



Monday, February 11, 2019

ATTN: Melanie Bachman
Connecticut Siting Council
Executive Director / Staff Attorney
10 Franklin Square
New Britain, CT 06051

Notice of Exempt Modification —99 Meadow St., Hartford, CT 06114 — SITE ID: CT43XC806

To Whom It May Concern:

SAC Wireless, on behalf of Sprint, is requesting the necessary approvals from Connecticut Siting Council (CSC) our scope of work for an existing Sprint facility located at – **99 Meadow St.** Scope of work is as follows:

- Sprint is proposing to remove three (3) radios and swap three (3) existing antennas with three (3) new antennas and associated cabling. Install an equipment cabinet within Sprints existing leased space. Please see construction drawings for in-depth scope of work.
- Site is located at the coordinates (Lat/Long): 41.74319722, -72.66753888
- The underlying property owner of the site is Meadow Street Realty Inc.

RF Engineers have determined this minor modification is required to help increase the network for the residents and the workforce within the local jurisdiction by offering faster data transfer speeds, fewer dropped calls and higher capacity.

Connecticut Siting Council, please e-mail me any receipts for application fees and/or fees due after plan review, prior to permit issuance. If any questions or concerns arise, please contact me at 312-858-3641. We greatly appreciate your help with this proposed Sprint facility upgrade.

CC:

| | | | |
|--|--|---|---|
| Luke Bronin Mayor of Hartford 550 Main Street, Room 200 Hartford, CT 06103 | Sandra Fry Principal Planner 250 Constitution Plaza, 4th Floor, Hartford, CT 06103 | John Collins Acting Building Official 260 Constitution Plaza, Ground Floor Hartford, CT 06103 | Meadow Street Realty Inc. Underlying Property Owner 99 Meadow St, Hartford, CT 06114 |
|--|--|---|---|

Best Regards,

Luz Guzman

Luzmaria Guzman | Zoning and Permitting Specialist | (312) 858-3641
SAC Wireless, 540 W. Madison, 9th Floor, Chicago, IL 60661
luzmaria.guzman@sacw.com | www.sacw.com

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Sent To Sandra Fry

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Street and Apt. No., or PO Box No. 99 Meadow St

City, State, ZIP+4® Hartford, CT 06111

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7018 1830 0001 0676 9762



Letter of Authorization

RE: SAC (Sprint) Site Development Activities

Subject: Letter of Authorization for SAC

To Whom It May Concern:

By way of this letter, please recognize that Sprint has engaged SAC to represent our company to evaluate site conditions, negotiate modifications to our current real estate agreements, obtain necessary permits, and perform maintenance and service work at our facilities. Sprint values its good reputation with its landlords and local government agencies and has instructed SAC to protect its good standing in all matters. To that extent, please accept this as Sprint authorization for you to discuss the terms of our site agreement and possible improvements or changes that may be proposed at the facility with SAC.

Regards,

A handwritten signature in black ink, appearing to read "Nichole Thomas", written over a horizontal line.

Nichole Thomas, National Site Development



AMERICAN TOWER®
CORPORATION

This report was prepared for American Tower Corporation by



**TOWER
ENGINEERING
PROFESSIONALS**

Structural Analysis Report

Structure : 147.9 ft Monopole
ATC Site Name : Petro Lock, CT
ATC Site Number : 302468
Engineering Number : OAA729245_C3_01
Proposed Carrier : Sprint Nextel
Carrier Site Name : Petro Lock
Carrier Site Number : CT43XC806
Site Location : 99 Meadow St
Hartford, CT 06114-1598
41.743200,-72.667500
County : Hartford
Date : April 25, 2018
Max Usage : 63%
Result : Pass

Prepared By:
Jordan Russ
TEP

Reviewed By:



COA: PEC.0001553



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Existing and Reserved Equipment

| Elevation ¹ (ft) | | Qty | Antenna | Mount Type | Lines | Carrier |
|-----------------------------|----------------------------|-------|---|-----------------------|--|---------------------------|
| Mount | RAD | | | | | |
| 148.0 | 151.0 | 4 | Decibel DB844H90E-XY | Platform w/ Handrails | (12) 1 1/4" Coax | Sprint Nextel |
| | | 8 | Andrew 844G65VTZASX | | | |
| 137.0 | 137.0 | 6 | Powerwave LGP21901 | Platform w/ Handrails | (12) 1 5/8" Coax (6) 0.78" 8 AWG 6 (3) 0.39" Fiber Trunk (1) 3" conduit | AT&T Mobility |
| | | 6 | Powerwave 7020.00 Dual Band RET | | | |
| | | 2 | Raycap DC6-48-60-18-8F | | | |
| | | 6 | Powerwave LGP21401 | | | |
| | | 3 | Ericsson RRUS 4478 B14 | | | |
| | | 1 | Raycap DC6-48-60-18-8C | | | |
| | | 3 | Ericsson RRUS 11 (Band 12) (55 lb) | | | |
| | | 3 | Ericsson RRUS 32 B66A | | | |
| | | 3 | Ericsson RRUS 32 B2 | | | |
| | | 3 | Ericsson RRUS-32 | | | |
| | | 3 | Powerwave 7750.00 | | | |
| | | 2 | KMW AM-X-CD-16-65-00T-RET | | | |
| | | 2 | Quintel QS66512-3 | | | |
| | | 1 | Andrew SBNH-1D6565C | | | |
| 1 | CCI TPA-65R-LCUUUU-H8 | | | | | |
| 3 | Kathrein 80010965 | T-Arm | (12) 1 5/8" Coax (1) 1 5/8" Fiber | T-Mobile | | |
| 123.0 | 124.0 | | | | 3 | Ericsson KRY 112 144/1 |
| | | | | | 3 | Ericsson KRY 112 489/1 |
| | | | | | 3 | Ericsson AIR 32 B4A-B2P |
| | | | | | 3 | RFS APX16DWV-16DWVS-E-A20 |
| | | | | | 3 | Andrew LNX-6515DS-VTM |
| 123.0 | 123.0 | 3 | Kathrein Smart Bias Tee | | | |
| 116.0 | 116.0 | 3 | RFS APXV18-206517 | Flush | (6) 1 5/8" Coax | Metro PCS |
| 98.0 | 98.0 | 3 | RFS IBC1900HG-2A | Low Profile Platform | (3) 1 1/4" Hybriflex | Sprint Nextel |
| | | 3 | RFS IBC1900BB-1 | | | |
| | | 3 | RFS APXVSP18-C-A20 | | | |
| | | 1 | Alcatel-Lucent 800MHz 2X50W RRH w/ Filter | | | |
| 93.0 | 93.0 | 1 | Alcatel-Lucent 4x40W RRH (88 lb) | Stand-Off | (3) 1/2" Coax (6) 5/16" Coax (1) 2" conduit | Clearwire |
| | | 3 | DragonWave Horizon Compact | | | |
| | | 3 | NextNet BTS-2500 | | | |
| | | 2 | DragonWave A-ANT-18G-2-C | | | |
| | | 3 | Argus LLPX310R | | | |
| 1 | DragonWave A-ANT-11G-2.5-C | | | | | |
| 79.0 | 79.0 | 3 | Alcatel-Lucent RRH2X60-AWS | Low Profile Platform | (2) 1 5/8" Hybriflex | Verizon |
| | | 3 | Alcatel-Lucent RRH2x60 700 | | | |
| | | 3 | Alcatel-Lucent RRH2x60 | | | |
| | | 2 | RFS DB-T1-6Z-8AB-0Z | | | |
| | | 12 | Commscope SBNHH-1D65B | | | |
| 20.0 | 20.0 | 1 | Lucent KS-24019 | Stand-Off | (1) 1/2" Coax | Sprint Nextel |



Deflection and Sway*

| Antenna Elevation (ft) | Antenna | Carrier | Deflection (ft) | Sway (Rotation) (°) |
|------------------------|--|---------------|-----------------|---------------------|
| 98.0 | Alcatel-Lucent 800 MHz 2X50W RRH w/ Filter | Sprint Nextel | 0.647 | 0.715 |
| | Alcatel-Lucent 4x40W RRH (88 lb) | | | |
| | Nokia 2.5G MAA - AAHC(64T64R) | | | |
| 93.0 | DragonWave A-ANT-18G-2-C | Clearwire | 0.585 | 0.688 |
| | DragonWave A-ANT-11G-2.5-C | | | |

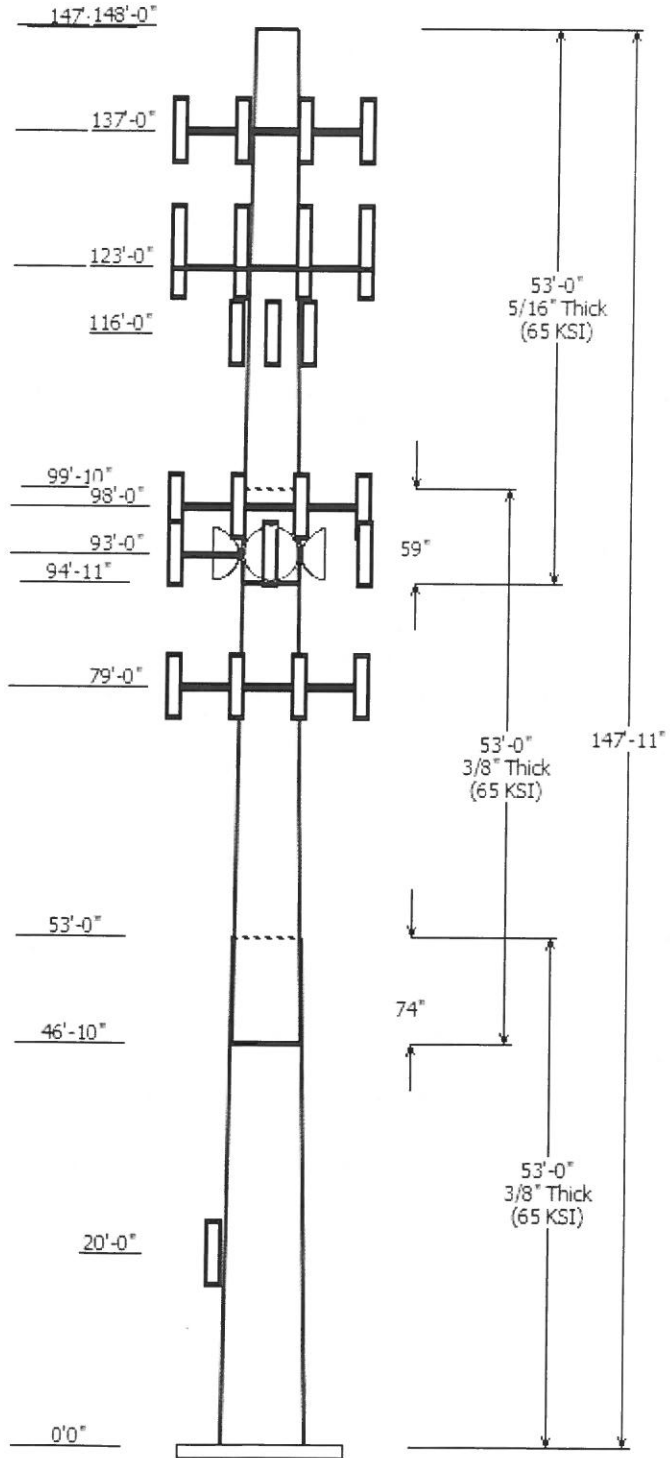
*Deflection and Sway was evaluated considering a design wind speed of 60 mph (3-Second Gust) per ANSI/TIA-222-G

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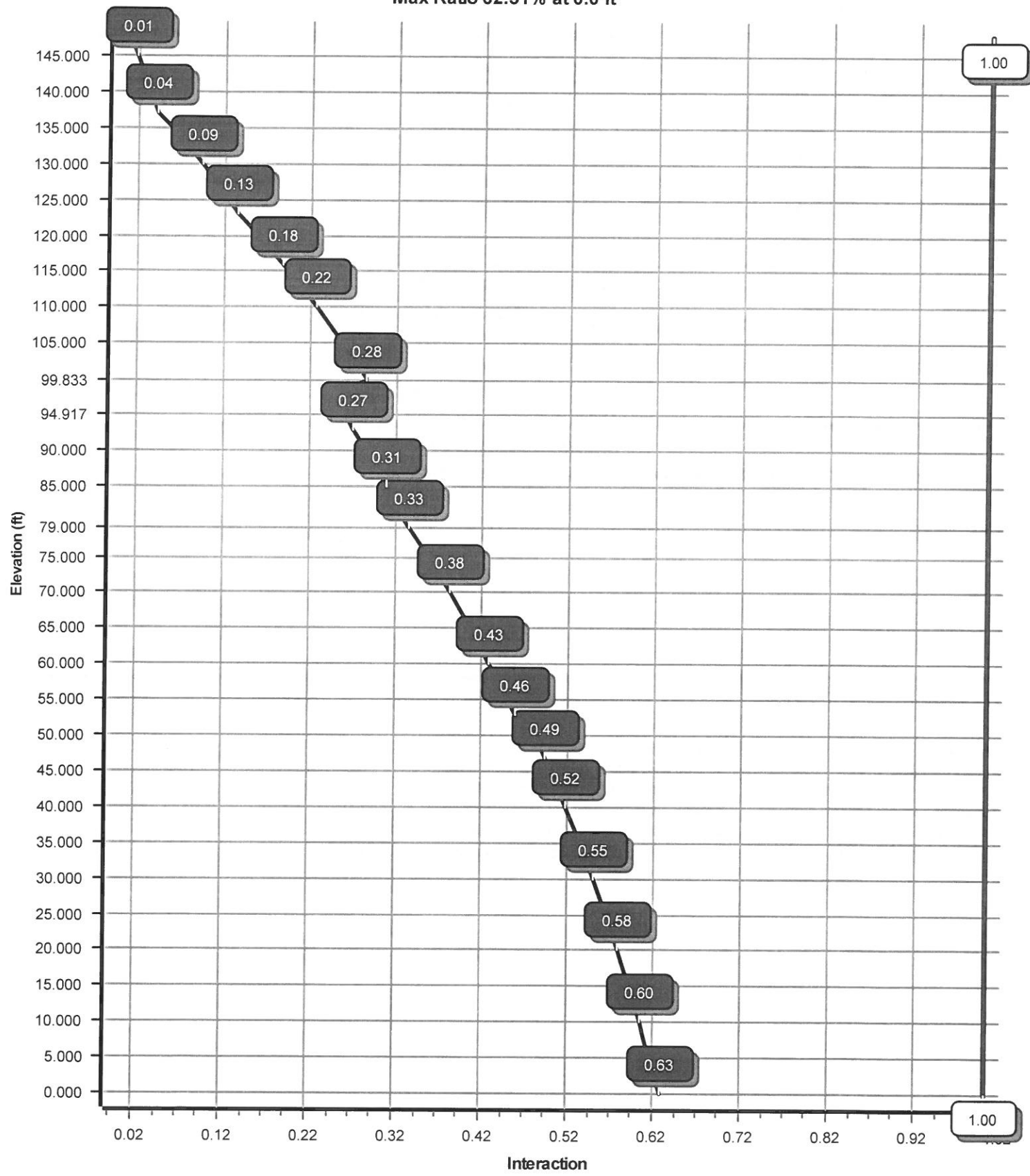
| Job Information | |
|---------------------------------|----------------------|
| Pole : 302468 | Code: ANSI/TIA-222-G |
| Location : Petro Lock, CT | |
| Description : 148' FWT Monopole | |
| Client : SPRINT NEXTEL | Struct Class : II |
| Shape : 18 Sides | Exposure : B |
| Height : 147.92 (ft) | Topo : 1 |
| Base Elev (ft): 0.00 | |
| Taper: 0.21456in/ft | |

| Sections Properties | | | | | | | |
|---------------------|-------------|---------------|--------|------------------|---------------------|-------------|-------------|
| Shaft Section | Length (ft) | Diameter (in) | | Thick Joint (in) | Overlap Length (in) | Steel Shape | Steel Grade |
| | | Top | Bottom | | | | |
| 1 | 53.000 | 45.20 | 56.58 | 0.375 | 0.000 | 18 Sides | 65 |
| 2 | 53.000 | 35.90 | 47.28 | 0.375 | 74.000 | 18 Sides | 65 |
| 3 | 53.000 | 26.21 | 37.58 | 0.313 | 59.000 | 18 Sides | 65 |

| Discrete Appurtenance | | | |
|-----------------------|-----------------|-----|--------------------------------|
| Attach Elev (ft) | Force Elev (ft) | Qty | Description |
| 148.000 | 148.000 | 1 | Flat Platform w/ Handrails |
| 148.000 | 151.000 | 8 | Andrew 844G65VTZASX |
| 148.000 | 151.000 | 4 | Decibel DB844H90E-XY |
| 137.000 | 137.000 | 2 | Quintel QS66512-3 (112 lbs.) |
| 137.000 | 137.000 | 1 | CCI TPA-65R-LCUUUU-H8 |
| 137.000 | 137.000 | 3 | Kathrein Scala 80010965 |
| 137.000 | 137.000 | 1 | Andrew SBNH-1D6565C |
| 137.000 | 137.000 | 3 | Ericsson RRUS-32 (77 lbs) |
| 137.000 | 137.000 | 3 | Ericsson RRUS 32 B2 |
| 137.000 | 137.000 | 3 | Ericsson RRUS 32 B66A |
| 137.000 | 137.000 | 3 | Ericsson RRUS 4478 B14 (15") |
| 137.000 | 137.000 | 1 | Raycap DC6-48-60-18-8C |
| 137.000 | 137.000 | 1 | Flat Platform w/ Handrails |
| 137.000 | 137.000 | 2 | KMW AM-X-CD-16-65-00T-RET |
| 137.000 | 137.000 | 3 | Powerwave Allgon 7750.00 |
| 137.000 | 137.000 | 3 | Ericsson RRUS 11 (Band 12) (55 |
| 137.000 | 137.000 | 2 | Raycap DC6-48-60-18-8F (23.5" |
| 137.000 | 137.000 | 6 | Powerwave Allgon LGP21401 |
| 137.000 | 137.000 | 6 | Powerwave Allgon 7020.00 |
| 137.000 | 137.000 | 6 | Powerwave Allgon LGP21901 |
| 123.000 | 124.000 | 3 | Ericsson AIR 32 B4A-B2P |
| 123.000 | 124.000 | 3 | Andrew LNX-6515DS-VTM |
| 123.000 | 124.000 | 3 | RFS APX16DWV-16DWVS-E-A20 |
| 123.000 | 124.000 | 3 | Ericsson KRY 112 489/1 |
| 123.000 | 124.000 | 3 | Ericsson KRY 112 144/1 |
| 123.000 | 123.000 | 3 | Kathrein Scala Smart Bias Tee |
| 123.000 | 123.000 | 3 | Round T-Arms |
| 116.000 | 116.000 | 3 | RFS APXV18-206517 |
| 98.000 | 98.000 | 2 | Alcatel-Lucent 4x40W RRH (88 l |
| 98.000 | 98.000 | 2 | Alcatel-Lucent 800 MHz 2X50W |
| 98.000 | 98.000 | 3 | Nokia 2.5G MAA - |
| 98.000 | 98.000 | 1 | Round Low Profile Platform |
| 98.000 | 98.000 | 3 | RFS APXVSP18-C-A20 |
| 98.000 | 98.000 | 1 | Alcatel-Lucent 4x40W RRH (88 l |
| 98.000 | 98.000 | 1 | Alcatel-Lucent 800 MHz 2X50W |
| 98.000 | 98.000 | 3 | RFS IBC1900HG-2A |
| 98.000 | 98.000 | 3 | RFS IBC1900BB-1 |
| 93.000 | 93.000 | 1 | DragonWave A-ANT-11G-2.5-C |
| 93.000 | 93.000 | 1 | Side Arms |
| 93.000 | 93.000 | 2 | DragonWave A-ANT-18G-2-C |
| 93.000 | 93.000 | 3 | Argus LLPX310R |
| 93.000 | 93.000 | 3 | NextNet BTS-2500 |
| 93.000 | 93.000 | 3 | DragonWave Horizon Compact |
| 79.000 | 79.000 | 1 | Flat Low Profile Platform |
| 79.000 | 79.000 | 12 | Commscope SBNHH-1D65B |



Load Case : 1.2D + 1.6W
Max Ratio 62.51% at 0.0 ft



Site Number: 302468 Code: ANSI/TIA-222-G © 2007 - 2018 by ATC IP LLC. All rights reserved.
 Site Name: Petro Lock, CT Engineering Number: OAA729245_C3_01 4/25/2018 6:36:25 PM
 Customer: SPRINT NEXTEL

Shaft Section Properties

| Sect Info | Length (ft) | Thick (in) | Fy (ksi) | Joint Type | Joint Len (in) | Weight (lb) | Bottom | | | | | Top | | | | | Taper (in/ft) | | |
|--------------|-------------|------------|----------|------------|----------------|-------------|----------|-----------|-------------------------|-----------------------|-----------|-----------|----------|-----------|-------------------------|-----------------------|---------------|-----------|-----------|
| | | | | | | | Dia (in) | Elev (ft) | Area (in ²) | Ix (in ⁴) | W/t Ratio | D/t Ratio | Dia (in) | Elev (ft) | Area (in ²) | Ix (in ⁴) | | W/t Ratio | D/t Ratio |
| 1-18 | 53.000 | 0.3750 | 65 | | 0.00 | 10,844 | 56.58 | 0.00 | 66.90 | 26698.9 | 24.84 | 150.88 | 45.20 | 53.00 | 53.36 | 13550.6 | 19.49 | 120.55 | 0.214568 |
| 2-18 | 53.000 | 0.3750 | 65 | Slip | 74.00 | 8,848 | 47.28 | 46.83 | 55.83 | 15518.7 | 20.47 | 126.08 | 35.90 | 99.83 | 42.29 | 6746.8 | 15.12 | 95.76 | 0.214568 |
| 3-18 | 53.000 | 0.3125 | 65 | Slip | 59.00 | 5,651 | 37.58 | 94.92 | 36.97 | 6490.6 | 19.45 | 120.28 | 26.21 | 147.92 | 25.69 | 2178.2 | 13.03 | 83.89 | 0.214568 |
| Shaft Weight | | | | | | 25,342 | | | | | | | | | | | | | |

Discrete Appurtenance Properties

| Attach Elev (ft) | Description | Qty | Distance From Face (ft) | Vert Ecc (ft) | Weight (lb) | No Ice EPAa (sf) | Orientation Factor |
|------------------|--------------------------------|-----|-------------------------|---------------|-------------|------------------|--------------------|
| 148.00 | Andrew 844G65VTZASX | 8 | 0.000 | 3.000 | 16.00 | 5.310 | 0.71 |
| 148.00 | Decibel DB844H90E-XY | 4 | 0.000 | 3.000 | 14.00 | 3.610 | 0.74 |
| 148.00 | Flat Platform w/ Handrails | 1 | 0.000 | 0.000 | 2000.00 | 42.400 | 1.00 |
| 137.00 | Andrew SBNH-1D6565C | 1 | 0.000 | 0.000 | 66.10 | 11.450 | 0.70 |
| 137.00 | CCI TPA-65R-LCUUUU-H8 | 1 | 0.000 | 0.000 | 81.60 | 13.300 | 0.69 |
| 137.00 | Ericsson RRUS 11 (Band 12) (55 | 3 | 0.000 | 0.000 | 55.00 | 2.520 | 0.67 |
| 137.00 | Ericsson RRUS 32 B2 | 3 | 0.000 | 0.000 | 53.00 | 2.740 | 0.67 |
| 137.00 | Ericsson RRUS 32 B66A | 3 | 0.000 | 0.000 | 50.70 | 2.720 | 0.67 |
| 137.00 | Ericsson RRUS 4478 B14 (15") | 3 | 0.000 | 0.000 | 59.40 | 1.650 | 0.50 |
| 137.00 | Ericsson RRUS-32 (77 lbs) | 3 | 0.000 | 0.000 | 77.00 | 3.310 | 0.67 |
| 137.00 | Flat Platform w/ Handrails | 1 | 0.000 | 0.000 | 2000.00 | 42.400 | 1.00 |
| 137.00 | Kathrein Scala 80010965 | 3 | 0.000 | 0.000 | 97.60 | 13.810 | 0.62 |
| 137.00 | KMW AM-X-CD-16-65-00T-RET | 2 | 0.000 | 0.000 | 48.50 | 8.020 | 0.67 |
| 137.00 | Powerwave Allgon 7020.00 Dual | 6 | 0.000 | 0.000 | 2.20 | 0.400 | 0.50 |
| 137.00 | Powerwave Allgon 7750.00 | 3 | 0.000 | 0.000 | 27.00 | 5.560 | 0.65 |
| 137.00 | Powerwave Allgon LGP21401 | 6 | 0.000 | 0.000 | 14.10 | 1.100 | 0.50 |
| 137.00 | Powerwave Allgon LGP21901 | 6 | 0.000 | 0.000 | 5.50 | 0.230 | 0.50 |
| 137.00 | Quintel QS66512-3 (112 lbs.) | 2 | 0.000 | 0.000 | 112.00 | 8.130 | 0.74 |
| 137.00 | Raycap DC6-48-60-18-8C | 1 | 0.000 | 0.000 | 16.00 | 3.050 | 0.67 |
| 137.00 | Raycap DC6-48-60-18-8F (23.5" | 2 | 0.000 | 0.000 | 20.00 | 1.110 | 1.00 |
| 123.00 | Andrew LNX-6515DS-VTM | 3 | 0.000 | 1.000 | 51.30 | 11.430 | 0.70 |
| 123.00 | Ericsson AIR 32 B4A-B2P | 3 | 0.000 | 1.000 | 105.80 | 6.520 | 0.71 |
| 123.00 | Ericsson KRY 112 144/1 | 3 | 0.000 | 1.000 | 11.00 | 0.410 | 0.50 |
| 123.00 | Ericsson KRY 112 489/1 | 3 | 0.000 | 1.000 | 15.40 | 0.650 | 0.50 |
| 123.00 | Kathrein Scala Smart Bias Tee | 3 | 0.000 | 0.000 | 3.30 | 0.090 | 0.50 |
| 123.00 | RFS APX16DWV-16DWVS-E-A20 | 3 | 0.000 | 1.000 | 40.70 | 6.590 | 0.60 |
| 123.00 | Round T-Arms | 3 | 0.000 | 0.000 | 250.00 | 9.700 | 0.67 |
| 116.00 | RFS APXV18-206517 | 3 | 0.000 | 0.000 | 26.40 | 5.050 | 0.68 |
| 98.00 | Alcatel-Lucent 4x40W RRH (88 I | 2 | 0.000 | 0.000 | 88.00 | 3.260 | 0.67 |
| 98.00 | Alcatel-Lucent 4x40W RRH (88 I | 1 | 0.000 | 0.000 | 88.00 | 3.260 | 0.67 |
| 98.00 | Alcatel-Lucent 800 MHz 2X50W R | 2 | 0.000 | 0.000 | 64.00 | 2.060 | 0.67 |
| 98.00 | Alcatel-Lucent 800 MHz 2X50W R | 1 | 0.000 | 0.000 | 64.00 | 2.060 | 0.67 |
| 98.00 | Nokia 2.5G MAA - AAHC(64T64R) | 3 | 0.000 | 0.000 | 103.60 | 4.200 | 0.64 |
| 98.00 | RFS APXVSPP18-C-A20 | 3 | 0.000 | 0.000 | 57.00 | 8.020 | 0.69 |
| 98.00 | RFS IBC1900BB-1 | 3 | 0.000 | 0.000 | 22.00 | 0.970 | 0.50 |
| 98.00 | RFS IBC1900HG-2A | 3 | 0.000 | 0.000 | 22.00 | 0.970 | 0.50 |
| 98.00 | Round Low Profile Platform | 1 | 0.000 | 0.000 | 1500.00 | 21.700 | 1.00 |
| 93.00 | Argus LLPX310R | 3 | 0.000 | 0.000 | 28.60 | 4.290 | 0.63 |
| 93.00 | DragonWave A-ANT-11G-2.5-C | 1 | 0.000 | 0.000 | 47.60 | 8.670 | 1.00 |
| 93.00 | DragonWave A-ANT-18G-2-C | 2 | 0.000 | 0.000 | 27.10 | 4.690 | 1.00 |
| 93.00 | DragonWave Horizon Compact | 3 | 0.000 | 0.000 | 10.60 | 0.430 | 0.50 |
| 93.00 | NextNet BTS-2500 | 3 | 0.000 | 0.000 | 35.00 | 1.820 | 0.50 |
| 93.00 | Side Arms | 1 | 0.000 | 0.000 | 560.00 | 8.500 | 1.00 |
| 79.00 | Alcatel-Lucent RRH2x60 | 3 | 0.000 | 0.000 | 60.00 | 3.500 | 0.67 |
| 79.00 | Alcatel-Lucent RRH2x60 700 | 3 | 0.000 | 0.000 | 56.70 | 2.150 | 0.67 |
| 79.00 | Alcatel-Lucent RRH2X60-AWS | 3 | 0.000 | 0.000 | 44.00 | 1.880 | 0.50 |
| 79.00 | Commscope SBNHH-1D65B | 12 | 0.000 | 0.000 | 50.70 | 8.170 | 0.69 |
| 79.00 | Flat Low Profile Platform | 1 | 0.000 | 0.000 | 1500.00 | 26.100 | 1.00 |

Site Number: 302468

Code: ANSI/TIA-222-G © 2007 - 2018 by ATC IP LLC. All rights reserved.

