



245 COMMERCIAL ST., SUITE 203
PORTLAND, ME 04101
OFFICE: 207-358-7454 / MOBILE: 207-232-9001
BMADDEN@TILSONTECH.COM

MEMORANDUM

TO: THE CITY OF AUGUSTA
ATTN: BETSY POULIN – ASSISTANT PLANNER
DEVELOPMENT SERVICES
16 CONY ST.
AUGUSTA, ME 04330
207-626-2365
BETSY.POULIN@AUGUSTAMAINE.GOV

FROM: BENJAMIN T. MADDEN

SUBJECT: REDZONE WIRELESS CO-LOCATION – DEVELOPMENT REVIEW APPLICATION

DATE: SEPTEMBER 23, 2016

Redzone Wireless is proposing to install 9 wireless LTE spectrum antennas for broadband internet service at approximately 180' AGL on an existing 190' AGL monopole tower alongside other antennas at the address below. Please see the attached construction drawings for a more in depth look at the project.

Please find enclosed: ten (10) copies of the "Development Review Application" supplied by the City of Augusta pertaining to the site listed below, a check for two hundred and fifty dollars (\$250.00) to go towards the "Development Review Application", a check for twenty six dollars and twenty four cents (\$26.24) to go towards notifying the abutters, ten (10) copies of a zoning map with the proposed location highlighted, ten (10) copies of a tax map with the proposed location highlighted, ten (10) copies of the property record card for the proposed location, ten (10) copies of the lease both parties intend to use upon approval, ten (10) copies of the structural analysis report, and ten (10) copies of the construction drawings.

Please advise if you need further clarification or information. Thank you, and have a nice day.

<u>Site Name</u>	<u>Approximate Address</u>	<u>Zone</u>	<u>Map / Block</u>	<u>Latitude</u>	<u>Longitude</u>
Augusta (Shaw Hill)	49 Shaw Rd., Augusta, ME 04357	RRES: Rural Residential	11 / 146	44° 18' 03.50"	-69° 43' 32.10"

Please direct all correspondence to:

Tilson Technology Management, Inc
ATTN: Benjamin T. Madden (Tilson – agent for Redzone Wireless)
Address: 245 Commercial St., Suite 203
Portland, ME 04101
Phone: 207-358-7454
Email: bmadden@tilsontech.com

City of Augusta
Development Review Application
 Bureau of Planning, Department of Development Services

Address of Proposed development: 49 Shaw Rd., Augusta, ME 04357		
Zone(s): RRES: Rural Residential		
Project Name: Augusta (Shaw Hill)		
Existing Building (sq. ft.):	Proposed Building (sq. ft.):	
Existing Impervious (sq. ft.):	Proposed Impervious (sq. ft.):	
Structure Demolition: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Blasting Proposed (cu. ft.):	
Proposed Total Disturbed Area of the Site: Proposed disturbance of greater than one acre requires a Chapter 500, Stormwater Management Permit from the Maine Department of Environmental Protection (DEP).		
Owner's Name/Address: Dale & Kimberly Plummer 46 Baseball Ln. Richmond, ME 04357	Applicant's Name/Address: Redzone Wireless 91 Camden St. Suite 404 Rockland, ME 04841	Consultant's Name/Address: Tilson Technology Management, Inc. 245 Commercial St. Suite 203 Portland, ME
Phone #: 207-737-3460	Phone #: 207-593-7277	Phone #: 207-358-7454
Cell #:	Cell #:	Cell #:
e-mail:	e-mail: cam@redzonewireless.com	e-mail: bmadden@tilsontech.com
Tax Map #: 11	Lot Size (acres): 47	Form for Evidence of Standing (deed, purchase and sale agreement, other):
Lot #: 146	Frontage (Feet): 0	
Signatures:		
Applicant: 	Benjamin T. Madden (Tilson - agent for Redzone Wireless)	Date: September 23, 2016
Owner: _____		Date: _____
Agent: 	Benjamin T. Madden (Tilson - agent for Redzone Wireless)	Date: September 23, 2016
For Staff Use		
Fee Calculation: Major Development max fee is \$4,000; Minor Development max fee is \$1,000		
Major Development: \$2,000 + (number of sq ft over 25,000 x \$0.15) =		
Minor Development: \$250 + (number of sq ft over 5,000 x \$0.15) =		
All Development: Number of Abutters x (1oz First Class postage fee + \$0.15) =		
Total Fee:		

Checklist. The checklist below must be completed by the applicant. The required material or a written waiver request must be provided.

Information Required on Plan(s) See Augusta Land Use Ordinance for greater detail including Section 300-405B(1) Preliminary Plan Requirements and Section 300-305B Final Plan Requirements	Included	Waiver Requested
a. Name of Site Plan or Subdivision. 300-405B(1)(a)	X	
b. Owner(s) name and address. 300-405B(1)(b)	X	
c. Deed reference to subject parcel and immediate abutter identification. 300-405B(1)(c)	X	
d. Engineer's name, address, signature and seal. 300-405B(1)(d)	X	
e. Surveyor's name, address, signature and seal. 300-405B(1)(e)	X	
f. Scale, both in graphic and written form. 300-405B(1)(f)	X	
g. Date and revision box. 300-405B(1)(g)	X	
h. Zoning designation(s). 300-405B(1)(h)	X	
i. North Arrow (true, magnetic, dated or grid). 300-405B(1)(i)	X	
j. Preliminary site plan. 300-405B(1)(j)	X	
k. Ownership, location & present or proposed use of abutting properties. 300-405B(1)(k)	X	
l. Location map. 300-405B(1)(l)	X	
m. Streets, existing & proposed, with curve data. 300-405B(1)(m) & 300-406B(5)	X	
n. Drainage and erosion control. 300-405B(1)(n)		X
o. Utilities, existing and proposed. 300-405B(1)(o)	X	
p. Topography, 2 foot contours. 300-405B(1)(p)		X
q. Lot lines and dimensions. 300-405B(1)(q)	X	
r. Proposed use of the property. 300-405B(1)(r)	X	
s. Proposed public or common areas, if any. 300-405B(1)(s)		X
t. Boundary survey and associated information. 300-405B(1)(t)		X
u. Traffic controls, off-street parking and facilities. 300-405B(1)(u)		X
v. Proposed fire protection plans or needs. 300-405B(1)(v)		X
w. Landscaping and buffering. 300-405B(1)(w)		X
x. Outdoor lighting plan. 300-405B(1)(x)		X
y. Freshwater wetlands. 300-404B(15)		X
z. River, stream or brook. 300-404B(16)		X

Information Required in Written Project Narrative See Augusta Land Use Ordinance for greater detail Section 300-404B(1) Criteria for Reviewing the Preapplication and Section 300-603E Conditional Uses Site Plan Review Criteria	Included	Waiver Requested
1. Pollution – undue water or air pollution. 300-404B(1)		X
2. Water – sufficient potable water. 300-404B(2)		X
3. Municipal Water – adequate supply, if applicable. 300-404B(3)		X
4. Soil Erosion – unreasonable soil erosion. 300-404B(4)		X
5. Road congestion and safety. 300-404B(5) & 300-405B(1)(v)		X
6. Major Developments, additional traffic movement. 300-404B(6)		X
7. Sewage waste disposal – adequate provisions. 300-404B(7)		X
8. Solid waste – adequate provisions. 300-404B(8)		X
9. Aesthetic, cultural, and natural values. 300-404B(9)		X
10. Conformity with City ordinances and plans. 300-404B(10)	X	

Additional Information Required in Written Narrative (continued) Where the items below duplicate the items above, identical responses are permitted and encouraged.	Included	Waiver Requested
11. Financial and technical capacity. 300-404B(11)		X
12. Surface water, shorelands and outstanding rivers. 300-404B(12)		X
13. Groundwater – negative impact. 300-404B(13)		X
14. Flood areas. 300-404B(14)		X
15. Freshwater wetlands – description of impact. 300-404B(15)		X
16. River, stream or brook – description of impact. 300-404B(16)		X
17. Stormwater – management plans. 300-404B(17)		X
18. Access to direct sunlight. 300-404B(18)		X
19. State permits – description of requirements. 300-404B(19)		X
20. Spaghetti lots prohibited – 300-404B(20)		X
21. Outdoor lighting – description of lighting plans. 300-404B(21)		X
22. Neighborhood compatibility – description per ordinance. 300-603E(1)		X
23. Compliance with plans and policies. 300-603E(2)		X
24. Traffic pattern, flow and volume analysis. 300-603E(3)		X
25. Public facilities – utilities including stormwater. 300-603E(4)		X
26. Resource protection and the environment. 300-603E(5)		X
27. Performance standards. 300-603E(6)		X
28. Financial and technical ability. 300-603E(7)		X

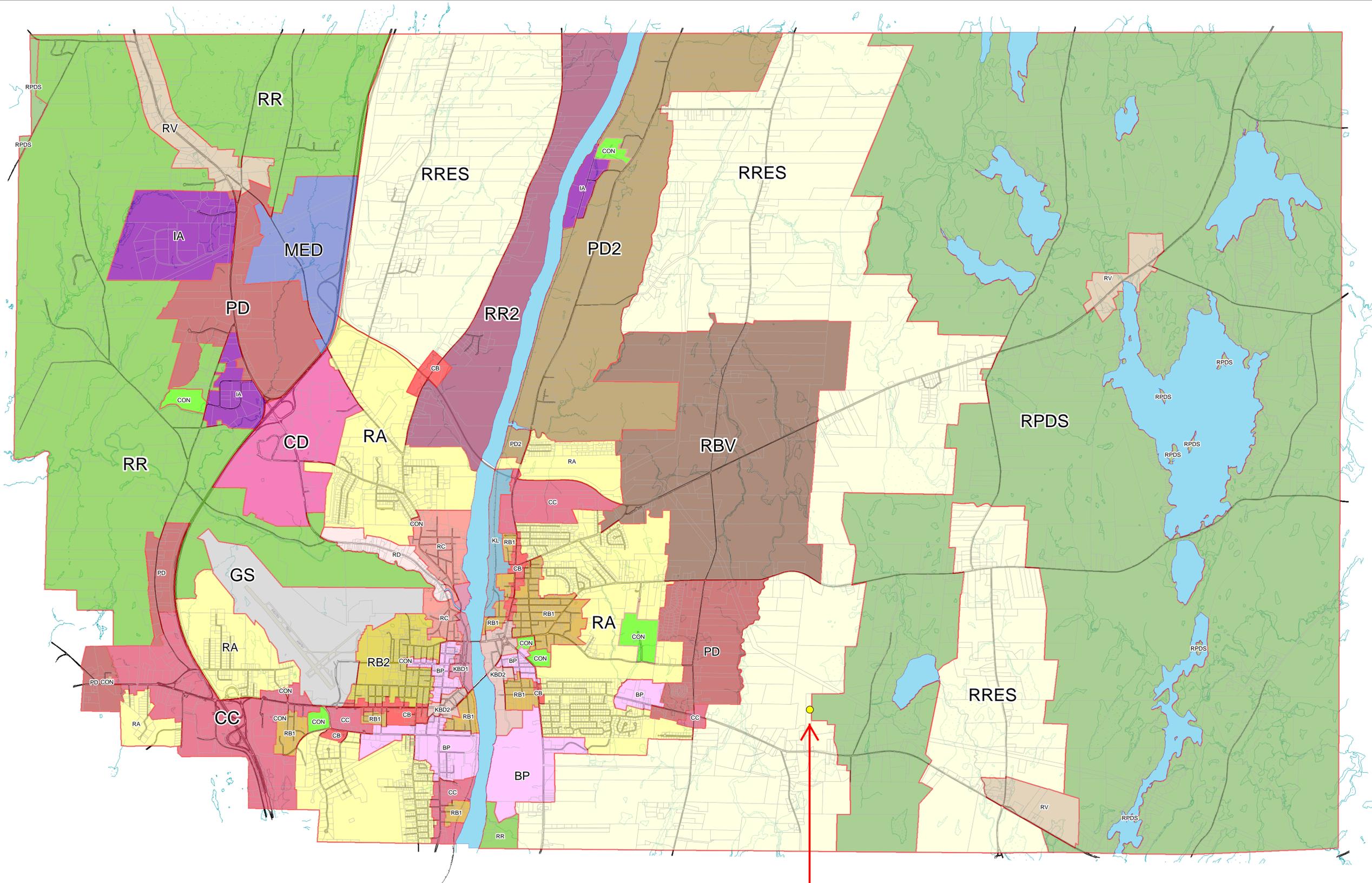
Application Materials

The application materials that are required for a complete application are listed below:

Paper Copies	Included	Waiver Requested
10 copies of the Application Packet	X	
- Application Form(s)	X	
- Project narratives	X	
- Purchase & sale agreement, or other document to show standing	X	
- Letter authorizing the agent to represent the applicant	X	
3 copies of any stormwater report		X
2 copies of any traffic report		X
10 reduced-sized complete plan sets on 11" x 17" paper	X	
4 full-sized complete plan sets on ARCH D or E size paper		X
Payment in full of application fee (Note: an abutter notification fee will be assessed after the application is determined to be complete. The fee is \$0.15 plus the cost of first class postage for each abutter that will be notified as required by the ordinance.)		
Electronic Copy		
1 CD that includes each of the application documents in Adobe PDF format		

For Official Use:

\$ _____ **Application** Fee Paid. Received By (Initials): _____ Date: _____
 \$ _____ **Abutter** Notification Fee Paid. Received By (Initials): _____ Date: _____



