



# CERTIFICATE OF APPROPRIATENESS PLACARD

for Raleigh Historic Resources

716 ST. MARY'S STREET

Address

GLENWOOD-BROOKLYN

Historic District

Historic Property

177-16-MW

Certificate Number

11-17-2016

Date of Issue

05-17-2017

Expiration Date

## Project Description:

- Install cellular antenna and equipment on existing power pole

*This card must be kept pasted in a location within public view until all phases of the described project are complete. The work must conform with the code of the City of Raleigh and laws of the state of North Carolina. When your project is complete, you are required to ask for a final zoning inspection in a historic district area. Telephone the RHDC office at 832-7238 and commission staff will coordinate the inspection with the Inspections Department. If you do not call for this final inspection, your Certificate of Appropriateness is null and void.*

Signature,

Raleigh Historic Development Commission

*Pending the resolution of appeals, commencement of work is at your own risk.*



# Raleigh Historic Development Commission – Certificate of Appropriateness (COA) Application



**DEVELOPMENT  
SERVICES  
DEPARTMENT**

Development Services  
Customer Service Center  
One Exchange Plaza  
1 Exchange Plaza, Suite 400  
Raleigh, North Carolina 27601  
Phone 919-996-2495  
eFax 919-996-1831



<input type="checkbox"/> Minor Work (staff review) – 1 copy <input checked="" type="checkbox"/> Major Work (COA Committee review) – 13 copies <input type="checkbox"/> Additions Greater than 25% of Building Square Footage <input type="checkbox"/> New Buildings <input type="checkbox"/> Demo of Contributing Historic Resource <input checked="" type="checkbox"/> All Other  <input type="checkbox"/> Post Approval Re-review of Conditions of Approval	<p style="text-align: center;"><b>For Office Use Only</b></p> Transaction # <u>490661</u> File # <u>177-16-MW</u> Fee <u>29</u> Amount Paid <u>\$29</u> Received Date <u>10/11/16</u> Received By <u>ACH</u> <u>new fee \$10/25</u>
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**Property Street Address** Near 716 St. Marys St, Raleigh, NC 27605

**Historic District** Glenwood-Brooklyn Historic District & Glenwood-Brooklyn Historic Overlay District - Streetside

**Historic Property/Landmark name (if applicable)**

**Owner's Name** Fibertech

<b>Lot size</b>	(width in feet)	(depth in feet)
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For applications that require review by the COA Committee (Major Work), provide addressed, stamped envelopes to owners of all properties within 100 feet (i.e. both sides, in front (across the street), and behind the property) not including the width of public streets or alleys:

Property Address	Property Address
714 St Marys Street	713 Gaston Street
716 St Marys Street	715 Gaston Street
718 St Marys Street	717 Gaston Street
720 St Marys Street	719 Gaston Street
723 St Marys Street	721 Gaston Street
809 Brooklyn Street	723 Gaston Street

*Process as minor -> do not post check -> John will contact client*

*mailed in*





**Minor Work Approval (office use only)**

Upon being signed and dated below by the Planning Director or designee, this application becomes the Minor Work Certificate of Appropriateness. It is valid until 5/17/17. Please post the enclosed placard form of the certificate as indicated at the bottom of the card. Issuance of a Minor Work Certificate shall not relieve the applicant, contractor, tenant, or property owner from obtaining any other permit required by City Code or any law. Minor Works are subject to an appeals period of 30 days from the date of approval.

Signature (City of Raleigh) [Signature]

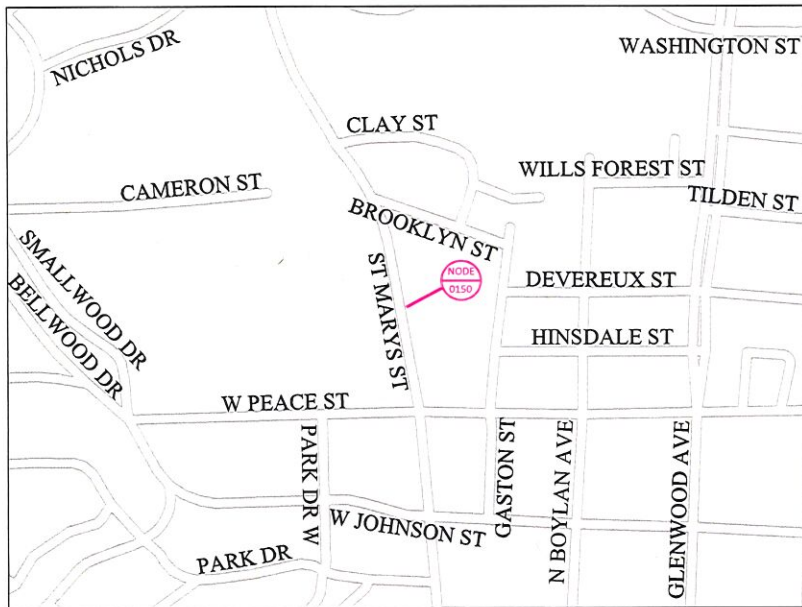
Date 11/17/16

	TO BE COMPLETED BY APPLICANT		TO BE COMPLETED BY CITY STAFF		
	YES	N/A	YES	NO	N/A
Attach 8-1/2" x 11" sheets with written descriptions and drawings, photographs, and other graphic information necessary to completely describe the project. Use the checklist below to be sure your application is complete.  <b>Minor Work (staff review) – 1 copy</b> <b>Major Work (COA Committee review) – 13 copies</b>			✓		
1. <b>Written description.</b> Describe clearly and in detail the nature of your project. Include exact dimensions for materials to be used (e.g. width of siding, window trim, etc.)	<input checked="" type="checkbox"/>		✓		
2. <b>Description of materials</b> (Provide samples, if appropriate)	<input checked="" type="checkbox"/>		✓		
3. <b>Photographs</b> of existing conditions are required.	<input checked="" type="checkbox"/>		✓		
4. <b>Paint Schedule</b> (if applicable)	<input type="checkbox"/>	<input type="checkbox"/>			✓
5. <b>Plot plan</b> (if applicable). A plot plan showing relationship of buildings, additions, sidewalks, drives, trees, property lines, etc., must be provided if your project includes any addition, demolition, fences/walls, or other landscape work. Show accurate measurements. You may also use a copy of the survey you received when you bought your property. Revise the copy as needed to show existing conditions and your proposed work.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	✓		
6. <b>Drawings</b> showing proposed work <input type="checkbox"/> Plan drawings <input type="checkbox"/> Elevation drawings showing the new façade(s) <input type="checkbox"/> Dimensions shown on drawings and/or graphic scale <input type="checkbox"/> 8-1/2" x 11" or 11" x 17" reductions of full-size drawings. If reduced size is so small as to be illegible, make 8-1/2" x 11" or 11" x 17" snap shots of individual drawings on the big sheet.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	✓		
7. Stamped envelopes addressed to all property owners within 100 feet of property not counting the width of public streets and alleys (required for Major Work). Use the <a href="#">Label Creator</a> to determine the addresses.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	✓		
8. <b>Fee</b> ( <a href="#">See Development Fee Schedule</a> )	<input checked="" type="checkbox"/>		✓		

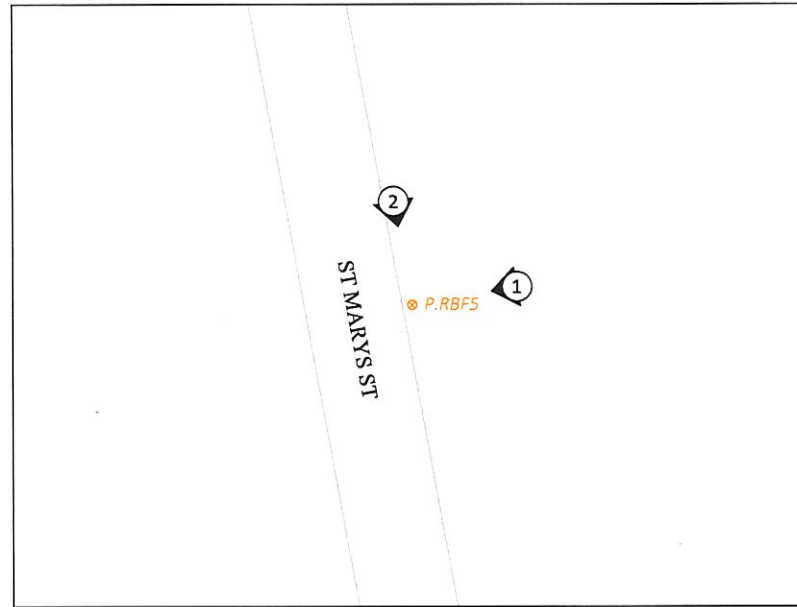
Per John A. Do Not Process Check.



