FA#10068617 CV325

LTE 2C



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 \$375 application fee. For all other projects requiring BAR approval, please include \$125 application fee. For projects that require only administrative approval, please include \$100 administrative fee. Make 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 4 p.m.



FDH Engineering, Inc., 6521 Meridien Dr. Raleigh, NC 27616, Ph. 919.755.1012, Fax 919.755.1031

May 6, 2014

Mr. Xiao He Velocitel, Inc. 8000 Regency Parkway, Suite 430 Cary, NC 27518

RE: Roof Top

Site Name: Hampton Inn

USID: 49372-A

FA Location Code: 10068617 FDH Project No. 1463XK1400

Dear Xiao:

Per your request, FDH Engineering, Inc. has reviewed the existing and proposed loading for the roof top located in Charlottesville, VA. The Tower Analysis Summary form lists the existing and proposed appurtenance loading (see page 2).

According to information provided by Velocitel, Inc., the proposed loading will be installed on the existing mounts on the roof top. With the AT&T loading at a centerline elevation of 53' above grade, the increase in wind area from the proposed antennas is insignificant with respect to the wind area of the antennas that are to be replaced. Furthermore, due to the marginal increase in wind area, the roof top will not experience any significant change in weight and the existing mounts and mount connections are assumed to be adequate for the existing and proposed antenna loading.

Our assessment has been made assuming all information provided to FDH Engineering, Inc. is accurate and that the building has been properly erected and maintained.

In conclusion, the revised AT&T installation should meet or exceed all applicable standards and should therefore be considered safe. Should you require additional information, please do not hesitate to contact our office.

Prepared By:

Chip DeVoto, El Project Engineer Reviewed By:

Dennis D. Abel, PE Director – Structural Engineering VA PE License No. 0402 035020

DENNIS D. ABEL No. 0402 035020

05-06-2014

Document No: ENG-RPT-504S Revision Date: 1/18/10

	Antenna Owner		sture Loading			121	T&T	T&T	Antenna Owner		roposed Loading	101	Tori	T&T	18.1	1	Antenna Owner		xisting / Reserved Loading		nchor Bolts	ase Plate	ole	teel Yield Strenath (ks))	oundation Mapping	revious Structural Analysis	ower Mapping	eotech Report	ower Design	ower Model	ower Manufacturer	ower Height (top of steel AGL)	ower Info	e in the second	Date of Analysis	A Number	ite Number	ite Name	Second Info
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Scala, Mary Joy

From:

Rency Yeatts < R. Yeatts@velocitel.com>

Sent:

Thursday, July 24, 2014 4:48 PM

RE: 900 West MAin Street

To: Subject: Scala, Mary Joy

Attachments:

LTE 2C CV325 10068617 CHIMNEY HAMPTONINN.PROPOSAL.jpg; chimney.png

Importance:

High

Mary Joy:

I have attached a couple of current pictures of the stealth design per your request. You will see that that I have manipulated one of the pictures to depict the proposed upgrade as related to the outside of the "chimney". That picture shows a current DC2 mounted below the parapet wall on brackets. This proposal will mount 2 additional boxes on the adjacent lower portion of the "chimney" by an identical mounting method effectively hiding the equipment from view.

I hope this will address your question(s) and please feel free to contact me should you require any additional information.

Kind regards,

Rency Yeatts Senior Site Acquisition Specialist

Velocitel, Inc.
4144 Innslake Drive
Glen Allen, VA 23060
757-573-3129 Mobile
804-217-8665 Fax
r.yeatts@velocitel.net
www.velocitel.net

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From: Scala, Mary Joy [mailto:scala@charlottesville.org]

Sent: Thursday, July 24, 2014 3:51 PM

To: Rency Yeatts

Subject: 900 West MAin Street

Please confirm that all proposed work will be located inside the existing stealth chimneys. Drawing C3 shows what appears to be something mounted outside.

I need photos of the existing installations taken on the roof please.

Mary Joy Scala, AICP

Preservation and Design Planner City of Charlottesville







Antenna System Upgrade Project

- LTE/2C
- INSTALL LTE AND GSM/UMTS ANTENNAS
- IMPROVE QUALITY OF SERVICE



APPROVED

By Steve McCormick at 3:18 pm, Jul 17, 2014



SITE NAME: HAMPTON INN - FA# 10068617 TOWER OWNER/SITE NO.: MIDTOWN HOSPITALITY LLC

SHEET	DRAWING INDEX	REV	DATE
T1 C1 C2.1 C2.2 C3 C4 E1 E2	TITLE SHEET GENERAL NOTES SITE PLAN ENLARGED EQUIPMENT LAYOUT ELEVATION VIEW & RF DETAILS ANTENNAS/COAX CABLE SCHEMATIC GROUNDING & RF NOTES GROUNDING DETAILS & COLOR CODE CHART	0 0 0 0 0 0	07/17/14 07/17/14 07/17/14 07/17/14 07/17/14 07/17/14 07/17/14 07/17/14

REVIEWED BY:

AT&T

VELOCITEL DATE

DATE

APPROVED BY:

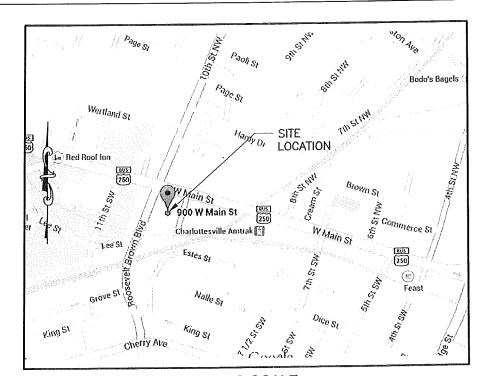
WILLIAM PANEK Lic. No. 034732

THE A WIND AT PERSON UNDER THEY ARE ACTING ION OF A CASE WAY SEED AR IONAL ENGINEER TO ALTER UNLESS EXPLICITLY AGREED TO BY THE ENGINEER IN OWNER DATE