Site Name: Petro Lock, CT

Engineering Number: OAA729245_C3_01

4/25/2018 6:36:25 PM

Customer: SPRINT NEXTEL

Segment Properties (Max Len : 5. ft)

| Seg Top Elev (ft) | Description | Thick (in) | Flat Dia (in) | Area (in ²) | Ix (in ⁴) | W/t Ratio | D/t Ratio | F'y (ksi) | S (in ³) | Z (in ³) | Weight (lb) |
|-------------------|-----------------|------------|---------------|-------------------------|-----------------------|-----------|-----------|-----------|----------------------|----------------------|-------------|
| 0.00 | | 0.3750 | 56.580 | 66.895 | 26,698.9 | 24.84 | 150.88 | 72.2 | 929.4 | 0.0 | 0.0 |
| 5.00 | | 0.3750 | 55.507 | 65.618 | 25,199.0 | 24.34 | 148.02 | 72.8 | 894.2 | 0.0 | 1,127.3 |
| 10.00 | | 0.3750 | 54.434 | 64.341 | 23,756.4 | 23.83 | 145.16 | 73.4 | 859.6 | 0.0 | 1,105.6 |
| 15.00 | | 0.3750 | 53.361 | 63.065 | 22,369.9 | 23.33 | 142.30 | 74.0 | 825.7 | 0.0 | 1,083.8 |
| 20.00 | | 0.3750 | 52.288 | 61.788 | 21,038.4 | 22.82 | 139.44 | 74.6 | 792.5 | 0.0 | 1,062.1 |
| 25.00 | | 0.3750 | 51.216 | 60.511 | 19,760.8 | 22.32 | 136.57 | 75.2 | 760.0 | 0.0 | 1,040.4 |
| 30.00 | | 0.3750 | 50.143 | 59.234 | 18,536.1 | 21.81 | 133.71 | 75.7 | 728.1 | 0.0 | 1,018.7 |
| 35.00 | | 0.3750 | 49.070 | 57.957 | 17,363.0 | 21.31 | 130.85 | 76.3 | 696.9 | 0.0 | 996.9 |
| 40.00 | | 0.3750 | 47.997 | 56.680 | 16,240.5 | 20.81 | 127.99 | 76.9 | 666.4 | 0.0 | 975.2 |
| 45.00 | | 0.3750 | 46.924 | 55.403 | 15,167.4 | 20.30 | 125.13 | 77.5 | 636.6 | 0.0 | 953.5 |
| 46.83 | Bot - Section 2 | 0.3750 | 46.531 | 54.935 | 14,786.1 | 20.12 | 124.08 | 77.7 | 625.9 | 0.0 | 344.2 |
| 50.00 | | 0.3750 | 45.851 | 54.126 | 14,142.7 | 19.80 | 122.27 | 78.1 | 607.5 | 0.0 | 1,184.8 |
| 53.00 | Top - Section 1 | 0.3750 | 45.958 | 54.253 | 14,242.1 | 19.85 | 122.55 | 78.1 | 610.4 | 0.0 | 1,106.4 |
| 55.00 | | 0.3750 | 45.528 | 53.742 | 13,843.6 | 19.64 | 121.41 | 78.3 | 598.9 | 0.0 | 367.5 |
| 60.00 | | 0.3750 | 44.456 | 52.465 | 12,880.1 | 19.14 | 118.55 | 78.9 | 570.7 | 0.0 | 903.5 |
| 65.00 | | 0.3750 | 43.383 | 51.188 | 11,962.4 | 18.64 | 115.69 | 79.5 | 543.1 | 0.0 | 881.8 |
| 70.00 | | 0.3750 | 42.310 | 49.911 | 11,089.3 | 18.13 | 112.83 | 80.1 | 516.2 | 0.0 | 860.0 |
| 75.00 | | 0.3750 | 41.237 | 48.634 | 10,259.8 | 17.63 | 109.97 | 80.7 | 490.0 | 0.0 | 838.3 |
| 79.00 | | 0.3750 | 40.379 | 47.613 | 9,626.8 | 17.22 | 107.68 | 81.1 | 469.6 | 0.0 | 655.0 |
| 80.00 | | 0.3750 | 40.164 | 47.357 | 9,472.7 | 17.12 | 107.10 | 81.3 | 464.5 | 0.0 | 161.6 |
| 85.00 | | 0.3750 | 39.091 | 46.081 | 8,726.9 | 16.62 | 104.24 | 81.9 | 439.7 | 0.0 | 794.9 |
| 90.00 | | 0.3750 | 38.019 | 44.804 | 8,021.4 | 16.11 | 101.38 | 82.4 | 415.6 | 0.0 | 773.1 |
| 93.00 | | 0.3750 | 37.375 | 44.038 | 7,616.9 | 15.81 | 99.67 | 82.6 | 401.4 | 0.0 | 453.5 |
| 94.92 | Bot - Section 3 | 0.3750 | 36.964 | 43.548 | 7,365.7 | 15.62 | 98.57 | 82.6 | 392.5 | 0.0 | 285.6 |
| 95.00 | | 0.3750 | 36.946 | 43.527 | 7,354.9 | 15.61 | 98.52 | 82.6 | 392.1 | 0.0 | 22.8 |
| 98.00 | | 0.3750 | 36.302 | 42.761 | 6,973.3 | 15.31 | 96.81 | 82.6 | 378.3 | 0.0 | 814.4 |
| 99.83 | Top - Section 2 | 0.3125 | 36.534 | 35.926 | 5,955.0 | 18.85 | 116.91 | 79.2 | 321.0 | 0.0 | 490.6 |
| 100.0 | | 0.3125 | 36.498 | 35.890 | 5,937.4 | 18.83 | 116.79 | 79.3 | 320.4 | 0.0 | 20.4 |
| 105.0 | | 0.3125 | 35.425 | 34.826 | 5,424.8 | 18.23 | 113.36 | 80.0 | 301.6 | 0.0 | 601.6 |
| 110.0 | | 0.3125 | 34.352 | 33.762 | 4,942.6 | 17.62 | 109.93 | 80.7 | 283.4 | 0.0 | 583.5 |
| 115.0 | | 0.3125 | 33.279 | 32.698 | 4,489.8 | 17.01 | 106.49 | 81.4 | 265.7 | 0.0 | 565.4 |
| 116.0 | | 0.3125 | 33.065 | 32.485 | 4,402.7 | 16.89 | 105.81 | 81.5 | 262.3 | 0.0 | 110.9 |
| 120.0 | | 0.3125 | 32.207 | 31.634 | 4,065.6 | 16.41 | 103.06 | 82.1 | 248.6 | 0.0 | 436.4 |
| 123.0 | | 0.3125 | 31.563 | 30.995 | 3,824.4 | 16.05 | 101.00 | 82.5 | 238.7 | 0.0 | 319.7 |
| 125.0 | | 0.3125 | 31.134 | 30.570 | 3,669.0 | 15.80 | 99.63 | 82.6 | 232.1 | 0.0 | 209.5 |
| 130.0 | | 0.3125 | 30.061 | 29.506 | 3,299.0 | 15.20 | 96.19 | 82.6 | 216.2 | 0.0 | 511.1 |
| 135.0 | | 0.3125 | 28.988 | 28.442 | 2,954.8 | 14.59 | 92.76 | 82.6 | 200.8 | 0.0 | 493.0 |
| 137.0 | | 0.3125 | 28.559 | 28.016 | 2,824.1 | 14.35 | 91.39 | 82.6 | 194.8 | 0.0 | 192.1 |
| 140.0 | | 0.3125 | 27.915 | 27.377 | 2,635.4 | 13.99 | 89.33 | 82.6 | 185.9 | 0.0 | 282.7 |
| 145.0 | | 0.3125 | 26.842 | 26.313 | 2,339.9 | 13.38 | 85.90 | 82.6 | 171.7 | 0.0 | 456.7 |
| 147.9 | | 0.3125 | 26.216 | 25.693 | 2,178.2 | 13.03 | 83.89 | 82.6 | 163.6 | 0.0 | 258.1 |
| 25,342.4 | | | | | | | | | | | |

Site Number: 302468

Code: ANSI/TIA-222-G © 2007 - 2018 by ATC IP LLC. All rights reserved.

Site Name: Petro Lock, CT

Engineering Number: OAA729245_C3_01

4/25/2018 6:36:30 PM

Customer: SPRINT NEXTEL

| | | |
|-------------------------------|---------------------------|-----------------------------|
| Load Case: 1.2D + 1.6W | 96 mph with No Ice | 23 Iterations |
| Gust Response Factor :1.10 | | Wind Importance Factor 1.00 |
| Dead Load Factor :1.20 | | |
| Wind Load Factor :1.60 | | |

Calculated Forces

| Seg Elev (ft) | Pu FY (-) (kips) | Vu FX (-) (kips) | Tu MY (ft-kips) | Mu MZ (ft-kips) | Mu MX (ft-kips) | Resultant Moment (ft-kips) | phi Pn (kips) | phi Vn (kips) | phi Tn (ft-kips) | phi Mn (ft-kips) | Total Deflect (in) | Rotation (deg) | Ratio |
|---------------|------------------|------------------|-----------------|-----------------|-----------------|----------------------------|---------------|---------------|------------------|------------------|--------------------|----------------|-------|
| 0.00 | -54.91 | -29.43 | 0.00 | -3,080.84 | 0.00 | 3,080.84 | 4,345.86 | 2,172.93 | 10,048.4 | 5,031.69 | 0.00 | 0.00 | 0.625 |
| 5.00 | -53.48 | -29.15 | 0.00 | -2,933.71 | 0.00 | 2,933.71 | 4,297.95 | 2,148.97 | 9,746.71 | 4,880.60 | 0.09 | -0.16 | 0.614 |
| 10.00 | -51.74 | -28.88 | 0.00 | -2,787.94 | 0.00 | 2,787.94 | 4,248.67 | 2,124.33 | 9,446.20 | 4,730.12 | 0.34 | -0.32 | 0.602 |
| 15.00 | -50.02 | -28.61 | 0.00 | -2,643.54 | 0.00 | 2,643.54 | 4,198.03 | 2,099.01 | 9,147.09 | 4,580.35 | 0.77 | -0.48 | 0.589 |
| 20.00 | -48.33 | -28.31 | 0.00 | -2,500.51 | 0.00 | 2,500.51 | 4,146.02 | 2,073.01 | 8,849.58 | 4,431.37 | 1.36 | -0.65 | 0.576 |
| 25.00 | -46.67 | -28.03 | 0.00 | -2,358.98 | 0.00 | 2,358.98 | 4,092.65 | 2,046.32 | 8,553.84 | 4,283.28 | 2.13 | -0.81 | 0.562 |
| 30.00 | -45.04 | -27.75 | 0.00 | -2,218.82 | 0.00 | 2,218.82 | 4,037.92 | 2,018.96 | 8,260.05 | 4,136.16 | 3.07 | -0.98 | 0.548 |
| 35.00 | -43.44 | -27.46 | 0.00 | -2,080.07 | 0.00 | 2,080.07 | 3,981.82 | 1,990.91 | 7,968.40 | 3,990.12 | 4.18 | -1.14 | 0.532 |
| 40.00 | -41.86 | -27.15 | 0.00 | -1,942.77 | 0.00 | 1,942.77 | 3,924.36 | 1,962.18 | 7,679.06 | 3,845.24 | 5.47 | -1.31 | 0.516 |
| 45.00 | -40.34 | -26.92 | 0.00 | -1,807.02 | 0.00 | 1,807.02 | 3,865.53 | 1,932.77 | 7,392.22 | 3,701.60 | 6.92 | -1.47 | 0.499 |
| 46.83 | -39.77 | -26.76 | 0.00 | -1,757.66 | 0.00 | 1,757.66 | 3,843.62 | 1,921.81 | 7,287.71 | 3,649.27 | 7.50 | -1.53 | 0.492 |
| 50.00 | -38.09 | -26.53 | 0.00 | -1,672.91 | 0.00 | 1,672.91 | 3,805.35 | 1,902.67 | 7,108.06 | 3,559.31 | 8.55 | -1.64 | 0.480 |
| 53.00 | -36.53 | -26.33 | 0.00 | -1,593.32 | 0.00 | 1,593.32 | 3,811.37 | 1,905.68 | 7,136.09 | 3,573.35 | 9.61 | -1.74 | 0.456 |
| 55.00 | -35.92 | -26.10 | 0.00 | -1,540.65 | 0.00 | 1,540.65 | 3,786.97 | 1,893.48 | 7,023.10 | 3,516.77 | 10.35 | -1.80 | 0.448 |
| 60.00 | -34.45 | -25.73 | 0.00 | -1,410.17 | 0.00 | 1,410.17 | 3,725.00 | 1,862.50 | 6,742.70 | 3,376.36 | 12.32 | -1.95 | 0.427 |
| 65.00 | -33.00 | -25.35 | 0.00 | -1,281.52 | 0.00 | 1,281.52 | 3,661.68 | 1,830.84 | 6,465.40 | 3,237.50 | 14.45 | -2.10 | 0.405 |
| 70.00 | -31.59 | -24.97 | 0.00 | -1,154.76 | 0.00 | 1,154.76 | 3,596.99 | 1,798.49 | 6,191.38 | 3,100.29 | 16.73 | -2.25 | 0.381 |
| 75.00 | -30.21 | -24.62 | 0.00 | -1,029.90 | 0.00 | 1,029.90 | 3,530.94 | 1,765.47 | 5,920.82 | 2,964.81 | 19.16 | -2.39 | 0.356 |
| 79.00 | -26.08 | -20.74 | 0.00 | -931.44 | 0.00 | 931.44 | 3,477.11 | 1,738.56 | 5,706.98 | 2,857.73 | 21.20 | -2.50 | 0.334 |
| 80.00 | -25.80 | -20.52 | 0.00 | -910.70 | 0.00 | 910.70 | 3,463.52 | 1,731.76 | 5,653.90 | 2,831.15 | 21.73 | -2.52 | 0.329 |
| 85.00 | -24.51 | -20.12 | 0.00 | -808.08 | 0.00 | 808.08 | 3,394.74 | 1,697.37 | 5,390.81 | 2,699.41 | 24.44 | -2.65 | 0.307 |
| 90.00 | -23.24 | -19.78 | 0.00 | -707.47 | 0.00 | 707.47 | 3,324.59 | 1,662.30 | 5,131.72 | 2,569.67 | 27.28 | -2.77 | 0.282 |
| 93.00 | -21.50 | -18.30 | 0.00 | -648.12 | 0.00 | 648.12 | 3,271.77 | 1,635.89 | 4,962.98 | 2,485.18 | 29.05 | -2.85 | 0.267 |
| 94.92 | -21.04 | -18.21 | 0.00 | -613.04 | 0.00 | 613.04 | 3,235.40 | 1,617.70 | 4,852.71 | 2,429.96 | 30.20 | -2.89 | 0.259 |
| 95.00 | -21.00 | -18.10 | 0.00 | -611.53 | 0.00 | 611.53 | 3,233.82 | 1,616.91 | 4,847.95 | 2,427.58 | 30.25 | -2.89 | 0.259 |
| 98.00 | -16.87 | -15.68 | 0.00 | -557.24 | 0.00 | 557.24 | 3,176.90 | 1,588.45 | 4,677.94 | 2,342.44 | 32.09 | -2.96 | 0.243 |
| 99.83 | -16.18 | -15.57 | 0.00 | -528.49 | 0.00 | 528.49 | 2,561.71 | 1,280.85 | 3,809.78 | 1,907.72 | 33.24 | -3.00 | 0.283 |
| 100.00 | -16.14 | -15.39 | 0.00 | -525.89 | 0.00 | 525.89 | 2,559.94 | 1,279.97 | 3,803.37 | 1,904.51 | 33.34 | -3.01 | 0.283 |
| 105.00 | -15.14 | -14.98 | 0.00 | -448.95 | 0.00 | 448.95 | 2,506.36 | 1,253.18 | 3,612.41 | 1,808.89 | 36.55 | -3.12 | 0.254 |
| 110.00 | -14.17 | -14.57 | 0.00 | -374.05 | 0.00 | 374.05 | 2,451.42 | 1,225.71 | 3,424.31 | 1,714.70 | 39.88 | -3.23 | 0.224 |
| 115.00 | -13.22 | -14.31 | 0.00 | -301.17 | 0.00 | 301.17 | 2,395.11 | 1,197.55 | 3,239.25 | 1,622.03 | 43.32 | -3.33 | 0.191 |
| 116.00 | -12.96 | -13.70 | 0.00 | -286.87 | 0.00 | 286.87 | 2,383.68 | 1,191.84 | 3,202.61 | 1,603.69 | 44.02 | -3.35 | 0.184 |
| 120.00 | -12.25 | -13.42 | 0.00 | -232.06 | 0.00 | 232.06 | 2,337.43 | 1,168.72 | 3,057.40 | 1,530.97 | 46.85 | -3.41 | 0.157 |
| 123.00 | -10.15 | -10.80 | 0.00 | -190.11 | 0.00 | 190.11 | 2,302.17 | 1,151.09 | 2,949.92 | 1,477.15 | 49.01 | -3.46 | 0.133 |
| 125.00 | -9.84 | -10.54 | 0.00 | -168.51 | 0.00 | 168.51 | 2,271.18 | 1,135.59 | 2,869.84 | 1,437.05 | 50.46 | -3.48 | 0.122 |
| 130.00 | -9.06 | -10.15 | 0.00 | -115.81 | 0.00 | 115.81 | 2,192.12 | 1,096.06 | 2,672.56 | 1,338.27 | 54.14 | -3.54 | 0.091 |
| 135.00 | -8.31 | -9.87 | 0.00 | -65.04 | 0.00 | 65.04 | 2,113.07 | 1,056.53 | 2,482.31 | 1,243.00 | 57.87 | -3.58 | 0.056 |
| 137.00 | -3.67 | -4.04 | 0.00 | -45.30 | 0.00 | 45.30 | 2,081.44 | 1,040.72 | 2,408.17 | 1,205.88 | 59.37 | -3.59 | 0.039 |
| 140.00 | -3.32 | -3.76 | 0.00 | -33.18 | 0.00 | 33.18 | 2,034.01 | 1,017.00 | 2,299.08 | 1,151.25 | 61.63 | -3.60 | 0.030 |
| 145.00 | -2.74 | -3.46 | 0.00 | -14.40 | 0.00 | 14.40 | 1,954.95 | 977.48 | 2,122.87 | 1,063.01 | 65.41 | -3.61 | 0.015 |
| 147.92 | 0.00 | -3.28 | 0.00 | -4.30 | 0.00 | 4.30 | 1,908.83 | 954.42 | 2,023.32 | 1,013.16 | 67.61 | -3.62 | 0.004 |

Site Number: 302468

Code: ANSI/TIA-222-G © 2007 - 2018 by ATC IP LLC. All rights reserved.

