

CITY OF CHARLOTTESVILLE
"A World Class City"



Department of Neighborhood Development Services

City Hall • P.O. Box 911
Charlottesville, Virginia 22902
Telephone 434-970-3182
Fax 434-970-3359
www.charlottesville.org

December 28, 2007

Verizon Wireless c/o Nathan Holland
536 Pantops Center #405
Charlottesville, VA 22911

Certificate of Appropriateness Application
BAR 07-12-06
7 ½ Street and West Main Street
TM 32 P 144.2

819 W Main St.

Verizon Wireless/ Southern Railway Co.
Attach antenna to existing tower and add equipment shelter

Dear Mr. Holland,

The above referenced project was considered at a meeting of the City of Charlottesville Board of Architectural Review (BAR) on December 18, 2007.

The BAR approved (9-0) the application with the condition of adding evergreen screening on three sides of the perimeter of the new chain link fencing, with the screening plan to be submitted for staff approval.

In accordance with Charlottesville City Code 34-285(b), this decision may be appealed to the City Council in writing within ten working days of the date of the decision. Written appeals should be directed to Jeanne Cox, Clerk of the City Council, PO Box 911, Charlottesville, VA 22902.

This certificate of appropriateness shall expire in one year (December 18, 2008), unless within that time period you have either: been issued a building permit for construction of the improvements if one is required, or if no building permit is required, commenced construction. You may request an extension of the certificate of appropriateness before this approval expires for one additional year for reasonable cause.

802 block w Main St.

Scala, Mary Joy

From: Scala, Mary Joy
Sent: Thursday, January 24, 2008 12:03 PM
To: 'Nathan Holland'
Cc: Rogers, Nicholas
Subject: RE: Verizon Wireless - BAR 07-12-06 - Downtown Cville Tower

Nathan,

The landscaping plan as submitted is fine with me. I am willing to sign off on the BAR approval.

However, you still need to talk with the Neighborhood Planner, Nick Rogers, about getting a site plan amendment approved before you can get your building permit. He said you all have not talked yet.

Mary Joy

Mary Joy Scala, Preservation and Design Planner
City of Charlottesville
Department of Neighborhood Development Services
City Hall - 610 East Market Street
P.O. Box 911
Charlottesville, VA 22902
Ph 434.970.3130 FAX 434.970.3359
scala@charlottesville.org

From: Nathan Holland [mailto:nathan.holland@wirelessresources.com]
Sent: Tuesday, January 22, 2008 5:09 PM
To: Scala, Mary Joy
Subject: Verizon Wireless - BAR 07-12-06 - Downtown Cville Tower

Dear Mary Joy,

Please see attached the final site plans which include the required submittal of landscape plans for approval on pages L-1 and L-2. Take a look and let me know if you have questions.

Thanks-Again for all your help,

Nathan Holland
Wireless Resources, Inc.
757-305-8420 (Cell)

NOTICE: This communication from Wireless Resources Inc., including attachments, if any, is intended as a confidential and privileged communication. If received in error, you should not copy, save or reproduce in any manner or form, but delete immediately and notify the sender.

1/24/2008

**CITY OF CHARLOTTESVILLE
BOARD OF ARCHITECTURAL REVIEW
STAFF REPORT
December 18, 2007**



Certificate of Appropriateness Application

BAR 07-12-06

West Main Street and 7 ½ Street NW

TM 32 P 144.2

Verizon Wireless / Southern Railway Co.

Attach antenna to existing tower and add equipment shelter

819 W Main St

Background

This property is located in the West Main Street ADC District. The three sided, 225' lattice radio tower is a non-conforming use. The zoning is West Main North Corridor Mixed Use. The tower was built in the late 60's primarily for railroad communications. Over the last ten years, the tower has been used by wireless communication carriers such as Alltel and Ntelos.

November 28, 2006: The BAR approved the installation of a new Ntelos antenna and concrete pad to house an equipment cabinet.

April 18, 2006: The BAR approved the installation of an Alltel generator. That application included approximately 55 feet of brown slat screening on a portion of the existing chain link fence.

Application

The applicant is seeking approval to add twelve white antennas measuring 71.1" x 4.1" to the existing 225' self support tower at 140'. The twelve antennas will be arranged into four groups of three antennas spread across the 140' level. The doctored photos include the proposed antennas.

The applicant is also asking to install a new 12' x 20' fenced radio equipment shelter located at the base of the existing tower. The building is intended to look like the photo, and not have a brick veneer finish as described in the application. A new 4' x 6' diesel gas powered generator will also be placed at the base of the tower, adjacent to the proposed equipment shelter. The generator will sit on a new 6' x 10' concrete pad. These new additions will be enclosed by extending new chain link fence with barbed wire on top to match the existing. New gravel will be laid within the limits of the compound.

Lastly, because the tower would be structurally deficient otherwise, the applicant is seeking to install structural steel cross members at the 0-25' level and 125'-150' level at the advice of a structural report.

The proposal will not add height to the existing tower, but will increase the footprint of the installation toward West Main Street. The proposed shelter and generator will be screened from offsite views on all sides only by the existing deciduous trees and other vegetation that surround the site.

Discussion

Review Criteria Generally

Sec. 34-284(b) of the City Code states that,

In considering a particular application the BAR shall approve the application unless it finds:

- (1) That the proposal does not meet specific standards set forth within this division or applicable provisions of the Design Guidelines established by the board pursuant to Sec. 34-288(6); and*
- (2) The proposal is incompatible with the historic, cultural or architectural character of the district in which the property is located or the protected property that is the subject of the application.*

Pertinent Standards for Review of Construction and Alterations include:

- (1) Whether the material, texture, color, height, scale, mass and placement of the proposed addition, modification or construction are visually and architecturally compatible with the site and the applicable design control district;*
- (2) The harmony of the proposed change in terms of overall proportion and the size and placement of entrances, windows, awnings, exterior stairs and signs;*
- (3) The Secretary of the Interior Standards for Rehabilitation set forth within the Code of Federal Regulations (36 C.F.R. §67.7(b)), as may be relevant;*
- (4) The effect of the proposed change on the historic district neighborhood;*
- (5) The impact of the proposed change on other protected features on the property, such as gardens, landscaping, fences, walls and walks;*
- (6) Whether the proposed method of construction, renovation or restoration could have an adverse impact on the structure or site, or adjacent buildings or structures;*
- (8) Any applicable provisions of the City's Design Guidelines.*

Pertinent Design Review Guidelines

Site Design and Elements

P. 2.7 Utilities and other Site Appurtenances

- 1. Place overhead wires, utility poles and meters, antennae, trash containers, and exterior heat exchangers in locations where they are least likely to detract from the character of the site.*
- 2. Encourage the installation of utility services underground.*
- 3. Screen utilities and other site elements with fences, walls or plantings.*
- 4. Antennae and communication dishes should be placed in inconspicuous rooftop locations.*
- 5. Screen all rooftop mechanical equipment with a wall of a material harmonious with the building or structure.*

Recommendations

The proposed antennas will not add height to the existing tower and will be an appropriate color.

The proposed equipment shelter is to be covered with what appears to be a brown pebbly material. Staff has requested a sample.

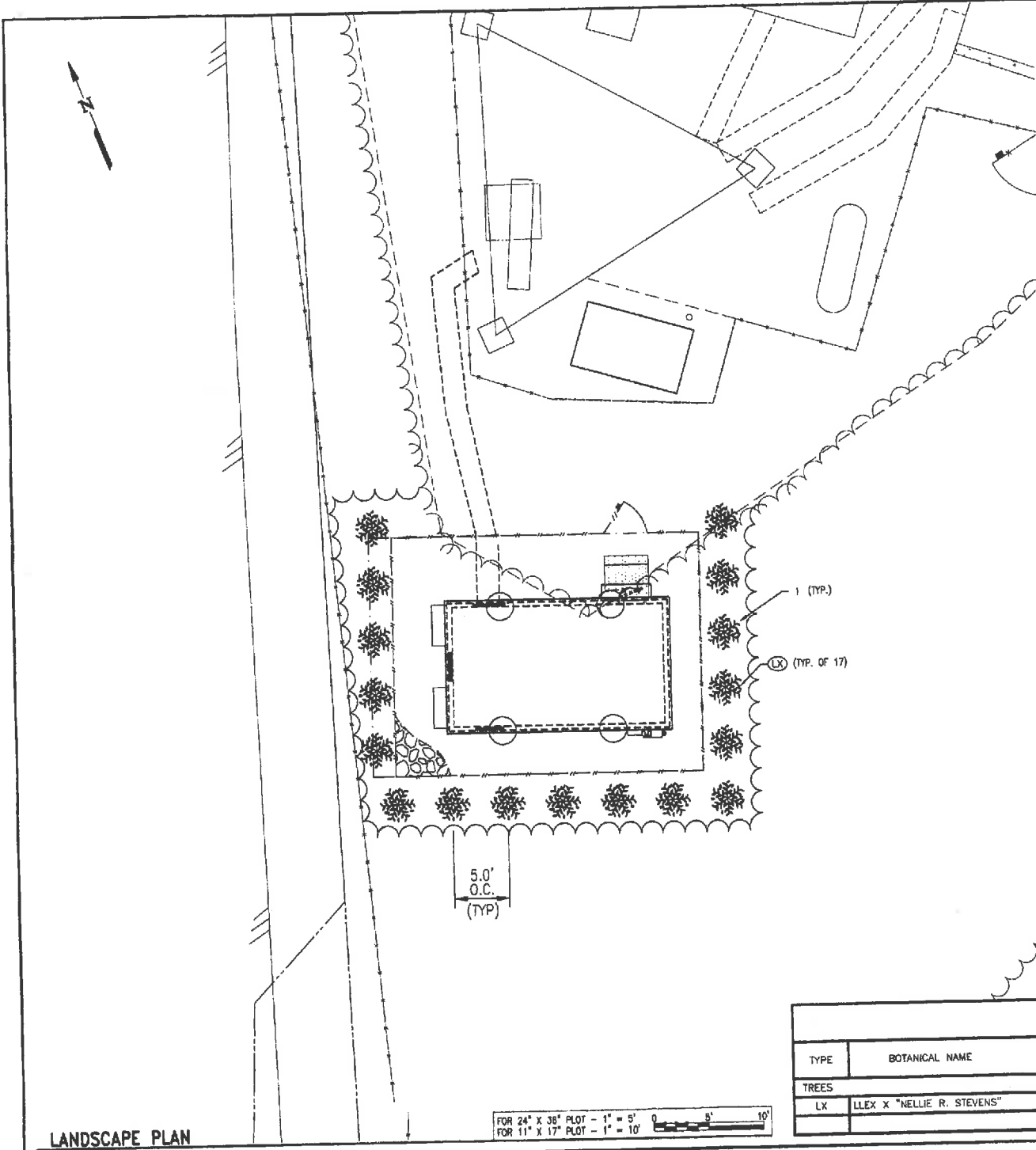
From previous applications, the site has had brown slat screening installed in the existing fence to help obscure the ground level equipment from West Main Street. This is not a very attractive solution.

The current proposal does not include any additional screening. Since the footprint of the installation is being increased, staff recommends that the BAR conditions the approval on additional vegetative screening. Staff suggests a row of Magnolia or Holly trees and evergreen shrubs planted around three sides of the perimeter of the new chain link fence.

Suggested Motion

Having considered the standards set forth within the City Code, including City Design Guidelines for New Construction, I move to find that the proposed new antenna, equipment shelter and generator satisfy the BAR's criteria and are compatible with this and other properties in this district, and that the BAR approves the application with the condition of adding evergreen screening (~~Magnolia or Holly trees and evergreen shrubs~~) on three sides of the perimeter of the new chain link fencing. *w/ screening*

plan to be sub. for staff approval 9-0



SITE NOTES

1. THE CONTRACTOR SHALL VERIFY THAT TOTAL QUANTITIES INDICATED IN THE PLANT LIST OR SCHEDULE QUANTITIES SHOWN ON PLANTING LAYOUT. IF DISCREPANCIES, USE TOTAL OF QUANTITIES SHOWN ON LAYOUT.
2. THE CONTRACTOR SHALL PROVIDE THE QUANTITIES REQUIRED TO COMPLETE PROPOSED PLANTING AS LANDSCAPE PLAN.
3. CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE.
4. ALL BEDS SHALL BE CLEAN AND WEEDED.
5. ALL AREAS NOT PAVED OR PLANTED SHALL BE SEEDED.
6. PROVIDE ALL NECESSARY PLANT MATERIALS, LABOR, TOOLS, AND MATERIALS TO COMPLETE THIS PROJECT WORKMANLIKE, PROFESSIONAL MANNER.
7. ALL TREES, SHRUBS, AND GROUND COVERS SHALL BE SPECIMEN QUALITY (AMERICAN ASSOCIATION OF STANDARDS), SHALL BE NURSERY-GROWN, AND IN A HEALTHY, INSECT AND DISEASE-FREE, CONDITION.
8. NO SUBSTITUTIONS OF SIZE OR VARIETY OF PLANT MATERIAL WITHOUT PRIOR APPROVAL OF LANDSCAPE DESIGNER.
9. STAKE TREES ACCORDING TO A.A.N. (AMERICAN ASSOCIATION OF NURSESMEN) STANDARDS.
10. "B&B" INDICATES BALLED AND BURLAPPED.
11. "CDN" INDICATES CONTAINERIZED PLANTS.
12. ALL TREES AND SHRUBS HAVE BEEN LOCATED WITH RESPECT TO PROPOSED OR EXISTING UTILITIES AS FAR AS POSSIBLE. FIELD VERIFY LOCATIONS FOR ALL UTILITIES PRIOR TO INSTALLING PLANT MATERIAL.
13. VERIFY ALL DIMENSIONS IN THE FIELD, NOTIFY OWNER AND LANDSCAPE DESIGNER OF ANY VARIANCE.
14. PROVIDE OWNER FULL 12 MONTHS MATERIAL AND LABOR GUARANTEE ON ALL PLANT MATERIAL.
15. TEST SOIL BEFORE PLANTING AND ADD PROPER SOIL AMENDMENTS TO SOIL TO ESTABLISH pH OF 6.1 TO 6.5.
16. PREPARE SOIL WITH HI CALCIUM LIME @ RATE INDICATED ON SEEDING SCHEDULE (SEE SHEET L02).
17. PRUNE ALL PLANT MATERIAL - REMOVE RANK AND DEAD GROWTH ONLY. PRUNE FOR NATURAL SHAPE.
18. MULCH TO BE 2" MIN. DEPTH SHREDDED HARDWOOD BARK MULCH IN ALL BED AREAS.
19. ANY QUESTIONS REGARDING THE INSTALLATION OF THIS PROJECT SHOULD BE BROUGHT TO THE ATTENDING LANDSCAPE DESIGNER @ 757-453-5800.
20. IN PLANTING BEDS, OMIT THE COMPACTED EARTH SAUCER AND COVER THE BEDS WITH MULCH (2" MIN. HEDGE ROWS PROVIDE MULCH IN A CONTINUOUS BED. ALL GROUPINGS OF SHRUBS SHALL BE IN CONTINUOUS MULCH BEDS).
21. WHERE PLANTING BEDS ABUT WALK AND CURBS, DEPRESS TOPS OF MULCHED BEDS 3/4".
22. TREE AND SHRUB PITS SHALL BE 3 TIMES SIZE OF ROOT BALL AND BACK FILLED WITH FOLLOWING: 1. THOROUGHLY MIXED: 2 PARTS SAND, 2 PARTS COMPOSTED HORSE MANURE OR CATTLE MANURE, OR AND 6 PARTS GOOD QUALITY TOPSOIL.

CONSTRUCTION NOTES

1. TREE. SEE SCHEDULE THIS SHEET. SEE DETAIL 1, SHEET L-2.

LANDSCAPE PLAN PREPARED BY:

MARTIN ARREDONDO
VIRGINIA CERTIFIED HORTICULTURIST #1957

PLANTING SCHEDULE

TYPE	BOTANICAL NAME	COMMON NAME	HEIGHT AT PLANTING		SPREAD	QUANTITY
			CALIPER			
TREES						
LX	LLEX X "NELLIE R. STEVENS"	NELLIE R STEVENS HOLLY	1 1/2"	4' TO 5'	2' TO 3'	17

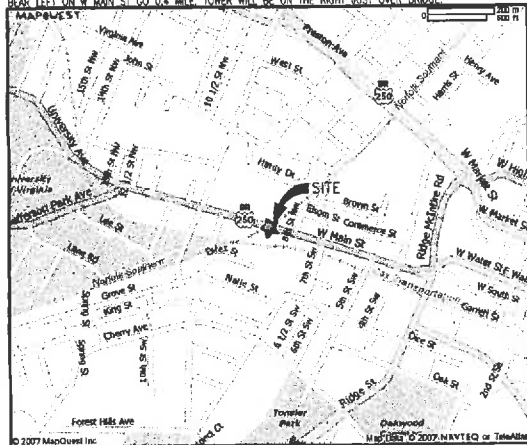
LANDSCAPE PLAN

FOR 24" X 36" PLOT - 1" = 5'
FOR 11" X 17" PLOT - 1" = 10'

verizon wireless

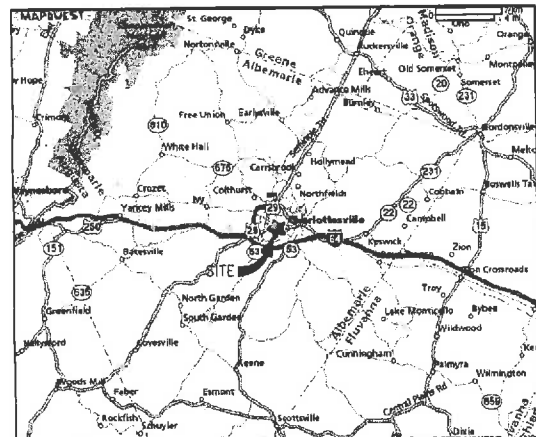
DIRECTIONS TO SITE:

FROM RICHMOND:
TAKE I-95 N TO I-64W MERGE ONTO I-64 W TOWARDS CHARLOTTESVILLE TAKE EXIT 121 TOWARDS CHARLOTTESVILLE/SCOTTESVILLE. TURN RIGHT ON VA-20 N. GO ±1 MILE CONTINUE ON MONTICELLO AVE. GO 0.3 MILE, TURN RIGHT ON 2ND ST. SE GO 0.2 MILES AND TURN LEFT ON WATER ST. GO 0.2 MILES AND BEAR LEFT ON W MAIN ST GO 0.4 MILE. TOWER WILL BE ON THE RIGHT JUST OVER BRIDGE.