MUNICIPAL DATE

DIRECTIONS: FROM AT&T OFFICE, HEAD SOUTHWEST ON COX RD TOWARD N PARK DR. 0.2 MI TURN RIGHT ONTO NUCKOLS RD. 0.3 MI CONTINUE STRAIGHT TO STAY ON NUCKOLS RD. 0.3 MI MERGE ONTO I—295 N VIA THE RAMP TO I—64 W/CHARLOTTESVILLE. 0.4 MI FOLLOW I—64 W TO VA—20 N IN SCOTTSVILLE. TAKE EXIT 121 FROM I—64 W 57.5 MI / 49 MIN MERGE ONTO I—295 N 1.5 MI TAKE EXIT 53A TO MERGE ONTO I—64 W TOWARD CHARLOTTESVILLE 55.8 MI TAKE EXIT 121 FOR VA—20 TOWARD CHARLOTTESVILLE/SCOTTSVILLE. 0.2 MI CONTINUE ON VA—20 N. DRIVE TO W MAIN ST IN CHARLOTTESVILLE. 2.1 MI / 6 MIN TURN RIGHT ONTO VA—20 N 1.0 MI CONTINUE ONTO MONTICELLO AVE 0.5 MI TURN RIGHT ONTO RIDGE ST 0.1 MI TURN LEFT ONTO W MAIN ST

VICINITY MAP



NOT TO SCALE

SITE INFORMATION

SCOPE OF

ALL EXISTING ANTENNAS, RRU'S, TMA'S AND DC2'S SHALL BE REUSED. INSTALL NEW RRU'S, TRIPLEXERS, AND DC2'S.

SITE ADDRESS:

900 WEST MAIN STREET CHARLOTTESVILLE, VA 22903

OWNER:

MIDTOWN HOSPITALITY LLC

CONTACT PERSON:

RANDY RICHARDSON (434) 923-8600

APPLICANT:

AT&T MOBILITY

4801 COX ROAD, SUITE 300 GLEN ALLEN, VA 23060

LATITUDE (NAD 83):

38' 1' 55.38" (38.0320500)

LONGITUDE (NAD 83):

-78° 29° 39.66" (-78.4943500)

CURRENT USE: PROPOSED USE:

TELECOMMUNICATIONS FACILITY
TELECOMMUNICATIONS FACILITY

JURISDICTION:

CHARLOTTESVILLE CITY

SITE QUALIFICATION PARTICIPANTS

	NAME	<u>COMPANY</u>	<u>NUMBER</u>
A/E	DAN COSTELLO	VELOCITEL	(315) 717-6547
SAC	RENCY YEATTS	VELOCITEL	(757) 573-3129
СМ	STEVEN MCCORMICK	VELOCITEL	(804) 217-7088



4164 INNSLAKE DRIVE, SUITE B GLEN ALLEN, VA 23060 (804) 217-7088 (MAIN) (757) 401-6453 (FAX)



LIBERTY PLAZA 1 4801 COX ROAD, SUITE 300 GLEN ALLEN, VA 23060 SITE NO. CV325 HAMPTON INN FA# 10068617

FA# 10068617 900 WEST MAIN STREET CHARLOTTESVILLE, VA 22903

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_	04/11/14	ISSUED FOR REVIEW	WEG	DKC	-	
10	DATE	REVISIONS	BY	снк	APP'D	F
	N. C.	DESIGNED:	i_			l

TITLE SHEET

DRAWING NUMBER REV
10068617 T1 0

GENERAL NOTES:

- THE PROPOSED FACILITY WILL BE UNMANNED AND DOES NOT REQUIRE POTABLE WATER OR SEWER SERVICE AND IS NOT FOR HUMAN HABITAT. (NO HANDICAP ACCESS IS REQUIRED).
- OCCUPANCY IS LIMITED TO PERIODIC MAINTENANCE AND INSPECTION, APPROXIMATELY 2 TIMES PER MONTH, BY AT&T TECHNICIANS.
- NO NOISE, SMOKE, DUST, ODOR OR VIBRATIONS WILL RESULT FROM THIS PROPOSAL.
- OUTDOOR STORAGE AND SOLID WASTE CONTAINERS ARE NOT PROPOSED.
- 5. ALL MATERIAL SHALL BE FURNISHED AND WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE AT&T SYSTEM GROUNDING STANDARD DATED JUNE 2011. "TECHNICAL SPECIFICATION FOR CONSTRUCTION OF GSM/GPRS WIRELESS SITES, "TECHNICAL SPECIFICATION FOR FACILITY GROUNDING". IN CASE OF A CONFLICT BETWEEN THE CONSTRUCTION SPECIFICATION AND THE DRAWINGS, THE DRAWINGS SHALL GOVERN.
- SUBCONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING ANY DAMAGE CAUSED BY THE CONSTRUCTION OPERATION.
- SUBCONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND INSPECTIONS REQUIRED FOR CONSTRUCTION.
- SUBCONTRACTOR SHALL REMOVE ALL TRASH AND DEBRIS FROM THE SITE ON A DAILY BASIS.
- D. INFORMATION SHOWN ON THESE DRAWINGS WAS OBTAINED FROM SITE VISITS AND DRAWINGS PROVIDED BY THE SITE OWNER. SUBCONTRACTOR SHALL NOTIFY AT&T OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIAL OR PROCEEDING WITH CONSTRUCTION.
- NO WHITE STROBIC LIGHTS ARE PERMITTED. LIGHTING, IF REQUIRED, WILL MEET FAA STANDARDS AND REQUIREMENTS.
- ALL SIGNS SHALL BE FURNISHED AND INSTALLED AT ALL AT&T WIRELESS SERVICES SITES IN ACCORDANCE WITH SPECIFICATION AT&T SYSTEM GROUNDING DATED JUNE 2011.
- 12. NO ADDITIONAL PARKING TO BE PROPOSED, EXISTING ACCESS AND PARKING TO BE USED.
- 13. NO LANDSCAPING IS PROPOSED AT THIS SITE.

