

▶ **FILE #:** 4-J-08-UR

AGENDA ITEM #: 64

AGENDA DATE: 4/10/2008

▶ **APPLICANT:** U.S. CELLULAR CORPORATION

OWNER(S): EDWARD & KATHERINE GRAVES

TAX ID NUMBER: 48 O C 052

JURISDICTION: City Council District 4

▶ **LOCATION:** Northwest side of Grove Dr., southeast of Rifle Range Dr.

▶ **APPX. SIZE OF TRACT:** 6.49 acres

SECTOR PLAN: North City

GROWTH POLICY PLAN: Urban Growth Area

ACCESSIBILITY: Access is via Grove Dr., a minor collector street with a 16' pavement width within a 50' right-of-way.

UTILITIES: Water Source: Knoxville Utilities Board

Sewer Source: Knoxville Utilities Board

WATERSHED: First Creek & Knob Fork

▶ **ZONING:** R-1 (Low Density Residential)

▶ **EXISTING LAND USE:** Residences

▶ **PROPOSED USE:** 90' monopole telecommunications tower

HISTORY OF ZONING: None noted

SURROUNDING LAND USE AND ZONING: North: Residences / RA (Low Density Residential)

South: Residences / R-1 (Low Density Residential)

East: Residences / R-1 (Low Density Residential)

West: Residences / R-1 (Low Density Residential)

NEIGHBORHOOD CONTEXT: This area has developed with primarily residential uses under RA zoning to the north of the site and R-1 zoning to the east, west and south of the site.

STAFF RECOMMENDATION:

▶ **APPROVE the request for a 90' monopole telecommunications tower in the R-1 zoning district, subject to the following 7 conditions:**

1. Meeting all applicable requirements of the Knoxville Zoning Ordinance.
2. Meeting all applicable requirements of the Knoxville Department of Engineering.
3. In addition to the "stealth" structural design of the proposed tower, there shall be no exterior antennas.
4. Since the FAA does not require any lighting for this facility, there shall be no lighting on the tower.
5. The perimeter of the fenced area shall be landscaped.
6. Installing the proposed landscaping as shown on the landscape plan within six months of the tower becoming operational.
7. At the time of the request for a building permit, posting a bond or other approved financial surety that would ensure the removal of the tower if it is abandoned.

COMMENTS:

This is a request for a new 90' monopole telecommunications tower to be located within a 2,500 square foot lease area located on the north side of Grove Dr. The proposed tower will be located on an existing 6.49 residential lot. The subject property is zoned R-1(Low Density Residential), and telecommunication towers are considered as a use on review in this district. The proposed design of the tower is considered to be "stealth" based on the facts that the antennas will be flush mounted with no extension devices and that the 90' tower will blend in with the surrounding 65'-75' tree-line. Antennas on a typical monopole tower are mounted on the exterior with 3-4 antennas per carrier with potential for multiple carriers.

The proposed site is surrounded by residential properties. According to the Knoxville-Knox County Wireless Communications Facility Plan, stealth structures are encouraged in residential areas. Due to the height of the proposed tower, (90') the Facility Plan identifies this as an "encouraged" site for a telecommunication towers. According to the Knoxville Zoning Ordinance, all towers shall be setback from all properties zoned R-1 a minimum distance equal to 110% of the height of the tower. The required setback for the proposed tower is 99 ft. According to the site plan the nearest residential property line is 110' to the north and 138.5' to the southwest.

The visual impact of the tower on nearby residences will be minimal due to its stealth design along with the fact that the proposed tower and equipment area will be located on a heavily wooded 6.49 acre lot. The tower is also setback from Grove Dr. approximately 300' which will significantly reduce its visibility from the road. The tower is designed so it will collapse upon itself in case of a natural disaster or other failure. FAA does not require any lighting for the tower. The tower will support up to two telecommunication carriers. All antennas are required to be interior to the tower. U.S. Cellular will be the principal client for the tower.

According to the applicant there are no existing or acceptable structures within this area. The proposed tower will be a "fill" site to relieve gaps in the present coverage. Co-location is not an option. All towers were tested for possible collocation possibilities. No other structure exists within the area needed to provide coverage (see the attached letter from Jackson Kramer).

Attached to the staff report are several support documents, including a report from MPC's tower consultant, Mr. Larry E. Perry. Mr. Perry's report describes the proposal and highlights his findings. Mr. Perry concludes that the 90' stealth monopole tower is technically justified by the materials submitted by the applicant based on the following criteria: stealth design; internal antennas; heavily wooded, 6.49 acre lot, setback 300' from Grove Dr.; and that the height of the tower will only exceed the existing tree-line by approximately 15'- 20'.

An agreement has been submitted stating that U.S. Cellular Corporation agrees to make all of its facilities available to other wireless providers (see attached letter from John Locascio).

EFFECT OF THE PROPOSAL ON THE SUBJECT PROPERTY, SURROUNDING PROPERTY AND THE COMMUNITY AS A WHOLE

1. The proposed development will improve overall telephone service, and will have minimal impact on local services since all other utilities are in place to serve this development.
2. The tower, being located adjacent to residential uses, is required to be screened. The applicant will be required to provide landscaping around the perimeter of the fenced area. In addition to the required landscaping, the proposed tower is located in a heavily wooded area (see exhibit 10). This will reduce the impact of the proposed tower on existing residential property.
3. The height of the tower (90') will only exceed the existing tree-line by about 20'. This will make the tower less visible from the surrounding skyline. The proposed tower will also be setback from Grove Dr. approximately 300'. This will make the tower less visible from nearby property owners.

CONFORMITY OF THE PROPOSAL TO CRITERIA ESTABLISHED BY THE KNOXVILLE ZONING ORDINANCE

1. The proposed commercial telecommunications tower at this location, based on the fact that it will be designed as a stealth structure, meets the criteria required in the R-1 zoning district for approval of a telecommunications tower as a use on review.
2. The proposed tower is consistent with the general standards for uses permitted on review: The proposed development is consistent with the adopted plans and policies of the General Plan and One Year Plan. The use is in harmony with the general purpose and intent of the Zoning Ordinance. Due to the short height of the tower and the fact that it will be located on a 6.49 acre heavily wooded lot, the use will not significantly injure the value of adjacent property. The use will not draw additional traffic through residential areas.

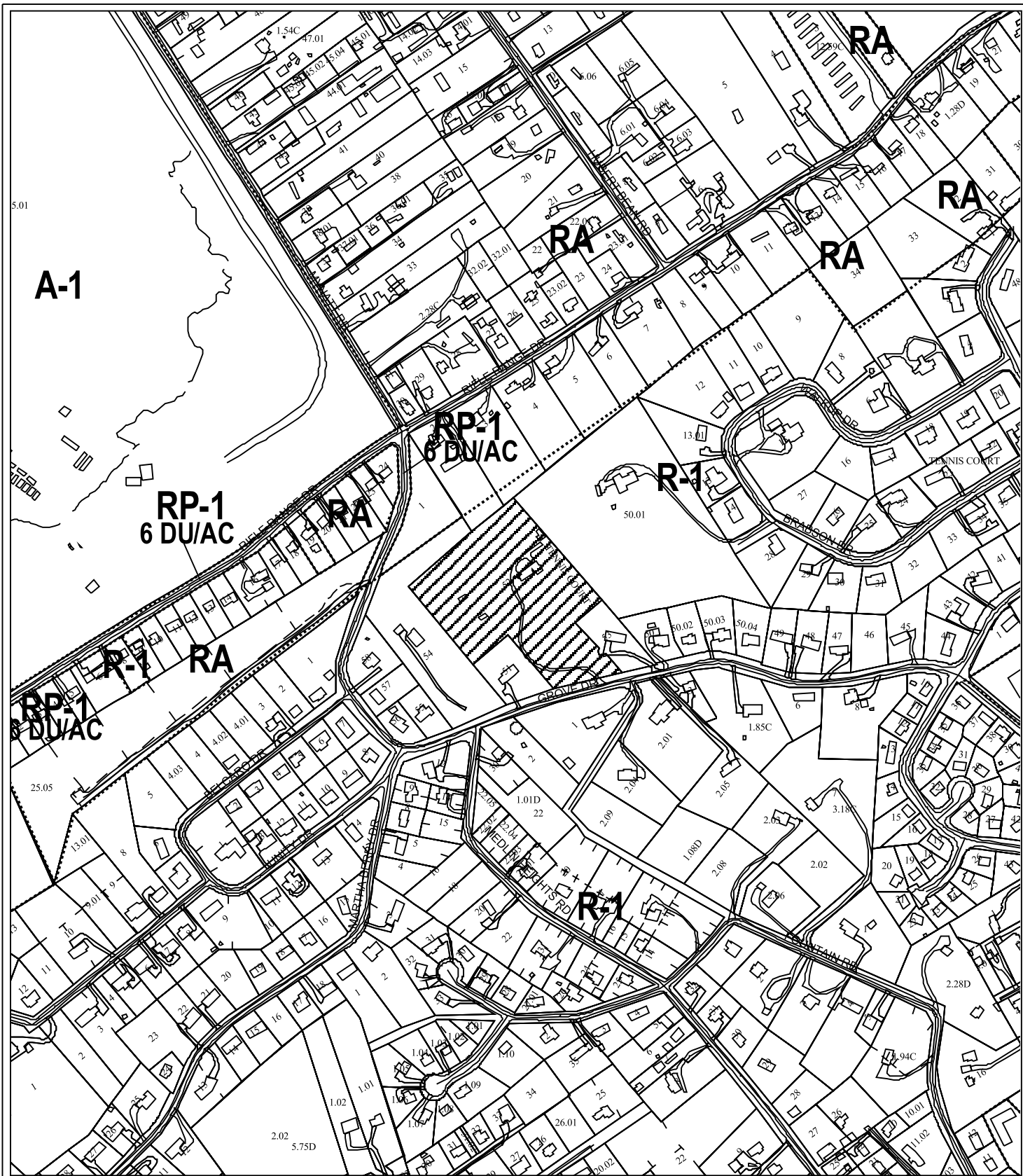
CONFORMITY OF THE PROPOSAL TO ADOPTED PLANS

1. The North City Sector Plan identifies this property as being low density residential. The proposed development is consistent with this land designation.
2. The Wireless Communications Facility Plan identifies the proposed 90' monopole as a "moderate" monopole. Under the guidelines for Tower Placement section of the Facility Plan, the proposed tower falls within the "Encouraged" category based on the stealth design (see attached matrix). As previously stated, the tower will be setback 110' from any residential property line and approximately 130' from the nearest residence


ESTIMATED TRAFFIC IMPACT: Not calculated.

ESTIMATED STUDENT YIELD: Not applicable.

MPC's approval or denial of this request is final, unless the action is appealed to the Knoxville City Council. The date of the Knoxville City Council hearing will depend on when the appeal application is filed. Appellants have 15 days to appeal an MPC decision in the City.



4-J-08-UR
 USE ON REVIEW

 90' monopole telecommunications tower in R-1 (Low Density Residential)

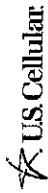
Original Print Date: 03/27/08 Revised:
 Metropolitan Planning Commission * City / County Building * Knoxville, TN 37902

Petitioner: U.S. Cellular Corporation

Map No: 48

Jurisdiction: City



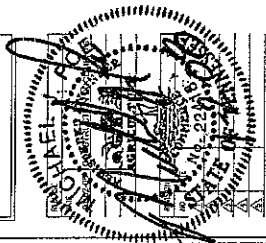


9731 COGDILL ROAD
KNOXVILLE, TN 37932
(865) 777-7030

U.S. CELLULAR
RAW LAND
HARILL HILLS
223-474
90' MONOPOLE
TELECOMMUNICATIONS TOWER
WITH MULTIPLE CARRIERS

U.S. Cellular
9731 COGDILL ROAD,
SUITE 200
KNOXVILLE, TN 37932
(865) 777-7035

BWSC
ENGINEERS ARCHITECTS PLANNERS
LANDSCAPE ARCHITECTS AND SURVEYORS
BARGE WAGDONER SUMNER & GANNON, INC.
10133 SHERILL BLVD., SUITE 200
KNOXVILLE, TENNESSEE 37932



THE OWNER'S REPRESENTATIVE HAS REVIEWED THIS PROJECT AND APPROVES IT AS SHOWN ON THESE PLANS. THIS APPROVAL IS LIMITED TO THE PROJECT AS SHOWN ON THESE PLANS AND DOES NOT CONSTITUTE A GUARANTEE OF THE ACCURACY OF THE INFORMATION ON THESE PLANS.

