

Attachment B

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

CROWN CASTLE FIBER LLC,

Complainant,

v.

COMMONWEALTH EDISON COMPANY,

Respondent.

File No.

DECLARATION OF MAUREEN A. WHITFIELD

I, MAUREEN A. WHITFIELD, declare as follows:

1. I serve as Manager, Utility Relations of Crown Castle Fiber LLC (“Crown Castle”), with a mailing address of 1220 Augusta Drive, Suite 600, Houston, Texas 77057-2261.
2. I have served as Manager, Utility Relations for 5 years. In this role, I negotiate master attachment and use agreements for use of utility poles, conduits and utility-controlled right-of-way. I also manage and monitor pole attachment permit applications to ensure that they are processed within established regulatory and/or contractual timeframes.
3. I have reviewed the allegations made in the Pole Attachment Complaint filed in this proceeding as well as the exhibits attached hereto and verify that they are true and correct to the best of my knowledge, information and belief.
4. I make this Declaration in support of Crown Castle’s Pole Attachment Complaint in the above-captioned case. I know the following of my own personal knowledge.

5. On December 22, 2004, Crown Castle (at the time operating under the name NextG Networks of Illinois, Inc.) and ComEd entered into a pole attachment agreement (the “Crown Castle Pole Attachment Agreement”) that permits Crown Castle to attach fiber optic lines and related attachments and wireless facilities to ComEd poles.

6. On May 5, 2005, Sunesys, Inc., which was later acquired by Crown Castle, and ComEd entered into a pole attachment agreement (the “Sunesys Pole Attachment Agreement”) that permits Sunesys to attach fiber optic lines and related attachments to ComEd poles.

7. On July 26, 2013, Sidera Networks d/b/a Lighttower Fiber Networks, which was later acquired by Crown Castle, and ComEd entered into a pole attachment agreement (the “Lighttower Pole Attachment Agreement”) that permits Lighttower to attach fiber optic lines and related attachments to ComEd poles.

8. Crown Castle has attached and continues to attach fiber optic lines and wireless facilities on ComEd poles pursuant to the Crown Castle Pole Attachment Agreement, the Sunesys Pole Attachment Agreement, and the Lighttower Pole Attachment Agreement.

9. Crown Castle currently intends to deploy approximately [REDACTED] miles of fiber optic lines in the Chicago area by attaching to approximately over [REDACTED] ComEd poles across multiple communities in the Chicago area. Crown Castle will use the fiber optic lines for the provision of telecommunications services to enterprise customer and wireless-carrier customers.

10. In addition, Crown Castle intends to install more than [REDACTED] wireless node facilities on ComEd poles for Crown Castle’s provision of telecommunication services to wireless-carrier customers.

11. ComEd jointly owns some, but not all, poles with AT&T.

12. Attached to this Declaration as Exhibits 1, 2, 3, 4 are wireless node configurations that Crown Castle has deployed on ComEd poles. Attached to this Declaration as Exhibits 5, 6, and 7 are wireless node construction drawings that ComEd has approved.

13. Over the past several years, ComEd has been charging Crown Castle excessive rates for attachment of wireline and wireless equipment. Attached to this Declaration as Exhibit 8 are the pole attachment invoices from 2013 to 2018 that ComEd issued to Crown Castle. Crown Castle has paid all of these invoices.

14. In some cases, ComEd charged 100% of its wireless and wireline rates for attachments to poles that ComEd jointly owns with AT&T and for which Crown Castle is required to, has paid, and continues to pay AT&T rent.

15. From 2013 to 2018, Crown Castle paid ComEd, pursuant to the Crown Castle Pole Attachment Agreement, the following amounts for fiber optic attachments to ComEd poles:¹

| Year | Fiber Rate <i>Sole</i> | Fiber Rate <i>Joint</i> | # of Attach <i>Sole</i> | # of Attach <i>Joint</i> | Paid Amount (Pre-Tax) |
|-------------|-----------------------------------|------------------------------------|--|---|----------------------------------|
| 2013 | | | 0 | 56 | |
| 2014 | | | 0 | 69 | |
| 2015 | | | 0 | 69 | |
| 2016 | | | 0 | 69 | |
| 2017 | | | 1,280 | 1,452 | |
| 2018 | | | 2,697 | 3,690 | |