Site Name: Petro Lock, CT

Engineering Number: OAA729245_C3_01

4/25/2018 6:36:34 PM

Customer: SPRINT NEXTEL

| | | |
|-------------------------------|---------------------------------|-----------------------------|
| Load Case: 0.9D + 1.6W | 96 mph with No Ice (Reduced DL) | 23 Iterations |
| Gust Response Factor :1.10 | | Wind Importance Factor 1.00 |
| Dead Load Factor :0.90 | | |
| Wind Load Factor :1.60 | | |

Calculated Forces

| Seg Elev (ft) | Pu FY (-) (kips) | Vu FX (-) (kips) | Tu MY (ft-kips) | Mu MZ (ft-kips) | Mu MX (ft-kips) | Resultant Moment (ft-kips) | phi Pn (kips) | phi Vn (kips) | phi Tn (ft-kips) | phi Mn (ft-kips) | Total Deflect (in) | Rotation (deg) | Ratio |
|---------------|------------------|------------------|-----------------|-----------------|-----------------|----------------------------|---------------|---------------|------------------|------------------|--------------------|----------------|-------|
| 0.00 | -41.18 | -29.41 | 0.00 | -3,048.82 | 0.00 | 3,048.82 | 4,345.86 | 2,172.93 | 10,048.4 | 5,031.69 | 0.00 | 0.00 | 0.616 |
| 5.00 | -40.08 | -29.10 | 0.00 | -2,901.78 | 0.00 | 2,901.78 | 4,297.95 | 2,148.97 | 9,746.71 | 4,880.60 | 0.09 | -0.16 | 0.604 |
| 10.00 | -38.76 | -28.79 | 0.00 | -2,756.30 | 0.00 | 2,756.30 | 4,248.67 | 2,124.33 | 9,446.20 | 4,730.12 | 0.34 | -0.32 | 0.592 |
| 15.00 | -37.45 | -28.48 | 0.00 | -2,612.38 | 0.00 | 2,612.38 | 4,198.03 | 2,099.01 | 9,147.09 | 4,580.35 | 0.76 | -0.48 | 0.579 |
| 20.00 | -36.16 | -28.15 | 0.00 | -2,469.99 | 0.00 | 2,469.99 | 4,146.02 | 2,073.01 | 8,849.58 | 4,431.37 | 1.35 | -0.64 | 0.566 |
| 25.00 | -34.90 | -27.84 | 0.00 | -2,329.26 | 0.00 | 2,329.26 | 4,092.65 | 2,046.32 | 8,553.84 | 4,283.28 | 2.10 | -0.80 | 0.553 |
| 30.00 | -33.66 | -27.53 | 0.00 | -2,190.06 | 0.00 | 2,190.06 | 4,037.92 | 2,018.96 | 8,260.05 | 4,136.16 | 3.03 | -0.97 | 0.538 |
| 35.00 | -32.44 | -27.22 | 0.00 | -2,052.40 | 0.00 | 2,052.40 | 3,981.82 | 1,990.91 | 7,968.40 | 3,990.12 | 4.13 | -1.13 | 0.523 |
| 40.00 | -31.25 | -26.88 | 0.00 | -1,916.32 | 0.00 | 1,916.32 | 3,924.36 | 1,962.18 | 7,679.06 | 3,845.24 | 5.40 | -1.29 | 0.507 |
| 45.00 | -30.09 | -26.64 | 0.00 | -1,781.90 | 0.00 | 1,781.90 | 3,865.53 | 1,932.77 | 7,392.22 | 3,701.60 | 6.84 | -1.45 | 0.489 |
| 46.83 | -29.66 | -26.47 | 0.00 | -1,733.06 | 0.00 | 1,733.06 | 3,843.62 | 1,921.81 | 7,287.71 | 3,649.27 | 7.41 | -1.51 | 0.483 |
| 50.00 | -28.39 | -26.24 | 0.00 | -1,649.23 | 0.00 | 1,649.23 | 3,805.35 | 1,902.67 | 7,108.06 | 3,559.31 | 8.45 | -1.62 | 0.471 |
| 53.00 | -27.22 | -26.04 | 0.00 | -1,570.52 | 0.00 | 1,570.52 | 3,811.37 | 1,905.68 | 7,136.09 | 3,573.35 | 9.50 | -1.71 | 0.447 |
| 55.00 | -26.74 | -25.78 | 0.00 | -1,518.45 | 0.00 | 1,518.45 | 3,786.97 | 1,893.48 | 7,023.10 | 3,516.77 | 10.23 | -1.78 | 0.439 |
| 60.00 | -25.63 | -25.41 | 0.00 | -1,389.53 | 0.00 | 1,389.53 | 3,725.00 | 1,862.50 | 6,742.70 | 3,376.36 | 12.17 | -1.93 | 0.419 |
| 65.00 | -24.54 | -25.02 | 0.00 | -1,262.51 | 0.00 | 1,262.51 | 3,661.68 | 1,830.84 | 6,465.40 | 3,237.50 | 14.27 | -2.07 | 0.397 |
| 70.00 | -23.47 | -24.63 | 0.00 | -1,137.41 | 0.00 | 1,137.41 | 3,596.99 | 1,798.49 | 6,191.38 | 3,100.29 | 16.52 | -2.22 | 0.374 |
| 75.00 | -22.42 | -24.27 | 0.00 | -1,014.27 | 0.00 | 1,014.27 | 3,530.94 | 1,765.47 | 5,920.82 | 2,964.81 | 18.92 | -2.35 | 0.349 |
| 79.00 | -19.36 | -20.43 | 0.00 | -917.18 | 0.00 | 917.18 | 3,477.11 | 1,738.56 | 5,706.98 | 2,857.73 | 20.94 | -2.46 | 0.327 |
| 80.00 | -19.15 | -20.21 | 0.00 | -896.75 | 0.00 | 896.75 | 3,463.52 | 1,731.76 | 5,653.90 | 2,831.15 | 21.46 | -2.49 | 0.322 |
| 85.00 | -18.17 | -19.81 | 0.00 | -795.70 | 0.00 | 795.70 | 3,394.74 | 1,697.37 | 5,390.81 | 2,699.41 | 24.13 | -2.62 | 0.300 |
| 90.00 | -17.22 | -19.48 | 0.00 | -696.66 | 0.00 | 696.66 | 3,324.59 | 1,662.30 | 5,131.72 | 2,569.67 | 26.94 | -2.74 | 0.276 |
| 93.00 | -15.92 | -18.01 | 0.00 | -638.23 | 0.00 | 638.23 | 3,271.77 | 1,635.89 | 4,962.98 | 2,485.18 | 28.68 | -2.81 | 0.262 |
| 94.92 | -15.58 | -17.92 | 0.00 | -603.71 | 0.00 | 603.71 | 3,235.40 | 1,617.70 | 4,852.71 | 2,429.96 | 29.82 | -2.85 | 0.253 |
| 95.00 | -15.55 | -17.81 | 0.00 | -602.22 | 0.00 | 602.22 | 3,233.82 | 1,616.91 | 4,847.95 | 2,427.58 | 29.87 | -2.85 | 0.253 |
| 98.00 | -12.47 | -15.44 | 0.00 | -548.80 | 0.00 | 548.80 | 3,176.90 | 1,588.45 | 4,677.94 | 2,342.44 | 31.68 | -2.92 | 0.238 |
| 99.83 | -11.95 | -15.34 | 0.00 | -520.49 | 0.00 | 520.49 | 2,561.71 | 1,280.85 | 3,809.78 | 1,907.72 | 32.81 | -2.96 | 0.278 |
| 100.00 | -11.92 | -15.15 | 0.00 | -517.93 | 0.00 | 517.93 | 2,559.94 | 1,279.97 | 3,803.37 | 1,904.51 | 32.91 | -2.97 | 0.277 |
| 105.00 | -11.17 | -14.75 | 0.00 | -442.16 | 0.00 | 442.16 | 2,506.36 | 1,253.18 | 3,612.41 | 1,808.89 | 36.08 | -3.08 | 0.249 |
| 110.00 | -10.44 | -14.35 | 0.00 | -368.41 | 0.00 | 368.41 | 2,451.42 | 1,225.71 | 3,424.31 | 1,714.70 | 39.36 | -3.19 | 0.219 |
| 115.00 | -9.73 | -14.10 | 0.00 | -296.65 | 0.00 | 296.65 | 2,395.11 | 1,197.55 | 3,239.25 | 1,622.03 | 42.75 | -3.28 | 0.187 |
| 116.00 | -9.54 | -13.49 | 0.00 | -282.55 | 0.00 | 282.55 | 2,383.68 | 1,191.84 | 3,202.61 | 1,603.69 | 43.44 | -3.30 | 0.180 |
| 120.00 | -9.01 | -13.21 | 0.00 | -228.59 | 0.00 | 228.59 | 2,337.43 | 1,168.72 | 3,057.40 | 1,530.97 | 46.24 | -3.37 | 0.153 |
| 123.00 | -7.47 | -10.63 | 0.00 | -187.25 | 0.00 | 187.25 | 2,302.17 | 1,151.09 | 2,949.92 | 1,477.15 | 48.37 | -3.41 | 0.130 |
| 125.00 | -7.23 | -10.37 | 0.00 | -165.99 | 0.00 | 165.99 | 2,271.18 | 1,135.59 | 2,869.84 | 1,437.05 | 49.80 | -3.44 | 0.119 |
| 130.00 | -6.66 | -10.00 | 0.00 | -114.12 | 0.00 | 114.12 | 2,192.12 | 1,096.06 | 2,672.56 | 1,338.27 | 53.43 | -3.49 | 0.088 |
| 135.00 | -6.10 | -9.73 | 0.00 | -64.13 | 0.00 | 64.13 | 2,113.07 | 1,056.53 | 2,482.31 | 1,243.00 | 57.10 | -3.53 | 0.055 |
| 137.00 | -2.70 | -3.98 | 0.00 | -44.68 | 0.00 | 44.68 | 2,081.44 | 1,040.72 | 2,408.17 | 1,205.88 | 58.58 | -3.54 | 0.038 |
| 140.00 | -2.44 | -3.70 | 0.00 | -32.75 | 0.00 | 32.75 | 2,034.01 | 1,017.00 | 2,299.08 | 1,151.25 | 60.81 | -3.55 | 0.030 |
| 145.00 | -2.01 | -3.42 | 0.00 | -14.26 | 0.00 | 14.26 | 1,954.95 | 977.48 | 2,122.87 | 1,063.01 | 64.54 | -3.56 | 0.014 |
| 147.92 | 0.00 | -3.28 | 0.00 | -4.30 | 0.00 | 4.30 | 1,908.83 | 954.42 | 2,023.32 | 1,013.16 | 66.71 | -3.57 | 0.004 |

Site Number: 302468

Code: ANSI/TIA-222-G © 2007 - 2018 by ATC IP LLC. All rights reserved.

Site Name: Petro Lock, CT

Engineering Number: OAA729245_C3_01

4/25/2018 6:36:39 PM

Customer: SPRINT NEXTEL

| | | |
|--|--------------------------------|------------------------------|
| Load Case: 1.2D + 1.0Di + 1.0Wi | 50 mph with 1.00 in Radial Ice | 23 Iterations |
| Gust Response Factor :1.10 | Ice Dead Load Factor :1.00 | Wind Importance Factor :1.00 |
| Dead Load Factor :1.20 | | Ice Importance Factor :1.00 |
| Wind Load Factor :1.00 | | |

Calculated Forces

| Seg Elev (ft) | Pu FY (-) (kips) | Vu FX (-) (kips) | Tu MY (ft-kips) | Mu MZ (ft-kips) | Mu MX (ft-kips) | Resultant Moment (ft-kips) | phi Pn (kips) | phi Vn (kips) | phi Tn (ft-kips) | phi Mn (ft-kips) | Total Deflect (in) | Rotation (deg) | Ratio |
|---------------|------------------|------------------|-----------------|-----------------|-----------------|----------------------------|---------------|---------------|------------------|------------------|--------------------|----------------|-------|
| 0.00 | -101.91 | -8.44 | 0.00 | -894.35 | 0.00 | 894.35 | 4,345.86 | 2,172.93 | 10,048.4 | 5,031.69 | 0.00 | 0.00 | 0.201 |
| 5.00 | -99.99 | -8.38 | 0.00 | -852.16 | 0.00 | 852.16 | 4,297.95 | 2,148.97 | 9,746.71 | 4,880.60 | 0.03 | -0.05 | 0.198 |
| 10.00 | -97.53 | -8.32 | 0.00 | -810.25 | 0.00 | 810.25 | 4,248.67 | 2,124.33 | 9,446.20 | 4,730.12 | 0.10 | -0.09 | 0.194 |
| 15.00 | -95.05 | -8.26 | 0.00 | -768.65 | 0.00 | 768.65 | 4,198.03 | 2,099.01 | 9,147.09 | 4,580.35 | 0.22 | -0.14 | 0.190 |
| 20.00 | -92.54 | -8.19 | 0.00 | -727.36 | 0.00 | 727.36 | 4,146.02 | 2,073.01 | 8,849.58 | 4,431.37 | 0.40 | -0.19 | 0.186 |
| 25.00 | -90.09 | -8.12 | 0.00 | -686.42 | 0.00 | 686.42 | 4,092.65 | 2,046.32 | 8,553.84 | 4,283.28 | 0.62 | -0.24 | 0.182 |
| 30.00 | -87.66 | -8.06 | 0.00 | -645.80 | 0.00 | 645.80 | 4,037.92 | 2,018.96 | 8,260.05 | 4,136.16 | 0.89 | -0.28 | 0.178 |
| 35.00 | -85.25 | -7.98 | 0.00 | -605.51 | 0.00 | 605.51 | 3,981.82 | 1,990.91 | 7,968.40 | 3,990.12 | 1.21 | -0.33 | 0.173 |
| 40.00 | -82.87 | -7.90 | 0.00 | -565.60 | 0.00 | 565.60 | 3,924.36 | 1,962.18 | 7,679.06 | 3,845.24 | 1.59 | -0.38 | 0.168 |
| 45.00 | -80.52 | -7.84 | 0.00 | -526.08 | 0.00 | 526.08 | 3,865.53 | 1,932.77 | 7,392.22 | 3,701.60 | 2.01 | -0.43 | 0.163 |
| 46.83 | -79.66 | -7.80 | 0.00 | -511.71 | 0.00 | 511.71 | 3,843.62 | 1,921.81 | 7,287.71 | 3,649.27 | 2.18 | -0.45 | 0.161 |
| 50.00 | -77.47 | -7.73 | 0.00 | -487.02 | 0.00 | 487.02 | 3,805.35 | 1,902.67 | 7,108.06 | 3,559.31 | 2.49 | -0.48 | 0.157 |
| 53.00 | -75.42 | -7.68 | 0.00 | -463.81 | 0.00 | 463.81 | 3,811.37 | 1,905.68 | 7,136.09 | 3,573.35 | 2.80 | -0.50 | 0.150 |
| 55.00 | -74.49 | -7.61 | 0.00 | -448.46 | 0.00 | 448.46 | 3,786.97 | 1,893.48 | 7,023.10 | 3,516.77 | 3.01 | -0.52 | 0.147 |
| 60.00 | -72.20 | -7.51 | 0.00 | -410.39 | 0.00 | 410.39 | 3,725.00 | 1,862.50 | 6,742.70 | 3,376.36 | 3.58 | -0.57 | 0.141 |
| 65.00 | -69.95 | -7.39 | 0.00 | -372.87 | 0.00 | 372.87 | 3,661.68 | 1,830.84 | 6,465.40 | 3,237.50 | 4.20 | -0.61 | 0.134 |
| 70.00 | -67.73 | -7.28 | 0.00 | -335.90 | 0.00 | 335.90 | 3,596.99 | 1,798.49 | 6,191.38 | 3,100.29 | 4.87 | -0.65 | 0.127 |
| 75.00 | -65.54 | -7.17 | 0.00 | -299.52 | 0.00 | 299.52 | 3,530.94 | 1,765.47 | 5,920.82 | 2,964.81 | 5.57 | -0.69 | 0.120 |
| 79.00 | -55.61 | -6.14 | 0.00 | -270.86 | 0.00 | 270.86 | 3,477.11 | 1,738.56 | 5,706.98 | 2,857.73 | 6.17 | -0.73 | 0.111 |
| 80.00 | -55.20 | -6.07 | 0.00 | -264.72 | 0.00 | 264.72 | 3,463.52 | 1,731.76 | 5,653.90 | 2,831.15 | 6.32 | -0.73 | 0.109 |
| 85.00 | -53.16 | -5.94 | 0.00 | -234.36 | 0.00 | 234.36 | 3,394.74 | 1,697.37 | 5,390.81 | 2,699.41 | 7.11 | -0.77 | 0.102 |
| 90.00 | -51.16 | -5.83 | 0.00 | -204.66 | 0.00 | 204.66 | 3,324.59 | 1,662.30 | 5,131.72 | 2,569.67 | 7.94 | -0.81 | 0.095 |
| 93.00 | -47.36 | -5.41 | 0.00 | -187.18 | 0.00 | 187.18 | 3,271.77 | 1,635.89 | 4,962.98 | 2,485.18 | 8.45 | -0.83 | 0.090 |
| 94.92 | -46.64 | -5.37 | 0.00 | -176.82 | 0.00 | 176.82 | 3,235.40 | 1,617.70 | 4,852.71 | 2,429.96 | 8.79 | -0.84 | 0.087 |
| 95.00 | -46.60 | -5.34 | 0.00 | -176.37 | 0.00 | 176.37 | 3,233.82 | 1,616.91 | 4,847.95 | 2,427.58 | 8.80 | -0.84 | 0.087 |
| 98.00 | -38.67 | -4.60 | 0.00 | -160.36 | 0.00 | 160.36 | 3,176.90 | 1,588.45 | 4,677.94 | 2,342.44 | 9.34 | -0.86 | 0.081 |
| 99.83 | -37.73 | -4.56 | 0.00 | -151.94 | 0.00 | 151.94 | 2,561.71 | 1,280.85 | 3,809.78 | 1,907.72 | 9.67 | -0.87 | 0.094 |
| 100.00 | -37.68 | -4.50 | 0.00 | -151.18 | 0.00 | 151.18 | 2,559.94 | 1,279.97 | 3,803.37 | 1,904.51 | 9.70 | -0.87 | 0.094 |
| 105.00 | -36.01 | -4.36 | 0.00 | -128.69 | 0.00 | 128.69 | 2,506.36 | 1,253.18 | 3,612.41 | 1,808.89 | 10.63 | -0.91 | 0.086 |
| 110.00 | -34.38 | -4.21 | 0.00 | -106.90 | 0.00 | 106.90 | 2,451.42 | 1,225.71 | 3,424.31 | 1,714.70 | 11.60 | -0.94 | 0.076 |
| 115.00 | -32.78 | -4.12 | 0.00 | -85.83 | 0.00 | 85.83 | 2,395.11 | 1,197.55 | 3,239.25 | 1,622.03 | 12.60 | -0.97 | 0.067 |
| 116.00 | -31.88 | -3.95 | 0.00 | -81.72 | 0.00 | 81.72 | 2,383.68 | 1,191.84 | 3,202.61 | 1,603.69 | 12.80 | -0.97 | 0.064 |
| 120.00 | -30.66 | -3.85 | 0.00 | -65.92 | 0.00 | 65.92 | 2,337.43 | 1,168.72 | 3,057.40 | 1,530.97 | 13.62 | -0.99 | 0.056 |
| 123.00 | -24.77 | -3.11 | 0.00 | -54.02 | 0.00 | 54.02 | 2,302.17 | 1,151.09 | 2,949.92 | 1,477.15 | 14.25 | -1.00 | 0.047 |
| 125.00 | -24.26 | -3.02 | 0.00 | -47.80 | 0.00 | 47.80 | 2,271.18 | 1,135.59 | 2,869.84 | 1,437.05 | 14.67 | -1.01 | 0.044 |
| 130.00 | -23.01 | -2.88 | 0.00 | -32.71 | 0.00 | 32.71 | 2,192.12 | 1,096.06 | 2,672.56 | 1,338.27 | 15.74 | -1.03 | 0.035 |
| 135.00 | -21.80 | -2.77 | 0.00 | -18.33 | 0.00 | 18.33 | 2,113.07 | 1,056.53 | 2,482.31 | 1,243.00 | 16.82 | -1.04 | 0.025 |
| 137.00 | -8.67 | -1.19 | 0.00 | -12.78 | 0.00 | 12.78 | 2,081.44 | 1,040.72 | 2,408.17 | 1,205.88 | 17.25 | -1.04 | 0.015 |
| 140.00 | -8.05 | -1.09 | 0.00 | -9.21 | 0.00 | 9.21 | 2,034.01 | 1,017.00 | 2,299.08 | 1,151.25 | 17.91 | -1.04 | 0.012 |
| 145.00 | -7.03 | -0.97 | 0.00 | -3.78 | 0.00 | 3.78 | 1,954.95 | 977.48 | 2,122.87 | 1,063.01 | 19.00 | -1.05 | 0.007 |
| 147.92 | 0.00 | -0.85 | 0.00 | -0.94 | 0.00 | 0.94 | 1,908.83 | 954.42 | 2,023.32 | 1,013.16 | 19.64 | -1.05 | 0.001 |

Site Number: 302468

Code: ANSI/TIA-222-G © 2007 - 2018 by ATC IP LLC. All rights reserved.

Site Name: Petro Lock, CT

Engineering Number: OAA729245_C3_01

4/25/2018 6:36:43 PM

Customer: SPRINT NEXTEL

| | | |
|-------------------------------|-----------------------|-----------------------------|
| Load Case: 1.0D + 1.0W | Serviceability 60 mph | 22 Iterations |
| Gust Response Factor :1.10 | | Wind Importance Factor 1.00 |
| Dead Load Factor :1.00 | | |
| Wind Load Factor :1.00 | | |

Calculated Forces

| Seg Elev (ft) | Pu FY (-) (kips) | Vu FX (-) (kips) | Tu MY (ft-kips) | Mu MZ (ft-kips) | Mu MX (ft-kips) | Resultant Moment (ft-kips) | phi Pn (kips) | phi Vn (kips) | phi Tn (ft-kips) | phi Mn (ft-kips) | Total Deflect (in) | Rotation (deg) | Ratio |
|---------------|------------------|------------------|-----------------|-----------------|-----------------|----------------------------|---------------|---------------|------------------|------------------|--------------------|----------------|-------|
| 0.00 | -45.79 | -7.18 | 0.00 | -747.35 | 0.00 | 747.35 | 4,345.86 | 2,172.93 | 10,048.4 | 5,031.69 | 0.00 | 0.00 | 0.159 |
| 5.00 | -44.66 | -7.11 | 0.00 | -711.45 | 0.00 | 711.45 | 4,297.95 | 2,148.97 | 9,746.71 | 4,880.60 | 0.02 | -0.04 | 0.156 |
| 10.00 | -43.27 | -7.04 | 0.00 | -675.91 | 0.00 | 675.91 | 4,248.67 | 2,124.33 | 9,446.20 | 4,730.12 | 0.08 | -0.08 | 0.153 |
| 15.00 | -41.90 | -6.96 | 0.00 | -640.73 | 0.00 | 640.73 | 4,198.03 | 2,099.01 | 9,147.09 | 4,580.35 | 0.19 | -0.12 | 0.150 |
| 20.00 | -40.55 | -6.88 | 0.00 | -605.92 | 0.00 | 605.92 | 4,146.02 | 2,073.01 | 8,849.58 | 4,431.37 | 0.33 | -0.16 | 0.147 |
| 25.00 | -39.23 | -6.81 | 0.00 | -571.49 | 0.00 | 571.49 | 4,092.65 | 2,046.32 | 8,553.84 | 4,283.28 | 0.52 | -0.20 | 0.143 |
| 30.00 | -37.93 | -6.74 | 0.00 | -537.43 | 0.00 | 537.43 | 4,037.92 | 2,018.96 | 8,260.05 | 4,136.16 | 0.74 | -0.24 | 0.139 |
| 35.00 | -36.64 | -6.67 | 0.00 | -503.73 | 0.00 | 503.73 | 3,981.82 | 1,990.91 | 7,968.40 | 3,990.12 | 1.01 | -0.28 | 0.135 |
| 40.00 | -35.39 | -6.59 | 0.00 | -470.40 | 0.00 | 470.40 | 3,924.36 | 1,962.18 | 7,679.06 | 3,845.24 | 1.32 | -0.32 | 0.131 |
| 45.00 | -34.15 | -6.53 | 0.00 | -437.47 | 0.00 | 437.47 | 3,865.53 | 1,932.77 | 7,392.22 | 3,701.60 | 1.68 | -0.36 | 0.127 |
| 46.83 | -33.70 | -6.49 | 0.00 | -425.50 | 0.00 | 425.50 | 3,843.62 | 1,921.81 | 7,287.71 | 3,649.27 | 1.82 | -0.37 | 0.125 |
| 50.00 | -32.34 | -6.43 | 0.00 | -404.95 | 0.00 | 404.95 | 3,805.35 | 1,902.67 | 7,108.06 | 3,559.31 | 2.07 | -0.40 | 0.122 |
| 53.00 | -31.06 | -6.38 | 0.00 | -385.66 | 0.00 | 385.66 | 3,811.37 | 1,905.68 | 7,136.09 | 3,573.35 | 2.33 | -0.42 | 0.116 |
| 55.00 | -30.58 | -6.32 | 0.00 | -372.89 | 0.00 | 372.89 | 3,786.97 | 1,893.48 | 7,023.10 | 3,516.77 | 2.51 | -0.44 | 0.114 |
| 60.00 | -29.39 | -6.23 | 0.00 | -341.28 | 0.00 | 341.28 | 3,725.00 | 1,862.50 | 6,742.70 | 3,376.36 | 2.99 | -0.47 | 0.109 |
| 65.00 | -28.23 | -6.14 | 0.00 | -310.12 | 0.00 | 310.12 | 3,661.68 | 1,830.84 | 6,465.40 | 3,237.50 | 3.50 | -0.51 | 0.104 |
| 70.00 | -27.09 | -6.05 | 0.00 | -279.42 | 0.00 | 279.42 | 3,596.99 | 1,798.49 | 6,191.38 | 3,100.29 | 4.05 | -0.54 | 0.098 |
| 75.00 | -25.97 | -5.96 | 0.00 | -249.20 | 0.00 | 249.20 | 3,530.94 | 1,765.47 | 5,920.82 | 2,964.81 | 4.64 | -0.58 | 0.091 |
| 79.00 | -22.42 | -5.02 | 0.00 | -225.36 | 0.00 | 225.36 | 3,477.11 | 1,738.56 | 5,706.98 | 2,857.73 | 5.14 | -0.60 | 0.085 |
| 80.00 | -22.20 | -4.96 | 0.00 | -220.35 | 0.00 | 220.35 | 3,463.52 | 1,731.76 | 5,653.90 | 2,831.15 | 5.26 | -0.61 | 0.084 |
| 85.00 | -21.14 | -4.87 | 0.00 | -195.53 | 0.00 | 195.53 | 3,394.74 | 1,697.37 | 5,390.81 | 2,699.41 | 5.92 | -0.64 | 0.079 |
| 90.00 | -20.10 | -4.79 | 0.00 | -171.20 | 0.00 | 171.20 | 3,324.59 | 1,662.30 | 5,131.72 | 2,569.67 | 6.61 | -0.67 | 0.073 |
| 93.00 | -18.60 | -4.43 | 0.00 | -156.84 | 0.00 | 156.84 | 3,271.77 | 1,635.89 | 4,962.98 | 2,485.18 | 7.04 | -0.69 | 0.069 |
| 94.92 | -18.22 | -4.40 | 0.00 | -148.36 | 0.00 | 148.36 | 3,235.40 | 1,617.70 | 4,852.71 | 2,429.96 | 7.32 | -0.70 | 0.067 |
| 95.00 | -18.20 | -4.38 | 0.00 | -147.99 | 0.00 | 147.99 | 3,233.82 | 1,616.91 | 4,847.95 | 2,427.58 | 7.33 | -0.70 | 0.067 |
| 98.00 | -14.67 | -3.79 | 0.00 | -134.87 | 0.00 | 134.87 | 3,176.90 | 1,588.45 | 4,677.94 | 2,342.44 | 7.78 | -0.72 | 0.062 |
| 99.83 | -14.10 | -3.77 | 0.00 | -127.91 | 0.00 | 127.91 | 2,561.71 | 1,280.85 | 3,809.78 | 1,907.72 | 8.05 | -0.73 | 0.073 |
| 100.00 | -14.07 | -3.72 | 0.00 | -127.28 | 0.00 | 127.28 | 2,559.94 | 1,279.97 | 3,803.37 | 1,904.51 | 8.08 | -0.73 | 0.072 |
| 105.00 | -13.24 | -3.62 | 0.00 | -108.67 | 0.00 | 108.67 | 2,506.36 | 1,253.18 | 3,612.41 | 1,808.89 | 8.86 | -0.76 | 0.065 |
| 110.00 | -12.43 | -3.53 | 0.00 | -90.54 | 0.00 | 90.54 | 2,451.42 | 1,225.71 | 3,424.31 | 1,714.70 | 9.66 | -0.78 | 0.058 |
| 115.00 | -11.64 | -3.46 | 0.00 | -72.91 | 0.00 | 72.91 | 2,395.11 | 1,197.55 | 3,239.25 | 1,622.03 | 10.50 | -0.81 | 0.050 |
| 116.00 | -11.41 | -3.32 | 0.00 | -69.44 | 0.00 | 69.44 | 2,383.68 | 1,191.84 | 3,202.61 | 1,603.69 | 10.66 | -0.81 | 0.048 |
| 120.00 | -10.81 | -3.25 | 0.00 | -56.18 | 0.00 | 56.18 | 2,337.43 | 1,168.72 | 3,057.40 | 1,530.97 | 11.35 | -0.83 | 0.041 |
| 123.00 | -8.95 | -2.61 | 0.00 | -46.02 | 0.00 | 46.02 | 2,302.17 | 1,151.09 | 2,949.92 | 1,477.15 | 11.87 | -0.84 | 0.035 |
| 125.00 | -8.68 | -2.55 | 0.00 | -40.80 | 0.00 | 40.80 | 2,271.18 | 1,135.59 | 2,869.84 | 1,437.05 | 12.23 | -0.84 | 0.032 |
| 130.00 | -8.03 | -2.46 | 0.00 | -28.04 | 0.00 | 28.04 | 2,192.12 | 1,096.06 | 2,672.56 | 1,338.27 | 13.12 | -0.86 | 0.025 |
| 135.00 | -7.39 | -2.39 | 0.00 | -15.76 | 0.00 | 15.76 | 2,113.07 | 1,056.53 | 2,482.31 | 1,243.00 | 14.02 | -0.87 | 0.016 |
| 137.00 | -3.25 | -0.98 | 0.00 | -10.98 | 0.00 | 10.98 | 2,081.44 | 1,040.72 | 2,408.17 | 1,205.88 | 14.38 | -0.87 | 0.011 |
| 140.00 | -2.95 | -0.91 | 0.00 | -8.04 | 0.00 | 8.04 | 2,034.01 | 1,017.00 | 2,299.08 | 1,151.25 | 14.93 | -0.87 | 0.008 |
| 145.00 | -2.45 | -0.84 | 0.00 | -3.50 | 0.00 | 3.50 | 1,954.95 | 977.48 | 2,122.87 | 1,063.01 | 15.85 | -0.88 | 0.005 |
| 147.92 | 0.00 | -0.80 | 0.00 | -1.05 | 0.00 | 1.05 | 1,908.83 | 954.42 | 2,023.32 | 1,013.16 | 16.38 | -0.88 | 0.001 |

Site Number: 302468

Code: ANSI/TIA-222-G © 2007 - 2018 by ATC IP LLC. All rights reserved.