SMALL CELL  
 PROPOSED NODE SC-NC 0150 LOCATION  
 RAGEIGH, NC



**LOCATION MAP**  
 LAT: 35.78985° LONG: -78.65121°  
 1" = 500'



**NODE PLACEMENT**  
 1" = 50'

LOCATION: RALEIGH, NORTH CAROLINA  
 35.78985°, -78.65121°

NOTES:

PREPARED FOR:



PREPARED BY:

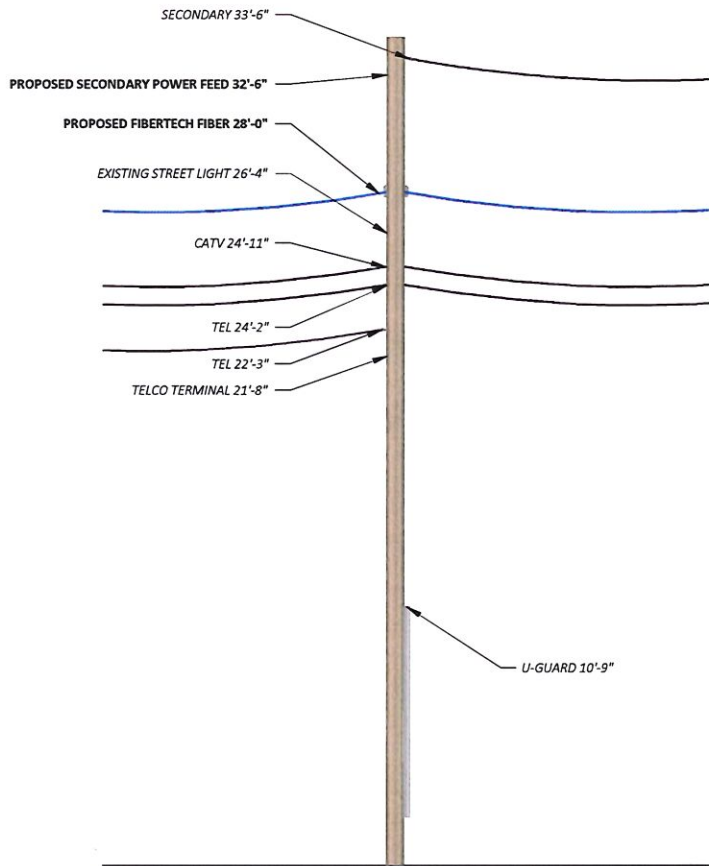


FIBERTECH SMALL CELL  
 LOCATION MAPS

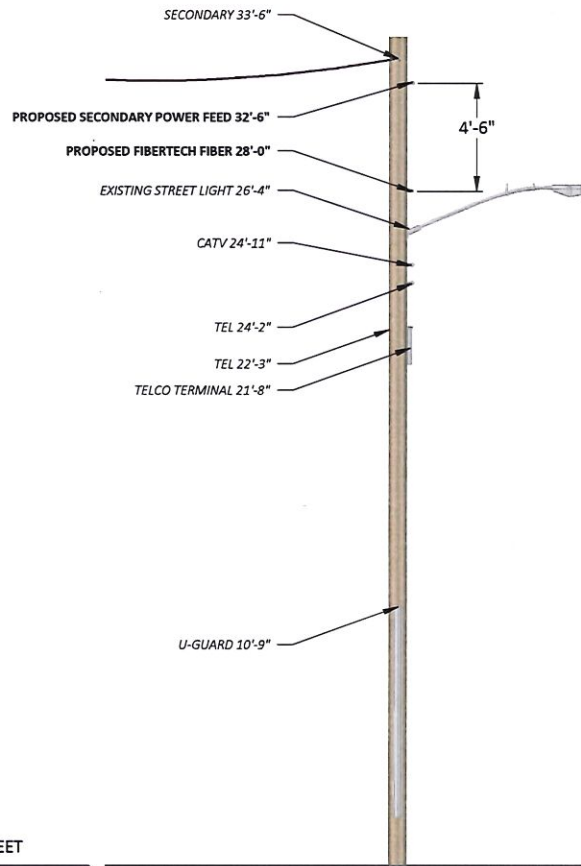
REVISIONS		
REV	DESCRIPTION	DATE

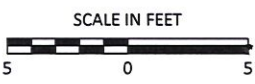
DRAFTER: WP	1
SCALE: AS NOTED	
ISSUE DATE: 10/12/15	
INDEX NAME: SC-NC 0150	
SHEET #: 1 OF 13	



① PROPOSED PROFILE - REAR VIEW  
FROM WEST TOWARDS ST MARYS ST



② PROPOSED PROFILE - SIDE VIEW  
FROM SOUTH FROM ST MARYS ST



LOCATION: RALEIGH, NC  
35.78985°, -78.65121°

NOTES:

PREPARED FOR:  
**Fibertech**  
network, Inc.

PREPARED BY:  
**UC SYNERGETIC**  
Infrastructure Planning & Engineering Solutions  
21 OXFORD RD  
MANSFIELD, MA 02048  
www.uceng.com 1-508-337-7600