¹ The invoices for Crown Castle fiber optic attachments cover multiple communities in Illinois, including the City of Chicago. In 2013 and 2014, attachments in the City of Chicago were subject to an 8% lease transaction tax. From 2015 to 2018, the City of Chicago imposed a 9% lease transaction tax on attachments. The amounts displayed do not reflect these taxes and, therefore, are slightly less than the amounts listed in each invoice:

16. From 2013 to 2018, Crown Castle paid ComEd, pursuant to the Sunesys Pole Attachment Agreement, the following amounts for fiber optic attachments to ComEd poles:²

| Year | Fiber Rate <i>Sole</i> | Fiber Rate <i>Joint</i> | # of Attach <i>Sole</i> | # of Attach <i>Joint</i> | Paid Amount (Pre-Tax) |
|------|---------------------------|----------------------------|----------------------------|-----------------------------|--------------------------|
| 2013 | | | 1,681 | 592 | |
| 2014 | | | 1,681 | 592 | |
| 2015 | | | 1,794 | 674 | |
| 2016 | | | 1,794 | 674 | |
| 2017 | | | 1,794 | 674 | |
| 2018 | | | 1,825 | 674 | |

17. Lighttower did not have attachments to ComEd poles prior to 2016. From 2016 to 2018, Crown Castle paid ComEd, pursuant to the Lighttower Pole Attachment Agreement, the following amounts for fiber optic attachments to ComEd poles:

| Year | Fiber Rate <i>Sole</i> | Fiber Rate <i>Joint</i> | # of Attach <i>Sole</i> | # of Attach <i>Joint</i> | Paid Amount (Pre-Tax) |
|------|---------------------------|----------------------------|----------------------------|-----------------------------|--------------------------|
| 2013 | | | 0 | 0 | \$0.00 |
| 2014 | | | 0 | 0 | \$0.00 |
| 2015 | | | 0 | 0 | \$0.00 |
| 2016 | | | 33 | 23 | |
| 2017 | | | 33 | 23 | |
| 2018 | | | 33 | 23 | |

² The invoices for Sunesys attachments cover multiple communities in Illinois, including the City of Chicago. In 2013 and 2014, attachments in the City of Chicago were subject to an 8% lease transaction tax. From 2015 to 2018, the City of Chicago imposed a 9% lease transaction tax on attachments. The amounts displayed do not reflect these taxes and, therefore, are slightly less than the amounts listed in each invoice:

18. From 2013 to 2018, Crown Castle paid ComEd, pursuant to the Crown Castle Pole Attachment Agreement, the following amounts for wireless node attachments to ComEd poles:³

| Year | Node Rate <i>Sole & Joint Rates</i> | # of Attach <i>Sole</i> | # of Attach <i>Joint</i> | Paid Amount (Pre-Tax) |
|------|--|----------------------------|-----------------------------|--------------------------|
| 2013 | | 48 | 12 | |
| 2014 | | 48 | 12 | |
| 2015 | | 48 | 19 | |
| 2016 | | 48 | 19 | |
| 2017 | | 268 | 22 | |
| 2018 | | 276 | 300 | |

19. Crown Castle has disputed ComEd's wireless rates since 2017 and ComEd's wireline rates since 2018.

20. Attached to this Declaration as Exhibit 9 is a letter that Brian Cabe of Crown Castle sent Joe Gilchrist of ComEd on September 20, 2018, which demonstrates that Crown Castle paid the 2018 wireless attachment invoice under protest.

21. In order to determine whether ComEd's rates are calculated in accordance with the FCC's formula, I requested both a pole count and a rate of return from ComEd. Attached as

³ The invoices for Crown Castle wireless node attachments cover multiple communities in Illinois, including the City of Chicago. In 2013 and 2014, attachments in the City of Chicago were subject to an 8% lease transaction tax. From 2015 to 2018, the City of Chicago imposed a 9% lease transaction tax on attachments. The amounts displayed do not reflect these taxes and, therefore, are slightly less than the amounts listed in each invoice:

Exhibit 10 to this Declaration are my e-mail exchanges with ComEd regarding its pole count and rate of return.

22. On September 27, 2018, ComEd provided a pole count equivalent of 1,098,478 but did not provide a rate of return. *See* Exh. 10.

23. On September 28, 2018, ComEd generally directed Crown Castle to find the appropriate rate of return on the ICC's website, without specifying the exact location of the rate. *See* Exh. 10.