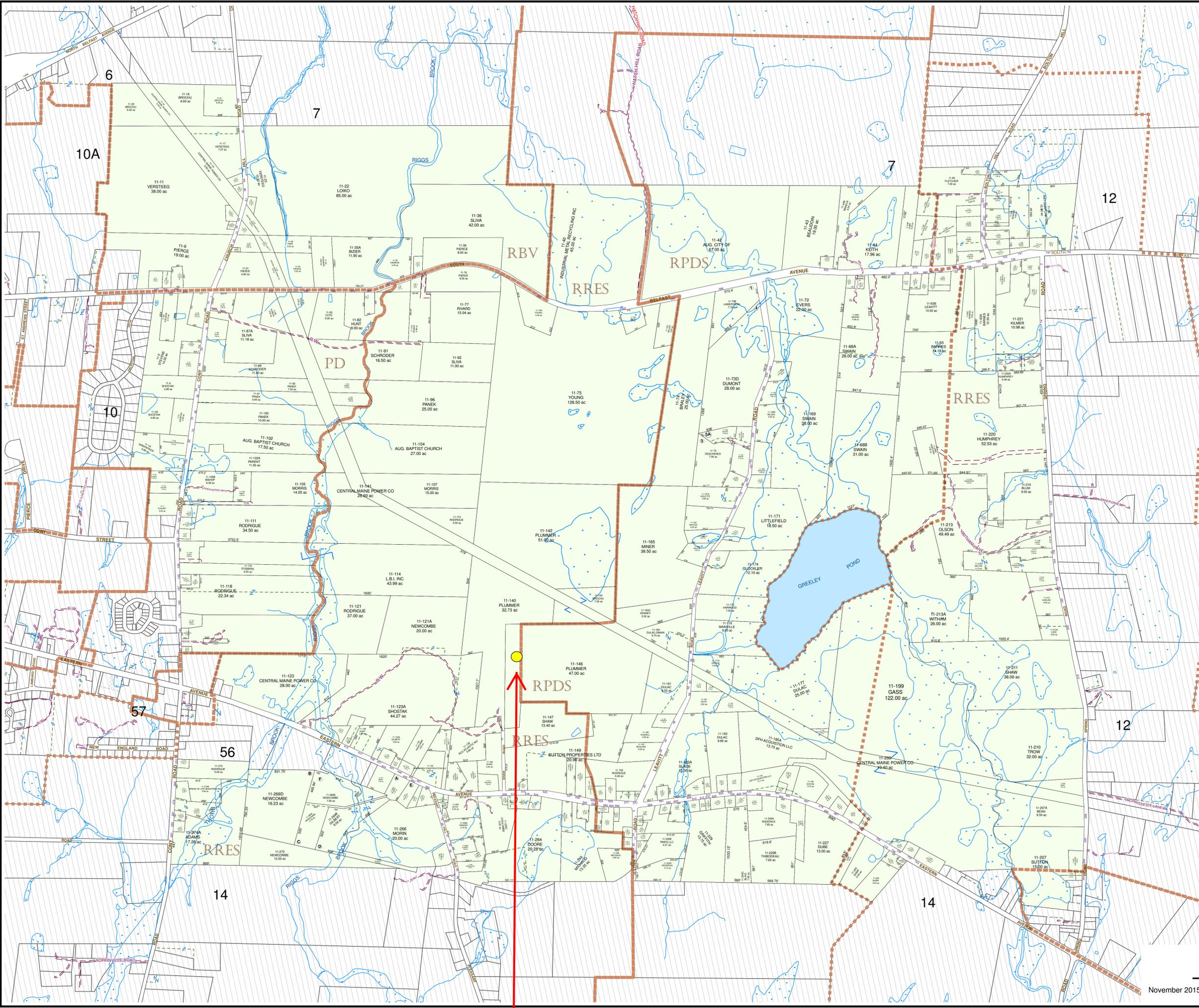
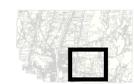
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|---|---|---|--|
| BP - Institutional/Business/Professional | IA - Industrial | PD2 - Planned Development 2 | RD - Resource Development |
| CB - Local Business | KBD1 - Kennebec Business 1 | RA - Low Density Residential | RPDS - Rural Ponds |
| CC - Regional Business | KBD2 - Kennebec Business 2 | RB1 - Medium Density Residential | RR - Rural River |
| CD - Civic Center | KL - Kennebec Lockes | RB2 - Medium Density Residential | RR2 - Rural River 2 |
| CON - Contract or Conditional | MED - Medical | RBV - Riggs Brook Village | RRES - Rural Residential |
| GS - Government Services | PD - Planned Development | RC - High Density Residential | RV - Rural Village |



2

City of Augusta Base Zones

Does NOT Show
Overlay Zones



Map 11

- Zoning
- Cemeteries
- All_Tie_In_Div
- Historical Lines
- Private ROW
- Streams
- Sublots
- Map 11 Parcels
- Water
- Neighbor Map Parcels
- Tie-in
- Sublots Annotation



SHAW ROAD - REAR

Location SHAW ROAD - REAR

Mblu 11/ 146/ / /

Acct# 45042

Owner PLUMMER DALE W &
KIMBERLY K

Assessment \$19,300

PID 3191

Building Count 1

Current Value

Assessment			
Valuation Year	Improvements	Land	Total
2006	\$0	\$19,300	\$19,300

Owner of Record

Owner PLUMMER DALE W & KIMBERLY K
Co-Owner
Address 46 BASEBALL LANE
 RICHMOND, ME 04357

Sale Price \$46,500
Certificate
Book & Page 8694/ 206
Sale Date 11/17/2005
Instrument 1G

Ownership History

Ownership History					
Owner	Sale Price	Certificate	Book & Page	Instrument	Sale Date
PLUMMER DALE W & KIMBERLY K	\$46,500		8694/ 206	1G	11/17/2005
CAROLIN DENNIS A & TRACIE Y	\$0		7971/ 319	1A	10/14/2003
GLOCKLER CAROL S	\$0				03/03/1997
GLOCKLER WALTER H.JR. & CAROL	\$0		3566/ 10	1A	06/09/1989
GLOCKLER WALTER H. JR. & CAROL	\$0		3282/ 240		12/03/1987

Building Information

Building 1 : Section 1

Year Built:

Living Area: 0

Building Attributes	
Field	Description
Style	Vacant Land
Model	
Grade:	
Stories:	
Occupancy	
Exterior Wall 1	
Exterior Wall 2	
Roof Structure:	
Roof Cover	
Interior Wall 1	
Interior Wall 2	
Interior Flr 1	
Interior Flr 2	
Heat Fuel	
Heat Type:	
AC Type:	
Total Bedrooms:	
Total Bthrms:	
Total Half Baths:	
Total Xtra Fixtrs:	
Total Rooms:	
Bath Style:	
Kitchen Style:	

Building Photo



(http://images.vgsi.com/photos/AugustaMEPhotos/\00\01\69\86.jpg)

Building Layout

Building Layout

Building Sub-Areas (sq ft)	Legend
No Data for Building Sub-Areas	

Extra Features

Extra Features	Legend
No Data for Extra Features	

Land

Land Use

Use Code 1320
Description RES ACLNUD
Zone RPDS
Neighborhood
Alt Land Appr No
Category

Land Line Valuation

Size (Acres) 47
Frontage 0
Depth 0
Assessed Value \$19,300

Outbuildings

Outbuildings	<u>Legend</u>
No Data for Outbuildings	

Valuation History

Assessment			
Valuation Year	Improvements	Land	Total
2017	\$0	\$19,300	\$19,300
2016	\$0	\$19,300	\$19,300
2015	\$0	\$19,300	\$19,300

Valuation History

Exemptions			
Exemption Year	Code	Description	Amount
2007	2	NON-RESIDENTS	\$0

TOWER SUB-LEASE AGREEMENT

1. This Tower Sub-Lease Agreement (the "Sub-Lease") is made and entered into this ____ day of _____ 2016, by and between MCF Communications, LLC, a Massachusetts Limited Liability Company, whose mailing address is 733 Turnpike Street, Suite 105, North Andover, MA. 01845, hereinafter referred to as a "Sub-Lessor", and _____, a _____ corporation, having an address at _____, hereinafter referred to as "Sub-Lessee". This Lease is subject to a prime lease dated _____, 20__ in which _____ is Lessor and MCF Communications, Inc. is Lessee ("Prime Lease").
2. It is hereby agreed that Sub-Lessor will provide Sub-Lessee with certain space for installing, removing, replacing, modifying, maintaining, housing and operating certain communications equipment, including but not limited to transmitter/receiver base stations, antenna systems, satellite dishes, cable wiring, back up sources including generators and fuel storage tanks, and related fixtures ("Equipment") and that Sub-Lessee will accept such space for such purposes, subject to the following terms and conditions:
3. Property: Sub-Lessor has exclusive right to the tower (defined below) located on the real property located at _____ as more particularly shown as Lot # ____ on the Town of _____ Assessor's Map # _____, recorded in the _____ Registry of Deeds in Book _____, at Page(s) _____ (hereinafter the "Leased Premises") comprised of a parcel of land improved by a tower thereon commonly known as ("Tower"). Sub-Lessor's exclusive rights to lease to Sub-Lessee are derived from the Prime Lease. A Notice of Lease is attached hereto as Exhibit A.
4. Approved Use of Tower Site by Lessee: Lessor hereby leases to Lessee, and Lessee hereby leases from Lessor the following (hereinafter collectively referred to as the "Leased Premises"):
 - (a) Ground space measuring _____ square feet in size and antenna per mounting space on the tower at _____ feet center line as further shown on Exhibit B.
 - (b) Space required for cable runs to connect the equipment and antennae.
 - (c) Transmitting frequencies _____ Receiving frequencies: _____.
 - (d) All other permitted use of the Leased Premises, including without limitation, Lessee's approved equipment, frequencies, channels and the identification and location of the Leased Premises (as defined herein) are described in Exhibits A and B, attached hereto and made a part of this Agreement
5. Use/Equipment: The Leased Premises may be used by Sub-Lessee for the installation, maintenance, repair, or replacement of equipment including antennas, related ancillary equipment and associated equipment on the Leased Premises as described in Exhibit B (hereinafter collectively referred to as the "Equipment") for the transmission and reception of radio communication signals as licensed by the Federal Communications Commission ("FCC"). Sub-Lessee agrees not to modify Section 4 above and/or add any additional antennae, ground equipment or ancillary equipment other than is set forth in the attached Exhibit B as approved by Sub-Lessor without prior written request and written approval by Sub-Lessor. Sub-Lessor's written approval of any additional equipment or antennas shall include a rent increase to which Sub-Lessee will agree in writing prior to installing or otherwise locating the same on the Leased Premises. Any such additional antennas or equipment shall in all ways comply with the provisions of this Sub-Lease.
6. Contractors: Sub-Lessee agrees, at Sub-Lessee's expense, to use a PCS Construction of Limington, Maine as the Contractor for the antenna and equipment installation and maintenance on Tower, provided service pricing is competitive with industry standards.
7. Communications Equipment: Sub-Lessee will maintain the communications equipment in a safe and good condition, reasonable wear and tear excepted, and in accordance with Provision 17 below.
8. Term: The initial term of this Sub-Lease shall be five (5) years ("Initial Term") commencing upon the earlier of the start of installation of the equipment, or ninety (90) days after the execution of this Sub-Lease by all parties (the "Commencement Date"). The Initial Term of this Sub-Lease shall be automatically renewed and extended,

unless terminated as provided herein, for four (4) additional terms of (5) years each ("Renewal Terms") unless, at least sixty (60) days prior to the termination of the then existing term, Sub-Lessee notifies Sub-Lessor of its intention not to renew the Sub-Lease. Sub-Lessor acknowledges that if the Initial Term or any Renewal Term under the Prime Lease is not renewed, Sub-Lessor shall notify Sub-Lessee immediately of such non-renewal, and this Sub-Lease shall expire on the date the Prime Lease expires. The Initial Term and Renewal Term(s) are collectively referred to as the "Term".

9. Rent: Upon the Commencement Date, Sub-Lessee shall pay Sub-Lessor monthly base rent during the Initial Term in accordance with the following schedule, prorated for any partial months, as rent, the sum of _____ (\$ _____) per month (the "Rent"). Rent shall be payable on the first day of each month, in advance, made payable to MCF Communications, bg, Inc. at Sub-Lessor's address specified in the Notice Section of this Sub-Lease. On each anniversary of the Commencement Date of this Sub-Lease, base Rent will be increased by five (5%) percent over the base Rent payable for the immediately preceding lease year.
10. Security Deposit: A security deposit in the amount of _____ (\$ _____) (the "Security Deposit"), which is equivalent to one (1) month's rent, shall be paid to Lessor upon the Commencement Date of this Lease, and shall be held by Lessor without liability for interest and not in trust or in a separate account, as security for the performance by Lessee or Lessee's covenants and obligations under this Lease. The Security Deposit shall not be considered an advance payment or rental or a measure of Lessor's damages in case of default. Upon the occurrence of any default by Lessee, Lessor shall notify lessee in writing within thirty (30) days of the alleged default of its intent to invade the Security Deposit. If Lessee does not cure the default within thirty (30) business days of written notice, Lessor may, without prejudice to any other remedy, use and apply the Security Deposit to the extent necessary to make good any arrearage of rent and any other damage, injury, expense, or liability suffered by Lessor by such default. Following any such application of the Security Deposit, Lessee shall pay to Lessor on demand as additional rent, the amount so applied in order to restore the Security Deposit to its original amount. If Lessee is not then in default hereunder, any remaining balance of the Security Deposit shall be returned by Lessor to Lessee within thirty (30) days after the termination of this Lease and after; (i) Lessee has vacated and surrendered the premises vacating; (ii) Lessor has inspected the Leased Premises after such vacating; and (iii) Lessee has complied with all the terms, conditions and covenants of the lease. In the event Lessor assigns its rights under the Lease, Lessor shall assign the Security Deposit to the assignee thereafter shall have no further liability for the return of the Security Deposit.
11. Utilities: Rent due and payable under this Sub-Lease shall be exclusive of telephone and electricity. Sub-Lessee shall have the right to arrange for its own telephone and electrical service and shall pay directly for such services to the local utility providers. Sub-Lessor agrees to provide any cooperation reasonably requested by Sub-Lessee to facilitate telephone and electrical installations required by the Sub-Lessee.
12. Title and Quiet Possession: Sub-Lessor represents that; a) it derives its exclusive leasing right to the Tower from the Prime Lease; b) it has the right to enter into this Sub-Lease; c) the person signing this Sub-Lease has the authority to sign; d) Sub-Lessee is entitled access to the property at all times and to the quiet possession of the Leased Premises throughout the Initial term and each Renewal Term so long as Sub-Lessee is not in default of any term of this Sub-Lease beyond expiration of a reasonable cure period; and e) that no additional ground lease or easement is required from any third party for access to the Leased Premises.
13. (A) Termination: Except as otherwise provided herein, this Sub-Lease may be terminated without penalty or further liability as follows:
 - (i) By either party, upon written notice to the other party, upon a default of any covenant or term hereof by the other party, which default is not cured within sixty (60) days of receipt of written notice of the default; or
 - (ii) By Sub-Lessee, upon thirty (30) days written notice to Sub-Lessor, if Sub-Lessee is unable to obtain or maintain any license, permit or other governmental approval necessary to the construction and/or operation of the equipment on the Leased Premises; or
 - (iii) By Sub-Lessee, upon thirty (30) days written notice to Sub-Lessor, if the Leased Premises or equipment is destroyed or damaged and rendered unsuitable for normal use; or