14

TYPICAL MI	NIMUM BENC	RADII
COAX DIAMETER	ANDREW	COMMSCOPE
1/2" SUPERFLEX	1.25"	1.25"
1/2"	5"	2"
7/8"	10"	5"
1 1/4"	15"	8"
1 5/8"	20"	15"

15. ALL COAXIAL CABLE INSTALLATIONS TO FOLLOW MANUFACTURER'S

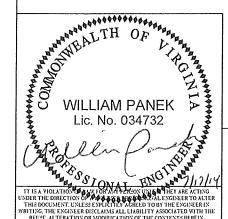
GENERAL NOTES:

- 1. FOR THE PURPOSE OF CONSTRUCTION DRAWINGS, THE FOLLOWING DEFINITIONS SHALL APPLY:
 CONTRACTOR CONTRACTOR
 SUBCONTRACTOR GENERAL CONTRACTOR (CONSTRUCTION)
 OWNER AT&T WIRELESS
- ALL SITE WORK SHALL BE COMPLETED AS INDICATED ON THE DRAWINGS AND PROJECT SPECIFICATIONS.
- 3. DRAWINGS PROVIDED HERE ARE NOT TO BE SCALED AND ARE INTENDED TO SHOW OUTLINE ONLY.
- 4. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. SUBCONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS, AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK.
- ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.
- UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
- 7. THE SUBCONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
- 8. IF THE SPECIFIED EQUIPMENT CANNOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE SUBCONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION SPACE FOR APPROVAL BY THE CONTRACTOR AND SITE OWNER.
- THE SUBCONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT SUBCONTRACTOR'S EXPENSE TO THE SATISFACTION OF OWNER.
- 10. THE SUBCONTRACTOR SHALL CONTACT UTILITY LOCATING SERVICES PRIOR TO THE START OF
- 11. ALL EXISTING ACTIVE SEWER, WATER, GAS, ELECTRIC, AND OTHER UTILITIES WHERE ENCOUNTERED IN THE WORK, SHALL BE PROTECTED AT ALL TIMES, AND WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, SHALL BE RELOCATED AS DIRECTED BY ENGINEERS. EXTREME CAUTION SHOULD BE USED BY THE SUBCONTRACTOR WHEN EXCAVATING OR DRILLING PIERS AROUND OR NEAR UTILITIES. SUBCONTRACTOR SHALL PROVIDE SAFETY TRAINING FOR THE WORKING CREW. THIS WILL INCLUDE BUT NOT BE LIMITED TO A) FALL PROTECTION, B) CONFINED SPACE, C) ELECTRICAL SAFETY & D) TRENCHING & EXCAVATION.
- 12. ALL EXISTING INACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE REMOVED AND/OR CAPPED, PLUGGED OR OTHERWISE DISCONTINUED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK, AS DIRECTED BY THE RESPONSIBLE ENGINEER, AND SUBJECT TO THE APPROVAL OF THE OWNER AND/OR LOCAL UTILITIES.
- 13. THE AREAS OF THE OWNER'S PROPERTY DISTURBED BY THE WORK AND NOT COVERED BY THE TOWER, EQUIPMENT OR DRIVEWAY, SHALL BE GRADED TO A UNIFORM SLOPE, AND STABILIZED TO PREVENT EROSION.
- 14. SUBCONTRACTOR SHALL MINIMIZE DISTURBANCE TO EXISTING SITE DURING CONSTRUCTION. EROSION CONTROL MEASURES, IF REQUIRED DURING CONSTRUCTION, SHALL BE IN CONFORMANCE WITH THE LOCAL GUIDELINES FOR EROSION AND SEDIMENT CONTROL.
- 15. NO FILL OR EMBANKMENT MATERIAL SHALL BE PLACED ON FROZEN GROUND. FROZEN MATERIALS, SNOW OR ICE SHALL NOT BE PLACED IN ANY FILL OR EMBANKMENT.
- 16. THE SUB GRADE SHALL BE COMPACTED AND BROUGHT TO A SMOOTH UNIFORM GRADE PRIOR TO FINISHED SURFACE APPLICATION.
- 17. THE SITE SHALL BE GRADED TO CAUSE SURFACE WATER TO FLOW AWAY FROM THE BTS EQUIPMENT.
- 18. IF NECESSARY, RUBBISH, STUMPS, DEBRIS, STICKS, STONES AND OTHER REFUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF LEGALLY.
- 19. THE SUBCONTRACTOR SHALL PROVIDE SITE SIGNAGE IN ACCORDANCE WITH OSHA REGULATIONS.
- 20. SUBCONTRACTOR SHALL LEAVE PREMISES IN A CLEAN CONDITION.

STRUCTURAL STEEL NOTES:

- ALL STEEL WORK SHALL BE PAINTED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS AND IN ACCORDANCE WITH ASTM A36 UNLESS OTHERWISE NOTED.
- 2. ALL WELDING SHALL BE PERFORMED USING E70XX ELECTRODES AND WELDING SHALL CONFORM TO AISC AND AWS D1.1. WHERE FILLET WELD SIZES ARE NOT SHOWN, PROVIDE THE MINIMUM SIZE PER TABLE J2.4 IN THE AISC "MANUAL OF STEEL CONSTRUCTION". PAINTED SURFACES SHALL BE TOUCHED UP.
- BOLTED CONNECTIONS SHALL BE ASTM A325 BEARING TYPE (3/4"

 CONNECTIONS AND SHALL HAVE MINIMUM OF TWO BOLTS UNLESS
 NOTED OTHERWISE.
- NON-STRUCTURAL CONNECTIONS FOR STEEL GRATING MAY USE 5/8" DIA. ASTM A 307 BOLTS UNLESS NOTED OTHERWISE.
- 5. INSTALLATION OF CONCRETE EXPANSION/WEDGE ANCHOR, SHALL BE PER MANUFACTURER'S WRITTEN RECOMMENDED PROCEDURE. THE ANCHOR BOLT, DOWEL OR ROD SHALL CONFORM TO MANUFACTURER'S RECOMMENDATION FOR EMBEDMENT DEPTH OR AS SHOWN ON THE DRAWINGS. NO REBAR SHALL BE CUT WITHOUT PRIOR ENGINEERING APPROVAL WHEN DRILLING HOLES IN CONCRETE. SPECIAL INSPECTIONS, REQUIRED BY GOVERNING CODES, SHALL BE PERFORMED IN ORDER TO MAINTAIN MANUFACTURER'S MAXIMUM ALLOWABLE LOADS.
- ALL METAL WORK SHALL BE GALVANIZED IN ACCORDANCE WITH SPECIFICATION ASTM A123. ALL SHOP WELDED MEMBERS SHALL BE GALVANIZED AFTER WELDING.