24. On October 25, 2018, Brian Cabe of Crown Castle sent Vito Martino of ComEd a letter requesting a final executive-level meeting to discuss Crown Castle's concerns about ComEd's pole attachment rates. Because the United States Postal Service did not successfully deliver the letter, it was resent and e-mailed to ComEd on November 6, 2018. On November 20, 2018, Mark Falcone of ComEd responded to Mr. Cabe's letter. The aforementioned executive-level meeting correspondence is attached to this Declaration as Exhibit 11.

25. On December 4, 2018, I participated in an executive-level meeting at ComEd's office in Oakbrook, Illinois to discuss, in part, Crown Castle's concerns about ComEd's pole attachment rates. Crown Castle was also represented Karen Rohrkemper (Vice President, Engineering & Operations, Central Region), Mike Smith (Vice President, General Manager), Brian Cabe (Vice President, General Manager). ComEd was represented by Mark Falcone (Vice-President, Support Services), Joe Gilchrist (Manager, Real Estate and Facilities), Daryl Richardson (Manager, New Business), Christ Siambekos (Director, Strategic Support), John Prueitt (Director Engineering), Taral Patel (Manager, Regional Engineering and New Business), and Darryl Mitchell (Director, Engineering Work Management and New Business). No resolution of the dispute was reached at the December 4, 2018 meeting.

26. At a follow-up meeting held on December 14, 2018, although no resolution of the dispute was reached, the parties agreed to form a "sub-team" comprised of Crown Castle and ComEd operational personnel to focus on resolving the wireline and wireless pole attachment rate disputes. I am a member of this sub-team.

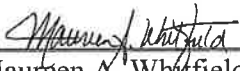
27. Since December 14, 2018, Crown Castle and ComEd have met, either by person or by phone, on 8 subsequent occasions (4 executive level meets and 4 sub-team meetings).

28. While the two parties have made progress to rectify the issue, they have not reached a resolution of the rate dispute.

29. Attached to this Declaration as Exhibit 12 is a calculation of the refund that Crown Castle is owed by ComEd for Crown Castle's overpayments. The refund amount is calculated by subtracting, for each year from 2013 to 2018, the pole rental fees that ComEd was permitted to charge under the FCC's Rules from the actual rental fees that Crown Castle paid.

30. I have reviewed the data provided in Exhibit 12, Refund Calculation, and verify that the data is accurate and correct to the best of my knowledge, information and belief.

I declare under penalty of perjury under the laws of the United States that the foregoing is true and correct to the best of my knowledge.