- (iv) By Sub-Lessee, upon ninety (90) days written notice to Sub-Lessor, if Sub-Lessee determines that any of the equipment cannot be used without interference from, or causing any undue interference to, other occupants of the Property.
 - (B) Damages: In the event Sub-Lessee defaults under any term of this Lease, Sub-Lessee shall pay all rent for the period to the end of the lease term set forth herein or under any amendment or extension in addition to all costs and legal fees incurred by Sub-Lessor to evict Sub-Lessee and / or repair / replace damages to the Leased Premises.
14. Taxes: Sub-Lessee will pay to Sub-Lessor any taxes which are attributed to Sub-Lessee's communications equipment, antennas or its other personal property located at the Leased Premises. Sub-Lessor will give Sub-Lessee timely prior written notification of any such taxes, which Sub-Lessee shall pay to Sub-Lessor within thirty (30) days of Sub-Lessor's sending Sub-Lessee such notice.
 15. Approvals: Sub-Lessor hereby agrees to cooperate with Sub-Lessee in obtaining any approvals required by Sub-Lessee for its use of the Leased Premises. Sub-Lessee shall be responsible for any cost or expense associated with obtaining any approval or permit associated with its use of the Leased Premises.
 16. Inspections: Sub-Lessee, at its sole cost and expense, may, prior to the commencement date, conduct such surveys, tests and inspections, as Sub-Lessee considers reasonably necessary or desirable in connection with the intended use of the Leased Premises. Sub-Lessee shall conduct such inspections at reasonable times and without causing unreasonable interference to existing Sub-Lessees on the Property.
 17. Access to the Leased Premises: Sub-Lessee will have the right to access to the Leased Premises, twenty-four (24) hours a day, seven (7) days a week as may be required for Sub-Lessee to access, install, construct, house, operate, maintain, repair, replace, protect, remove, modify or secure the communications equipment and otherwise exercise the rights granted herein.
 18. Maintenance: Sub-Lessee shall perform all repairs necessary to keep its equipment located on or about the Leased Premises in good condition, reasonable wear and tear and damage from the elements excepted. If Sub-Lessee damages the Leased Premises or any other tenants' equipment during the installation or maintenance of its equipment, Sub-Lessee agrees to repair such damage promptly or replace the damaged part of the Leased Premises or other tenant's equipment at its sole cost and expense within five (5) days from the date notice of the damage. Failure to repair or replace the damaged premises or equipment within the five (5) day period described herein shall be a default under this Lease and Sub-Lessor shall have the right to terminate this Lease. Upon notice of termination of this Lease, Sub-Lessee shall pay to Sub-Lessor rent through and including the balance of the Lease period, all costs of repair or replacement (at Sub-Lessor's sole and exclusive discretion) of damaged premises and / or equipment and all costs and reasonable attorney fees expended by Sub-Lessor pursuant to this default. Sub-Lessee agrees to use the master lock installed by Sub-Lessor at the main entrance of the Leased Premises to access Sub-Lessee's individual equipment shelter located within the Sub-Lessor's compound, at all times. Sub-Lessee further agrees not to install any additional lock(s) to access the main entrance.
 19. Interference:
 - (A) RF compliance: Sub-Lessor and Sub-Lessee agree to comply with the Federal Communications Commission ("FCC") radio frequency ("RF") exposure rules and requirements for RF exposure to humans.
 - (B) Radio frequency and/or electrical interference: (a) Sub-Lessee will not cause radio frequency and/or electrical interference to the existing equipment of Sub-Lessor or to any other tenant who is using the site upon the earlier of the commencement date or at the time Sub-Lessee installs its communications equipment, provided that the equipment used by Sub-Lessor or other Sub-Lessee is operating within the technical parameters specified by its manufacturer and/or as defined by the FCC (see schedule C) for a list of existing and/or known wireless communications users on the Leased Premises). Upon written notice from Sub-Lessor to Sub-Lessee of such interference, Sub-Lessee will take all reasonable steps to correct such interference in a timely manner. Sub-Lessor will have the option of resolving the interference only after providing notice and a reasonable cure period to the Sub-Lessee, and the Sub-Lessee shall reimburse Sub-Lessor for reasonable costs incurred. If such interference cannot be reasonably corrected within five (5) business days from receipt

of Sub-Lessor's notice, Sub-Lessee will cease using its communications equipment, except for testing, until such time as Sub-Lessee corrects the interference. In the event Sub-Lessee cannot correct interference, Sub-Lessee will have the option to terminate this Lease without liability there under, upon thirty (30) days written notice to Sub-Lessor.

(C) After the date of this lease, Sub-Lessor will not intentionally grant a lease to any other party for use of the site or modify an existing lease for the use of the site, or change its use of the site or permit an existing tenant to make any changes to its use of the site, if such would in any way adversely affect or interfere with the operation of Sub-Lessee's communications equipment. If Sub-Lessor or its agents, employees or other tenants of Sub-Lessor's site causes uncorrected radio and/or frequency electrical interference with Sub-Lessee's communications equipment, Sub-Lessor will correct the interference or require its tenant to do so within fifteen (15) days of learning of the interference. If the interference cannot be corrected within fifteen (15) business days from receipt of Sub-Lessee's notice, Sub-Lessor will take action to cause the party creating the interference to cease using its equipment, except for testing, until the interference has been corrected. If after thirty (30) days such interference has not been completely corrected to Sub-Lessee's reasonable satisfaction, Sub-Lessee will have the option to terminate this lease without further liability hereunder.

20. Insurance: Sub-Lessee shall carry during the lease term, at its own cost and expense, the following insurance: a) "all risk" property insurance for its property's replacement cost; and b) comprehensive general liability insurance with a combined single limit of \$3,000,000 for bodily injury and property damage. Sub-Lessee shall provide a certificate of insurance to Sub-Lessor within thirty (30) days of written request. Sub-Lessee's insurance policy shall name MCF Communications Inc. and Prime Lessor _____ as an additional insured and provide that termination or cancellation will not occur without at least fifteen (15) days prior written notice to MCF Communications.

21. Construction Drawings: Prior to installation of any equipment on the Property and within sixty (60) days of signing this Lease, Sub-Lessee shall submit to Sub-Lessor construction drawings (the "construction drawings") which shall detail the plans and specifications for Sub-Lessee's Equipment installation. Sub-Lessor shall approve the construction drawings within fifteen (15) business days from submission or provide specific reasons for disapproval. In the event that Sub-Lessor does not approve or does not provide reasonable grounds for disapproval of the construction drawings within fifteen (15) business days, then the construction drawings shall be deemed approved. If Sub-Lessor provides reasonable grounds for disapproval within the (15) day period, Sub-Lessee shall not proceed with construction and within fifteen (15) days of Sub-Lessor's disapproval of the plans may submit new plans to Sub-Lessor for approval or withdraw from this Lease. If Sub-Lessee submits new plans, Sub-Lessor shall within fifteen (15) days approve or disapprove the new plans. If Sub-Lessor disapproves the new plans, Sub-Lessor has the right to terminate this Lease. If within forty-five (45) days after the initial submission plans are not approved, Sub-Lessor may declare this Lease null and void.

22. Environmental Indemnification:

(A) Sub-Lessee will defend, indemnify and hold harmless Sub-Lessor from and against any and all losses, claims, liabilities, damages, demands, fines, costs and expenses (including reasonable legal expenses) of whatever kind and nature that Sub-Lessor may incur as a result of the release by Sub-Lessee on, in, or under the Leased Premises of any hazardous materials, hazardous substances, hazardous wastes, pollutants, asbestos, petroleum, oil or other fuels as those are defined in the Comprehensive Environmental Response Compensation and Liability Act, or applicable state law.

(B) Sub-Lessor represents that he is not aware that the Leased Premises has not been used for the generation, storage, treatment or disposal of hazardous wastes as those terms are defined in the comprehensive environmental response compensation and liability act, or applicable state law. Sub-Lessor has not had an environmental study performed.

23. Non-Disturbance: In the event the Property is encumbered by a mortgage as of the date of this Sub-Lease, the Sub-Lessor shall request the prime Lessor to request the holder of each such mortgage to execute non-disturbance and subordination agreement to be prepared by Sub-Lessee, and cooperate with Sub-Lessee toward such end to the extent that such cooperation does not cause Sub-Lessor or prime Lessor additional financial liability or expense. Sub-Lessor is not a guarantor that a subordination agreement or nondisturbance agreement will be executed.

24. **Liability and Indemnity:** Sub-Lessee agrees to indemnify and hold the Sub-Lessor harmless from any loss, damage, cost, expense or claims which Sub-Lessor may incur as a result of Sub-Lessee's breach of this Sub-Lease, or any negligent act of Sub-Lessee, or of its agents, servants invitees and employees, arising from or related to this Sub-Lease. Sub-Lessor agrees to indemnify and hold Sub-Lessee harmless from any loss, damage, cost, expense or claims, which Sub-Lessee may incur as a result of Sub-Lessor's intentional breach of this Sub-Lease.
25. **Assignment:** Upon Sub-Lessor's written consent, which will not be unreasonably withheld, Sub-Lessee will have the right at any time to assign this Sub-Lease or to sublet the Leased Premises to any corporation which is a parent, subsidiary or affiliate of Sub-Lessee or which is acquiring fifty one percent (51%) or more of all of the assets or stock of Sub-Lessee. For the purposes of this provision, a "parent" will mean a corporation which owns not less than fifty-one percent (51%) of whose outstanding stock will be owned by Sub-Lessee, and an "affiliate" will mean any corporation not less than fifty-one percent (51%) of whose outstanding stock will be owned by Sub-Lessee's parent. Upon such written assignment or subletting, Sub-Lessee will be relieved of all obligations hereunder and the assignee or subtenant will succeed to all obligations, rights and options (including renewal options) of Sub-Lessee upon receiving prior written approval of the assignment by Sub-Lessor. Sub-Lessee agrees that Sub-Lessor may transfer all or any rights and obligations pursuant to this Lease without written consent of Sub-Lessee.
26. **Relocation of Communications Equipment:** In the event that Sub-Lessor requires Sub-Lessee to temporarily disconnect and / or relocate its communications equipment at the Leased Premises, Sub-Lessor will pay the costs to disconnect and reconnect and, if necessary, relocate the Sub-Lessee's equipment. Sub-Lessee shall fully cooperate with this process and any other improvements Sub-Lessor shall make on the Tower.
27. **Quiet Enjoyment:** Sub-Lessor covenants that Sub-Lessee will, upon paying the rent and observing the other covenants and conditions herein upon its part to be observed, peaceably and quietly hold and enjoy the Leased Premises during the initial term and any renewal term of this Lease, without hindrance or ejection by the Sub-Lessor, and any person or persons claiming under the Sub-Lessor.
28. **Representations and Warranties:** Sub-Lessor represents and warrants that it (a) leases the Leased Premises (as more specified in schedule A) from the owner of the Property in fee simple, and (b) that it is duly organized, validly existing and in good standing and has all the rights powers and authority to make this Lease and bind itself through the party set forth below as signatory of Sub-Lessor. Sub-Lessee represents and warrants that it is; (a) duly organized, validly existing, (b) in good standing and has all the rights powers and authority to make this Lease and bind itself through the party set forth below as signatory of Sub-Lessee. Sub-Lessee agrees to provide Sub-Lessor with a certificate of vote or authorization simultaneously with signing of this Lease confirming the signatory authority of the individual authorized to execute the Lease on its behalf.
29. **Destruction or Condemnation of Leased Premises:** If the Leased Premises, in whole or in part, is damaged by fire or other casualty so as to prevent Sub-Lessee's use of the Leased Premises and Sub-Lessor cannot repair the Leased Premises within thirty (60) days after the date of the damage, Sub-Lessee will have the option to terminate this Lease, without any further liability hereunder, upon fifteen (15) days written notice to Sub-Lessor. In the event of partial destruction of the Leased Premises, Sub-Lessee will be entitled to rent abatement until Sub-Lessor completes repairs and Sub-Lessee is able to resume use of the Leased Premises. If a proceeding is instituted by any governmental authority pursuant to which the site, in whole or in part, is proposed to be taken or condemned, Sub-Lessee will have the option to terminate this Lease at any time thereafter during the pendency of such proceeding without further liability hereunder, upon thirty (30) days written notice to Sub-Lessor. Sub-Lessee may, at its own expense, make a claim in any condemnation proceeding involving the site for losses related to Sub-Lessee's communications equipment and relocation costs.
30. **Consent:** Whenever under the Sub-Lease, the consent or approval of either party is required or a determination must be made by either party, no such consent or approval will be unreasonably withheld or delayed, and all such determinations will be made on a reasonable basis and in a reasonable manner.

31. Entire Agreement and Binding Effect: This Sub-Lease and any attached Schedules, Exhibits or Amendments signed or initialed by the parties, constitute the entire Agreement between Sub-Lessor and Sub-Lessee; no prior written or contemporaneous oral promises or representations will be binding. The undersigned have full power and authority to bind their principals to this Sub-Lease. This Sub-Lease will not be amended, or changed except by written instrument signed by both parties. If any clause or provision of this Sub-Lease is found to be legally invalid and legally unenforceable with respect to any party, the remainder of this Sub-Lease will not be affected and will remain valid and enforceable. Paragraph captions herein are for convenience only and neither limit nor amplify the provisions of this Sub-Lease. The provisions of this Sub-Lease will be binding upon and inure to the benefit of the parties hereto and their respective heirs, executors, administrators, successors, transferees, and permitted assignees.
32. Governing law: This Sub-Lease shall be governed by the laws of the State of Rhode Island and where Leased Premises are located, without regard to conflict of laws.
33. Notice: Any notice or demand required or permitted to be given hereunder will be sufficiently given of made by regular, registered, certified mail, postage prepaid, or return receipt requested, overnight courier, or hand delivery addressed to the other party at the address set forth herein. Any such notice or demand will be deemed to have been made five (5) business days after it is postmarked in the united states postal service, if by mail, the next business day if by overnight courier, and upon receipt if by hand delivery. Either party may from time to time designate any other address for this purpose by giving written notice thereof to the other party.

Addresses for notice:

Sub-Lessor: MCF Communications, LLC
733 Turnpike Street, Suite 105
North Andover, MA. 01845
ATTN: Mike McFadden

Sub-Lessee:

34. Sub-Lessee agrees to pay a one-time fee of Four Thousand Dollars (\$4,000.00), due and payable upon execution of this Sublease, to supplement Sublessor's engineering and environmental compliance costs associated with obtaining all applicable licenses, permits and approvals necessary to develop the Tower site for the purpose intended herein.

35. Each party agrees to complete execution of this Lease within thirty (30) days following execution of this Lease by the first party signing.

IN WITNESS HEREOF, Sub-Lessor and Sub-Lessee have executed this Lease effective as of this _____ day of _____ 2016.

Sub-Lessor: MCF Communications, LLC.