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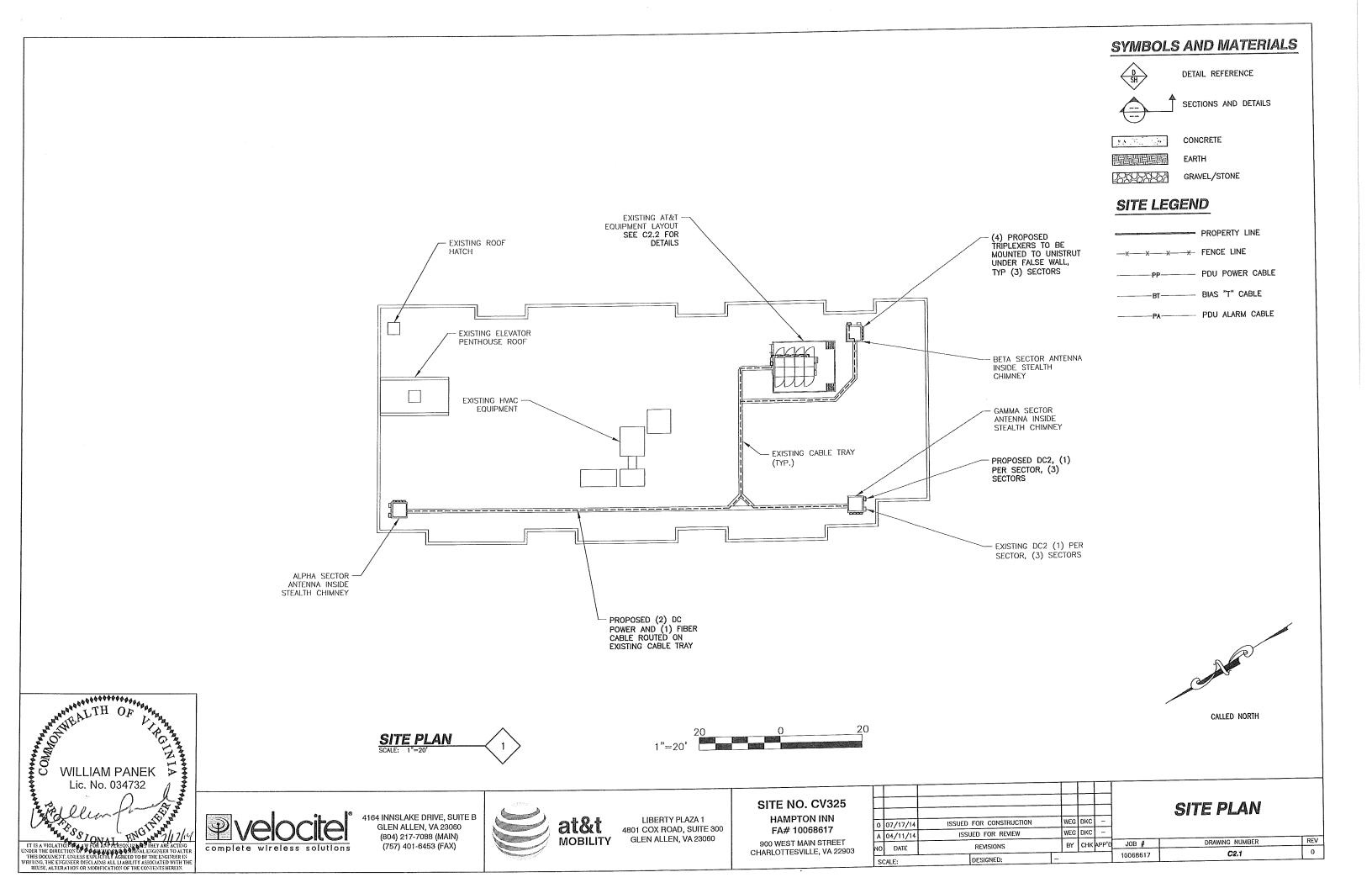
LIBERTY PLAZA 1 4801 COX ROAD, SUITE 300 GLEN ALLEN, VA 23060 SITE NO. CV325 HAMPTON INN FA# 10068617

900 WEST MAIN STREET CHARLOTTESVILLE, VA 22903

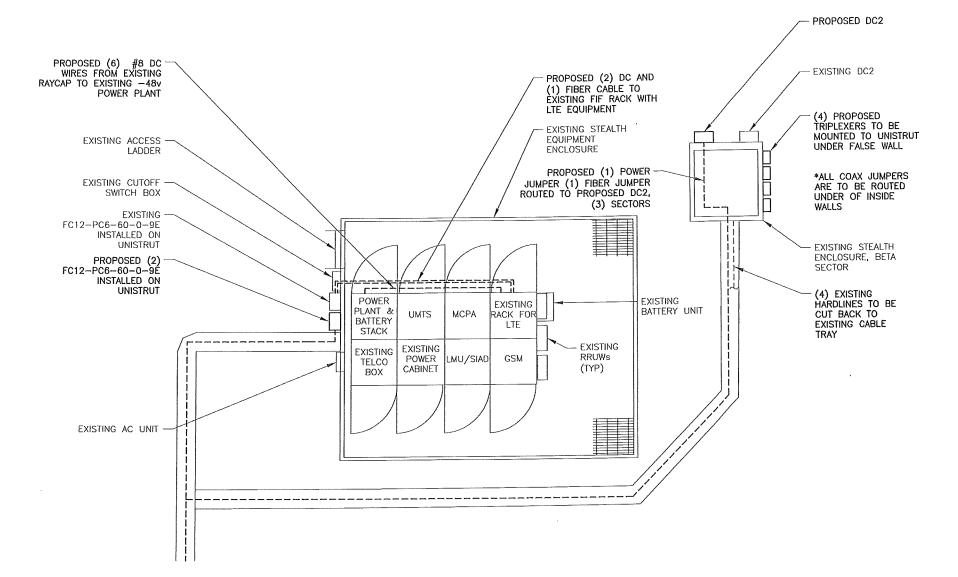
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GENERAL NOTES