Site Name: Petro Lock, CT

Engineering Number: OAA729245_C3_01

4/25/2018 6:36:44 PM

Customer: SPRINT NEXTEL

| | | | | | | |
|----------------------|--------|-------|--------|-------|-----|-------|
| 17 | 72.50 | 1,118 | 2,943 | 0.017 | 31 | 1,385 |
| 16 | 67.50 | 1,140 | 2,630 | 0.015 | 28 | 1,412 |
| 15 | 62.50 | 1,161 | 2,327 | 0.013 | 25 | 1,438 |
| 14 | 57.50 | 1,183 | 2,034 | 0.012 | 22 | 1,465 |
| 13 | 54.00 | 479 | 734 | 0.004 | 8 | 594 |
| 12 | 51.50 | 1,274 | 1,788 | 0.010 | 19 | 1,578 |
| 11 | 48.42 | 1,362 | 1,706 | 0.010 | 18 | 1,687 |
| 10 | 45.92 | 447 | 508 | 0.003 | 5 | 553 |
| 9 | 42.50 | 1,233 | 1,216 | 0.007 | 13 | 1,527 |
| 8 | 37.50 | 1,255 | 983 | 0.006 | 11 | 1,554 |
| 7 | 32.50 | 1,277 | 769 | 0.004 | 8 | 1,581 |
| 6 | 27.50 | 1,298 | 575 | 0.003 | 6 | 1,608 |
| 5 | 22.50 | 1,320 | 404 | 0.002 | 4 | 1,635 |
| 4 | 17.50 | 1,342 | 259 | 0.001 | 3 | 1,663 |
| 3 | 12.50 | 1,364 | 142 | 0.001 | 2 | 1,690 |
| 2 | 7.50 | 1,386 | 56 | 0.000 | 1 | 1,717 |
| 1 | 2.50 | 1,127 | 6 | 0.000 | 0 | 1,396 |
| Decibel DB844H90E-XY | 148.00 | 56 | 547 | 0.003 | 6 | 69 |
| Andrew 844G65VTZASX | 148.00 | 128 | 1,251 | 0.007 | 13 | 159 |
| Flat Platform w/ Han | 148.00 | 2,000 | 19,551 | 0.112 | 209 | 2,477 |
| Powerwave Allgon LGP | 137.00 | 33 | 280 | 0.002 | 3 | 41 |
| Powerwave Allgon 702 | 137.00 | 13 | 112 | 0.001 | 1 | 16 |
| Powerwave Allgon LGP | 137.00 | 85 | 718 | 0.004 | 8 | 105 |
| Raycap DC6-48-60-18- | 137.00 | 40 | 339 | 0.002 | 4 | 50 |
| Ericsson RRUS 4478 B | 137.00 | 178 | 1,511 | 0.009 | 16 | 221 |
| Ericsson RRUS 11 (Ba | 137.00 | 165 | 1,399 | 0.008 | 15 | 204 |
| Ericsson RRUS 32 B66 | 137.00 | 152 | 1,290 | 0.007 | 14 | 188 |
| Ericsson RRUS 32 B2 | 137.00 | 159 | 1,349 | 0.008 | 14 | 197 |
| Raycap DC6-48-60-18- | 137.00 | 16 | 136 | 0.001 | 1 | 20 |
| Ericsson RRUS-32 (77 | 137.00 | 231 | 1,959 | 0.011 | 21 | 286 |
| Powerwave Allgon 775 | 137.00 | 81 | 687 | 0.004 | 7 | 100 |
| KMW AM-X-CD-16-65-00 | 137.00 | 97 | 823 | 0.005 | 9 | 120 |
| Quintel QS66512-3 (1 | 137.00 | 224 | 1,900 | 0.011 | 20 | 277 |
| Andrew SBNH-1D6565C | 137.00 | 66 | 561 | 0.003 | 6 | 82 |
| CCI TPA-65R-LCUUUU-H | 137.00 | 82 | 692 | 0.004 | 7 | 101 |
| Kathrein Scala 80010 | 137.00 | 293 | 2,483 | 0.014 | 27 | 363 |
| Flat Platform w/ Han | 137.00 | 2,000 | 16,963 | 0.097 | 181 | 2,477 |
| Kathrein Scala Smart | 123.00 | 10 | 69 | 0.000 | 1 | 12 |
| Ericsson KRY 112 144 | 123.00 | 33 | 230 | 0.001 | 2 | 41 |
| Ericsson KRY 112 489 | 123.00 | 46 | 321 | 0.002 | 3 | 57 |
| Ericsson AIR 32 B4A- | 123.00 | 317 | 2,208 | 0.013 | 24 | 393 |
| RFS APX16DWV-16DWVS- | 123.00 | 122 | 849 | 0.005 | 9 | 151 |
| Round T-Arms | 123.00 | 750 | 5,217 | 0.030 | 56 | 929 |
| Andrew LNX-6515DS-VT | 123.00 | 154 | 1,071 | 0.006 | 11 | 191 |
| RFS APXV18-206517 | 116.00 | 79 | 495 | 0.003 | 5 | 98 |
| RFS IBC1900BB-1 | 98.00 | 66 | 302 | 0.002 | 3 | 82 |
| RFS IBC1900HG-2A | 98.00 | 66 | 302 | 0.002 | 3 | 82 |
| Alcatel-Lucent 800 M | 98.00 | 64 | 293 | 0.002 | 3 | 79 |
| Alcatel-Lucent 800 M | 98.00 | 128 | 586 | 0.003 | 6 | 159 |
| Alcatel-Lucent 4x40W | 98.00 | 176 | 806 | 0.005 | 9 | 218 |
| Alcatel-Lucent 4x40W | 98.00 | 88 | 403 | 0.002 | 4 | 109 |
| Nokia 2.5G MAA - AAH | 98.00 | 311 | 1,424 | 0.008 | 15 | 385 |
| RFS APXVSP18-C-A20 | 98.00 | 171 | 783 | 0.004 | 8 | 212 |
| Round Low Profile PI | 98.00 | 1,500 | 6,872 | 0.039 | 74 | 1,858 |
| DragonWave Horizon C | 93.00 | 32 | 132 | 0.001 | 1 | 39 |
| NextNet BTS-2500 | 93.00 | 105 | 437 | 0.003 | 5 | 130 |
| Argus LLPX310R | 93.00 | 86 | 357 | 0.002 | 4 | 106 |
| DragonWave A-ANT-18G | 93.00 | 54 | 226 | 0.001 | 2 | 67 |
| Side Arms | 93.00 | 560 | 2,330 | 0.013 | 25 | 694 |
| DragonWave A-ANT-11G | 93.00 | 48 | 198 | 0.001 | 2 | 59 |
| Alcatel-Lucent RRH2X | 79.00 | 132 | 407 | 0.002 | 4 | 163 |
| Alcatel-Lucent RRH2x | 79.00 | 170 | 524 | 0.003 | 6 | 211 |
| Alcatel-Lucent RRH2x | 79.00 | 180 | 555 | 0.003 | 6 | 223 |
| RFS DB-T1-6Z-8AB-0Z | 79.00 | 88 | 271 | 0.002 | 3 | 109 |

Site Number: 302468

Code: ANSI/TIA-222-G © 2007 - 2018 by ATC IP LLC. All rights reserved.

Site Name: Petro Lock, CT

Engineering Number: OAA729245_C3_01

4/25/2018 6:36:44 PM

Customer: SPRINT NEXTEL

| | | | | | | |
|----------------------|--------|--------|---------|-------|-------|--------|
| Raycap DC6-48-60-18- | 137.00 | 16 | 136 | 0.001 | 1 | 14 |
| Ericsson RRUS-32 (77 | 137.00 | 231 | 1,959 | 0.011 | 21 | 199 |
| Powerwave Allgon 775 | 137.00 | 81 | 687 | 0.004 | 7 | 70 |
| KMW AM-X-CD-16-65-00 | 137.00 | 97 | 823 | 0.005 | 9 | 84 |
| Quintel QS66512-3 (1 | 137.00 | 224 | 1,900 | 0.011 | 20 | 193 |
| Andrew SBNH-1D6565C | 137.00 | 66 | 561 | 0.003 | 6 | 57 |
| CCI TPA-65R-LCUUUU-H | 137.00 | 82 | 692 | 0.004 | 7 | 70 |
| Kathrein Scala 80010 | 137.00 | 293 | 2,483 | 0.014 | 27 | 252 |
| Flat Platform w/ Han | 137.00 | 2,000 | 16,963 | 0.097 | 181 | 1,723 |
| Kathrein Scala Smart | 123.00 | 10 | 69 | 0.000 | 1 | 9 |
| Ericsson KRY 112 144 | 123.00 | 33 | 230 | 0.001 | 2 | 28 |
| Ericsson KRY 112 489 | 123.00 | 46 | 321 | 0.002 | 3 | 40 |
| Ericsson AIR 32 B4A- | 123.00 | 317 | 2,208 | 0.013 | 24 | 273 |
| RFS APX16DWV-16DWVS- | 123.00 | 122 | 849 | 0.005 | 9 | 105 |
| Round T-Arms | 123.00 | 750 | 5,217 | 0.030 | 56 | 646 |
| Andrew LNX-6515DS-VT | 123.00 | 154 | 1,071 | 0.006 | 11 | 133 |
| RFS APXV18-206517 | 116.00 | 79 | 495 | 0.003 | 5 | 68 |
| RFS IBC1900BB-1 | 98.00 | 66 | 302 | 0.002 | 3 | 57 |
| RFS IBC1900HG-2A | 98.00 | 66 | 302 | 0.002 | 3 | 57 |
| Alcatel-Lucent 800 M | 98.00 | 64 | 293 | 0.002 | 3 | 55 |
| Alcatel-Lucent 800 M | 98.00 | 128 | 586 | 0.003 | 6 | 110 |
| Alcatel-Lucent 4x40W | 98.00 | 176 | 806 | 0.005 | 9 | 152 |
| Alcatel-Lucent 4x40W | 98.00 | 88 | 403 | 0.002 | 4 | 76 |
| Nokia 2.5G MAA - AAH | 98.00 | 311 | 1,424 | 0.008 | 15 | 268 |
| RFS APXVSP18-C-A20 | 98.00 | 171 | 783 | 0.004 | 8 | 147 |
| Round Low Profile PI | 98.00 | 1,500 | 6,872 | 0.039 | 74 | 1,292 |
| DragonWave Horizon C | 93.00 | 32 | 132 | 0.001 | 1 | 27 |
| NextNet BTS-2500 | 93.00 | 105 | 437 | 0.003 | 5 | 90 |
| Argus LLPX310R | 93.00 | 86 | 357 | 0.002 | 4 | 74 |
| DragonWave A-ANT-18G | 93.00 | 54 | 226 | 0.001 | 2 | 47 |
| Side Arms | 93.00 | 560 | 2,330 | 0.013 | 25 | 482 |
| DragonWave A-ANT-11G | 93.00 | 48 | 198 | 0.001 | 2 | 41 |
| Alcatel-Lucent RRH2X | 79.00 | 132 | 407 | 0.002 | 4 | 114 |
| Alcatel-Lucent RRH2x | 79.00 | 170 | 524 | 0.003 | 6 | 147 |
| Alcatel-Lucent RRH2x | 79.00 | 180 | 555 | 0.003 | 6 | 155 |
| RFS DB-T1-6Z-8AB-0Z | 79.00 | 88 | 271 | 0.002 | 3 | 76 |
| Commscope SBNHH-1D65 | 79.00 | 608 | 1,875 | 0.011 | 20 | 524 |
| Flat Low Profile Pla | 79.00 | 1,500 | 4,624 | 0.026 | 49 | 1,292 |
| Lucent KS-24019 | 20.00 | 4 | 1 | 0.000 | 0 | 3 |
| | | 45,797 | 174,485 | 1.000 | 1,867 | 39,449 |

Load Case (0.9 - 0.2Sds) * DL + E ELFM Seismic (Reduced DL) Equivalent Lateral Forces Method

Calculated Forces

| Seg Elev (ft) | Pu FY (-) (kips) | Vu FX (-) (kips) | Tu MY (ft-kips) | Mu MZ (ft-kips) | Mu MX (ft-kips) | Resultant Moment (ft-kips) | phi Pn (kips) | phi Vn (kips) | phi Tn (ft-kips) | phi Mn (ft-kips) | Total Deflect (in) | Rotation (deg) | Ratio |
|---------------|------------------|------------------|-----------------|-----------------|-----------------|----------------------------|---------------|---------------|------------------|------------------|--------------------|----------------|-------|
| 0.00 | -36.60 | -1.64 | 0.00 | -179.25 | 0.00 | 179.25 | 4,345.86 | 2,172.93 | 10,048.4 | 5,031.69 | 0.00 | 0.00 | 0.044 |
| 5.00 | -35.40 | -1.65 | 0.00 | -171.05 | 0.00 | 171.05 | 4,297.95 | 2,148.97 | 9,746.71 | 4,880.60 | 0.01 | -0.01 | 0.043 |
| 10.00 | -34.23 | -1.65 | 0.00 | -162.82 | 0.00 | 162.82 | 4,248.67 | 2,124.33 | 9,446.20 | 4,730.12 | 0.02 | -0.02 | 0.042 |
| 15.00 | -33.07 | -1.65 | 0.00 | -154.58 | 0.00 | 154.58 | 4,198.03 | 2,099.01 | 9,147.09 | 4,580.35 | 0.04 | -0.03 | 0.042 |
| 20.00 | -31.93 | -1.65 | 0.00 | -146.32 | 0.00 | 146.32 | 4,146.02 | 2,073.01 | 8,849.58 | 4,431.37 | 0.08 | -0.04 | 0.041 |
| 25.00 | -30.81 | -1.65 | 0.00 | -138.06 | 0.00 | 138.06 | 4,092.65 | 2,046.32 | 8,553.84 | 4,283.28 | 0.12 | -0.05 | 0.040 |
| 30.00 | -29.71 | -1.65 | 0.00 | -129.81 | 0.00 | 129.81 | 4,037.92 | 2,018.96 | 8,260.05 | 4,136.16 | 0.18 | -0.06 | 0.039 |
| 35.00 | -28.63 | -1.64 | 0.00 | -121.59 | 0.00 | 121.59 | 3,981.82 | 1,990.91 | 7,968.40 | 3,990.12 | 0.24 | -0.07 | 0.038 |
| 40.00 | -27.57 | -1.63 | 0.00 | -113.39 | 0.00 | 113.39 | 3,924.36 | 1,962.18 | 7,679.06 | 3,845.24 | 0.32 | -0.08 | 0.037 |
| 45.00 | -27.18 | -1.63 | 0.00 | -105.25 | 0.00 | 105.25 | 3,865.53 | 1,932.77 | 7,392.22 | 3,701.60 | 0.40 | -0.09 | 0.035 |
| 46.83 | -26.01 | -1.61 | 0.00 | -102.26 | 0.00 | 102.26 | 3,843.62 | 1,921.81 | 7,287.71 | 3,649.27 | 0.44 | -0.09 | 0.035 |
| 50.00 | -24.91 | -1.59 | 0.00 | -97.17 | 0.00 | 97.17 | 3,805.35 | 1,902.67 | 7,108.06 | 3,559.31 | 0.50 | -0.10 | 0.034 |
| 53.00 | -24.50 | -1.58 | 0.00 | -92.40 | 0.00 | 92.40 | 3,811.37 | 1,905.68 | 7,136.09 | 3,573.35 | 0.56 | -0.10 | 0.032 |
| 55.00 | -23.48 | -1.56 | 0.00 | -89.23 | 0.00 | 89.23 | 3,786.97 | 1,893.48 | 7,023.10 | 3,516.77 | 0.60 | -0.11 | 0.032 |
| 60.00 | -22.48 | -1.54 | 0.00 | -81.42 | 0.00 | 81.42 | 3,725.00 | 1,862.50 | 6,742.70 | 3,376.36 | 0.72 | -0.11 | 0.030 |
| 65.00 | -21.50 | -1.51 | 0.00 | -73.73 | 0.00 | 73.73 | 3,661.68 | 1,830.84 | 6,465.40 | 3,237.50 | 0.84 | -0.12 | 0.029 |
| 70.00 | -20.53 | -1.48 | 0.00 | -66.17 | 0.00 | 66.17 | 3,596.99 | 1,798.49 | 6,191.38 | 3,100.29 | 0.98 | -0.13 | 0.027 |
| 75.00 | -19.78 | -1.45 | 0.00 | -58.76 | 0.00 | 58.76 | 3,530.94 | 1,765.47 | 5,920.82 | 2,964.81 | 1.12 | -0.14 | 0.025 |
| 79.00 | -17.29 | -1.35 | 0.00 | -52.94 | 0.00 | 52.94 | 3,477.11 | 1,738.56 | 5,706.98 | 2,857.73 | 1.24 | -0.14 | 0.023 |
| 80.00 | -16.37 | -1.32 | 0.00 | -51.59 | 0.00 | 51.59 | 3,463.52 | 1,731.76 | 5,653.90 | 2,831.15 | 1.27 | -0.15 | 0.023 |
| 85.00 | -15.48 | -1.27 | 0.00 | -45.01 | 0.00 | 45.01 | 3,394.74 | 1,697.37 | 5,390.81 | 2,699.41 | 1.42 | -0.15 | 0.021 |
| 90.00 | -14.95 | -1.25 | 0.00 | -38.64 | 0.00 | 38.64 | 3,324.59 | 1,662.30 | 5,131.72 | 2,569.67 | 1.59 | -0.16 | 0.020 |
| 93.00 | -13.86 | -1.19 | 0.00 | -34.90 | 0.00 | 34.90 | 3,271.77 | 1,635.89 | 4,962.98 | 2,485.18 | 1.69 | -0.16 | 0.018 |
| 94.92 | -13.84 | -1.19 | 0.00 | -32.63 | 0.00 | 32.63 | 3,235.40 | 1,617.70 | 4,852.71 | 2,429.96 | 1.76 | -0.17 | 0.018 |
| 95.00 | -13.01 | -1.14 | 0.00 | -32.53 | 0.00 | 32.53 | 3,233.82 | 1,616.91 | 4,847.95 | 2,427.58 | 1.76 | -0.17 | 0.017 |
| 98.00 | -10.30 | -0.98 | 0.00 | -29.11 | 0.00 | 29.11 | 3,176.90 | 1,588.45 | 4,677.94 | 2,342.44 | 1.87 | -0.17 | 0.016 |
| 99.83 | -10.28 | -0.98 | 0.00 | -27.32 | 0.00 | 27.32 | 2,561.71 | 1,280.85 | 3,809.78 | 1,907.72 | 1.93 | -0.17 | 0.018 |
| 100.00 | -9.56 | -0.93 | 0.00 | -27.16 | 0.00 | 27.16 | 2,559.94 | 1,279.97 | 3,803.37 | 1,904.51 | 1.94 | -0.17 | 0.018 |
| 105.00 | -8.87 | -0.88 | 0.00 | -22.50 | 0.00 | 22.50 | 2,506.36 | 1,253.18 | 3,612.41 | 1,808.89 | 2.12 | -0.18 | 0.016 |
| 110.00 | -8.19 | -0.83 | 0.00 | -18.09 | 0.00 | 18.09 | 2,451.42 | 1,225.71 | 3,424.31 | 1,714.70 | 2.31 | -0.18 | 0.014 |
| 115.00 | -8.05 | -0.82 | 0.00 | -13.94 | 0.00 | 13.94 | 2,395.11 | 1,197.55 | 3,239.25 | 1,622.03 | 2.51 | -0.19 | 0.012 |
| 116.00 | -7.47 | -0.77 | 0.00 | -13.12 | 0.00 | 13.12 | 2,383.68 | 1,191.84 | 3,202.61 | 1,603.69 | 2.55 | -0.19 | 0.011 |
| 120.00 | -7.09 | -0.74 | 0.00 | -10.03 | 0.00 | 10.03 | 2,337.43 | 1,168.72 | 3,057.40 | 1,530.97 | 2.71 | -0.19 | 0.010 |
| 123.00 | -5.63 | -0.61 | 0.00 | -7.81 | 0.00 | 7.81 | 2,302.17 | 1,151.09 | 2,949.92 | 1,477.15 | 2.83 | -0.19 | 0.008 |
| 125.00 | -5.06 | -0.55 | 0.00 | -6.60 | 0.00 | 6.60 | 2,271.18 | 1,135.59 | 2,869.84 | 1,437.05 | 2.91 | -0.20 | 0.007 |
| 130.00 | -4.52 | -0.50 | 0.00 | -3.82 | 0.00 | 3.82 | 2,192.12 | 1,096.06 | 2,672.56 | 1,338.27 | 3.12 | -0.20 | 0.005 |
| 135.00 | -4.30 | -0.48 | 0.00 | -1.33 | 0.00 | 1.33 | 2,113.07 | 1,056.53 | 2,482.31 | 1,243.00 | 3.33 | -0.20 | 0.003 |
| 137.00 | -0.67 | -0.08 | 0.00 | -0.38 | 0.00 | 0.38 | 2,081.44 | 1,040.72 | 2,408.17 | 1,205.88 | 3.41 | -0.20 | 0.001 |
| 140.00 | -0.24 | -0.03 | 0.00 | -0.15 | 0.00 | 0.15 | 2,034.01 | 1,017.00 | 2,299.08 | 1,151.25 | 3.53 | -0.20 | 0.000 |
| 145.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1,954.95 | 977.48 | 2,122.87 | 1,063.01 | 3.74 | -0.20 | 0.000 |
| 147.92 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1,908.83 | 954.42 | 2,023.32 | 1,013.16 | 3.86 | -0.20 | 0.000 |

Site Number: 302468

Code: ANSI/TIA-222-G © 2007 - 2018 by ATC IP LLC. All rights reserved.