LOCAL MAP

SCALE: 1" = 2,000'



VICINITY MAP

NOT TO SCALE

DOWNTOWN CHARLOTTESVILLE

WEST MAIN STREET
CHARLOTTESVILLE, VA 22911

PROJECT DESCRIPTION:
COLLOCATION OF ANTENNAS AND ASSOCIATED EQUIPMENT ON AN EXISTING SELF SUPPORT TOWER



2 WORKING DAYS BEFORE YOU DIG
1-800-552-7001
TOLL FREE
MISS UTILITY

APPROVAL			
ACQUISITION MANAGER	SIGNATURE	PHONE NUMBER	DATE
CONSTRUCTION MANAGER	SIGNATURE	PHONE NUMBER	DATE
RF ENGINEERING	SIGNATURE	PHONE NUMBER	DATE
NETWORK OPS MANAGER	SIGNATURE	PHONE NUMBER	DATE

REV. NO.	DESCRIPTION	BY	DATE	REV. NO.	DESCRIPTION	BY	DATE
0	PRELIMINARY CONSTRUCTION DRAWINGS	SPP	11/01/07				
1	FINAL CONSTRUCTION DRAWINGS	SPP	11/15/07				
2	REVISED FINAL CONSTRUCTION DRAWINGS	JTY	01/18/08				

CONSULTING TEAM

ARCHITECTURE AND ENGINEERING:
CLARK NEXSEN
5510 CHEROKEE AVE, SUITE 110
ALEXANDRIA, VA 22312
PROJECT MANAGER: STUART P. PATTERSON, PE
TELEPHONE: (703) 256-3344
FAX NUMBER: (703) 256-6622

SURVEY:
CAUSEWAY CONSULTANTS, P.C.
1005 S. BATTLEFIELD BLVD.
CHESAPEAKE, VA 23322
CONTACT: EDDIE R. WHITE
TELEPHONE: (757) 482-0474
FAX NUMBER: (757) 482-9870
SOIL ENGINEER: NONE

STRUCTURAL ENGINEERING:
CLARK NEXSEN
6150 KEMPVILLE CIR, SUITE-200A
NORFOLK, VA 23502
CONTACT: WILLIAM R. MELGAARD, PE
TELEPHONE: (757) 455-5600
FAX NUMBER: (757) 455-5638

UTILITIES:
POWER COMPANY:
COMMONWEALTH POWER
CONTACT: CUSTOMER SERVICE
TELEPHONE: 1-888-667-3000

TELEPHONE COMPANY:
VERIZON
CONTACT: CUSTOMER SERVICE
TELEPHONE: 1-800-826-2355

PROJECT SUMMARY

SITE INFORMATION:
DOWNTOWN CHARLOTTESVILLE
WEST MAIN STREET
CHARLOTTESVILLE, VA 22911

PROPERTY OWNER:
NORFOLK SOUTHERN RAILWAY COMPANY

TOWER INFORMATION:
NORFOLK SOUTHERN RAILROAD COMPANY
CONTACT: JIM LOVE
TELEPHONE: 1-434-531-8282

APPLICANT INFORMATION:
VERIZON WIRELESS
1831 RADY COURT
RICHMOND, VA 23222
CONTACT: VINCENT CRUTE
TELEPHONE: (804) 543-7580
FAX NUMBER: (804) 321-0398

PROJECT DATA:
ZONING: CITY OF CHARLOTTESVILLE
PARCEL ID #: COLLOCATION
SITE TYPE: SELF SUPPORT TOWER
TOWER TYPE: TOWER
TOWER HEIGHT: 225'
ACREAGE: N/A
LEASE AREA: 707 SF
AREA OF LAND DISTURBANCE: 748 SF

GEOGRAPHIC COORDINATES:
LATITUDE: 38° 01' 56.54" N
LONGITUDE: 78° 29' 30.29" W
GROUND ELEV (AMSL): 496.50'

ADA COMPLIANCE:
FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION.
SITE WILL NOT BE SERVED BY CITY SEWER OR WATER.

SHEET INDEX

SHEET	DESCRIPTION
T-1	TITLE SHEET
T-2	LEGEND AND ABBREVIATIONS
C-1	SURVEY AND SITE PLAN
C-2	ENLARGED SITE PLAN
C-2A	GRADING PLAN
C-3	ELEVATION VIEW
C-4	FENCE DETAILS AND NOTES
C-5	CIVIL DETAILS
L-1	LANDSCAPING PLANS
L-2	LANDSCAPING DETAILS
A-1	SHELTER ELEVATIONS
S-1	FOUNDATION PLAN
S-2	FOUNDATION DETAILS
S-3	STRUCTURAL DETAILS
E-1	ELECTRICAL SITE PLAN
E-2	ELECTRICAL GROUNDING PLAN AND DETAILS
E-3	POWER/TELEPHONE RISER DIAGRAM

SHEET TOTAL: 17

CLARK NEXSEN
Architecture & Engineering

5510 CHEROKEE AVENUE SUITE 110
ALEXANDRIA, VIRGINIA 22312
703-256-3344 FAX 703-256-6622
WWW.CLARKNEXSEN.COM



1831 RADY COURT
RICHMOND, VA 23222

SITE INFO:
DOWNTOWN CHARLOTTESVILLE

COLLOCATE SELF SUPPORT TOWER
WEST MAIN STREET
CHARLOTTESVILLE, VA 22911
ALBEMARLE COUNTY

DESIGN	SPP
DRAWN	MSA
REVIEW	SPP
TV DATE	02/18/07
COMB. NO.	2567.2 (0)

SUBMITTALS

SYM	DESCRIPTION	DATE
△	PRELIM CONSTRUCTION DWGS	11/01/07
△	FINAL CONSTRUCTION DWGS	11/15/07
△	REV FINAL CONSTRUCTION DWGS	01/18/08
△		
△		
△		

SHEET NAME:

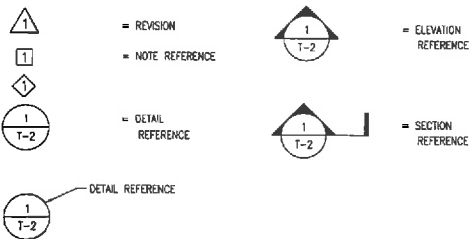
TITLE SHEET

SHEET NO:
T-1

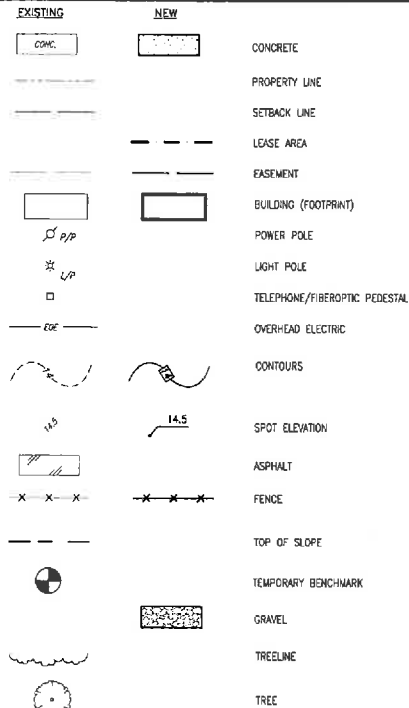
1P, 2P, & 3P SINGLE POLE, TWO POLE, & THREE POLES
 A/C AIR CONDITIONING
 ADJ ADJUSTABLE
 AFF ABOVE FINISH FLOOR
 AGL ABOVE GROUND LEVEL
 APPROX APPROXIMATELY
 ASTM AMERICAN SOCIETY FOR TESTING AND MATERIALS
 AWG AMERICAN WIRE GAUGE
 A OR AMP AMPERE
 BLDG BUILDING
 BLK BLOCK
 BMR BASE MOBILE RADIO
 B/S BUILDING STANDARD
 CU COPPER
 CG CLEAN OUT
 C CONDUIT SIZE AS NOTED
 CB CIRCUIT BREAKER
 CKT CIRCUIT
 CLG CEILING
 CLR CLEAR
 CONC CONCRETE
 CONST CONSTRUCTION
 CONT CONTINUOUS
 CFCI CONTRACTOR FURNISHED CONTRACTOR INSTALLED
 DB DEED BOOK
 DBL DOUBLE
 DIA # DIAMETER
 DAG DIAGONAL
 DIM DIMENSION
 DN DOWN
 DETL DETAIL
 DWG DRAWING
 DEF DUAL ELEMENT FUSES
 E EAST
 EA EACH
 EL, ELEV ELEVATION
 ELECT ELECTRICAL
 EQ EQUAL
 EQUIP EQUIPMENT
 EW EACH WAY
 EXIST/EX EXISTING
 EXT EXTERIOR
 EMT ELECTRICAL METALLIC TUBING
 EC EMPTY CONDUIT
 FIN FINISH
 FLOR FLOOR
 FLR FLOOR
 FT FOOT
 GRS GALVANIZED STEEL CONDUIT
 G OR GRD GROUND
 GA GAUGE
 GALV GALVANIZE(D)
 CC GENERAL CONTRACTOR
 GPS GLOBAL POSITIONING SYSTEM
 GWB GYPSUM WALL BOARD
 HARD WD HARDWOOD
 HCC HIGH STRENGTH
 HORIZ HORIZONTAL
 HR HOUR
 HI HEIGHT
 HVAC HEATING, VENTILATION AND AIR CONDITIONING
 ID INSIDE DIA
 IN INCH
 INFO INFORMATION
 INS INSULATION
 KW KILOWATTS
 LB(S) POUND(S)
 LG LONG
 MAX MAXIMUM
 MECH MECHANICAL
 MET METAL
 MFR MANUFACTURER
 MGR MANAGER
 MIN MINIMUM
 MISC MISCELLANEOUS
 MPH MILES PER HOUR
 MTD MOUNTED

NEUT NEUTRAL
 N NORTH
 NA NOT APPLICABLE
 NIC NOT IN CONTRACT
 NTS NOT TO SCALE
 OFCI OWNER FURNISHED, CONTRACTOR INSTALLED
 OC ON CENTER
 OD OUTSIDE DIAMETER
 OPP OPENING
 OPOS OPPOSITE
 OHP OVERHEAD TELEPHONE/OVERHEAD POWER
 OHP OVERHEAD POWER
 OHT OVERHEAD TELEPHONE
 OZ OUNCE
 PG PAGE
 FM FOUND
 FM SET SOUTH
 P/JF POLYVINYL JOINT FILLER
 PLYWD PLYWOOD
 PR PROJECT
 PRDP PROPERTY
 PSI PER SQUARE INCH
 PSF PER SQUARE FOOT
 PT PRESSURE TREATED
 PVC SCHEDULE 40 PLASTIC CONDUIT
 RAD RADIATION
 RECEPT RECEPTACLE
 REQ'D REQUIRED
 RM ROOM
 RO ROUGH OPENING
 S SOUTH
 SW SWITCH
 SCH SCHEDULE
 SHT SHEET
 SIMR SIMILAR
 SPEC SPECIFICATION
 SQ SQUARE
 SS STAINLESS STEEL
 STL STEEL
 STRUCT STRUCTURAL
 SUSP SUSPENDED
 THRD THREADED
 THRU THROUGH
 TM TAX MAP
 TNND TINNED
 TOP OF CONCRETE TOP OF CONCRETE
 TYP TYPICAL
 UNLESS OTHERWISE NOTED UNLESS OTHERWISE NOTED
 UG UNDERGROUND
 VERT VERTICAL
 VF VERIFY IN FIELD
 VT VINYL TILE
 W/ WINDOW
 W WEST
 W/O WITHOUT
 W WAITS
 WF WEATHERPROOF
 XFRM TRANSFORMER

ANGLE
 & AND
 CL CENTER LINE
 PL PROPERTY LINE, PLATE
 AT AT
 # NUMBER



ABBREVIATIONS & SYMBOLS LIST



LEGEND

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 703-256-0344 FAX 703-256-6622
 WWW.CLARKNESSEN.COM

verizon wireless
 1831 RADY COURT
 RICHMOND, VA 23222

SITE INFO:
**DOWNTOWN
 CHARLOTTEVILLE**

**COLLOCATE
 SELF SUPPORT
 TOWER**
 WEST MAIN STREET
 CHARLOTTEVILLE, VA
 22911
 ALBEMARLE COUNTY

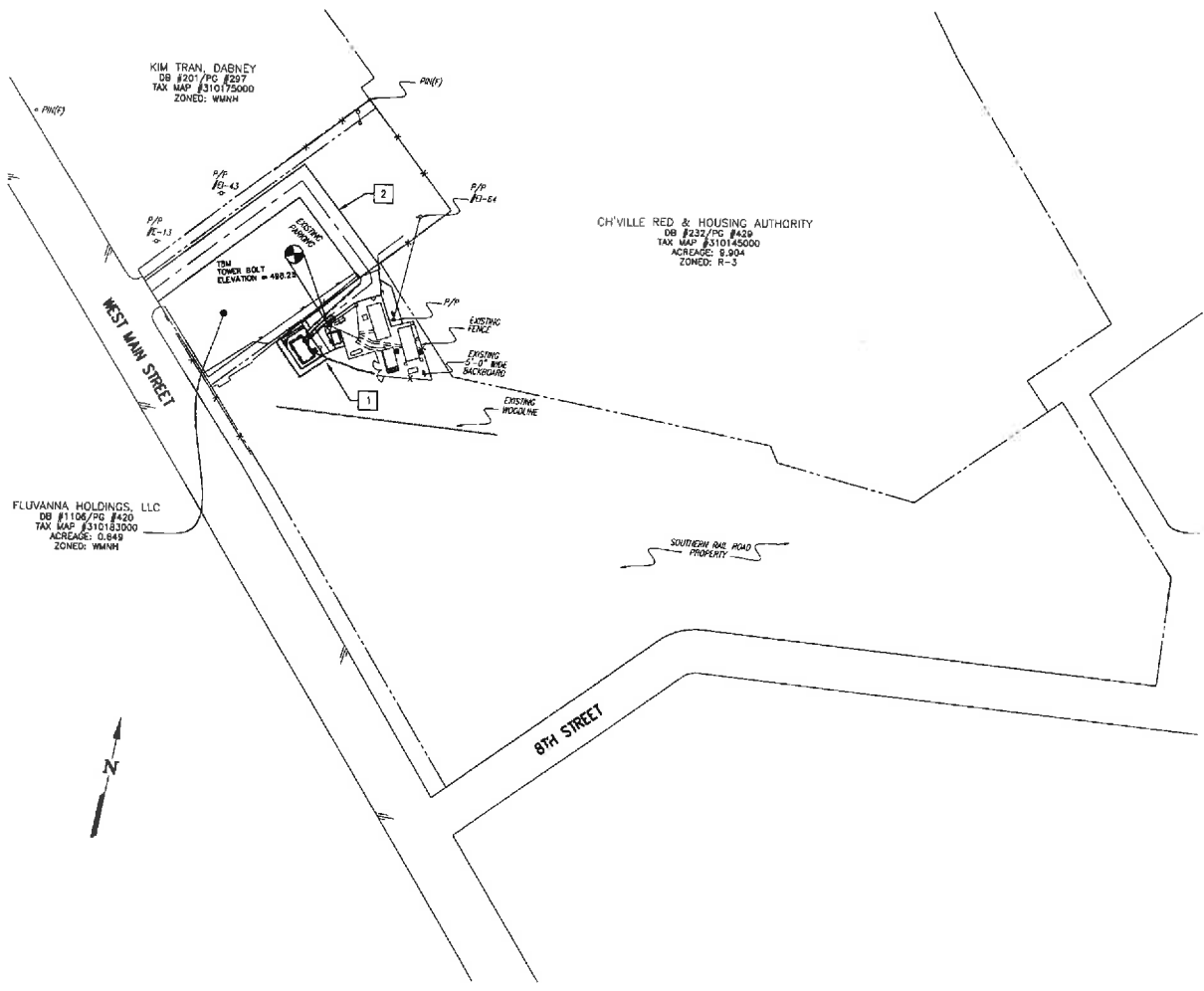
DESIGN:	SPP
DRAWING:	MEA
REVIEW:	SPP
TTV DATE:	07/19/07
COMPL. NO.:	2562-2 (P)

SUBMITTALS		
SYM	DESCRIPTION	DATE
△	PRELIM CONSTRUCTION DWGS	11/01/07
△	FINAL CONSTRUCTION DWGS	11/15/07
△	REV FINAL CONSTRUCTION DWGS	01/18/08
△		
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SHEET NAME:
**LEGEND
 AND
 ABBREVIATIONS**

SHEET NO.:

T-2



SURVEY NOTES

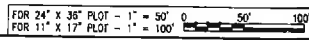
1. TOPOGRAPHIC INFORMATION WAS TAKEN FROM A TOPOGRAPHIC SURVEY PERFORMED BY CAUSEWAY CONSULTANTS P.C., CHESAPEAKE, VIRGINIA ON 8-07-07. METES AND BOUNDS WERE COMPILED FROM PLATS AND/OR DEEDS OF RECORD. NO BOUNDARY SURVEY WAS PERFORMED.
2. THIS DRAWING WAS PREPARED WITH REFERENCE TO TITLE REPORT # 2771-00574, PREPARED BY CHICAGO TITLE INSURANCE COMPANY, DATED AUGUST 17, 2007.
3. PROPERTY IS SUBJECT TO ALL EASEMENTS AND RESTRICTIONS OF RECORD.
4. FLOOD ZONE DETERMINATION IS BASED ON THE FLOOD INSURANCE RATE MAPS AND DOES NOT IMPLY THAT THE PROPERTY WILL OR WILL NOT BE FREE FROM FLOODING OR DAMAGE.
5. THIS SITE APPEARS TO BE LOCATED IN THE F.I.R.M. ZONE "X" AS SHOWN ON COMMUNITY PANEL NUMBER S1003C 0287 D EFFECTIVE DATE 2/04/05.
6. NO SUBSURFACE INVESTIGATION WAS PERFORMED BY CAUSEWAY CONSULTANTS P.C.
7. MERIDIAN SOURCE FOR THIS SURVEY IS BASED UPON GRID NORTH. MAGNETIC DECLINATION IS COMPUTED AND NOT OBSERVED.
8. NO WETLAND AREAS HAVE BEEN DELINEATED.
9. ALL PHYSICAL EVIDENCE OF UTILITIES SHOWN ON THIS SURVEY IS FROM SURFACE EVIDENCE.
10. THE TEMPORARY BENCHMARK IS TOWER BOLT. ELEVATION = 498.25'.
11. BASED ON THIS SURVEY, THE PROPOSED TOWER HAS BEEN CERTIFIED BY CAUSEWAY CONSULTANTS P.C. THAT THE COORDINATE LOCATION OF THE REFERENCED TOWER AT THE REFERENCED SITE IS ACCURATE WITHIN 50'± HORIZONTALLY AND THE ELEVATION IS ACCURATE WITHIN 20'± VERTICALLY. THE HORIZONTAL DATUM (COORDINATES) ARE IN TERMS OF THE NORTH AMERICAN DATUM OF 1983 (NAD 83) AND ARE EXPRESSED AS DEGREES, MINUTES, AND SECONDS. THE VERTICAL DATUM (ELEVATIONS) ARE IN TERMS AS DEFINED BELOW AND ARE DETERMINED TO THE NEAREST TENTH OF A FOOT.