Signature: _____

Name: Michael McFadden

Title: President

Date: _____

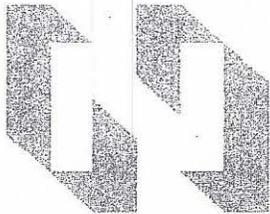
Sub-Lessee: _____

Signature: _____

Name: _____

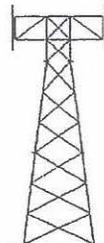
Title: _____

Date: _____



FRED A. NUDD CORPORATION

1743 ROUTE 104, BOX 577
ONTARIO, NY 14519
(315) 524-4249 FAX (315) 524-4249
www.nuddtowers.com



Design of:
190' Monopole Tower

Project #: 111-13018
Location: Augusta, Kennebec Co., ME / Site No.:

PRODUCTIVE CONSTRUCTION SERVICES

968 Cape Road, Box 529
Limington, ME 04049
2/16/11



2.16.2011

Davinci
Engineering, Inc.

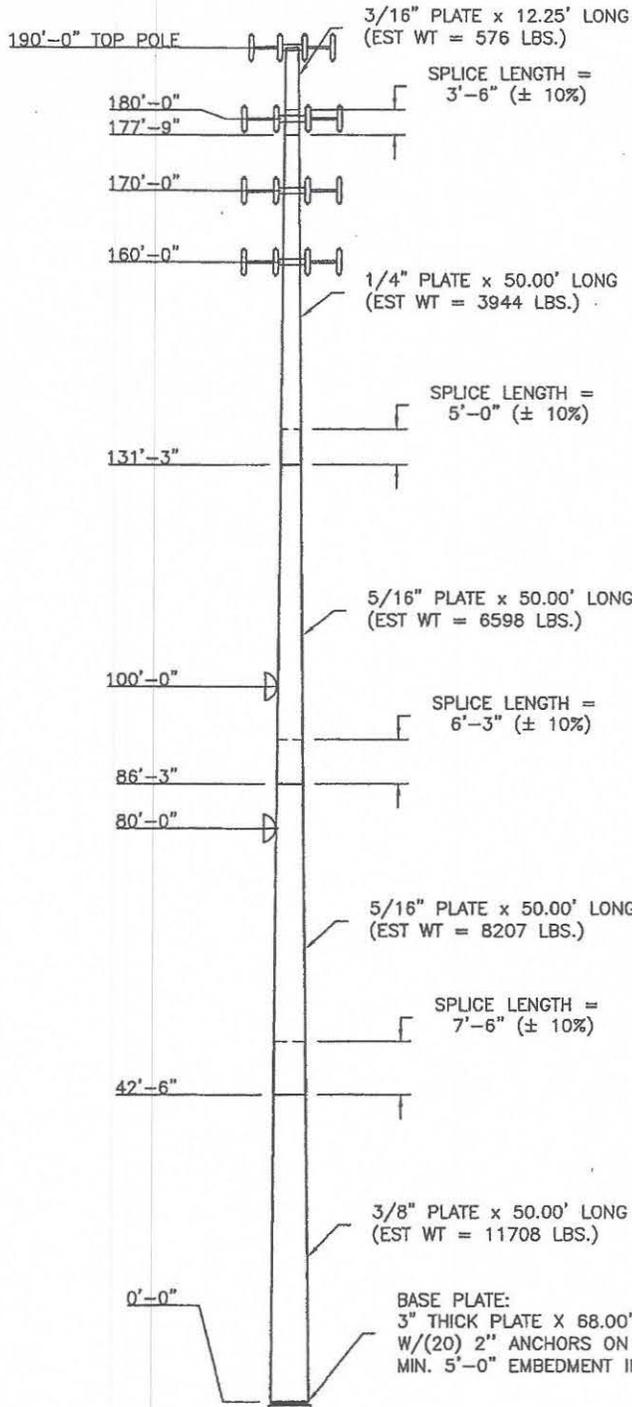
P.O. Box 66, 110 W. Main Street,
Unionville Center, OH 43077
PH: 614.937.4922

DaVinci Engineering, Inc.

PO Box 66, Unionville Center, OH 43077
 PH: 614-937-4922 / FX: 614-413-2887



FRED A. NUDD CORPORATION
 1743 ROUTE 104, BOX 577
 ONTARIO, NY 14519
 (315) 524-2531 FAX (315) 524-4249



DESIGN CRITERIA PER ANSI/TIA-222-G-2

STRUCTURE CLASS	EXPOSURE CATEGORY	TOPOGRAPHIC CATEGORY	CREST HEIGHT
II	C	1	

DESIGN SPECIFICATIONS:

- DESIGNED ACCORDING TO: ANSI/TIA-222-G-2
- COMPLIES WITH: 2006 INTERNATIONAL BUILDING CODE
- Wind Speed Load Cases: (According to the ANSI/TIA-222-G-2)
- LOAD CASE 1: 95 MPH DESIGN WIND SPEED
- LOAD CASE 2: 40 MPH WIND SPEED + 1" RADIAL ICE
- LOAD CASE 3: 60 MPH OPERATIONAL WIND SPEED

Pole Steel Specifications:

- POLE SHAFT SHAPE: 18-Sided Tapered Polygon
- POLE SHAFT TAPER: 0.23224 inches/ft.
- POLE SHAFT STEEL: ASTM A572 GR. 65 (Fy= 65 KSI)
- BASE PLATE STEEL: ASTM A572 GR. 50 (Fy= 50 KSI)
- ANCHOR RODS: 2"Ø 2 in. F1554 GR. 105 X 6'-0" LONG

Monopole Base Reactions: (Base Reactions For Foundation Design)

MOMENT:	5400 ft-kips
SHEAR:	42.0 kips
AXIAL:	62.0 kips

Pole Shaft Sections Dimensions:

SECTION LENGTH (FT)	WALL THK. (INCHES)	SPLICE LENGTH (FT)	TOP DIA. (INCHES)	BOT. DIA. (INCHES)
12.25	0.1875	3.50	22.000	24.845
50.00	0.2500	5.00	23.657	35.269
50.00	0.3125	6.25	33.608	45.220
50.00	0.3125	7.50	43.143	54.755
50.00	0.3750	0.00	52.388	64.000

ELEVATION	95 MPH WIND SPEED		60 MPH WIND SPEED	
	DEFLECTION	ROTATION	DEFLECTION	ROTATION
190'-0"	175.0"	8.4°	38.8"	1.8°

Appurtenance List:

Elev.(FT)	Equipment Description:
TOP	LIGHTNING ROD (OPTIONAL)
190.0	(12) RFS APXV18-206517 PANEL W/ (6) TMA'S
190.0	12-FT T-ARM MOUNTS
180.0	(12) POWERWAVE 7770 PANEL W/ (6) TMA'S
180.0	14-FT LOW PROFILE PLATFORM
170.0	(6) ANTEL WPA-80063/4 + (3) BXA-70063/4 + (3) BXA-171063/8
170.0	14-FT LOW PROFILE PLATFORM
160.0	(12) POWERWAVE 7770 PANEL W/ (6) TMA'S
160.0	14-FT LOW PROFILE PLATFORM
100.0	(1) 6-FT STD. MICROWAVE
100.0	MICROWAVE MOUNT
80.0	(1) 4-FT STD. MICROWAVE
80.0	MICROWAVE MOUNT



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POLE: 190-FT MONOPOLE	DATE: 2/16/11
OWNER: PRODUCTIVE CONSTRUCTION SERVICES	
SITE NAME: AUGUSTA	SITE #:
LOCATION: KENNEBEC CO., ME	
CLIENT: FRED NUDD	DESIGN #: 111-13018
REV. #:	REV. DATE:
REV. COMMENT:	
LAT/LONG: 44°18'3.5", -69°43'32"	
DAVINCI JOB#: 11243-1067	PAGE 1 OF 2

POLE ELEVATION

SCALE: NTS

NOTES: ANTENNA COAX INSIDE POLE SHAFT
 STEP BOLTS TO FULL HEIGHT

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 PH: 614-937-4922 / FX: 614-413-2887



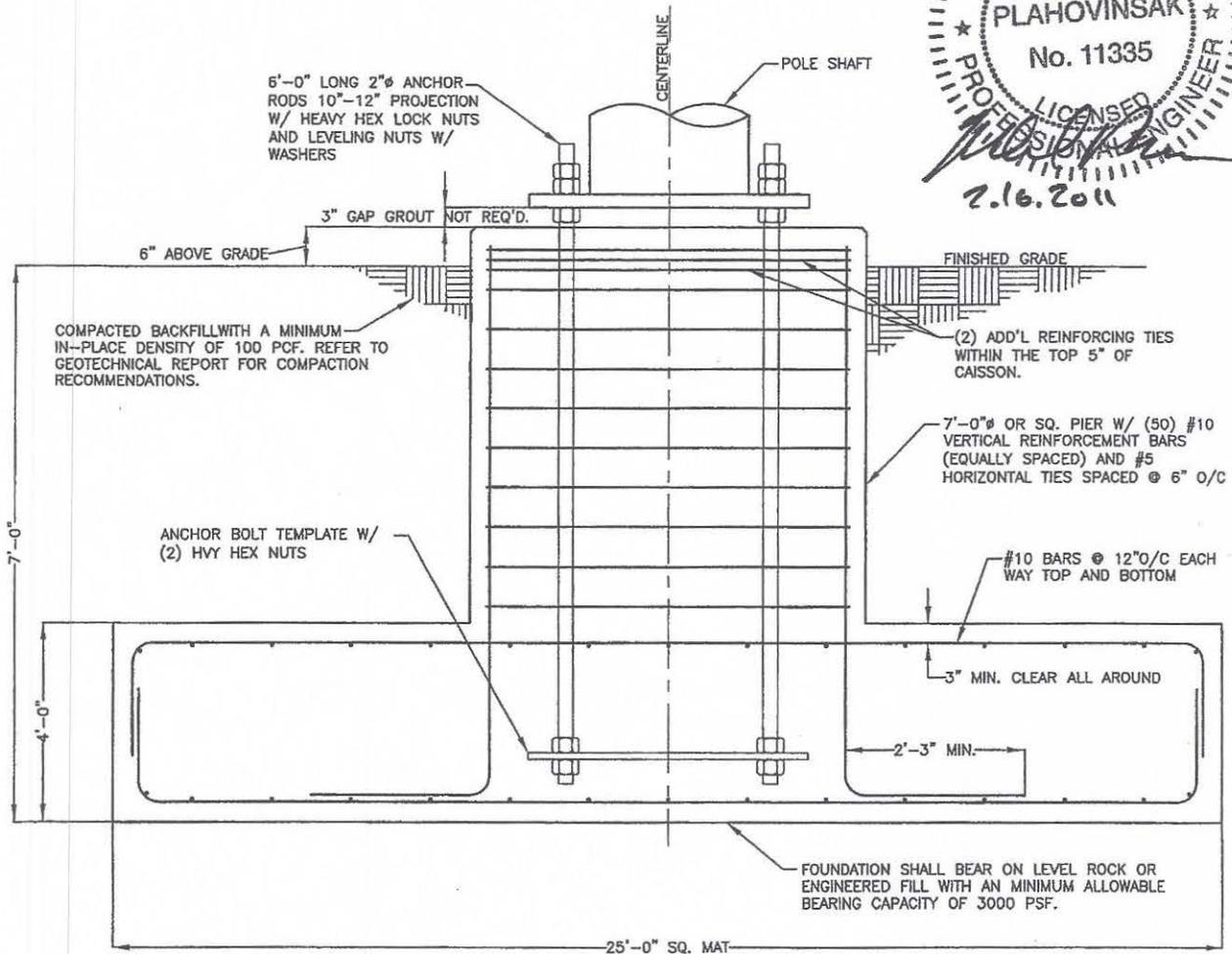
FRED A. NUDD CORPORATION
 1743 ROUTE 104, BOX 577
 ONTARIO, NY 14819
 (315) 524-2531 FAX (315) 524-4248

FOUNDATION NOTES (CONT.):

- ALL FOUNDATION CONCRETE SHALL USE TYPE II CEMENT AND ATTAIN A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI AT 28 DAYS. CONCRETE SHALL HAVE A MAXIMUM WATER/CEMENT RATIO OF 0.46 AND SHALL BE AIR ENTRAINED 6% ($\pm 1.5\%$). ALL CONCRETE CONSTRUCTION SHALL BE IN ACCORDANCE WITH ACI 318, "THE BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE", LATEST EDITION.
- ALL REINFORCING STEEL SHALL CONFORM TO ASTM A615 VERTICAL BARS SHALL BE GRADE 60, AND TIES OR STIRRUPS SHALL BE A MINIMUM OF GRADE 40. THE PLACEMENT OF ALL REINFORCEMENT SHALL CONFORM TO ACI 315, "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES", LATEST EDITION, UNLESS OTHERWISE DETAILED ON THIS SHEET.
- ESTIMATED CONCRETE VOLUME = 99 CUBIC YARDS.
- THE FOUNDATION HAS BEEN DESIGNED TO RESIST THE FOLLOWING FACTORED LOADS:
 MOMENT: 5400 FT*KIPS
 SHEAR: 42 KIPS
 AXIAL: 62 KIPS

FOUNDATION NOTES:

- THE GEOTECHNICAL ENGINEER (OR THE APPROPRIATE INSPECTOR) SHALL INSPECT THE EXCAVATION PRIOR TO PLACING REINFORCING STEEL OR FORMS. THE GEOTECHNICAL ENGINEER (OR INSPECTOR) SHALL PROVIDE A NOTICE OF INSPECTION FOR THE BUILDING INSPECTOR FOR REVIEW AND RECORDS PURPOSE.
- THE CONTRACTOR SHALL READ THE GEOTECHNICAL REPORT AND SHALL CONSULT THE GEOTECHNICAL ENGINEER AS NECESSARY PRIOR TO CONSTRUCTION.
- FOUNDATION DESIGN IS BASED ON GEOTECHNICAL REPORT:
 ENGINEER: MAINE TEST BORINGS
 REPORT NUMBER: 2010-162
 DATED: 11/15/10



PAD & PIER FOUNDATION

SCALE: NTS

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POLE: 190-FT MONOPOLE	DATE: 2/16/11
OWNER: PRODUCTIVE CONSTRUCTION SERVICES	
SITE NAME: AUGUSTA	SITE #:
LOCATION: KENNEBEC CO., ME	
CLIENT: FRED NUDD	DESIGN #: 111-13018
REV. #:	REV. DATE:
REV. COMMENT:	
LAT/LONG 44°18'3.5", -69°43'32"	
DAVINCI JOB#: 11243-1067	PAGE 2 OF 2

RISATower DaVinci Engineering, Inc. P.O. Box 66 Unionville Center, OH 43077 Phone: 614-937-4922 FAX:	Job	190-ft Monopole - DaVinci #11243-1067 r1	Page	1 of 8
	Project	Augusta	Date	12:09:07 02/14/11
	Client	Fred A. Nudd Corp. 111-13018	Designed by	Mike P

Tower Input Data

There is a pole section.