DRAWN BY: DAS
CHECKED BY: MJP
PROJ. NO.: MJP

SHEET TITLE: U.S. CELLULAR HARILL HILLS

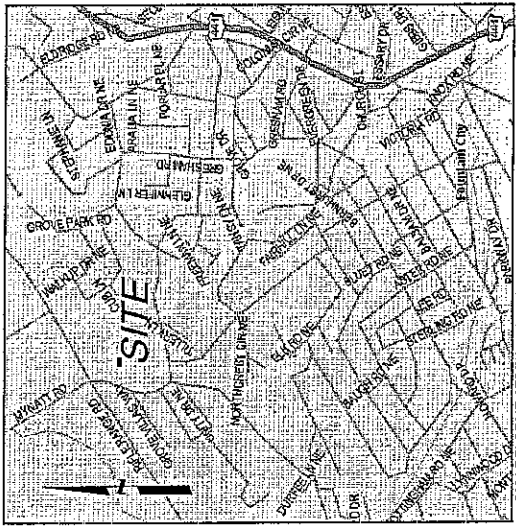
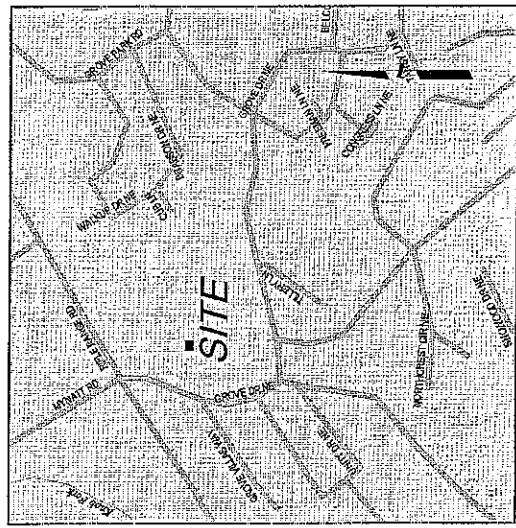
SHEET NUMBER: 223-474

SITE ADDRESS: 6242 GROVE DRIVE KNOXVILLE, TN 37918

TITLE SHEET
SITE INFORMATION
PROJECT # 33477-12
SHEET NUMBER: G0.01
DRAWN SCALE: 1" = 1'

SITE NAME
HARILL HILLS
SITE NUMBER
223-474
SITE 911 ADDRESS
6242 GROVE DRIVE
KNOXVILLE, TN 37918
SITE OWNER
U.S. CELLULAR CORPORATION
9731 COGDILL ROAD, SUITE 200
KNOXVILLE, TN 37932
APPLICANT
U.S. CELLULAR CORPORATION
9731 COGDILL ROAD, SUITE 200
KNOXVILLE, TN 37932
ZONING
R-1 - RESIDENTIAL
AREA OF LEASE
2.800 S.F. (0.067 AC.)
PARCEL NUMBER(S)
MAP 48; INSERT C, GROUP C, PARCEL 52
SITE SUMMARY

SHEET NUMBER	DESCRIPTION
G0.01	TITLE SHEET SITE INFORMATION
G0.02	GENERAL NOTES
G0.03	SITE WORK NOTES
1.0E.2	SITE SURVEY
2.0P.2	LEGAL DESCRIPTIONS
SITE PLANS	
C0.10	ACCESS PLAN
C1.01	SITE PLAN
C2.01	ELEVATION & PLATFORM DETAIL
C3.01	GRADING PLAN
C1.01	SITE WORK DETAILS
C1.02	SITE WORK DETAILS
C1.03	SITE WORK DETAILS
ELECTRICAL PLANS	
E1.01	UTILITIES PLAN
E1.10	ELECTRICAL SPECIFICATIONS
E2.01	GROUNDING PLAN
E2.10	GROUNDING NOTES
E7.01	ELECTRICAL DETAILS
E7.02	ELECTRICAL DETAILS
E7.03	ELECTRICAL DETAILS
E7.04	ELECTRICAL DETAILS



SCALE: NTS VICINITY MAP SCALE: NTS

DIRECTIONS TO SITE
FROM WEST KNOXVILLE, TAKE I-40 EAST, MERGE ONTO I-640 EAST AND TRAVEL 6.1 MILES TO OLD BROADWAY VLS. 441 (EXIT #6). EXIT AND TURN LEFT (NORTH) AT THE SECOND TRAFFIC LIGHT ONTO S.R. 33 N. TRAVEL 1.8 MILES TO A LEFT TURN ONTO GRESHAM ROAD NE. TRAVEL 0.2 MILE TO A RIGHT TURN ONTO GROVE DRIVE NE. TRAVEL 0.5 MILE TO A CONCRETE DRIVEWAY AT 6242 GROVE DRIVE NE. TRAVEL 0.5 MILES UNTIL YOU TURN LEFT HALF WAY UP THE DRIVEWAY TOWARD THE RESIDENCE. THE SITE IS IN THE NORTHWEST CORNER OF THIS PROPERTY.

FILE NO. 33477-12
DATE: JANUARY 02, 2008
10133 SHERILL BLVD., SUITE 200
KNOXVILLE, TENNESSEE 37932
PH: (865) 637-2610

BARGE WAGDONER SUMNER & GANNON, INC.
ENGINEERS ARCHITECTS PLANNERS
LANDSCAPE ARCHITECTS AND SURVEYORS



4-J 08-WR

NOTES

- A. ALL CONSTRUCTION MUST CONFORM TO THE CITY OF KNOXVILLE STANDARDS AND SPECIFICATIONS, WHETHER OR NOT REVIEW COMMENTS WERE MADE.
- B. NOTIFY INSPECTOR TWENTY-FOUR (24) HOURS PRIOR TO CONSTRUCTION.
- C. THIS PROJECT DOES NOT REQUIRE SEWER SERVICE OR SEPTIC TANKS.
- D. OFF STREET PARKING SHALL BE PROVIDED AND MAINTAINED THROUGHOUT CONSTRUCTION.
- E. ALL AREAS MUST BE COMPACTED TO A MINIMUM 95% STANDARD PROCTOR. A REPORT FROM A GEOTECHNICAL ENGINEER MAY BE REQUIRED BY THE CONSTRUCTION INSPECTOR FOR ALL FILL AREAS.
- F. IF THE CONTRACTOR, IN THE COURSE OF WORK, FINDS ANY DISCREPANCY BETWEEN THE PLANS AND THE PHYSICAL CONDITIONS OF THE LOCALITY, OR ANY ERRORS, OR OMISSIONS IN THE PLANS, OR IN THE LAYOUT AS GIVEN BY THE ENGINEER, IT SHALL BE HIS DUTY TO IMMEDIATELY INFORM THE ENGINEER, IN WRITING, AND THE ENGINEER WILL PROMPTLY VERIFY THE SAME. ANY WORK DONE AFTER SUCH DISCOVERY, UNTIL AUTHORIZED, WILL BE AT THE CONTRACTORS RISK.
- G. NO BURY PITS SHALL BE LOCATED ON THIS SITE.
- H. THE UTILITIES SHOWN TO BE EXISTING ON THESE PLANS ARE BASED ON INFORMATION WHICH WAS AVAILABLE AT THE TIME THESE PLANS WERE PREPARED AND MAY NOT BE ACCURATE AS TO THE EXTENT, OR LOCATION OF UTILITIES. THE CONTRACTOR SHALL NOTIFY ALL UTILITIES AND HAVE THEIR LOCATION MARKED OR RE-MARKED, AND THEY SHALL REMAIN MARKED DURING THE CONSTRUCTION.
- I. LOT STANDARDS OF TOTAL PARENT TRACT ZONED RP-1.
 - MIN. FRONT B.L. SETBACK 110% TOWER HEIGHT
 - MIN. SIDE B.L. SETBACK 110% TOWER HEIGHT
 - MIN. REAR B.L. SETBACK 110% TOWER HEIGHT
 - MIN. HEATED FLOOR AREA N/A
 - MIN. LOT WIDTH N/A
 - MIN. TELECOM TOWER SETBACK N/A
- J. SIGNING AND STRIPING TO BE PROVIDED BY THE DEVELOPER ACCORDING TO THE CITY OF KNOXVILLE SPECIFICATIONS.
- K. ALL WORK SHALL BE ACCOMPLISHED IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL CODES OR ORDINANCES. THE MOST STRINGENT CODE WILL APPLY IN THE CASE OF DISCREPANCIES OR DIFFERENCES IN CODE REQUIREMENTS.
- L. AFTER BUILDING PERMIT HAS BEEN ISSUED, THE IMPROVEMENTS LOCATED AT OR BELOW EXISTING GRADE CAN BE CONSTRUCTED. PRIOR TO INSTALLING EQUIPMENT ON THE TOWER, THE CONTRACTOR SHALL VERIFY THAT THE STRUCTURAL ANALYSIS HAS BEEN COMPLETED.
- M. THE CONTRACTOR SHALL INCLUDE ALL WORK REQUIRED TO CONSTRUCT A TOWER COMPOUND AND MONOPOLE TOWER, INCLUDING ALL NECESSARY SITE IMPROVEMENTS, FOUNDATIONS, CONCRETE PADS, ELECTRICAL IMPROVEMENTS AND OTHER ACCESSORIES FOR A COMPLETE INSTALLATION.
- N. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF THE FOLLOWING EQUIPMENT THAT WILL BE SUPPLIED BY U.S. CELLULAR:
 - *ANTENNAS *COAX CABLES *RADIO EQUIPMENT SHELTER *ANTENNA MOUNTS *ICE BRIDGE *HOISTING GRIPS
 - THE EQUIPMENT SHALL BE TRANSPORTED TO THE SITE BY THE CONTRACTOR.
- O. ALL CONCRETE WORK SHALL CONFORM TO ACI 301.
- P. CONTRACTOR TO NOTIFY US CELLULAR TESTING REPRESENTATIVE 48 HOURS BEFORE CONCRETE POURS.

UTILITY DATA	
POWER:	KNOXVILLE UTILITIES BOARD CONTACT: CHARLIE GRAY PHONE: (865) 594-7385
PHONE:	BELLSOUTH CONTACT: THERESA NORTHERN PHONE: (865) 539-8578
POLICE DEPT.:	911
FIRE DEPT.:	911
ZONING/BUILDING PERMIT:	KNOX COUNTY MPC AND CITY OF KNOXVILLE

U.S. Cellular
9731 COGDILL ROAD
KNOXVILLE, TN 37932
(865) 777-7030

BWSC

BARBARA W. BROWN
REGISTERED PROFESSIONAL ENGINEER
1505 BEAR AVENUE, SUITE 200
KNOXVILLE, TENNESSEE 37932

DATE	REVISION
01/05/08	CONSTRUCTION DOCUMENTS

NO.	DATE
1	▲
2	▲
3	▲
4	▲
5	▲

THIS DRAWING IS THE PROPERTY OF U.S. CELLULAR. IT IS TO BE USED ONLY FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREON. IT IS NOT TO BE REPRODUCED, COPIED, OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, WITHOUT THE WRITTEN PERMISSION OF U.S. CELLULAR.

DESIGNED BY: DAS
CHECKED BY: MJP
PROJECT NO.: 11P

SITE NAME: U.S. CELLULAR
HARILL HILLS

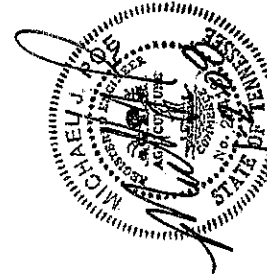
SITE ADDRESS: 223-474

SITE ADDRESS: 6242 GROVE DRIVE
KNOXVILLE, TN 37918

SHEET TITLE: GENERAL SITE NOTES

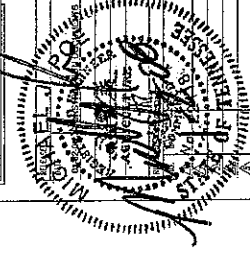
PROJECT # 33477-12
SHEET NUMBER G0.02

SCALE: 1" = 1'



U.S. Cellular
 9731 COGDILL ROAD
 KNOXVILLE, TN 37932
 (665)777-7030

BWSC
 BARBER
 QUINN &
 LANNON, P.C.
 LANDSCAPE ARCHITECTS AND PLANNERS
 10133 SHERILL BLVD., SUITE 200
 KNOXVILLE TENNESSEE 37932



THIS DOCUMENT IS UNCLASSIFIED
 DATE 01-11-2011 BY 60322
 AUTHORITY 50 USC 17017
 REASON: THIS DOCUMENT IS UNCLASSIFIED
 EXCEPT WHERE SHOWN OTHERWISE

DOWN BY: DAS
 CHECKED BY: JAP
 PROJECT NO.: 143
 SHEET NO.: 143
 U.S. CELLULAR
 HARILL HILLS
 SET NUMBER: 223-474
 SHEET NUMBER: 6242 GROVE DRIVE
 KNOXVILLE, TN 37948
 SHEET TITLE: SITE WORK
 NOTES: PROJECT # 33477-12
 SHEET NUMBER: G0.03
 FOOT SCALE: 1" = 1'

6. CONTRACTOR SHALL REFER TO DRAWINGS OF OTHER TRADES AND VENDOR DRAWINGS FOR EMBEDDED ITEMS AND RECESSES NOT SHOWN ON THE STRUCTURAL DRAWINGS.

7. THE DESIGN ADEQUACY AND ERECTION OF BRACING, SHORING, ETC., IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

8. ALL REINFORCING STEEL BARS SHALL BE DOMESTIC, NEW BILLET STEEL, ASTM A615, GRADE 60. REINFORCING SHALL BE DETAILED AND FABRICATED IN ACCORDANCE WITH "MANUAL OF STANDARD FOR DETAILING REINFORCED CONCRETE" (ACI 315-80). WELDED WIRE FABRIC REINFORCING SHALL CONFORM TO ASTM A185.

9. CONCRETE SHALL BE PLACED AGAINST UNDISTURBED SOIL, UNLESS NOTED OTHERWISE. CONCRETE COVERAGE OVER ALL STEEL SHALL BE 3" UNLESS NOTED OTHERWISE.

10. OBTAIN THE A/E'S APPROVAL BEFORE PLACING CONCRETE.

11. CONCRETE SHALL BE AIR-ENTRAINED (4% TO 6%) AND HAVE A SLUMP NOT LESS THAN 3" OR MORE THAN 5".

12. SHELTER AREA SHALL BE CLEARED AND GRUBBED. REMOVE UNSUITABLE SOFT OR LOOSE SOILS, ORGANIC MATERIAL AND/OR RUBBLE TO FIRM SUBGRADE. FILL UNDERCUT UP TO 6 INCHES BELOW FINISH GRADE. PLACE A MIRAFI #500X GEOTEXTILE FILTER FABRIC ON SUBGRADE AND FILL WITH 6 INCHES OF #57 STONE TO FINISH GRADE.

STRUCTURAL STEEL

1. STRUCTURAL STEEL CONSTRUCTION SHALL BE IN COMPLIANCE WITH AISC SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS.

2. STRUCTURAL STEEL SHALL BE AS FOLLOWS: YIELD ATSM SPEC.

A. STRUCTURAL STEEL PIPE 35 KSI A53-GRADE B

B. STEEL SHAPES, BARS AND PLATES 36 KSI A36

C. STRUCTURAL STEEL TUBING 46 KSI A500-GRADE B

3. ALL ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS WRITTEN INSTRUCTIONS.

4. USE PRE-QUALIFIED WELDED JOINTS AS PER AISC AND AWS D1.1. STRUCTURAL WELDING CODE. USE ONLY CERTIFIED WELDERS. ALL ELECTRODES SHALL CONFORM TO AWS A5.1, GRADE E70XX, BARE ELECTRODE AND GRANULAR FLUX SHALL CONFORM TO AWS A5.1, P70 AWS FLUX CLASSIFICATION.

5. SUBMIT SHOP DRAWINGS FOR APPROVAL PRIOR TO FABRICATION.

6. THE GENERAL CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND SITE CONDITIONS BEFORE SUBMISSION OF SHOP DRAWINGS. THE ARCHITECT/ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCY.