EXISTING TOWER
NAD 1983
LATITUDE: 38° 01' 56.54" N
LONGITUDE: 78° 28' 30.29" W
NAVD 88 ELEVATION: 1,059.4'

CONSTRUCTION NOTES

- 1 SEE C-2 FOR ENLARGED SITE PLAN.
- 2 NEW VERIZON WIRELESS 20' WIDE ACCESS EASEMENT ALONG EXISTING ACCESS DRIVEWAY.

SURVEY AND SITE PLAN



CLARK NEXSEN
Architecture & Engineering

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WWW.CLARKNEXSEN.COM



1831 RADY COURT
RICHMOND, VA 23222

SITE NO.:
DOWNTOWN CHARLOTTEVILLE

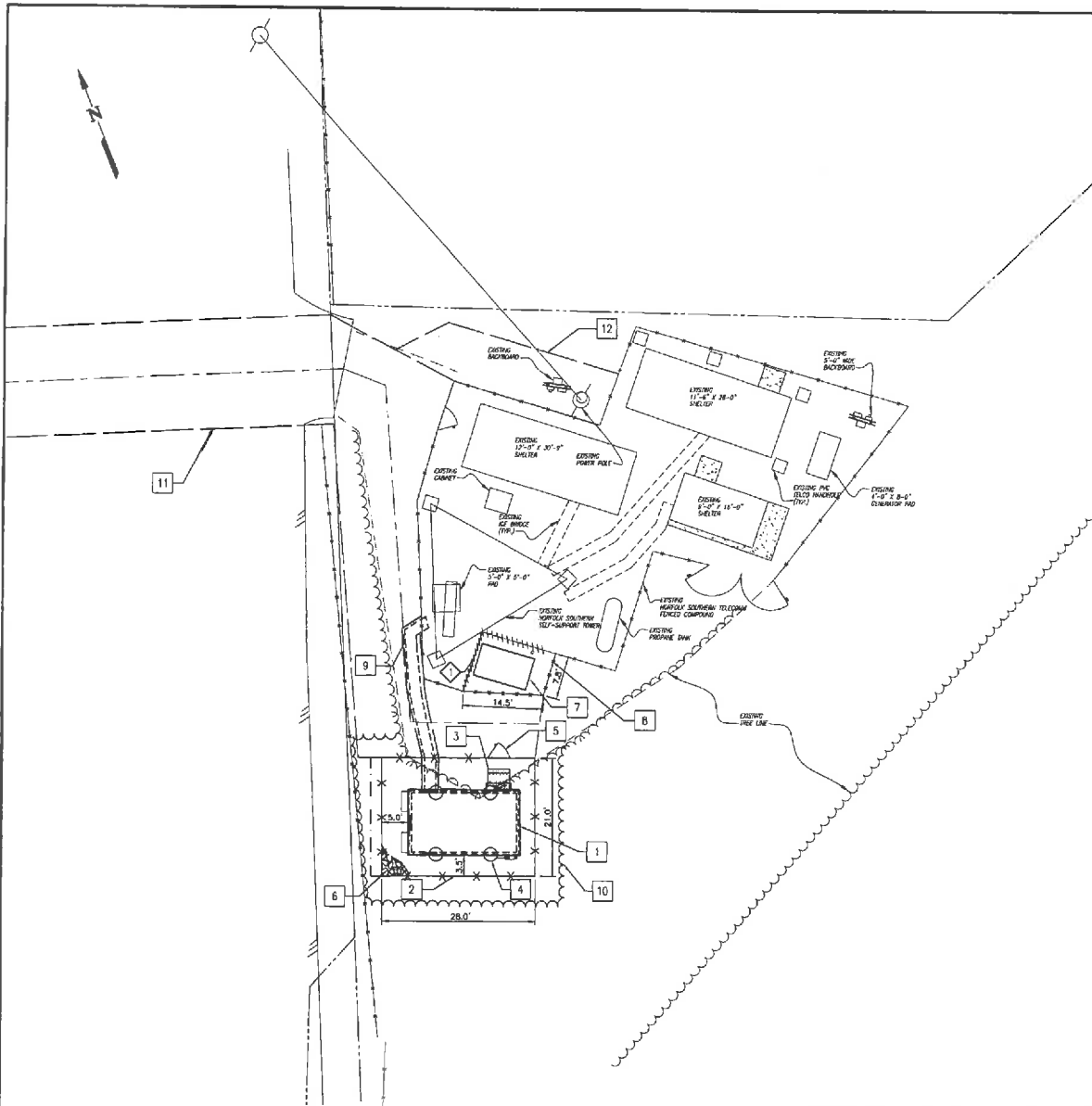
COLLOCATE SELF SUPPORT TOWER
WEST MAIN STREET
CHARLOTTEVILLE, VA 22911
ALBEMARLE COUNTY

DESIGN:	RAW
DRAWN:	NCS
REVIEW:	RAW
TTV DATE:	07/19/07
COMP. NO.:	25672.07

SUBMITTALS		
SYMBOL	DESCRIPTION	DATE
△	PRELIM CONSTRUCTION DWGS	11/01/07
△	FINAL CONSTRUCTION DWGS	11/15/07
△	REV. FINAL CONSTRUCTION DWGS	01/18/08
△		
△		
△		

SHEET NAME:
SURVEY AND SITE PLAN

SHEET NO.:
C-1



ENLARGED SITE PLAN

FOR 24" X 36" PLOT - 1" = 10'
 FOR 11" X 17" PLOT - 1" = 20'

SITE NOTES

1. PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL ASSUME THE RESPONSIBILITY OF LOCATING ANY UNDERGROUND UTILITIES (PUBLIC OR PRIVATE) THAT MAY EXIST AND CROSS THROUGH THE AREA OF CONSTRUCTION THAT ARE NOT SHOWN ON THESE PLANS. BEFORE YOU DIG, CALL "MISS UTILITY" AT 1-800-552-7001. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING, AT HIS EXPENSE, ANY EXISTING UTILITIES DAMAGED DURING CONSTRUCTION.
2. ALL EROSION AND SEDIMENT CONTROL DEVICES SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST EDITION OF VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK AT THE FIRST PHASE OF CONSTRUCTION AND CHECKED PERIODICALLY TO ENSURE THEY ARE FUNCTIONING AS INDICATED.
3. THE STOCKPIILING OF EXCESS MATERIAL ON SITE WILL NOT BE ALLOWED.
4. ANY VEGETATED AREA DISTURBED BY CONSTRUCTION SHALL BE TOPSOILED AND SEEDED TO RESTORE A PERMANENT VEGETATIVE COVER.
5. THE CONTRACTOR IS RESPONSIBLE FOR MEANS AND METHODS OF CONSTRUCTION. SAFETY IS THE RESPONSIBILITY OF THE CONTRACTOR. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH OSHA REQUIREMENTS.
6. THE CONTRACTOR IS RESPONSIBLE FOR SITE LAYOUT AND CONSTRUCTION STAKING. LOCATION OF EXISTING STRUCTURES AND UTILITIES MUST BE CONFIRMED BY THE CONTRACTOR.
7. ALL WORK SHALL BE ACCOMPLISHED IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL CODES OR ORDINANCES.

CONSTRUCTION NOTES

- 1 NEW 12' X 20' VERIZON WIRELESS EQUIPMENT SHELTER. SEE DETAIL 1, SHEET A-1.
- 2 NEW VERIZON WIRELESS CHAIN LINK FENCED GRAVEL COMPOUND. SEE DETAIL 1, SHEET C-4.
- 3 NEW VERIZON WIRELESS 4' X 4' CONCRETE STOOPS. SEE DETAILS 2, SHEET S-1.
- 4 NEW VERIZON WIRELESS CONCRETE PIERS. SEE DETAIL 1, SHEET S-1.
- 5 NEW 6' WIDE VERIZON WIRELESS GATE. SEE DETAIL 1, SHEET C-4.
- 6 INSTALL NEW GRAVEL WITHIN LIMITS OF COMPOUND. SEE DETAIL 1, SHEET C-5.
- 7 NEW VERIZON WIRELESS 6' X 10' CONCRETE GENERATOR PAD. SEE DETAIL 1, SHEET S-2.
- 8 NEW VERIZON WIRELESS CHAIN LINK FENCE TO MATCH EXISTING.
- 9 NEW VERIZON WIRELESS ICE BRIDGE/DUCT BANK. SEE DETAIL 1, SHEET S-3.
- 10 NEW TREE LINE AROUND NEW FENCE.
- 11 NEW VERIZON WIRELESS 20' WIDE INGRESS/EGRESS ACCESS & UTILITY EASEMENT. SEE C-1 FOR CONTINUATION.
- 12 NEW VERIZON WIRELESS 10' WIDE UTILITY EASEMENT.

SITE LIGHTING

- 1 120V, MOTION CENSORED PHOTOCELL AND SHIELDED SHELTER LIGHT.

DEMOLITION NOTES

- 1 24 LF. EXISTING CHAIN LINK FENCE TO BE REMOVED.

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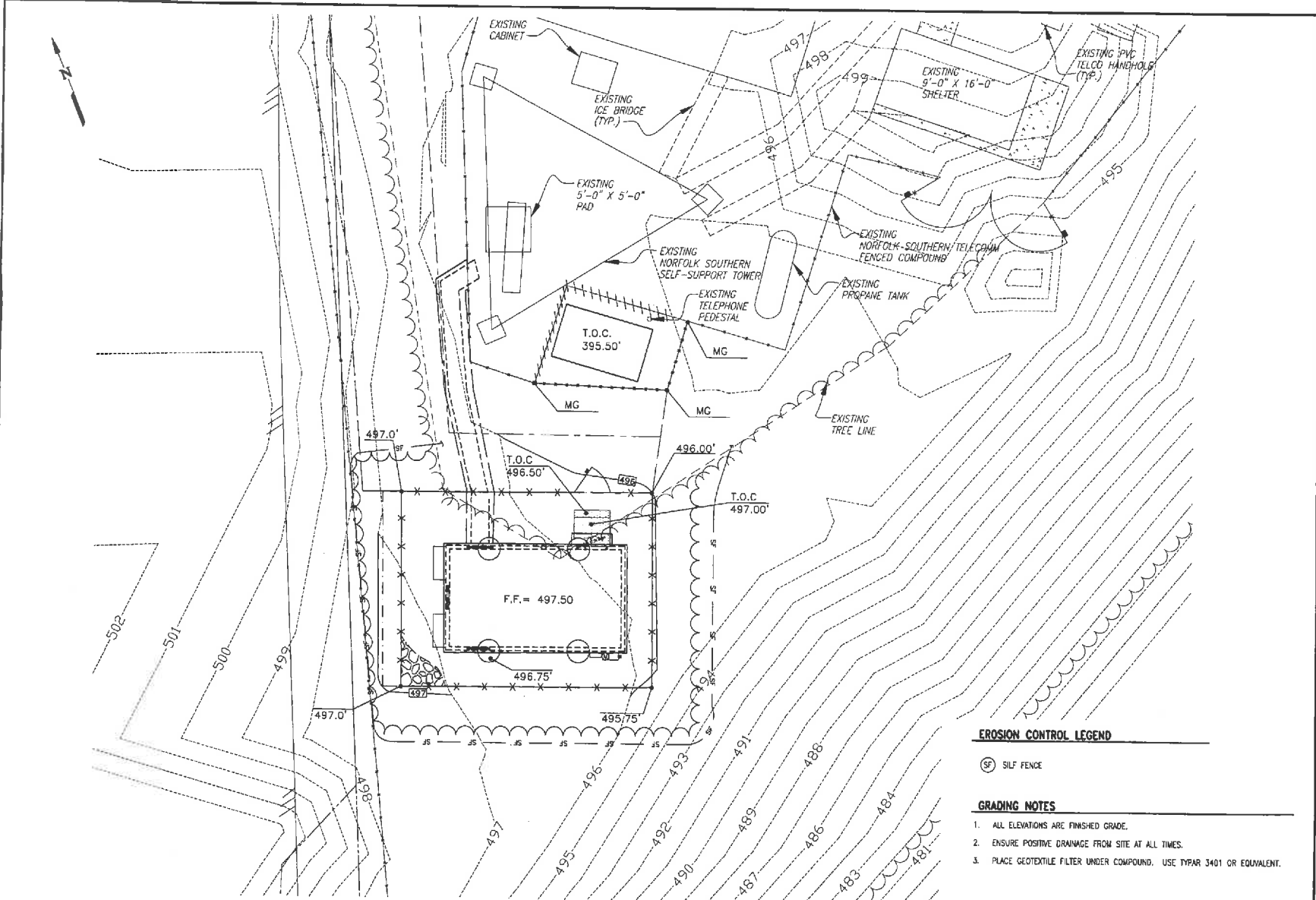
SITE INFO:
DOWNTOWN CHARLOTTESVILLE
COLLOCATE SELF SUPPORT TOWER
 WEST MAIN STREET
 CHARLOTTESVILLE, VA 22911
 ALBEMARLE COUNTY

DESIGN:	SPP
DRAWN:	MSA
REVIEW:	SPP
TITLE DATE:	07/19/07
COMPL. NO.:	2347.3.01

SUBMITTALS		
SYM.	DESCRIPTION	DATE
△	PHILUM CONSTRUCTION DWGS	11/01/07
△	FINAL CONSTRUCTION DWGS	11/15/07
△	REV FINAL CONSTRUCTION DWGS	01/18/08
△		
△		
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SHEET NAME:
ENLARGED SITE PLAN

SHEET NO.:
C-2



GRADING PLAN

FOR 24" X 36" PLOT - 1" = 5'
 FOR 11" X 17" PLOT - 1" = 10'

EROSION CONTROL LEGEND

(SF) SILF FENCE

GRADING NOTES

1. ALL ELEVATIONS ARE FINISHED GRADE.
2. ENSURE POSITIVE DRAINAGE FROM SITE AT ALL TIMES.
3. PLACE GEOTEXTILE FILTER UNDER COMPOUND. USE TYPAR 3401 OR EQUIVALENT.

