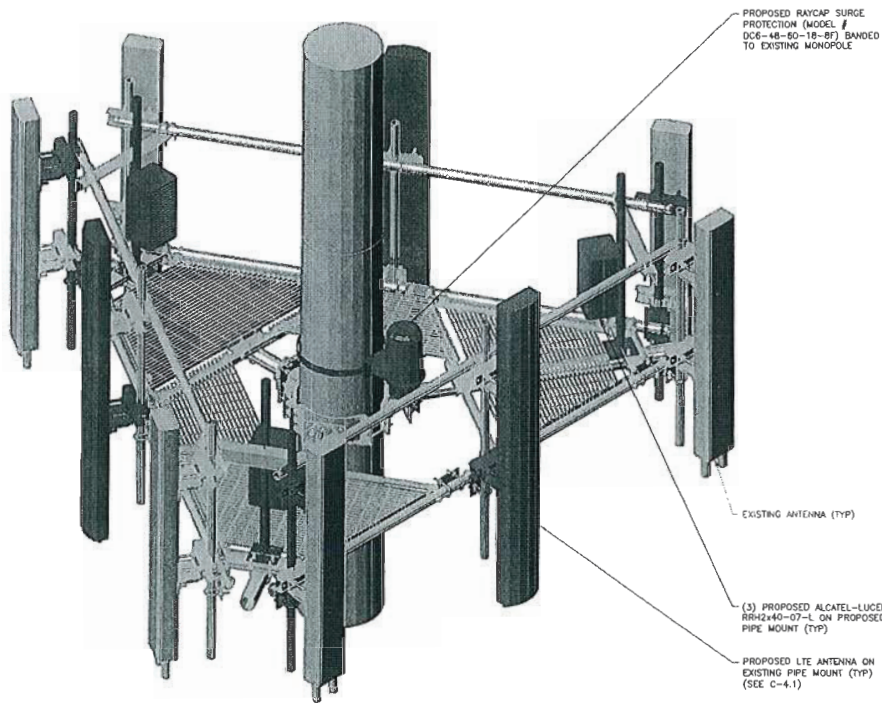
IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

MO3672
FAWCETT
16643 CHESTERFIELD AIRPORT RD
CHESTERFIELD, MO 63017
AKA 16641 OLD CHESTERFIELD RD
LTE - MONOPOLE

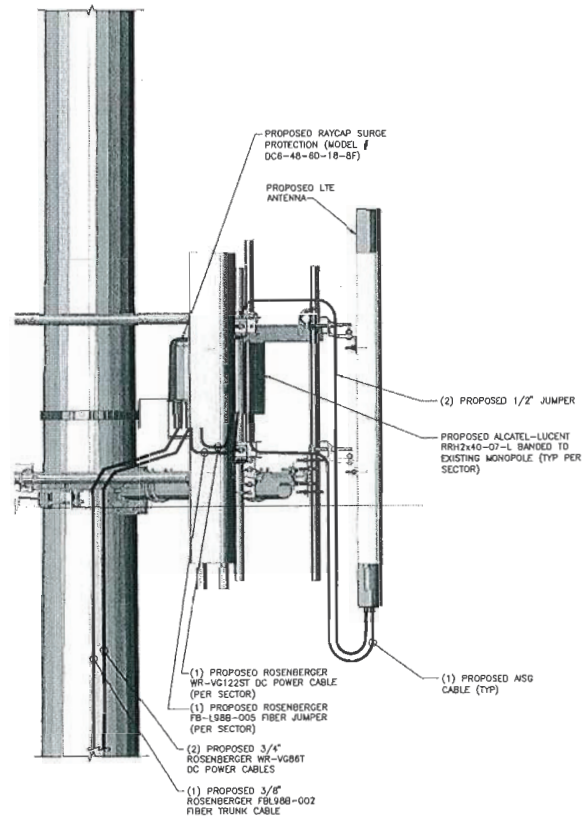
SHEET TITLE
SITE ELEVATIONS

SHEET NUMBER

Z-5



TYPICAL PLATFORM MOUNT
NO SCALE



ANTENNA ELEVATION
NO SCALE



13075 MANCHESTER RO, SUITE 100
ST LOUIS, MO 63131



BLACK & VEATCH

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

BLACK & VEATCH PROFESSIONAL ENGINEERING CORPORATION
MISSOURI STATE CERTIFICATE OF AUTHORITY # 001844

PROJECT NO.: 168988
DRAWN BY: MAK
CHECKED BY: GPX

REV	DATE	DESCRIPTION
1	07/12/11	MISC REVISIONS
0	04/28/11	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.

M03672
FAWCETT
16643 CHESTERFIELD AIRPORT RD
CHESTERFIELD, MO 63017
AKA 16641 OLD CHESTERFIELD RD
LTE - MONOPOLE

SHEET TITLE
ANTENNA/RRH MOUNT
DETAIL

SHEET NUMBER

Z-6