JOB # DRAWING NUMBER REV 10068617 C1 0



ALL PROPOSED CABLING TO BE ROUTED IN EXISTING CABLE LADDER WHERE POSSIBLE,



SYMBOLS AND MATERIALS



DETAIL REFERENCE



SECTIONS AND DETAILS

CONCRETE

GRAVEL/STONE

EARTH

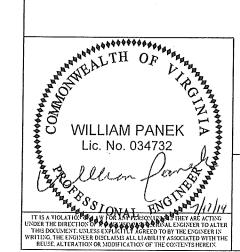
SITE LEGEND

	PROPERTY LINE
_x x x x	FENCE LINE
РР	PDU POWER CABLE
BT	BIAS "T" CABLE
РД	PDU ALARM CABLE









4164 INNSLAKE DRIVE, SUITE B GLEN ALLEN, VA 23060 (804) 217-7088 (MAIN) (757) 401-6453 (FAX)



LIBERTY PLAZA 1 4801 COX ROAD, SUITE 300 GLEN ALLEN, VA 23060

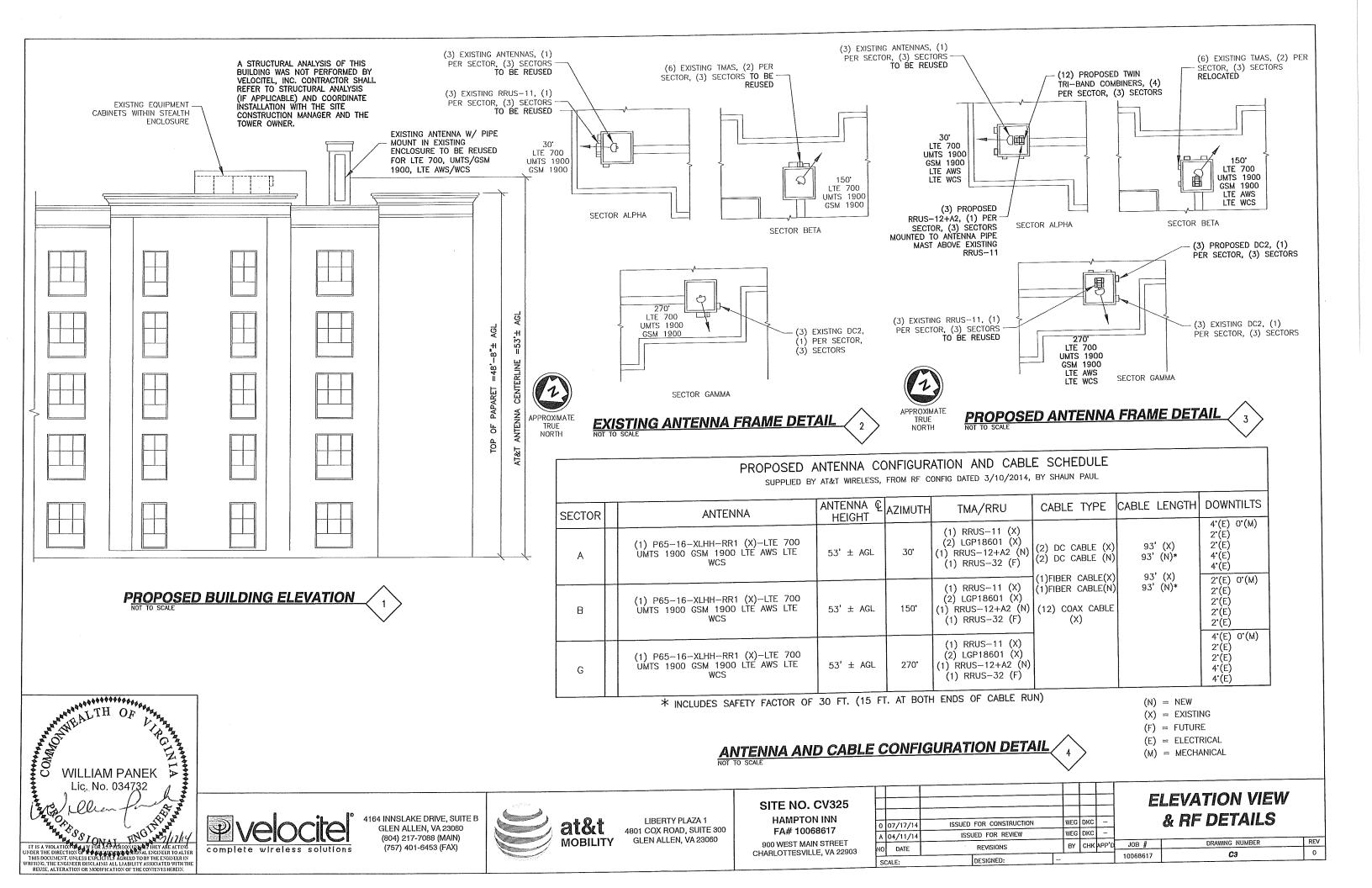
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900 WEST MAIN STREET CHARLOTTESVILLE, VA 22903