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1831 RADY COURT
 RICHMOND, VA 23222

SITE NO.:
**DOWNTOWN
 CHARLOTTESVILLE**

**COLLOCATE
 SELF SUPPORT
 TOWER**

WEST MAIN STREET
 CHARLOTTESVILLE, VA
 22911
 ALBEMARLE COUNTY

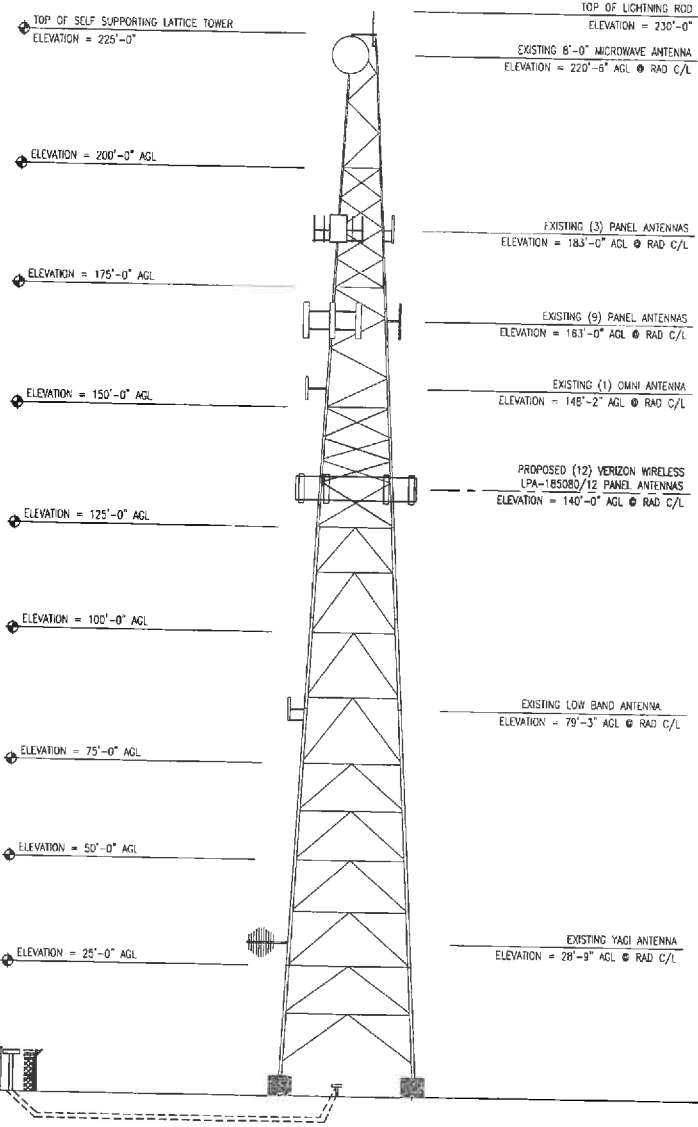
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SUBMITTALS		
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△	FINAL CONSTRUCTION DWGS	11/15/07
△	REV FINAL CONSTRUCTION DWGS	01/18/08
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SHEET NAME:

**GRADING
 PLAN**

SHEET NO.:
C-2A



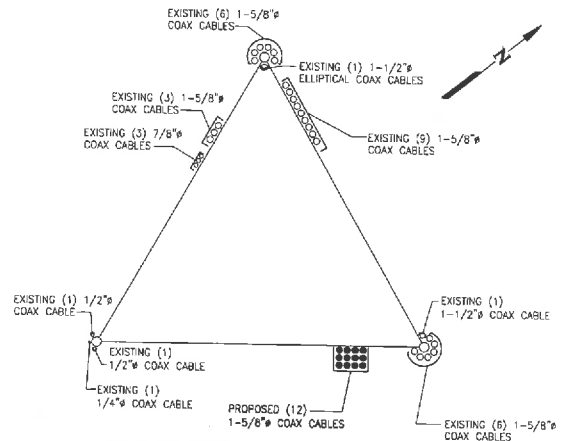
NOTE:
THIS ELEVATION SHOWS THE INTENDED LOCATION OF THE PROPOSED EQUIPMENT. REFER TO STRUCTURAL REPORT DONE BY CLARK NEXSEN DATED 11/09/07 FOR THE RESULTS OF THE STRUCTURAL ANALYSIS OF THE EXISTING TOWER'S ABILITY TO SUPPORT THE PROPOSED LOADS.

NOTE:
EXISTING GROUND EQUIPMENT NOT SHOWN FOR CLARITY.

ELEVATION VIEW
NOT TO SCALE

SITE NOTES

1. NO SIGNS SHALL BE PERMITTED EXCEPT AS MAY BE REQUIRED FOR PUBLIC SAFETY PURPOSES, OR AS REQUIRED BY THE FAA OR FCC.
2. NO MATERIALS OR MARKINGS CONTAINING ANY ADVERTISING OR ADVERTISEMENT SHALL BE PERMITTED.
3. ALL STRUCTURES AND APPURTENANCES SHALL BE GALVANIZED FINISH OR PAINTED GRAY ABOVE THE SURROUNDING TREELINE.



COAX INVENTORY
NOT TO SCALE

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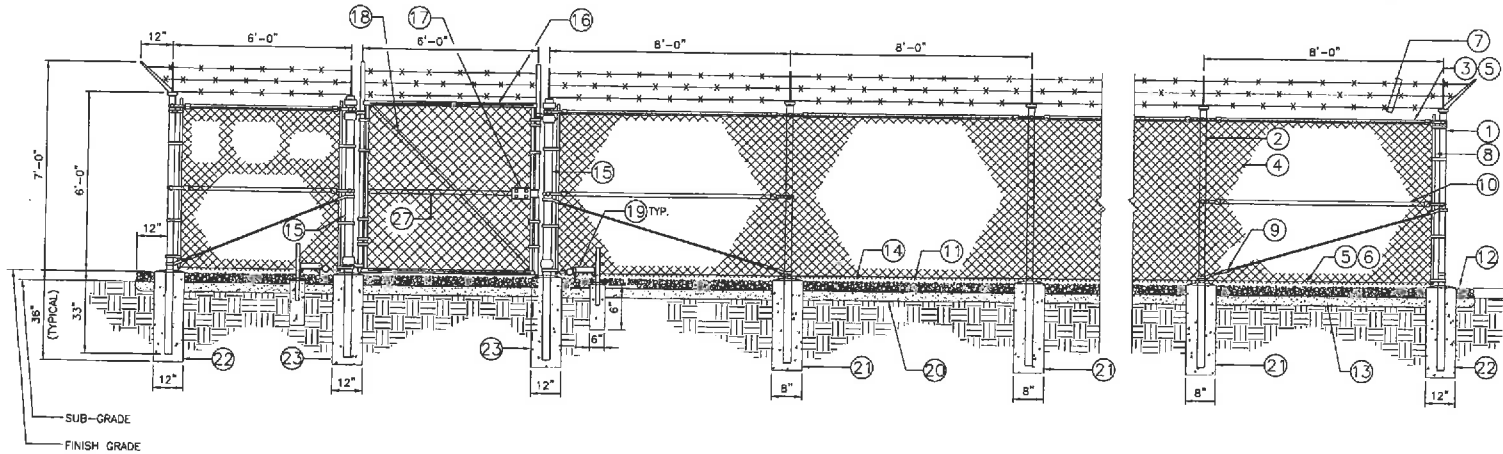
verizon wireless
1831 RADY COURT
RICHMOND, VA 23222

SHEET NO.:
DOWNTOWN CHARLOTTESVILLE
COLLOCATE SELF SUPPORT TOWER
WEST MAIN STREET
CHARLOTTESVILLE, VA 22911
ALBEMARLE COUNTY

DESIGN:	SPP	
DRAWING:	MEA	
REVIEW:	SPP	
ITV DATE:	07/19/07	
COMPL. NO.:	25072 (P)	
SUBMITTALS		
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▲	FINAL CONSTRUCTION DWGS	11/15/07
▲	REV FINAL CONSTRUCTION DWGS	01/19/08
▲		
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SHEET NAME:
ELEVATION VIEW

SHEET NO.:
C-3



1
C-4
COMPOUND FENCE DETAIL
NOT TO SCALE

REFERENCE NOTES:

- | | |
|--|---|
| <p>① CORNER END OR PULL POST 3" NOMINAL SCHEDULE 40 PIPE.</p> <p>② LINE POST: 2 1/2" SCHEDULE 40 PIPE, PER ASTM-F1083. LINE POSTS SHALL BE EQUALLY SPACED AT MAXIMUM 8'-0" OC</p> <p>③ TOP RAIL & BRACE RAIL: 1 1/2" PIPE, PER ASTM-F1083.</p> <p>④ FABRIC: 9 GA CORE WIRE SIZE 2" MESH, CONFORMING TO ASTM-A392.</p> <p>⑤ TIE WIRE: MINIMUM 11 GA GALVANIZED STEEL AT POSTS AND RAILS A SINGLE WRAP OF FABRIC TIE AND AT TENSION WIRE BY HOG RINGS SPACED MAX. 24" INTERVALS.</p> <p>⑥ TENSION WIRE: 9 GA GALVANIZED STEEL.</p> <p>⑦ BARBED WIRE: DOUBLE STRAND 12-1/2" OD TWISTED WIRE TO MATCH WITH FABRIC 14 GA, 4 POINT BARBS SPACED ON APPROXIMATELY 5" CENTERS.</p> <p>⑧ STRETCHER BAR.</p> <p>⑨ 3/8" DIAGONAL ROD WITH GALVANIZED STEEL TURNBUCKLE OR DIAGONAL THREADED ROD.</p> <p>⑩ FENCE CORNER POST BRACE: 1 5/8" DIA EACH CORNER EACH WAY.</p> <p>⑪ 1 1/2" MAXIMUM CLEARANCE FROM GRADE.</p> <p>⑫ 4" FINISH OR AS DETERMINED BY CONSTRUCTION MANAGER DURING BID WALK.</p> <p>⑬ 6" COMPACTED 95% BASE MATERIAL OR AS DETERMINED BY CONSTRUCTION MANAGER DURING BID WALK.</p> <p>⑭ FINISH GRADE SHALL BE UNIFORM AND LEVEL.</p> <p>⑮ GATE POST 4" SCHEDULE 40 PIPE, FOR GATE WIDTHS UP THRU 7 FEET OR 14 FEET FOR DOUBLE SWING GATE, PER ASTM-F1083.</p> <p>⑯ GATE FRAME: 1 1/2" PIPE, PER ASTM-F1083.</p> <p>⑰ GATE LOCKING DEVICE (OFC)</p> | <p>⑱ 1-1/2 PAIR INDUSTRIAL MALLEABLE IRON OFFSET PIN HINGE (PAGE-WILSON M-6 OR EQUAL)</p> <p>⑲ NOT USED</p> <p>⑳ GEOTEXTILE FABRIC</p> <p>㉑ LINE POST: CONCRETE FOUNDATION (2000 PSI)</p> <p>㉒ CORNER POST: CONCRETE FOUNDATION (2000 PSI)</p> <p>㉓ GATE POST: CONCRETE FOUNDATION (2000 PSI)</p> |
|--|---|

GENERAL NOTES:

1. INSTALL FENCING PER ASTM F-567
2. INSTALL SWING GATES PER ASTM F- 900
3. LOCAL ORDINANCE OF BARBED WIRE PERMIT REQUIREMENT SHALL BE COMPLIED IF REQUIRED.
4. POST & GATE PIPE SIZES ARE INDUSTRY STANDARDS. ALL PIPE TO BE 1 1/2" GALV. (HOT DIP, ASTM A120 GRADE "A" STEEL). ALL GATE FRAMES SHALL BE WELDED. ALL WELDING SHALL BE COATED WITH (3) COATS OF COLD GALV. (OR EQUAL).
5. ALL OPEN POSTS SHALL HAVE END-CAPS.
6. USE GALVANIZED HOG-RING WIRE TO MOUNT ALL SIGNS.
7. ALL SIGNS MUST BE MOUNTED ON INSIDE OF FENCE FABRIC.

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SITE INFO:
DOWNTOWN CHARLOTTESVILLE

COLLOCATE SELF SUPPORT TOWER
WEST MAIN STREET
CHARLOTTESVILLE, VA 22911
ALBEMARLE COUNTY

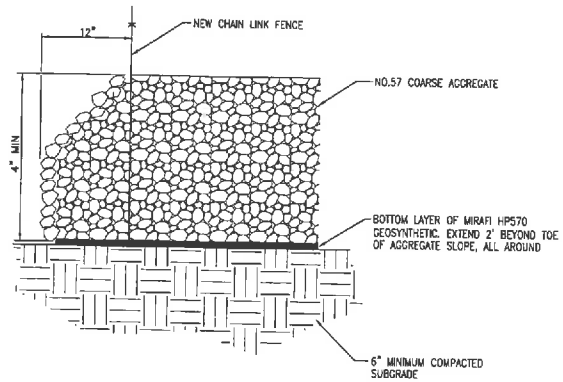
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REVIEW:	SPP
TTY DATE:	07/18/07
COMM. NO.:	25672.00

SUBMITTALS

SYN.	DESCRIPTION	DATE
△	PRELIM CONSTRUCTION DWGS	11/01/07
△	FINAL CONSTRUCTION DWGS	11/15/07
△	REV FINAL CONSTRUCTION DWGS	01/18/08
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SHEET NAME:
FENCE NOTES AND DETAILS

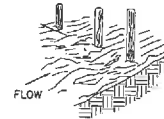
SHEET NO.:
C-4



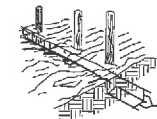
1 SECTION - LEASE AREA
C-5 NOT TO SCALE

CONSTRUCTION OF A SILT FENCE
(WITHOUT WIRE SUPPORT)

1. SET THE STAKES.



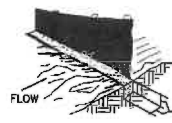
2. EXCAVATE A 4" X 4" TRENCH
UPSLOPE ALONG THE LINE OF
STAKES.



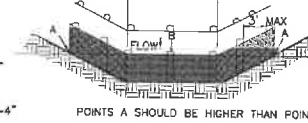
3. STAPLE FILTER MATERIAL
TO STAKES AND EXTEND
IT INTO THE TRENCH.



4. BACKFILL AND COMPACT
THE EXCAVATED SOIL.



SHEET FLOW INSTALLATION
(PERSPECTIVE VIEW)



POINTS A SHOULD BE HIGHER THAN POINT B
DRAINAGE WAY INSTALLATION
(FRONT ELEVATION)

2 SILT FENCE
C-5 NOT TO SCALE

(SF)

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SITE NO.:
**DOWNTOWN
CHARLOTTESVILLE**

**COLLOCATE
SELF SUPPORT
TOWER**
WEST MAIN STREET
CHARLOTTESVILLE, VA
22911
ALBEMARLE COUNTY

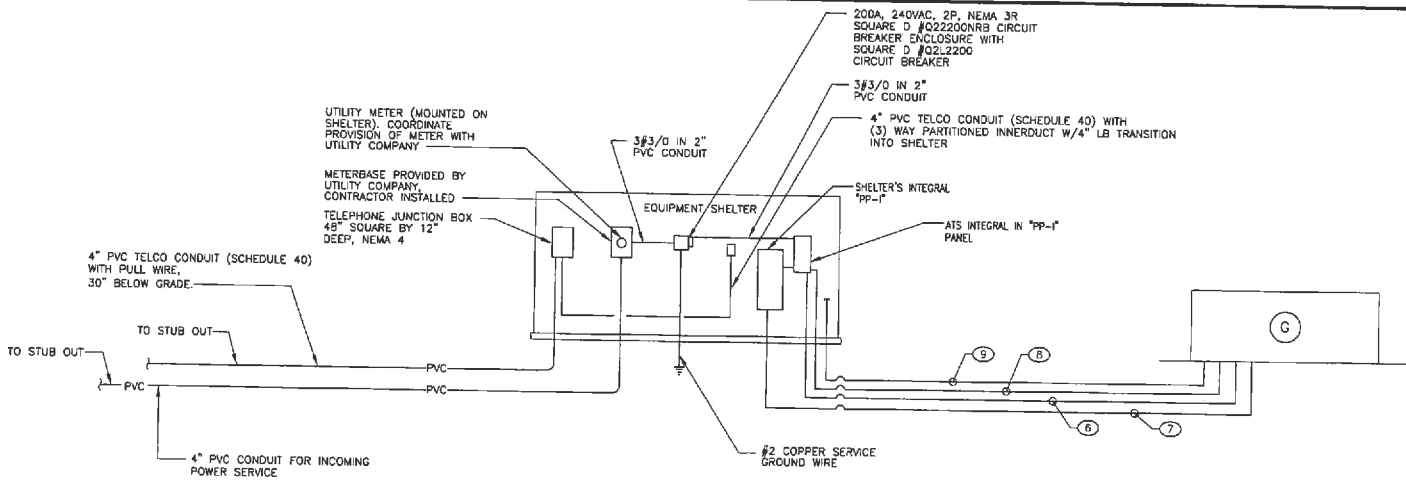
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REVIEW: SPP
TTY DATE: 02/15/07
COPR. NO: 25672.00

SUBMITTALS		
SYMBOL	DESCRIPTION	DATE
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△	REV FINAL CONSTRUCTION DWGS	01/18/08
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SHEET NAME:

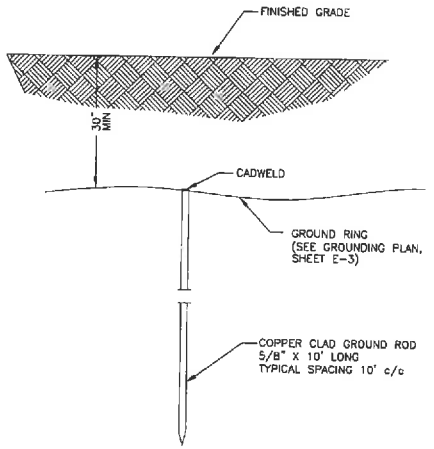
**CIVIL
DETAILS**

SHEET NO.:
C-5



POWER/TELEPHONE RISER DIAGRAM

NOT TO SCALE
 NOTE: SEE ELECTRICAL SITE PLAN NOTES, SHEET E-1.



NOTE:
 PROVIDE ADDITIONAL GROUND RODS AS REQUIRED TO ACHIEVE MAXIMUM 5 OHMS RESISTANCE.