7. PROVIDE ADEQUATE BRACING FOR STRUCTURE SO THAT IT WILL BE STABLE DURING ALL STAGES OF CONSTRUCTION.

8. ALL STEEL SHALL BE HOT DIPPED GALVANIZED

9. GUSSET PLATES SHALL BE 3/8" THICK MINIMUM.

10. TOUCH UP GALVANIZED COATING REMOVED BY WELDING OR OTHERWISE USING Z.R.C. COLD GALVANIZING COMPOUND.

STRUCTURAL

DESIGN CRITERIA:
 APPLICABLE CODES:

STANDARD BUILDING CODE, 1997
 ANSI/TIA/EIA-222-F-1996, 70 MPH BASIC WIND SPEED.

GENERAL

1. INFORMATION SHOWN ON THESE DRAWINGS WAS OBTAINED BY FIELD MEASUREMENT. THE GENERAL CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIALS OR PROCEEDING WITH CONSTRUCTION.

2. THE GENERAL CONTRACTOR AND HIS SUBCONTRACTORS SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND INSPECTIONS WHICH MAY BE REQUIRED FOR THE WORK.

3. ALL THREADED STRUCTURAL FASTENERS FOR ANTENNA SUPPORT ASSEMBLIES SHALL CONFORM TO ASTM A307 OR ASTM A36. ALL STRUCTURAL FASTENERS FOR STRUCTURAL STEEL FRAMING SHALL CONFORM TO ASTM A325. FASTENERS SHALL BE 5/8 INCH MIN. DIAMETER BEARING TYPE CONNECTIONS WITH THREADS EXCLUDED IN THE SHEAR PLANE. BOLTS SHALL BE MECHANICALLY OR HOT DIPPED GALVANIZED. ELECTROPLATED BOLTS ARE NOT ACCEPTABLE. CONCRETE EXPANSION ANCHORS SHALL BE HILTI KWIK BOLTS UNLESS OTHERWISE NOTED. ALL ANCHORS INTO CONCRETE SHALL BE STAINLESS STEEL.

4. ALL COAXIAL CABLE CONNECTORS AND TRANSMITTER EQUIPMENT SHALL BE AS SPECIFIED BY THE OWNER AND IS NOT INCLUDED IN THESE CONSTRUCTION DOCUMENTS. THE CONTRACTOR SHALL FURNISH ALL CONNECTION HARDWARE REQUIRED TO SECURE THE CABLES, CONNECTION HARDWARE SHALL BE STAINLESS STEEL.

5. A STRUCTURAL ANALYSIS SHALL BE PERFORMED BY THE OWNER'S AGENT TO CERTIFY THAT THE COMMUNICATION TOWER AND ITS COMPONENTS ARE STRUCTURALLY ADEQUATE TO SUPPORT THE EXISTING AND ALL NEW ANTENNAS AND CABLES. THE OWNER SHALL FURNISH A CERTIFICATION LETTER SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF TENNESSEE. ALL COST FOR THE INITIAL STRUCTURAL ANALYSIS/DESIGN SHALL BE PAID BY US CELLULAR, INC.

CONCRETE/FOUNDATION

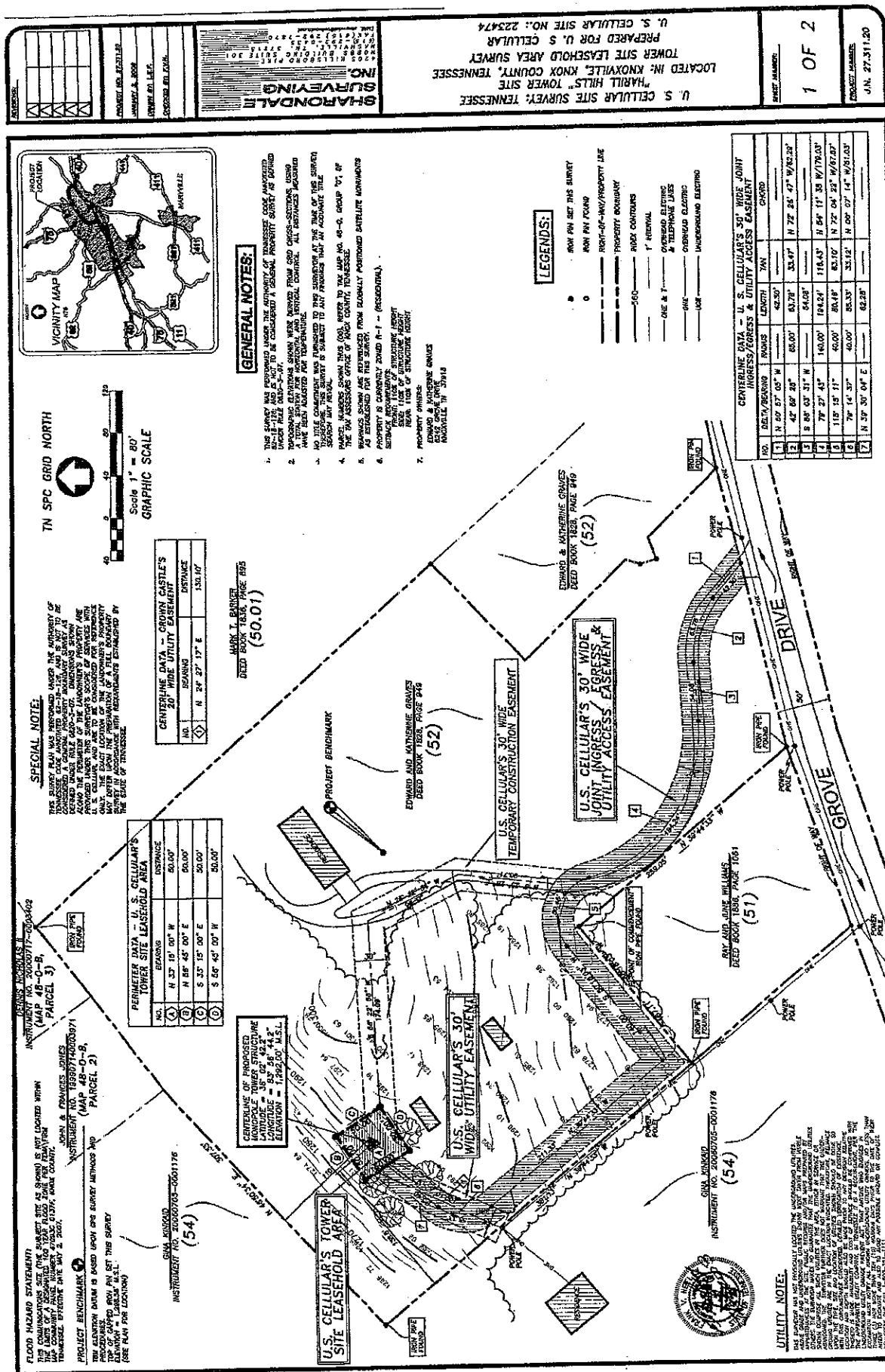
1. CHECK AREA FOR LOCATION OF UNDERGROUND PIPES, CABLE CONDUIT, ETC. PRIOR TO STARTING EXCAVATION.

2. ALL CONCRETE WORK SHALL CONFORM TO ACI 318 BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE. ALL CONCRETE SHALL BE NORMAL WEIGHT CONCRETE WITH A 28 DAY COMPRESSIVE STRENGTH OF 5,000 PSI.

3. ALL BAR SPLICES SHALL BE CLASS "B" TENSION SPLICES, UNLESS OTHERWISE SHOWN.

4. CHAMFER ALL EXPOSED EXTERNAL CORNERS OF CONCRETE WITH 3/4"x45 DEGREES CHAMFER, UNLESS OTHERWISE NOTED.

5. CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING, PROTECTING AND RELOCATING AS REQUIRED ALL SERVICE AND UTILITY LINES IN VICINITY OF THE WORK SITE.



U.S. Cellular
 9731 COGDRILL ROAD
 KNOXVILLE, TN 37932
 (865)777-7030

BWSC
BARBE WADDNER & DANNON, INC.
 ENGINEERS ARCHITECTS AND PLANNERS
 10133 SHERILL BLVD., SUITE 200
 KNOXVILLE, TENNESSEE 37932

REVISION	DATE	DESCRIPTION
1	08-27-07	CONTRACT AGREEMENT
2	08-28-07	ADD COASTAL EASEMENT
3	10-07-08	MOVED SITE

THE DRAWING IS UNRECORDED AND IS THE SITE PLAN FOR THE USE OF THE LOCAL GOVERNMENT. IT IS NOT TO BE USED FOR ANY OTHER PURPOSES WITHOUT THE WRITTEN PERMISSION OF THE OWNER.

DRAWN BY: DAS
 CHECKED BY: MJP
 TITLE: MAP

U.S. CELLULAR
 HARILL HILLS

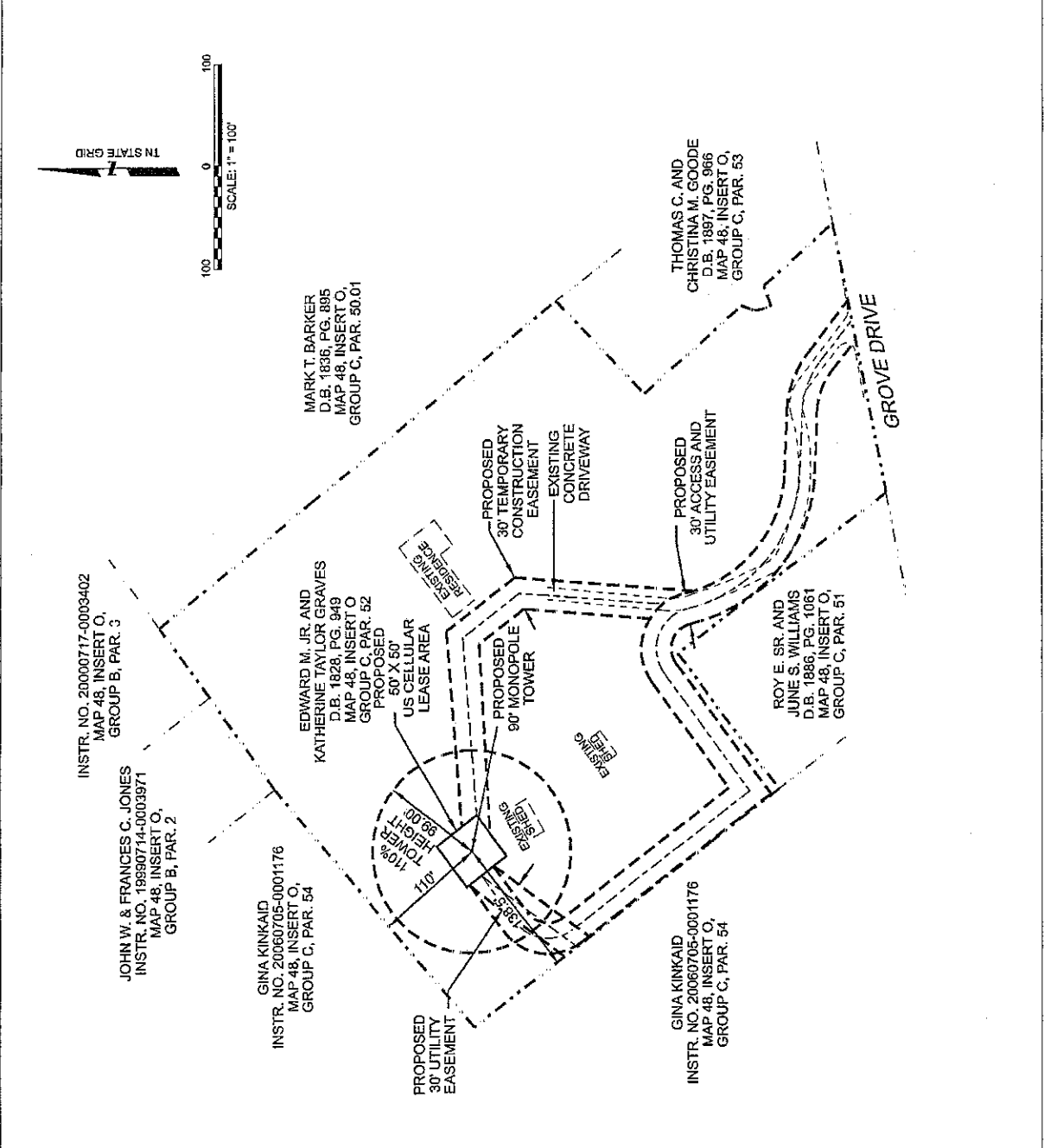
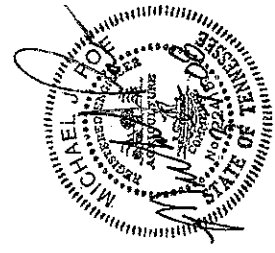
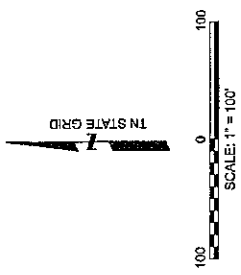
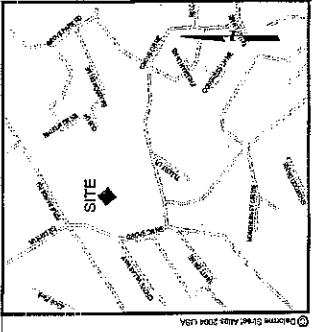
DIST. NUMBER
 223-474

DIST. ADDRESS
 6242 GROVE DRIVE
 KNOXVILLE, TN 37918

DIST. TITLE
 SETBACK EXHIBIT

PROJECT # 33477-12
 SHEET NUMBER

C0.00
 FOOT SCALE



U.S. Cellular
 8731 COGDILL ROAD
 KNOXVILLE, TN 37932
 (865)777-7030

BW.S.C.
 BARRE
 WAGGONER &
 GANNON, INC.
 ENGINEERS ARCHITECTS AND SURVEYORS
 10133 SHERILL BLVD., SUITE 200
 KNOXVILLE, TENNESSEE 37932

DATE	1/15/08
BY	J.M.P.
DESCRIPTION	CONSTRUCTION DOCUMENTS

NO.	DATE
1	1/15/08
2	1/15/08
3	1/15/08
4	1/15/08
5	1/15/08
6	1/15/08
7	1/15/08
8	1/15/08
9	1/15/08
10	1/15/08

THIS DRAWING IS THE PROPERTY OF B.W.S.C. ENGINEERS ARCHITECTS AND SURVEYORS. IT IS TO BE USED ONLY FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREON. NO PART OF THIS DRAWING IS TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, WITHOUT THE WRITTEN PERMISSION OF B.W.S.C.