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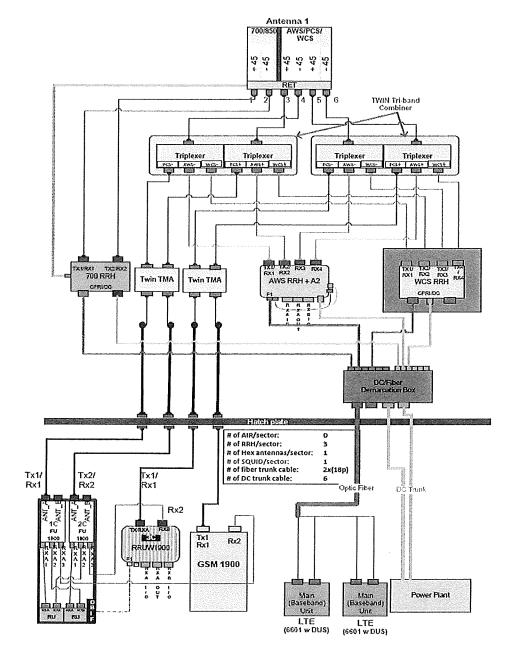
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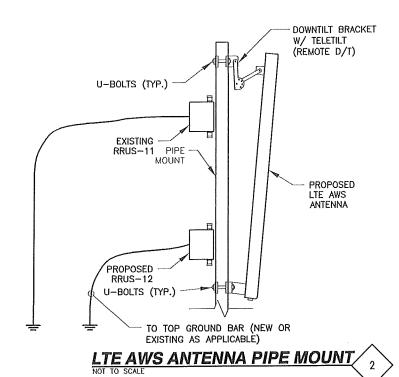
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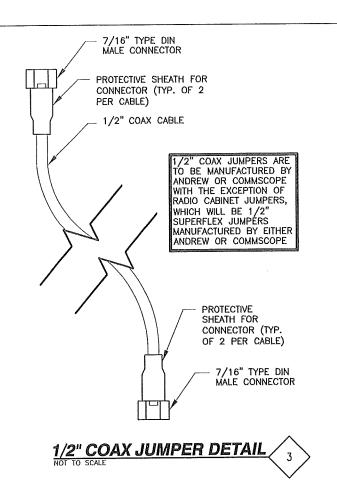


CAP UNUSED PORTS WITH 50 ohm LOADS

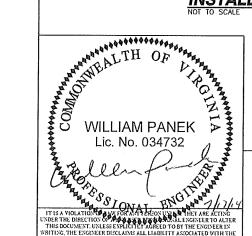




NOTE: RRUS-12 LOCATION MAY VARY. CONTRACTOR TO VERIFY FINAL MOUNTING LOCATION AND METHODS W/ SITE CM PRIOR TO INSTALLATION.



INSTALLATION SCHEMATIC



Pvelocitel Complete wireless solutions

4164 INNSLAKE DRIVE, SUITE B GLEN ALLEN, VA 23060 (804) 217-7088 (MAIN) (757) 401-6453 (FAX)



LIBERTY PLAZA 1 4801 COX ROAD, SUITE 300 GLEN ALLEN, VA 23060 SITE NO. CV325

HAMPTON INN
FA# 10068617

900 WEST MAIN STREET CHARLOTTESVILLE, VA 22903

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NO.	DATE	REVISIONS		BY	СНК	4₽P,Ū	L
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ANTENNA/COAX
CABLE SCHEMATIC

 JOB #
 DRAWING NUMBER
 REV

 10068617
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GENERAL NOTES

1. INSPECTIONS

- A. GENERAL: DURING AND UPON COMPLETION OF THE WORK, ARRANGE AND PAY ALL ASSOCIATED INSPECTIONS OF ALL ELECTRICAL WORK INSTALLED UNDER THIS CONTRACT IN ACCORDANCE WITH THE CONDITIONS OF THE CONTRACT. INSTALLATION SHALL COMPLY WITH APPLICABLE LAWS AND ORDINANCES, UTILITY COMPANY REQUIREMENTS, AND THE LATEST EDITION OF NEC, NFC,
- B. INSPECTIONS REQUIRED: AS PER THE LAWS AND REGULATIONS OF THE LOCAL AND/OR STATE AGENCIES HAVING JURISDICTION AT THE PROJECT SITE.
- C. INSPECTION AGENCY: APPROVED BY THE LOCAL AND/OR STATE AGENCIES HAVING JURISDICTION AT THE PROJECT SITE,
- D. CERTIFICATES: SUBMIT ALL REQUIRED INSPECTION CERTIFICATES.

2. HANGERS AND SUPPORTS

- A. MATERIALS: ALL HANGERS, SUPPORTS, FASTENERS AND HARDWARE SHALL BE STAINLESS STEEL OR OF EQUIVALENT CORROSION RESISTANCE BY TREATMENT OR INHERENT PROPERTY, AND SHALL BE MANUFACTURED PRODUCTS DESIGNED FOR THE APPLICATION. PRODUCTS FOR OUTDOOR USE SHALL BE HOT DIP GALVANIZED.
- B. TYPES: HANGERS, STRAPS, RISER SUPPORTS, CLAMPS, U-CHANNEL, THREADED RODS, ETC. AS INDICATED OR REQUIRED.
- C. INSTALLATION: RIGIDLY SUPPORT AND SECURE ALL MATERIALS, RACEWAY AND EQUIPMENT TO BUILDING STRUCTURE USING HANGERS, SUPPORTS AND FASTENERS SUITABLE FOR THE USE. MATERIALS AND LOADS ENCOUNTERED. PROVIDE ALL NECESSARY HARDWARE. PROVIDE CONDUIT SUPPORTS AT MAXIMUM 5 FT. O.C.
- D: STRUCTURAL MEMBERS: DO NOT CUT, DRILL, OR WELD ANY STRUCTURAL MEMBER EXCEPT AS SPECIFICALLY APPROVED BY THE ENGINEER.
- MISCELLANEOUS SUPPORTS: PROVIDE ANY ADDITIONAL STRUCTURAL SUPPORT STEEL BRACKETS, ANGLES, FASTENERS AND HARDWARE AS REQUIRED TO ADEQUATELY SUPPORT ALL ELECTRICAL MATERIALS AND EQUIPMENT.
- F. ONE HOLE STRAPS SHALL NOT BE USED FOR CONDUITS LARGER THAN 3/4 INCH.

3. ENCLOSURES

A. NEMA 3R

4. HOLES, SLEÉVES AND OPENINGS

GENERAL: PROVIDE ALL HOLES, SLEEVES, AND OPENINGS REQUIRED FOR THE COMPLETION OF WORK AND RESTORE ALL SURFACES DAMAGED TO MATCH SURROUNDING SURFACES.