GROUND ROD DETAIL

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SITE NO: **DOWNTOWN CHARLOTTESVILLE**

COLLOCATE SELF SUPPORT TOWER
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 ALBEMARLE COUNTY

DESIGN: DLM
 DRAWN: PBA
 REVIEW: DLM
 ITV DATE: 07/19/07
 COMPL. NO: 2542.01

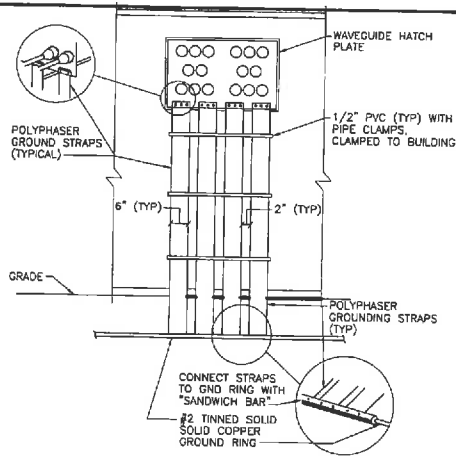
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△	FINAL CONSTRUCTION DWGS	11/15/07
△	REV. FINAL CONSTRUCTION DWGS	01/18/08
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SHEET NAME:
ELECTRICAL DETAILS

SHEET NO:
E-2

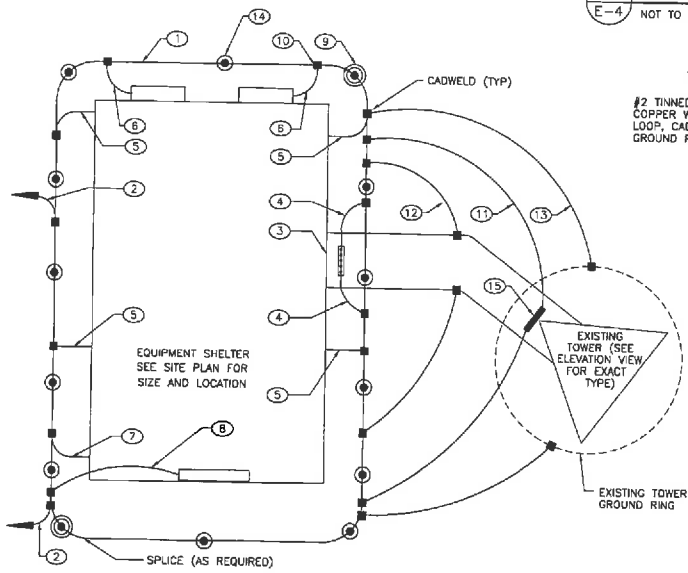
SHELTER GROUND RING PLAN NOTES

- 1 #2 BARE, TINNED SOLID COPPER GROUND 30" BELOW GRADE (MIN.)
- 2 CADWELD 3" ABOVE GRADE TO FENCE POST WITHIN 6'. SEE DETAIL 4, THIS SHEET.
- 3 WAVEGUIDE.
- 4 GROUND LEAD FROM POLYPHASER (SANDWICH) GROUND BAR (LOCATED BELOW WAVEGUIDE) TO GROUND RING. BOND WAVEGUIDE HATCH PLATE WITH GROUND STRAPS (FURNISHED BY VERIZON WIRELESS) (TYP OF TWO). SEE DETAIL 2, THIS SHEET.
- 5 #2 STRANDED DOWNLEAD FROM SHELTER'S HALO TO EXTERIOR GROUND. ENCASE GROUND WIRE IN 1/2" SEAL-TIGHT ABOVE GRADE.
- 6 GROUND LEAD FROM A/C UNIT FRAME TO GROUND RING.
- 7 TELCO ENTRANCE GROUND LEAD.
- 8 GROUND LEAD FROM SHELTER POWER CENTER, "PP-1".
- 9 INSPECTION PORT 6" DIA PVC SCH. 40 WITH COUPLING & CAP (2 REQ'D) OPPOSITE ENDS (TYP OF TWO). SEE DETAIL 3, THIS SHEET.
- 10 CADWELD (TYP).
- 11 CADWELD TO TOWER BOTTOM GROUND BAR (TYP OF TWO).
- 12 CADWELD TO ICE BRIDGE POST (TYP OF TWO).
- 13 CADWELD TO NEW TOWER GROUND RING (TYP OF TWO).
- 14 GROUND ROD, TYP. SEE DETAIL, SHEET E-2.
- 15 TIN COATED TOWER GROUND BAR FASTENED WITH THEFT PROOF STAINLESS STEEL HARDWARE.



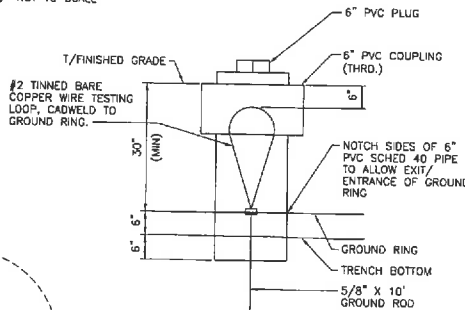
2 WAVEGUIDE GROUNDING DETAIL

E-4 NOT TO SCALE



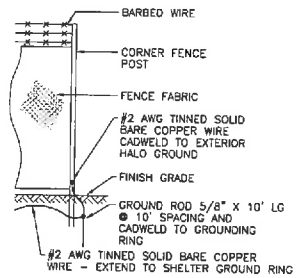
1 SHELTER GROUND RING SCHEMATIC

E-4 NOT TO SCALE



3 INSPECTION PORT DETAIL

E-4 NOT TO SCALE

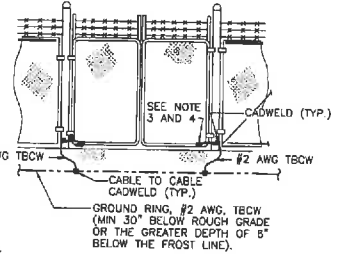


4 FENCE GROUNDING DETAIL

E-4 NOT TO SCALE

GROUNDING NOTES

1. EGR (EXTERIOR GROUND RING) THE BUILDING GROUNDING SYSTEM SHALL BE INSTALLED BY CONTRACTOR. GROUND LEADS OF SUFFICIENT LENGTH SHALL BE PROVIDED FOR THE FOLLOWING:
 - A. TWO (2) GROUND LEADS FOR THE BASE OF THE TOWER.
 - B. TWO (2) GROUND LEADS FOR THE TOWER BOTTOM GROUND BAR.
 - C. GROUND LEADS SHALL BE PROVIDED FOR EACH ICE-BRIDGE POST.
 - D. TWO (2) GROUND LEADS SHALL BE CADWELDED TO THE BASE OF POLYPHASER STRAPS AT EACH END OF THE SANDWICH BAR THAT IS PROVIDED.
 - E. GROUND LEADS SHALL BE PROVIDED FOR EACH MECHANICAL UNIT.
 - F. GROUND LEAD SHALL BE PROVIDED FOR THE TELCO GROUND BAR.
 - G. GROUND LEADS SHALL BE PROVIDED FOR EACH CORNER OF THE BUILDING AND TWO CENTER LEADS.
 - H. ONE (1) GROUND LEAD SHALL BE PROVIDED FOR THE ELECTRICAL DISCONNECT AT BUILDING.
 - I. ONE (1) GROUND LEAD SHALL BE PROVIDED FOR THE METER BASE.
2. POLYPHASER - CONTRACTOR SHALL ATTACH THE POLYPHASER GROUND STRAPS TO THE BUILDING AND CONNECT THEM TO THE EXTERIOR GROUND RING PER SPECIFICATIONS. VERIZON PCS SHALL FURNISH THE POLYPHASER GROUND STRAPS.
3. GROUND RING - CONTRACTOR SHALL INSTALL A GROUND RING PER VERIZON PCS' SPECIFICATIONS. THE GROUND RING MUST BE INSTALLED TO DEPTH OF 30", 10' GROUND RODS SPACED "TIP TO TIP" AND IN EACH CORNER, #2 TINNED SOLID COPPER, EXOTHERMIC WELDS ONLY BELOW GROUND. #2 LEADS FROM THE EGR ARE TO BE SLEAVED IN PVC. TOWER ATTACHMENTS, EXTERIOR BUS BARS, ICE-BRIDGE POSTS, AND POLYPHASER SANDWICH BAR ARE TO BE ATTACHED BY EXOTHERMIC WELD. #2 LEADS FOR ATTACHMENT TO THE INTERIOR GROUND HALO ARE TO BE BROUGHT INTO THE SHELTER AND DOUBLE C-TAPPED TO THE #2 STRANDED DOWN-LEADS INSIDE OF THE BUILDING. THE GROUND RING SHALL BE EXOTHERMICALLY WELDED TO THE EXISTING TOWER GROUND RING AT A MINIMUM OF TWO POINTS AND SHOULD BE ACCESSIBLE BY A CAPPED PVC TEST WELL. ADDITIONALLY, CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE THAT MAY BE CAUSED TO ANY EXISTING GROUND RING DURING THE INSTALLATION OF THE NEW GROUND RING.
4. RESISTIVITY/EGR INSPECTION - 24-HOUR NOTICE SHALL BE GIVEN TO VERIZON PCS BEFORE THE COMPLETION OF THE EGR. TO ALLOW FOR AN OPEN TRENCH INSPECTION OF THE SYSTEM, AND TO WITNESS THE GROUND FIELD RESISTIVITY TEST. A THREE ELECTRODE FALL OF POTENTIAL TEST IS REQUIRED WITH AN EXPECTED READING OF LESS THAN 5 OHMS. A RESISTIVITY TEST REPORT, WITH A COPY OF THE TEST UNIT'S MOST RECENT CALIBRATION CERTIFICATION IS REQUIRED.
5. ELECTRICAL SERVICE - CONTRACTOR SHALL FURNISH AND INSTALL ONE RUN OF 2" TYPE-C PVC CONDUIT FROM THE BUILDING'S ELECTRICAL DISCONNECT TO THE COMPOUND'S METER BASE. CONTRACTOR SHALL FURNISH AND INSTALL THE ELECTRICAL SERVICE FOR THE BUILDING, CONSISTING OF THE CONDUIT AND WIRE FOR A 200 AMP, SINGLE PHASE SYSTEM.
6. TELECOM CONDUIT - CONTRACTOR SHALL FURNISH AND INSTALL A 4" TYPE-C PVC CONDUIT FROM THE TELEPHONE PROVIDER'S DEMARC TO THE EQUIPMENT SHELTER.
7. EXISTING BELOW GRADE GROUNDING SYSTEM IS BASED ON PROTOTYPICAL GROUNDING SYSTEMS FOR CELLULAR FOR THE CONTRACTOR SHALL VERIFY THAT THE EXISTING GROUNDING SYSTEM IS IN PLACE AND SHALL INDICATE EXACT ROUTING OF THE GROUNDING SYSTEM USING SURFACE MARKING METHOD. WHERE PLANS INDICATE TO CONNECT TO EXISTING GROUNDING SYSTEM CONTRACTOR SHALL CAREFULLY EXCAVATE TO EXPOSE EXISTING GROUNDING CONDUCTOR. USE CARE TO MAINTAIN CONTINUITY OF EXISTING GROUND SYSTEM WHILE PERFORMING WORK UNDER THIS CONTRACT.



NOTE:

1. THE #2 AWG, TBCW, FROM THE GROUND RING SHALL BE CADWELDED TO THE POST, ABOVE GRADE.
2. BOND EACH HORIZONTAL POLE/BRACE TO EACH OTHER AND TO EACH VERTICAL POLE BONDED TO THE EXTERIOR GROUND RING.
3. GATE JUMPER SHALL BE #4/0 AWG WELDING CABLE OR FLEXIBLE COPPER BRAID BURNDY TYPE B WITH SLEEVES ON EACH END DESIGNED FOR EXOTHERMIC WELDING.
4. GATE JUMPER SHALL BE INSTALLED SO THAT IT WILL NOT BE SUBJECTED TO DAMAGING STRAIN WHEN GATE IS FULLY OPEN IN EITHER DIRECTION.

5 GATE GROUNDING DETAIL

E-4 NOT TO SCALE

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1831 RADY COURT
RICHMOND, VA 23222

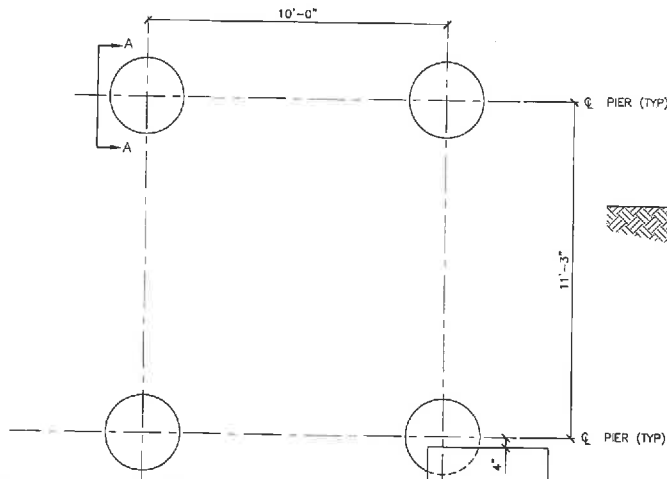
SITE INFO:
DOWNTOWN CHARLOTTESVILLE

COLLOCATE SELF SUPPORT TOWER
WEST MAIN STREET
CHARLOTTESVILLE, VA 22911
ALBEMARLE COUNTY

DESIGN:	DKM	
DRAWING:	MSA	
REVIEW:	DKM	
ITV DATE:	09/19/02	
CDPH. NO.:	35072.00	
SUBMITTALS		
SYM	DESCRIPTION	DATE
▲	PRELIM CONSTRUCTION DWGS	11/01/02
▲	FINAL CONSTRUCTION DWGS	11/15/02
▲	REV. FINAL CONSTRUCTION DWGS	01/18/08
▲		
▲		
▲		

SHEET NAME:
ELECTRICAL GROUNDING PLAN AND DETAILS

SHEET NO.:
E-3

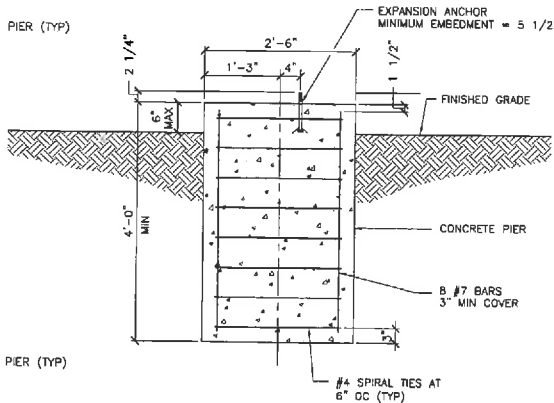


NOTE: LOCATE EXPANSION ANCHORS AFTER SHELTER IS LOCATED ON PIERS TO CORRECTLY ALIGN WITH INSTALLED ANCHOR PLATE. DO NOT INSTALL EXPANSION ANCHOR BEFORE SETTING SHELTER ON FOUNDATION.

4' X 4' CONCRETE STOOP. SEE DETAIL 2/ S-1 (TYP)

1 PIER LAYOUT

SCALE: 1/2" = 1'-0"

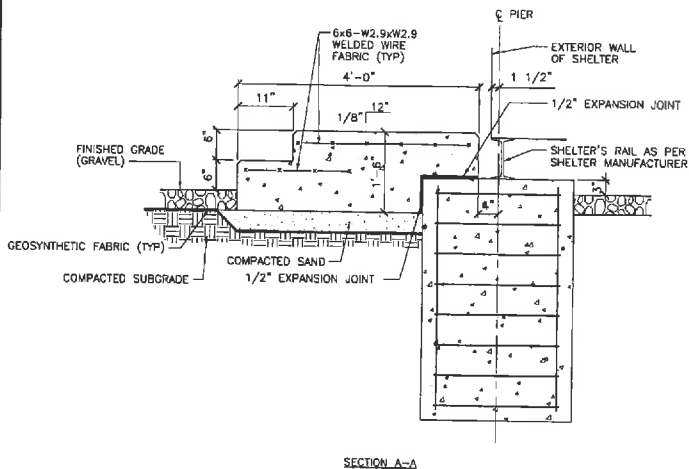


CONCRETE PIER A-A

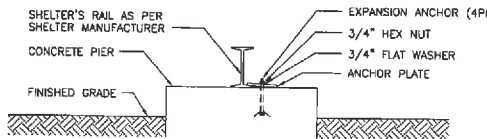
SCALE: 1" = 1'-0"

NOTE: TOP OF STOOP SET TO COMPLY WITH IBC-2003, SECTION 1000.3, - A MAXIMUM STEP HEIGHT OF 7" SHALL BE PERMITTED. CLARK-NEXSEN TO BE CONTACTED IMMEDIATELY IF DETAILS PROVIDED DO NOT ACCOMMODATE THIS REQUIREMENT. CHAMFER OF STAIR NOSINGS SHALL NOT EXCEED 1/2". ALL OTHER CONCRETE EDGES SHALL BE CHAMFERED 3/4".

NOTE: PIER LAYOUT AND SHELTER TIE DOWN ARE AS SPECIFIED BY MANUFACTURER. MANUFACTURER TO PROVIDE CHANNEL AND SHELTER TO CHANNEL CONNECTION SPECIFICATIONS. SHELTER FLOOR SLAB TO BE DESIGNED TO SPAN BETWEEN PIERS UNSUPPORTED AND CANTILEVER AS SHOWN.



SECTION A-A



BUILDING ATTACHMENT

SCALE: 1" = 1'-0"

STRUCTURAL SPECIFICATIONS:

DESIGN NOTES

1. STRUCTURAL DESIGN IN ACCORDANCE WITH THE VIRGINIA UNIFORM STATEWIDE BUILDING CODE (VUSBC), EFFECTIVE NOVEMBER 16, 2005.

DESIGN LOADS

TOTAL FOUNDATION DESIGN LOAD 38,000 LB

EXCAVATION

1. SELECT FILL MATERIAL: ASTM D 2487 SOIL CLASSIFICATION GROUPS GW, GP, GM, SW, SP, AND SM, OR A COMBINATION OF THESE GROUP SYMBOLS; FREE OF WASTE, FROZEN MATERIALS, AND VEGETATION, WITH LESS THAN 5 PERCENT BY WEIGHT RUBBLE. RUBBLE SHALL BE NO LARGER THAN 4 INCHES IN ANY DIRECTION.
2. PIER SHALL NOT BE PLACED IN FROZEN GROUND.
3. DESIGN ALLOWABLE SOIL BEARING PRESSURE IS 2000 PSF ON SUITABLE RESIDUAL SOIL OR PROPERLY COMPACTED STRUCTURAL FILL. STRUCTURAL FILL SHALL BE COMPACTED TO A MINIMUM OF 95% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY (ASTM D-698).
4. AFTER EXCAVATIONS ARE MADE, THE BOTTOMS SHALL BE INSPECTED TO VERIFY THAT THE SUPPORTING SOILS ARE SUITABLE FOR BEARING AND ARE CAPABLE OF SUPPORTING THE DESIGN ALLOWABLE BEARING PRESSURE OF 2000 PSF.