FIBERTECH SMALL CELL  
EXISTING

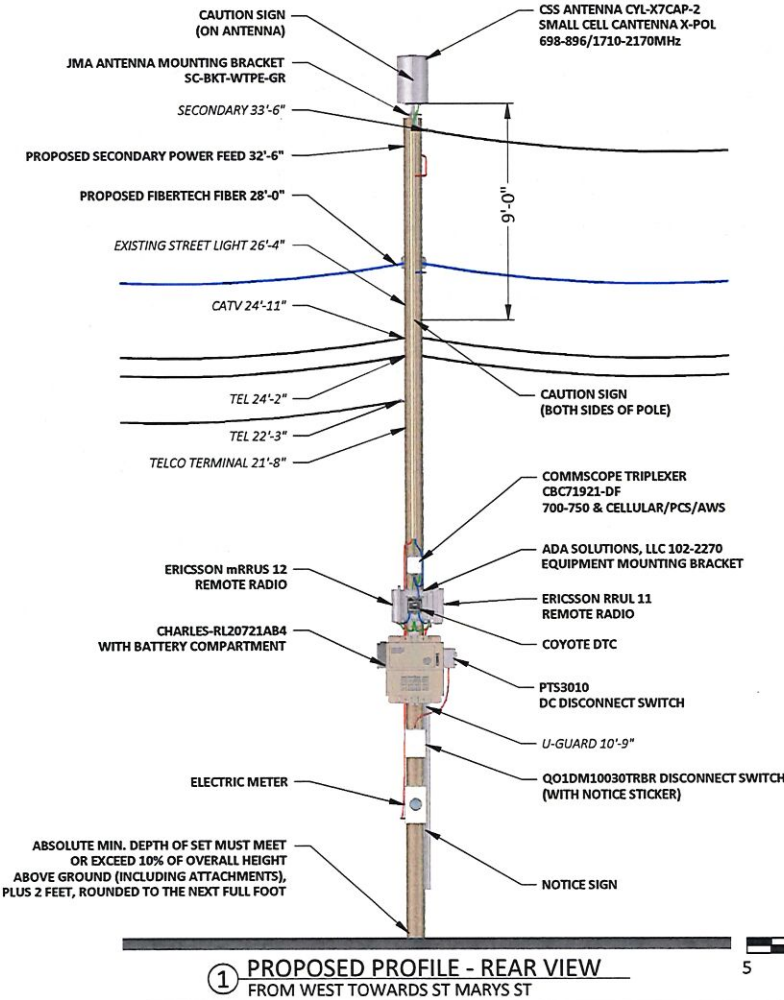
REVISIONS		
REV	DESCRIPTION	DATE

DRAFTER: WP  
SCALE: 1" = 5'  
ISSUE DATE: 10/12/15  
NODE NAME: SC-NC-0150  
SHEET #: 2 OF 13

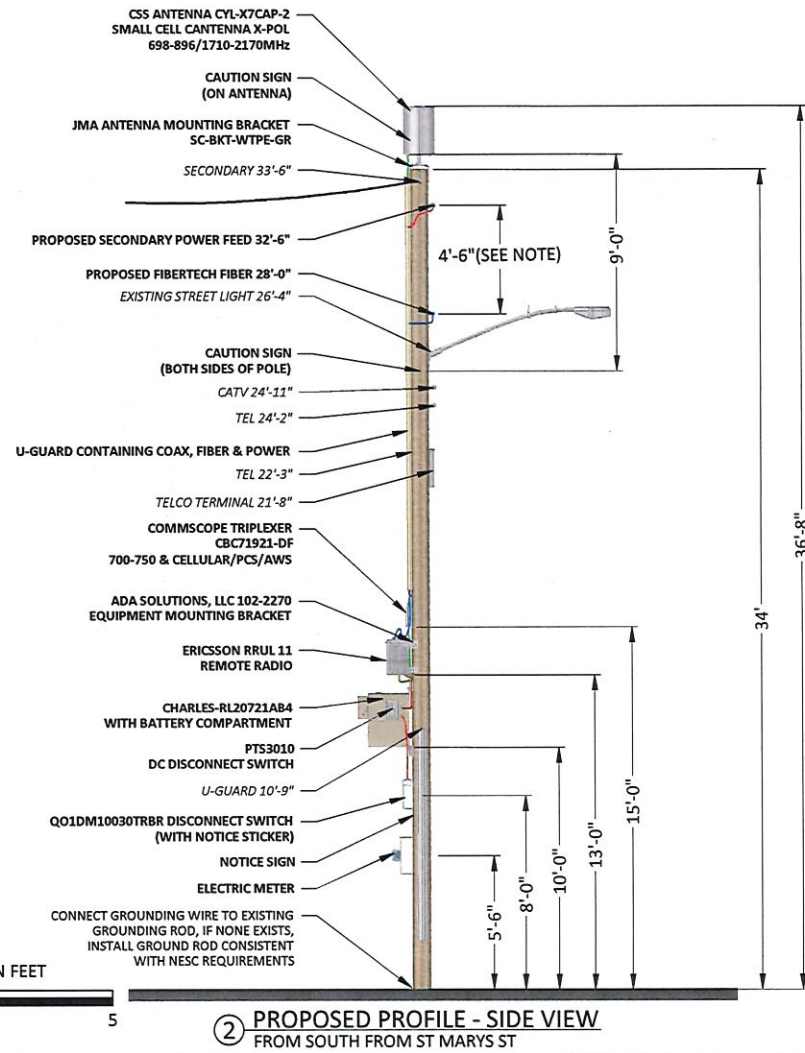


**NOTE:**  
40" MIN. WORKER SAFETY ZONE  
BETWEEN LOWEST ENERGIZED POWER  
& HIGHEST COMMUNICATIONS CABLE  
IN ACCORDANCE WITH NESC REGULATIONS

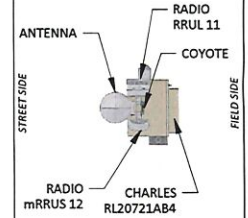
**NOTE 1:**  
REPLACE EXISTING POLE  
WITH NEW 40" CL 3 POLE



① PROPOSED PROFILE - REAR VIEW  
FROM WEST TOWARDS ST MARYS ST



② PROPOSED PROFILE - SIDE VIEW  
FROM SOUTH FROM ST MARYS ST



PROPOSED TOP VIEW  
NOTE:  
CABLES & EXISTING POLE EQUIPMENT  
NOT SHOWN FOR CLARITY

LOCATION: RAGEIGH, NC  
35.78985°,-78.65121°

NOTES:  
  
PREPARED FOR:



PREPARED BY: UC SYNERGETIC  
Innovative Thinking. Engineered Solutions.  
21 OXFORD RD  
MANSFIELD, MA 02048  
www.ucsceng.com 1-508-337-7600

FIBERTECH SMALL CELL  
PROPOSED

REVISIONS		
REV	DESCRIPTION	DATE

DRAWER: WP  
SCALE: 3" = 5'  
ISSUE DATE: 10/12/15  
NODE NAME: SC-NC 0150  
SHEET #: 3 OF 13



EXISTING PHOTOGRAPHIC VIEW



PROPOSED PHOTOGRAPHIC SIMULATION

LOCATION: RALEIGH, NC

NOTES:

PREPARED FOR:



PREPARED BY:  
**UC SYNERGETIC**  
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 MANSFIELD, MA 02048  
 www.ucseng.com 1-508-337-7600

FIBERTECH SMALL CELL  
 PHOTOSIM

REVISIONS		
REV	DESCRIPTION	DATE

DRAWER: WP  
 SCALE: NTS  
 ISSUE DATE: 10/22/15  
 PLOT NAME: SC-NC-0130  
 SHEET #: 4 OF 13

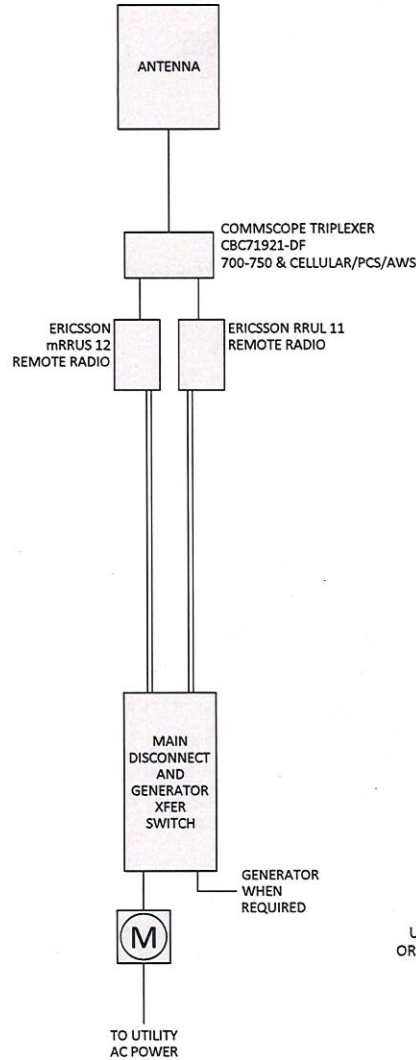




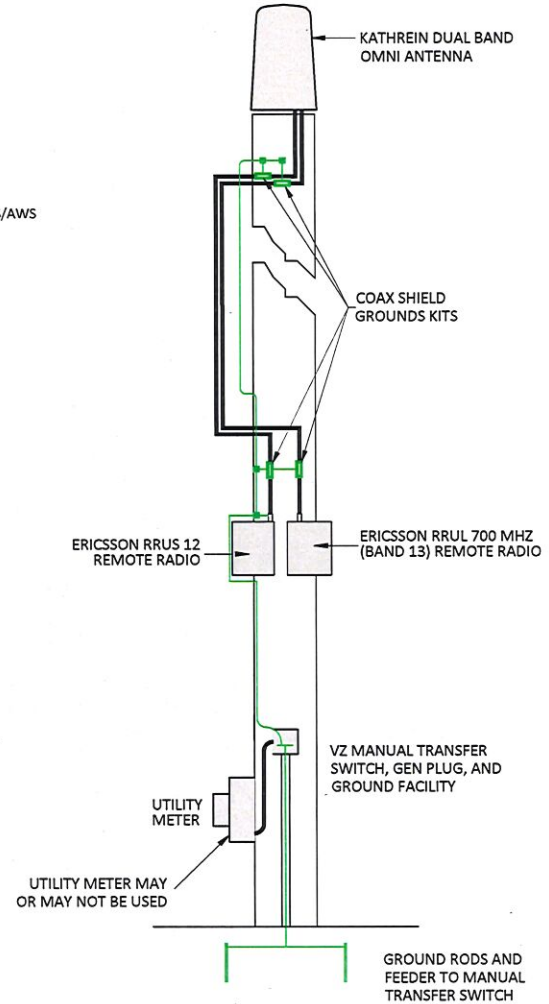
**POLE SIGNAGE**  
 NOT TO SCALE

Host (B1)				Remote (D1)		
Color	TX	RX	Technologies	Color	TX	RX
		SFP Label				SFP Label
Purple	1471	1491	1900 PCS LTE	Gray	1491	1471
Green	1511	1531	850 CDMA	Blue	1531	1511
Orange	1551	1571	700 LTE	Yellow	1571	1551
Brown	1591	1611	2100 AWS LTE	Red	1611	1591

