

▶ **FILE #:** 5-C-14-UR

AGENDA ITEM #: 38

AGENDA DATE: 5/8/2014

▶ **APPLICANT:** NEW CINGULAR WIRELESS, LLC

OWNER(S): Tony & Judy Clift

TAX ID NUMBER: 63 20301

JURISDICTION: County Commission District 8

STREET ADDRESS: 9720 Asheville Hwy

▶ **LOCATION:** Southside of Asheville Hwy, west of Whittaker Rd.

▶ **APPX. SIZE OF TRACT:** 14.87 acres

SECTOR PLAN: East County

GROWTH POLICY PLAN: Rural Area

ACCESSIBILITY: Access is via Asheville Hwy, a major arterial street with a 36' pavement width within a 50' right-of-way.

UTILITIES: Water Source: Knoxville Utilities Board

Sewer Source: Knoxville Utilities Board

WATERSHED: Lyon Creek

▶ **ZONING:** A (Agricultural)

▶ **EXISTING LAND USE:** Residence

▶ **PROPOSED USE:** 141' Monopole Commercial Telecommunications Tower

HISTORY OF ZONING: None noted

SURROUNDING LAND USE AND ZONING: North: Residences / A (Agricultural)

South: Residences / A (Agricultural)

East: Residences / A (Agricultural)

West: Residences / A (Agricultural)

NEIGHBORHOOD CONTEXT: The site is located in an area along Asheville Hwy. that is primarily a mix of agricultural and rural residential uses.

STAFF RECOMMENDATION:

▶ **APPROVE the request for a 141' monopole commercial telecommunications tower in the A (Agricultural) zoning district subject to 7 conditions.**

1. Meeting all applicable requirements of the Knox County Zoning Ordinance.
2. Providing a surveyor's certification that a minimum of 550' of sight distance is available in both directions along Asheville Hwy. at the proposed driveway entrance.
3. Meeting the Utility Access Driveway standards and all other applicable requirements of the Knox County Fire Prevention Bureau.
4. Meeting all applicable requirements of the Knox County Department of Engineering and Public Works.
5. Installing the evergreen landscaping screen along the fenced enclosure, as identified on the tree planting plan, within six months of the tower becoming operational.

6. Since the FAA does not require any lighting for this facility, there shall be no lighting on the tower.
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.

With the conditions noted above, this request meets all criteria for a use-on-review in the A (Agricultural) zoning district.

COMMENTS:

This is a request for a new 141' monopole commercial telecommunications tower (which includes a 4' lightning rod for a total height of 145') to be located within a 10,000 square foot lease area located on a portion of a 14.87 acre tract. The subject property is zoned A (Agricultural) and telecommunication towers are considered as a use on review in this district. Access to the site is by an easement off of Asheville Hwy., a major arterial street. The driveway is required to meet the Utility Access Driveway standards of the Knox County Fire Prevention Bureau which requires a 16' wide paved access driveway.

The proposed tower is required to be located 155.1 feet (110% of the tower height) from the nearest residence. The proposed tower exceeds that minimum standard since the nearest residence (residence on the property) is approximately 380.5' from the base of the tower. The closest residence off the property is located approximately 405' south of the proposed tower. The applicant is proposing an 8' high security fence around the tower and equipment area. The FAA does not require any lighting for a tower of this height.

The applicant states that there are no existing structures in the area that can be used for antenna placement to obtain the required coverage. The applicant is proposing up to 4 telecommunication carrier antenna arrays on this tower. AT&T will be the principal client for the tower. A letter has been submitted stating that American Towers LLC agrees to make all of its facilities available to other wireless providers.

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 141' monopole tower is technically justified by the materials submitted by the applicant (see attached report).

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

1. The proposed development will have minimal impact on local services since utilities are available to serve this site.
2. The tower site, being located on the south side of a major arterial street in an area made up of a mix of agricultural and rural residential uses, should have minimal impact on nearby residences.

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

1. With the recommended conditions, the proposed commercial telecommunications tower at this location meets the standards required in the A (Agricultural) zoning district.
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, Northeast County Sector Plan and Wireless Communications Facility Plan. The use is in harmony with the general purpose and intent of the Zoning Ordinance. Since this site is in an area of agricultural and rural residential uses, 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

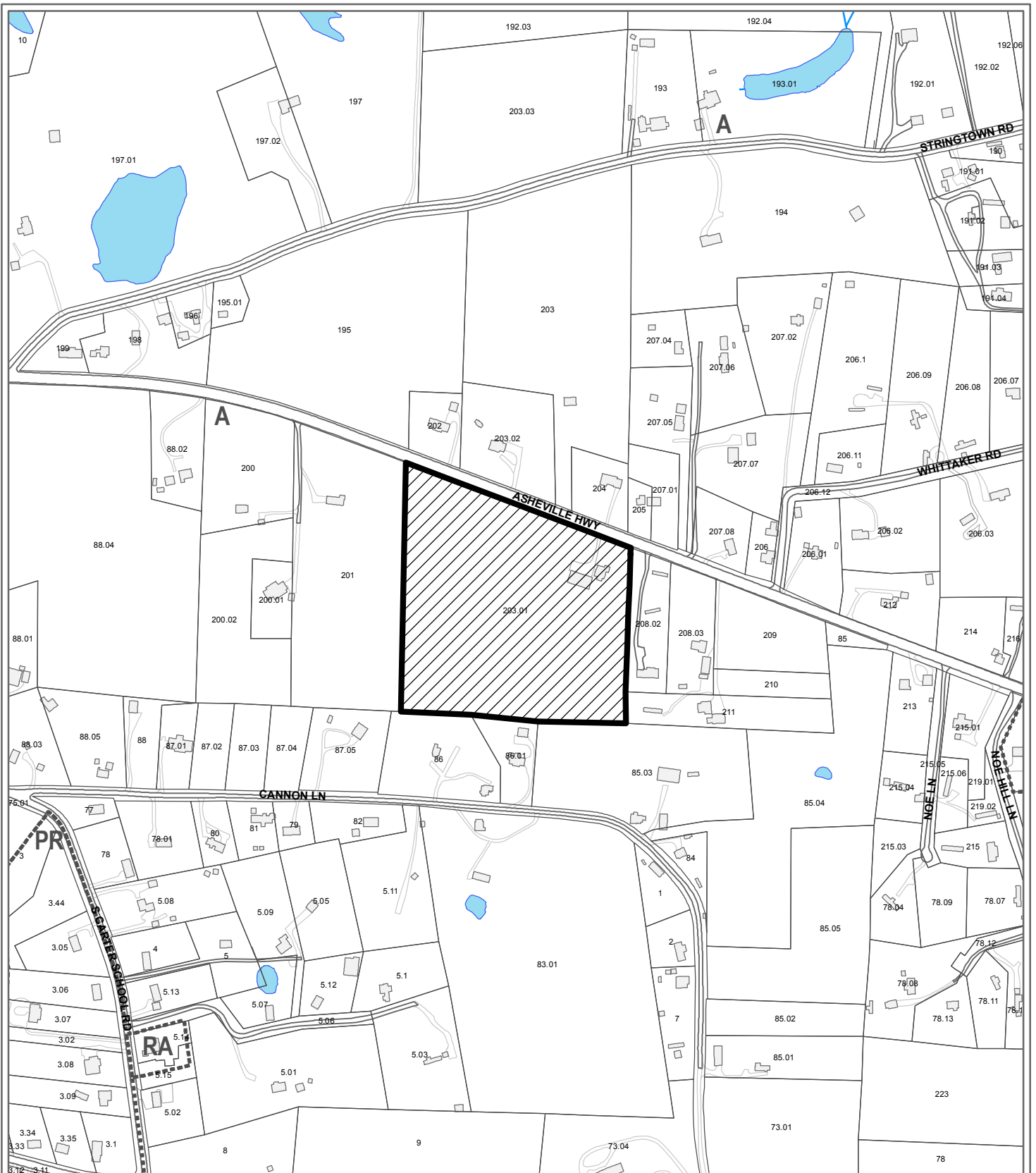
1. The East County Sector Plan proposes agricultural uses on this property.
2. Under the guidelines for tower placement in the Wireless Communications Facility Plan this proposed tower falls within the "Opportunity Area" and "Sensitive Area". The proposed tower site is located in a pasture area which the Plan considers to be an "Opportunity Area" for the location of telecommunication towers. The Plan takes a neutral position on moderate monopole towers located in a pasture area. The proposed tower site is also located within 500' of a residence which the Plan considers to be a "Sensitive Area" for the location of telecommunication towers. The Plan takes a neutral position on moderate monopole towers located in this area.

3. The site is located within the Rural Area on the Knoxville-Knox County-Farragut Growth Policy Plan map.

ESTIMATED TRAFFIC IMPACT: Not required.

ESTIMATED STUDENT YIELD: Not applicable.

MPC's approval or denial of this request is final, unless the action is appealed to the Knox County Board of Zoning Appeals. The date of the Knox County Board of Zoning Appeals hearing will depend on when the appeal application is filed. Appellants have 30 days to appeal an MPC decision in the County.