Site Name: Petro Lock, CT

Engineering Number: OAA729245_C3_01

4/25/2018 6:36:44 PM

Customer: SPRINT NEXTEL

| | | | | | | | | |
|----------------------|--------|--------|--------|--------|--------|--------|-------|--------|
| 6 | 27.50 | 1,298 | 0.065 | 0.072 | 0.041 | 0.046 | 52 | 1,608 |
| 5 | 22.50 | 1,320 | 0.044 | 0.071 | 0.042 | 0.044 | 51 | 1,635 |
| 4 | 17.50 | 1,342 | 0.026 | 0.067 | 0.040 | 0.042 | 49 | 1,663 |
| 3 | 12.50 | 1,364 | 0.013 | 0.059 | 0.035 | 0.038 | 45 | 1,690 |
| 2 | 7.50 | 1,386 | 0.005 | 0.044 | 0.025 | 0.030 | 36 | 1,717 |
| 1 | 2.50 | 1,127 | 0.001 | 0.018 | 0.010 | 0.014 | 13 | 1,396 |
| Decibel DB844H90E-XY | 148.00 | 56 | 1.892 | 1.991 | 1.144 | 0.370 | 18 | 69 |
| Andrew 844G65VTZASX | 148.00 | 128 | 1.892 | 1.991 | 1.144 | 0.370 | 41 | 159 |
| Flat Platform w/ Han | 148.00 | 2,000 | 1.892 | 1.991 | 1.144 | 0.370 | 642 | 2,477 |
| Powerwave Allgon LGP | 137.00 | 33 | 1.621 | 0.846 | 0.699 | 0.209 | 6 | 41 |
| Powerwave Allgon 702 | 137.00 | 13 | 1.621 | 0.846 | 0.699 | 0.209 | 2 | 16 |
| Powerwave Allgon LGP | 137.00 | 85 | 1.621 | 0.846 | 0.699 | 0.209 | 15 | 105 |
| Raycap DC6-48-60-18- | 137.00 | 40 | 1.621 | 0.846 | 0.699 | 0.209 | 7 | 50 |
| Ericsson RRUS 4478 B | 137.00 | 178 | 1.621 | 0.846 | 0.699 | 0.209 | 32 | 221 |
| Ericsson RRUS 11 (Ba | 137.00 | 165 | 1.621 | 0.846 | 0.699 | 0.209 | 30 | 204 |
| Ericsson RRUS 32 B66 | 137.00 | 152 | 1.621 | 0.846 | 0.699 | 0.209 | 28 | 188 |
| Ericsson RRUS 32 B2 | 137.00 | 159 | 1.621 | 0.846 | 0.699 | 0.209 | 29 | 197 |
| Raycap DC6-48-60-18- | 137.00 | 16 | 1.621 | 0.846 | 0.699 | 0.209 | 3 | 20 |
| Ericsson RRUS-32 (77 | 137.00 | 231 | 1.621 | 0.846 | 0.699 | 0.209 | 42 | 286 |
| Powerwave Allgon 775 | 137.00 | 81 | 1.621 | 0.846 | 0.699 | 0.209 | 15 | 100 |
| KMW AM-X-CD-16-65-00 | 137.00 | 97 | 1.621 | 0.846 | 0.699 | 0.209 | 18 | 120 |
| Quintel QS66512-3 (1 | 137.00 | 224 | 1.621 | 0.846 | 0.699 | 0.209 | 41 | 277 |
| Andrew SBNH-1D6565C | 137.00 | 66 | 1.621 | 0.846 | 0.699 | 0.209 | 12 | 82 |
| CCI TPA-65R-LCUUUU-H | 137.00 | 82 | 1.621 | 0.846 | 0.699 | 0.209 | 15 | 101 |
| Kathrein Scala 80010 | 137.00 | 293 | 1.621 | 0.846 | 0.699 | 0.209 | 53 | 363 |
| Flat Platform w/ Han | 137.00 | 2,000 | 1.621 | 0.846 | 0.699 | 0.209 | 362 | 2,477 |
| Kathrein Scala Smart | 123.00 | 10 | 1.307 | 0.130 | 0.342 | 0.063 | 1 | 12 |
| Ericsson KRY 112 144 | 123.00 | 33 | 1.307 | 0.130 | 0.342 | 0.063 | 2 | 41 |
| Ericsson KRY 112 489 | 123.00 | 46 | 1.307 | 0.130 | 0.342 | 0.063 | 3 | 57 |
| Ericsson AIR 32 B4A- | 123.00 | 317 | 1.307 | 0.130 | 0.342 | 0.063 | 17 | 393 |
| RFS APX16DWV- | 123.00 | 122 | 1.307 | 0.130 | 0.342 | 0.063 | 7 | 151 |
| Round T-Arms | 123.00 | 750 | 1.307 | 0.130 | 0.342 | 0.063 | 41 | 929 |
| Andrew LNX-6515DS-VT | 123.00 | 154 | 1.307 | 0.130 | 0.342 | 0.063 | 8 | 191 |
| RFS APXV18-206517 | 116.00 | 79 | 1.162 | -0.028 | 0.228 | 0.015 | 1 | 98 |
| RFS IBC1900BB-1 | 98.00 | 66 | 0.830 | -0.117 | 0.063 | -0.037 | -2 | 82 |
| RFS IBC1900HG-2A | 98.00 | 66 | 0.830 | -0.117 | 0.063 | -0.037 | -2 | 82 |
| Alcatel-Lucent 800 M | 98.00 | 64 | 0.830 | -0.117 | 0.063 | -0.037 | -2 | 79 |
| Alcatel-Lucent 800 M | 98.00 | 128 | 0.830 | -0.117 | 0.063 | -0.037 | -4 | 159 |
| Alcatel-Lucent 4x40W | 98.00 | 176 | 0.830 | -0.117 | 0.063 | -0.037 | -6 | 218 |
| Alcatel-Lucent 4x40W | 98.00 | 88 | 0.830 | -0.117 | 0.063 | -0.037 | -3 | 109 |
| Nokia 2.5G MAA - AAH | 98.00 | 311 | 0.830 | -0.117 | 0.063 | -0.037 | -10 | 385 |
| RFS APXVSP18-C-A20 | 98.00 | 171 | 0.830 | -0.117 | 0.063 | -0.037 | -6 | 212 |
| Round Low Profile PI | 98.00 | 1,500 | 0.830 | -0.117 | 0.063 | -0.037 | -48 | 1,858 |
| DragonWave Horizon C | 93.00 | 32 | 0.747 | -0.100 | 0.040 | -0.034 | -1 | 39 |
| NextNet BTS-2500 | 93.00 | 105 | 0.747 | -0.100 | 0.040 | -0.034 | -3 | 130 |
| Argus LLPX310R | 93.00 | 86 | 0.747 | -0.100 | 0.040 | -0.034 | -3 | 106 |
| DragonWave A-ANT-18G | 93.00 | 54 | 0.747 | -0.100 | 0.040 | -0.034 | -2 | 67 |
| Side Arms | 93.00 | 560 | 0.747 | -0.100 | 0.040 | -0.034 | -17 | 694 |
| DragonWave A-ANT-11G | 93.00 | 48 | 0.747 | -0.100 | 0.040 | -0.034 | -1 | 59 |
| Alcatel-Lucent RRH2X | 79.00 | 132 | 0.539 | -0.031 | 0.009 | 0.001 | 0 | 163 |
| Alcatel-Lucent RRH2x | 79.00 | 170 | 0.539 | -0.031 | 0.009 | 0.001 | 0 | 211 |
| Alcatel-Lucent RRH2x | 79.00 | 180 | 0.539 | -0.031 | 0.009 | 0.001 | 0 | 223 |
| RFS DB-T1-6Z-8AB-0Z | 79.00 | 88 | 0.539 | -0.031 | 0.009 | 0.001 | 0 | 109 |
| Commscope SBNHH- | 79.00 | 608 | 0.539 | -0.031 | 0.009 | 0.001 | 1 | 754 |
| Flat Low Profile Pla | 79.00 | 1,500 | 0.539 | -0.031 | 0.009 | 0.001 | 1 | 1,858 |
| Lucent KS-24019 | 20.00 | 4 | 0.035 | 0.069 | 0.041 | 0.043 | 0 | 5 |
| | | 45,797 | 86.452 | 25.141 | 25.579 | 6.500 | 2,438 | 56,725 |

Site Number: 302468

Code: ANSI/TIA-222-G © 2007 - 2018 by ATC IP LLC. All rights reserved.

Site Name: Petro Lock, CT

Engineering Number: OAA729245_C3_01

4/25/2018 6:36:44 PM

Customer: SPRINT NEXTEL

| | | | | | | | | |
|----------------------|--------|--------|--------|--------|--------|--------|-------|--------|
| Andrew SBNH-1D6565C | 137.00 | 66 | 1.621 | 0.846 | 0.699 | 0.209 | 12 | 57 |
| CCI TPA-65R-LCUUUU-H | 137.00 | 82 | 1.621 | 0.846 | 0.699 | 0.209 | 15 | 70 |
| Kathrein Scala 80010 | 137.00 | 293 | 1.621 | 0.846 | 0.699 | 0.209 | 53 | 252 |
| Flat Platform w/ Han | 137.00 | 2,000 | 1.621 | 0.846 | 0.699 | 0.209 | 362 | 1,723 |
| Kathrein Scala Smart | 123.00 | 10 | 1.307 | 0.130 | 0.342 | 0.063 | 1 | 9 |
| Ericsson KRY 112 144 | 123.00 | 33 | 1.307 | 0.130 | 0.342 | 0.063 | 2 | 28 |
| Ericsson KRY 112 489 | 123.00 | 46 | 1.307 | 0.130 | 0.342 | 0.063 | 3 | 40 |
| Ericsson AIR 32 B4A- | 123.00 | 317 | 1.307 | 0.130 | 0.342 | 0.063 | 17 | 273 |
| RFS APX16DWV- | 123.00 | 122 | 1.307 | 0.130 | 0.342 | 0.063 | 7 | 105 |
| Round T-Arms | 123.00 | 750 | 1.307 | 0.130 | 0.342 | 0.063 | 41 | 646 |
| Andrew LNX-6515DS-VT | 123.00 | 154 | 1.307 | 0.130 | 0.342 | 0.063 | 8 | 133 |
| RFS APXV18-206517 | 116.00 | 79 | 1.162 | -0.028 | 0.228 | 0.015 | 1 | 68 |
| RFS IBC1900BB-1 | 98.00 | 66 | 0.830 | -0.117 | 0.063 | -0.037 | -2 | 57 |
| RFS IBC1900HG-2A | 98.00 | 66 | 0.830 | -0.117 | 0.063 | -0.037 | -2 | 57 |
| Alcatel-Lucent 800 M | 98.00 | 64 | 0.830 | -0.117 | 0.063 | -0.037 | -2 | 55 |
| Alcatel-Lucent 800 M | 98.00 | 128 | 0.830 | -0.117 | 0.063 | -0.037 | -4 | 110 |
| Alcatel-Lucent 4x40W | 98.00 | 176 | 0.830 | -0.117 | 0.063 | -0.037 | -6 | 152 |
| Alcatel-Lucent 4x40W | 98.00 | 88 | 0.830 | -0.117 | 0.063 | -0.037 | -3 | 76 |
| Nokia 2.5G MAA - AAH | 98.00 | 311 | 0.830 | -0.117 | 0.063 | -0.037 | -10 | 268 |
| RFS APXVSP18-C-A20 | 98.00 | 171 | 0.830 | -0.117 | 0.063 | -0.037 | -6 | 147 |
| Round Low Profile PI | 98.00 | 1,500 | 0.830 | -0.117 | 0.063 | -0.037 | -48 | 1,292 |
| DragonWave Horizon C | 93.00 | 32 | 0.747 | -0.100 | 0.040 | -0.034 | -1 | 27 |
| NextNet BTS-2500 | 93.00 | 105 | 0.747 | -0.100 | 0.040 | -0.034 | -3 | 90 |
| Argus LLPX310R | 93.00 | 86 | 0.747 | -0.100 | 0.040 | -0.034 | -3 | 74 |
| DragonWave A-ANT-18G | 93.00 | 54 | 0.747 | -0.100 | 0.040 | -0.034 | -2 | 47 |
| Side Arms | 93.00 | 560 | 0.747 | -0.100 | 0.040 | -0.034 | -17 | 482 |
| DragonWave A-ANT-11G | 93.00 | 48 | 0.747 | -0.100 | 0.040 | -0.034 | -1 | 41 |
| Alcatel-Lucent RRH2X | 79.00 | 132 | 0.539 | -0.031 | 0.009 | 0.001 | 0 | 114 |
| Alcatel-Lucent RRH2x | 79.00 | 170 | 0.539 | -0.031 | 0.009 | 0.001 | 0 | 147 |
| Alcatel-Lucent RRH2x | 79.00 | 180 | 0.539 | -0.031 | 0.009 | 0.001 | 0 | 155 |
| RFS DB-T1-6Z-8AB-0Z | 79.00 | 88 | 0.539 | -0.031 | 0.009 | 0.001 | 0 | 76 |
| Commscope SBNHH- | 79.00 | 608 | 0.539 | -0.031 | 0.009 | 0.001 | 1 | 524 |
| Flat Low Profile Pla | 79.00 | 1,500 | 0.539 | -0.031 | 0.009 | 0.001 | 1 | 1,292 |
| Lucent KS-24019 | 20.00 | 4 | 0.035 | 0.069 | 0.041 | 0.043 | 0 | 3 |
| | | 45,797 | 86.452 | 25.141 | 25.579 | 6.500 | 2,438 | 39,449 |

Site Number: 302468

Code: ANSI/TIA-222-G © 2007 - 2018 by ATC IP LLC. All rights reserved.

Site Name: Petro Lock, CT

Engineering Number: OAA729245_C3_01

4/25/2018 6:36:44 PM

Customer: SPRINT NEXTEL

Load Case (0.9 - 0.2Sds) * DL + E EMAM Seismic (Reduced DL) Equivalent Modal Analysis Method

Calculated Forces

| Seg Elev (ft) | Pu FY (-) (kips) | Vu FX (-) (kips) | Tu MY (ft-kips) | Mu MZ (ft-kips) | Mu MX (ft-kips) | Resultant Moment (ft-kips) | phi Pn (kips) | phi Vn (kips) | phi Tn (ft-kips) | phi Mn (ft-kips) | Total Deflect (in) | Rotation (deg) | Ratio |
|---------------|------------------|------------------|-----------------|-----------------|-----------------|----------------------------|---------------|---------------|------------------|------------------|--------------------|----------------|-------|
| 0.00 | -36.60 | -1.73 | 0.00 | -180.06 | 0.00 | 180.06 | 4,345.86 | 2,172.93 | 10,048.4 | 5,031.69 | 0.00 | 0.00 | 0.044 |
| 5.00 | -35.40 | -1.70 | 0.00 | -171.43 | 0.00 | 171.43 | 4,297.95 | 2,148.97 | 9,746.71 | 4,880.60 | 0.01 | -0.01 | 0.043 |
| 10.00 | -34.23 | -1.66 | 0.00 | -162.95 | 0.00 | 162.95 | 4,248.67 | 2,124.33 | 9,446.20 | 4,730.12 | 0.02 | -0.02 | 0.043 |
| 15.00 | -33.07 | -1.61 | 0.00 | -154.66 | 0.00 | 154.66 | 4,198.03 | 2,099.01 | 9,147.09 | 4,580.35 | 0.04 | -0.03 | 0.042 |
| 20.00 | -31.93 | -1.57 | 0.00 | -146.60 | 0.00 | 146.60 | 4,146.02 | 2,073.01 | 8,849.58 | 4,431.37 | 0.08 | -0.04 | 0.041 |
| 25.00 | -30.81 | -1.52 | 0.00 | -138.76 | 0.00 | 138.76 | 4,092.65 | 2,046.32 | 8,553.84 | 4,283.28 | 0.12 | -0.05 | 0.040 |
| 30.00 | -29.71 | -1.47 | 0.00 | -131.17 | 0.00 | 131.17 | 4,037.92 | 2,018.96 | 8,260.05 | 4,136.16 | 0.18 | -0.06 | 0.039 |
| 35.00 | -28.63 | -1.42 | 0.00 | -123.81 | 0.00 | 123.81 | 3,981.82 | 1,990.91 | 7,968.40 | 3,990.12 | 0.24 | -0.07 | 0.038 |
| 40.00 | -27.57 | -1.37 | 0.00 | -116.70 | 0.00 | 116.70 | 3,924.36 | 1,962.18 | 7,679.06 | 3,845.24 | 0.32 | -0.08 | 0.037 |
| 45.00 | -27.18 | -1.36 | 0.00 | -109.84 | 0.00 | 109.84 | 3,865.53 | 1,932.77 | 7,392.22 | 3,701.60 | 0.41 | -0.09 | 0.037 |
| 46.83 | -26.01 | -1.30 | 0.00 | -107.36 | 0.00 | 107.36 | 3,843.62 | 1,921.81 | 7,287.71 | 3,649.27 | 0.44 | -0.09 | 0.036 |
| 50.00 | -24.91 | -1.24 | 0.00 | -103.25 | 0.00 | 103.25 | 3,805.35 | 1,902.67 | 7,108.06 | 3,559.31 | 0.50 | -0.10 | 0.036 |
| 53.00 | -24.50 | -1.22 | 0.00 | -99.52 | 0.00 | 99.52 | 3,811.37 | 1,905.68 | 7,136.09 | 3,573.35 | 0.57 | -0.10 | 0.034 |
| 55.00 | -23.48 | -1.18 | 0.00 | -97.08 | 0.00 | 97.08 | 3,786.97 | 1,893.48 | 7,023.10 | 3,516.77 | 0.61 | -0.11 | 0.034 |
| 60.00 | -22.48 | -1.14 | 0.00 | -91.19 | 0.00 | 91.19 | 3,725.00 | 1,862.50 | 6,742.70 | 3,376.36 | 0.73 | -0.12 | 0.033 |
| 65.00 | -21.50 | -1.11 | 0.00 | -85.51 | 0.00 | 85.51 | 3,661.68 | 1,830.84 | 6,465.40 | 3,237.50 | 0.85 | -0.13 | 0.032 |
| 70.00 | -20.54 | -1.09 | 0.00 | -79.97 | 0.00 | 79.97 | 3,596.99 | 1,798.49 | 6,191.38 | 3,100.29 | 0.99 | -0.14 | 0.032 |
| 75.00 | -19.78 | -1.08 | 0.00 | -74.53 | 0.00 | 74.53 | 3,530.94 | 1,765.47 | 5,920.82 | 2,964.81 | 1.14 | -0.15 | 0.031 |
| 79.00 | -17.29 | -1.08 | 0.00 | -70.20 | 0.00 | 70.20 | 3,477.11 | 1,738.56 | 5,706.98 | 2,857.73 | 1.27 | -0.15 | 0.030 |
| 80.00 | -16.37 | -1.08 | 0.00 | -69.12 | 0.00 | 69.12 | 3,463.52 | 1,731.76 | 5,653.90 | 2,831.15 | 1.30 | -0.16 | 0.029 |
| 85.00 | -15.48 | -1.11 | 0.00 | -63.70 | 0.00 | 63.70 | 3,394.74 | 1,697.37 | 5,390.81 | 2,699.41 | 1.47 | -0.17 | 0.028 |
| 90.00 | -14.95 | -1.12 | 0.00 | -58.17 | 0.00 | 58.17 | 3,324.59 | 1,662.30 | 5,131.72 | 2,569.67 | 1.65 | -0.18 | 0.027 |
| 93.00 | -13.86 | -1.16 | 0.00 | -54.80 | 0.00 | 54.80 | 3,271.77 | 1,635.89 | 4,962.98 | 2,485.18 | 1.76 | -0.18 | 0.026 |
| 94.92 | -13.83 | -1.16 | 0.00 | -52.58 | 0.00 | 52.58 | 3,235.40 | 1,617.70 | 4,852.71 | 2,429.96 | 1.84 | -0.19 | 0.026 |
| 95.00 | -13.01 | -1.19 | 0.00 | -52.48 | 0.00 | 52.48 | 3,233.82 | 1,616.91 | 4,847.95 | 2,427.58 | 1.84 | -0.19 | 0.026 |
| 98.00 | -10.30 | -1.28 | 0.00 | -48.91 | 0.00 | 48.91 | 3,176.90 | 1,588.45 | 4,677.94 | 2,342.44 | 1.96 | -0.19 | 0.024 |
| 99.83 | -10.27 | -1.28 | 0.00 | -46.56 | 0.00 | 46.56 | 2,561.71 | 1,280.85 | 3,809.78 | 1,907.72 | 2.03 | -0.20 | 0.028 |
| 100.00 | -9.56 | -1.31 | 0.00 | -46.35 | 0.00 | 46.35 | 2,559.94 | 1,279.97 | 3,803.37 | 1,904.51 | 2.04 | -0.20 | 0.028 |
| 105.00 | -8.87 | -1.32 | 0.00 | -39.81 | 0.00 | 39.81 | 2,506.36 | 1,253.18 | 3,612.41 | 1,808.89 | 2.25 | -0.21 | 0.026 |
| 110.00 | -8.18 | -1.32 | 0.00 | -33.20 | 0.00 | 33.20 | 2,451.42 | 1,225.71 | 3,424.31 | 1,714.70 | 2.47 | -0.22 | 0.023 |
| 115.00 | -8.05 | -1.32 | 0.00 | -26.59 | 0.00 | 26.59 | 2,395.11 | 1,197.55 | 3,239.25 | 1,622.03 | 2.70 | -0.22 | 0.020 |
| 116.00 | -7.47 | -1.30 | 0.00 | -25.27 | 0.00 | 25.27 | 2,383.68 | 1,191.84 | 3,202.61 | 1,603.69 | 2.75 | -0.23 | 0.019 |
| 120.00 | -7.09 | -1.28 | 0.00 | -20.05 | 0.00 | 20.05 | 2,337.43 | 1,168.72 | 3,057.40 | 1,530.97 | 2.94 | -0.23 | 0.016 |
| 123.00 | -5.62 | -1.18 | 0.00 | -16.20 | 0.00 | 16.20 | 2,302.17 | 1,151.09 | 2,949.92 | 1,477.15 | 3.09 | -0.24 | 0.013 |
| 125.00 | -5.06 | -1.12 | 0.00 | -13.83 | 0.00 | 13.83 | 2,271.18 | 1,135.59 | 2,869.84 | 1,437.05 | 3.19 | -0.24 | 0.012 |
| 130.00 | -4.51 | -1.04 | 0.00 | -8.21 | 0.00 | 8.21 | 2,192.12 | 1,096.06 | 2,672.56 | 1,338.27 | 3.44 | -0.24 | 0.008 |
| 135.00 | -4.30 | -0.99 | 0.00 | -3.03 | 0.00 | 3.03 | 2,113.07 | 1,056.53 | 2,482.31 | 1,243.00 | 3.70 | -0.24 | 0.004 |
| 137.00 | -0.67 | -0.21 | 0.00 | -1.05 | 0.00 | 1.05 | 2,081.44 | 1,040.72 | 2,408.17 | 1,205.88 | 3.80 | -0.25 | 0.001 |
| 140.00 | -0.24 | -0.08 | 0.00 | -0.42 | 0.00 | 0.42 | 2,034.01 | 1,017.00 | 2,299.08 | 1,151.25 | 3.95 | -0.25 | 0.000 |
| 145.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1,954.95 | 977.48 | 2,122.87 | 1,063.01 | 4.21 | -0.25 | 0.000 |
| 147.92 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1,908.83 | 954.42 | 2,023.32 | 1,013.16 | 4.36 | -0.25 | 0.000 |

Site Number: 302468

Code: ANSI/TIA-222-G © 2007 - 2018 by ATC IP LLC. All rights reserved.