DRAWN BY: J.M.P.
 CHECKED BY: J.M.P.
 PLOTTED BY: J.M.P.

SITE NAME:
 U.S. CELLULAR
 HARILL HILLS

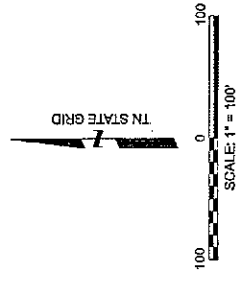
SHEET NUMBER:
 223-474

SITE ADDRESS:
 6242 GROVE DRIVE
 KNOXVILLE, TN 37918

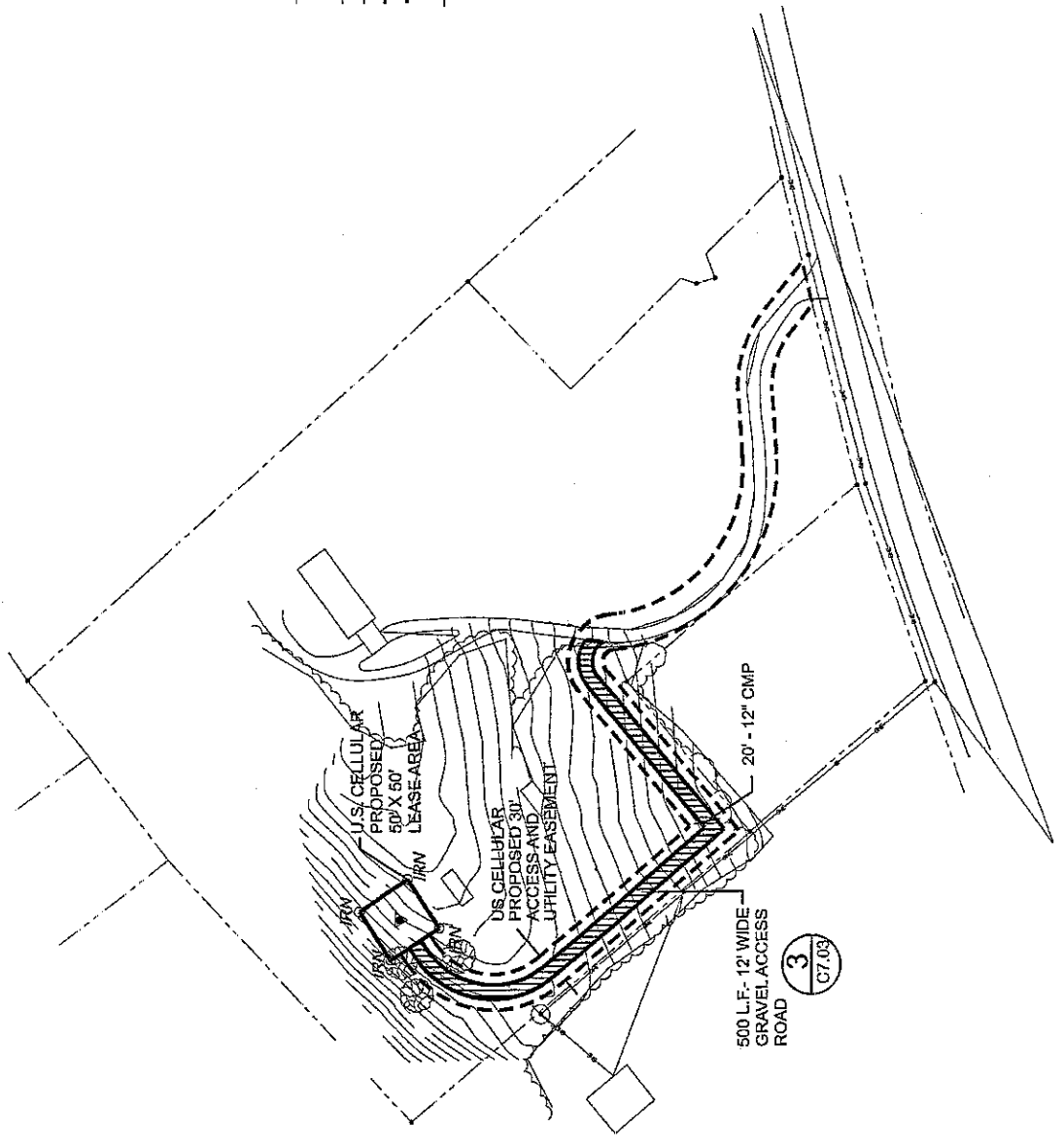
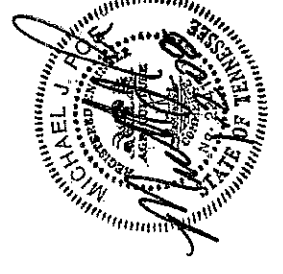
SHEET TITLE:
 ACCESS PLAN

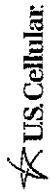
PROJECT # 33477-12
 SHEET NUMBER
 C0.10

PLOT SCALE:
 1" = 1'



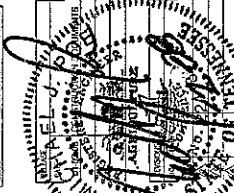
- LEGEND**
- UTILITY POLE
 - FENCE
 - EXISTING PROPERTY LINE
 - PROPOSED LEASE LINE
 - EXISTING OR PROPOSED EASEMENT LIMITS
 - PROPOSED GRAVEL ACCESS





9781 COGDILL ROAD
KNOXVILLE, TN 37932
(865)777-7030

BWSC
BARGE
WAGNER
DANNON &
PANNON, INC.
ENGINEER ARCHITECTS AND PLANNERS
LANDSCAPE ARCHITECTS AND PLANNERS
10133 SHERILL BLVD., SUITE 200
KNOXVILLE, TENNESSEE 37932



THIS DRAWING IS CONSIDERED VALID AS TO THE SITE INFORMATION ON THE DATE OF THE PERMITTING AGENCY'S REVIEW OF THIS DRAWING AND FOR THE PURPOSES OF THE PERMITTING AGENCY. THE PERMITTING AGENCY SHALL BE THE ULTIMATE AUTHORITY ON THE MATTER.

DRAWN BY: [Signature]
CHECKED BY: [Signature]
FINAL, NGR, RMP

SHEET NAME: U.S. CELLULAR
HARRILL HILLS

SHEET NUMBER: 223-474

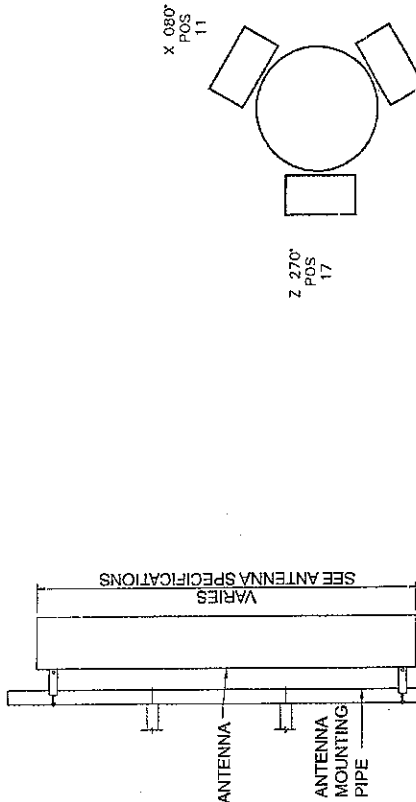
SITE ADDRESS: 6242 GROVE DRIVE
KNOXVILLE, TN 37918

SHEET TITLE: ELEVATION & PLATFORM DETAIL

PROJECT #: 33477-12

SHEET NUMBER: C2.01

PROJECT SCALE: 1" = 1'

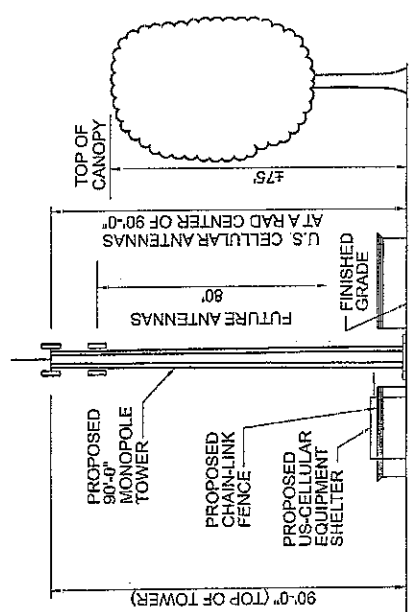


2 ANTENNA SECTION
N.T.S.
C2.01

3 ANTENNA MOUNTING ASSIGNMENT
N.T.S.
C2.01

POS	ANTENNA #	ANTENNA MODEL	GAIN	ANT. ERP	PA SETTING	MECH. DT	ELEC. DT	ANT. HEIGHT	AZIMUTH	CABLE LENGTH	CABLE SIZE
10	X	LR651406DA2	NP	NP	NP	2	NP	90'	60°	150	7/8"
14	Y	LR651406DA2	NP	NP	NP	5	NP	90'	170°	150	7/8"
17	Z	LR651406DA2	NP	NP	NP	4	NP	90'	270°	150	7/8"

4 TOWER ELEVATION
N.T.S.
C2.01



1 TOWER ELEVATION
SCALE: 1" = 30'
C2.01

KRAMER RAYSON LLP
ATTORNEYS AT LAW

POST OFFICE BOX 629
KNOXVILLE TENNESSEE 37901-0629

E. H. RAYSON
JOHN B. RAYSON
JOHN T. JOHNSON JR.
WARREN L. GOOCH
WAYNE R. KRAMER
EDWARD G. PHILLIPS
THOMAS M. HALE
JACKSON G. KRAMER
BEECHER A. BARTLETT JR.
ROBERT W. KNOLTON
JOHN C. BURGIN, JR.
ADRIENNE L. ANDERSON
CHARLES M. FINN
ROBERT A. CRAWFORD
ROBERT P. MURRIAN
JOHN E. WINTERS
ROBERT L. BOWMAN
CHARLES E. YOUNG JR.
FRANCIS L. LLOYD, JR.
AMANDA M. BUSBY
ANN E. SARTWELL
KATE E. TUCKER
BETSY J. BECK
WILLIAM J. CARVER
SUSAN SCHULTZ DAVIS
CHAD W. HAMPTON

March 10, 2008

4-J-08-UR
3/10/08
SPECIAL COUNSEL
STEVEN E. KRAMER
SHANNON D. COLEMAN

OF COUNSEL
DONELSON M. LEAKE
HUGH W. MORGAN
G. WILSON HORDE

OFFICES
FIRST TENNESSEE PLAZA, SUITE 2500
800 SOUTH GAY STREET
KNOXVILLE TENNESSEE 37929
TELEPHONE 865 525-5134
TELECOPIER 865 522-5723

105 DONNER DRIVE, SUITE B
OAK RIDGE TENNESSEE 37830
TELEPHONE 865 220-5134
TELECOPIER 865 220-5132

R. R. KRAMER (1888-1966)
CARTER B. WALL (1915-1968)
ANDREW JOHNSON (1918-1985)
JACKSON C. KRAMER (1921-1993)
R. ARNOLD KRAMER (1918-1993)

Metropolitan Planning Commission
City-County Building, Suite 403
400 Main Avenue
Knoxville, Tennessee 37902

Re: U.S. Cellular Corporation
Application for Tower Site Use-On-Review

Dear Sir or Madam:

Please be advised that the undersigned represents U S Cellular Corporation ("USCC"). USCC hereby files the enclosed Use-On-Review Application and requests that it be placed on the agenda for the April 10, 2008 Metropolitan Planning Commission meeting. Such Use-On-Review Application requests approval for a proposed cellular communications monopole to be located on property owned by Edward M. Graves, Jr. and spouse, Katherine Graves, at 6242 Grove Drive in the City of Knoxville, Knox County, Tennessee. Accordingly, enclosed herewith please find the following items:

1. Completed Application Form as signed by an authorized representative of USCC and as signed by Edward M. Graves, Jr., the property owner.
2. Information Summary and Table of Contents.
3. Ten (10) copies of the Development Plan with Exhibits 1 through 12 attached.
4. Our Firm's check in the amount of Five Hundred Eighty Dollars (\$580.00), made payable to the Metropolitan Planning Commission in payment of the review fee.

5. Our Firm's check in the amount of One Thousand Five Hundred Dollars (\$1,500.00), made payable to the Metropolitan Planning Commission for the Escrow deposit relative to the Professional Engineering Consultant's fee

As noted, USCC is proposing that a cellular communications monopole be placed on property owned by Edward M. Graves, Jr. and spouse, Katherine Graves, at 6242 Grove Drive in the City of Knoxville, Knox County, Tennessee. USCC has entered into a lease with the property owner for the proposed site.

USCC recognizes that pursuant to Article 5.20(B)(1)(f) of the City of Knoxville Zoning Ordinance, a professional engineering consultant qualified in the design and installation of wireless communications facilities may be employed to review its application. Accordingly, the One Thousand Five Hundred Dollar (\$1,500.00) escrow fee specified in the Zoning Ordinance is enclosed. USCC further understands that such fee shall not exceed One Thousand Five Hundred Dollars (\$1,500.00) in total.

USCC proposes to construct a tapered stealth monopole structure ninety (90) feet in height that will utilize interior antenna mounts. A photograph of a nearly identical tapered monopole is attached to the Application as Exhibit 3. Please note that proposed monopole will be significantly shorter than the monopole shown in Exhibit 3.

Since the proposed monopole will be less than 200 feet in height, FAA regulations will not require the monopole to be lighted. In addition, as required by Article 5.20(B)(1)(a) of the City of Knoxville Zoning Ordinance, the monopole will be constructed to support two (2) antenna arrays for co-location purposes. USCC's letter of intent setting forth its commitment to permit co-location on the proposed monopole is included with the Application as Exhibit 4.