**5-C-14-UR
USE ON REVIEW**

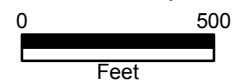


141' Monopole Commercial Telecommunications Tower in A (Agricultural)

Petitioner: New Cingular Wireless, LLC

Map No: 63

Jurisdiction: County



Original Print Date: 4/11/2014

Revised:

Metropolitan Planning Commission * City / County Building * Knoxville, TN 37902

NEW CINGULAR WIRELESS LLC

Telecommunications Tower Site Review

USE ON REVIEW APPLICATION # 5-C-14-UR

CONSULTANT'S SUMMARY

STRINGTOWN SITE

Knox County

Location: 9720 Asheville Highway

Proposed Tower Height: 145 foot Monopole Support Structure

Address: 9720 Asheville Highway

Strawberry Plains, Tennessee

District: # 8 **County Map Number:** 063 **Parcel** 203.01

Use: Telecommunications antenna support structure

Zoning: A (Agricultural)

Land Planning Area: AG/HP

Variations and waivers: Applicant requests a waiver of the landscaping requirements of the Ordinance due to the fact that the site is isolated in a wooded area and the base area is not seen from a public road or area. Further, the applicant intends to preserve as much of the natural vegetation in place as possible.

Need: The applicant is Cingular Wireless a licensed cellular carrier by the Federal Communications Commission and possibly other users. The applicant has proven a need for the site for its coverage requirements to include the new 4G technology and the site is necessary to provide that coverage and to overcome the shadowing effect of surrounding hills and wooded areas.

Instant Proposal: Construct a 145 foot (overall height) Monopole type support structure.

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

A handwritten signature in black ink, followed by the date "4-21-14" written below it.

**REPORT TO
METROPOLITAN PLANNING COMMISSION**

for

Proposed Telecommunications Tower Site
Located at 9720 Asheville Highway
Strawberry Plains, TN known as

“STRINGTOWN SITE”

NEW CINGULAR WIRELESS LLC

UOR 5-C-14-UR

COMPLIANCE WITH

THE MPC TELECOMMUNICATIONS FACILITY ORDINANCE

3/18/2014

The proposed site for the applicant is a 145 foot (overall height) Monopole antenna support structure (including antennas and lightning rod) to be located south of Asheville Highway and west of Whittaker Road in Northeast Knox County. The supporting material from applicant has been reviewed for technical and Federal/State legal compliance As well as with the Knox County Wireless Communication Facilities Plan from 2002. This is a new telecommunications site.

REQUESTED

- 1. Location.** The location is within the **County** of Knox in **District 8** and is located on **Tax Map Number 063 Parcel 203.01.**
- 2. Zoning.** A (Agricultural)
- 3. Land Planning Area:** AG/HP
- 4. Proposed Tower Height:** 145 foot Monopole tower
- 5. Address:** 9720 Asheville Highway
Knoxville, Tennessee
- 6. Tower height.** The requested height is 145 feet above ground level will support up to 3 additional telecommunications carrier antennas for a total of 4 users. Lighting will not be required on this structure.

7. **Variances.** The set back requirements in Article 4.92 of the Ordinance for Knox County for "A" sites requires that the structure be set back a minimum distance of 110% of the structure height or in this case 160 feet from the nearest dwelling unit (residence). The proposed site meets that requirement and no variances are required as the nearest dwelling is more than 380 feet from the base of the proposed structure. The proposed site is within a pasture area with trees on the east and south of the site.

8. **Site.** This application is for the construction of a new Monopole type antenna support structure to be located in a pasture parcel.

9. **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 New Cingular Wireless LLC and there are 3 possible additional telecommunications users for the facility.

10. **Setbacks.** The setback requirements are that the facility must be 110% height of the tower from any dwelling unit. The applicant meets that requirement and no variances are required.

11. **Height.** The proposed structure is for 145 feet and no aviation lighting is required.

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

Tennessee Code Annotated 13-24-305

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.

The site elevation at this location is about 1100 feet. It is located on a cleared pasture land near Asheville Highway and Whittaker Road in Northeast Knox County.

The request is for a 145 foot overall height Monopole structure of which Cingular Wireless will use the top 15 feet and the additional usable lower 100 feet is for other carriers' expansion.

This a fill site. This means that the service for the service in the area is minimal at best and there needs to be filled in area . There are no sites within a 1 mile radius of the proposed site herein.

The site is a good elevation location and by the addition of a cell site here, it would probably eliminate the need for other sites nearby.

The proposed structure should not affect adjacent property as it is on a parcel of land that is agricultural and is heavily wooded. The site would be screened from any area roads by the woods.

It is located in an A zoned area.

Using the MPC's Wireless Facilities Matrix the site qualifies as a Neutral site in that it is 145 feet and located on a rural pasture area.

The proposed access road to the site rises from 1040 feet to 1100 feet in a little over 421 feet. The grade along the road is about 15%. This may create a problem for any emergency vehicles if the road is gravel as proposed. Others will have to make any determination in this regard.

There are no other antenna support structures within 1.75 miles of this site and reviewing that site, the coverage needed for this area could not be achieved using that tower. The coverage is based on the new technology currently being touted by the various carriers, 4G, for data and voice transmission. The tower height is justified in this case in that the new technology is fairly limited as to range and there are surrounding hills to this location which the added tower elevation will help prevent shadow areas.

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 (145 feet) coupled with no lighting requirements and should have little or no impact on the view aesthetics of the area.

(2) **Land Use Compatibility**—The proposed site is on a small rolling hill in a pasture the structure and associated building/facilities would be compatible with the local land use and the surrounding area is lightly wooded. The site will be unmanned and will have no impact on noise, traffic or air pollution.

(3) **Design Compatibility**—The proposed location in a pastured area would blend in with surrounding agricultural land usage and design. The new structure will be a Monopole type structure 145 feet in height.

(4) **Opportunity Area**---This location is Neutral and located in an Opportunity/Sensitive area of the Matrix. *(See attached Matrix)*

SUMMARY

(1) The proposed antenna support structure is a 145 foot Monopole structure including antennas. Lighting WILL NOT be required for this structure by the FAA due to its proposed height.

(2) A review of the structure stress analysis on the proposed structure and specifications support the use of the Monopole structure by three additional other potential users in the future.

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

(4) The area surrounding the site is pasture/wooded and zoned Agricultural. The nearest residence is about 350 feet south from the tower base.

(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 4.92 requires it to be removed.

(6) The proposed equipment housing facility is an outdoor precast building 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 some of which is presently existing.

(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 minimal impact on the community involved by its very location.

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

(10) There are no waivers required or requested.

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

(12) Assuming that there are 4 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.

(13) 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.

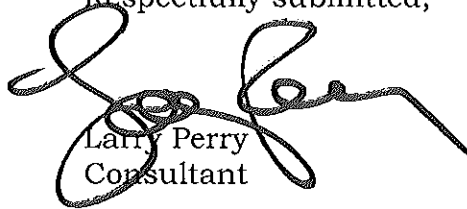
[14] Access road concern. I have a concern about the grade of the access road that in some cases may exceed 15%. This grade may be beyond the grade considered by the Knox County Emergency Management staff as a safe grade for emergency vehicles on a graveled road and the applicant may have to pave a portion to meet the Emergency requirements, but that is for others to evaluate.

[15] There are no other antenna structures within 2 mile radius that would allow the coverage needed by the applicant for this area.

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 federal requirements.

Respectfully submitted,



Larry Perry
Consultant

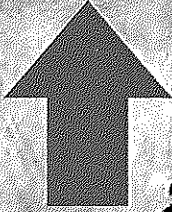


CINGULAR TOWER SITE
STRINGTOWN
9720 Asheville Highway
Strawberry Plains, TN



CINGULAR TOWER SITE
STRINGTOWN
9720 Asheville Highway
Strawberry Plains, TN

Cingular Tower Site



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	
Industrial/Business Park							
Industrial Use							
Pre-approved Government-owned Property							
Urban Expressway Corridor							
Rural/Heavily Wooded							
Pasture			X				
Central Business District							
Office/Commercial Corridor							
Shopping Center							

OPPORTUNITY AREAS

MPC May 8, 2014

Within 500' of a Residence			X			
Rural Residential						
Non-residential Property in Residential Area (church, cemetery, library, etc.)						
Multi-family Residential						
On Hill below Ridgeline						

SENSITIVE AREAS

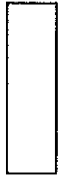
Conservation Open Space						
Scenic Highway						
Public Park						
Ridgetop/Ridgeline						
Scenic Vista						
Historic District/Site						
Single-family Residential						
Vacant Residential Lot						

AVOIDANCE AREAS

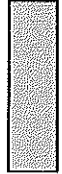
Encouraged



Neutral



Discouraged





AMERICAN TOWER®
CORPORATION

Knox MPC
400 Main Street, Suite 403
Knoxville, TN 37902
Attn: Tom Brechko

*Application of American Towers LLC to construct a new Wireless
Telecommunications Tower for the following site:*

American Tower Site Name: Stringtown TN; American Tower Site Number: 282144
Site Address: 9707 Asheville Highway, Strawberry Plains, Tennessee, 37871

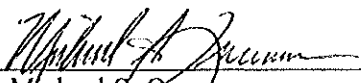
AMERICAN TOWERS LLC

American Towers LLC ("AT") is one of the leading independent owners and operators of shared wireless infrastructure. The core business of American Towers LLC involves the engineering, deployment, marketing, ownership, operation and leasing of shared wireless communications sites. The sharing of infrastructure among multiple services lies at the heart of American Tower's business philosophy. Our portfolio of wireless communication sites, including existing towers and rooftops, enables our customers to serve their markets more efficiently and with sensitivity to local planning and zoning jurisdictions. American Towers LLC designs all of our facilities for multiple collocation opportunities for our customers. We endeavor to assist communities in reducing the number of towers in a given jurisdiction by supplying our customers with locations that are ready for them "Just in Time" for their coverage design and wireless performance needs. As one of the largest tower companies in the world, American Towers LLC has master lease agreements, negotiated at arms-length, with all major wireless carriers licensed to operate in Tennessee. In negotiating the rental rates of these master lease agreements, American Towers LLC considers the competitive environment of its business and the presence of other major tower companies such as Crown Castle and SBA. This ensures that American Towers LLC charges only reasonable rates to service providers.