Site Name: Petro Lock, CT

Engineering Number: OAA729245_C3_01

4/25/2018 6:36:44 PM

Customer: SPRINT NEXTEL

Base Summary

Reactions

| Original Design | | | Analysis | | | |
|-----------------|-------------|-------------|-----------------|-------------|-------------|-----------------|
| Moment (kip-ft) | Axial (kip) | Shear (kip) | Moment (kip-ft) | Axial (kip) | Shear (kip) | Moment Design % |
| 2,489.00 | 36.10 | 23.90 | 3,080.84 | 101.91 | 29.43 | 91.69 |

Base Plate

| Yield (ksi) | Thick (in) | Width (in) | Style | Poly Sides | Clip Len (in) | Effective Len (in) | Mu (kip-in) | Phi Mn (kip-in) | Ratio |
|-------------|------------|------------|-------|------------|---------------|--------------------|-------------|-----------------|-------|
| 60.0 | 2.500 | 69.000 | Round | 0 | 0.00 | 11.224 | 294.84 | 946.99 | 0.31 |

Anchor Bolts

| Bolt Circle | Num Bolts | Bolt Type | Bolt Dia (in) | Yield (ksi) | Ultimate (ksi) | Arrange | Cluster Dist (in) | Start Angle (deg) | Compression | | | Tension | | |
|-------------|-----------|-------------|---------------|-------------|----------------|---------|-------------------|-------------------|-------------|-------------|-------|-------------|-------------|-------|
| | | | | | | | | | Force (kip) | Allow (kip) | Ratio | Force (kip) | Allow (kip) | Ratio |
| 63.00 | 16 | 2.25" A615- | 2.25 | 75.00 | 100.00 | Radial | 0.00 | 0.0 | 153.08 | 260.00 | 0.60 | 140.34 | 260.00 | 0.55 |

Caisson Strength Capacity

| | |
|--|--|
| Concrete Compressive Strength (f'_c): | 3000 psi |
| Vertical Steel Rebar Size #: | 11 |
| Vertical Steel Rebar Area: | 1.56 in ² |
| # of Vertical Steel Rebars: | 21 |
| Vertical Steel Rebar Yield Strength (F_y): | 60 ksi |
| Horizontal Tie / Stirrup Size #: | 5 |
| Horizontal Tie / Stirrup Area: | 0.31 in ² |
| Design Horizontal Tie / Stirrup Spacing: | 18.0 in |
| Horizontal Tie / Stirrup Steel Yield Strength (F_y): | 40 ksi |
| Rebar Cage Diameter: | 76.0 in |
| Strength Bending/Tension Reduction Factor (ϕ_B): | 0.90 ACI318-05 - 9.3.2.1 |
| Strength Shear Reduction Factor (ϕ_V): | 0.75 ACI318-05 - 9.3.2.3 |
| Strength Compression Reduction Factor (ϕ_C): | 0.65 ACI318-05 - 9.3.2.2 |
| Steel Elastic Modulus: | 29000 ksi |
| Design Moment (M_u): | 3097.1 k-ft |
| Nominal Moment Capacity ($\phi_B M_n$): | 4963.4 k-ft - ACI318-05 - 10.2 |
| $M_u / \phi_B M_n$: | 0.62 Result: OK |
| Design Shear (V_u): | 270.3 k |
| Nominal Shear Capacity ($\phi_V V_n$): | 457.6 k - ACI318-05 - 11.3.1.1 or 11.5.7.2 |
| $V_u / \phi_V V_n$: | 0.59 Result: OK |
| Design Tension (T_u): | 0.0 k |
| Nominal Tension Capacity ($\phi_T T_n$): | 1769.0 k - ACI318-05 - 10.2 |
| $T_u / \phi_T T_n$: | 0.00 Result: OK |
| Design Compression (P_u): | 110.6 k |
| Nominal Compression Capacity ($\phi_P P_n$): | 7304.9 k - ACI318-05 - 10.3.6.2 |
| $P_u / \phi_P P_n$: | 0.02 Result: OK |
| Bending Reinforcement Ratio: | 0.006 ACI318-05 - 10.8.4 & 10.9.1 |
| $M_u / \phi_B M_n + T_u / \phi_T T_n$: | 0.62 Result: OK |



PROJECT: SPRINT MASSIVE MIMO
SITE CASCADE: CT43XC806
SITE NAME: PETRO LOCK
AUGMENT ID: CT43XC806S18.1
SITE ADDRESS: 99 MEADOW ST.
 HARTFORD, CT 06518
SITE TYPE: 126'-0" MONOPOLE
DRAWING DESCRIPTION: FINAL CDs



201 STATE ROUTE 17 NORTH
 RUTHERFORD, NJ 07070
 TEL: (201) 684-4000
 FAX: (201) 684-4223



540 W. MADISON ST.
 9TH FLOOR
 CHICAGO, IL 60661
 www.sacw.com
 312.895.4977



604 FOX GLEN
 BARRINGTON, IL 60010
 TELEPHONE: 847-277-0070
 FAX: 847-277-0080
 AE@westchesterservices.com



604 FOX GLEN
 BARRINGTON, IL 60010
 TELEPHONE: 847-277-0070
 FAX: 847-277-0080
 JBANKS@WESTCHESTERSERVICES.COM

SITE INFORMATION

TOWER OWNER:
 AMERICAN TOWER CORPORATION
 116 HUNTINGTON AVE, 11TH FLOOR
 BOSTON, MA 02118
PROPERTY OWNER:
 MEADOW STREET REALTY LLC
SITE ADDRESS:
 99 MEADOW ST.
 HARTFORD, CT 06518
COUNTY:
 HARTFORD COUNTY
LATITUDE (NAD83):
 41° 44' 35.5" N (41.74319722°)
LONGITUDE (NAD83):
 72° 40' 03.1" W (-72.66753888°)
ZONING JURISDICTION:
 CONNECTICUT SITTING COUNCIL AND
 CITY OF HARTFORD
CURRENT ZONING:
 12
ELECTRIC PROVIDER:
 CONNECTICUT LIGHT & POWER
 (800) 266-2000
BACKHAUL PROVIDER:
 AT&T
 (800) 246-2020
SPRINT CM:
 AHMED BASHIR
CONSTRUCTION TYPE:
 2B
OCCUPANCY USE GROUP:
 U
PIN/APN:
 275690115

AREA MAP



LOCATION MAP



PROJECT DESCRIPTION

EXISTING SPRINT EQUIPMENT TO BE REMOVED:

- REMOVE (3) EXISTING SPRINT 2.5 GHz ANTENNAS
- REMOVE (3) EXISTING SPRINT 2.5 GHz RADIOS
- REMOVE 1" CONDUIT W/(3) ETHERNET & FIBER CABLES

NEW SPRINT EQUIPMENT TO BE INSTALLED:

- INSTALL (3) NEW mMIMO 2.5 GHz AIRSCALE MAA 64T64R 128AE B41 120W AAHC ANTENNAS
- INSTALL (1) NEW 1.3" HYBRID FIBER TRUNK CABLE, (9) NEW FIBER JUMPER CABLES AND (3) NEW SOOW POWER JUMPER CABLES (PER SPRINT GUIDELINES)
- INSTALL (1) NEW mMIMO JUNCTION BOX
- INSTALL (1) NEW mMIMO AIRSCALE BBU IN EXISTING MMBTS CABINET
- INSTALL (1) NEW TOP HAT ON EXISTING MMBTS CABINET
- INSTALL (2) NEW AMOB UNITS STACKED ON EXISTING BBU CABINET

APPLICABLE CODES

SUBCONTRACTOR'S WORK SHALL COMPLY WITH ALL APPLICABLE NATIONAL, STATE, AND LOCAL CODES AS ADOPTED BY THE LOCAL AUTHORITY HAVING JURISDICTION FOR THE LOCATION. THE EDITION OF THE AHJ ADOPTED CODES AND STANDARDS IN EFFECT OF THE DATE OF CONTRACT AWARD SHALL GOVERN THE DESIGN.

- 2015 INTERNATIONAL BUILDING CODE
- 2015 MECHANICAL CODE
- NFPA 780-LIGHTNING PROTECTION CODE
- 2015 UNIFORM BUILDING CODE
- 2014 NATIONAL ELECTRICAL CODE
- 2016 CONNECTICUT STATE BUILDING CODE
- NFPA 70-2014 EDITION AS AMENDED BY THE STATE OF CONNECTICUT

SUBCONTRACTOR'S WORK SHALL COMPLY WITH LATEST EDITION OF THE FOLLOWING STANDARDS. AMERICAN CONCRETE INSTITUTE (ACI) 318, BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC), MANUAL OF STEEL CONSTRUCTION, ASD, NINTH EDITION TELECOMMUNICATIONS INDUSTRY ASSOCIATION (TIA) 222-G, STRUCTURAL STANDARDS FOR STEEL ANTENNA TOWER AND ANTENNA SUPPORTING STRUCTURES; TIA 607, COMMERCIAL BUILDING GROUNDING AND BONDING REQUIREMENTS FOR TELECOMMUNICATIONS

INSTITUTE FOR ELECTRICAL AND ELECTRONICS ENGINEERS (IEEE) 81 GUIDE FOR MEASURING EARTH RESISTIVELY, GROUND IMPEDANCE, AND EARTH SURFACE POTENTIALS OF A GROUND SYSTEM
 IEEE 1100 (1999) RECOMMENDED PRACTICE FOR POWERING AND GROUNDING OF ELECTRONIC EQUIPMENT.



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 Call before you dig.**

TO OBTAIN LOCATION OF PARTICIPANTS UNDERGROUND FACILITIES BEFORE YOU DIG IN CONNECTICUT, CONTACT CALL BEFORE YOU DIG
 TOLL FREE: 1-800-922-4455 OR
 www.cbyd.com

CONNECTICUT STATUTE REQUIRES MIN OF 2 WORKING DAYS NOTICE BEFORE YOU EXCAVATE

DRAWING INDEX

| SHEET NO: | SHEET TITLE | REV |
|-----------|--|-----|
| T-1 | TITLE SHEET | 0 |
| T-2 | SPRINT CONSTRUCTION SPECIFICATIONS (REFERENCE) | 0 |
| T-3 | SPRINT SPECIFICATIONS | 0 |
| C-1 | SITE PLANS | 0 |
| C-2 | TOWER ELEVATION - SOUTHWEST | 0 |
| C-3 | ANTENNA LAYOUTS | 0 |
| C-4 | EQUIPMENT DETAILS | 0 |
| C-5 | EQUIPMENT DETAILS | 0 |
| C-6 | IMPLEMENTATION DETAIL | 0 |
| C-7 | ELECTRICAL DETAILS | 0 |
| C-8 | GROUNDING DETAILS | 0 |

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| NO. | DATE | DESCRIPTION |
|-----|----------|---------------------|
| 0 | 07.25.18 | PERMIT/CONSTRUCTION |

DRAWN BY: JM
 CHECKED BY: JMB
 JOB NUMBER: CT43XC806
 ARCHITECT: JOHN BANKS

DATED: 11/20/18
 NO SEAL
 EXP. DATE: 07/31/19

PETRO LOCK

SITE NUMBER

CT43XC806

SITE LOCATION

99 MEADOW ST.
 HARTFORD, CT 06114

AUGMENT ID

CT43XC806S18.1

SHEET TITLE

TITLE SHEET

SHEET NUMBER

T-1

ALL DRAWINGS CONTAINED HEREIN ARE FORMATTED FOR 11X17. CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.

APPROVALS

| SIGNER | SIGNATURE | DATE |
|-----------------------------|-----------|------|
| SPRINT CONSTRUCTION MANAGER | | |
| SPRINT OPERATIONS MANAGER | | |
| SPRINT RF ENGINEER | | |
| LANDLORD | | |



OVERALL SITE PLAN

0 35' 70' SCALE: 1"=70'-0" (11x17)
(OR) 2"=70'-0" (22x34)

1

NEW EQUIPMENT PLAN

(3) EXISTING SPRINT 2500 MHz CABLES TO BE REMOVED

EXISTING SPRINT ICE BRIDGE

EXISTING SPRINT PPC/ TELCO CABINET

(9) FIBER JUMPERS & (3) SOOW POWER JUMPER CABLES FROM NEW mMIMO JUNCTION BOX TO ANTENNAS (TYP. 3 FIBER JUMPERS & 1 SOOW POWER JUMPER CABLES PER SECTOR, TYP. OF 3 SECTORS)

EXISTING SPRINT FIBER DISTRIBUTION BOX

EXISTING SPRINT GROUND BAR

EXISTING SPRINT MMBS CABINET

(1) NEW TOP HAT ENCLOSURE W/ RECTIFIER SHELF & (4) NEW RECTIFIERS ON EXISTING SPRINT MMBS CABINET

PROVIDE (2) NEW 1" CONDUIT CONNECTIONS BETWEEN EXISTING MMBS CABINET AND EXISTING BATTERY CABINET

(2) NEW AMOB UNITS STACKED ON TOP OF EXISTING SPRINT BATTERY CABINET

EXISTING SPRINT BATTERY CABINET

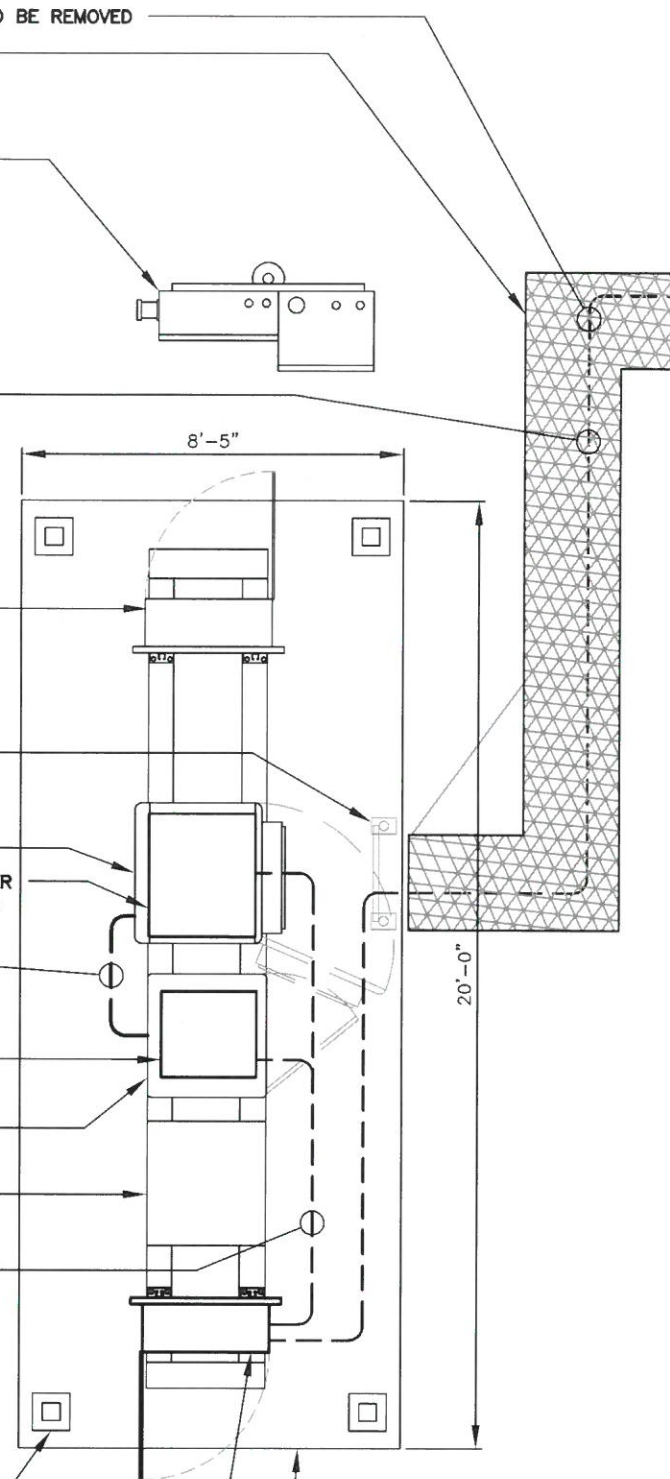
EXISTING BATTERY CABINET

(1) 1.3" HYBRID FIBER TRUNK CABLE FROM NEW mMIMO JUNCTION BOX TRUNK CABLE SHALL BE SECURED WITH A CLAMP EVERY 24" PER SPRINT STANDARDS

EXISTING ICE BRIDGE CANOPY SUPPORT POST (TYP.)

INSTALL (1) NEW mMIMO JUNCTION BOX ON NEW H-FRAME (12' OF FIBER TRUNK CABLE SHALL BE COILED INSIDE JUNCTION BOX BEFORE BREAK OUT PER SPRINT CABLE GUIDELINES)

NEW AND EXISTING SPRINT EQUIPMENT ON EXISTING SPRINT 8'-5"X20'-0" CONCRETE PAD WITH ICE BRIDGE CANOPY



0 2' 4' SCALE: 1/4"=1'-0" (11x17)
(OR) 1/2"=1'-0" (22x34)

2

Sprint

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|-----------------------|----------|---------------------|
| NO. | DATE | DESCRIPTION |
| DRAWN BY: JMB | | |
| CHECKED BY: JMB | | |
| JOB NUMBER: CT43XC806 | | |
| ARCHITECT: JOHN BANKS | | |

DATED: 11/07/18
EXPIRES: 07/31/19
SEAL

SITE NAME

PETRO LOCK

SITE NUMBER
CT43XC806

SITE LOCATION
99 MEADOW ST.
HARTFORD, CT 06114

AUGMENT ID
CT43XC806S18.1

SHEET TITLE

SITE PLANS

SHEET NUMBER

C-1



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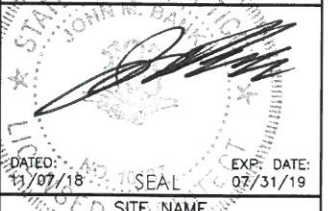
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| NO. | DATE | DESCRIPTION |
| DRAWN BY: JM | | |
| CHECKED BY: JMB | | |
| JOB NUMBER: CT43XC806 | | |
| ARCHITECT: JOHN BANKS | | |



| |
|-------------------------------------|
| PROPOSED SITE NAME |
| PETRO LOCK |
| SITE NUMBER |
| CT43XC806 |
| SITE LOCATION |
| 99 MEADOW ST. HARTFORD, CT 06114 |
| AUGMENT ID |
| CT43XC806S18.1 |
| SHEET TITLE |
| TOWER ELEVATION - SOUTHWEST |
| SHEET NUMBER |

TOP OF EXISTING MONOPOLE
ELEV. ±126'-0"=AGL

ANTENNA MOUNTING PROFILE
(SEE DETAIL 1, SHEET C-4)

TOP OF NEW SPRINT ANTENNAS
ELEV. ±99'-0"=AGL

C.L. OF NEW & EXISTING SPRINT ANTENNAS
ELEV. ±98'-0"=AGL

EXISTING SPRINT 2.5 GHz ANTENNA & RADIO UNIT
TO BE REMOVED (TYP. 1 PER SECTOR, 3 TOTAL)

NEW SPRINT 2.5 GHz AIRSCALE MAA 64T64R 128AE B41
120W AAHC ANTENNA (TYP. 1 PER SECTOR, 3 TOTAL)

EXISTING OTHER CARRIER ANTENNAS

EXISTING SPRINT 800/1900 MHz ANTENNA TO REMAIN
(TYP 1 PER SECTOR, 3 TOTAL)

EXISTING SPRINT 800 MHz RADIO TO REMAIN
(TYP 1 PER SECTOR, 3 TOTAL)

EXISTING SPRINT 1900 MHz RADIO TO REMAIN
(TYP 2 PER SECTOR, 6 TOTAL)

EXISTING OTHER CARRIER ANTENNAS

(9) FIBER JUMPERS & (3) SOOW POWER JUMPER
CABLES FROM NEW mMIMO JUNCTION BOX TO
ANTENNAS (TYP. 3 FIBER JUMPERS & 1 SOOW POWER
JUMPER CABLES PER SECTOR, TYP. OF 3 SECTORS)

EXISTING SPRINT ICE BRIDGE

NEW AND EXISTING SPRINT EQUIPMENT ON
EXISTING SPRINT 8'-5"X20'-0" CONCRETE
PAD WITH ICE BRIDGE CANOPY

GRADE
ELEV. ±0'-0"=AGL

| EXISTING ANTENNA AND CABLE SCHEDULE | | | | | | | | | |
|-------------------------------------|---------|------------|--------|------------------------|------------------------------------|-------------------------|--|--------------|--|
| LOCATION | AZIMUTH | RAD CENTER | STATUS | TECHNOLOGY | ANTENNA MODEL # | # OF RRH | CABLE SIZE | CABLE LENGTH | |
| SECTOR 1 | 1A | 20° | 98'-0" | EXISTING | 800/1900 MHz RFS APXVSP18-C-A20 | 800 MHz-1 1900 MHz-2 | 1-1/4" HYBRIFLEX | ±124' | |
| | 1B | 350° | 98'-0" | EXISTING-TO BE REMOVED | 2500 MHz RFS APZXVTM14-C-I20 | 2500 MHz-1 | 1" CONDUIT W/(3) ETHERNET & FIBER CABLES TO BE REMOVED | ±124' | |
| SECTOR 2 | 2A | 140° | 98'-0" | EXISTING | 800/1900 MHz RFS APXVSP18-C-A20 | 800 MHz-1 1900 MHz-2 | 1-1/4" HYBRIFLEX | ±124' | |
| | 2B | 115° | 98'-0" | EXISTING-TO BE REMOVED | 2500 MHz RFS APZXVTM14-C-I20 | 2500 MHz-1 | 1" CONDUIT W/(3) ETHERNET & FIBER CABLES TO BE REMOVED | ±124' | |
| SECTOR 3 | 3A | 270° | 98'-0" | EXISTING | 800/1900 MHz RFS APXVSP18-C-A20 | 800 MHz-1 1900 MHz-2 | 1-1/4" HYBRIFLEX | ±124' | |
| | 3B | 220° | 98'-0" | EXISTING-TO BE REMOVED | 2500 MHz RFS APZXVTM14-C-I20 | 2500 MHz-1 | 1" CONDUIT W/(3) ETHERNET & FIBER CABLES TO BE REMOVED | ±124' | |

| NEW ANTENNA AND CABLE SCHEDULE | | | | | | | | | |
|--------------------------------|---------|------------|--------|------------|--|-------------------------|------------------|--------------|--|
| LOCATION | AZIMUTH | RAD CENTER | STATUS | TECHNOLOGY | ANTENNA MODEL # | # OF RRH | CABLE SIZE | CABLE LENGTH | |
| SECTOR 1 | 1A | 20° | 98'-0" | EXISTING | 800/1900 MHz RFS APXVSP18-C-A20 | 800 MHz-1 1900 MHz-2 | 1-1/4" HYBRIFLEX | ±124' | |
| | 1B | 350° | 98'-0" | NEW | 2500 MHz AIRSCALE MAA 64T64R 128AE B41 120 W AAHC | INTEGRATED | 1.3" HYBRID | ±15' | |
| SECTOR 2 | 2A | 140° | 98'-0" | EXISTING | 800/1900 MHz RFS APXVSP18-C-A20 | 800 MHz-1 1900 MHz-2 | 1-1/4" HYBRIFLEX | ±124' | |
| | 2B | 115° | 98'-0" | NEW | 2500 MHz AIRSCALE MAA 64T64R 128AE B41 120 W AAHC | INTEGRATED | SHARED | SHARED | |
| SECTOR 3 | 3A | 270° | 98'-0" | EXISTING | 800/1900 MHz RFS APXVSP18-C-A20 | 800 MHz-1 1900 MHz-2 | 1-1/4" HYBRIFLEX | ±124' | |
| | 3B | 220° | 98'-0" | NEW | 2500 MHz AIRSCALE MAA 64T64R 128AE B41 120 W AAHC | INTEGRATED | SHARED | SHARED | |



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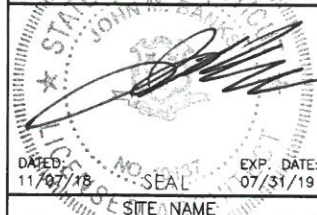
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| D | 07.25.18 | PERMIT/CONSTRUCTION |
| NO. | DATE | DESCRIPTION |
| DRAWN BY: JM | | |
| CHECKED BY: JMB | | |
| JOB NUMBER: CT43XC806 | | |
| ARCHITECT: JOHN BANKS | | |



PETRO LOCK

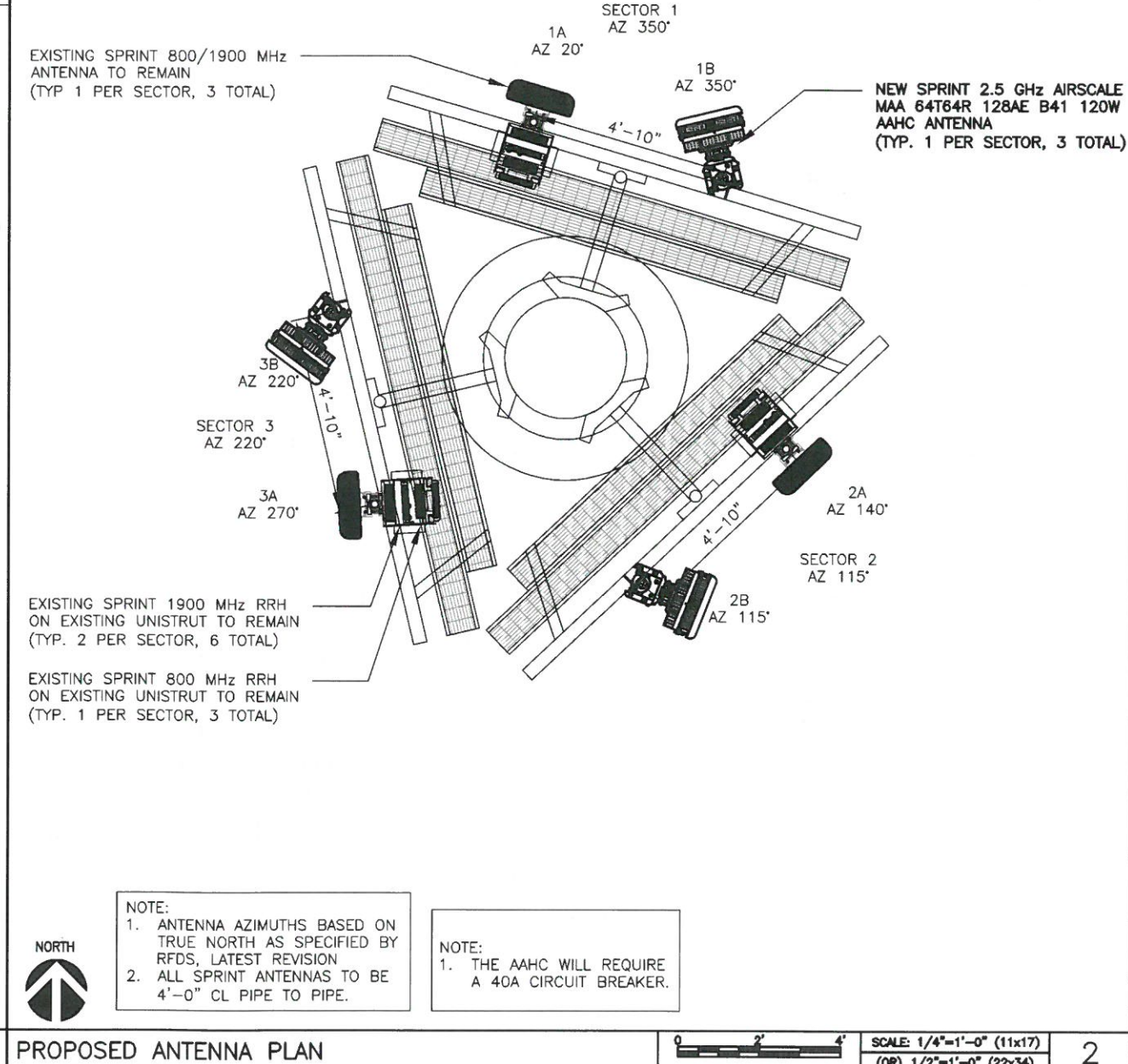
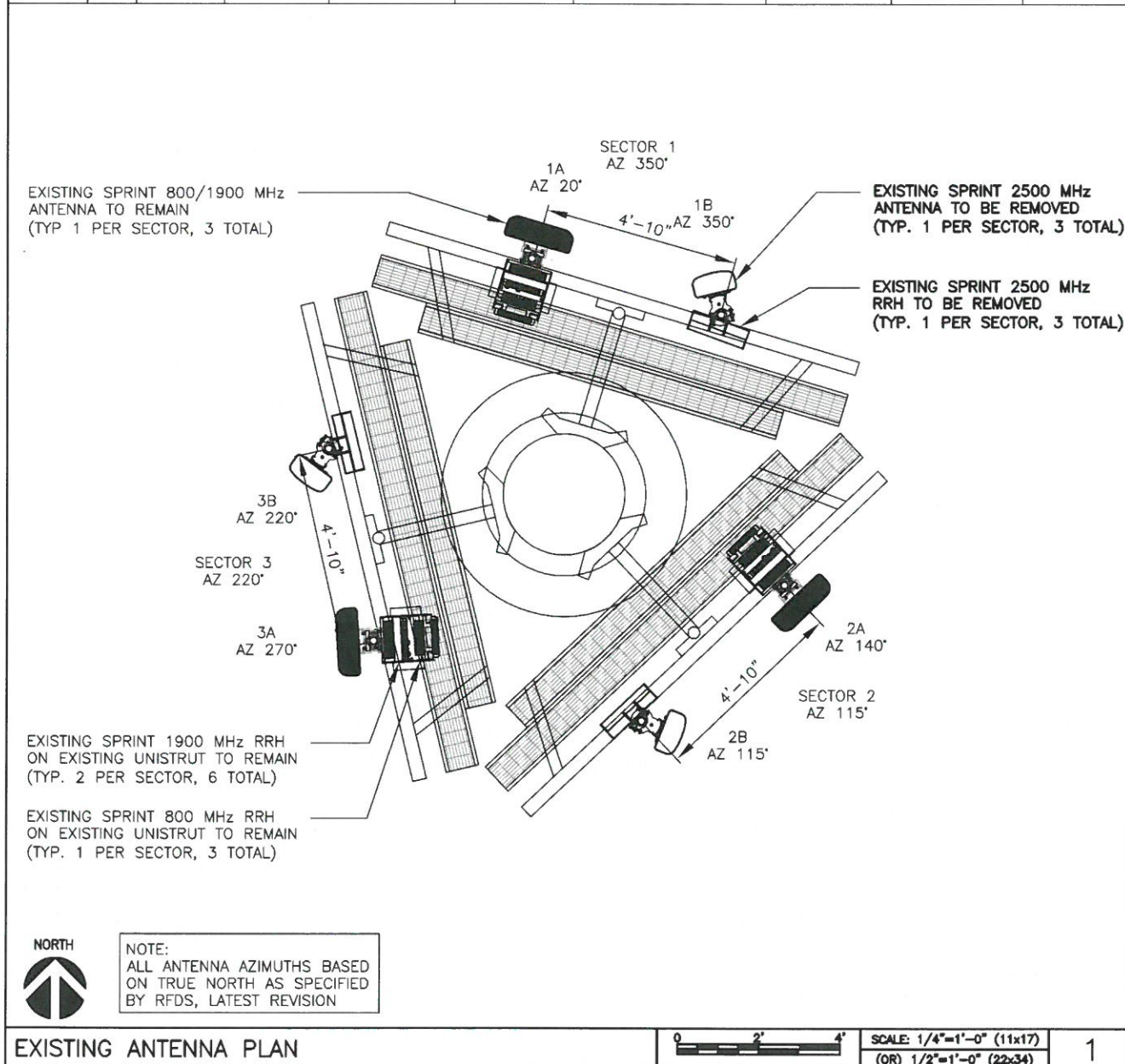
SITE NUMBER
CT43XC806