The monopole is proposed for this area in order to fill a radio frequency coverage gap experienced by USCC along Maynardville Highway, Broadway, Rifle Range Road, Dry Gap Pike, Cedar Lane, and other areas in the vicinity, and to address capacity issues on existing USCC sites. Moreover, signal hand-offs from USCC's existing sites surrounding this area are impeded because of terrain blocking and because of capacity constraints.

Radio frequency coverage maps showing coverage with and without the proposed monopole are attached to the Application as Exhibits 6 and 7.

In an effort to address tower proliferation concerns, USCC performed a search in the proposed coverage area for other existing towers on which co-location might be possible. As noted on Exhibit 1, no existing towers are located within a one-mile search ring.

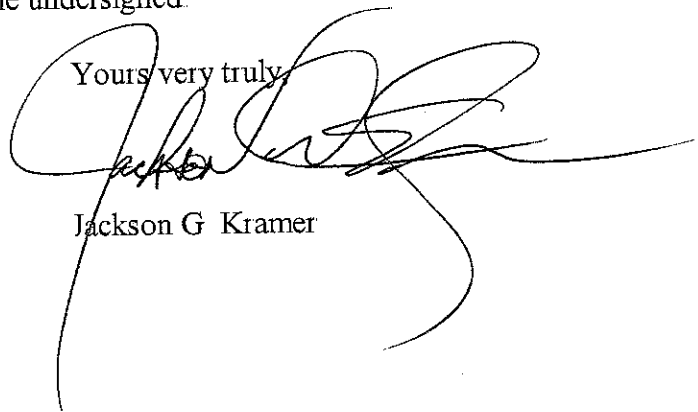
USCC also searched for other existing structures within the area of the proposed site on which co-location might be feasible. No other suitable existing structures are present in this area.

This proposed monopole is also consistent with the Goals, Objectives and Policies of the Wireless Communications Facilities Plan ("Plan") adopted by the Metropolitan Planning Commission in September, 2002. Although the proposed site is residentially zoned, the 90 foot monopole is considered a "low" to "moderate" monopole in height. Further, the proposed structure is a "stealth" type monopole design with interior antenna mounts, is located in a heavily wooded area below the ridgeline, and is located a significant distance from the public right-of-way.

In addition, the proposed monopole meets the Plan's objective of being separated from any nearby residents by a distance of at least one hundred ten percent (110%) of the tower height (in this instance, ninety-nine (99) feet). No property lines are located within ninety-nine (99) feet of the proposed monopole. It should also be noted that no residential structures are located within ninety-nine (99) feet of the proposed site.

Thank you very much for your assistance in this matter. Should you need any additional information, please do not hesitate to contact the undersigned.

Yours very truly,



Jackson G. Kramer

JGK/tsg
Enclosures

FAUS CELLULAR/HARRILL HILLS ZONING MATTER/METROPOLITAN PLANNING COMMISSION 3-6-08 DOC

INFORMATION SUMMARY AND TABLE OF CONTENTS

USE ON REVIEW APPLICATION FOR

U. S. CELLULAR'S HARRILL HILLS SITE NUMBER 223474

1. Site Plan/Survey – Attached to Construction Drawings
2. No towers registered with the FCC as telecommunications towers were found on the FCC Data Base within a one-mile search ring (See Exhibit 1). FCC Data Base results of search ring is attached as Exhibit 2 (Note: Search ring shown on Exhibit 2 is a five-mile radius).

3. & 4. Application is made directly by the carrier -

U. S. Cellular Corporation
9731 Cogdill Road, Suite 200
Knoxville, Tennessee 37932

Contact: John Locascio
Telephone: (865) 777-7039
Facsimile: (865) 777-7012

5. Basic Tower Information:

- (a) U S Cellular Corporation ("USCC") proposes a monopole to be manufactured by Sabre Communications. The pole will be located on property owned by Edward M. Graves, Jr. and spouse, Katherine Graves, at 6242 Grove Drive in the City of Knoxville, Knox County, Tennessee. The equipment compound and the base of the pole will be enclosed within a chain link fence six (6) feet in height.
- (b) The monopole will be ninety (90) feet in height.
- (c) Since the monopole will be less than 200 feet in height, no FAA lighting will be necessary.
- (d) U S Cellular will utilize a tapered monopole with interior antenna mounts. A photograph of a nearly identical stealth monopole is attached as Exhibit 3. The monopole is designed and will be constructed to permit co-location for one additional carrier.
- (e) An area forty-five (45) feet by forty-one and one-half (41.5) feet will be enclosed by a chain link fence six (6) feet in height and topped with three (3) strands of barbed wire. See Construction Drawings, p. C1 01. The

monopole and all ancillary equipment will be located within this fenced compound.

6. USCC's Letter of Intent committing itself to allow shared use of the proposed monopole is attached as Exhibit 4 Other likely candidates for co-location:

AT&T
Cricket (Leap Wireless)
Verizon
Sprint/Nextel
T-Mobile

7. Zoning Map:

Proposed site is zoned R-1. Site zoning and zoning of adjacent parcels are shown on Exhibit 5 Map of larger area within one mile of proposed site to be provided by the Metropolitan Planning Commission.

8. Coverage Map without proposed site - Exhibit 6

9. Coverage Map with proposed site - Exhibit 7

10. Proposed landscaping -- The site is heavily wooded and pursuant to Section 5.20(B)(4)(b) of the City of Knoxville, Tennessee Zoning Ordinance, USCC believes that existing natural vegetation will achieve the required screening. See photographs of site attached as Collective Exhibit 10. In addition, at the property owner's request, USCC has agreed to install certain landscaping in locations identified by the property owner. However, should the determination be made that additional landscaping is necessary, USCC will meet the landscaping requirements of Section 5.20(B)(4) of said Zoning Ordinance.

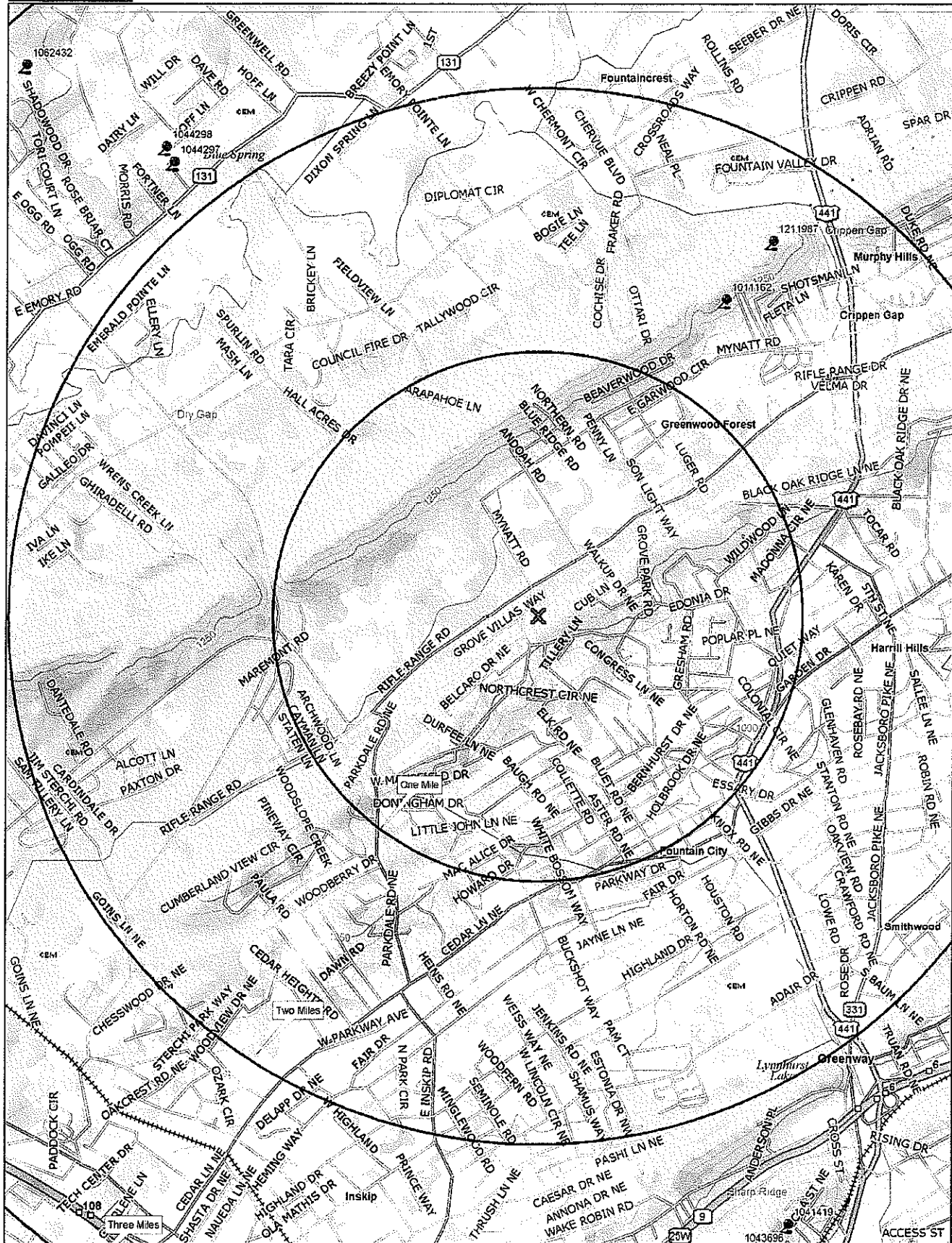
11. Technical Justifications Narrative - Exhibit 8

12. Variances or Waivers from Ordinance - Exhibit 9

13. Photographs of proposed site -- Collective Exhibit 10.

16. Safety Statements - Exhibit 11

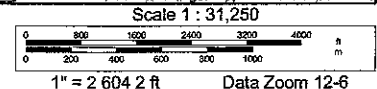
17. Photosimulation of monopole on proposed site - Exhibit 12

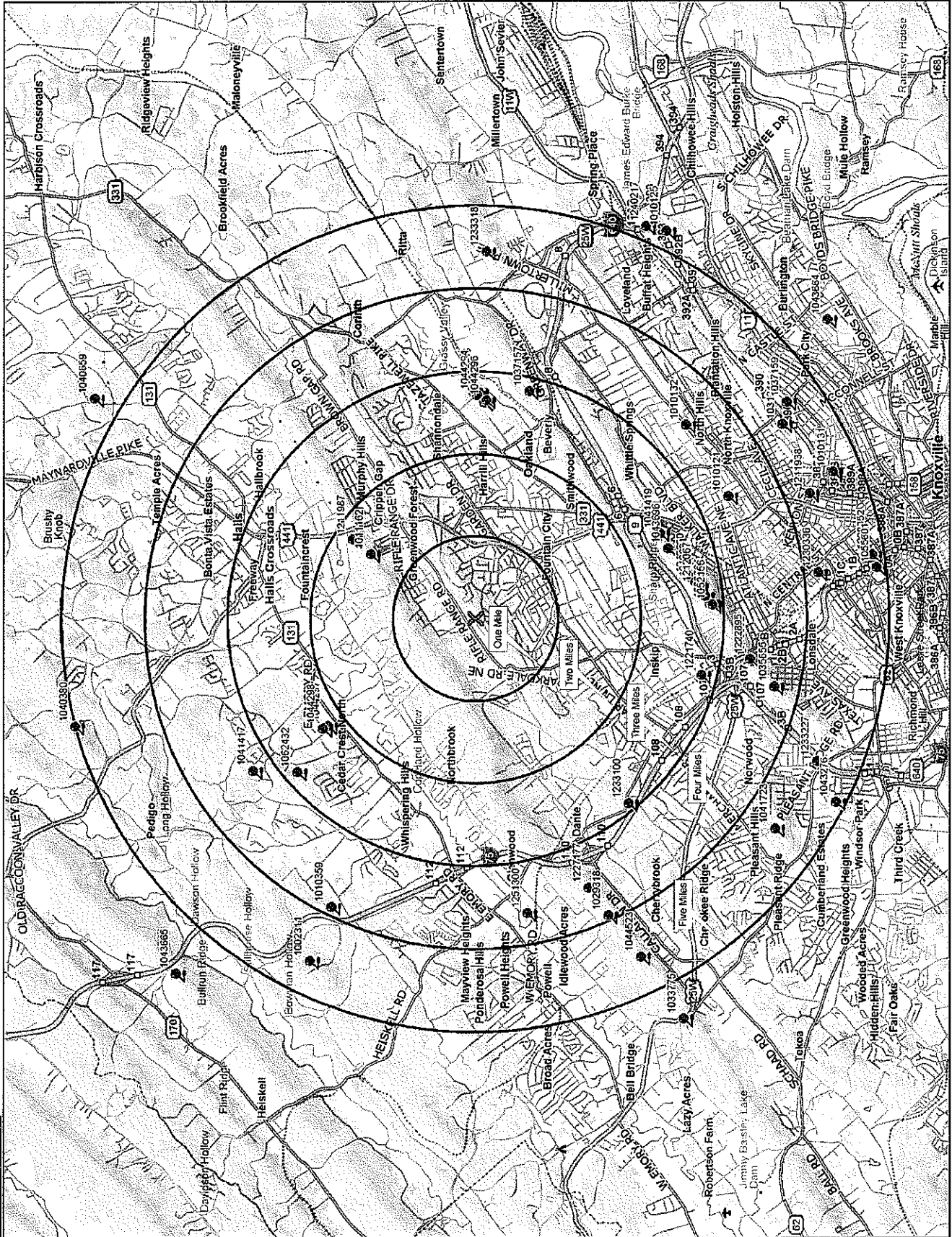


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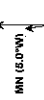


Scale 1 : 100,000



1" = 1.56 mi Data Zoom 11-0

TN



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M

nda Item # 64
EXHIBIT 3



March 7, 2008

Metropolitan Planning Commission
of Knoxville/Knox County
4th Floor, City-County Building
400 Main Avenue
Knoxville, Tennessee 37902

**Re: U.S. Cellular Corporation
Proposed Harrill Hills Site**

Dear Sir or Madam:

This letter is written to confirm U. S Cellular Corporation=s (AUSCC@) commitment to shared use of its proposed cellular communications monopole site at 6242 Grove Drive in Knoxville, Knox County, Tennessee.