**SFP/CWDM**  
**COLOR CODING REFERENCE**



**ELECTRICAL DIAGRAM**  
 NOT TO SCALE



**TYPICAL GROUNDING DIAGRAM**  
 NOT TO SCALE

LOCATION: RALEIGH, NC

NOTES:

PREPARED FOR:



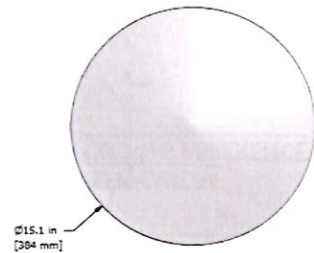
PREPARED BY:



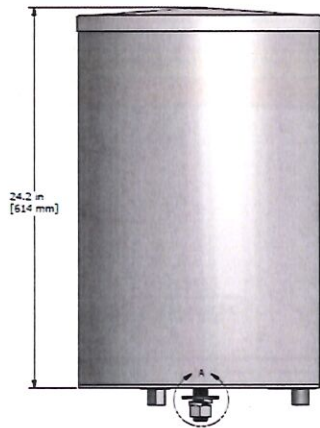
**FIBERTECH SMALL CELL  
 POLE SIGNAGE  
 & WIRING DIAGRAM**

REVISIONS		
REV	DESCRIPTION	DATE

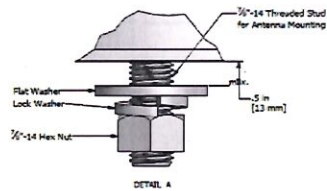
DRAWN: WP  
 SCALE: NTS  
 ISSUE DATE: 10/22/15  
 NODE NAME: SC-NC 0150  
 SHEET #: 5 OF 13



Ø15.1 in  
[384 mm]



24.2 in  
[614 mm]

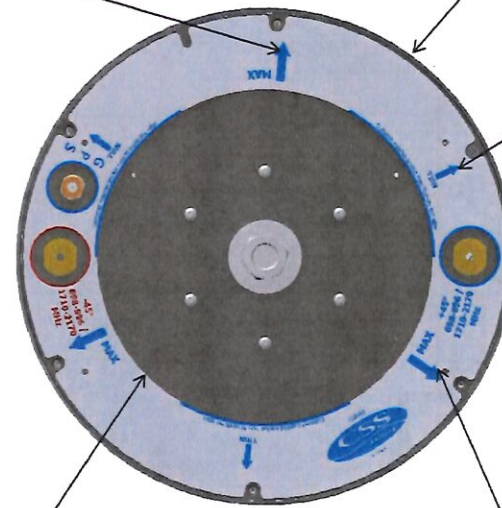


DETAIL A

**CSS ANTENNA CYL-X7CAP-2 SMALL CELL ANTENNA X-POL**  
698-896/1710-2170MHz  
SIDE VIEW

Max Labels point to the direction of maximum signal strength

15.1" [384 mm] dia



Null Labels point to the direction of minimum signal strength

Mounting brackets must stay inside 10" [254 mm] circle

Drain Holes (multiple places)  
(Avoid any obstructions to drain holes)

**CSS ANTENNA CYL-X7CAP-2 SMALL CELL ANTENNA X-POL**  
698-896/1710-2170MHz  
BOTTOM VIEW

LOCATION: RALEIGH, NC

NOTES:

PREPARED FOR:



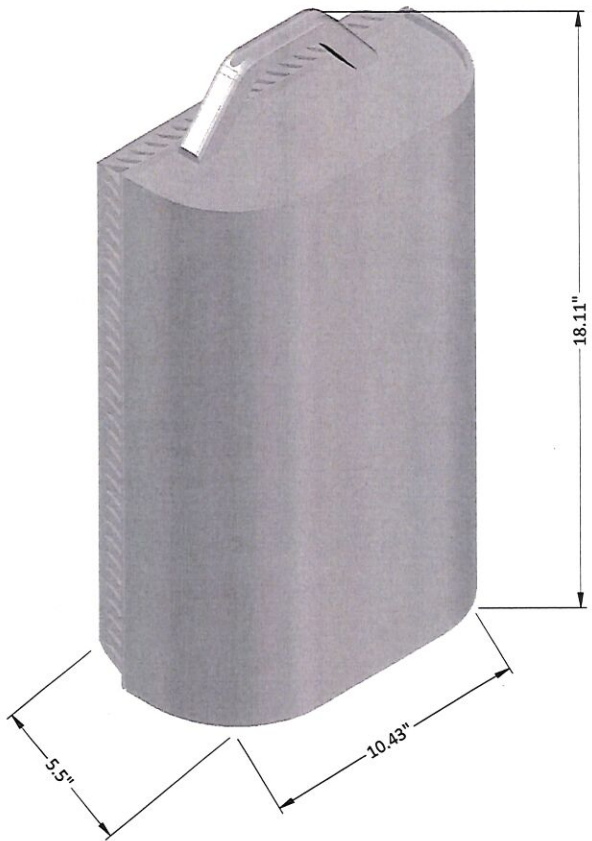
PREPARED BY:  
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21 OXFORD RD  
MANSFIELD, MA 02048  
www.ucseeng.com 1-508-337-7600