CONCRETE

1. CONCRETE CONSTRUCTION SHALL COMPLY WITH PROVISIONS OF THE FOLLOWING CODES, SPECIFICATIONS, AND STANDARDS: AMERICAN CONCRETE INSTITUTE (ACI) 301, SPECIFICATIONS FOR STRUCTURAL CONCRETE; ACI 318-02, "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE".
2. CONCRETE SHALL BE NORMAL WEIGHT, 6% AIR ENTRAINMENT AND HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 4000 PSI. SUBMIT MIX DESIGN FOR APPROVAL.
3. CONCRETE MATERIALS SHALL BE IN ACCORDANCE WITH THE FOLLOWING:

PORTLAND CEMENT	ASTM C 150, TYPE 1
FLY ASH	ASTM C 618, TYPE F (NOT TO EXCEED 15% OF CEMENT BY WEIGHT)
NORMAL WEIGHT AGGREGATES	ASTM C 33
WATER	POTABLE
AIR-ENTRAINING ADMIXTURE	ASTM C 260
WATER REDUCING ADMIXTURES	ASTM C 494, TYPE A & ASTM C 494, TYPE F OR G
ACCELERATING ADMIXTURE	ASTM C 494, TYPE E
RETARDING ADMIXTURE	ASTM C 494, TYPE D
4. REINFORCING STEEL SHALL BE DEFORMED BARS IN ACCORDANCE WITH ASTM A-615, GRADE 60. REINFORCING MARKED CONTINUOUS SHALL BE LAPPED 36 BAR DIAMETERS AT SPLICES.
5. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A82 AND A185. LAP ONE FULL MESH SPACING AND TIE.
6. SUPPORT REINFORCING AND WELDED WIRE FABRIC ON METAL CHAIRS OR BOLSTERS.
7. MINIMUM CONCRETE COVER FOR REINFORCING SHALL BE IN ACCORDANCE WITH ACI 318-02 UNLESS OTHERWISE INDICATED.
8. ALL COLD WEATHER CONCRETE CONSTRUCTION SHALL CONFORM TO ACI 306R, "COLD WEATHER CONCRETING."
9. ALL HOT WEATHER CONCRETE CONSTRUCTION SHALL CONFORM TO ACI 305R, "HOT WEATHER CONCRETING."
10. CURING COMPOUND SHALL COMPLY WITH ASTM C 309, TYPE I, CLASS B.
11. TOPS OF ALL PIERS SHALL BE COPLANAR.

STEEL

1. ALL STEEL ANGLES AND PLATES SHALL BE ASTM A36. ALL BOLTS SHALL BE ASTM A325. ALL THREADED ROD MATERIAL SHALL BE ASTM A36. AND STEEL PIPE SHALL BE ASTM A53, GRADE B, UNLESS OTHERWISE NOTED. ALL STRUCTURAL STEEL SHALL BE GALVANIZED AFTER FABRICATION.
2. ALL STRUCTURAL STEEL WORK SHALL BE IN ACCORDANCE WITH THE NINTH EDITION OF THE "MANUAL OF STEEL CONSTRUCTION, ALLOWABLE STRESS DESIGN", OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION, INCLUDING CURRENT REVISIONS.

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1831 RADY COURT
RICHMOND, VA 23222

SITE NO.:
DOWNTOWN CHARLOTTESVILLE

COLLOCATE SELF SUPPORT TOWER

WEST MAIN STREET
CHARLOTTESVILLE, VA 22911
ALBEMARLE COUNTY

DESIGN: RWR
DRAWN: JJC
REVIEW: RWR

ITV DATE: 07/18/07

CONSTR. NO.: 2562-2-00

SUBMITTALS

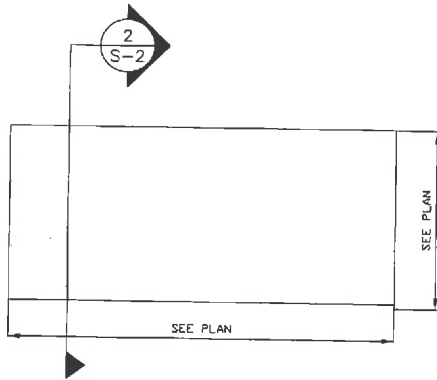
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11/15/07	FINAL CONSTRUCTION DWGS	
01/18/08	REV FINAL CONSTRUCTION DWGS	

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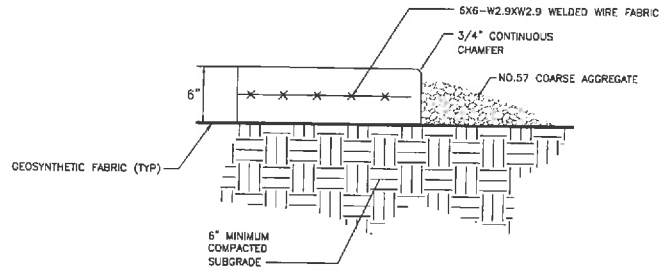
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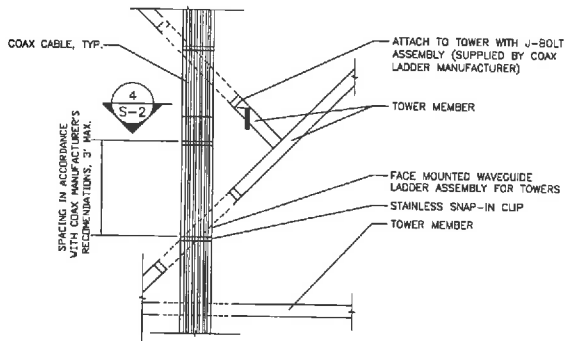
S-1



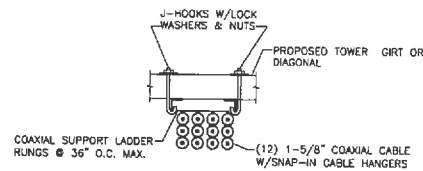
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S-2 EQUIPMENT PAD DETAIL
NOT TO SCALE



2
S-2 EQUIPMENT PAD SECTION
NOT TO SCALE



3
S-2 CABLE LADDER DETAIL
NOT TO SCALE



4
S-2 COAXIAL LADDER SUPPORT
NOT TO SCALE

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1831 RADY COURT
RICHMOND, VA 23222

SITE NO.:
**DOWNTOWN
CHARLOTTESVILLE**

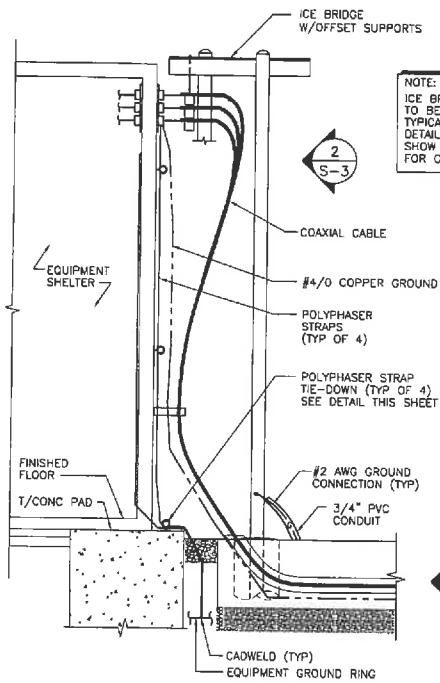
**COLLOCATE
SELF SUPPORT
TOWER**
WEST MAIN STREET
CHARLOTTESVILLE, VA
22911
ALBEMARLE COUNTY

DESIGN: WWH
DRAWN: NSA
REVIEW: WWH
TYP DATE: 07/19/07
COMP. NO. 25622.01

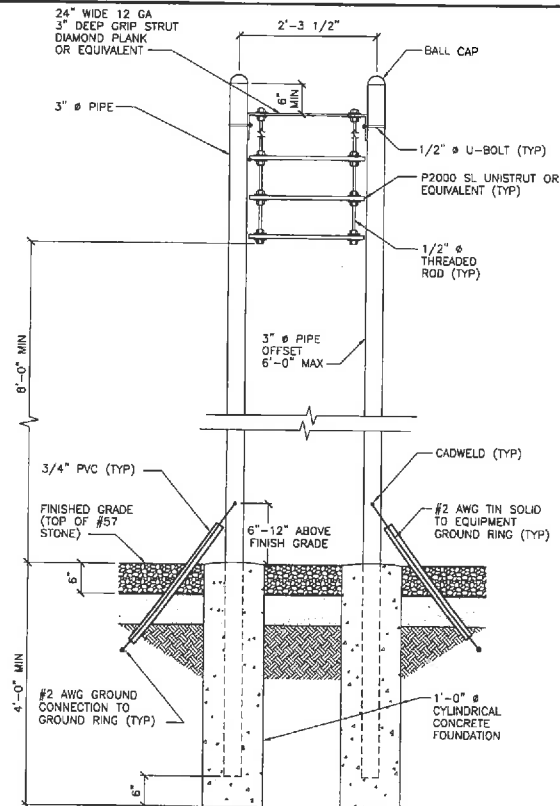
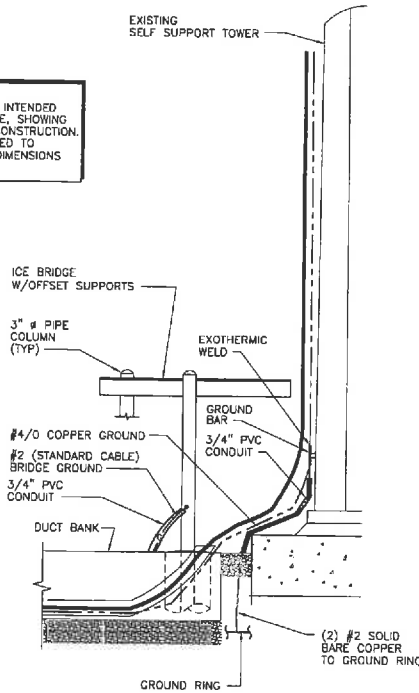
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SYM.	DESCRIPTION	DATE
▲	PRELIM CONSTRUCTION DWGS	11/01/07
▲	FINAL CONSTRUCTION DWGS	11/15/07
▲	REV. FINAL CONSTRUCTION DWGS	01/18/08
▲		
▲		
▲		

SHEET NAME:
**STRUCTURAL
DETAILS**

SHEET NO.:
S-2



NOTE:
ICE BRIDGE DETAIL IS INTENDED TO BE REPRESENTATIVE, SHOWING TYPICAL ICE BRIDGE CONSTRUCTION. DETAIL IS NOT INTENDED TO SHOW JOB SPECIFIC DIMENSIONS FOR CONSTRUCTION.

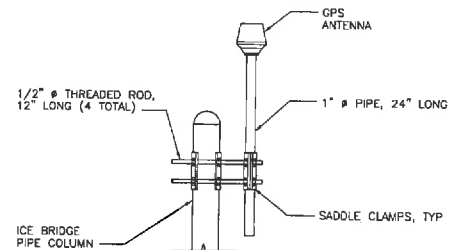


1 ICE BRIDGE DETAIL

FOR 24" X 36" PLOT - 3/4" = 1'-0" 0 6" 1' 2'
FOR 11" X 17" PLOT - 3/8" = 1'-0"

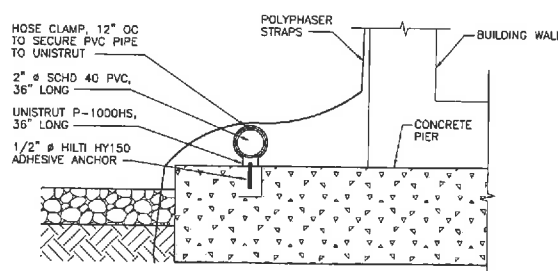
2 SECTION

FOR 24" X 36" PLOT - 1" = 1'-0" 0 6" 11"
FOR 11" X 17" PLOT - 1/2" = 1'-0"



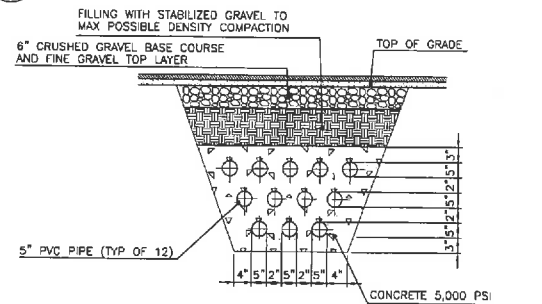
GPS ANTENNA MOUNTING BRACKET

FOR 24" X 36" PLOT - 1 1/2" = 1'-0" 0 3" 6" 9" 1'
FOR 11" X 17" PLOT - 3/4" = 1'-0"



POLYPHASER STRAP TIE-DOWN DETAIL

FOR 24" X 36" PLOT - 3" = 1'-0" 0 3" 6"
FOR 11" X 17" PLOT - 1-1/2" = 1'-0"



3 UNDERGROUND DUCT BANK (12 PIPES)

NOT TO SCALE

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RICHMOND, VA 23222

SITE NO.:
DOWNTOWN CHARLOTTESVILLE

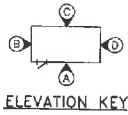
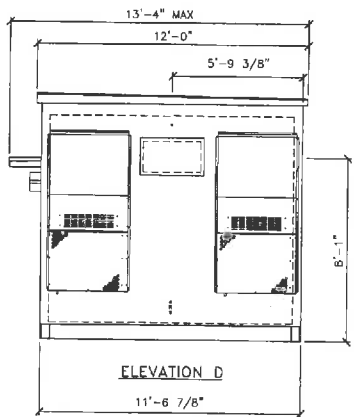
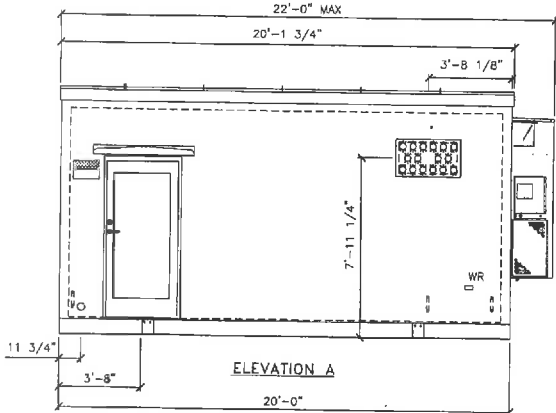
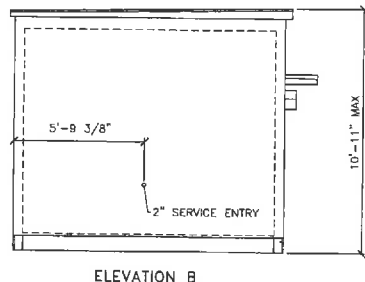
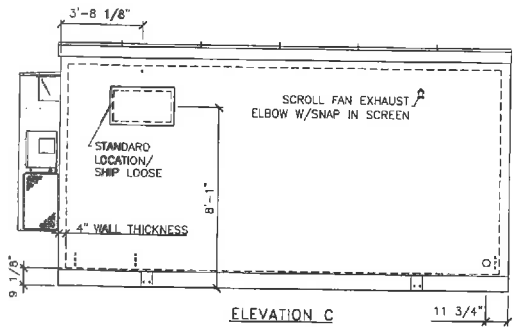
COLLOCATE SELF SUPPORT TOWER
WEST MAIN STREET
CHARLOTTESVILLE, VA 22911
ALBEMARLE COUNTY

DESIGN: SPP
DRAWN: MSA
REVIEW: SPP
TYP DATE: 07/19/07
CONC. NO.: 25672.00

SUBMITTALS		
SYM	DESCRIPTION	DATE
▲	PRELIM CONSTRUCTION DWGS	11/01/07
▲	FINAL CONSTRUCTION DWGS	11/13/07
▲	REV FINAL CONSTRUCTION DWGS	01/18/08
▲		
▲		
▲		

SHEET NAME:
STRUCTURAL DETAILS

SHEET NO.:
S-3



NOTE:
PROPOSED BUILDING LIGHT FIXTURE WILL BE SHIELDED IN ACCORDANCE
WITH CITY OF CHARLOTTESVILLE REQUIREMENTS AND OPERATED BY MOTION SENSOR.

1
A-1
SHELTER ELEVATIONS
NOT TO SCALE

SHELTER NOTES

- DESIGN CRITERIA:

FLOOR LIVE LOAD	150 PSF
ROOF LIVE LOAD	30 PSF
SNOW LOAD	
GROUND SNOW LOAD, P_g	20 PSF
FLAT ROOF SNOW LOAD, P_f	14 PSF
SNOW EXPOSURE FACTOR, C_e	1.0
SNOW LOAD IMPORTANCE FACTOR, I	1.0
THERMAL FACTOR, C_t	1.0
WIND LOAD	
BASIC WIND SPEED, V	60 MPH
WIND IMPORTANCE FACTOR, I	1.0
BUILDING CATEGORY	I
WIND EXPOSURE CATEGORY	C
INTERNAL PRESSURE COEFFICIENT	+0.18
SEISMIC LOAD	
SEISMIC USE GROUP	II
SPECTRAL RESPONSE COEFFICIENTS	
S_{ps}	0.28
S_{p1}	0.11
D	
SITE CLASS	D
SEISMIC BASE SHEAR, V	0.074 W
BASIC SEISMIC-FORCE-RESISTING SYSTEM	BEARING WALL- ORDINARY REINFORCED CONCRETE SHEAR WALLS
ANALYSIS PROCEDURE	EQUIVALENT LATERAL FORCE PROCEDURE
- THE SHELTER IS TO BE CLASSIFIED AS USE GROUP S-2, TYPE IIB CONSTRUCTION PER THE VIRGINIA UNIFORM STATEWIDE BUILDING CODE, EFFECTIVE NOVEMBER 16, 2003.
- THIS SHELTER IS TO BE DESIGNED AND CONSTRUCTED IN COMPLIANCE WITH THE VIRGINIA UNIFORM STATEWIDE BUILDING CODE, EFFECTIVE NOVEMBER 16, 2003.
- BUILDING WILL BE PLACED ON CONCRETE PIERS.
- BUILDING SHALL BE LOCATED THREE FEET (3'-0") OR MORE FROM ANY PROPERTY LINE, INTERIOR LOT LINE OR ANY OTHER BUILDING.
- BUILDING WILL HAVE A DARK BROWN, AGGREGATE STONE FINISH.