5. CUTTING AND PATCHING

- A. GENERAL: PROVIDE ALL CUTTING, DRILLING, FITTING AND PATCHING NECESSARY FOR ACCOMPLISHING THE WORK. THIS INCLUDES ANY AND ALL WORK NECESSARY TO: UNCOVER WORK TO PROVIDE FOR THE INSTALLATION OF ILL TIMED WORK, REMOVE AND REPLACE DEFECTIVE WORK AND WORK NOT CONFORMING TO THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.
- REPAIRS: REPAIR ANY AND ALL DAMAGE TO WORK OF OTHER TRADES CAUSED BY CUTTING AND PATCHING OPERATIONS, USING SKILLED MECHANICS OF THE TRADES INVOLVED.

6. RACEWAY SYSTEMS

ALL ABOVE GRADE CONDUIT AND ALL CONDUIT ELBOWS SHALL BE RIGID GALVANIZED STEEL UNLESS

7. CONDUCTORS

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WILLIAM PANEK Lic. No. 034732

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TRO

USE 98% CONDUCTIVITY COPPER WITH TYPE XHHW-2 INSULATION, 600 VOLT, COLOR CODED, USE SOLID CONDUCTORS FOR WIRE UP TO AND INCLUDING NO. 8 AWG, STRANDED CONDUCTORS FOR WIRE LARGER THAN NO. 8. USE PRESSURE-TYPE INSULATED TWIST-ON CONNECTORS FOR NO. 10 AWG AND SMALLER, SOLDERLESS MECHANICAL TERMINAL LUGS FOR NO. 8 AWG AND LARGER.

8. GROUNDING SYSTEM

INSTALLATION: INSTALL AS REQUIRED SPECIFICATION. CONTRACTORS REPRESENTATIVE WILL INSPECT EXOTHERMIC WELDS AND CONDUCT MEGGER TEST PRIOR TO BURIAL. MAXIMUM 5 OHMS RESISTANCE IS REQUIRED, WHEN MORE THAT (4) ADDITIONAL GROUNDS ARE REQUIRED, VERIFY OHM LEVEL PRIOR TO CONSTRUCTION. USE CLEAN SAND AND CLAYBACKFILL FOR BURIED GROUND CONDUCTORS



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SITE NO. CV325 HAMPTON INN FA# 10068617

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WEG DKC -ISSUED FOR CONSTRUCTION 0 107/17/1 WEG DKC ISSUED FOR REVIEW 04/11/1 REVISIONS DATE DESIGNED: SCALE:

GROUNDING & RF NOTES

DRAWING NUMBER REV JOB # E1

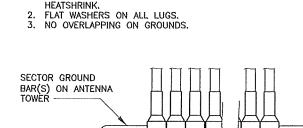
9. CHECKOUT, TESTING AND ADJUSTING

A. CORRECTION/REPLACEMENT: AFTER TESTING BY CONTRACTOR, OWNER OR ENGINEER, CORRECT ANY DEFICIENCIES AND REPLACE MATERIALS AND EQUIPMENT SHOWN TO BE DEFECTIVE OR UNABLE TO PERFORM AT DESIGN OR RATED CAPACITY.

- POWER CONDUCTORS: CONTRACTOR SHALL CONDUCT A CONTINUITY & INSULATION TEST ON CONDUCTORS BETWEEN SERVICE DISCONNECT SWITCH & POWER CABINET.
- WHEN SITE POWER IS DERIVED FROM 3 PHASE SOURCE, LOAD READINGS WILL BE TAKEN AND RECORDED TO MAINTAIN A BALANCED LOAD AT THE PRIMARY SOURCE. RECORDS SHALL BE TURNED IN TO THE OWNER'S REPRESENTATIVE.

RF NOTES:

- 1. ACTUAL LENGTHS SHALL BE DETERMINED PER SITE CONDITION BY SUBCONTRACTOR.
- 2. THE DESIGN IS BASED ON RF DATA SHEETS, SIGNED AND APPROVED.
- 3. RADIO SIGNAL CABLE AND RACEWAY SHALL COMPLY WITH THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE (NEC, NFPA 70), CHAPTER 8.
- 4. ALL SPECIFIED MATERIAL FOR EACH LOCATION (E.G. OUTDOORS-OCCUPIED, INDOORS-UNOCCUPIED, PLENUMS, RISER SHAFTS, ETC.) SHALL BE APPROVED, LISTED, OR LABELED AS
- 5. RADIO SIGNAL CABLE SHALL BE SUPPORTED AT MINIMUM OF EVERY THREE (3) FEET EXCEPT INSIDE MONOPOLES OR LATTICE TOWERS WHERE CABLE AND CONNECTOR MANUFACTURER'S SUPPORT RECOMMENDATIONS SHALL BE FOLLOWED, RF JUMPERS SHALL BE SUPPORTED AT A MAXIMUM OF TWO (2) FEET INTERVALS AND WITHIN 18" OF CONNECTORS. MANUFACTURER RECOMMENDED CABLE IPPORT ACCESSORIES SHALL BE USED.
- 6. THE OUTDOOR CABLE SUPPORT SYSTEM SHALL BE PROVIDED WITH AN ICE SHIELD TO SUPPORT AND
- 7. DRIP LOOPS SHALL BE REQUIRED ON ALL OUTSIDE CABLES. CABLES SHALL BE SLOPED AWAY FROM BUILDING OR OUTDOOR BTS CABINETS TO PREVENT WATER FROM ENTERING THROUGH THE COAXIAL
- 8, ALL FEEDER LINE AND JUMPER CONNECTORS SHALL BE 7/16 DIN CABLE CONNECTORS THAT MEET
- 9. 7/16 DIN CONNECTORS REQUIRE NO ADDITIONAL WEATHER PROOFING IN INDOOR APPLICATIONS IF INSTALLED AND TORQUED PROPERLY. IN OUTDOOR APPLICATIONS, WEATHER PROOFING IS REQUIRED AND THE FOLLOWING PROCEDURE SHOULD BE FOLLOWED.
- 10. USING WEATHERPROOFING KIT APPROVED BY CABLE MANUFACTURER AND CONTRACTOR, START TAPE APPROXIMATELY 5 INCHES FROM THE CONNECTOR AND WRAP 2 INCHES TOWARD THE CONNECTOR, THEN REVERSE THE TAPE SO THAT THE STICKY SIDE IS UP. TAPE OVER THE CONNECTOR OR SURGE ARRESTOR UNTIL THREE (3) TO FOUR (4) INCHES BEYOND THE CONNECTOR AND REVERSE AGAIN WITH THE STICKY SIDE DOWN FOR ANOTHER INCH OR TWO. ADD THE BUTYL RUBBER AND FINISH WITH A FINAL LAYER OF TAPE.
- 11. ANTENNAS AND COAX SHALL BE PAINTED, WHEN REQUIRED, BY THE LANDLORD OR AUTHORITY HAVING JURISDICTION IN ACCORDANCE WITH ANTENNA MANUFACTURERS' SURFACES' PREPARATION AND PAINTING
- 12. CABLE SHIELDS, AND TOWER CONDUITS SHALL BE GROUNDED AT THE TOP OF THE TOWER, WITHIN 10 FEET OF THEIR CONNECTORS, AND AT THE BOTTOM OF THE TOWER ABOUT 6 INCHES BEFORE THEY TURN TOWARD THE FACILITY. THEY SHALL BE GROUNDED AT THE MIDPOINT OF THE TOWERS THAT ARE BETWEEN 100 FEET AND 200 FEET HIGH, AND AT INTERVALS OF 100 FEET OR LESS ON TOWERS THAT
- 13. APPROVED GROUNDING KITS, WHICH INCLUDE GROUNDING STRAPS, SHALL BE USED TO GROUND THE COAXIAL CABLE SHIELDS, AND CONDUITS. THE GROUND CONDUCTORS FOR THE KITS AT THE TOP OF THE TOWER, AND IN THE MIDDLE SECTION OF THE TOWER, ARE BONDED DIRECTLY TO GROUND BAR USING EXOTHERMIC OR COMPRESSION CONNECTIONS.
- 14. ALL RADIO SIGNAL CABLE SHALL BE LABELED PER MARKET REQUIREMENTS.
- 15. ANTENNA FEED LINE SYSTEM SWEEP TESTING SHALL BE PERFORMED AND REPORTED IN ACCORDANCE WITH CARRIER REQUIREMENTS. CONTRACTOR WILL NOT ACCEPT A RADIO SIGNAL CABLE INSTALLATION WITH UNSATISFACTORY SWEEP TEST RESULTS. THERE SHALL ALSO BE A HARD COPY OF SWEEPS LEFT AT SITE UPON COMPLETION OF SWEEP TEST.



NOTES:

1. ALL EXTERIOR GROUNDS USE BLACK

CONDUCTOR EXOTHERMIC WELD TO BURIED GROUND RING BLACK UV HEAT SHRINK ON ALL GROUNDS OUTSIDE OF

SHELTER. CLEAR HEAT SHRINK INSIDE SHELTER.

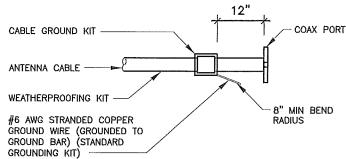
- 1. COPPER GROUND BAR 1/4"x4"x14" 2—HOLE CENTERS TO MATCH NEMA DOUBLE LUG CONFIGURATION.
- 2. SIMILAR INSTALLATION FOR TOP AND BOTTOM TOWER GROUND BARS.



#2 AWG SOLID

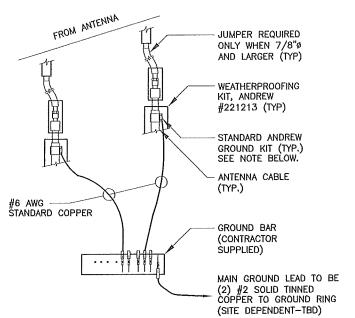
GROUND

TINNED COPPER



DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.

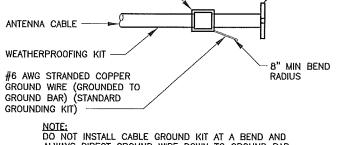
CABLE GROUND KIT **CONNECTION TO ANTENNA CABLE**



BLACK UV HEAT SHRINK ON ALL GROUNDS OUTSIDE OF SHELTER, CLEAR HEAT SHRINK INSIDE SHELTER.

DO NOT INSTALL CABLE GROUND KIT AT A BEND ALWAYS DIRECT GROUND WIRE DOWN TO COAX ISOLATED GROUND BAR EXTERNAL (CIGBE).

CONNECTION OF GROUND WIRES TO GROUNDING BARS (TOWER/MONOPOLE/ROOFTOP)



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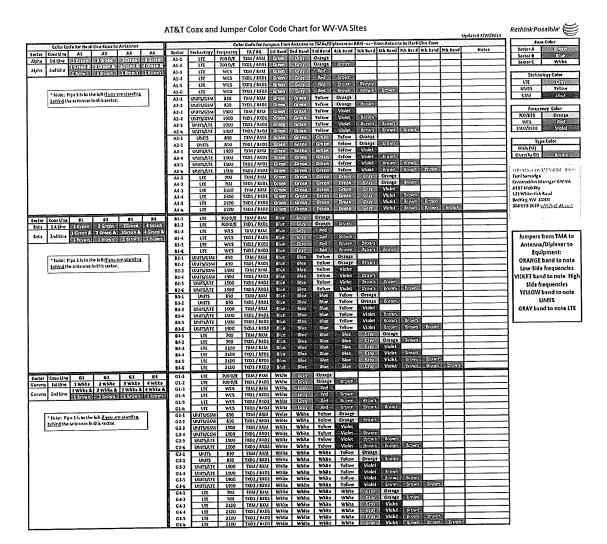
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0 07/17/14 A 04/11/14 DATE

ISSUED FOR CONSTRUCTION WEG DKC WEG DKC ISSUED FOR REVIEW BY CHK APP'D REVISIONS SCALE: DESIGNED:

GROUNDING DETAILS & COLOR CODE CHART

REV JOB # DRAWING NUMBER 10068617



COAX & JUMPER COLOR CODE CHART