**FIBERTECH SMALL CELL**  
**CSS CYL-X7CAP-2**  
**ANTENNA DETAIL**

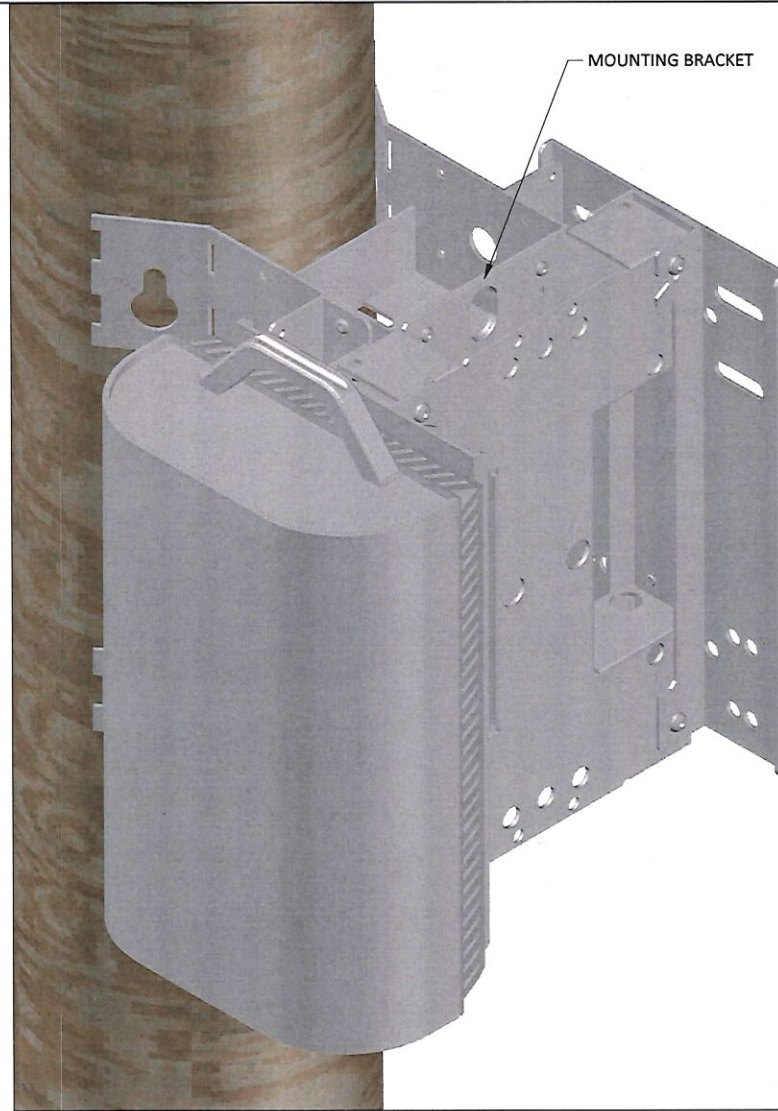
REVISIONS		
REV	DESCRIPTION	DATE

DRAWN BY: WP  
SCALE: NTS  
ISSUE DATE: 10/22/15  
NODE NAME: SC-NC-0120  
SHEET #: 6 OF 13





**ERICSSON mRRUS 12 REMOTE RADIO**  
ISOMETRIC VIEW



**ERICSSON mRRUS 12 REMOTE RADIO**  
WITH ADA SOLUTIONS, LLC 102-2270 EQUIPMENT MOUNTING BRACKET  
CONCEPTUAL VIEW

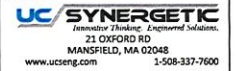
LOCATION: RALEIGH, NC

NOTES:

PREPARED FOR:



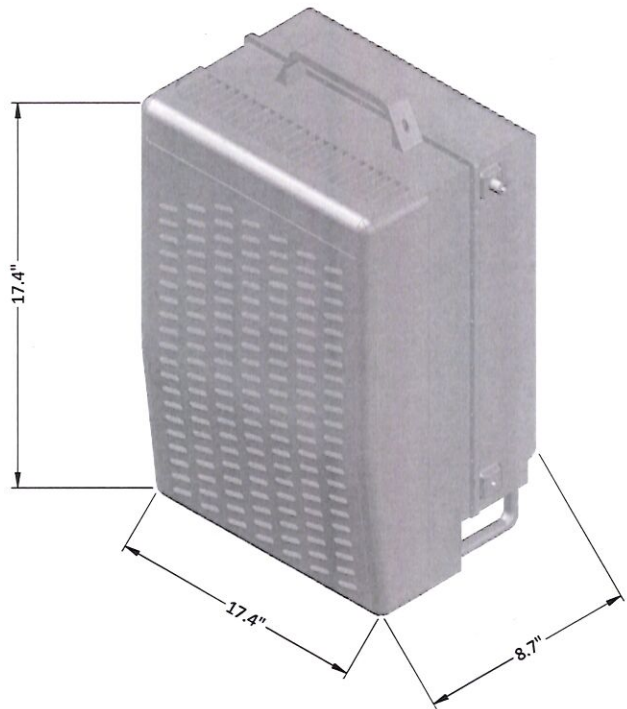
PREPARED BY:



FIBERTECH SMALL CELL  
ERICSSON  
mRRUS 12

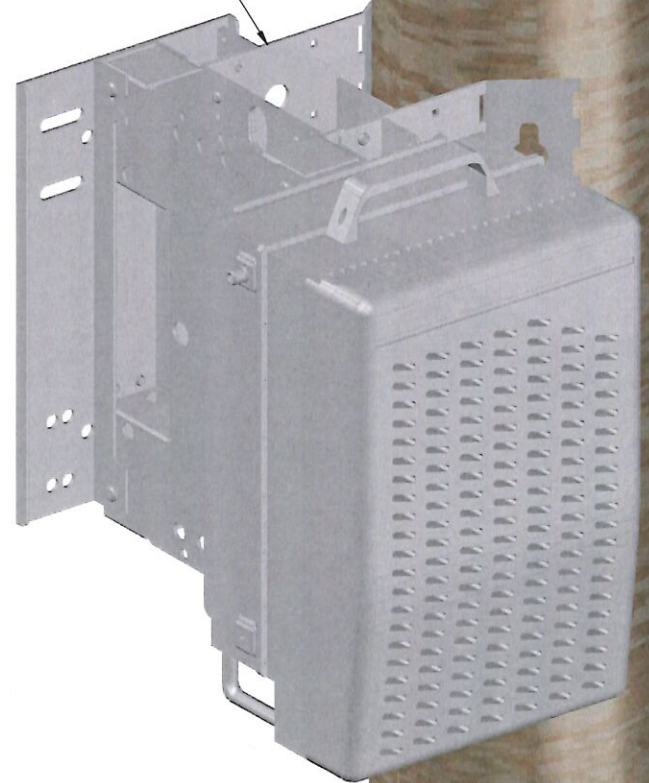
REVISIONS		
REV	DESCRIPTION	DATE

DRAFTER: WP  
SCALE: NTS  
ISSUE DATE: 10/22/15  
NODE NAME: SC-NC 0150  
SHEET #: 7 OF 13



**ERICSSON RRUL 11 REMOTE RADIO**  
ISOMETRIC VIEW

MOUNTING BRACKET



**ERICSSON RRUL 11 REMOTE RADIO**  
**WITH ADA SOLUTIONS, LLC 102-2270 EQUIPMENT MOUNTING BRACKET**  
CONCEPTUAL VIEW

LOCATION: RALEIGH, NC

NOTES:

PREPARED FOR:



PREPARED BY:

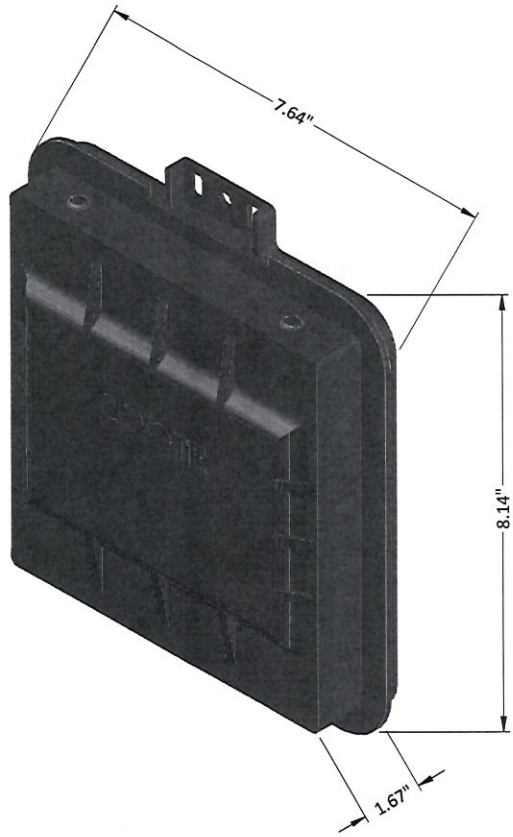
**UC SYNERGETIC**  
*Infrastructure Planning, Engineering Solutions*  
21 OXFORD RD  
MANSFIELD, MA 02048  
www.ucseng.com 1-508-337-7600