As you are aware, City of Knoxville Zoning Ordinance Article 5.20(B)(1)(a) requires that any proposed communications tower less than 130 feet in height be built to accommodate at least two antenna arrays for co-location purposes. USCC is proposing that the monopole on Grove Drive be 90 feet in height. As is evident from Page C2.01 of the engineering plan submitted with the Use on Review Application to which this letter is attached, the specifications show that USCC is constructing the tower to accommodate the required two antenna arrays.

Furthermore, please accept this letter as confirmation that pursuant to City of Knoxville Zoning Ordinance Article 5.20(B)(1)(b), USCC and its successors are committed to allowing shared use of the tower at rental rates commensurate to those being charged in similar situations, so long as any additional user agrees in writing to meet reasonable terms and conditions concerning use of USCC=s tower and so long as space on such tower remains available.

Metropolitan Planning Commission

March 7, 2008

Page 2

I trust that this letter is sufficient to address the inquiries posed concerning shared use. However, should you need additional information, please do not hesitate to contact either the undersigned at (865) 777-7039 or USCC=s attorney, Jackson G. Kramer, at (865) 525-5134.

Yours very truly,







John Locascio
Senior Project Manager

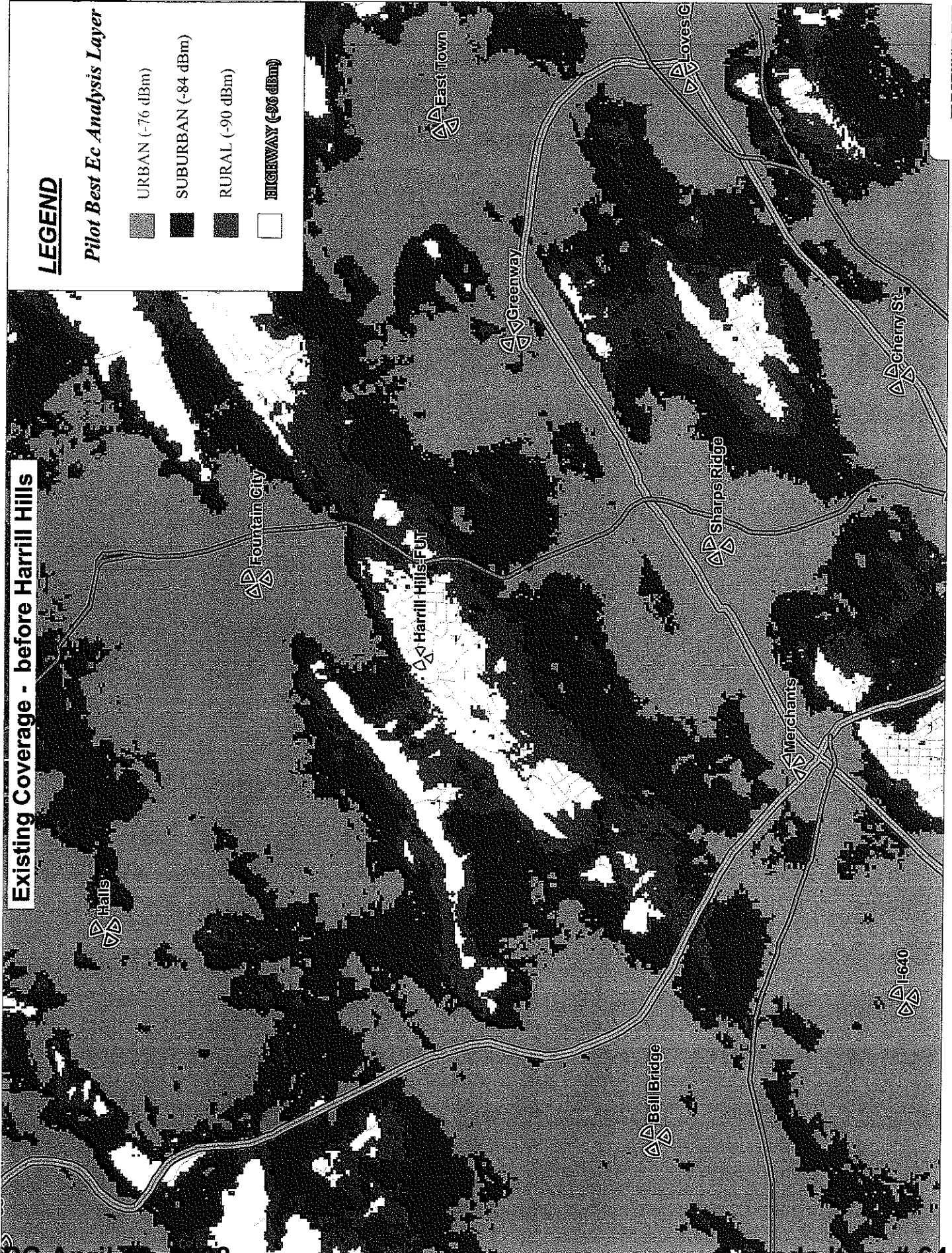
J:\US Cellular\Harrill Hills Zoning Matter\Metropolitan Planning Commission from Locascio 3-6-08.doc

Existing Coverage - before Harrill Hills

LEGEND

Pilot Best Ec Analysis Layer

-  URBAN (-76 dBm)
-  SUBURBAN (-84 dBm)
-  RURAL (-90 dBm)
-  HIGHWAY (-96 dBm)

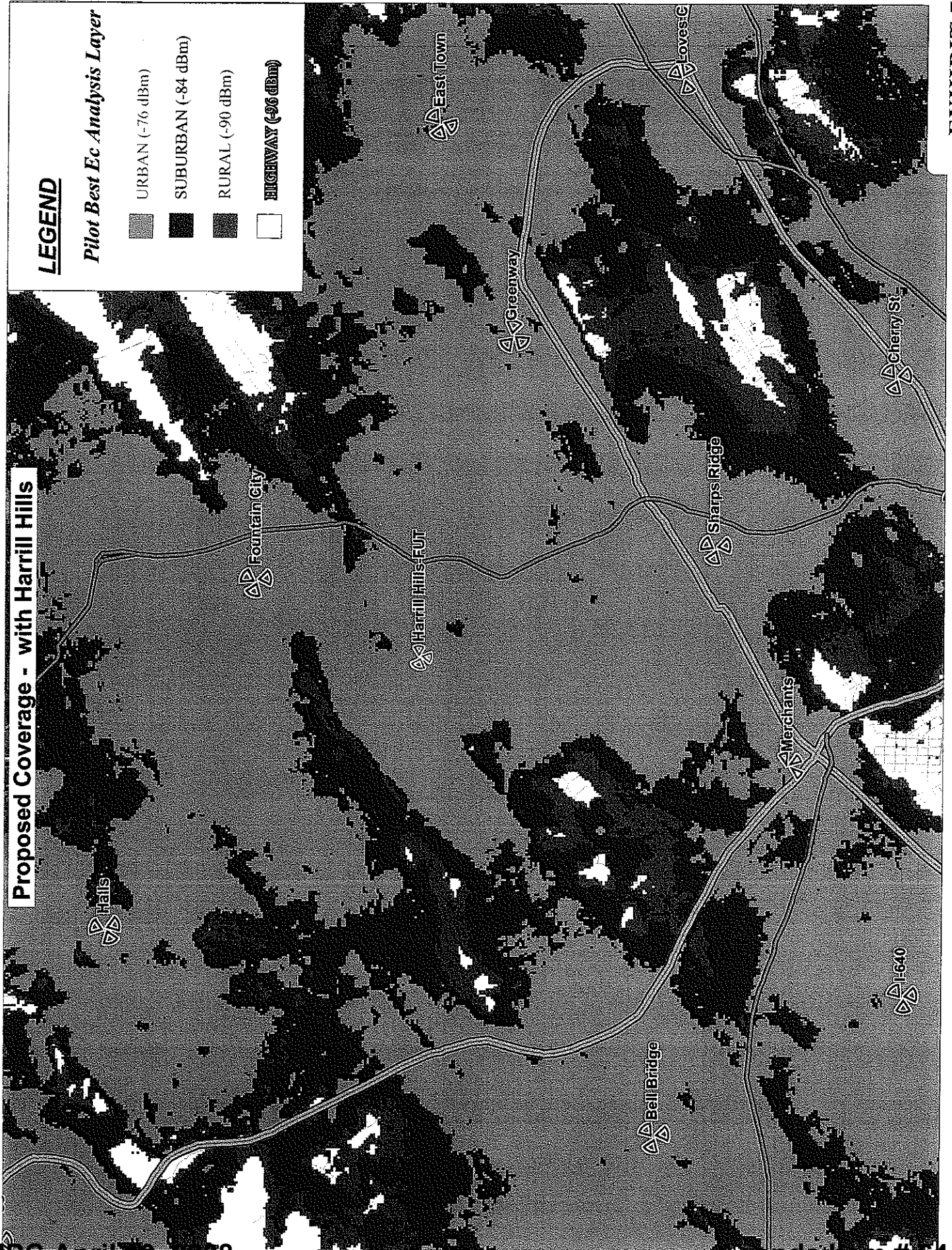


Proposed Coverage - with Harrill Hills

LEGEND

Pilot Best Ec Analysis Layer

- URBAN (-76 dBm)
- SUBURBAN (-84 dBm)
- RURAL (-90 dBm)
- HIGHWAY (-96 dBm)



**TECHNICAL JUSTIFICATION FOR PROPOSED
HARRILL HILLS ALTERNATE CELLSITE**

Prepared by: Isaac Ndiaye
RF Engineer
US Cellular

Proposal: Build a telecommunications monopole with a multiple carrier capability at 6242 Grove Drive, Knoxville, Knox County, Tennessee on property owned and occupied by Edward M. Graves, Jr. and spouse, Katherine Graves

Tower: U.S. Cellular Corporation ("USCC") proposes to construct a 90 foot above ground level stealth monopole structure with interior antenna mounts. The proposed site is at 1292 feet AMSL per the mandatory FAA 2C survey. Because the height of the tower is significantly less than 200 feet above ground level, no lighting will be required pursuant to FAA regulations.

RF Justification: USCC proposes to build this facility in this area to fill in radio frequency coverage gaps as well as strengthen coverage in the areas of Maynardville Highway (Hwy-441), Broadway, Rifle Range Road, Dry Gap Pike, Cedar Lane, and other areas in the vicinity. This facility will also augment existing coverage, provide additional capacity, and reduce access failures and dropped calls on existing USCC sites in the area in question

USCC's existing cell sites at I-640, East Town, Bell Bridge, and Halls are located a significant distance away from the coverage gaps and thus are not able to provide adequate service. The Fountain City, Merchant, Sharps Ridge, and Greenway cell sites are terrain blocked from the areas of proposed coverage improvements. In an attempt to address customer requests for better service in and around the Fountain City and Harrill Hills area, USCC is proposing this tower at this specific location to improve the coverage in this area. This poor coverage, as shown by the weak signal on USCC's coverage map, can only be corrected by a full cell site at the proposed location. Otherwise, the alternative will be to build several cell sites to cover the same coverage gap.

Collocation: The alternative of collocating USCC's equipment and antennas on existing structures in the surrounding area was considered. In accordance with the City of Knoxville zoning ordinance, a search was performed to identify any existing registered structures within one mile of the proposed site. There are no such structures within one mile of the proposed site.

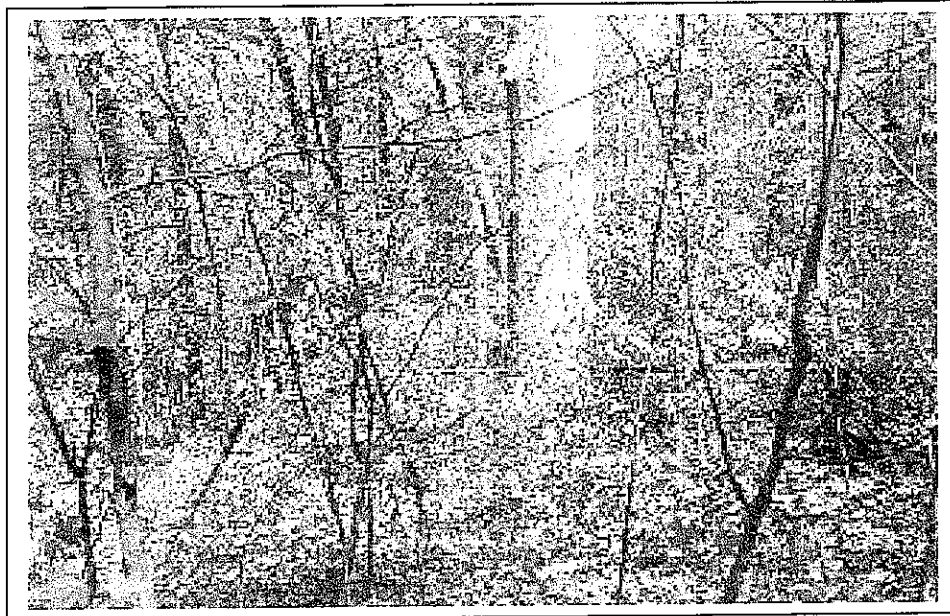
EXHIBIT 9

List of Variances and/or Waivers From Zoning Ordinance Requirements

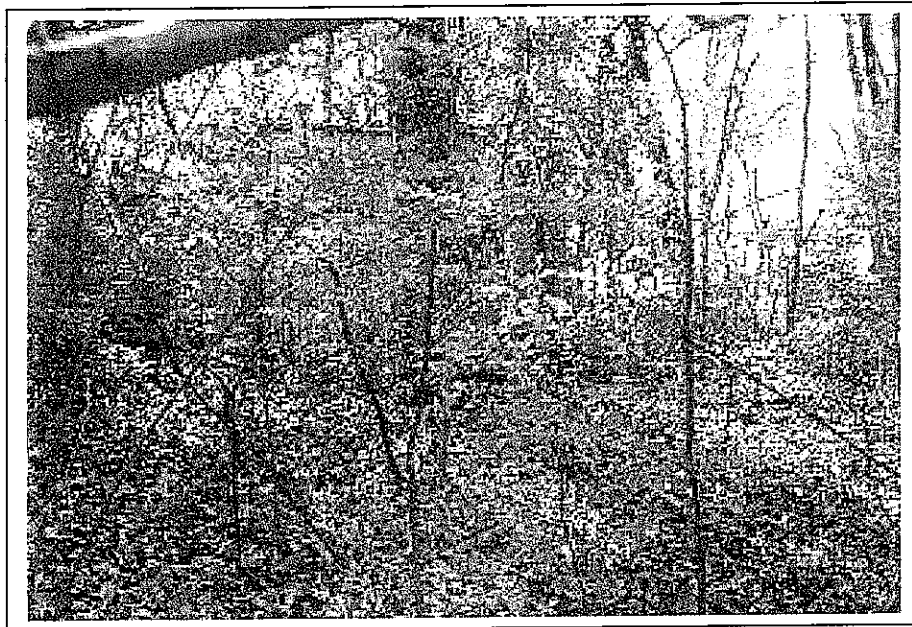
Applicant is requesting one (1) variance and/or waiver from the City of Knoxville, Tennessee zoning ordinance requirements:

1. Landscaping Variance and/or Waiver: Article 5 20(B)(4) sets forth landscaping requirements for telecommunications towers. Section 5 20(B)(4)(b) states that “new or existing vegetation, earth berms, existing topographic features, walls, fences, building and features other than those described above may be used to meet the requirements of these regulations if the code administrator finds that they achieve the same degree of screening as 4 a.” As can be seen from photographs of the proposed site attached as Collective Exhibit 10, the proposed site is heavily wooded. Applicant intends to leave as much natural vegetation in place as possible, and Applicant therefore respectfully submits that the existing natural vegetation will accomplish the desired screening objectives set forth in the zoning ordinance. In addition, at the property owner’s request, Applicant has agreed to install landscaping in locations identified by the property owner. Therefore, Applicant respectfully requests a waiver of the landscape requirements set forth in the zoning ordinance. However, should the determination be made that landscaping is required, Applicant will comply with the landscaping requirements set forth in the zoning ordinance.