By: 
Maureen A. Whitfield

Dated: June 18, 2019

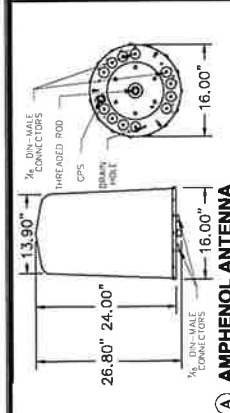
Exhibit 1

PROJECT MANAGER

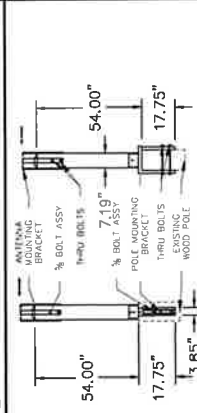
EQUIPMENT DETAILS

INDEX

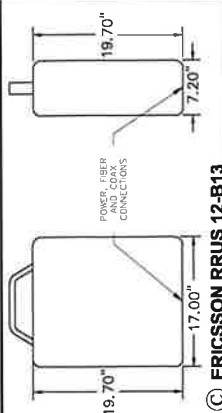
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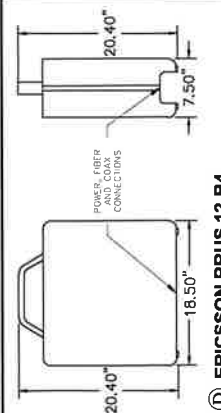
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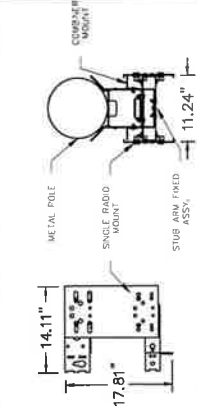
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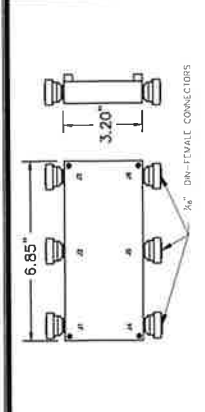
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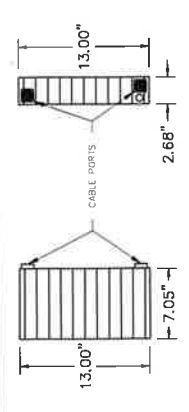
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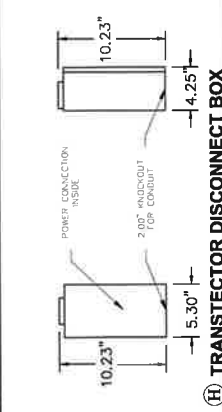
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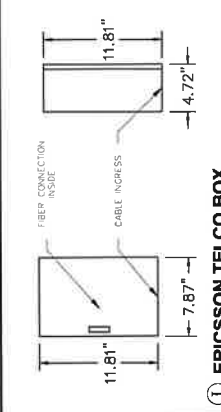
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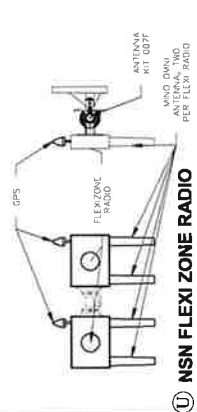
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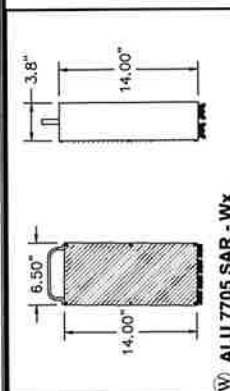
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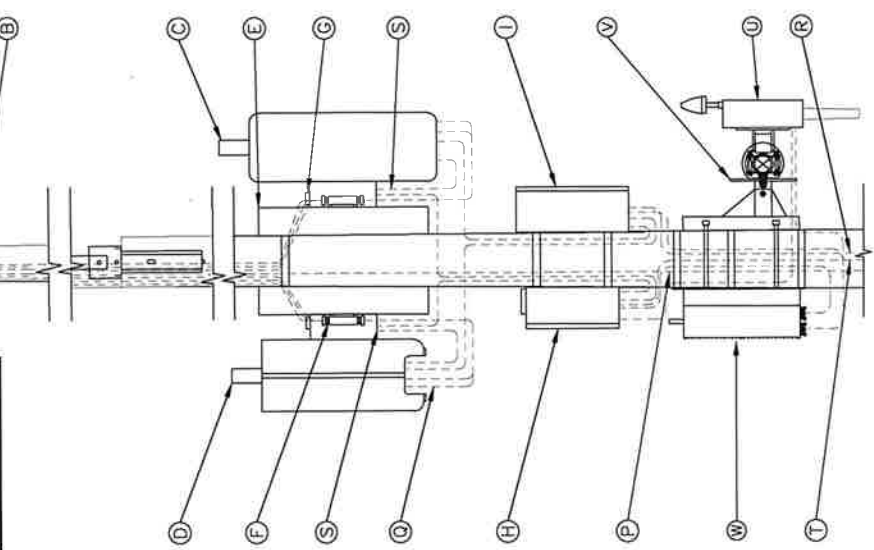
① ERICSSON TELCO BOX



④ NSN FLEXI ZONE RADIO
⑤ WITH ANTENNA KIT 007F



® ALU 7705 SAR - Wx



WIRING CONNECTIONS

[illegible]

hbk
ENGINEERING

U1. WERT VAN RIJZEN STRAAT, RUYTJE 14M
CIBACAO, ELIJONDIS 8AMF
STATE OF BLINDHO DEPARTEMENT
OF PROFESSIONAL REGULATION

1.8.1998 101 104-104/98



CROWN
CASTLE

TITLE:
POLE EXHIBIT
CHICAGO, ILLINOIS
JURISDICTION: CITY OF CHICAGO

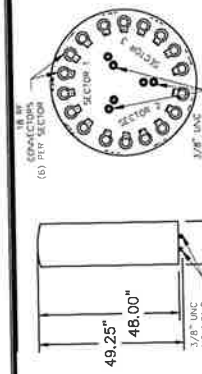
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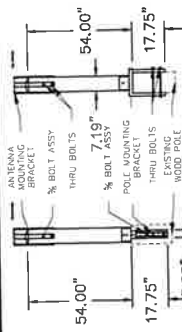
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PROJECT MANAGER