**FIBERTECH SMALL CELL**  
**ERICSSON**  
**RRUL 11**

REVISIONS		
REV	DESCRIPTION	DATE

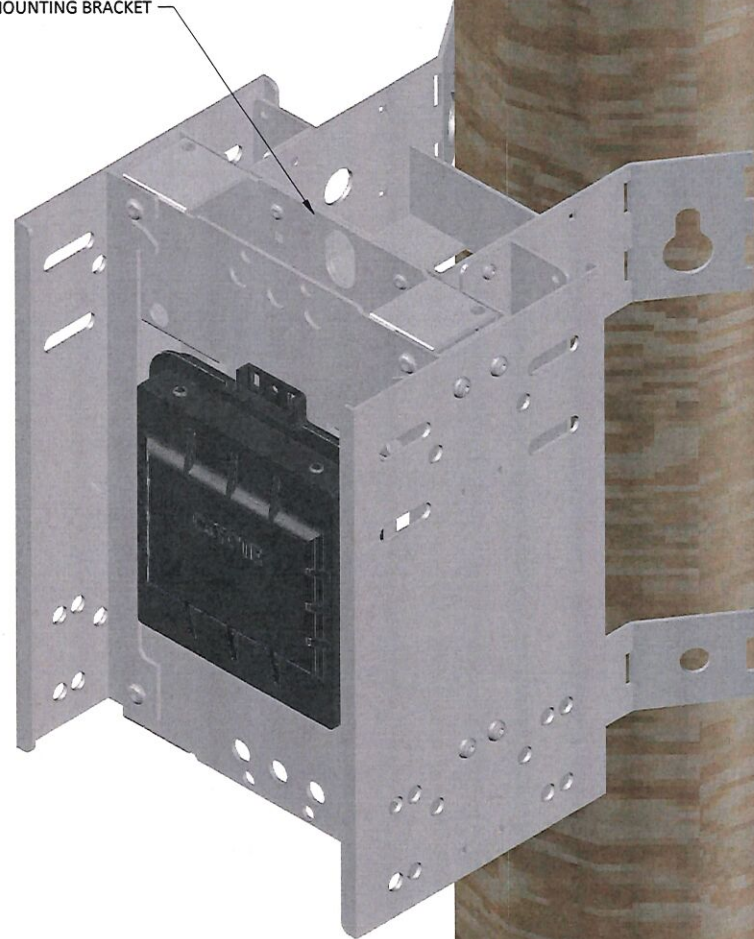
DRAWN BY: WP  
SCALE: NTS  
ISSUE DATE: 10/12/15  
MODEL NAME: SC-NC 0130  
SHEET # 8 OF 13





**COYOTE - DTC**  
ISOMETRIC VIEW

MOUNTING BRACKET



**COYOTE - DTC**  
WITH ADA SOLUTIONS, LLC 102-2270 EQUIPMENT MOUNTING BRACKET  
CONCEPTUAL VIEW

LOCATION: RALEIGH, NC

NOTES:

PREPARED FOR:



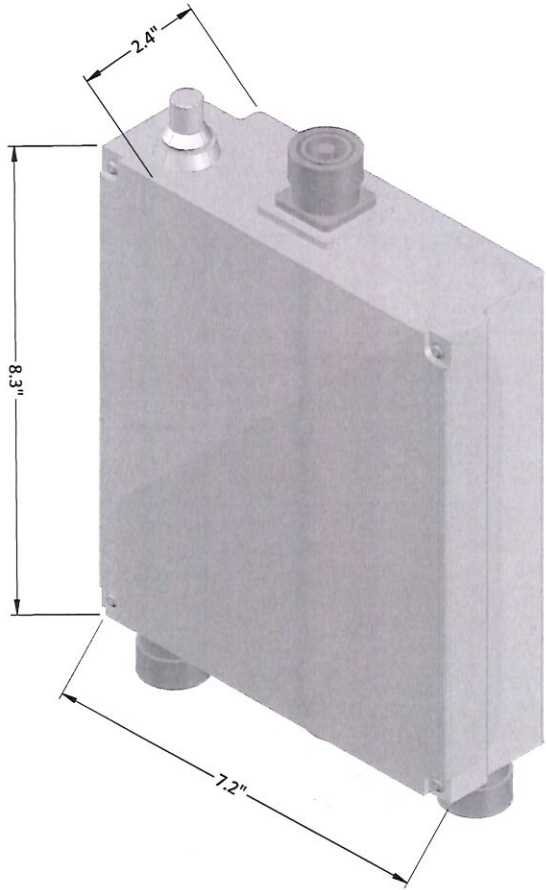
PREPARED BY:

**UC SYNERGETIC**  
*Innovative Thinking, Engineered Solutions.*  
21 OXFORD RD  
MANSFIELD, MA 02048  
www.ucseng.com 1-508-337-7600

**FIBERTECH SMALL CELL**  
**COYOTE DTC**

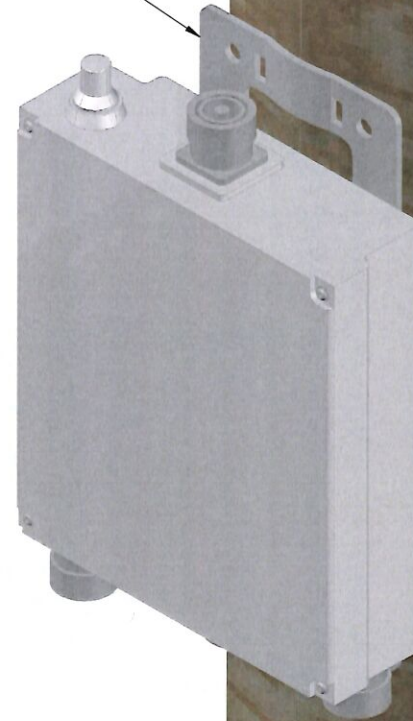
REVISIONS		
REV	DESCRIPTION	DATE

DRAFTER: WP  
SCALE: NTS  
ISSUE DATE: 30/23/15  
MODEL NAME: SC-NC-0150  
SHEET #: 9 OF 13



**COMMSCOPE TRIPLEXER**  
**CBC71921-DF 700-750 & CELLULAR PCS/AWS**  
 ISOMETRIC VIEW

MOUNTING BRACKET



**COMMSCOPE TRIPLEXER**  
**CBC71921-DF 700-750 & CELLULAR PCS/AWS**  
 ISOMETRIC VIEW

LOCATION: RALEIGH, NC

NOTES:

PREPARED FOR:



PREPARED BY:  
**UC SYNERGETIC**  
*Innovative Thinking. Engineered Solutions.*  
 21 OXFORD RD  
 MANSFIELD, MA 02048  
 www.uceng.com 1-508-337-7600

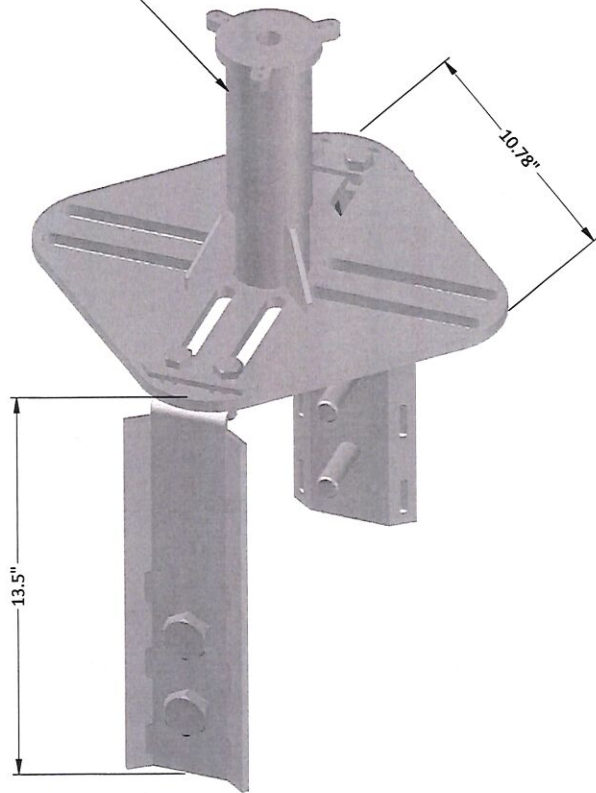
**FIBERTECH SMALL CELL**  
**COMMSCOPE**  
**TRIPLEXER**

REVISIONS		
REV	DESCRIPTION	DATE

DRAWN BY: WP  
 SCALE: NTS  
 ISSUE DATE: 10/12/15  
 MODEL NAME: SC-NC-0150  
 SHEET #: 10 OF 13



UNIVERSAL ANTENNA SLEEVE MOUNT



**JMA ANTENNA MOUNTING BRACKET**  
**SC-BKT-WTPE-GR**  
 CONCEPTUAL VIEW



**JMA POLE TOP ANTENNA MOUNTING BRACKET**  
**FOR CSS ANTENNA**  
 CONCEPTUAL VIEW

LOCATION: RALEIGH, NC

NOTES:

PREPARED FOR:



PREPARED BY:



**MOUNTING BRACKET**  
**DETAILS**

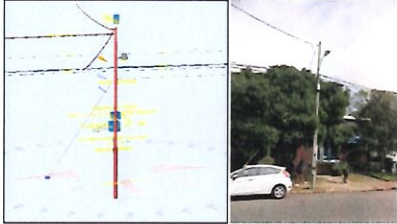
REV	REVISIONS DESCRIPTION	DATE

DRAWN: WP  
 SCALE: NTS  
 ISSUE DATE: 10/22/15  
 MODEL NAME: SC-NC-0520  
 SHEET #: 11 OF 13

O-Calc® Pro Analysis Report

Monday, October 19, 2015 10:49:18 AM

File Name: SC-NC-0150 OCALC.p	Pole Length / Class: 40 / 5	Code: NESC	Structure Type: Guyed
Pole Num: P RBF5	Pole Species: SOUTHERN PINE	NESC Rule: Rule 250B	Status: N/A
Aux Data: SC-NC-0150	Setting Depth (ft): 6.00	Construction Grade: C	Pole Strength Factor: 0.85
Aux Data: Unset	G/L Circumference (in): 31.00	Loading District: Medium	Transverse Wind LF: 1.75
Aux Data: Unset	G/L Fiber Stress (psi): 8,000	Ice Thickness (in): 0.25	Wire Tension LF: 1.30
Aux Data: Unset	Allowable Stress (psi): 6,800	Wind Speed (mph): 39.53	Vertical LF: 1.90
Aux Data: Unset	Fiber Stress Ht. Reduction: No	Wind Pressure: 4.00	



Pole Capacity Utilization		
Maximum:	Height	Wind Angle
37.7%	0.0 ft	0.0°
Groundline: 37.7%	0.0 ft	0.0°
Vertical: 2.1%	19.5 ft	90.0°

Pole Moments		
Max Capac. Util:	Load Angle	Wind Angle
19,768 ft-lb	15.2°	0.0°
Groundline: 19,768 ft-lb	15.2°	0.0°

Guys Capacity Summary: Adequate

Guy Summary	Guy Tensions		Maximum Guy Tensions	
	Attach Height (ft)	% Allowable Tension	Wind Angle	% Allowable Tension
Guy 1	22.3	25.6%	0.0°	28.2%

Anchor Summary

Anchor	Lead Length (ft)	Lead Angle	Max. % Allow. Capacity
Anchor 1	16.0	270.0°	11.5%

Pole ID: SC-NC-0150 OCALC.ppk (P RBF5)

O-Calc® Pro Analysis Report

Monday, October 19, 2015 10:49:18 AM

GROUNDLINE LOAD SUMMARY: Wind at 0.0°, Applied Moment 19,768 ft-lb at 15.2°, Allowable Moment 53,452 ft-lb

	Shear Load (lbs)	Percent Applied Load	Bending Moment (ft-lb)	Percent of Applied Moment	Percent of Pole Capacity	Bending Stress (+/-psi)	Vertical Load (lbs)	Vertical Stress (psi)	Total Stress (psi)	Percent of Pole Capacity
Power:	-104	-9.5	-3,397	-14.5	-6.4	-432	67	1	-431	-6.3
Comms:	870	79.2	20,219	88.3	37.8	2,572	1,008	13	2,585	38.0
Guys/Braces:	6	0.5	126	0.5	0.2	16	5	0	16	0.2
Generic Equipment:	151	13.7	2,947	12.6	5.5	375	906	12	387	5.7
Pole:	152	13.9	2,382	10.2	4.5	303	1,364	18	321	4.7
Streetlights:	24	2.2	1,159	4.9	2.2	147	114	1	149	2.2
Insulators:	0	0.0	-5	0.0	0.0	-1	42	1	0	0.0
Pole Load:	1,099	100.0	23,432	100.0	43.8	2,981	3,506	46	3,027	44.5
Pole Reserve Capacity:			30,020		56.2	3,819			3,773	55.5

LOAD SUMMARY BY OWNER

Elec:	-71	-2,169	-276	203	3	-273	-4.0
Fibertech:	233	5,417	689	1,038	14	703	10.3
CATV:	200	4,693	597	601	8	605	8.9
Telco:	584	13,106	1,668	299	4	1,672	24.6
Pole:	152	2,382	303	1,364	18	321	4.7
Totals:	1,099	23,432	2,981	3,506	46	3,027	44.5

Detailed Load Components

Power:	Owner	Height (ft)	Horiz. Offset (ft)	Cable Dia. (in)	Sag at Max Temp (ft)	Cable Weight (lbs/ft)	Lead Sag on Length (ft)	Span Angle (deg)	Wire Length (ft)	Tension (lbs)	Tension Moment (ft-lb)	Offset Moment (ft-lb)	Wind Moment (ft-lb)	Moment at CL (ft-lb)	
Secondary	Secondary cable	Eco	33.50	5.30	0.5370	1.25	0.071	62.0	5.0	62.1	34	1,457	-2	-16	1,445
Secondary	Secondary cable	Eco	33.50	5.30	0.5370	1.23	0.071	61.0	200.0	61.1	33	-1,432	-2	16	-1,417
Secondary	Proposed Secondary cable	Eco	32.50	5.30	0.5370	1.08	0.071	99.0	270.0	99.0	393	-4,361	-3	828	-3,426
Totals:											-4,336	-8	947	-3,397	

Pole ID: SC-NC-0150 OCALC.ppk (P RBF5)

O-Calc® Pro Analysis Report

Monday, October 19, 2015 10:49:18 AM

Comm:	Owner	Height (ft)	Horiz. Offset (ft)	Cable Dia. (in)	Sag at Max Temp (ft)	Cable Weight (lbs/ft)	Lead Sag on Length (ft)	Span Angle (deg)	Wire Length (ft)	Tension (lbs)	Tension Moment (ft-lb)	Offset Moment (ft-lb)	Wind Moment (ft-lb)	Moment at CL (ft-lb)	
Overlashed Bundle	12M STRAND	Fibertech	28.00	5.85	0.3050	0.55	0.165	151.0	90.0	151.0	2,000	15,136	-23	1,137	20,250
Fiber	Fiber Cable	Fibertech	27.96	5.85	0.6100	-	0.147	151.0	90.0	151.0	0	-22	541	519	
Overlashed Bundle	12M STRAND	Fibertech	28.00	5.85	0.3050	0.24	0.165	99.0	270.0	99.0	2,000	-15,136	-15	745	-18,406
Fiber	Fiber Cable	Fibertech	27.96	5.85	0.6100	-	0.147	99.0	270.0	99.0	0	-15	356	340	
Overlashed Bundle	6M STRAND	CATV	24.92	6.03	0.2420	4.30	0.104	151.0	90.0	151.0	1,200	10,219	-26	1,256	11,349
Fiber	CATV Fiber - 1"	CATV	24.88	6.25	1.0000	-	0.280	99.0	270.0	99.0	0	-48	826	778	
CATV	CATV Cable - 1"	CATV	24.87	5.82	1.3200	-	1.200	151.0	90.0	151.0	0	-95	826	729	
Overlashed Bundle	6M STRAND	CATV	24.92	6.03	0.2420	1.93	0.104	99.0	270.0	99.0	1,200	-10,219	-17	689	-9,347
Fiber	CATV Fiber - 1"	CATV	24.88	6.25	1.0000	-	0.280	99.0	270.0	99.0	0	-31	541	510	
CATV	CATV Cable - 1"	CATV	24.87	5.82	1.3200	-	1.200	99.0	270.0	99.0	0	-63	541	478	
Overlashed Bundle	6M STRAND	Telco	24.17	6.08	0.2420	0.61	0.104	151.0	90.0	151.0	1,200	9,911	-18	896	10,789
Fiber	Telco Cable - 5"	Telco	24.14	6.03	0.5000	-	0.100	151.0	90.0	151.0	0	-18	382	354	
Overlashed Bundle	6M STRAND	Telco	24.17	6.08	0.2420	0.26	0.104	99.0	270.0	99.0	1,200	-9,911	-12	587	-9,328
Fiber	Telco Cable - 5"	Telco	24.14	6.03	0.5000	-	0.100	99.0	270.0	99.0	0	-12	250	229	
Overlashed Bundle	6M STRAND	Telco	22.25	6.19	0.2420	1.40	0.104	151.0	90.0	151.0	1,200	9,124	6	1,047	10,177
Fiber	Telco Fiber - 1"	Telco	22.20	6.18	1.0000	-	0.330	151.0	90.0	151.0	0	12	573	585	
Totals:											9,124	-396	11,492	20,219	