This tower is designed using the TIA-222-G standard.

The following design criteria apply:

Tower is located in Kennebec County, Maine. ✓

Basic wind speed of 95 mph. ✓

Structure Class II.

Exposure Category C.

Topographic Category 1.

Crest Height 0.00 ft.

Nominal ice thickness of 1.0000 in. ✓

Ice thickness is considered to increase with height.

Ice density of 56 pcf.

A wind speed of 40 mph is used in combination with ice. ✓

Temperature drop of 50 °F.

Deflections calculated using a wind speed of 60 mph.

A non-linear (P-delta) analysis was used.

Pressures are calculated at each section.

Stress ratio used in pole design is 1.

Local bending stresses due to climbing loads, feedline supports, and appurtenance mounts are not considered.

Tapered Pole Section Geometry

Section	Elevation ft	Section Length ft	Splice Length ft	Number of Sides	Top Diameter in	Bottom Diameter in	Wall Thickness in	Bend Radius in	Pole Grade
L1	190.00-177.75	12.25	3.50	18	22.0000	24.8400	0.1875	0.7500	A572-65 (65 ksi)
L2	177.75-131.25	50.00	5.00	18	23.6536	35.2700	0.2500	1.0000	A572-65 (65 ksi)
L3	131.25-86.25	50.00	6.25	18	33.6084	45.2200	0.3125	1.2500	A572-65 (65 ksi)
L4	86.25-42.50	50.00	7.50	18	43.1435	54.7500	0.3125	1.2500	A572-65 (65 ksi)
L5	42.50-0.00	50.00		18	52.3840	64.0000	0.3750	1.5000	A572-65 (65 ksi)

Tapered Pole Properties

Section	Tip Dia. in	Area in ²	I in ⁴	r in	C in	I/C in ³	J in ⁴	I/Q in ²	w in	w/t
L1	22.3394	12.9812	780.3007	7.7434	11.1760	69.8193	1561.6281	6.4918	3.5420	18.891
L2	25.2232	14.6713	1126.4931	8.7516	12.6187	89.2716	2254.4685	7.3371	4.0418	21.556
L3	24.8442	18.5707	1285.0818	8.3083	12.0160	106.9474	2571.8545	9.2871	3.7230	14.892
L4	35.8141	27.7884	4305.5913	12.4321	17.9172	240.3055	8616.8481	13.8968	5.7675	23.07
L5	35.3059	33.0253	4625.5671	11.8200	17.0730	270.9281	9257.2207	16.5158	5.3651	17.168
L1	45.2823	42.4830	9846.2397	15.2050	21.9169	449.2529	19705.4354	21.2456	7.0433	22.538
L2	45.9176	44.5426	11348.8284	15.9422	22.9718	494.0339	22712.5899	22.2755	7.4087	23.708
L3	54.9614	61.9038	21154.9475	18.4632	26.6111	794.9674	42337.7313	30.9578	8.5596	22.826
L4	64.9873	75.7297	38731.0282	22.5869	32.5120	1191.2841	77513.0197	37.8720	10.6040	28.277

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	Project	Augusta	Date	12:09:07 02/14/11
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Feed Line/Linear Appurtenances - Entered As Area

Description	Face or Leg	Allow Shield	Component Type	Placement ft	Total Number	C _{AA}		Weight plf
						ft ² /ft		
1 5/8"	C	No	Inside Pole	190.00 - 0.00	12	No Ice	0.00	0.92
						1/2" Ice	0.00	0.92
						1" Ice	0.00	0.92
1 5/8"	C	No	Inside Pole	180.00 - 0.00	12	No Ice	0.00	0.92
						1/2" Ice	0.00	0.92
						1" Ice	0.00	0.92
1 5/8"	C	No	Inside Pole	170.00 - 0.00	12	No Ice	0.00	0.92
						1/2" Ice	0.00	0.92
						1" Ice	0.00	0.92
1 5/8"	C	No	Inside Pole	160.00 - 0.00	12	No Ice	0.00	0.92
						1/2" Ice	0.00	0.92
						1" Ice	0.00	0.92
1 5/8"	C	No	Inside Pole	100.00 - 0.00	12	No Ice	0.00	0.92
						1/2" Ice	0.00	0.92
						1" Ice	0.00	0.92
1 5/8"	C	No	Inside Pole	80.00 - 0.00	12	No Ice	0.00	0.92
						1/2" Ice	0.00	0.92
						1" Ice	0.00	0.92

Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment	Placement ft	C _{AA}		Weight K
			Horz Lateral ft	Vert ft			Front ft ²	Side ft ²	
(4) RFS APXV18-206517S-C w/ mount pipe	A	From Face	3.00	0.0000	190.00	No Ice	5.45	5.05	0.07
						1/2" Ice	5.99	6.06	0.11
						1" Ice	6.51	6.93	0.17
(2) TMA	A	From Face	3.00	0.0000	190.00	No Ice	1.50	1.50	0.05
						1/2" Ice	2.00	2.00	0.07
						1" Ice	3.00	3.00	0.07
(4) RFS APXV18-206517S-C w/ mount pipe	B	From Face	3.00	0.0000	190.00	No Ice	5.45	5.05	0.07
						1/2" Ice	5.99	6.06	0.11
						1" Ice	6.51	6.93	0.17
(2) TMA	B	From Face	3.00	0.0000	190.00	No Ice	1.50	1.50	0.05
						1/2" Ice	2.00	2.00	0.07
						1" Ice	3.00	3.00	0.07
(4) RFS APXV18-206517S-C w/ mount pipe	C	From Face	3.00	0.0000	190.00	No Ice	5.45	5.05	0.07
						1/2" Ice	5.99	6.06	0.11
						1" Ice	6.51	6.93	0.17
(2) TMA	C	From Face	3.00	0.0000	190.00	No Ice	1.50	1.50	0.05
						1/2" Ice	2.00	2.00	0.07
						1" Ice	3.00	3.00	0.07
12' T-Arm Mounts	C	None		0.0000	190.00	No Ice	18.00	18.00	1.20
						1/2" Ice	20.00	20.00	1.35
						1" Ice	22.00	22.00	0.50

(4) Powerwave 7770 w/ Mount Pipe	A	From Face	3.00	0.0000	180.00	No Ice	8.61	4.82	0.05
						1/2" Ice	9.15	5.36	0.09
						1" Ice	9.75	5.92	0.15
(2) TMA	A	From Face	3.00	0.0000	180.00	No Ice	1.50	1.50	0.05
						1/2" Ice	2.00	2.00	0.07
						1" Ice	3.00	3.00	0.07

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	Project	Augusta	Date	12:09:07 02/14/11
	Client	Fred A. Nudd Corp. 111-13018	Designed by	Mike P

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft	C _A A _A Front ft ²	C _A A _A Side ft ²	Weight K
(4) Powerwave 7770 w/ Mount Pipe	B	From Face	3.00 0.00 0.00	0.0000	180.00	No Ice 8.61 1/2" Ice 9.15 1" Ice 9.75	4.82 5.36 5.92	0.05 0.09 0.15
(2) TMA	B	From Face	3.00 0.00 0.00	0.0000	180.00	No Ice 1.50 1/2" Ice 2.00 1" Ice 3.00	1.50 2.00 3.00	0.05 0.07 0.07
(4) Powerwave 7770 w/ Mount Pipe	C	From Face	3.00 0.00 0.00	0.0000	180.00	No Ice 8.61 1/2" Ice 9.15 1" Ice 9.75	4.82 5.36 5.92	0.05 0.09 0.15
(2) TMA	C	From Face	3.00 0.00 0.00	0.0000	180.00	No Ice 1.50 1/2" Ice 2.00 1" Ice 3.00	1.50 2.00 3.00	0.05 0.07 0.07
Nudd 14' Low Profile Platform	C	None		0.0000	180.00	No Ice 22.98 1/2" Ice 29.10 1" Ice 33.09	22.98 29.10 33.09	1.70 2.20 2.70

Antel BXA-70063/4CF w/ mount pipe	A	From Face	3.00 0.00 0.00	0.0000	170.00	No Ice 5.17 1/2" Ice 5.56 1" Ice 5.96	3.31 3.85 4.42	0.02 0.05 0.10
(2) Antel WPA-80063/4 w/ mount pipe	A	From Face	3.00 0.00 0.00	0.0000	170.00	No Ice 5.45 1/2" Ice 5.84 1" Ice 6.24	2.88 3.42 3.98	0.03 0.06 0.11
Antel BXA-171063/8CF w/ mount pipe	A	From Face	3.00 0.00 0.00	0.0000	170.00	No Ice 2.90 1/2" Ice 3.22 1" Ice 3.55	3.18 3.73 4.29	0.03 0.05 0.09
Antel BXA-70063/4CF w/ mount pipe	B	From Face	3.00 0.00 0.00	0.0000	170.00	No Ice 5.17 1/2" Ice 5.56 1" Ice 5.96	3.31 3.85 4.42	0.02 0.05 0.10
(2) Antel WPA-80063/4 w/ mount pipe	B	From Face	3.00 0.00 0.00	0.0000	170.00	No Ice 5.45 1/2" Ice 5.84 1" Ice 6.24	2.88 3.42 3.98	0.03 0.06 0.11
Antel BXA-171063/8CF w/ mount pipe	B	From Face	3.00 0.00 0.00	0.0000	170.00	No Ice 2.90 1/2" Ice 3.22 1" Ice 3.55	3.18 3.73 4.29	0.03 0.05 0.09
Antel BXA-70063/4CF w/ mount pipe	C	From Face	3.00 0.00 0.00	0.0000	170.00	No Ice 5.17 1/2" Ice 5.56 1" Ice 5.96	3.31 3.85 4.42	0.02 0.05 0.10
(2) Antel WPA-80063/4 w/ mount pipe	C	From Face	3.00 0.00 0.00	0.0000	170.00	No Ice 5.45 1/2" Ice 5.84 1" Ice 6.24	2.88 3.42 3.98	0.03 0.06 0.11
Antel BXA-171063/8CF w/ mount pipe	C	From Face	3.00 0.00 0.00	0.0000	170.00	No Ice 2.90 1/2" Ice 3.22 1" Ice 3.55	3.18 3.73 4.29	0.03 0.05 0.09
Nudd 14' Low Profile Platform	C	None		0.0000	170.00	No Ice 22.98 1/2" Ice 29.10 1" Ice 33.09	22.98 29.10 33.09	1.70 2.20 2.70

(4) Powerwave 7770 w/ Mount Pipe	A	From Face	3.00 0.00 0.00	0.0000	160.00	No Ice 8.61 1/2" Ice 9.15 1" Ice 9.75	4.82 5.36 5.92	0.05 0.09 0.15
(2) TMA	A	From Face	3.00 0.00 0.00	0.0000	160.00	No Ice 1.50 1/2" Ice 2.00 1" Ice 3.00	1.50 2.00 3.00	0.05 0.07 0.07
(4) Powerwave 7770 w/ Mount Pipe	B	From Face	3.00 0.00 0.00	0.0000	160.00	No Ice 8.61 1/2" Ice 9.15 1" Ice 9.75	4.82 5.36 5.92	0.05 0.09 0.15
(2) TMA	B	From Face	3.00	0.0000	160.00	No Ice 1.50	1.50	0.05

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	Client	Fred A. Nudd Corp. 111-13018	Designed by	Mike P

Description	Face or Leg	Offset Type	Offsets: Horiz Lateral Vert ft ft ft	Azimuth Adjustment	Placement ft	C _A A ₁ Front ft ²	C _A A ₂ Side ft ²	Weight K	
(4) Powerwave 7770 w/ Mount Pipe	C	From Face	0.00	0.0000	160.00	1/2" Ice	2.00	2.00	0.07
			0.00			1" Ice	3.00	3.00	0.07
			3.00			No Ice	8.61	4.82	0.05
			0.00			1/2" Ice	9.15	5.36	0.09
			0.00			1" Ice	9.75	5.92	0.15
(2) TMA	C	From Face	3.00	0.0000	160.00	No Ice	1.50	1.50	0.05
			0.00			1/2" Ice	2.00	2.00	0.07
			0.00			1" Ice	3.00	3.00	0.07
Nudd 14" Low Profile Platform	C	None	0.0000	160.00	No Ice	22.98	22.98	1.70	
					1/2" Ice	29.10	29.10	2.20	
					1" Ice	33.09	33.09	2.70	

Dishes

Description	Face or Leg	Dish Type	Offset Type	Offsets: Horiz Lateral Vert ft ft ft	Azimuth Adjustment	3 dB Beam Width	Elevation ft	Outside Diameter ft	Aperture Area ft ²	Weight K	
6 ft standard	C	Paraboloid w/o Radome	From Face	1.00	0.0000		80.00	6.00	No Ice	28.27	0.14
				0.00					1/2" Ice	29.07	0.29
				0.00					1" Ice	29.86	0.45
4 ft standard	C	Paraboloid w/o Radome	From Face	1.00	0.0000		100.00	4.00	No Ice	12.57	0.10
				0.00					1/2" Ice	13.10	0.18
				0.00					1" Ice	13.62	0.25

Load Combinations

Comb. No.	Description
1	Dead Only
2	1.2 Dead+1.6 Wind 0 deg - No Ice
3	0.9 Dead+1.6 Wind 0 deg - No Ice
4	1.2 Dead+1.6 Wind 90 deg - No Ice
5	0.9 Dead+1.6 Wind 90 deg - No Ice
6	1.2 Dead+1.6 Wind 180 deg - No Ice
7	0.9 Dead+1.6 Wind 180 deg - No Ice
8	1.2 Dead+1.0 Ice+1.0 Temp
9	1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp
10	1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp
11	1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp
12	Dead+Wind 0 deg - Service
13	Dead+Wind 90 deg - Service
14	Dead+Wind 180 deg - Service