SITE LOCATION
99 MEADOW ST.
HARTFORD, CT 06114

AUGMENT ID
CT43XC806S18.1

SHEET TITLE
ANTENNA LAYOUTS

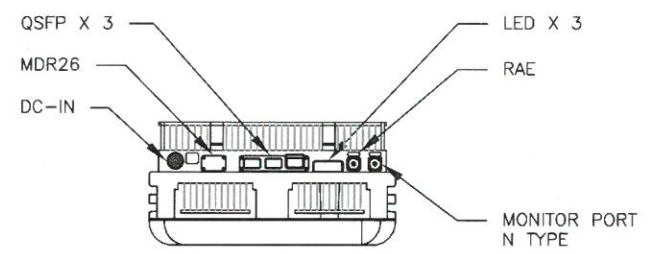
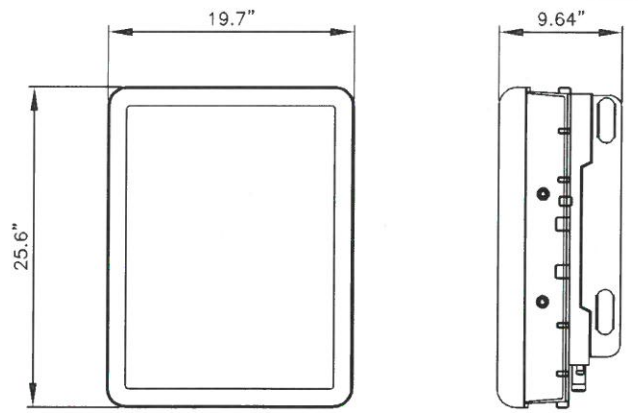
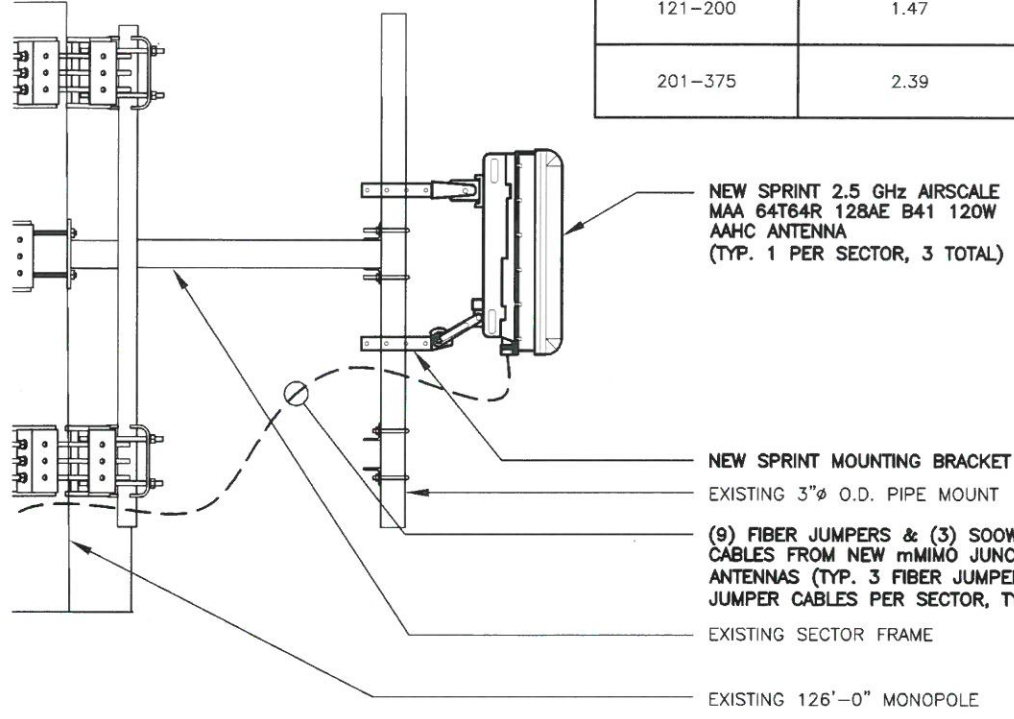
SHEET NUMBER
C-3



EXISTING ANTENNA PLAN

PROPOSED ANTENNA PLAN

| SPRINT CABLE GUIDELINES FOR CELL SITES | | | |
|--|---------------------|--|--------------------|
| CABLE LENGTH (FT) | MAX WEIGHT (LBS/FT) | CABLE DESCRIPTION | MAX DIAMETER (IN.) |
| 60-120 | 1.1 | 3 PAIRS OF 6AWG DC CONDUCTORS WITH 48 MULTI-MODE FIBER PAIRS | 1.144 |
| 121-200 | 1.47 | 3 PAIRS OF 4AWG DC CONDUCTORS WITH 48 MULTI-MODE FIBER PAIRS | 1.3 |
| 201-375 | 2.39 | 6 PAIRS OF 4AWG DC CONDUCTORS WITH 48 MULTI-MODE FIBER PAIRS | 1.66 |



NOKIA - AIRSCALE MAA 64T64R 128AE B41 120W AAHC
 WEIGHT (FULLY EQUIPPED): 103.6 LBS
 SIZE (HXWXD): 25.6X19.7X9.64 IN.

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ANTENNA MOUNTING PROFILE VIEW

SCALE 1 ANTENNA DETAIL

SCALE 2

| 0 | 07.25.18 | PERMIT/CONSTRUCTION |
|-----|----------|---------------------|
| NO. | DATE | DESCRIPTION |

DRAWN BY: JM
 CHECKED BY: JMB
 JOB NUMBER: CT43XC806
 ARCHITECT: JOHN BANKS

DATE: 11/07/18
 SEAL
 EXP. DATE: 07/31/19

SITE NAME
PETRO LOCK

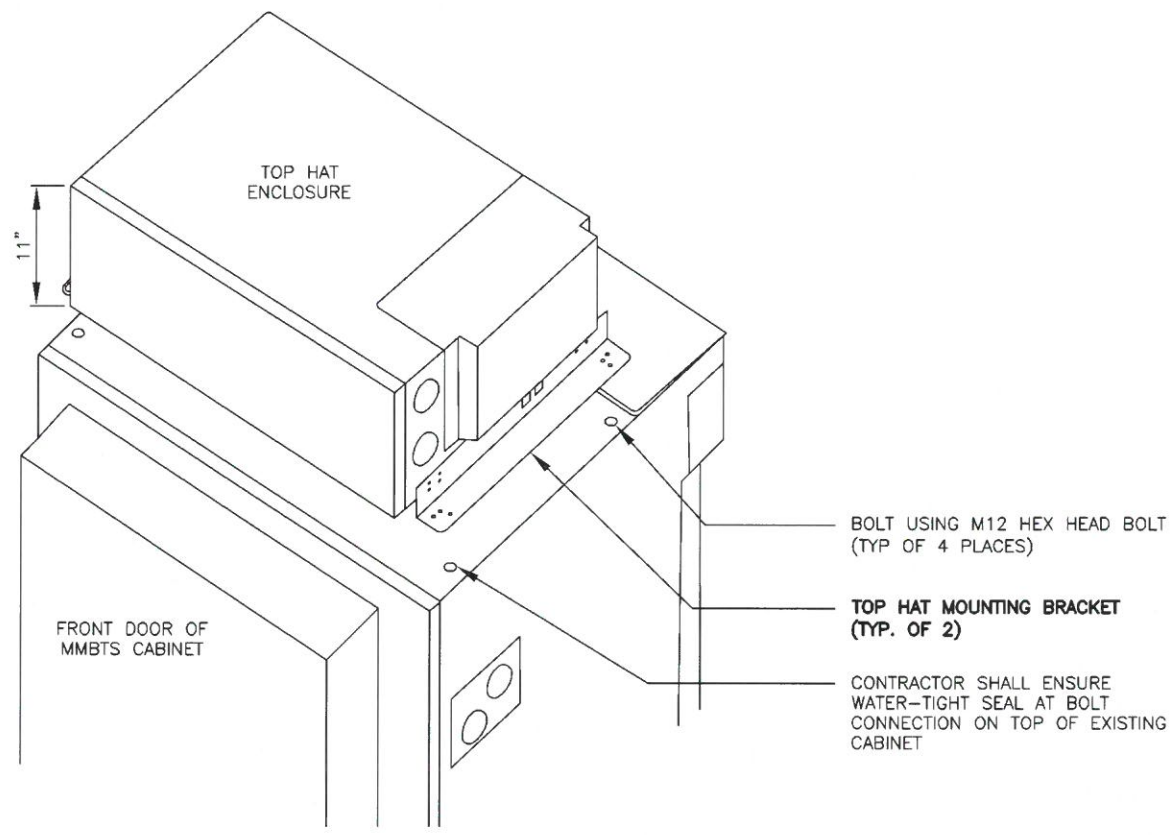
SITE NUMBER
CT43XC806

SITE LOCATION
 99 MEADOW ST.
 HARTFORD, CT 06114

AUGMENT ID
CT43XC806S18.1

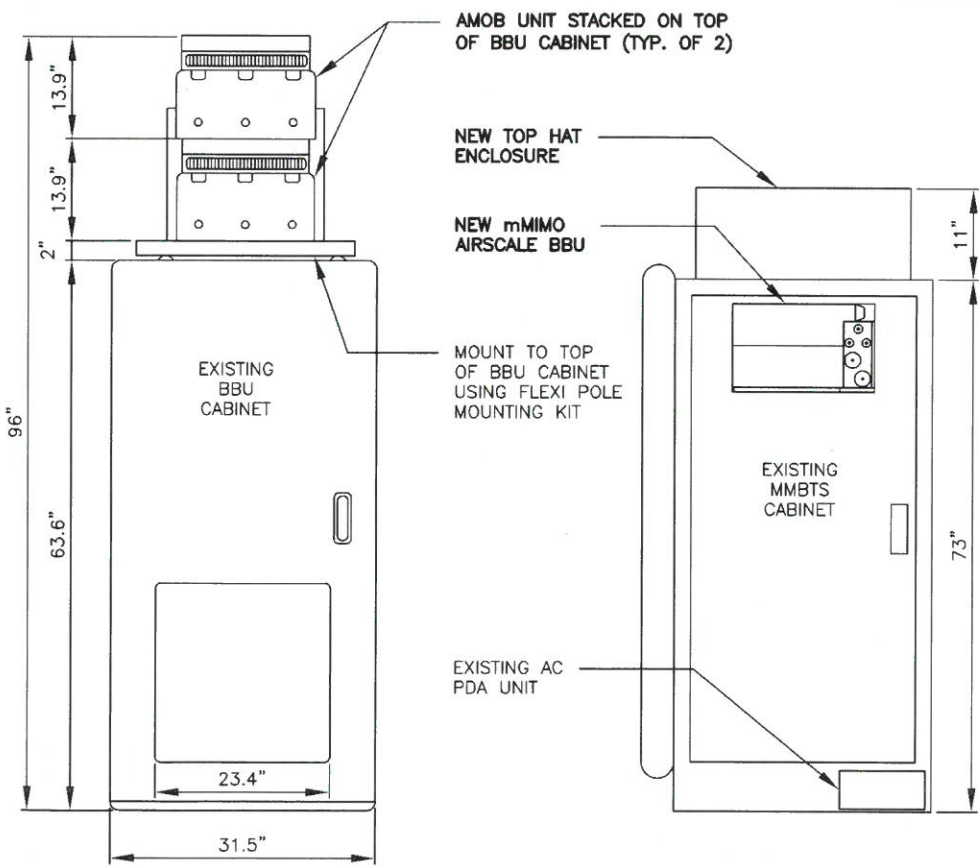
SHEET TITLE
EQUIPMENT DETAILS

SHEET NUMBER
C-4



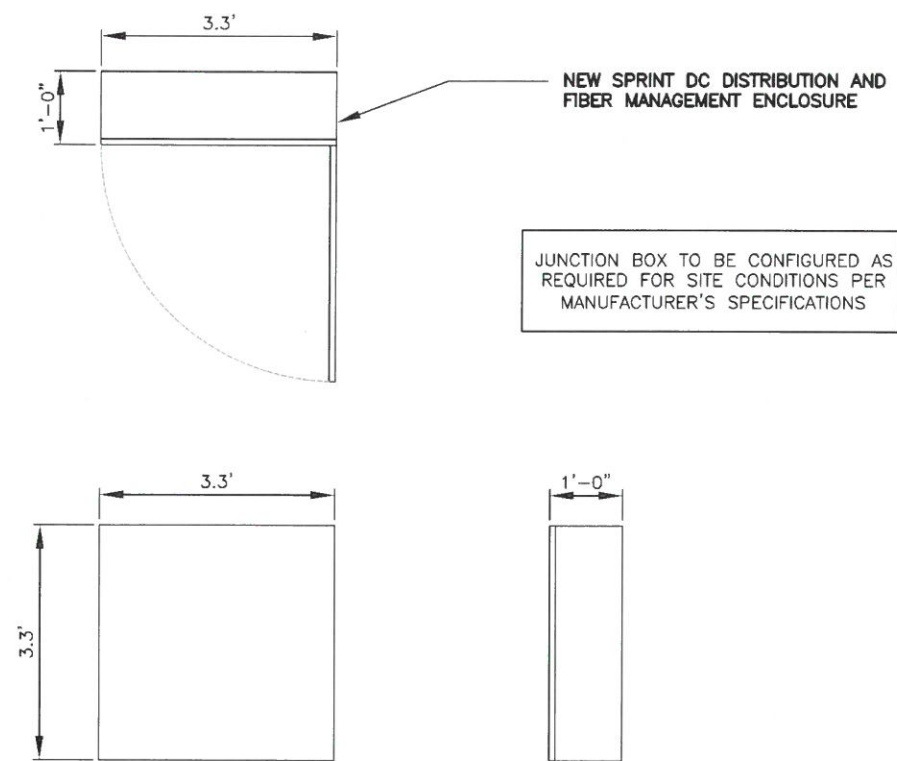
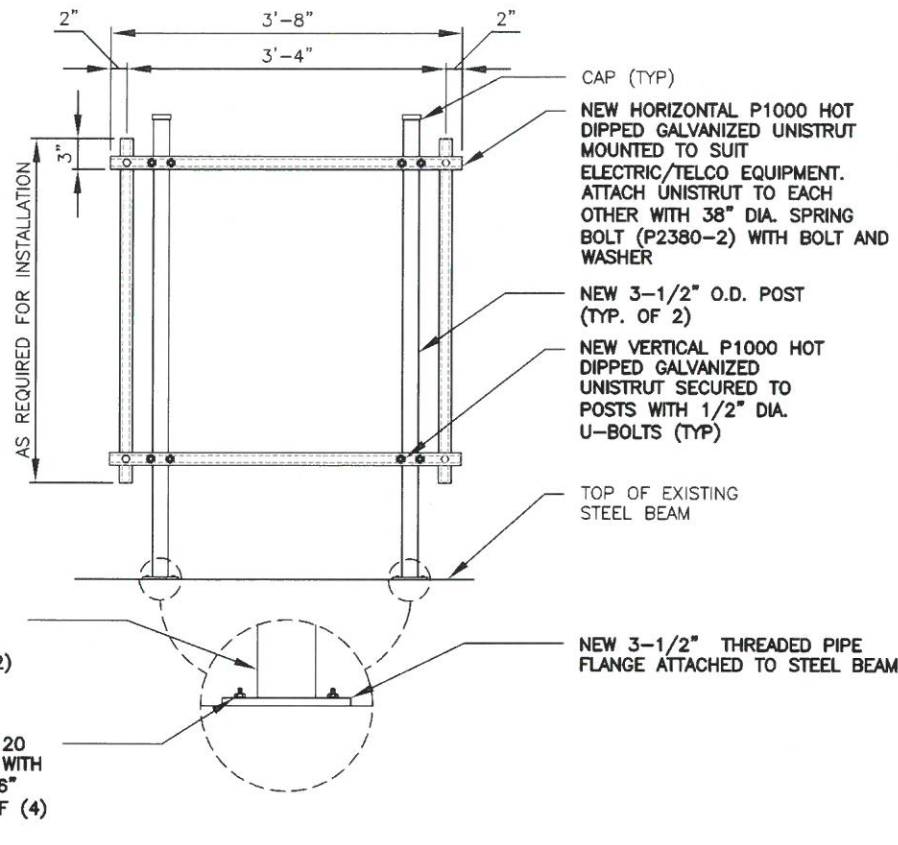
TOP HAT INSTALLATION DETAIL

SCALE 3



EQUIPMENT LOCATION DETAIL

SCALE 4



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DC DISTRIBUTION & FIBER MGMT ENCLOSURE MOUNTING DETAIL

SCALE N.T.S. 1

DC DISTRIBUTION & FIBER MGMT ENCLOSURE DETAIL

SCALE N.T.S. 2

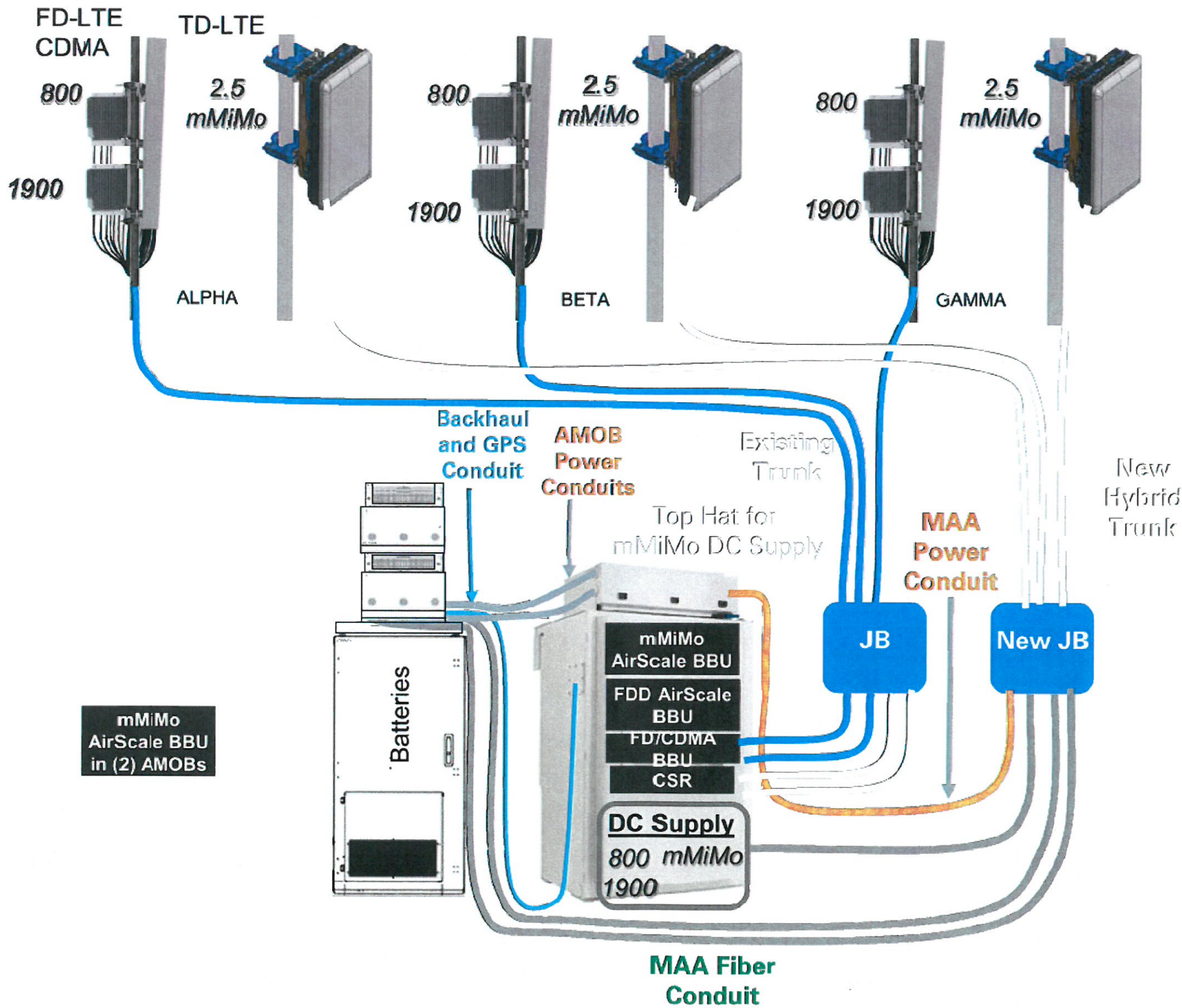
NOT USED

SCALE N.T.S. 3

NOT USED

SCALE N.T.S. 4

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| JOB NUMBER: CT43XC806 | | |
| ARCHITECT: JOHN BANKS | | |
| | | |
| SITE NAME | | |
| PETRO LOCK | | |
| SITE NUMBER | | |
| CT43XC806 | | |
| SITE LOCATION | | |
| 99 MEADOW ST. HARTFORD, CT 06114 | | |
| AUGMENT ID | | |
| CT43XC806S18.1 | | |
| SHEET TITLE | | |
| EQUIPMENT DETAILS | | |
| SHEET NUMBER | | |
| C-5 | | |