Collocation Certification

American Towers LLC agrees to comply with the Zoning Ordinance for the City of Knoxville, as applicable, and is willing to permit other user(s) to attach communication equipment which do not interfere with the primary purpose of the tower, provided that such other users agree to negotiate a reasonable compensation to the owner from such liability as may result from such attachment.

American Towers LLC

By: 
Michael S. Quehan
Zoning Attorney



RF Affidavit

February 24, 2014

Re: Stringtown Cell Site

AT&T Mobility ("AT&T") has determined that a new Wireless Communications Facility is required in Knox County, Tennessee. A property candidate at 9720 Asheville Hwy, Strawberry Plains, TN 37871 has been evaluated by AT&T for compatibility with leasing, land use, and constructability and this candidate has been accepted by AT&T's Radio Access Network Engineering Department. The primary focus of this new facility is to improve coverage at Asheville Hwy., S. Carter School Rd., and Andrew Johnson Hwy., in addition to the surrounding roads, commercial areas, and residential neighborhoods. These roads are important thoroughfares in Knox County.

Search Area Size: Each search area is designed to identify appropriate property candidates to meet AT&T's network system needs. Search area size may vary from site to site. They are sized such that, given local terrain and clutter topologies, a property candidate lying within that search area has a high probability of achieving the required system objectives, given a minimum height for antenna mounting. If made smaller, the search area may limit alternatives, thus precluding AT&T from selecting the least intrusive site option. If made larger, outlying property candidates found within the search area will likely have a much lower chance of meeting coverage objectives. Sites that are improperly placed can introduce radio frequency interference into the existing network, and in some cases, may require additional sites to meet the objectives.

Search Area Location: Search areas are located such that their "centers" are the ideal location for a site to meet system objectives. In general, the further away from the center of a search area, the less likely the site is to meet system objectives. Search areas are very carefully centered given the local terrain and clutter topologies, both of which can impact site constructability as well as signal propagation and, thus, system performance. For this reason, it is possible to have candidate locations within a search area that will not meet coverage objectives. A detailed engineering analysis is always required of candidate locations.

Extensive site acquisition efforts were conducted to determine if collocation on an existing tower or other structure would be possible, and no adequate structure could be found. AT&T is already a tenant on the nearby towers. There are no existing structures in the area that could provide the required antenna mounting height of 141' (above ground level) or more to support the load of antennas, lines, and related equipment needed for AT&T to successfully deploy a facility that can utilize existing and future wireless technologies. The proposed location for the new facility was based on a comprehensive analysis of the search ring. Factors considered included RF propagation objectives, constructability, and willingness of a landowner to provide property for a lease or easement.

The closest existing AT&T sites that would hand off to this proposed site are, on average, 1.9 miles away from the needed coverage zone.



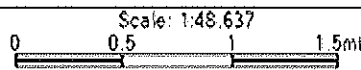
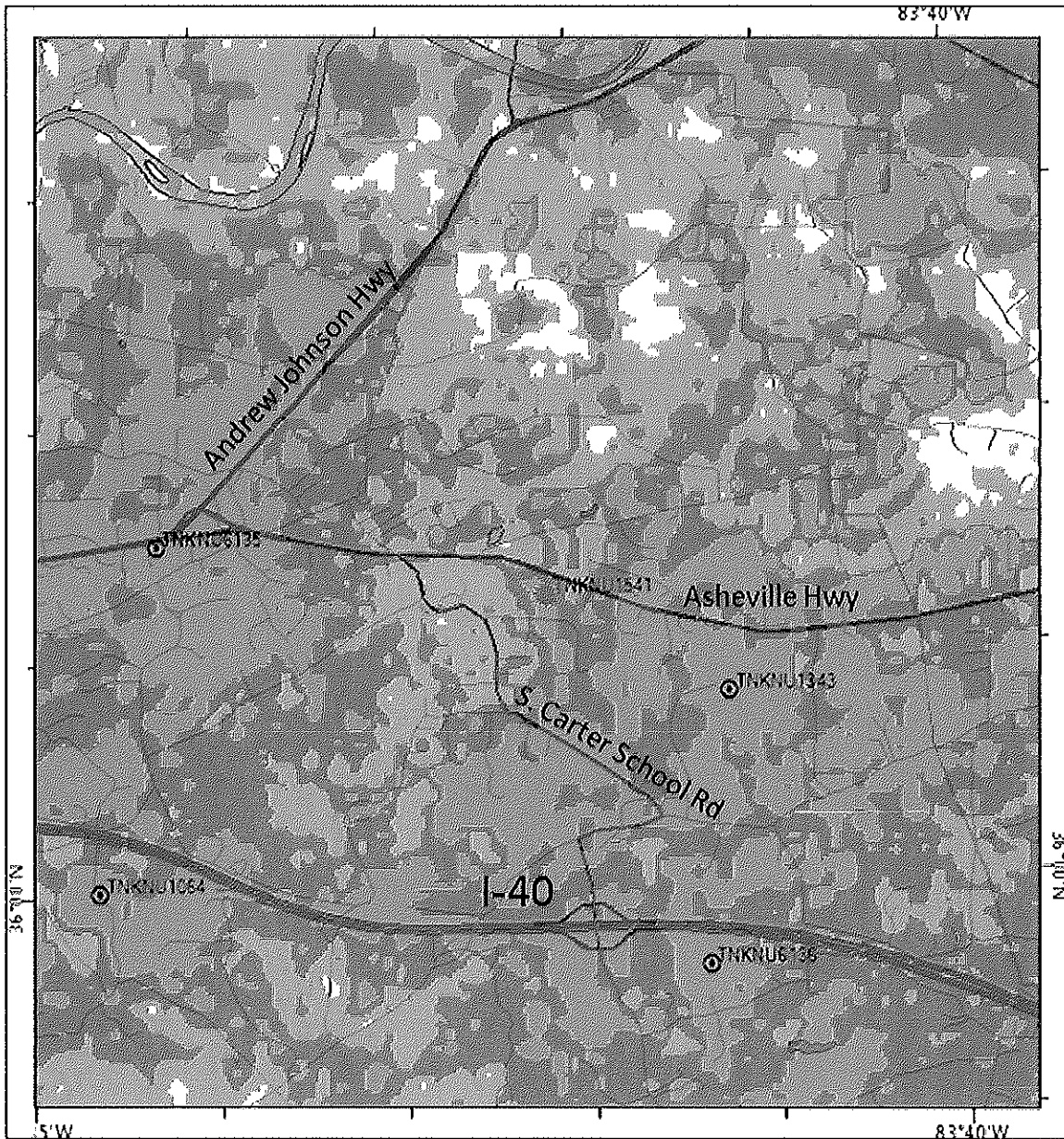
Radio Frequency (“RF”) Propagation plots are attached showing the predicted before and after coverage levels for a given frequency band. The attached plots show the pre and post coverage for the area affected for the spectrum bands that will be improved.

AT&T certifies that all of its equipment will be installed and operated in keeping with applicable FAA and FCC rules and regulations, as well as appropriate industry standards. The construction of this facility, including AT&T’s installation of transmitter/Receiver equipment, will not interfere with the usual and customary transmission or reception of radio, television, and general public use communications equipment.