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1831 RADY COURT
RICHMOND, VA 23222

SITE INFO:
**DOWNTOWN
CHARLOTTESVILLE**

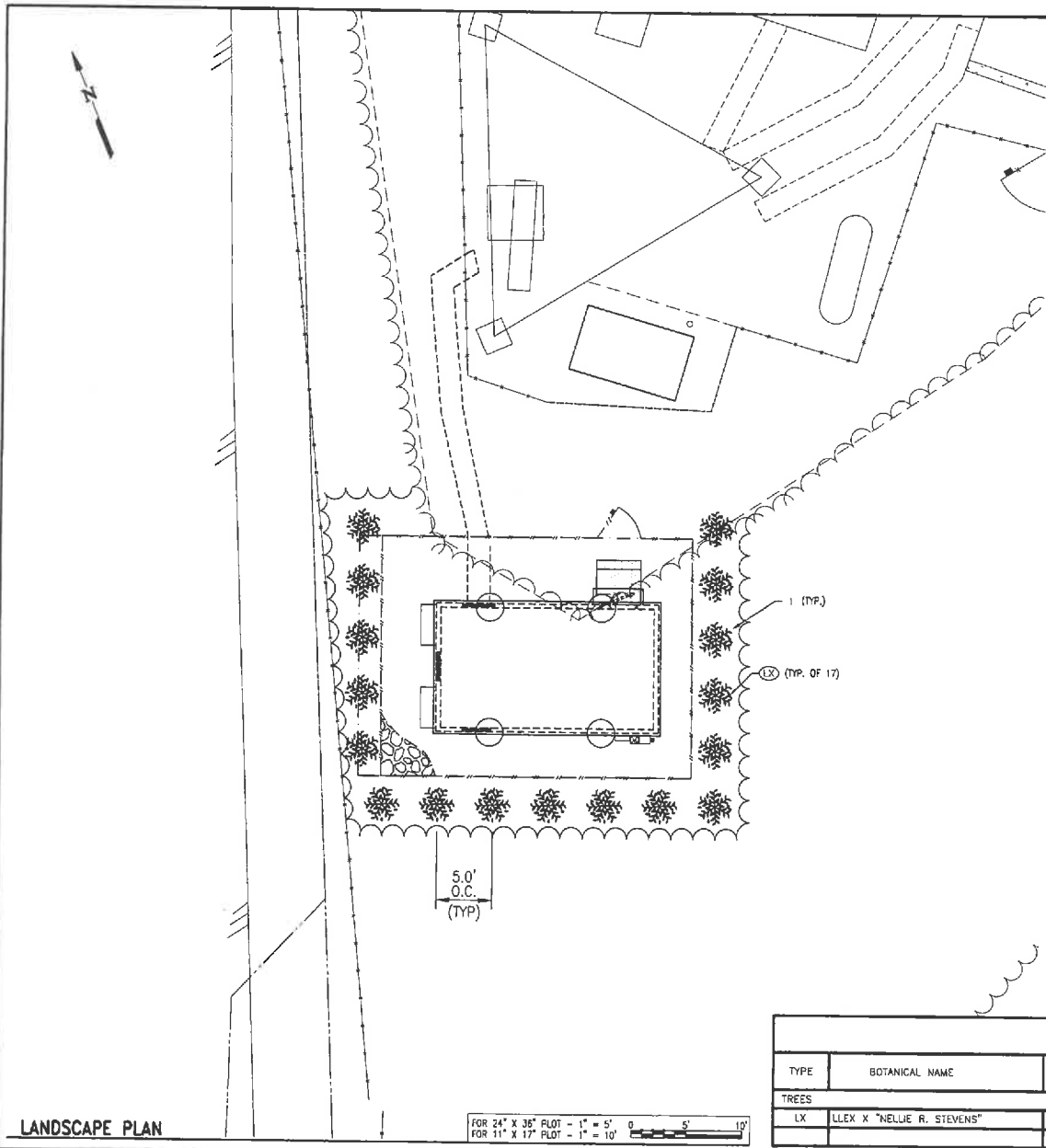
**COLLOCATE
SELF SUPPORT
TOWER**
WEST MAIN STREET
CHARLOTTESVILLE, VA
22911
ALBEMARLE COUNTY

DESIGN:	JYY
DRAWING:	JMW
REVIEW:	SPF
TTY DATE:	07/19/07
COMPL NO:	3567209

SUBMITTALS		
SYM	DESCRIPTION	DATE
△	PRELIM CONSTRUCTION DWGS	11/01/07
△	FINAL CONSTRUCTION DWGS	01/15/07
△	REV FINAL CONSTRUCTION DWGS	01/18/08
△		
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△		
△		

SHEET NAME:
**SHELTER
ELEVATIONS**

SHEET NO.:
A-1



SITE NOTES

1. THE CONTRACTOR SHALL VERIFY THAT TOTAL QUANTITIES INDICATED IN THE PLANT LIST OR SCHEDULE AGREES WITH QUANTITIES SHOWN ON PLANTING LAYOUT. IF DISCREPANCIES, USE TOTAL OF QUANTITIES SHOWN ON PLANTING LAYOUT.
2. THE CONTRACTOR SHALL PROVIDE THE QUANTITIES REQUIRED TO COMPLETE PROPOSED PLANTING AS SHOWN ON THE LANDSCAPE PLAN.
3. CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE.
4. ALL BEDS SHALL BE CLEAN AND WEDGED.
5. ALL AREAS NOT PAVED OR PLANTED SHALL BE SEEDED.
6. PROVIDE ALL NECESSARY PLANT MATERIALS, LABOR, TOOLS, AND MATERIALS TO COMPLETE THIS PROJECT IN A WORKMANLIKE, PROFESSIONAL MANNER.
7. ALL TREES, SHRUBS, AND GROUND COVERS SHALL BE SPECIMEN QUALITY (AMERICAN ASSOCIATION OF NURSERYMEN STANDARDS), SHALL BE NURSERY-GROWN AND IN A HEALTHY, INSECT AND DISEASE-FREE CONDITION.
8. NO SUBSTITUTIONS OF SIZE OR VARIETY OF PLANT MATERIAL WITHOUT PRIOR APPROVAL OF LANDSCAPE DESIGNER.
9. STAKE TREES ACCORDING TO A.A.N. (AMERICAN ASSOCIATION OF NURSERYMEN) STANDARDS.
10. "B&B" INDICATES BALLED AND BURLAPPED.
11. "CON" INDICATES CONTAINERIZED PLANTS.
12. ALL TREES AND SHRUBS HAVE BEEN LOCATED WITH RESPECT TO PROPOSED OR EXISTING UTILITIES AS ACCURATELY AS POSSIBLE. FIELD VERIFY LOCATIONS FOR ALL UTILITIES PRIOR TO INSTALLING PLANT MATERIAL.
13. VERIFY ALL DIMENSIONS IN THE FIELD, NOTIFY OWNER AND LANDSCAPE DESIGNER OF ANY VARIANCE FROM PLANS.
14. PROVIDE OWNER FULL 12 MONTHS MATERIAL AND LABOR GUARANTEE ON ALL PLANT MATERIAL.
15. TEST SOIL BEFORE PLANTING AND ADD PROPER SOIL AMENDMENTS TO SOIL TO ESTABLISH pH OF 6.5.
16. PREPARE SOIL WITH HI CALCIUM LIME @ RATE INDICATED ON SEEDING SCHEDULE (SEE SHEET L02).
17. PRUNE ALL PLANT MATERIAL - REMOVE RANK AND DEAD GROWTH ONLY. PRUNE FOR NATURAL SHAPE PER SPECIES.
18. MULCH TO BE 2" MIN. DEPTH SHREDDED HARDWOOD BARK MULCH IN ALL BED AREAS.
19. ANY QUESTIONS REGARDING THE INSTALLATION OF THIS PROJECT SHOULD BE BROUGHT TO THE ATTENTION OF LANDSCAPE DESIGNER @ 757-455-5600.
20. IN PLANTING BEDS, OWT THE COMPACTED EARTH SAUCER AND COVER THE BEDS WITH MULCH (2" MIN. DEPTH). AT HEDGE ROWS PROVIDE MULCH IN A CONTINUOUS BED. ALL GROUPINGS OF SHRUBS SHALL BE INSTALLED IN CONTINUOUS MULCH BEDS.
21. WHERE PLANTING BEDS ABUT WALK AND CURBS, DEPRESS TOPS OF MULCHED BEDS 3/4".
22. TREE AND SHRUB PITS SHALL BE 3 TIMES SIZE OF ROOT BALL AND BACK FILLED WITH FOLLOWING SOIL MIXTURE THOROUGHLY MIXED: 2 PARTS SAND, 2 PARTS COMPOSTED HORSE MANURE OR CATTLE MANURE, OR ORGANIC COMPOST, AND 6 PARTS GOOD QUALITY TOPSOIL.

CONSTRUCTION NOTES

1. TREE. SEE SCHEDULE THIS SHEET. SEE DETAIL 1, SHEET L-2.

LANDSCAPE PLAN PREPARED BY:

MARTIN ARREDONDO
 VIRGINIA CERTIFIED HORTICULTURIST #1967

PLANTING SCHEDULE

TYPE	BOTANICAL NAME	COMMON NAME	HEIGHT AT PLANTING			QUANTITY	REMARKS
			CALIPER	SPREAD	HEIGHT		
TREES							
LX	LLEX X "NELLIE R. STEVENS"	NELLIE R STEVENS HOLLY	1 1/2"	4' TO 5'	2' TO 3'	17	FULL, DENSE

LANDSCAPE PLAN

FOR 24" X 36" PLOT - 1" = 5'
 FOR 11" X 17" PLOT - 1" = 10'

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SITE INFO:
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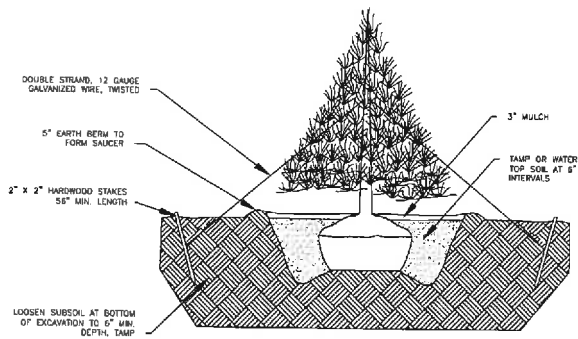
DESIGN: JMG
 DRAWN: MGA
 REVIEW: EPP
 TTY DATE: 07/19/07
 CORR. NO. 2/02/08

SUBMITTALS

SYM	DESCRIPTION	DATE
△	PRELIM CONSTRUCTION DWGS	11/01/07
△	FINAL CONSTRUCTION DWGS	11/15/07
△	REV FINAL CONSTRUCTION DWGS	01/18/08
△		
△		
△		

SHEET NAME:
LANDSCAPING PLAN

SHEET NO:
L-1



1 TREE PLANTING
L-2 NOT TO SCALE

TABLE 3.32-C
(REVISED JUNE 2003)
PERMANENT SEEDING SPECIFICATIONS FOR APPALACHIAN/MOUNTAIN AREA

SEED		
LAND USE	SPECIES	APPLICATION RATES
MINIMUM CARE LAWN (COMMERCIAL OR RESIDENTIAL)	TALL FESCUE ¹ PERENNIAL RYEGRASS ² KENTUCKY BLUEGRASS ²	90-100% 0-10% 0-10% TOTAL: 200-250 LBS
HIGH MAINTENANCE LAWN	MINIMUM OF THREE (3) UP TO FIVE (5) VARIETIES OF KENTUCKY BLUEGRASS FROM APPROVED LIST FOR USE IN VIRGINIA ¹	TOTAL: 125 LBS
GENERAL SLOPE (3:1 OR LESS)	TALL FESCUE ¹ RED TOP GRASS OR CREEPING RED FESCUE SEASONAL NURSE CROP ³	128 LBS 2 LBS 20LBS TOTAL: 150 LBS
LOW-MAINTENANCE SLOPE (STEEPER THAN 3:1)	TALL FESCUE ¹ RED TOP GRASS OR CREEPING RED FESCUE SEASONAL NURSE CROP ³ CROWNVECT ⁴	108 LBS 2 LBS 20LBS 20LBS 150 LBS TOTAL

1-WHEN SELECTING VARIETIES OF TURFGRASS, USE THE VIRGINIA CROP IMPROVEMENT ASSOCIATION (VCI) RECOMMENDED TURFGRASS VARIETY LIST. QUALITY SEED WILL BEAR A LABEL INDICATING THAT THEY ARE APPROVED BY VCI. A CURRENT TURFGRASS VARIETY LIST IS AVAILABLE AT THE LOCAL COUNTY EXTENSION OFFICE OR THROUGH VCI AT 804-746-4864 OR AT <http://sutton.ces.ncsu.edu/html/Turf/TurfPublications/Publications2.html>

2-USE SEASONAL NURSE CROP IN ACCORDANCE WITH THE SEEDING DATES AS STATED BELOW:
 MARCH, APRIL - MAY 15TH ANNUAL RYE
 MAY 16TH-AUGUST 15TH FOXTAIL MILLET
 AUGUST 16TH - SEPTEMBER, OCTOBER ANNUAL RYE
 NOVEMBER - FEBRUARY WINTER RYE

3-MAY THROUGH OCTOBER, USE HULLED SEED. ALL OTHER SEEDING PERIODS, USE UNHULLED SEED. IF WEEPING LOVEGRASS IS USED, INCLUDE ANY SLOPE OR LOW MAINTENANCE MIXTURE DURING WARMER SEEDING PERIODS, INCREASE TO 30-40 LBS/ACRE.

FERTILIZER AND LIME

- APPLY 10-20-10 FERTILIZER AT A RATE OF 500LBS/ACRE (OR 12LBS/1,000 SQFT)
- APPLY PULVERIZED AGRICULTURAL LIMESTONE AT A RATE OF 2 TONS/ACRE (OR 90LBS/1,000 SQFT)

NOTE:
 -A SOIL TEST IS NECESSARY TO DETERMINE THE ACTUAL AMOUNT OF LIME REQUIRED TO ADJUST THE SOIL pH OF SITE.
 -INCORPORATE THE LIME AND FERTILIZER INTO THE TOP 4-6 INCHES OF THE SOIL BY DISKING OR BY OTHER MEANS.
 -WHEN APPLYING SLOWLY AVAILABLE NITROGEN, USE RATES AVAILABLE IN EROSION & SEDIMENT CONTROL TECHNICAL BULLETIN #4, 2003 NUTRIENT MANAGEMENT FOR DEVELOPMENT SITES AT <http://www.dcr.state.va.us/sw/eds.htm#pubs>

CLARK NENSEN
 Architecture & Engineering
 5510 CHEROKEE AVENUE SUITE 110
 ALEXANDRIA, VIRGINIA 22312
 703-256-5344 FAX 703-256-6622
 WWW.CLARKNENSEN.COM

verizon wireless
 1831 RADY COURT
 RICHMOND, VA 23222

SITE NO.:
**DOWNTOWN
 CHARLOTTEVILLE**

**COLLOCATE
 SELF SUPPORT
 TOWER**
 WEST MAIN STREET
 CHARLOTTEVILLE, VA
 22911
 ALBEMARLE COUNTY

DESIGN: JWS
 DRAWING: HSA
 REVIEW: SP
 TV DATE: 07/15/07
 COMM. NO. 25872-05

SUBMITTALS		
SYM	DESCRIPTION	DATE
△	PRELIM CONSTRUCTION DWGS	11/01/07
△	FINAL CONSTRUCTION DWGS	11/15/07
△	REV FINAL CONSTRUCTION DWGS	01/18/08
△		
△		
△		

SHEET NAME:
**LANDSCAPING
 DETAILS**

SHEET NO.:
L-2



**Board of Architectural Review (BAR)
Certificate of Appropriateness**

Please Return To: City of Charlottesville
Department of Neighborhood Development Services
P.O. Box 911, City Hall
Charlottesville, Virginia 22902
Telephone (434) 970-3130 Fax (434) 970-3359

Please submit ten (10) copies of application form and all attachments.
For a new construction project, please include \$250 application fee. For all other projects requiring BAR approval, please include \$50 application fee. For both types of projects, the applicant must pay \$1.00 per required mail notice to property owners. The applicant will receive an invoice for these notices, and project approval is not final until the invoice has been paid. For projects that require only administrative approval, please include \$50 administrative fee. Checks payable to the City of Charlottesville.

The BAR meets the third Tuesday of the month.
Deadline for submittals is Tuesday 3 weeks prior to next BAR meeting by 5 p.m.

Information on Subject Property

Physical Street Address: 7 1/2 Street NW
Norfolk Southern R.O.W
City Tax Map/Parcel: 320144200

Name of Historic District or Property: _____
West Main Street
Do you intend to apply for Federal or State Tax Credits for this project? NO

Applicant

Name: Verizon Wireless c/o Nathan Holland
Address: 536 Pantops Center #405
Crville, VA 22911
Email: nathan.holland@wirelessresources.com
Phone: (W) 757-305-8420 (H) _____
FAX: _____

Signature of Applicant

I hereby attest that the information I have provided is, to the best of my knowledge, correct. (Signature also denotes commitment to pay invoice for required mail notices.)

Nathan Holland 11/13/07
Signature Date

Property Owner (if not applicant)

Name: Southern Railway Company
Address: 816 West Main Street
Crville, VA 22903
Email: _____
Phone: (W) _____ (H) _____
FAX: _____

Property Owner Permission (if not applicant)

I have read this application and hereby give my consent to its submission.