**mMiMo
AirScale BBU
in (2) AMOBs**

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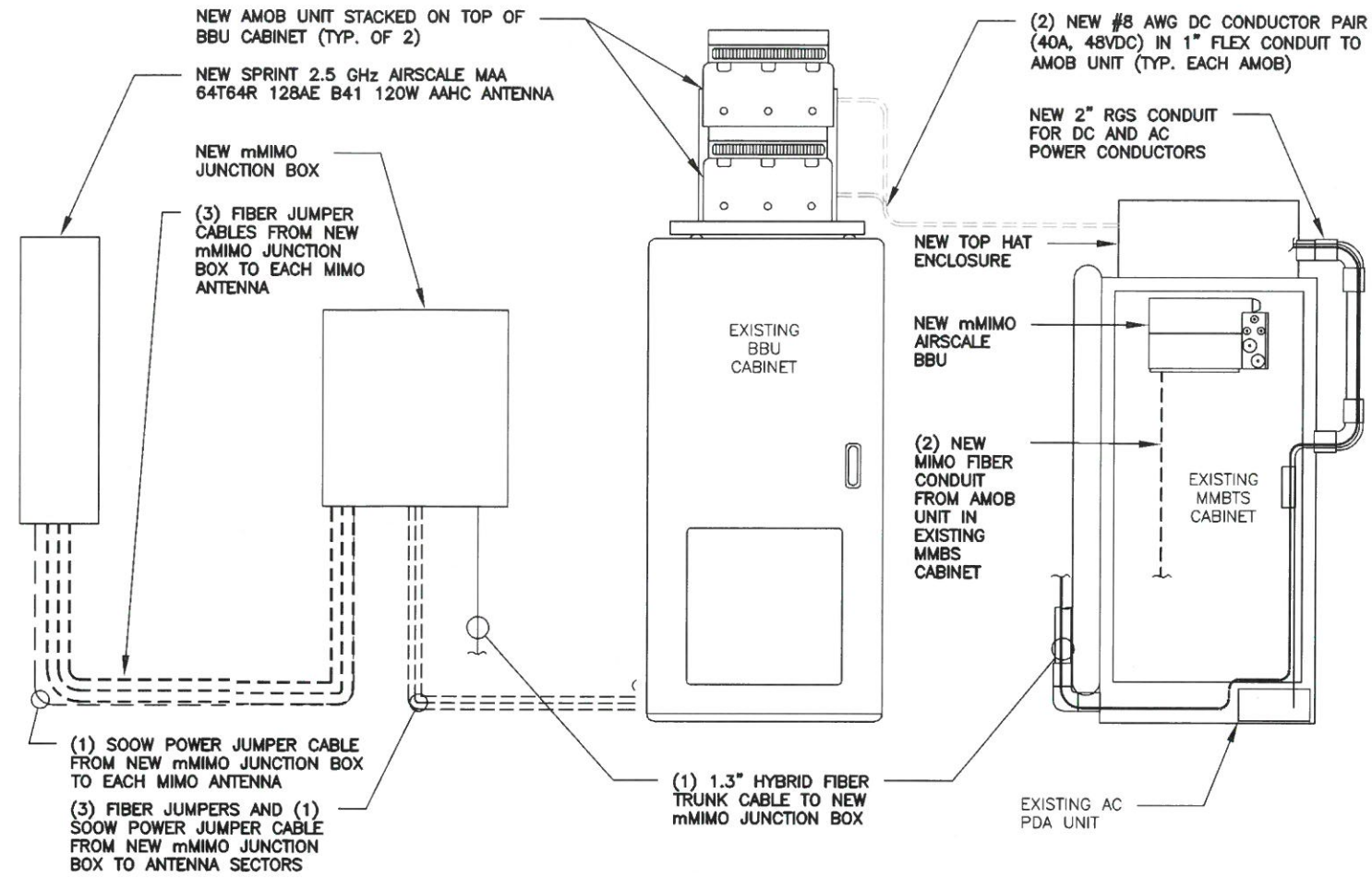
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| |
|-------------------------------------|
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| SITE NUMBER |
| CT43XC806 |
| SITE LOCATION |
| 99 MEADOW ST. HARTFORD, CT 06114 |
| AUGMENT ID |
| CT43XC806S18.1 |
| SHEET TITLE |
| IMPLEMENTATION DETAIL |
| SHEET NUMBER |

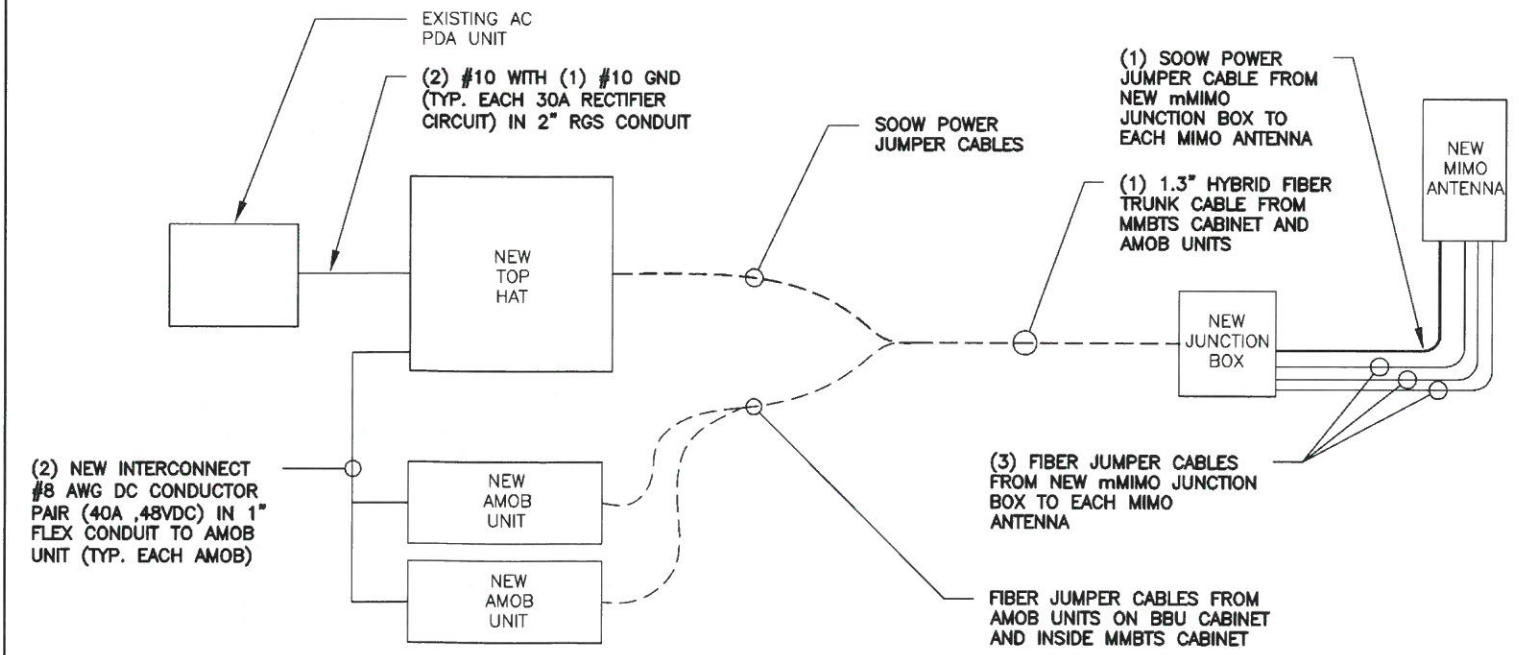
ELECTRICAL NOTES:

- CONTRACTOR SHALL INSPECT THE EXISTING CONDITIONS PRIOR TO SUBMITTING BID. ANY QUESTIONS ARISING DURING THE BID PERIOD IN REGARDS TO THE CONTRACTORS FUNCTIONS, THE SCOPE OF WORK, OR ANY OTHER ISSUE RELATED TO THIS PROJECT SHALL BE BROUGHT UP DURING THE BID PERIOD WITH THE PROJECT MANAGER FOR CLARIFICATION, NOT AFTER THE CONTRACT HAS BEEN AWARDED.
- LOCATION OF EQUIPMENT, CONDUIT AND DEVICES SHOWN ON THE DRAWINGS ARE APPROXIMATE AND SHALL BE COORDINATED WITH FIELD CONDITIONS PRIOR TO ROUGH-IN.
- THE CONDUIT RUNS AS SHOWN ON THE PLANS ARE APPROXIMATE. EXACT LOCATION AND ROUTING SHALL BE PER EXISTING FIELD CONDITIONS.
- PROVIDE PULL BOXES AND JUNCTION BOXES WHERE SHOWN OR REQUIRED BY NEC.
- ALL CONDUITS SHALL BE MET WITH BENDS MADE IN ACCORDANCE WITH NEC TABLE 346-10. NO RIGHT ANGLE DEVICE OTHER THAN STANDARD CONDUIT ELBOWS WITH 12" MINIMUM INSIDE SWEEPS OR LB'S FOR ALL CONDUITS 2" OR LARGER.
- ALL CONDUIT TERMINATION'S SHALL BE PROVIDED WITH PLASTIC THROAT INSULATING GROUNDING BUSHINGS.
- ALL WIRE SHALL BE TYPE THHN/THWN, SOLID, ANNEALED COPPER UP TO SIZE #10 AWG (#8 AND LARGER SHALL BE CONCENTRIC) 75 DEGREE C, (167 DEGREES F), 98% CONDUCTIVITY, MINIMUM #12.
- ALL WIRES SHALL BE TAGGED AT ALL PULL BOXES, J-BOXES, EQUIPMENT BOXES AND CABINETS WITH APPROVED PLASTIC TAGS, ACTION CRAFT, BRADY, OR APPROVED EQUAL.
- ALL NEW MATERIAL SHALL HAVE A U.L. LABEL.
- CONDUIT ROUGH-IN SHALL BE COORDINATED WITH THE MECHANICAL EQUIPMENT TO AVOID LOCATION TO CONFLICTS. VERIFY WITH MECHANICAL CONTRACTOR AND COMPLY AS REQUIRED.
- ALL PANEL DIRECTORIES SHALL BE TYPEWRITTEN NOT HAND WRITTEN.
- INSTALL AN EQUIPMENT GROUNDING CONDUCTOR IN ALL CONDUITS PER THE SPECIFICATIONS AND NEC. THE EQUIPMENT GROUNDING CONDUCTORS SHALL BE BONDED AT ALL JUNCTION BOXES, PULL BOXES, AND ALL DISCONNECT SWITCHES, STARTERS, AND EQUIPMENT CABINETS.
- THE CONTRACTOR SHALL PREPARE AS-BUILT DRAWINGS, DOCUMENT ANY AND ALL WIRING AND EQUIPMENT CONDITIONS AND CHANGES WHILE COMPLETING THIS CONTRACT. SUBMIT AT SUBSTANTIAL COMPLETION.
- ALL DISCONNECT SWITCHES AND OTHER CONTROLLING DEVICES SHALL BE PROVIDED WITH ENGRAVED LAMICOID NAMEPLATES INDICATING EQUIPMENT CONTROLLED, BRANCH CIRCUITS INSTALLED ON, AND PANEL FIELD LOCATIONS FED FROM (NO EXCEPTIONS.)
- ALL ELECTRICAL DEVICES AND INSTALLATIONS OF THE DEVICES SHALL COMPLY WITH (ADA) AMERICANS WITH DISABILITIES ACT AS ADOPTED BY THE APPLICABLE STATE.
- PROVIDE CORE DRILLING AS NECESSARY FOR PENETRATIONS OR RISERS THROUGH BUILDING. DO NOT PENETRATE STRUCTURAL MEMBERS WITHOUT CONSTRUCTION MANAGERS APPROVAL. SLEEVES AND/OR PENETRATIONS IN FIRE RATED CONSTRUCTION SHALL BE PACKED WITH FIRE RATED MATERIAL WHICH SHALL MAINTAIN THE FIRE RATING OF THE WALL OR STRUCTURE. FILL FOR FLOOR PENETRATIONS SHALL PREVENT PASSAGE OF WATER, SMOKE, FIRE AND FUMES. ALL MATERIAL SHALL BE UL APPROVED FOR THIS PURPOSE.
- ELECTRICAL CHARACTERISTICS OF ALL EQUIPMENT (NEW AND EXISTING) SHALL BE FIELD VERIFIED WITH THE OWNER'S REPRESENTATIVE AND EQUIPMENT SUPPLIER PRIOR TO ROUGH-IN OF CONDUIT AND WIRE. ALL EQUIPMENT SHALL BE PROPERLY CONNECTED ACCORDING TO THE NAMEPLATE DATA FURNISHED ON THE EQUIPMENT (THE DESIGN OF THESE PLANS ARE BASED UPON BEST AVAILABLE INFORMATION AT THE TIME OF DESIGN AND SOME EQUIPMENT CHARACTERISTICS MAY VARY FROM DESIGN AS SHOWN ON THESE DRAWINGS). LOCATION OF ALL OUTLET, BOXES, ETC., AND THE TYPE OF CONNECTION (PLUG OR DIRECT) SHALL BE CONFIRMED WITH THE OWNER'S REPRESENTATIVE PRIOR TO ROUGH-IN.



EQUIPMENT UTILITY ELEVATION VIEW

SCALE
N.T.S. 2



ONE-LINE DIAGRAM

SCALE
N.T.S. 3

ELECTRICAL NOTES

SCALE
N.T.S. 1

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| CHECKED BY: JMB | | |
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| ARCHITECT: JOHN BANKS | | |

DATE: 11/07/18
SEAL
EXP. DATE: 07/31/19

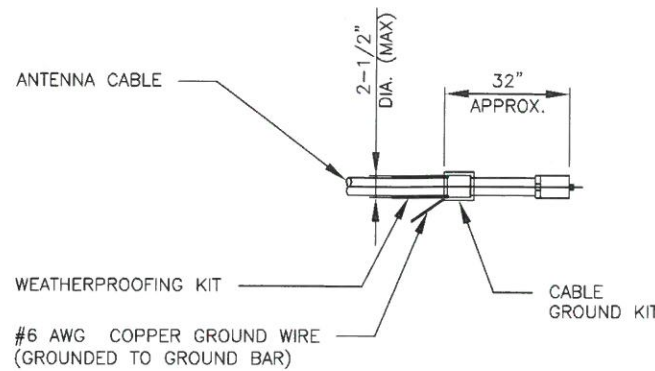
SITE NAME

| |
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| PETRO LOCK |
| SITE NUMBER |
| CT43XC806 |
| SITE LOCATION |
| 99 MEADOW ST. HARTFORD, CT 06114 |
| AUGMENT ID |
| CT43XC806S18.1 |
| SHEET TITLE |
| ELECTRICAL DETAILS |
| SHEET NUMBER |

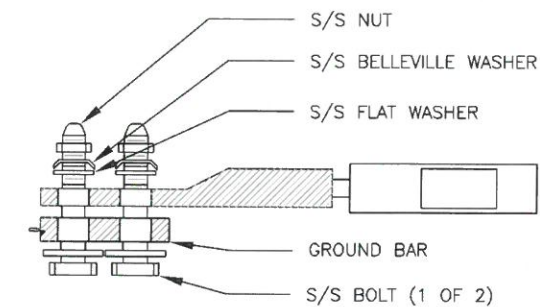
C-7

GROUNDING NOTES:

1. ALL GROUNDING SYSTEM CONDUCTORS AND CONNECTIONS BELOW GRADE SHALL BE THERMAL WELDS AT GROUND RODS AND AT A MINIMUM OF 36" BELOW GRADE.
2. ALL INSTALLATIONS SHALL BE FIELD VERIFIED.
3. ALL GROUND WIRE SHALL BE #2 AWG BARE COPPER TINNED UNLESS NOTED OTHERWISE.
4. ALL GROUND WIRES SHALL PROVIDE A STRAIGHT DOWNWARD PATH TO GROUND WITH GRADUAL BEND AS REQUIRED. GROUND WIRES SHALL NOT BE LOOPED OR SHARPLY BENT.
5. THE CONTRACTOR SHALL COORDINATE INSTALLATION OF GROUND RODS AND GROUND RING WITH FOUNDATION AND UNDERGROUND CONDUIT.
6. EACH EQUIPMENT CABINET SHALL BE CONNECTED WITH (2) #2 AWG INSULATED SOLID TINNED COPPER WIRE TO GROUND BAR. EQUIPMENT CABINETS SHALL EACH HAVE (2) CONNECTIONS.
7. ANTENNA GROUND KITS SHALL BE FURNISHED BY SPRINT AND INSTALLED BY CONTRACTOR.
8. KOPR-SHIELD ANTI-OXIDATION COMPOUND SHALL BE USED ON ALL GROUNDING CONNECTIONS.
9. ALL EXOTHERMIC CONNECTS SHALL BE INSTALLED UTILIZING THE PROPER CONNECTION/MOLD AND MATERIALS FOR THE PARTICULAR APPLICATION.
10. ALL BOLTED GROUNDING CONNECTIONS SHALL BE INSTALLED WITH A LOCK WASHER UNDER THE NUT. HARDWARE FOR BOLTED CONNECTIONS SHALL BE A MINIMUM OF 3/8" DIAMETER AND SHALL BE STAINLESS STEEL.
11. GROUNDING WIRE SHALL NOT BE INSTALLED OR ROUTED THROUGH HOLES IN ANY METAL OBJECTS OR SUPPORTS TO PRECLUDE ESTABLISHING A "CHOKE" POINT.
12. PLASTIC CLIPS OR METAL CLIPS WHICH DO NOT COMPLETELY SURROUND THE GROUNDING CONDUCTORS SHALL BE USED TO FASTEN AND SUPPORT GROUNDING CONDUCTORS. FERROUS METAL CLIPS WHICH COMPLETELY SURROUND THE GROUNDING CONDUCTOR SHALL NOT BE USED.
13. STANDARD BUS BARS (CIGBE AND MIGB) SHALL BE FURNISHED AND INSTALLED. THEY SHALL NOT BE FABRICATED OR MODIFIED IN THE FIELD.
14. THE GROUNDING CONNECTION TO THE POWER AND TELCO SECTIONS OF THE PPC CABINET SHALL BE MADE BY CONNECTING A CONDUCTOR FROM THE GROUND RING TO THE FACTORY FURNISHED BUS BAR IN EACH COMPARTMENT.
15. THE CONTRACTOR SHALL SUPPLY SPRINT AND NIH/ORF WITH RESULTS FROM PRE-CONSTRUCTION (CO-LO ONLY) AND POST-CONSTRUCTION OHM TESTING (GROUND) RESULTS.
16. THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE A "FALL OF POTENTIAL" TEST ON THE NEW SUPPLEMENTAL GROUND FIELD PRIOR TO FINAL CONNECTION OF THE GROUNDING SYSTEM TO EQUIPMENT. THE TEST SHALL BE PERFORMED BY A QUALIFIED AND CERTIFIED TESTING AGENT. PROVIDE INDEPENDENT TEST RESULTS TO THE PROJECT MANAGER AND NIH/ORF FOR REVIEW. THE GROUND SYSTEM RESISTANCE TO EARTH GROUND SHALL NOT EXCEED FIVE (5) OHMS. IF THE GROUND TEST EXCEEDS THE MAXIMUM OF 5 OHMS, THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE ADDITIONAL GROUND CONNECTIONS AS REQUIRED TO MEET THE 5 OHMS MAXIMUM.



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



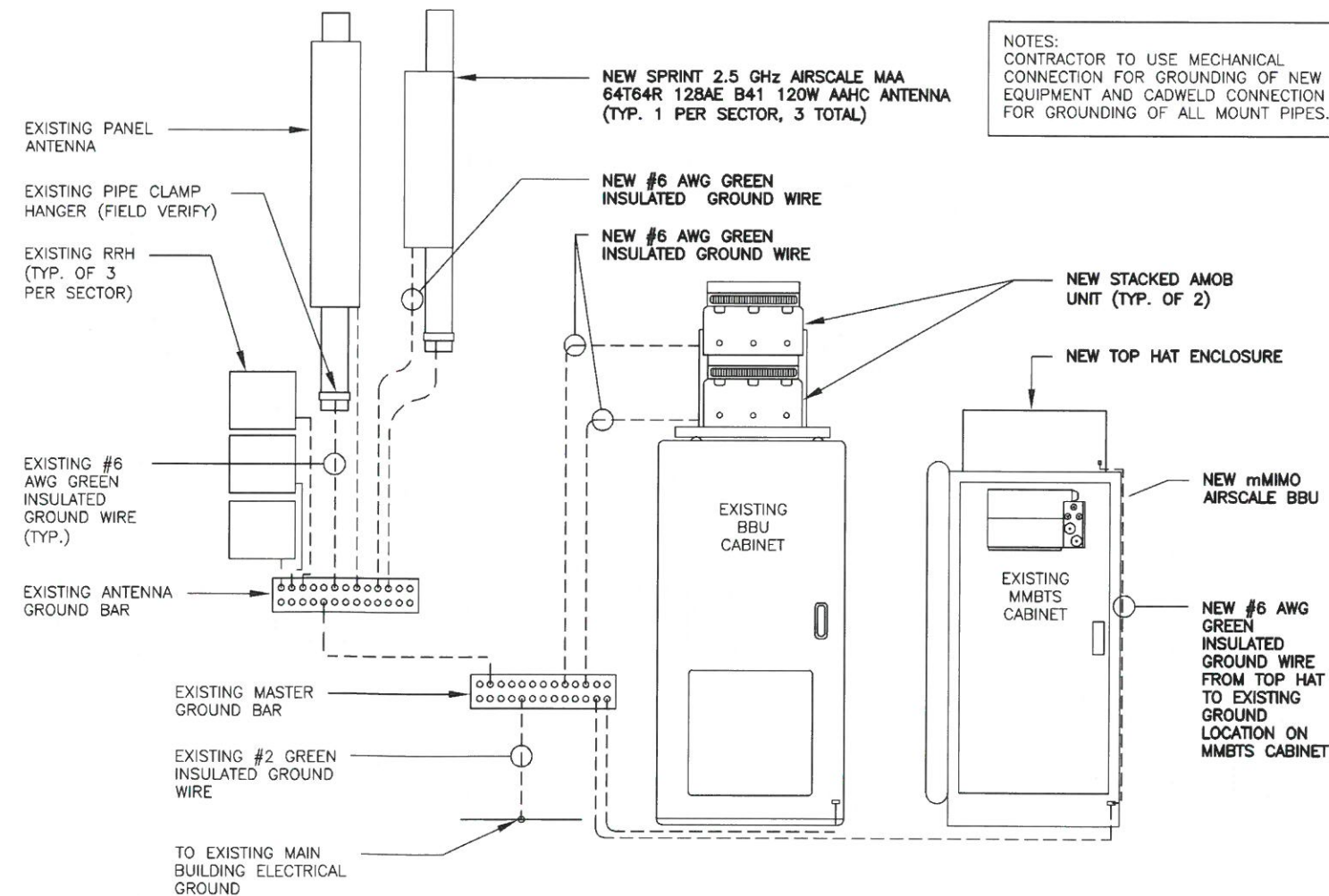
- NOTES:**
1. PROVIDE 2-HOLE, LONG BARREL, TINNED SOLID COPPER LUGS WHEREVER LUGS ARE SHOWN. ERICO B-122-CE PREFERRED WITH CADWELD TYPE GL CONNECTION. THOMAS AND BETTS 54800BE SERIES WHERE CRIMP CONNECTOR IS REQUIRED.
 2. ALL CRIMP CONNECTIONS MUST BE MADE USING HYDRAULIC TOOLS AND THREE POINT HEXAGONAL COMPRESSION MOLDS ON LONG BARREL LUGS.
 3. ALL MECHANICAL CONNECTIONS MUST BE MADE USING THOMAS AND BETTS "KOPR-SHIELD". COAT ALL WIRES BEFORE LUGGING. COAT ALL SURFACES BEFORE CONNECTING.
 4. ALL HARDWARE 18/8 STAINLESS STEEL INCLUDING BELLEVILLE, COAT ALL SURFACES WITH "KOPR-SHIELD" BEFORE MATING.
 5. FOR GROUNDING BOND TO STEEL ONLY: INSERT A DRAGON TOOTH WASHER BETWEEN LUG AND STEEL, COAT ALL SURFACES WITH "KOPR-SHIELD".
 6. NO SLOTTED HOLES ON BUS BAR OR LUGS ARE PERMITTED.
 7. ALL LUG SHANKS AND LEAD JOINTS SHALL HAVE HEAT SHRINK MATERIAL.

CABLE GROUNDING DETAIL

SCALE
N.T.S. 2

TWO-HOLE LUG

SCALE
N.T.S. 3



NOTES:
CONTRACTOR TO USE MECHANICAL CONNECTION FOR GROUNDING OF NEW EQUIPMENT AND CADWELD CONNECTION FOR GROUNDING OF ALL MOUNT PIPES.

ELECTRICAL NOTES

SCALE
N.T.S. 1

GROUNDING RISER DIAGRAM

SCALE
N.T.S. 4

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| 0 | 07.25.18 | PERMIT/CONSTRUCTION |
|-----------------------|----------|---------------------|
| NO. | DATE | DESCRIPTION |
| DRAWN BY: JMB | | |
| CHECKED BY: JMB | | |
| JOB NUMBER: CT43XC806 | | |
| ARCHITECT: JOHN BANKS | | |
| | | |

| | |
|-------------------------------------|--|
| PETRO LOCK | |
| SITE NUMBER | |
| CT43XC806 | |
| SITE LOCATION | |
| 99 MEADOW ST. HARTFORD, CT 06114 | |
| AUGMENT ID | |
| CT43XC806S18.1 | |
| SHEET TITLE | |
| GROUNDING DETAILS | |
| SHEET NUMBER | |
| C-8 | |

UPS CampusShip: View/Print Label

1. **Ensure there are no other shipping or tracking labels attached to your package.**
2. **Fold the printed label at the solid line below.** Place the label in a UPS Shipping Pouch. If you do not have a pouch, affix the folded label using clear plastic shipping tape over the entire label.
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|--|--------------------------------------|----------------------|---|---|--|--|
| <p>ATTN: MELANIE A. BACHMAN (860) 827-2935 CONNECTICUT SITING COUNCIL 10 FRANKLIN SQUARE NEW BRITAIN CT 060512655</p> <p>SHIP TO: LUZ GUZMAN 3128954977 SAC WIRELESS 540 W MADISON CHICAGO IL 60661-2591</p> | <p>1 LBS</p> <p>RS</p> | <p>1 OF 1</p> | <p>IL 606 9-02</p>  | <p>UPS GROUND</p> <p>TRACKING #: 1Z 44A 8W2 90 9056 8483</p>  | <p>BILLING: P/P DESC: documents RETURN SERVICE</p> <p>JOB CARD: ER0123</p> |  <p>CS 21.0.21. WNTNVS0 09.0A.01/2019</p> |
|--|--------------------------------------|----------------------|---|---|--|--|