Submitted by:

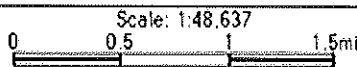
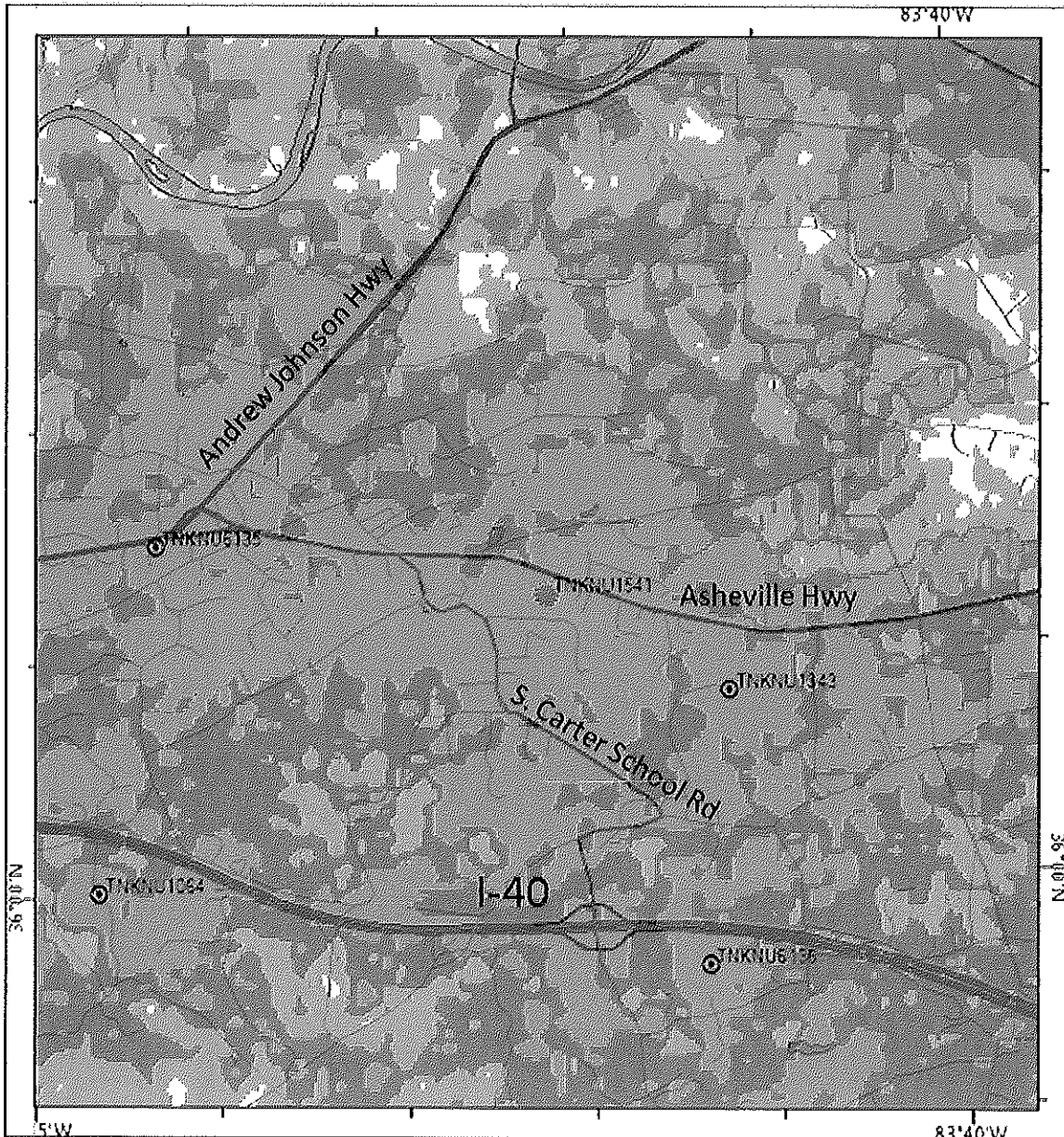
Gerald Winters – RAN Design Engineer – AT&T Mobility




Stringtown Before




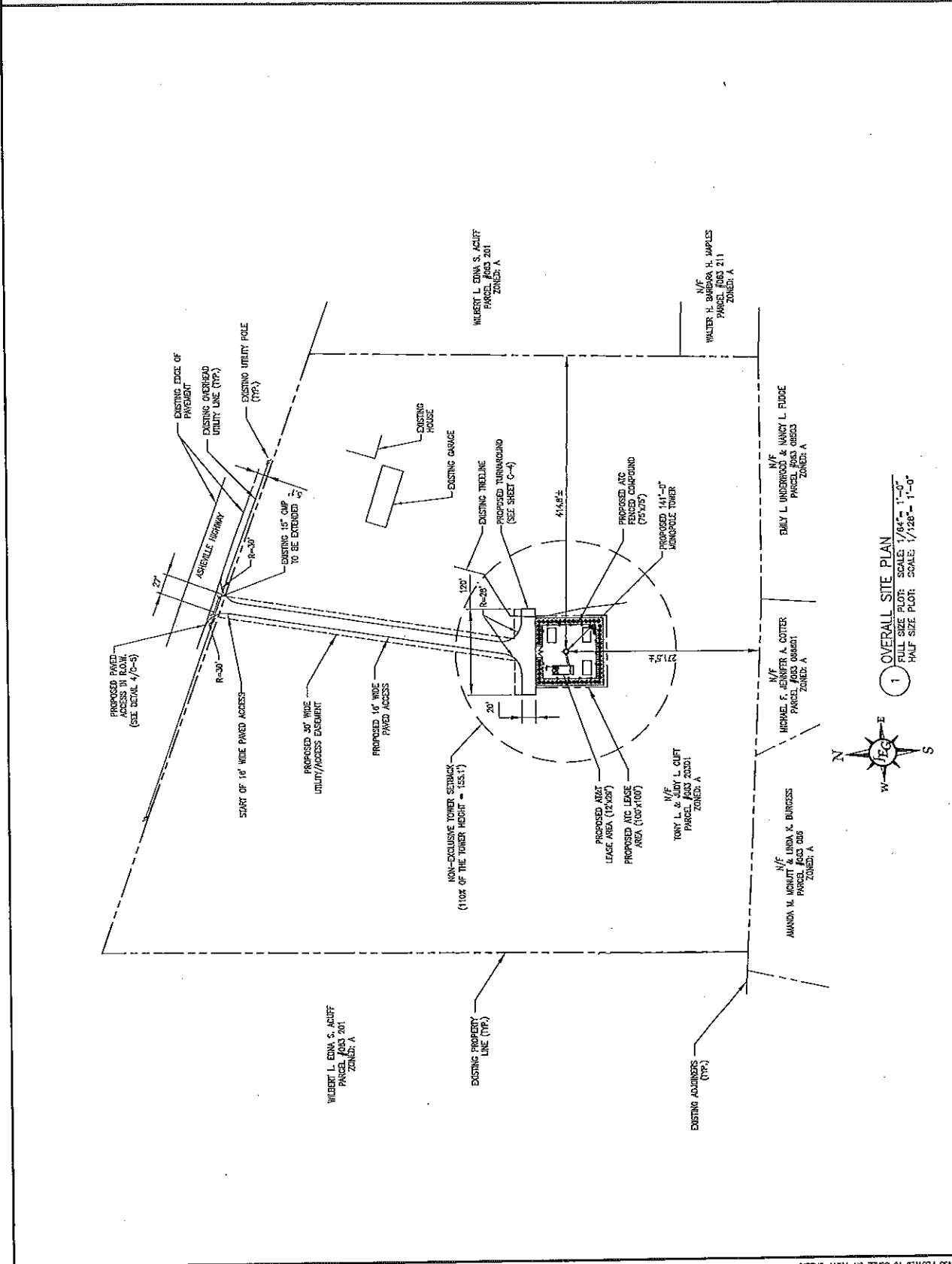
- Best Signal Level (dBm) ≥ -75
- Best Signal Level (dBm) ≥ -85
- Best Signal Level (dBm) ≥ -95

Stringtown After



-  Best Signal Level (dBm) ≥ -75
-  Best Signal Level (dBm) ≥ -85
-  Best Signal Level (dBm) ≥ -95