Dennis Worl 11/16/07
Signature Date

Description of Proposed Work (attach separate narrative if necessary): Attach antenna to existing 225' lattice tower @ 140'. In addition, placement of 12' x 20' equipment shelter and 4' x 10' generator pad at base of existing tower.

Attachments (see reverse side for submittal requirements): Construction Site Plans, Photos, Photo Simulations

For Office Use Only

Received by: BSW
Fee paid: 50.00 Cash/Ck. # 1094
Date Received: 11/27/07

Approved/Disapproved by: _____
Date: _____
Conditions of approval: _____

Vertically Polarized, Log Periodic 80° / 17.5 dBi

LPA-185080/12CF

When ordering, replace "___" with connector type.

Mechanical specifications

Length	1806 mm	71.1 in
Width	104 mm	4.1 in
Depth	150 mm	5.9 in
4) Weight	4.8 kg	10.5 lbs
Wind Area		
Front	0.188 m ²	2.02 ft ²
Side	0.271 m ²	2.92 ft ²
Rated Wind Velocity (Safety factor 2.0)		
	>270 km/hr	>168 mph
Wind load @ 100 mph (161 km/hr)		
Front	325 N	73.1 lbs
Side	440 N	98.9 lbs

Antenna consisting of aluminum alloy with brass feedlines covered by a UV safe fiberglass radome.

Mounting & Downtilting:

Wall mounted or pole tower mount with mounting brackets.

Mounting bracket kit #26799997

Downtilt bracket kit #26799999

The downtilt bracket kit includes the mounting bracket kit.

Electrical specifications

Frequency Range	1850-1990 MHz
Impedance	50Ω
3) Connector	NE, E-DIN
1) VSWR	≤1.4:1
Polarization	Vertical
1) Gain	17.5 dBi
2) Power Rating	250 W
1) Half Power Angle	
H-Plane	80°
E-Plane	5°
1) Electrical Downtilt	0°
1) Null Fill	10%
Lightning Protection	Direct Ground

¹⁾ Typical Values

²⁾ Power Rating limited by connector only.

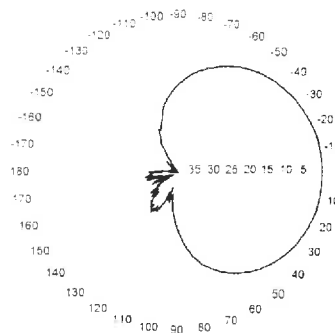
³⁾ NE indicates an elongated N Connector.

E-DIN indicates an elongated DIN Connector

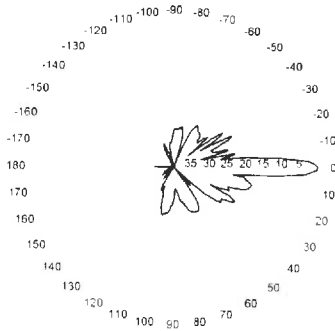
⁴⁾ The antenna weight listed above does not include the bracket weight.

Improvements to mechanical and/or electrical performance of the antenna may be made without notice.

Radiation-pattern¹⁾



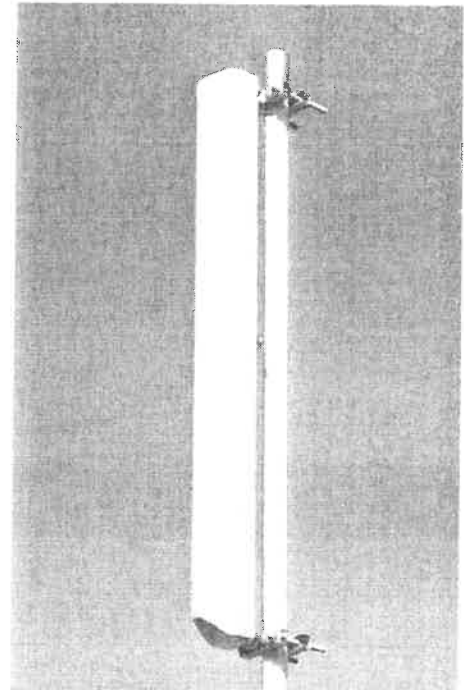
Horizontal



Vertical

Radiation patterns for all antennas are measured with the antenna mounted on a fiberglass pole.

Mounting on a metal pole will typically improve the Front-to-Back Ratio.



Amphenol Antel's Exclusive 3T (True Transmission Line Technology) Antenna Design:

- True log-periodic design allows for superior front-to-side characteristics to minimize sector overlap.
- Unique feedline design eliminates the need for conventional solder joints in the signal path.
- A non-collinear system with access to every radiating element for broad bandwidth and superior performance.
- Air as insulation for virtually no internal signal loss.

Every Amphenol Antel antenna is under a five-year limited warranty for repair or replacement.

Antenna available with center-fed connector only.

CF Denotes a Center-Fed Connector.

1850-1990 MHz

Amphenol Antel, Inc.
The Antenna Technology Institute

Revision Date: 1-27-05

November 26th, 2007

Mary Joy Scala
Preservation and Design Planner
City of Charlottesville
610 East Market Street
Charlottesville, VA 22902

RE: Architectural Review Board Application – Verizon Wireless Proposal – Downtown
Charlottesville Tower Co-location

Dear Ms. Scala,

Cellco Partnership trading as Verizon Wireless (“Verizon”) is proposing the placement of antennas and associated radio equipment on the existing lattice tower at 7 1/2 Street and West Main Street, located within the Norfolk Southern Railroad Right-of-Way. The property is identified by Tax Map #32144200. Verizon has entered into an agreement with the Norfolk Southern Railroad regarding the proposed new facilities to support Verizon’s new Personal Wireless Communications system that will provide new service in the City of Charlottesville, County of Albemarle and surrounding counties.

The twelve (12) proposed antennas (71.1” by 4.1”) will be located on the existing 225’ self support tower at 140’, with a new 12’ by 20’ fenced radio equipment shelter located at the base of the existing tower. A new four 4’ x 6’ (WxL) diesel gas powered generator will also be placed at the base of the tower, adjacent to proposed Verizon Wireless existing equipment shelter.

In addition, please see attached tower structural analysis prepared by Clark Nexsen Engineering group, which was prepared to determine structural capacity of the existing tower. Clark Nexsen determined the tower was overstressed and will require the addition of structural steel cross- members from the 0-25’ level and 125’ to 150’ level.

Verizon Wireless respectfully requests the approval of the proposed Architectural Review Board Application. If further information is required for the review of the application, please feel free to contact me at 757-305-8420 or by e-mail at nathan.holland@wirelessresources.com

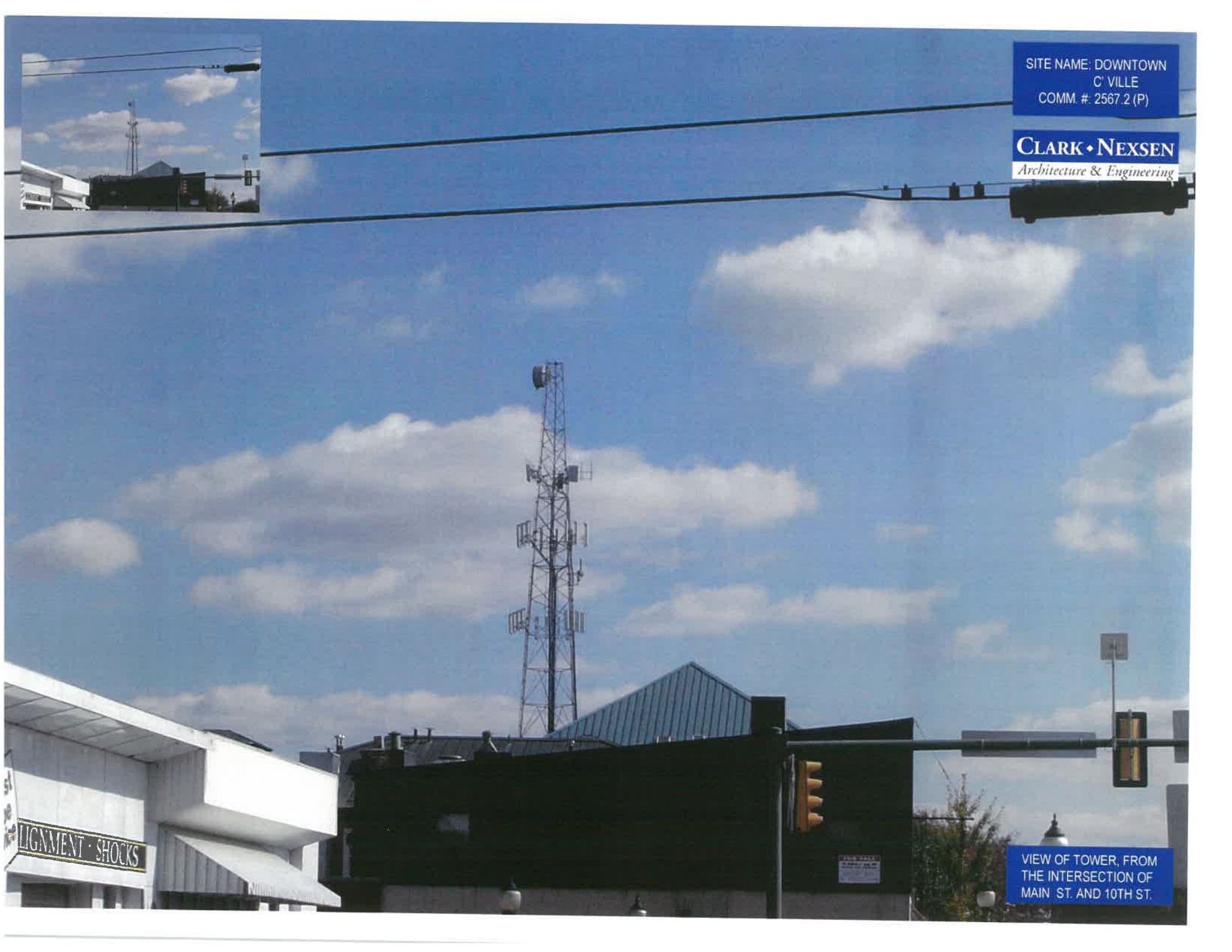
Sincerely,



Nathan Holland
Wireless Resources, Inc on behalf of Verizon Wireless
(757) 305-8420

SITE NAME: DOWNTOWN
C'VILLE
COMM. #. 2567.2 (P)

CLARK • NEXSEN
Architecture & Engineering



VIEW OF TOWER, FROM
THE INTERSECTION OF
MAIN ST. AND 10TH ST.

Looking Away From Tower at Proposed Lease Area



Looking at Compound From Main Street



Looking Into Tower Compound From Lease Area



Proposed Shelter





1831 Rady Court
Richmond, VA 23222

RECEIVED

NOV 27 2007

NEIGHBORHOOD DEVELOPMENT SERVICES

STRUCTURAL REPORT

Installation of (12) Panel Antennas on Existing
225'-0" Self-Support Tower

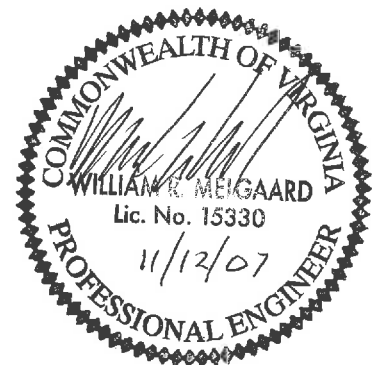
Downtown Charlottesville

Charlottesville, VA

CN Commission # 2567.2 P

November 9, 2007

Engineer (s): William R. Melgaard, P.E.
Edward C. Westerman, P.E.
Lakhwinder S. Sabharwal, E.I.T.



Previous Reports – 09/17/07
10/03/07
10/12/07

CLARK • NEXSEN

Architecture & Engineering

6160 Kempsville Circle, Suite 200A

Norfolk, Virginia 23502

(757) 455-5800

fax (757) 455-5638

www.clarknexsen.com



Downtown Charlottesville
Charlottesville, VA

Analysis Summary

Clark Nexsen has completed a structural analysis of the 225'-0" self-support tower at the referenced site. Verizon Wireless is proposing to install total of (12) LPA-185080/12 panel antennas at elevation 140'-0". The tower, with existing and proposed appurtenances, was analyzed for a basic wind speed equal to 75 mph (without ice) and 65 mph with a nominal ice accumulation of 3/4" as per TIA/EIA-222-F. This is equivalent to 90 mph basic wind speed (without ice) per IBC-2003, Table 1609.3.1 (3-second gust basis).

The analysis indicates the existing self-support tower will be overstressed after adding the proposed antenna loading. The existing tower does not have adequate capacity to safely support the existing and proposed appurtenances listed in this report and, therefore, will require augmentation. The augmentation on the existing tower shall be performed per tower augmentation drawings (Appendix A4) before installing the proposed antennas and coax cables.



Downtown Charlottesville Charlottesville, VA

Introduction

Clark Nexsen was contracted to perform a structural analysis of the above referenced communications tower. The intent of the analysis was to determine if the tower has sufficient capacity to support the antenna configuration proposed by Verizon Wireless. The analysis was based on a tower climb report provided by Digital Towers (Appendix A2), a previous structural analysis report by KCI Technologies, Inc. dated October 30, 2001 (Appendix A3), information provided by Verizon Wireless and the assumptions indicated in this report. This report stands alone as a detailed analysis of the existing tower based on the information available at the time of the analysis.

Analysis Criteria

- ◆ TIA/EIA-222-F
 - ◆ Fastest mile basic wind speed equal to 75 mph (without ice)
 - ◆ Fastest mile wind speed equal to 65 mph with 3/4" nominal ice accumulation
- ◆ IBC 2003
 - ◆ 3-second gust basic wind speed equal to 90 mph (without ice)

Existing Tower Data

Site Location

The tower is located at West Main Street in Charlottesville, VA.

Tower Description

The existing tower is best described as a three-sided, 225'-0" tall self-support tower. According to the tower climb report, the tower has (9) 25'-0" tapered sections. The face width of the tower at the base is 28.7' and face width of the tower at the top is 5.67'. The tower sections up to a height of 125'-0" have K-braced (K-down) diagonals on all three faces. The tower sections between 125'-0" elevation and 175'-0" elevation have K braced (K-left) diagonals on all three faces. The tower section between 175'-0" elevation and 200'-0" has X-braced diagonals on all three faces. The tower section at the top has K-braced (K-left) diagonals on all three faces.

A photograph of the existing tower is included in Appendix A1.



Downtown Charlottesville Charlottesville, VA

Foundation

No foundation information was available at the time of this report. As such, the adequacy of the existing foundation to support the existing and proposed appurtenances was not checked.

Existing Appurtenances

The tower was analyzed with the following existing appurtenances:

- ◆ (1) Yagi antenna at elevation 28'-9" with (1) 1/4" ϕ cable
- ◆ (1) Low band antenna with radials at elevation 79'-3" with (1) 1/4" ϕ cable
- ◆ (1) Omni antenna at elevation 148'-2" with (1) 1-1/2" ϕ cable
- ◆ (9) panel antennas at elevation 163'-0" with (9) 1-5/8" ϕ cables
- ◆ (3) panel antennas at elevation 183'-0" with (3) 1-5/8" ϕ cables and (3) 7/8" ϕ cables
- ◆ (1) 8'-0" microwave dish at elevation 220'-6" with (1) 1-1/2" ϕ elliptical cable
- ◆ (1) 4'-0" lighting rod at elevation 225'-0"

Proposed Appurtenances

The tower was analyzed with the following proposed appurtenances:

- ◆ (12) LPA-185080/12 panel antennas at elevation 140'-0" with (12) 1 5/8" ϕ cables and (12) TMA's *

* Refer to coax configuration sheet in Appendix A1 for the proposed location of coax cables.

Assumptions

- ◆ The information provided by Verizon Wireless is true and accurate.
- ◆ All unused coax cables will be removed before installation of the proposed antennas.
- ◆ All leg members are assumed to have a yield strength equal to 50 ksi.
- ◆ All horizontal and diagonal members are assumed to have a yield strength equal to 36 ksi.
- ◆ All the required maintenance indicated in the Appendix A5 will be implemented before the installation of the proposed antennas and coax cables.



Downtown Charlottesville
Charlottesville, VA

Analysis

A Non-Linear (P-Delta) analysis was performed using the RISATower tower analysis software package, version 5.0.2.0

Results and Conclusions

The structural analysis indicates the existing self-support tower cannot safely support the existing and proposed appurtenances as listed herein and therefore will require augmentation. Per the analysis, the main diagonals between elevations 0' to 25'-0" and 125'-0" to 150'-0" are overstressed after adding the proposed antenna loading. Therefore, all augmentations indicated in the Tower Augmentation Drawings in Appendix A4 shall be provided before adding the proposed loads on the existing tower.

The analysis results include the existing appurtenances and the proposed Verizon Wireless appurtenances only. Previous arrangements made by current carriers to place future appurtenances may be nullified by the placement of the proposed appurtenances. Equipment not listed in this report should not be placed on the existing tower without the approval of a Professional Engineer registered in the Commonwealth of Virginia.

A copy of the RISATower analysis is included in Appendices B and C.

Appendices

APPENDIX A1 - Site and Tower Information

APPENDIX A2 - Tower Climb Report by Digital Towers

APPENDIX A3 - Previous Structural Analysis Report by KCI Technologies, Inc.

APPENDIX A4- Tower Augmentation Drawings

APPENDIX A5 - Required Maintenance

APPENDIX B - Analysis Results - Graphical

APPENDIX C - RISATower Analysis Results

Upon completion of construction, please contact me for an inspection of the improvements included in this application.

If you have any questions, please contact me at 970-3130 or scala@charlottesville.org.

Sincerely yours,

A handwritten signature in cursive script that reads "Mary Joy Scala".

Mary Joy Scala
Preservation and Design Planner

cc:
Southern Railway Company
810 West Main Street
Charlottesville, VA 22903