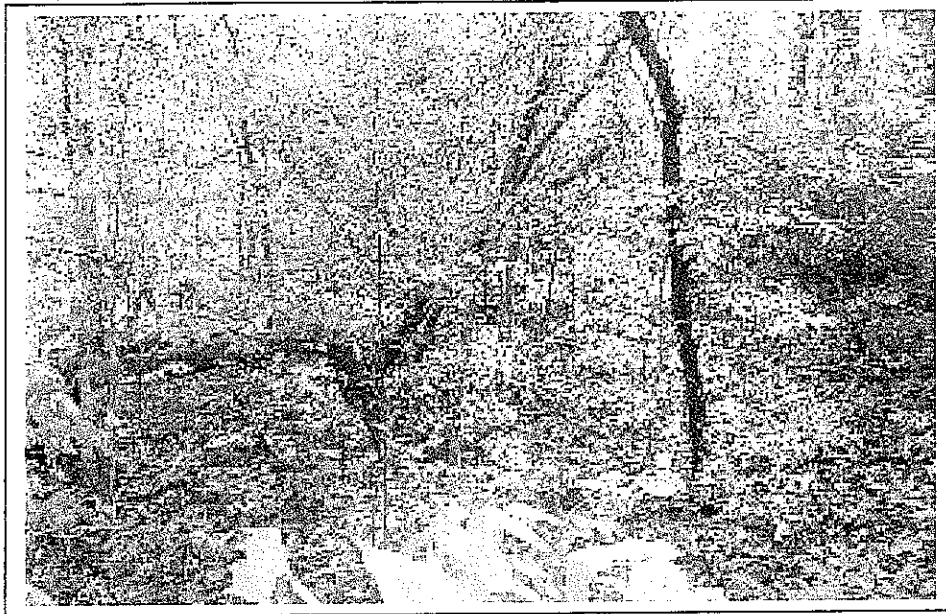
J:\US Cellular\Harrill Hills Zoning Matter\Harrill Hills Exhibit 9.doc



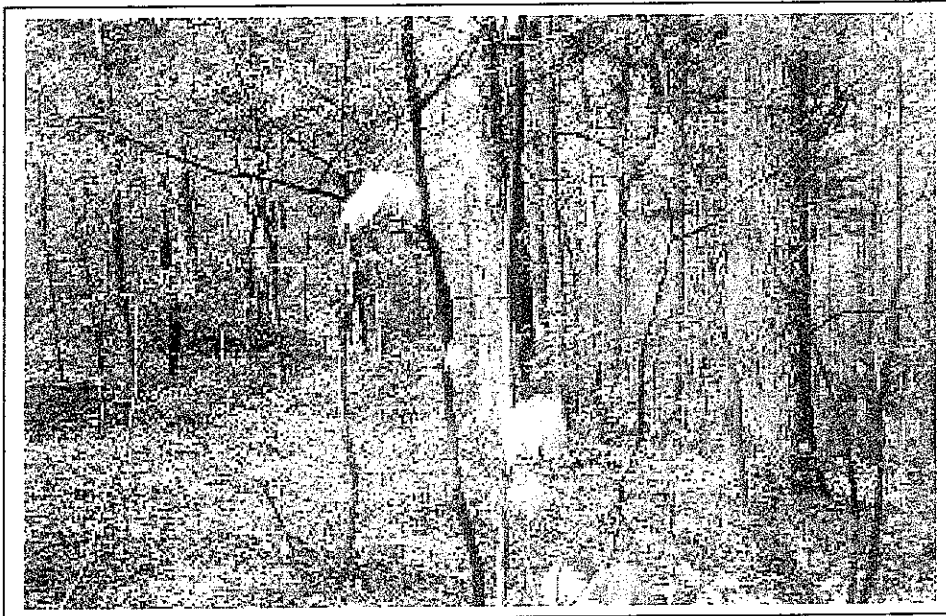
VIEW NORTH FROM THE SITE



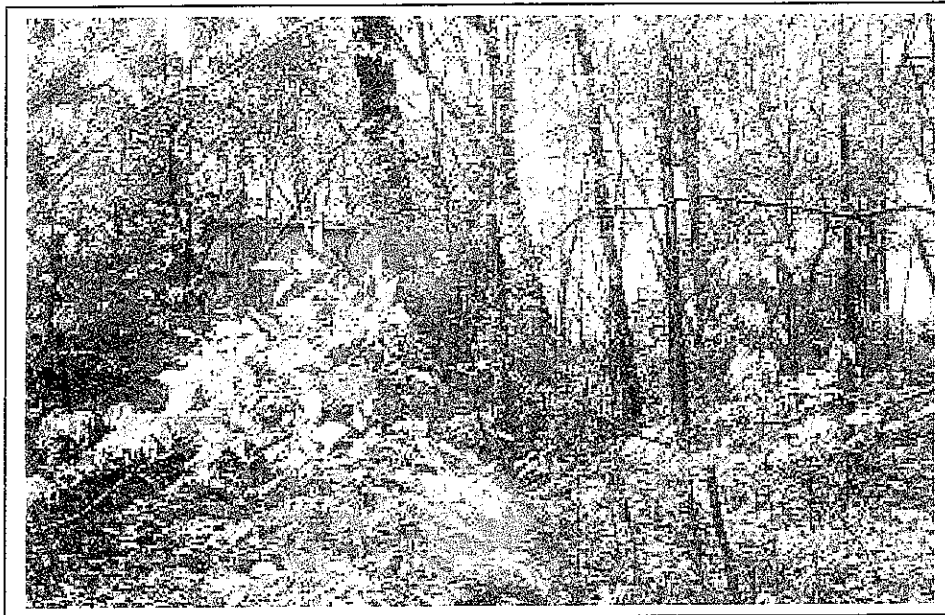
VIEW SOUTH FROM THE SITE



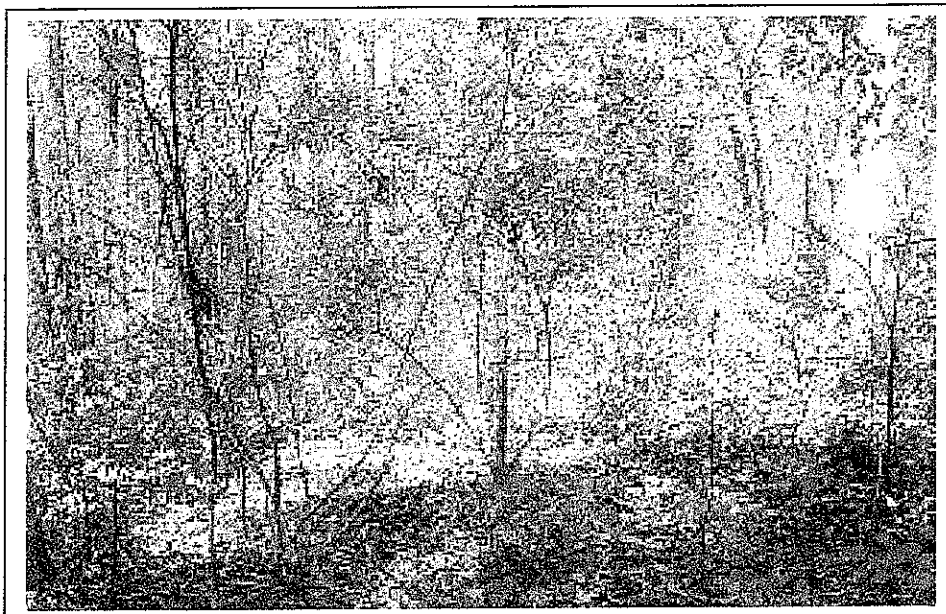
VIEW EAST FROM THE SITE



VIEW WEST FROM THE SITE



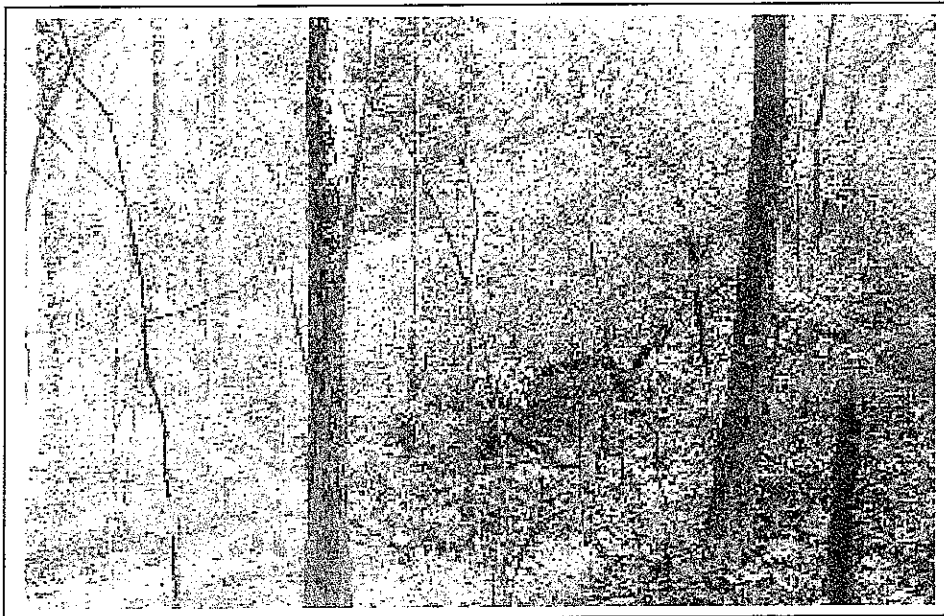
VIEW NORTH TO THE SITE



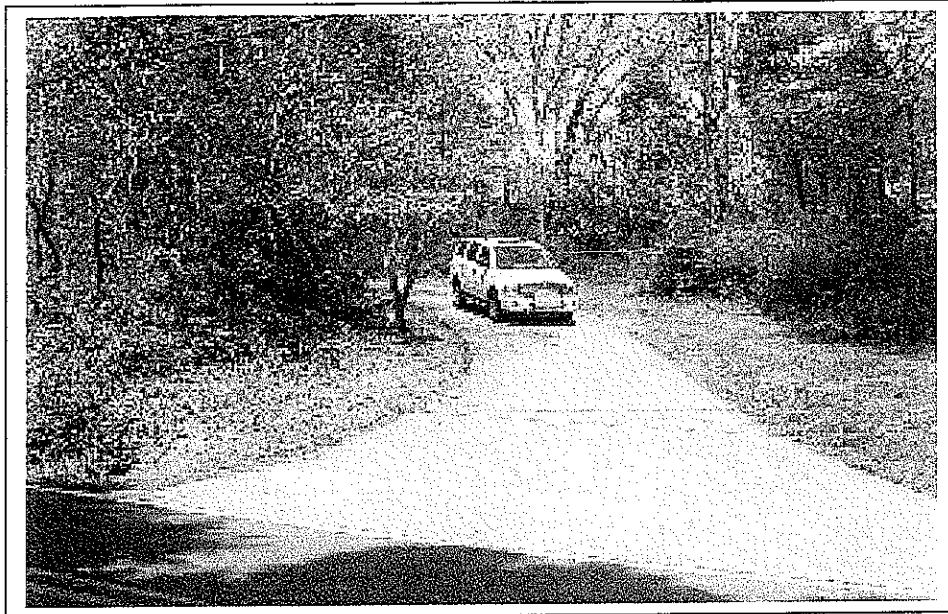
VIEW SOUTH TO THE SITE



VIEW EAST TO THE SITE



VIEW WEST TO THE SITE



VIEW OF INGRESS



VIEW OF EGRESS

EXHIBIT 11

Site Plan shows that proposed site provides satisfactory protection from hazardous energies by children and passersby:

Applicant states that its site and the planned structures will more than adequately provide a barrier and act as a deterrent to any hazardous energies by children or other passersby in the area. The proposed pole and all equipment cabinets and ancillary equipment will be placed within a fenced enclosure that meets the fencing requirements of the zoning ordinance. The fence will be six (6) feet in height and will be topped with 3 strands of barbed wire (see Construction Drawings Page C1 01). The proposed pole will have no steps so as to prevent climbing

J:\US CELLULAR\HARRILL HILLS ZONING MATTER\HARRILL HILLS EXHIBIT 11.DOC



90" "Slim" Tower



U.S. Cellular
Harrill Hills 223-475
 Grove Drive, Knoxville, TN 37918
90ft. Monopole Simulation
 View from Unity Drive
 approximately 680ft. south of site

UNIVERSITY OF TENNESSEE



Larry D. Perry

11464 Saga Lane • Knoxville, TN 37931-2819
Telephone (865) 927-8474 Fax (865) 927-4912 Email: larryperry@worldnet att net

March 27, 2008

Ms. Kelly Schlitz
MPC
Room 403
400 Main Street
Knoxville, TN 37902

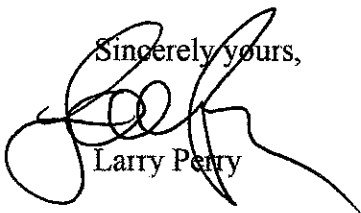
RE: USCC---TOWER APPLICATION FOR GROVE ROAD

Dear Kelly:

Here is the Report for the US Cellular application for a new tower site on Grove Dr. I visited with the neighbors out there the other day and surveyed the site. I don't think there will be any problems since they are proposing a short antenna and a stealth one at That.