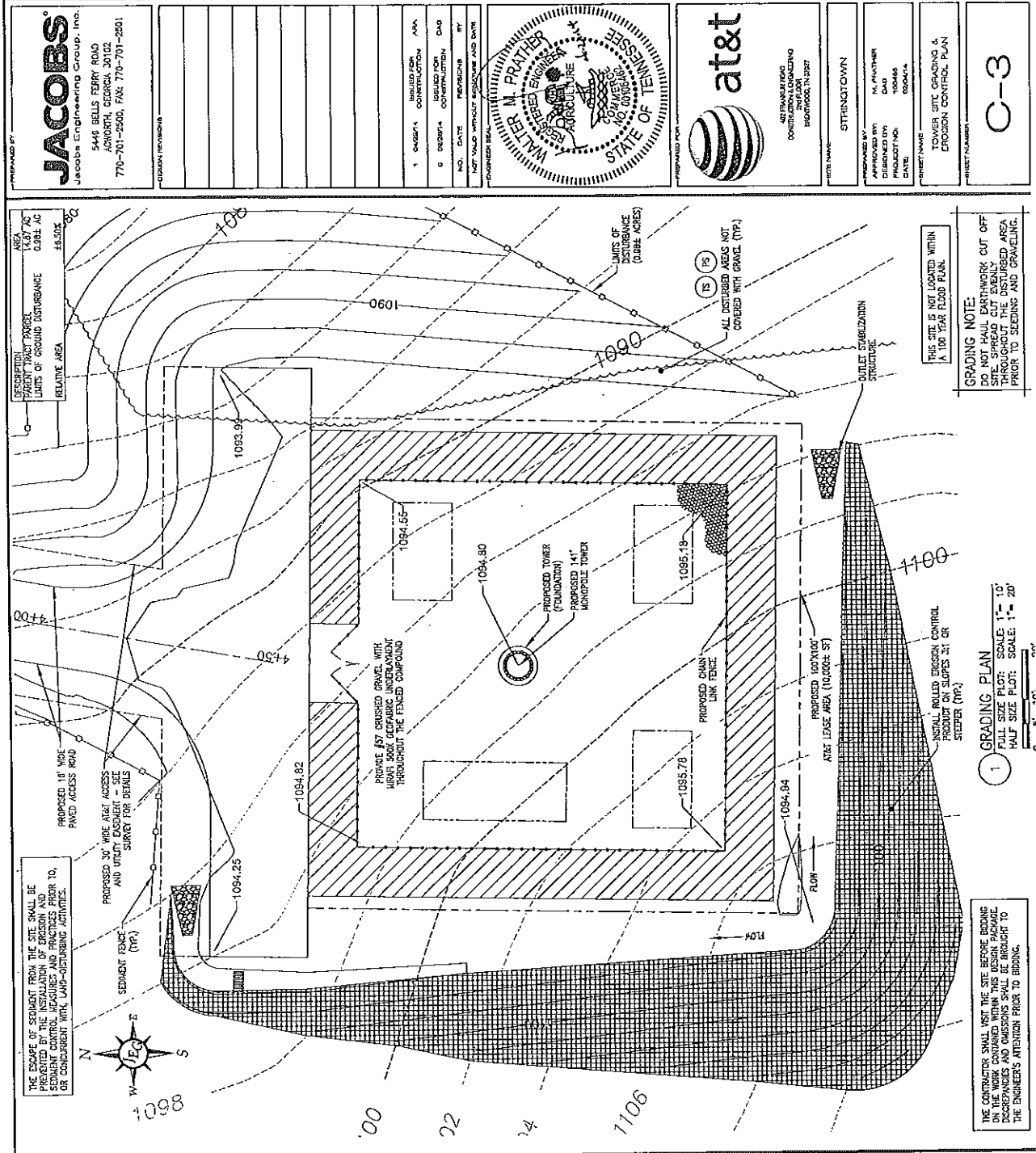
JACOBS Jacobs Engineering Group, Inc. 5440 BELLS FERRY ROAD ACWORTH, GEORGIA 30102 770-701-2300, FAX: 770-701-2601	PREPARED BY: WALTER M. PRATHEER REGISTERED ENGINEER STATE OF TENNESSEE LICENSE NO. 100049 DATE: 02/28/14		SITE NAME: STRINGTOWN
	1 04/28/14 WALTER M. PRATHEER, AIA 0 02/28/14 WALTER M. PRATHEER, AIA NO. DATE REVISIONS BY NOT VALID WITHOUT SIGNATURE AND DATE	PROJECT NO.: 100049 DATE: 02/28/14	PROJECT NAME: OVERALL SITE PLAN



1 OVERALL SITE PLAN
 FULL SIZE PLOT: SCALE: 1/64" = 1'-0"
 HALF SIZE PLOT: SCALE: 1/128" = 1'-0"

NOTICE: This drawing and the design shown herein are the property of Compass Technology Services, Inc. The reproduction, copying, or use of this drawing without written consent is prohibited and any infringement will be subject to legal action.

- GRADING NOTES:**
- THIS PLAN WAS PREPARED FOR THE CALCULATION OF EARTH AND EXCLUSIVELY FOR THE PURPOSES OF THE GRADING AND THE RIGHT OF EXEMPTION SHOWN HEREON AND SHALL NOT BE USED AS AN EXHIBIT OR EVIDENCE IN THE TRANSFER OF THE SUBJECT PROPERTY NOR ANY PORTION OR PORTIONS THEREOF.
 - THE CONTOURS SHOWN ON THIS PLAN ARE BASED ON LEVELS OBTAINED AND HAVE A VERTICAL ACCURACY OF ±2". CONTOURS OUTSIDE THE IMMEDIATE SITE AREA ARE APPROXIMATE.
 - THE UTILITIES SHOWN ARE BASED UPON AN ABOVE-GROUND FIELD SURVEY. THE ACTUAL UTILITY LOCATIONS SHOULD BE FIELD VERIFIED BY THE CONTRACTOR BEFORE ANY CONSTRUCTION BEGINS.
 - THERE ARE NO METEANS WITHIN THE PROPOSED LIMITS OF CONSTRUCTION FOR THIS PROJECT.
 - THE CONTRACTOR SHALL REMOVE ANY ROCK AND/OR UNSUITABLE MATERIAL TO A DEPTH OF TWO (2) FEET BELOW THE FINISHED GRADE OR AS DIRECTED BY THE SOILS ENGINEER OR THE DEVELOPER.
 - FOUNDATION FOR PERMANENT STRUCTURE AREAS SHALL BE COMPACTED TO A MINIMUM OF ONE (1) INCH OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY (ASTM D-1557) OR AS DIRECTED BY THE SOILS ENGINEER.
- EROSION CONTROL NOTES:**
- EROSION CONTROL MEASURES SHALL BE INSTALLED, INSPECTED, AND FULLY MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD AND UNTIL PERMANENT GROUND COVER IS ESTABLISHED.
 - ALL EROSION CONTROL MEASURES SHALL CONFORM TO LOCAL, STATE, AND COUNTY STANDARDS.
 - EROSION CONTROL MEASURES INDICATED ON THESE PLANS MEET THE MINIMUM REQUIREMENTS. ADDITIONAL REQUIREMENTS MAY BE DETERMINED BY FIELD CONDITIONS OR BY THE INSPECTOR. CHANGES AND REINFORCEMENT MAY BE REQUIRED WHEN FAILURE OF THE EROSION CONTROL MEASURES PERSISTS.
 - CONTRACTOR SHALL PROVIDE DUST CONTROL AND SHALL PROTECT ADJACENT STREETS FROM ACCUMULATION OF SOIL.
 - CONTRACTOR IS RESPONSIBLE FOR MONITORING DOWNSTREAM CONDITIONS THROUGHOUT THE CONSTRUCTION PERIOD AND CLEARING ANY DEBRIS AND/OR SEDIMENT CAUSED BY CONSTRUCTION.
 - CONTRACTOR SHALL MAINTAIN ALL EROSION CONTROL MEASURES AT ALL TIMES. CONTRACTOR SHALL INSPECT AND REPAIR ALL EROSION CONTROL MEASURES AT THE END OF EACH DAY AND AFTER EACH RAIN EVENT.
 - CONTRACTOR SHALL CLEAN OUT ALL EROSION CONTROL MEASURES BEFORE THEY ARE TWO-THIRDS FULL OR AS SPECIFIED BY THE INSPECTOR OR ENGINEER.
 - CONTRACTOR IS RESPONSIBLE FOR REMOVING ANY DIRT OR MUD FROM THE TIRES OF ANY CONSTRUCTION VEHICLES PRIOR TO THEIR LEAVING THE SITE.
- LEGEND:**
- TEMPORARY STREAM CROSSING
 - CHECK DAM
 - OUTLET PROTECTION
 - CONCRETE WASHOUT
 - UNDISTURBED AREA STABILIZATION WITH STRAW MULCH
 - DISTURBED AREA STABILIZATION WITH OTHER MULCHES
 - DISTURBED AREA STABILIZATION WITH PERMANENT VEGETATION
 - DISTURBED AREA STABILIZATION WITH SOB
 - DISTURBED AREA STABILIZATION WITH TEMPORARY VEGETATION
 - ROLLED EROSION CONTROL PRODUCTS
 - CONSTRUCTION EXIT
 - SEDIMENT FENCE
 - CONSTRUCTION ROAD STABILIZATION
 - TIRES AND WHEELS (SEDIMENT CONTROL)
- CONTRACTOR SHALL VISIT THE SITE BEFORE BIDDING ON THE WORK CONTAINED WITHIN THIS DESIGN PACKAGE. THE CONTRACTOR SHALL SCHEDULE A PRE-CONSTRUCTION MEETING WITH THE ENGINEER'S ATTENTION PRIOR TO BIDDING.**