LOCATION: RALEIGH, NC

NOTES:

PREPARED FOR:



PREPARED BY:

UC SYNERGETIC  
 Innovative Thinking. Engineered Solutions.  
 21 OXFORD RD  
 MANSFIELD, MA 02048  
 www.uceng.com 1-508-337-7600

O-CALC

REVISIONS	
REV	DESCRIPTION

DRAWER: WP	12
SCALE: NTS	
ISSUE DATE: 10/12/15	
NODE NAME: SC-NC-0150	
SHEET #: 12 OF 13	



**O-Calc® Pro Analysis Report**

Generic Equipment:	Owner	Height (ft)	Horiz. Offset (in)	Offset Angle (deg)	Rotate Angle (deg)	Unit Weight (lbs)	Unit Height (in)	Unit Depth (in)	Unit Diameter (in)	Unit Length (in)	Tension Moment (ft-lb) <sup>2</sup>	Offset Moment (ft-lb) <sup>2</sup>	Wind Moment (ft-lb) <sup>2</sup>	Moment at GL (ft-lb) <sup>2</sup>	
Cylinder	CSS ANTENNA CYL-XCAP-2	Fibertech	35.75	1.53	90.0	0.0	45.00	24.20	15.00	-	-	-	-3	612	900
Box	Telec Terminal	Telec	21.67	5.72	180.0	0.0	10.00	18.00	4.00	-	8.00	-	-9	176	187
Box	Commscope Triplex	Fibertech	15.30	5.54	0.0	0.0	10.00	8.25	2.33	-	7.17	-	8	68	76
Box	ADA LLC 102-2270 MOUNTING BRACKET	Fibertech	13.70	11.22	0.0	0.0	175.00	15.50	14.11	-	11.25	-	300	179	479
Box	Coyote-DTC	Fibertech	13.70	19.00	0.0	0.0	10.00	8.14	1.67	-	7.64	-	23	64	93
Box	ERICSSON mRRUS-12 RR	Fibertech	13.70	8.45	90.0	0.0	10.00	17.33	8.58	-	17.33	-	4	150	159
Box	ERICSSON RRUL-11 RR	Fibertech	13.70	8.45	270.0	0.0	10.00	17.33	8.58	-	17.33	-	-4	150	149
Box	CHARLES RLD2021A54-ADA	Fibertech	11.20	13.82	0.0	0.0	175.00	26.75	19.00	-	28.88	-	369	620	989
Box	PTS3010 DC-Disconnect	Fibertech	11.00	17.96	310.0	0.0	10.00	10.13	7.27	-	6.00	-	12	58	70
Box	QDDM19030RBR Disconnect	Fibertech	8.00	6.96	0.0	0.0	12.00	14.00	5.00	-	10.00	-	13	84	97
Box	Electric Meter	Eico	5.50	7.62	0.0	0.0	10.00	12.00	6.00	-	10.00	-	12	50	61
<b>Totals:</b>											<b>0</b>	<b>731</b>	<b>2,216</b>	<b>2,947</b>	

Streetlight:	Owner	Height (ft)	Horiz. Offset (in)	Offset Angle (deg)	Rotate Angle (deg)	Unit Weight (lbs)	Unit Height (in)	Unit Depth (in)	Unit Diameter (in)	Unit Length (in)	Tension Moment (ft-lb) <sup>2</sup>	Offset Moment (ft-lb) <sup>2</sup>	Wind Moment (ft-lb) <sup>2</sup>	Moment at GL (ft-lb) <sup>2</sup>
General	Streetlight - 8 ft. Arm	Eico	20.33	3.45	180.0	180.0	60.00	24.00	-	3.00	-	522	637	1,159
<b>Totals:</b>											<b>0</b>	<b>522</b>	<b>637</b>	<b>1,159</b>

Insulator:	Owner	Height (ft)	Horiz. Offset (in)	Offset Angle (deg)	Rotate Angle (deg)	Unit Weight (lbs)	Unit Height (in)	Unit Depth (in)	Unit Diameter (in)	Unit Length (in)	Tension Moment (ft-lb) <sup>2</sup>	Offset Moment (ft-lb) <sup>2</sup>	Wind Moment (ft-lb) <sup>2</sup>	Moment at GL (ft-lb) <sup>2</sup>
Spool	Spool Insulator	Eico	33.50	3.05	270.0	180.0	1.00	2.12	-	2.50	-	-	0	8
Spool	Proposed Secondary Attachment	Eico	32.50	3.11	270.0	270.0	1.00	0.00	-	2.50	-	-	0	0
Bot:	Fibertech	23.00	3.36	180.0	180.0	5.00	0.00	-	3.00	-	-	-	-4	0
Bot:	Three Bolt	CATV	24.22	2.53	180.0	180.0	5.00	0.00	-	3.00	-	-	-5	0
Bot:	Three Bolt	Telec	24.17	2.58	180.0	180.0	5.00	0.00	-	3.00	-	-	-5	0
Bot:	Single Bolt	Telec	22.25	3.68	90.0	90.0	5.00	0.00	-	3.00	-	-	1	0
<b>Totals:</b>											<b>0</b>	<b>-13</b>	<b>8</b>	<b>-5</b>

Guy Wire and Brace:	Owner	Attach Height (ft)	End Height (ft)	Lead Span Length (ft)	Wire Dia. (in)	Percent Solid (%)	Lead Angle (deg)	Incline Angle (deg)	Wire Weight (lbs/ft)	Rest Length (ft)	Stretch Length (in)	
Guy 1: 6M	Down	Telec	22.25	0.00	16.00	0.242	75.0	270.0	54.3	0.104	26.73	0.37

Guy Wire and Brace (Loads and Reactions)	Elastic Modulus (psi)	Rated Tensile Strength (lbs)	Guy Strength Factor	Allowable Tension (lbs)	Initial Tension (lbs)	Required Tension <sup>1</sup> (lbs)	Required Tension <sup>2</sup> (lbs)	Applied Tension <sup>3</sup> (lbs)	Vertical Load <sup>4</sup> (lbs)	Shear Load <sup>5</sup> in Guy Dia <sup>6</sup> (lbs)	Shear Load at Report Angle <sup>7</sup> (lbs)	Moment at GL <sup>8</sup> (ft-lb) <sup>2</sup>			
Guy 1: 6M	Down	23,000,000	6.000	0.95	5,400	700	1,522	1,363	913	741	520	-140	126		
<b>Totals:</b>												<b>741</b>	<b>520</b>	<b>-140</b>	<b>126</b>

**O-Calc® Pro Analysis Report**

Anchor/Rod Load Summary:	Owner	Rod Length AUL (in)	Lead Length (ft)	Lead Angle (deg)	Strength of Assembly (lbs)	Anchor/Rod Strength Factor	Allowable Load (lbs)	Max Load <sup>1</sup> (lbs)	Load at Pole MCU <sup>2</sup> (lbs)	Max Required Capacity <sup>3</sup> (%)
5.8" Telec Anchor	Telec	6.00	16.00	270.0	12,000	1.00	12,000	1,363	913	11.5

Pole Buckling													
Buckling Constant	Buckling Column Hgt (ft)	Buckling Section Height (% Buckling Col. Hgt.)	Buckling Section Diam. (in)	Min. Buckling Diam. at GL (in)	Diameter at Tip (in)	Diameter at GL (in)	Modulus of Elasticity (psi)	Pole Density (pcf)	Ice Density (pcf)	Pole Top Height (ft)	Buckling Load Capacity at Hgt. (lbs)	Buckling Load Applied at Hgt. (lbs)	Buckling Load Factor of Safety
0.71	19.49	33.33	9.14	7.89	6.05	9.87	1,800,000	60.00	57.00	34.00	168,827	3,506	47.93

LOCATION: RAGEIGH, NC

NOTES:

PREPARED FOR:



PREPARED BY:



O-CALC

REVISIONS

REV	DESCRIPTION	DATE

DRAFTER: WP  
 SCALE: NTS  
 ISSUE DATE: 10/13/15  
 NODE NAME: SC-NC-0150  
 SHEET #: 13 OF 13

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