If you have any communications with the neighbors or need me at the MPC meeting, let me know.

Sincerely yours,



Larry Perry

LP/cn

US CELLULAR
Telecommunications Tower Site Review
USE ON REVIEW APPLICATION # 4-J-08-UR
CONSULTANT'S SUMMARY

Harill Hills Site

Knoxville City

Location: 6242 Grove Drive

Proposed Tower Height: 90 foot Stealth Monopole

Address: 6242 Grove Drive
Knoxville, Tennessee

District: # 3 City **Map Number:** 0480C **Parcel** 052

Use: Telecommunications antenna support structure

Zoning: R 1 (Low Density Residential)

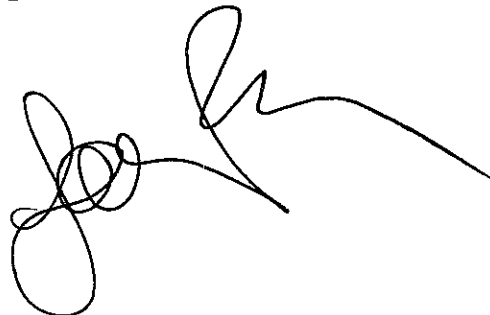
Variances: None required or requested

Waiver: Applicant requests a waiver of the landscaping requirement as the site is located within a heavily wooded plot of land.

Need: The applicant is US Cellular a licensed PCS carrier by the Federal Communications Commission and possibly other users.

Instant Proposal: Construct a 90 foot monopole stealth type support structure.

Consultant's Recommendation: The site and application meets the requirements of the Ordinance and the spirit of the Facilities Plan.

A handwritten signature in black ink, appearing to be 'John', written in a cursive style.

**REPORT TO
METROPOLITAN PLANNING COMMISSION**

for

Proposed Telecommunications Tower Site
Located at 6242 Grove Drive
Knoxville, TN known as

HARILL HILLS SITE

US CELLULAR

UOR 4-J-08-UR

COMPLIANCE WITH

THE MPC TELECOMMUNICATIONS FACILITY ORDINANCE

3/27/2008

The proposed site for the applicant is a 90 foot monopole antenna support structure (including antennas and lightning rod) to be located just off Grove Drive in a wooded lot. The supporting material from applicant has been reviewed for technical and Federal/State legal compliance As well as with the Knoxville City Wireless Communication Facilities Plan from 2002. This is a new telecommunications site. This site is known as a fill site (explained in the report).

REQUESTED

1. **Location.** The location is within the **City** of Knoxville limits in **District 3** and is located on **Tax Map Number 0480C Parcel 052**

2. **Zoning.** R 1 (Residential)

3. **Tower height.** The requested height is 90 feet above ground level will support up to 1 additional telecommunications carrier antennas for a total of 2 users. Lighting will not be required on this structure.

4. **Variances.** The set back requirements in Article 5 of the Ordinance for Knoxville City for "R 1" sites requires that the structure be set back a minimum distance of 110% of the structure height or in this case 99 feet from the nearest property line. The proposed site meets that requirement and no variances are required. However, the applicant is requesting a waiver of the landscaping requirement in Article 5.20(B)(4) of the Ordinance as the existing vegetation is in a heavily wooded area which provides adequate isolation from public view.

5. **Site.** This application is for the construction of a new stealth monopole type antenna support structure to be located in a heavily wooded parcel and is on a ridgetop overlooking Grove Drive.

6. **Use.** This antenna support structure will be used for telecommunications with the present state of the art communications technology using PCS and cellular communication sources. The applicant is US Cellular Corporation and there is 1 possible additional telecommunications user for the facility.

7. **Setbacks.** The setback requirements are that the facility must be 110% height of the tower from any dwelling unit/property line. The applicant meets that requirement and no variances are required. There are no property lines within that zone.

8. **Height.** The proposed structure is for 90 feet.

EVALUATION

The following is a list of items reviewed:

Zoning Ordinance for Knoxville Tennessee by Metropolitan Planning Commission---Telecommunication Facilities Section (as amended thru October 1, 2004)

Knoxville City Wireless Communications Facilities Plan dated 2002.

Check for other existing towers capable of supporting the load and elevation clearance requested by the applicant herein and within 1 mile radius of site.

Check for Antenna Support Structure stress analysis for co-location users' equipment support

Review support structure drawings and specifications with applicant

Review FAA lighting and marking requirements and proposals

Review FCC requirements regarding signal coverage, towers and lighting

Review applicant's justification for site in compliance with the FCC's requirements for telecommunication company providers compliance with required coverage for the use of the general public.

Review Site plan by applicant
Check Zoning

Check setbacks for building and antenna support structure

Check for compliance with Wireless Communication Facility Plan

Check proximity to other structures and district boundaries

Check nature of surrounding land uses

Check surrounding foliage and tree coverage

Check design of tower for esthetic changes

Check height requirements necessary for coverage

Check separation from other towers

Check frequencies proposed for possible interference to TV and radio reception in the immediate vicinity of the structure.

DISCUSSION

I visited the proposed tower site that is a part of this review and discussed the area with the applicant. I also met with several neighbors in the area to discuss same. None had any objections.

The site elevation at this location is 1292 feet. It is located on a ridge adjacent to the landowner's house separated by about 200 feet and is in a heavily wooded parcel of land.

The request is for a 90 foot stealth monopole type structure. This means that the final structure will look like a metal telephone pole without the usual triangle platform at the top. The antennas will blend with the sides of the structure and be internal.

This a "fill" site. By that is meant that the coverage is inadequate in the area at the present from present facilities in the area and that the site is to be used as primary signal coverage to "fill in" a hole in the present coverage.

The site is a fairly high elevation location and by the addition of a cell site here, it would probably eliminate the need for other sites nearby. There are no other tower sites within a mile of this location.

The proposed structure should not affect adjacent property as it is on a parcel of land in a heavily wooded area and surrounded by trees estimated to be 65-75 feet in height. The stealth like proposed structure should have no impact on the area and it is isolated from the public view by the ridgeline and the trees.

It is located in an R-1 zoned area. Normally this would be an AVOIDANCE area in the Wireless Communications Facilities Plan as it is in a low density residential are and on a ridgetop which is the case here. However, the fact that the applicant is proposing a stealth type structure that is fairly short, 90 feet, only about 20 feet above the tree line, would tend to negate any of the normal negatives associated with a cellular antenna

structure in a residential area. The proposed location and structure type should have no visual impact nor detract from the landscape surrounding the site. The applicant has designed the site such that the structure does not exceed 30 feet above the existing tree line as encouraged by the Facilities plan. The site is in a heavily wooded plot of land and so will be surrounded by a natural foliage barrier to provide good screening.

The applicant has demonstrated a need for the site and meets the federal requirements for same.

DISCUSSION RE FACILITIES PLAN

The Facilities plan is a guideline adopted by the MPC in 2002 for the placement and appearance of wireless communications facilities. The

following discussion is based on this application and how it relates to the Plan. The plan is an advisory plan and not a legal requirement.

(1) **View Protection**--The structure (90 feet) coupled with no lighting requirements and located in a heavily wooded area with the proposed height only about 20 feet or so above existing tree levels and thus, this structure should have no or minimal impact on the view in the area.

(2) **Land Use Compatibility**---The proposed site is on a ridge in a residential area, but is surrounded by vegetation and a tree line between the public access road as well as the back side by trees. The site will be unmanned and will have no impact on noise, traffic or air pollution.

(3) **Design Compatibility**---The proposed stealth monopole facility design would blend in with surrounding land usage and design. The new structure will be a monopole type structure which is the least obtrusive type antenna support structures with the antennas internal to the structure.

(A) **Opportunity Areas**---This proposed site is in an area zoned Residential (R-1). It is unlikely to become a blighting influence on the surrounding area due to the site design and wooded surroundings.

(B) **Sensitive Areas**---This site is not in a sensitive area as it is isolated and surrounded by woods and preexisting transmission lines.

(C) **Avoidance Areas**---This location is in an avoidance area in that it is located on a ridgetop in a low density residential area, but that is offset by the site design using a stealth type short structure.

SUMMARY

(1) The proposed antenna support structure is a 90 foot stealth monopole including internal antennas. There are no lighting requests for

this structure nor are any required by the FAA.

(2) A review of the structure stress analysis on the proposed structure and specifications support the use of the monopole by one other potential user in the future.

(3) The structure design meets or exceeds FCC and EIA requirements.

(4) The area surrounding the site is slightly wooded and zoned Residential. There are no residences within 110% of the tower height.

(5) There is no general use technology (such as satellite communications) that is available at the present time nor in the immediate future that would negate the need for the structure. However, should such a technology become available and the structure of no further use, the Ordinance at Article 5.20 (C) requires it to be removed.

(6) The proposed equipment housing facility is an outdoor cabinet and will have no impact on the aesthetics of the adjacent land uses. The landscape plan indicates that the fenced area will be surrounded by wooded vegetation that is presently existing. Should additional landscaping be required, the applicant is agreeable to providing same.

(7) The applicant has received authorization from the various governmental agencies, including the Federal Communications Commission, to provide communication service to the citizens of Knoxville, Tennessee.

(8) The requested site will have little impact on the community involved when compared with the benefits to be derived from the advanced service offered by the applicant.

(9) There are no other antenna support structures within 1 mile of the proposed site that are usable for the coverage required.

(10) There is a waiver requested for the landscaping. The fact that the proposed site is located in a heavily wooded plot would seem to negate the requirement for additional landscaping around the site. The applicant has apparently reached an agreement with the landowner for some landscape work as a part of the lease agreement.

(11) The proposed site and structure will have no environmental impact within the federal guidelines.

(12) The nature of the development in the surrounding area is not such as to pose a potential hazard to the proposed tower or to create an undesirable environment for the proposed structure.

(13) Assuming that there are 2 carriers operating cellular or PCS transmitters/receivers at this site and all are operating at the same time, the radiation produced by the combination of all the users at the same time using the standards and protocols proposed and used by the carriers today, will be considerably below that established by the Federal Communications Commission and the EPA as creating any danger to humans or animals.

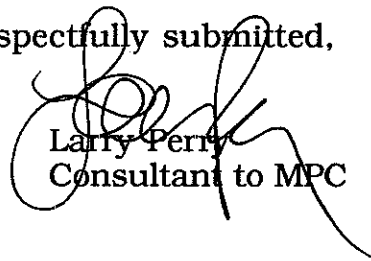
(14) There is a need for the structure in this area to provide for the wide spectrum wireless internet service and for other wireless voice and data services to be provided under government regulation by the various proposed carriers who plan to use the site.

(15) In meeting with several of the neighbors in the immediate area, there didn't appear to be any concern about the proposed structure.

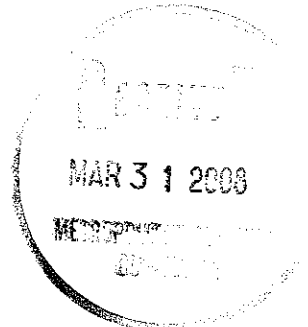
RECOMMENDATION

In light of the analysis and review of documents, it is my professional opinion that the applicant meets all requirements of the Ordinance and the spirit of the Facilities Plan as discussed above and is required for the applicant to meet their coverage requirements for the City of Knoxville.

Respectfully submitted,



Larry Perry
Consultant to MPC



March 31, 2008

Kelley Schlitz
Metropolitan Planning Commission
400 Main Street, Suite 403
Knoxville, TN 37902

(4-J-08-UR)

Dear Kelley:

Thank you so much for getting back to me last week about the use-on-review hearing scheduled for April 10th concerning the Grove Drive property in Fountain City.

As I indicated in our discussion, I am strongly opposed to the cell tower planned near my property on Black Oak Ridge. It seems a shame to ruin such a beautiful ridge when there seems no shortage of cell towers

My primary concern, however, is the planned placement of the tower approximately 20 feet from my property line. It is also placed nearly exactly on the ridge top, like my home. My home is over 100 years old, and has been completely renovated with over \$200,000 in improvements. Placement of a cell tower will immediately lower my property value, and those of my neighbors

The property owner asking for the use-on-review has approximately 11 acres of land on which to place this tower should he push for such. However, it is my opinion that he should place it on the east side of his property, rather than adjacent to mine. Please consider that no one ever asked for my input or my opinion. I discovered this plan only upon noting the use-on-review sign, and my subsequent call to the Planning Office.

On another note, let me point out that the cell tower once planned for Sequoyah Hills was not approved due to the concern of property owners with strong influence on a variety of boards, as well as elected and appointed bodies. No less consideration should be given to my neighborhood.

Sincerely,

Gina Kinkaid
6350 Grove Drive
Knoxville, TN 37918
865.548.7755 (c)

4-5-08-UR

**EXHIBIT 7.
LAND USE/WIRELESS FACILITIES MATRIX**

	Co-Location	Stealth Structure	Low Monopole Below 90'	Moderate Monopole 90'-150'	Tall Monopole 150'-199'	Lattice Tower	Guyed Tower
Opportunity Areas	Industrial/Business Park						
	Industrial Use						
	Pre-approved Government-owned Property						
	Urban Expressway Corridor						
	Rural/Heavily Wooded						
	Pasture						
	Central Business District						
	Office/Commercial Corridor						
	Shopping Center						

Sensitive Areas	Within 500' of a residence						
	Rural Residential						
	Non-residential Properties in a Residential Area (church, cemetery, library, etc.)						
	Multi-family Residential						
	On Hill Below Ridgeline						

Avoidance Areas	Conservation Open Space						
	Scenic Highway						
	Public Park						
	Ridge Top/Ridge Line						
	Scenic Vista						
	Historic District/Site						
	Single-family Residential						
	Vacant Residential Lot						

Encouraged
 Neutral
 Discouraged