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770-701-2500, FAX: 770-701-2501

at&t
4575 PARKWAY
CONSTRUCTION LOGGING
BOSTON, MA 02227

WALTER M. PRAETTER REGISTERED ENGINEER
STATE OF TENNESSEE
NO. 00063

PROJECT NAME: TOWER SITE GRADING & EROSION CONTROL PLAN
SHEET NUMBER: C-3

DATE: 02/04/14

PROJECT NUMBER: 100448

DATE: 02/04/14

PROJECT NAME: TOWER SITE GRADING & EROSION CONTROL PLAN
SHEET NUMBER: C-3

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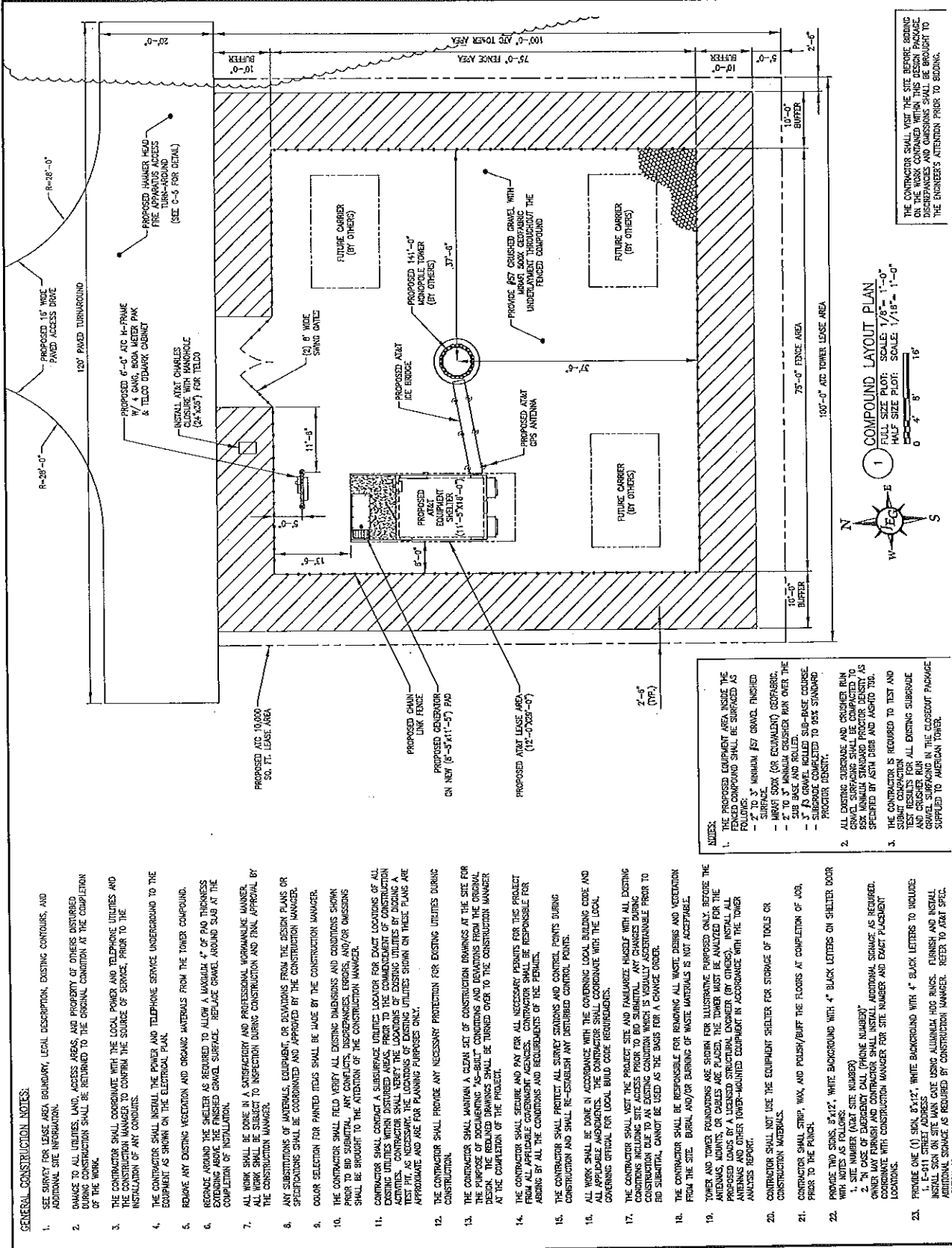
ISSUED FOR CONSTRUCTION A7A
REVISED FOR CONSTRUCTION DAB
NO. DATE REVISIONS BY
NOT VALID WITHOUT SIGNATURE AND DATE

PROJECT NAME: STREINNOTOWN
PROJECT NO.: 100040
DATE: 03/04/14

DESIGNED BY: M. PRATHER
CHECKED BY: T. COOPER
PROJECT NO.: 100040
DATE: 03/04/14

GENERAL CONSTRUCTION NOTES & SITE PLAN

C-4



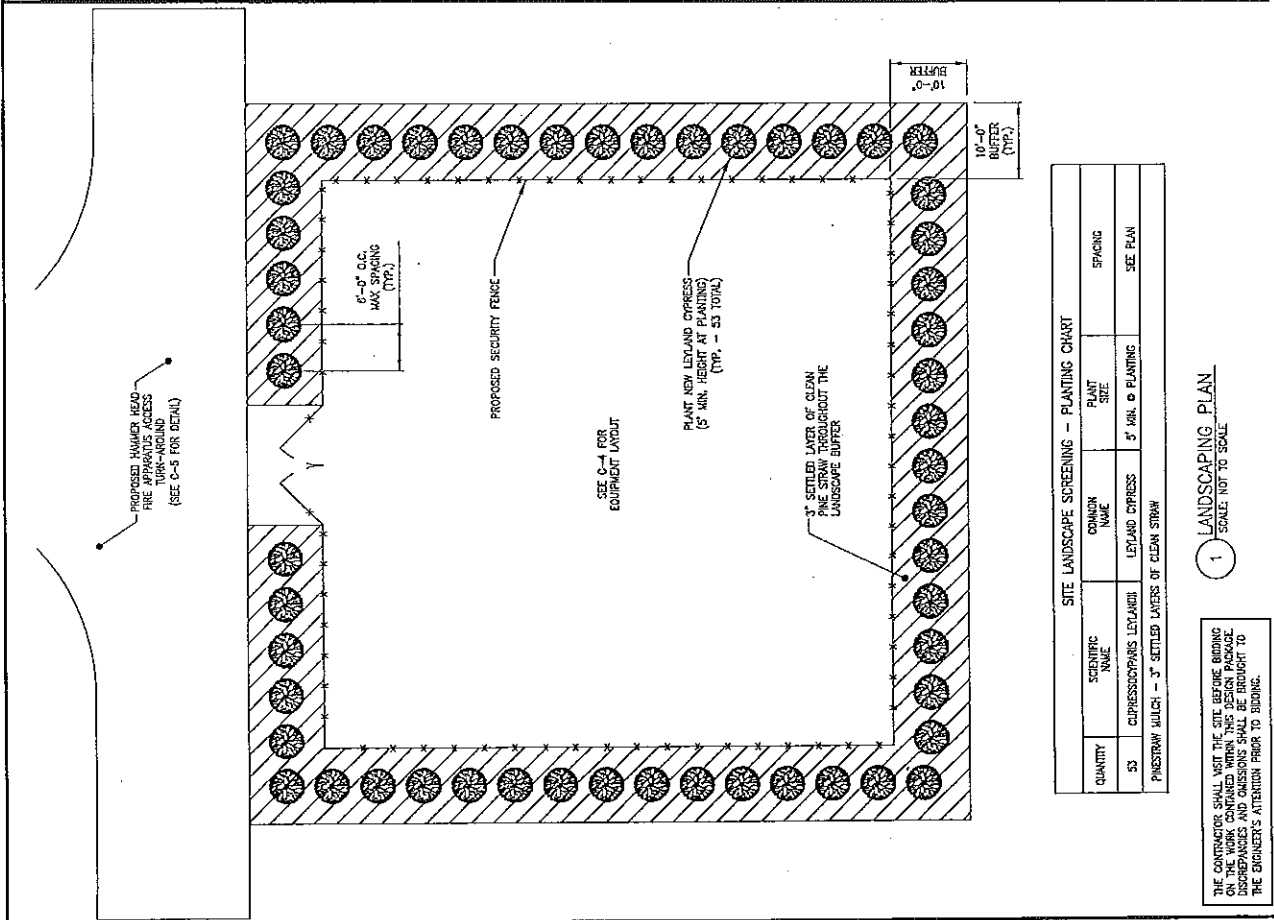
GENERAL CONSTRUCTION NOTES:

- SEE SURVEY FOR LEASE AREA BOUNDARY, LEGAL DESCRIPTION, EXISTING CONTOURS, AND ADDITIONAL SITE INFORMATION.
- GRADING TO ALL UTILITIES, LAWN, ACCESS AREAS, AND PROPERTY OF OTHERS DISTURBED DURING CONSTRUCTION SHALL BE RETURNED TO THE ORIGINAL CONDITION AT THE COMPLETION OF THE WORK.
- THE CONTRACTOR SHALL COORDINATE WITH THE LOCAL POWER AND TELEPHONE UTILITIES AND THE CONSTRUCTION MANAGER TO CONFIRM THE SOURCE OF SERVICE, PRIOR TO THE INSTALLATION OF ANY CONDUITS.
- THE CONTRACTOR SHALL INSTALL THE POWER AND TELEPHONE SERVICE UNDERGROUND TO THE EQUIPMENT AS SHOWN ON THE ELECTRICAL PLAN.
- REMOVE ANY EXISTING VEGETATION AND ORGANIC MATERIALS FROM THE TOWER COMPOUND.
- REMOVE GRASS FROM THE SHELTER IS REQUIRED TO ALLOW A MAXIMUM 4" OF PAD THICKNESS EXCEEDING ABOVE THE FINISHED GRAVEL SURFACE. REPLACE GRAVEL AROUND SLAB AT THE COMPLETION OF INSTALLATION.
- ALL WORK SHALL BE DONE IN A SATISFACTORY AND PROFESSIONAL WORKMANLIKE MANNER. ALL WORK SHALL BE SUBJECT TO INSPECTION DURING CONSTRUCTION AND FINAL APPROVAL BY THE CONSTRUCTION MANAGER.
- ANY SUBSTITUTIONS OF MATERIALS, EQUIPMENT, OR DEVIATIONS FROM THE DESIGN PLANS OR SPECIFICATIONS SHALL BE COORDINATED AND APPROVED BY THE CONSTRUCTION MANAGER.
- COLOR SELECTION FOR PAINTED ITEMS SHALL BE MADE BY THE CONSTRUCTION MANAGER.
- THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS SHOWN PRIOR TO BID SUBMITTAL. ANY CONFLICTS, DISCREPANCIES, ERRORS, AND/OR OMISSIONS SHALL BE BROUGHT TO THE ATTENTION OF THE CONSTRUCTION MANAGER.
- CONTRACTOR SHALL CONDUCT A SURFACE UNLINED LOCATOR FOR EXACT LOCATIONS OF ALL EXISTING UTILITIES WITHIN DISTURBED AREAS. THE LOCATION OF EXISTING UTILITIES BY DIGGING A MINIMUM 12" DEEP AT THE LOCATIONS OF EXISTING UTILITIES SHOWN ON THESE PLANS ARE APPROXIMATE AND ARE FOR PLANNING PURPOSES ONLY.
- THE CONTRACTOR SHALL PROVIDE ANY NECESSARY PROTECTION FOR EXISTING UTILITIES DURING CONSTRUCTION.
- THE CONTRACTOR SHALL MAINTAIN A CLEAN SET OF CONSTRUCTION DRAWINGS AT THE SITE FOR THE PURPOSE OF DOCUMENTING "AS-BUILT" CONDITIONS AND DEVIATIONS FROM THE ORIGINAL DESIGN. THE REVISED DRAWINGS SHALL BE TURNED OVER TO THE CONSTRUCTION MANAGER AT THE COMPLETION OF THE PROJECT.
- THE CONTRACTOR SHALL STAKE AND PLY FOR ALL NECESSARY PERMITS FOR THIS PROJECT AND SHALL MAINTAIN ACCESS TO ALL NECESSARY AGENCIES. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND REQUIREMENTS OF THE PERMITS.
- THE CONTRACTOR SHALL PROTECT ALL SURVEY STATIONS AND CONTROL POINTS DURING CONSTRUCTION AND SHALL RE-ESTABLISH ANY DISTURBED CONTROL POINTS.
- ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE GOVERNING LOCAL BUILDING CODE AND ALL APPLICABLE ORDINANCES. THE CONTRACTOR SHALL COORDINATE WITH THE LOCAL GOVERNING OFFICIAL FOR LOCAL BUILD CODE REQUIREMENTS.
- THE CONTRACTOR SHALL VISIT THE PROJECT SITE AND FAMILIARIZE HIMSELF WITH ALL EXISTING CONDITIONS INCLUDING SITE SPECIFIC CONDITIONS WHICH IS VISUALLY ASCERTAINABLE PRIOR TO BID SUBMITTAL. CANNOT BE USED AS THE BASIS FOR A CHANGE ORDER.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING ALL WASTE DEBRIS AND VEGETATION FROM THE SITE. BURIAL AND/OR BURNING OF WASTE MATERIALS IS NOT ACCEPTABLE.
- TOWER AND TOWER FOUNDATIONS ARE SHOWN FOR ILLUSTRATIVE PURPOSES ONLY. BEFORE THE PERMITS ARE OBTAINED, OR PERMITS ARE GRANTED, THE TOWER MUST BE ANALYZED FOR THE PROPOSED LOADS BY A LICENSED STRUCTURAL ENGINEER (BY OTHERS). INSTALL ALL ANTENNAS AND OTHER TOWER-MOUNTED EQUIPMENT IN ACCORDANCE WITH THE TOWER ANALYSIS REPORT.
- CONTRACTOR SHALL NOT USE THE EQUIPMENT SHELTER FOR STORAGE OF TOOLS OR CONSTRUCTION MATERIALS.
- CONSTRUCTION SHALL STOP, WAIX, AND POLISH/BUFF THE FLOORS AT COMPLETION OF JOB, PRIOR TO THE PUNCH.
- PROVIDE TWO SIDES, 8"x12" WHITE BACKGROUND WITH 4" BLACK LETTERS ON SHELTER DOOR WITH NOTES AS FOLLOWS:
 - SITE NUMBER (NOT SITE NUMBER)
 - DATE
 - CONTRACTOR NAME
- PROVIDE ONE (1) SIGN, 8"x12" WHITE BACKGROUND WITH 4" BLACK LETTERS TO INCLUDE:
 1. E-311 SHEET NUMBER
 2. SHEET NUMBER
 3. DATE
 4. CONTRACTOR NAME

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MPS PLOTTED TO SCALE ON 11x17 SHEETS

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SITE LANDSCAPE SCREENING - PLANTING CHART

QUANTITY	SCIENTIFIC NAME	COMMON NAME	PLANT SIZE	SPACING
53	CYPRESSOPHAPS LEVLANCII	LEVLAND CYPRESS	5' MIN. @ PLANTING	SEE PLAN
	PISTONIA MICHX.	3" SETTLED LAYERS OF CLEAN STRAW		

1. LANDSCAPING PLAN
SCALE: NOT TO SCALE

THE CONTRACTOR SHALL VISIT THE SITE BEFORE BIDDING ON THE WORK CONTAINED WITHIN THIS DESIGN PACKAGE. DISCREPANCIES AND OMISSIONS SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION PRIOR TO BIDDING.

PREPARED BY
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DESIGN REVISIONS

NO.	DATE	REVISION	BY
0	02/26/14	INITIAL DESIGN CONSTRUCTION	DAB

400 UNIVERSITY ROAD
CONSTRUCTION ENGINEERING
SPRINGFIELD, TN 37172

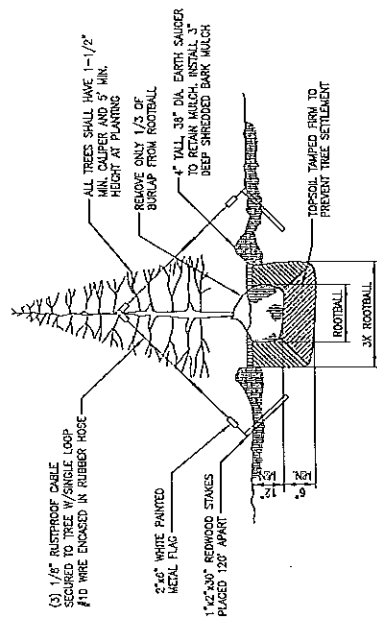
PROJECT NAME
STRINGTOWN

PROJECT NO.
100400

DATE
02/26/14

PROJECT NAME
LANDSCAPING PLAN
& DETAILS

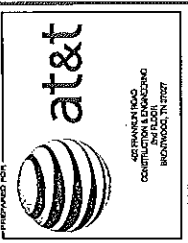
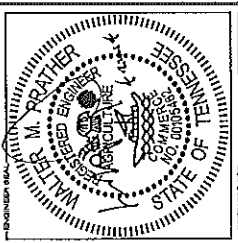
SHEET NUMBER
L-1



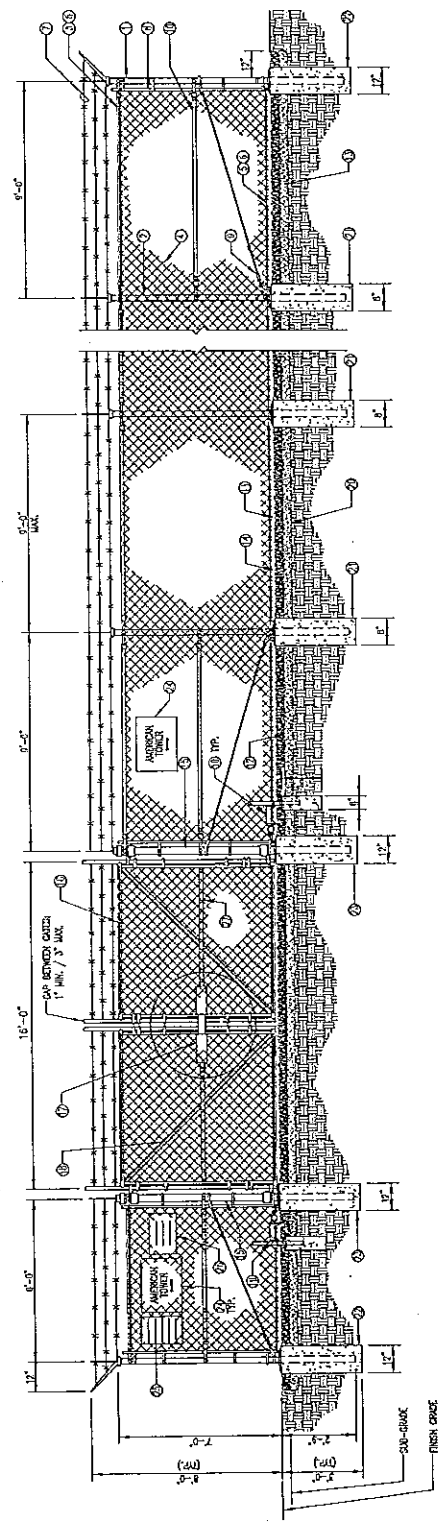
2. TREE PLANTING DETAIL
SCALE: NOT TO SCALE