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Maximum Member Forces

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
L1	190 - 177.75	Pole	Max Tension	11	0.15	0.00	-5.39
			Max. Compression	8	-9.66	0.00	-0.00
			Max. Mx	4	-2.70	-43.18	-0.01
			Max. My	2	-2.69	0.00	43.21
			Max. Vy	4	5.90	-33.84	-0.00
			Max. Vx	2	-5.91	0.00	33.87
			Max. Torque	10			0.00
L2	177.75 - 131.25	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-44.35	0.00	-0.00
			Max. Mx	4	-15.85	-861.32	-0.09
			Max. My	2	-15.80	0.00	862.12
			Max. Vy	4	23.90	-861.32	-0.09
			Max. Vx	2	-23.93	0.00	862.12
			Max. Torque	4			0.00
L3	131.25 - 86.25	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-60.19	0.00	-1.22
			Max. Mx	4	-26.35	-2011.55	-0.52
			Max. My	2	-26.24	0.00	2019.03
			Max. Vy	4	28.82	-2011.55	-0.52
			Max. Vx	2	-29.60	0.00	2019.03
			Max. Torque	5			-0.88
L4	86.25 - 42.5	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-80.08	0.00	-3.65
			Max. Mx	4	-39.90	-3348.77	-1.72
			Max. My	2	-39.77	0.00	3436.89
			Max. Vy	4	33.78	-3348.77	-1.72
			Max. Vx	2	-36.16	0.00	3436.89
			Max. Torque	5			-3.25
L5	42.5 - 0	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-107.95	0.00	-3.65
			Max. Mx	4	-60.64	-5158.87	-2.87
			Max. My	2	-60.64	0.00	5364.94
			Max. Vy	4	38.28	-5158.87	-2.87
			Max. Vx	2	-40.62	0.00	5364.94
			Max. Torque	5			-3.24

Maximum Tower Deflections - Service Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	190 - 177.75	38.758 ✓	12	1.8493 ✓	0.0011
L2	181.25 - 131.25	35.378	12	1.8368	0.0011
L3	136.25 - 86.25	19.500	12	1.4367	0.0011
L4	92.5 - 42.5	8.566	12	0.9227	0.0010
L5	50 - 0	2.387	12	0.4382	0.0004

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Critical Deflections and Radius of Curvature - Service Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
190.00	(4) RFS APXV18-206517S-C w/ mount pipe	12	38.758	1.8493	0.0011	28901
180.00	(4) Powerwave 7770 w/ Mount Pipe	12	34.898	1.8332	0.0011	15599
170.00	Antel BXA-70063/4CF w/ mount pipe	12	31.112	1.7825	0.0011	9783
160.00	(4) Powerwave 7770 w/ Mount Pipe	12	27.449	1.7004	0.0011	7184
100.00	4 ft standard	12	10.105	1.0112	0.0011	5065
80.00	6 ft standard	12	6.290	0.7744	0.0009	5010

Maximum Tower Deflections - Design Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	190 - 177.75	175.016 ✓	2	8.3655 ✓	0.0049
L2	181.25 - 131.25	159.775	2	8.3092	0.0049
L3	136.25 - 86.25	88.144	2	6.5014	0.0049
L4	92.5 - 42.5	38.730	2	4.1758	0.0046
L5	50 - 0	10.790	2	1.9817	0.0019

Critical Deflections and Radius of Curvature - Design Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
190.00	(4) RFS APXV18-206517S-C w/ mount pipe	2	175.016	8.3655	0.0049	6681
180.00	(4) Powerwave 7770 w/ Mount Pipe	2	157.613	8.2927	0.0049	3601
170.00	Antel BXA-70063/4CF w/ mount pipe	2	140.539	8.0638	0.0049	2248
160.00	(4) Powerwave 7770 w/ Mount Pipe	2	124.015	7.6933	0.0049	1644
100.00	4 ft standard	2	45.692	4.5763	0.0048	1133
80.00	6 ft standard	2	28.441	3.5044	0.0040	1114

Pole Design Data

Section No.	Elevation ft	Size	L ft	L _w ft	KI/r	A in ²	P _v K	φP _v K	Ratio P _v φP _v
L1	190 - 177.75 (1)	TP24.84x22x0.1875	12.25	0.00	0.0	14.1884	-2.69	982.52	0.003
L2	177.75 - 131.25 (2)	TP35.27x23.6536x0.25	50.00	0.00	0.0	26.8666	-15.80	1819.01	0.009
L3	131.25 - 86.25 (3)	TP45.22x33.6084x0.3125	50.00	0.00	0.0	43.1030	-26.24	2889.18	0.009
L4	86.25 - 42.5 (4)	TP54.75x43.1435x0.3125	50.00	0.00	0.0	52.2684	-39.77	3215.60	0.012
L5	42.5 - 0 (5)	TP64x52.384x0.375	50.00	0.00	0.0	75.7297	-60.64	4644.31	0.013

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Pole Bending Design Data

Section No.	Elevation ft	Size	M_{ux} kip-ft	ϕM_{ux} kip-ft	Ratio $\frac{M_{ux}}{\phi M_{ux}}$	M_{uy} kip-ft	ϕM_{uy} kip-ft	Ratio $\frac{M_{uy}}{\phi M_{uy}}$
L1	190 - 177.75 (1)	TP24.84x22x0.1875	43.21	481.68	0.090	0.00	481.68	0.000
L2	177.75 - 131.25 (2)	TP35.27x23.6536x0.25	862.13	1267.07	0.680	0.00	1267.07	0.000
L3	131.25 - 86.25 (3)	TP45.22x33.6084x0.3125	2019.03	2583.48	0.782	0.00	2583.48	0.000
L4	86.25 - 42.5 (4)	TP54.75x43.1435x0.3125	3436.89	3491.15	0.984	0.00	3491.15	0.000
L5	42.5 - 0 (5)	TP64x52.384x0.375	5364.94	6088.21	0.881	0.00	6088.21	0.000

Pole Shear Design Data

Section No.	Elevation ft	Size	Actual V_u K	ϕV_u K	Ratio $\frac{V_u}{\phi V_u}$	Actual T_u kip-ft	ϕT_u kip-ft	Ratio $\frac{T_u}{\phi T_u}$
L1	190 - 177.75 (1)	TP24.84x22x0.1875	5.29	487.80	0.011	0.00	964.53	0.000
L2	177.75 - 131.25 (2)	TP35.27x23.6536x0.25	23.93	900.39	0.027	0.00	2537.22	0.000
L3	131.25 - 86.25 (3)	TP45.22x33.6084x0.3125	29.60	1434.32	0.021	0.00	5173.28	0.000
L4	86.25 - 42.5 (4)	TP54.75x43.1435x0.3125	36.16	1600.75	0.023	0.00	6990.83	0.000
L5	42.5 - 0 (5)	TP64x52.384x0.375	40.62	2312.89	0.018	0.00	12191.33	0.000

Pole Interaction Design Data

Section No.	Elevation ft	Ratio P_u ϕP_u	Ratio M_{ux} ϕM_{ux}	Ratio M_{uy} ϕM_{uy}	Ratio V_u ϕV_u	Ratio T_u ϕT_u	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
L1	190 - 177.75 (1)	0.003	0.090	0.000	0.011	0.000	0.093	1.000	4.8.2 ✓
L2	177.75 - 131.25 (2)	0.009	0.680	0.000	0.027	0.000	0.690	1.000	4.8.2 ✓
L3	131.25 - 86.25 (3)	0.009	0.782	0.000	0.021	0.000	0.791	1.000	4.8.2 ✓
L4	86.25 - 42.5 (4)	0.012	0.984	0.000	0.023	0.000	0.997	1.000	4.8.2 ✓
L5	42.5 - 0 (5)	0.013	0.881	0.000	0.018	0.000	0.895	1.000	4.8.2 ✓

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Section Capacity Table

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	ϕP_{allow} K	% Capacity	Pass Fail
L1	190 - 177.75	Pole	TP24.84x22x0.1875	1	-2.69	982.52	9.3	Pass
L2	177.75 - 131.25	Pole	TP35.27x23.6536x0.25	2	-15.80	1819.01	69.0	Pass
L3	131.25 - 86.25	Pole	TP45.22x33.6084x0.3125	3	-26.24	2889.18	79.1	Pass
L4	86.25 - 42.5	Pole	TP54.75x43.1435x0.3125	4	-39.77	3215.60	99.7	Pass ✓
L5	42.5 - 0	Pole	TP64x52.384x0.375	5	-60.64	4644.31	89.5	Pass
Summary								
Pole (L4)							99.7	Pass
RATING =							99.7	Pass

Monopole Anchor Rod and Base Plate Calculation

ANSI/TIA-222-G-2

Factored Base Reactions:

Moment: 5365 ft-kips

Shear: 41 kips

Axial: 61 kips

Pole Shape:

18-Sided

Pole Dia. (D_p):

64.00 in

Anchor Rods:

(20) 2 in. F1554 GR. 105

Anchor Rods Evenly Spaced

On a 56.5 in Bolt Circle

Base Plate:

3 in. x 68 in. Round

$f_y = 50$ ksi

Anchor Rod Calculation According to TIA-222-G section 4.9.9

The following Interaction Equation Shall Be Satisfied:

$\phi = 0.80$ TIA 4.9.9

$I_{bolts} = 7980.63$ in² Moment of Inertia

$P_u = 228$ kips Tension Force

$V_u = 2$ kips Shear Force

$R_{nt} = 312.50$ kips Nominal Tensile Strength

$\eta = 0.50$ for detail type (d)

$$\left(\frac{P_u + \frac{V_u}{\eta}}{\phi R_{nt}} \right) \leq 1.0$$

$$0.928 \leq 1$$

Base Plate Calculation According to TIA-222-G

$\phi = 0.90$ TIA 4.7

$M_{PL} = 866.04$ in-kip Plate Moment

$L = 10.053$ in Section Length

$Z = 22.619$ Plastic Section Modulus

$M_p = 1131$ in-kip Plastic Moment

$\phi M_n = 1017.9$ in-kip Factored Resistance

Calculated Moment vs Factored Resistance

$$866 \text{ in-kip} \leq 1018 \text{ in-kip}$$

Anchor Rods Are Adequate	92.8%
Base Plate Is Adequate	85.1%

Monopole Spread Footing Calculation

DaVinci
Engineering

ANSI/TIA-222-G-2

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Factored Base Reactions:	Footing Dimensions:	Concrete:
Moment: 5400 ft-kips	25 ft x 25 ft	$f'_c = 4000$ psi
Shear: 42 kips	x 4 ft thick	Steel $f_y = 60$ ksi
Axial: 62 kips	Bearing 7 ft B.G.	$\phi = 0.75$
	7 ft Square Pier	
	w/ 6 in Reveal	
	98.9 Yd ³ Concrete	

Soil Backfill: 100 pcf	Ultimate Bearing: 6000 psf	Water Table n/a
	SF = 2.0	

Foundation Weight

Weight of Pole	62.0 kips
Weight of Concrete	400.7 kips
Weight of Soil	172.8 kips
Buoyancy of Water	0.0 kips
<u>Total</u>	<u>635.5 kips</u>

Overturning Resistance:

Overturning Moment (M_u)	5715 ft-kips	ft-kips + (1.05 kips x 0 ft)
Resisting Moment (R_s)	7944 ft-kips	635.525 kips x 25 ft / 2
$\phi \times R_s > M_u$	$M_{overturning} / \phi M_{resist}$	95.9% OK ✓

Soil Bearing Pressure:

Eccentricity (e)	8.99 ft.	5715 ft-kips / 635.525 kips
$6(e)$	54.0 ft >	25.0 ft $6e > 25$
Maximum Soil Bearing	4502 psf	Calculated across corners
Soil Overburden	-700 psf	
Net Soil Bearing	3802 psf	
Resisting Soil Bearing (R_s)	6000 psf	
Net Soil Bearing < $\phi \times R_s$	Net Bearing / ϕR_s	84.5% OK ✓

Bending Moment in Pier:

Bending Moment	5547 ft-kips	ft-kips + (1.05 kips x -4 ft)
Pier Steel Req'd (Loads)	63.45 in ² → 63.5 in ² PROVIDED	
Min. Pier Steel	35.28 in ²	1/2% (Based on Square Pier)

Bending Moment in Footing:

Max Bending Moment	3497 ft-kips	Σ Moments about pier face
Footing Steel Req'd (Loads)	1.13 in ² /ft → 1.27 in ² /ft PROVIDED	
Min. Footing Steel	1.04 in ² /ft	0.18%

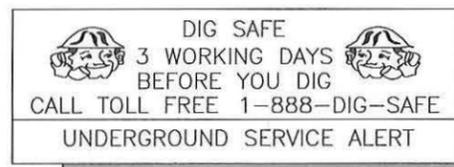
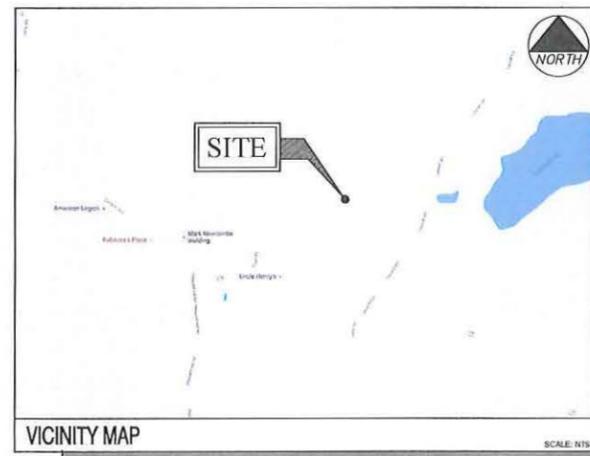


SITE NAME: AUGUSTA ME (AUGUSTA, ME)
LATITUDE: 44° 18' 03.50" (N)
LONGITUDE: 69° 43' 32.10" (W)
EXISTING 190' MONOPOLE TOWER AND
PROPOSED CO-LOCATION OF EQUIPMENT

SITE NAME:	AUGUSTA ME
TOWER TYPE:	190' MONOPOLE TOWER (EXISTING)
SITE ADDRESS:	SHAW ROAD AUGUSTA, ME 04330
PROPERTY OWNER:	DALE & KIMBERLY PLUMMER 46 BASEBALL LANE RICHMOND, ME 04357
TAX MAP/LOT	MAP 11 LOT 146
APPLICANT:	REDZONE WIRELESS 41 MECHANIC STREET SUITE 219 CAMDEN, ME 04843
PROJECT SUMMARY	

NOTES: A STRUCTURAL LOADING ANALYSIS OF THE EXISTING STRUCTURE TO SUPPORT THE PROPOSED LOADING HAS NOT BEEN PERFORMED BY TILSON. TILSON MAKES NO WARRANTY, IMPLIED OR OTHERWISE, REGARDING THE STRUCTURAL INTEGRITY OF THE EXISTING STRUCTURE TO SUPPORT THE PROPOSED EQUIPMENT.