- PLANTING NOTES:**
- ALL PLANTS MUST BE HEALTHY, VIGOROUS MATERIAL, FREE OF PEST AND DISEASE.
 - ALL PLANTS MUST BE CONTAINER-GROWN OR BALLED AND BURLAPPED AS SPECIFIED.
 - ALL TREES MUST BE STRAIGHT TRUNKED, FULL HEADED AND MEET ALL REQUIREMENTS SPECIFIED.
 - ALL TREES MUST BE SUBMITTED TO THE APPROVAL OF THE OWNER'S REPRESENTATIVE BEFORE, DURING, AND AFTER INSTALLATION.
 - ALL TREES MUST BE CAGED OR STAKED.
 - ALL TREES MUST BE SUBMITTED TO THE APPROVAL OF THE OWNER'S REPRESENTATIVE BEFORE, DURING, AND AFTER INSTALLATION.
 - PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES AND SHALL AVOID DAMAGE TO ALL UTILITIES DURING COURSE OF WORK.
 - THE CONTRACTOR IS RESPONSIBLE FOR FULLY MAINTAINING ALL PLANTING AREAS (INCLUDING, BUT NOT LIMITED TO, WATERING, SPRINKLING, MULCHING, FERTILIZATION, ETC.) UNTIL THE WORK IS FULLY ACCEPTED.
 - THE CONTRACTOR SHALL COMPLETELY GUARANTEE ALL PLANT MATERIAL FOR A PERIOD OF (1) ONE YEAR REMAINS OF THE DATE OF TOOL RELEASE OR (2) ONE YEAR REMAINS OF THE DATE OF THE CONTRACTOR'S RELEASE OR (3) THE END OF THE GUARANTEE PERIOD.
 - THE CONTRACTOR'S REPRESENTATIVE WILL APPROVE THE STAGED LOCATION OF ALL PLANT MATERIAL PRIOR TO INSTALLATION.
 - AFTER BEING DUG AT THE NURSERY SOURCE, ALL TREES IN LEAF SHALL BE ACCUMULATED FOR TWO (2) WEEKS UNDER A MIST SYSTEM PRIOR TO INSTALLATION.
 - ANY PLANT MATERIAL THAT DIES, TURNS BROWN OR DEFLORATES (PRIOR TO TOTAL ACCEPTANCE OF THE WORK) SHALL BE PROMPTLY REMOVED FROM THE SITE AND REPLACED WITH MATERIAL OF THE SAME SPECIES, QUANTITY, SIZE AND MEETING ALL SPECIFICATIONS.
 - ALL REQUIRED TREE PROTECTION MEASURES SHALL BE INSTALLED PRIOR TO GRADING OR EXCAVATING.
 - UNINSURED BUFFERS SHALL BE REPLANTED TO BUFFER STANDARDS WHERE SPARSELY VEGETATED OR WHERE DISTURBED AT APPROVED UTILITY CROSSINGS. REPLANTING IS SUBJECT TO COUNTY AND/OR APPROVAL.
 - TREES TO BE A MINIMUM OF 3' IN HEIGHT AT TIME OF PLANTING.

NO.	DATE	REVISIONS	BY
0	02/28/14	CONSTRUCTION	DAB
NOT VALID WITHOUT REVISIONS AND DATE			

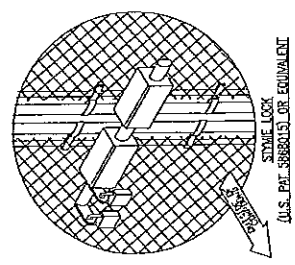


DATE	02/28/14
PROJECT NO.	000044
DESIGNED BY	DAB
APPROVED BY	W.M. PRATHER
DATE	02/28/14
PROJECT NAME	STRIP/TOWN
PROJECT NUMBER	
FENCING DETAILS	



- GENERAL NOTES:**
1. INSTALL FENCING PER ASTM F-877
 2. INSTALL SINGING DATES PER ASTM F-100
 3. LOCAL CLEARANCE OF BARBED WIRE PERMIT REQUIREMENT SHALL BE COMPLIED F REQUIRED.
 4. POST & GATE PIPE SIZES ARE INDUSTRY STANDARDS. ALL PIPE TO BE 1 1/2" O.D. GALV. (NOT USE 1 1/2" O.D. GALV. STEEL). ALL WELDING SHALL BE COVERED WITH (2) COATS OF COLD GALV. (OR EQUAL).
 5. ALL OPEN POSTS SHALL HAVE END-CAPS.
 6. USE GALVANIZED HOOK-RING WIRE TO MOUNT ALL SIGNS.
 7. ALL SIGNS MUST BE MOUNTED ON INSIDE OF FENCE FABRIC.

- REFERENCE NOTES:**
- ① CORNER END OR PULL END 4" SCHEDULE 40 PIPE
 - ② LINE POSTS 2 1/2" SCHEDULE 40 PIPE, PER ASTM-F100.
 - ③ LINE POSTS SHALL BE EQUALLY SPACED AT MAXIMUM 8'-0" O.C.
 - ④ TOP RAIL & BRACE RAIL 1 1/2" PIPE, PER ASTM-F100.
 - ⑤ FABRIC 9 GA CORE WIRE SIZE 2" MESH, CONFORMING TO ASTM-A325.
 - ⑥ 16 WIRE MINIMUM 11 GA GALVANIZED STEEL AT POSTS AND RAILS. A SINGLE WRAP OF FABRIC TO AND AT TENSION WIRE BY FOOT RINGS SPACED MAX. 24" INTERVALS.
 - ⑦ TENSION WIRE 9 GA GALVANIZED STEEL.
 - ⑧ BARBED WIRE: DOUBLE STRAND 12-17" O.D. INSTEAD WIRE TO MATCH WITH FABRIC 14 GA. 4 FT. BARS SPACED ON APPROXIMATELY 3' CENTERS.
 - ⑨ STRIPS/CHIEF BAR.
 - ⑩ 3/8" DIAGONAL ROD WITH GALVANIZED STEEL TURNBUCKLE OR DIAGONAL THREADED ROD.
 - ⑪ FENCE CORNER POST BRICE: 1 5/8" DIA. EACH CORNER EACH WAY.
 - ⑫ 1 1/2" MAXIMUM CLEARANCE FROM GRADE.
 - ⑬ 2" FINISH OR AS DETERMINED BY CONSTRUCTION MANAGER DURING BID WALK.
 - ⑭ COMPACTED 8% BASE MATERIAL OR AS DETERMINED BY CONSTRUCTION MANAGER DURING BID WALK.
 - ⑮ FINISH GRADE SHALL BE UNIFORM AND LEVEL.
 - ⑯ GATE POST 4" SCHEDULE 40 PIPE, FOR GATE WELDING UP THRU 10 FEET OR 20 FEET FOR DOUBLE SINGING DATE, PER ASTM-F100.
 - ⑰ GATE FRAME 1 1/2" PIPE SCH. 40, PER ASTM-F100.
 - ⑱ C.G. FINISH & INSTALL STAKE/ACK & MASTER LOCK (#125 W/ JIC COMBOST
 - ⑲ GATE DIAGONAL GALVANIZED STEEL 1 1/2" PIPE IN FIELD PRIOR TO INSTALLATION.
 - ⑳ BACKSILL OPEN GATE W/UNDER. VERIFY LOCATION
 - ㉑ GEOTEXTILE FABRIC, MESH 500K
 - ㉒ LINE POST: CONCRETE FOUNDATION (2000 PSI).
 - ㉓ CORNER POST: CONCRETE FOUNDATION (2000 PSI).
 - ㉔ GATE POST: CONCRETE FOUNDATION (2000 PSI).
 - ㉕ 18" x 24" AMERICAN TONER SCH.
 - ㉖ 12" x 18" YELLOW CAUTION SIGN.
 - ㉗ 12" x 18" EMPLOYEE NOTICE SIGN.
 - ㉘ GATE FRAME BRACE 1 5/8" DIAMETER.



STORE EXTRA PARTS OF MULTI-LOCK DEVICE IN TELCO CABINET.

NO PLUNGER OR MUSHROOM REQUIRED.