STRUCTURAL NOTE



SHEET NO.	DESCRIPTION	DATE	REV. NO.
T-1	TITLE SHEET	8/12/16	0
C-1	PLOT PLAN	8/12/16	0
C-2	SITE PLAN	8/12/16	0
C-3	ANTENNA CONFIGURATION AND DETAILS	8/12/16	0
D-1	DETAILS	8/12/16	0
SHEET INDEX			

FINAL CONSTRUCTION DRAWING

PREPARED FOR:

 BROADBAND FOR ME
 41 Mechanic Street Suite 219
 Camden, ME 04843
 P: (207) 596-5700

SUBMITTALS

REV	DATE	ISSUED FOR
Δ	8/12/16	ISSUED FOR CONSTRUCTION

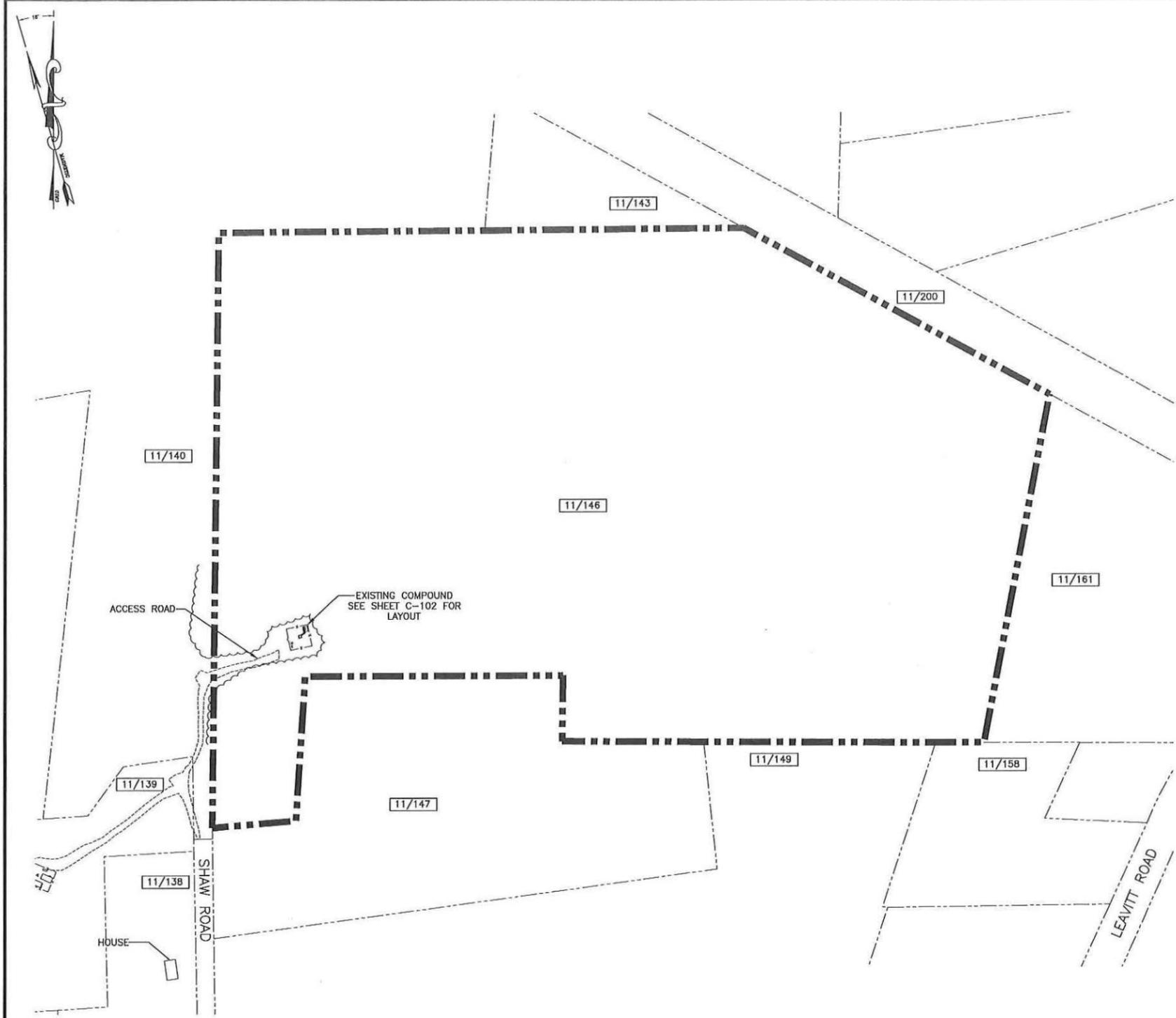


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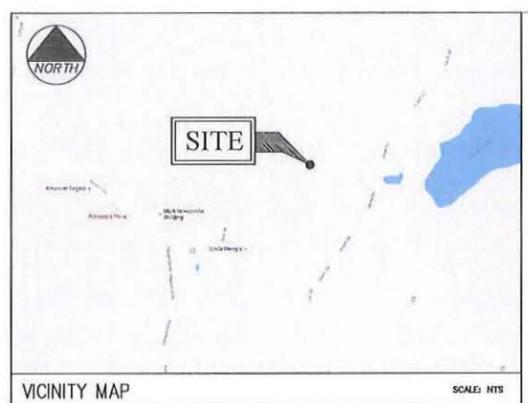
AUGUSTA ME
 SHAW ROAD
 AUGUSTA, ME 04330
 KENNEBEC COUNTY

SHEET TITLE
TITLE SHEET

DRAFTED BY:	REV
CBM	T-101 0



1
C-101
PLOT PLAN
SCALE: 1" = 150'



LIST OF ABUTTERS

CITY OF AUGUSTA, ME

MAP/LOT	RECORD OWNER	ADDRESS
11/143	JEAN D BROCHU	92 CHURCH HILL RD AUGUSTA, ME 04330
11/200	CENTRAL MAINE POWER CO IUMC - LOCAL TAXES	70 FARM VIEW DR NEW GLOUCESTER, ME 04260
11/161	JEANNINE P DULAC	62 LEAVITT RD AUGUSTA, ME 04330
11/158	JOSEPH W RUSSELL BEVERLY L RUSSELL	40 LEAVITT RD AUGUSTA, ME 04330
11/149	SUTTON PROPERTIES LTD C/O JOE SUTTON	PO BOX 367 WALDOBORO, ME 04572
11/147	NATHAN D SHAW	283 HANNAFORD HILL RD VASSALBORO, ME 04889
11/138	WANDA C SHAW	20 SHAW RD AUGUSTA, ME 04330
11/139	ROC ATLANTIC INC C/O REDZONE WIRELESS RE TAX	PO BOX 2549 ARLSON, TX 75001
11/140	DALE W PLUMMER KIMBERLY K PLUMMER	46 BASEBALL LANE RICHMOND, ME 04357

ZONING INFORMATION

ZONING DISTRICT: (RRS) RURAL RESIDENTIAL DISTRICT
 MINIMUM STREET FRONTAGE: 200FT
 SIDE YARD SETBACK: NA
 REAR YARD SETBACK: NA
 MINIMUM LOT SIZE: 60,000 FT²

- GENERAL NOTES**
1. DATES OF FIELD SURVEY: JUNE 2016
 2. SITE NAME: AUGUSTA ME
 3. SITE NUMBER: NA
 4. SITE ADDRESS: SHAW ROAD - REAR
AUGUSTA, ME 04330
USA
 5. PROPERTY OWNER: DALE W & KIMBERLY K PLUMMER
46 BASEBALL LANE
RICHMOND, ME 04357
SAGADAHOE COUNTY
 6. APPLICANT: REDZONE WIRELESS
41 MECHANIC STREET SUITE 219
CAMDEN, ME 04843
 7. JURISDICTION: CITY OF AUGUSTA
 8. ZONING DISTRICT: (RRS) RURAL RESIDENTIAL DISTRICT
 9. TAX IDENTIFICATION: 11 146
 10. DEED BOOK/PAGE: 8694/206
 11. CENTER OF EXISTING TOWER:
LATITUDE: 44°18'03.50" (N)
LONGITUDE: 69°43'32.10" (W)
GROUND EL.: 375'
 12. BEARINGS ARE BASED ON MAINE STATE GRID COORDINATE SYSTEM, WEST ZONE, (NAD83).
 13. ALL UNDERGROUND UTILITY INFORMATION PRESENTED HEREON WAS DETERMINED FROM SURFACE EVIDENCE AND PLANS OF RECORD. ALL UNDERGROUND UTILITIES SHOULD BE LOCATED IN THE FIELD PRIOR TO COMMENCEMENT OF ALL SITE WORK. CALL DIGSAFE 1(888) 344 -7233 A MINIMUM OF 72 HOURS PRIOR TO PLANNED ACTIVITY.
 14. THIS IS NOT A STANDARD BOUNDARY SURVEY. EXCEPT AS IDENTIFIED BY MONUMENTATION FOUND. ALL BOUNDARIES SHOWN ON THIS PLAN HAVE BEEN COMPILED FROM RECORD DEEDS AND TAX MAPS AND ARE INTENDED TO SHOW THE LOCATIONS OF ABUTTERS LOTS AND ZONING BOUNDARIES ONLY.

FINAL CONSTRUCTION DRAWING

PREPARED FOR:

 BROADBAND FOR ME
 41 Mechanic Street Suite 219
 Camden, ME 04843
 P: (207) 596-5700

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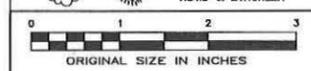
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AUGUSTA ME
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 KENNEBEC COUNTY

SHEET TITLE
PLOT PLAN

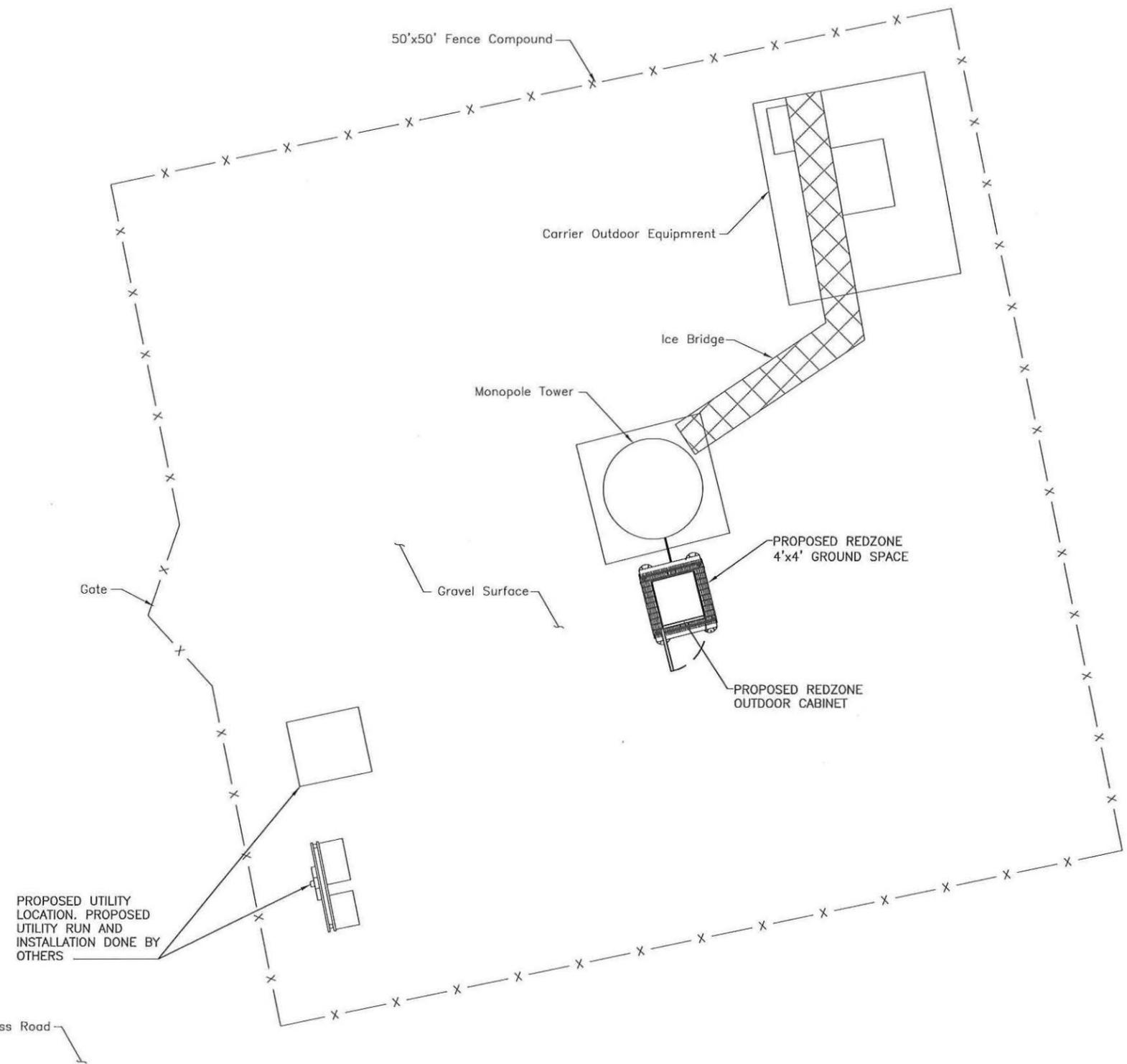
LEGEND

- STONEWALL
- ABUTTING PROPERTY LINE
- EXISTING TREE LINE
- EXISTING OVERHEAD ELECTRIC & TELEPHONE
- UTILITY POLE
- IRON PIN FOUND
- MONUMENT
- SEBACK LINE
- PROPERTY LINE
- XX/XX MAP/LOT
- △ TBM (BENCHMARK)
- EXISTING FENCE
- EXISTING BLDG & HATCH LAYERS
- EXISTING TREES: HDWD & EVRGREEN



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 REV: 0



1 SITE PLAN
C-102 SCALE: N.T.S.

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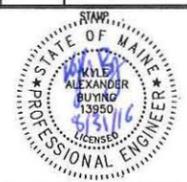
Y:\Shared\Telecom\Design\RedZone\Maine\Augusta\Augusta ME\Sheets\Augusta ME C-102.dwg Aug 29, 2016 - 11:51am

FINAL CONSTRUCTION DRAWING

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SUBMITTALS

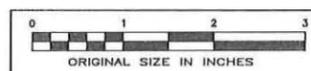
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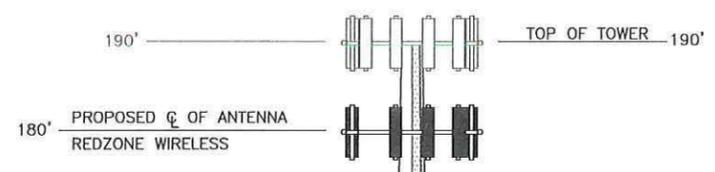
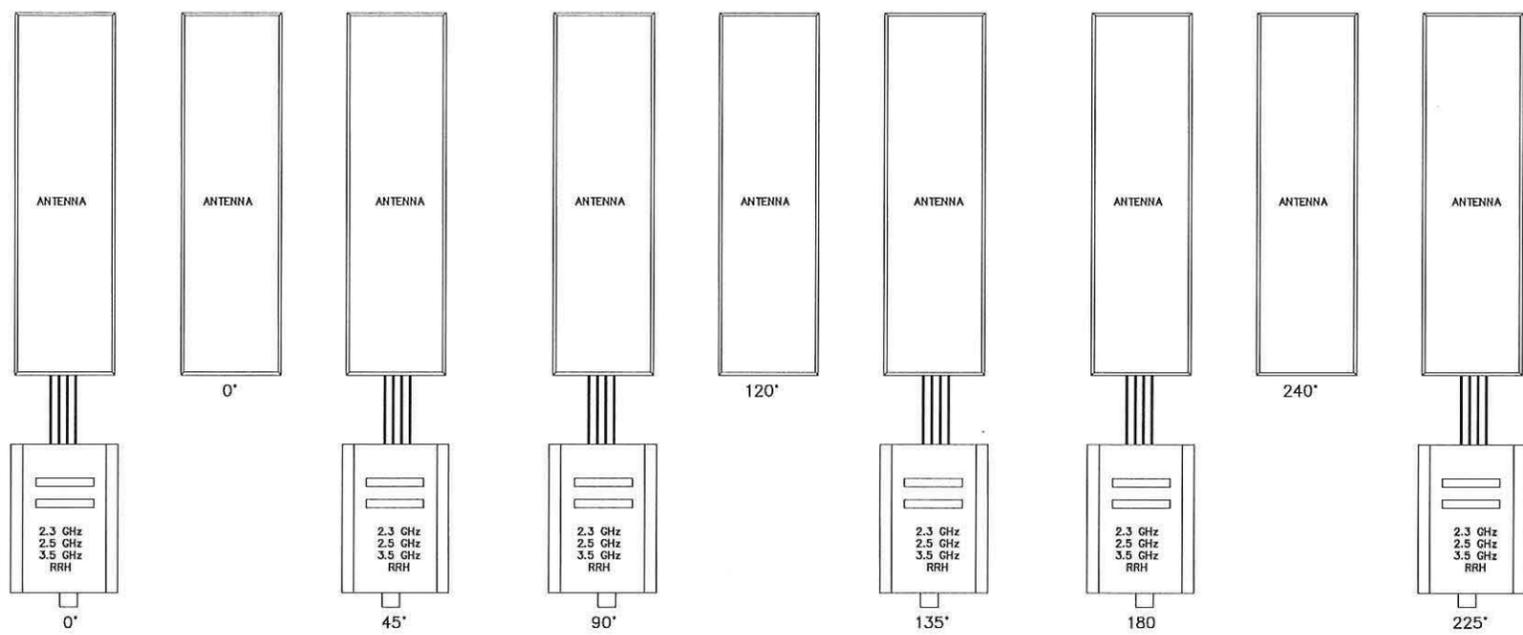
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AUGUSTA ME
SHAW ROAD
AUGUSTA, ME 04330
KENNEBEC COUNTY

SHEET TITLE
SITE PLAN

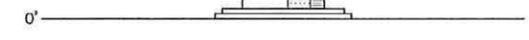


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1 PROPOSED ANTENNA CONNECTIONS
 C-103 SCALE: N.T.S.

ANTENNA AND COAXIAL CABLE SCHEDULE											
ANTENNA	SIZE (LxWxD)	WEIGHT	COAX CABLE FEED LOC	AZIMUTH (TRUE NORTH)	AZIMUTH (MAGNETIC)	RAD CENTER	RRH (BREEZECOMPACT 3000)	SIZE (RRH)	WEIGHT (RRH)	HYBRID/CONDUIT LENGTH	HYBRID/CONDUIT SIZE
AW3007	41.3"x11"x3.3"	23.2 LB	BOTTOM	0°	16°	180'	1	13"x10.2"x15.8"	42 LB	210' (HYBRID)	1.24"
AP-5AC-90-HD	51.18"x12"x7.93"	28.9 LB	BACK	0°	16°	180'					
AW3007	41.3"x11"x3.3"	23.2 LB	BOTTOM	45°	61°	180'	1	13"x10.2"x15.8"	42 LB		
AW3007	41.3"x11"x3.3"	23.2 LB	BOTTOM	90°	106°	180'	1	13"x10.2"x15.8"	42 LB		
AP-5AC-90-HD	51.18"x12"x7.93"	28.9 LB	BACK	120°	136°	180'					
AW3007	41.3"x11"x3.3"	23.2 LB	BOTTOM	135°	151°	180'	1	13"x10.2"x15.8"	42 LB		
AW3007	41.3"x11"x3.3"	23.2 LB	BOTTOM	180°	196°	180'	1	13"x10.2"x15.8"	42 LB		
AP-5AC-90-HD	51.18"x12"x7.93"	28.9 LB	BACK	240°	256°	180'					
AW3007	41.3"x11"x3.3"	23.2 LB	BOTTOM	225°	241°	180'	1	13"x10.2"x15.8"	42 LB		



2 ELEVATION
 C-103 SCALE: 1" = 10'

FINAL CONSTRUCTION DRAWING

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STATE OF MAINE
 KYLE ALEXANDER
 EXPIRING 13950
 LICENSED PROFESSIONAL ENGINEER

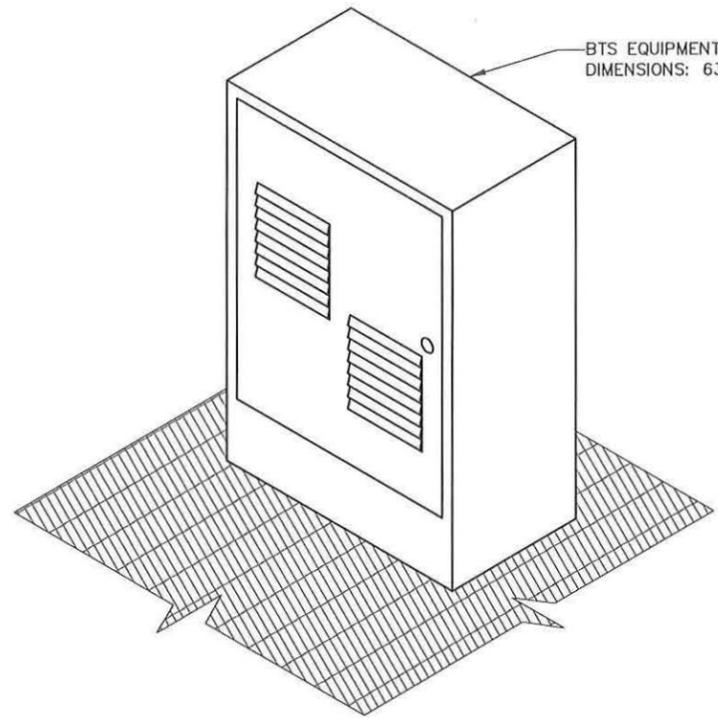
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 KENNEBEC COUNTY

SHEET TITLE
TOWER ELEVATION AND ANTENNA CONNECTIONS

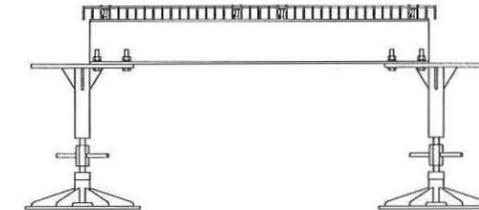
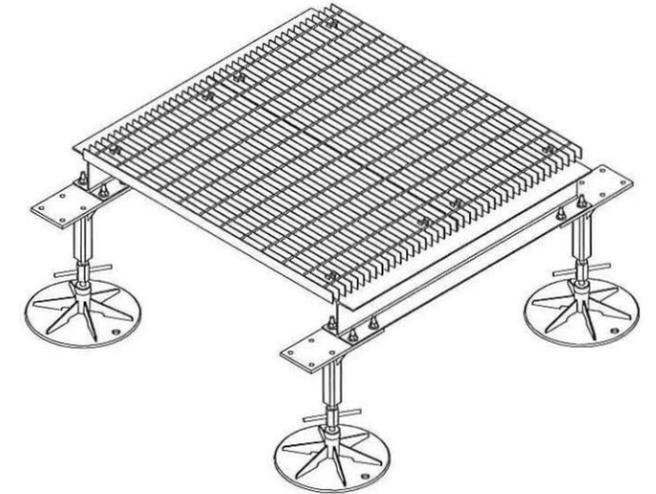
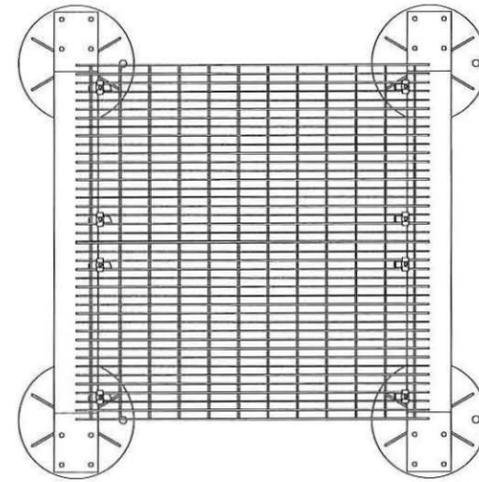
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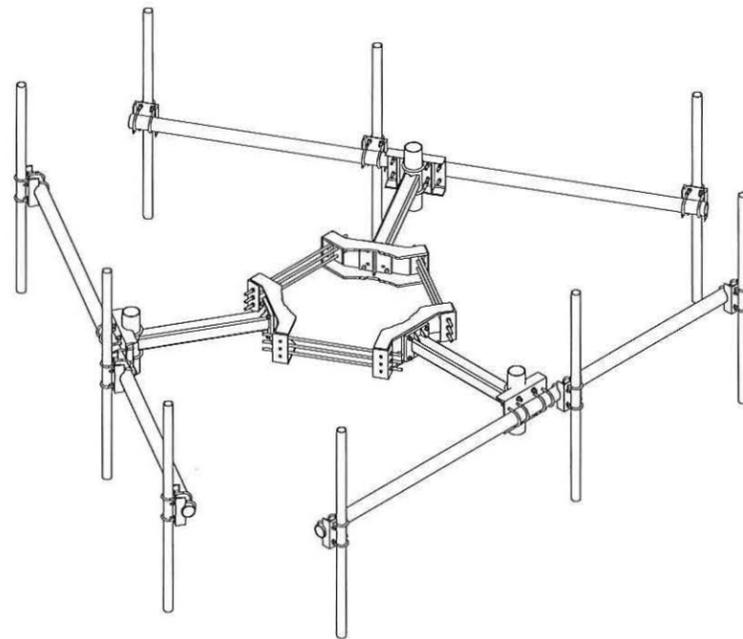


BTS EQUIPMENT CABINET
DIMENSIONS: 63.65"Hx31.5"Wx35.5"D

1 CABINET ELEVATION DETAIL
D-101 SCALE: N.T.S.

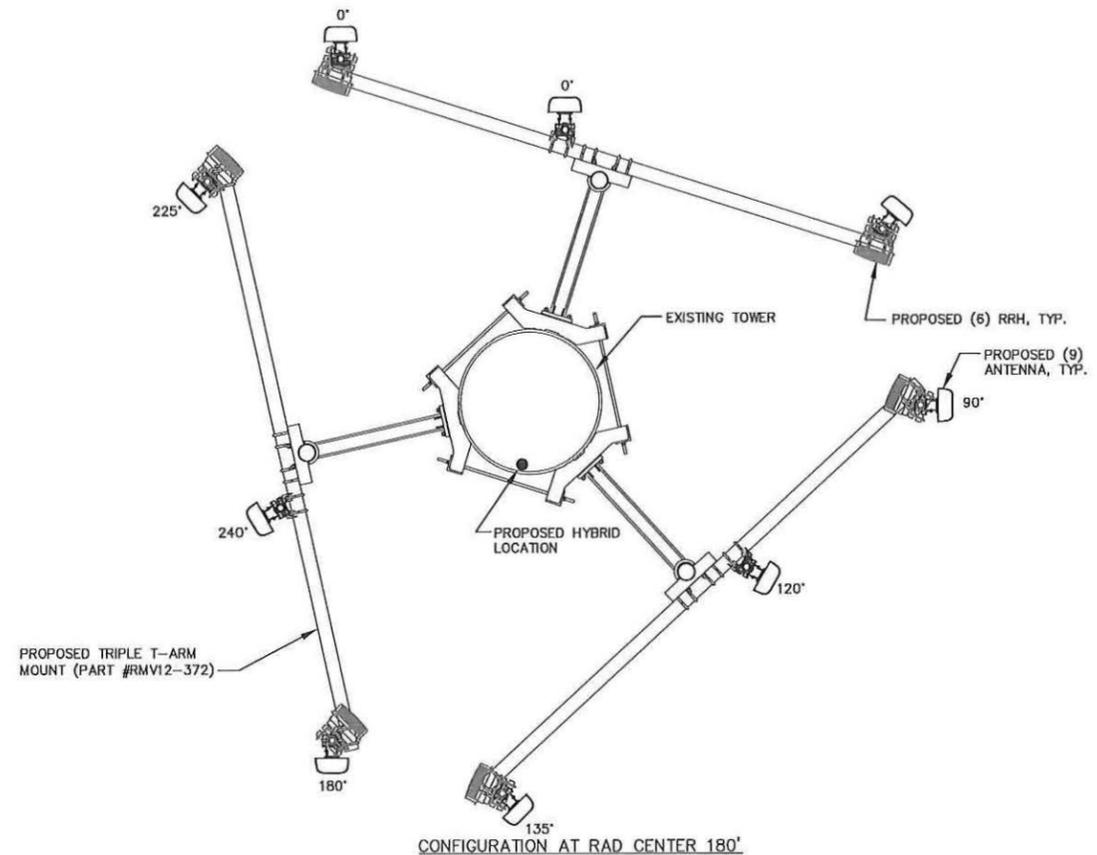


2 PROPOSED 4'x4' MOON PAD
D-101 SCALE: N.T.S.



PART # RMV12-372 (SITE PR01)

3 PROPOSED V-FRAME MOUNT
D-101 SCALE: N.T.S.



4 PROPOSED SECTOR MOUNT CONFIGURATIONS
D-101 SCALE: N.T.S.

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SHEET TITLE
DETAILS

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