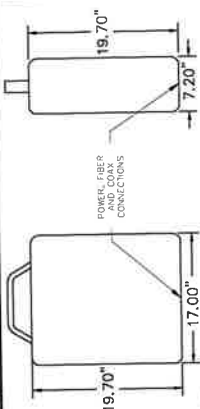
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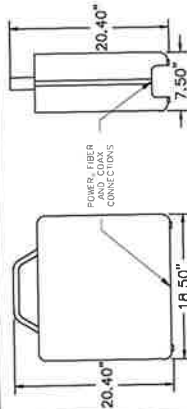
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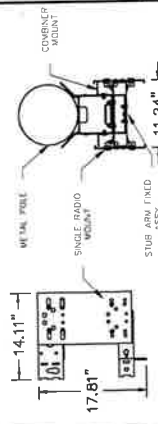
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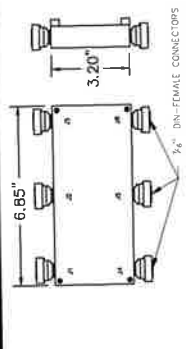
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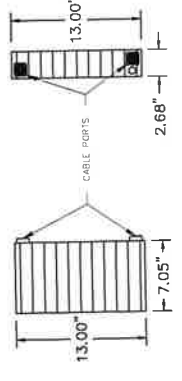
© ERICSSON RRUS 12-B4



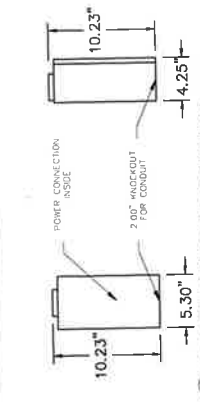
ADA MOUNTING BRACKET



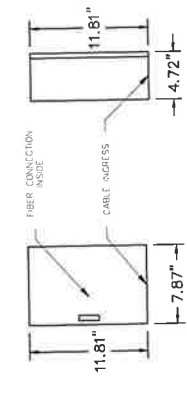
① MICROLAB 3X3 HYBRID COUPLER



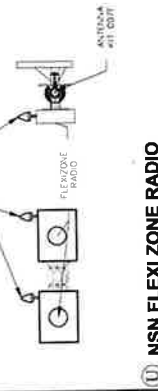
© **EMERSON PSU AC 2 UNIT**



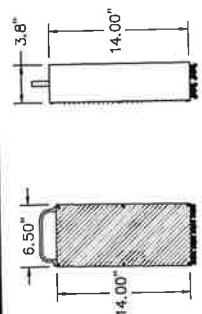
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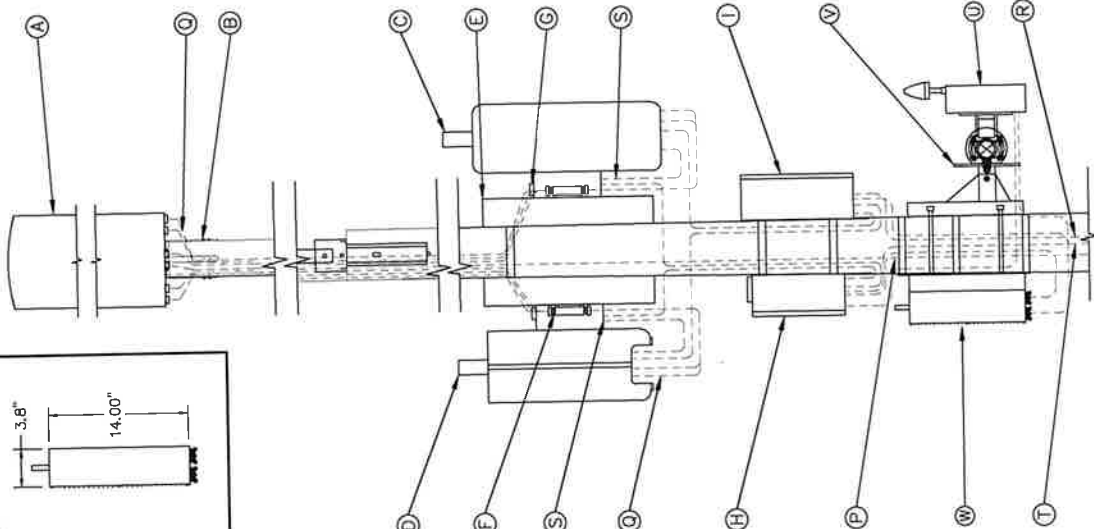
① ERICSSON TELCO BOX



(U) NSN FLEXI ZONE RADIO
(V) WITH ANTENNA KIT 007F



⑦ ALU 7705 SAR - Wx



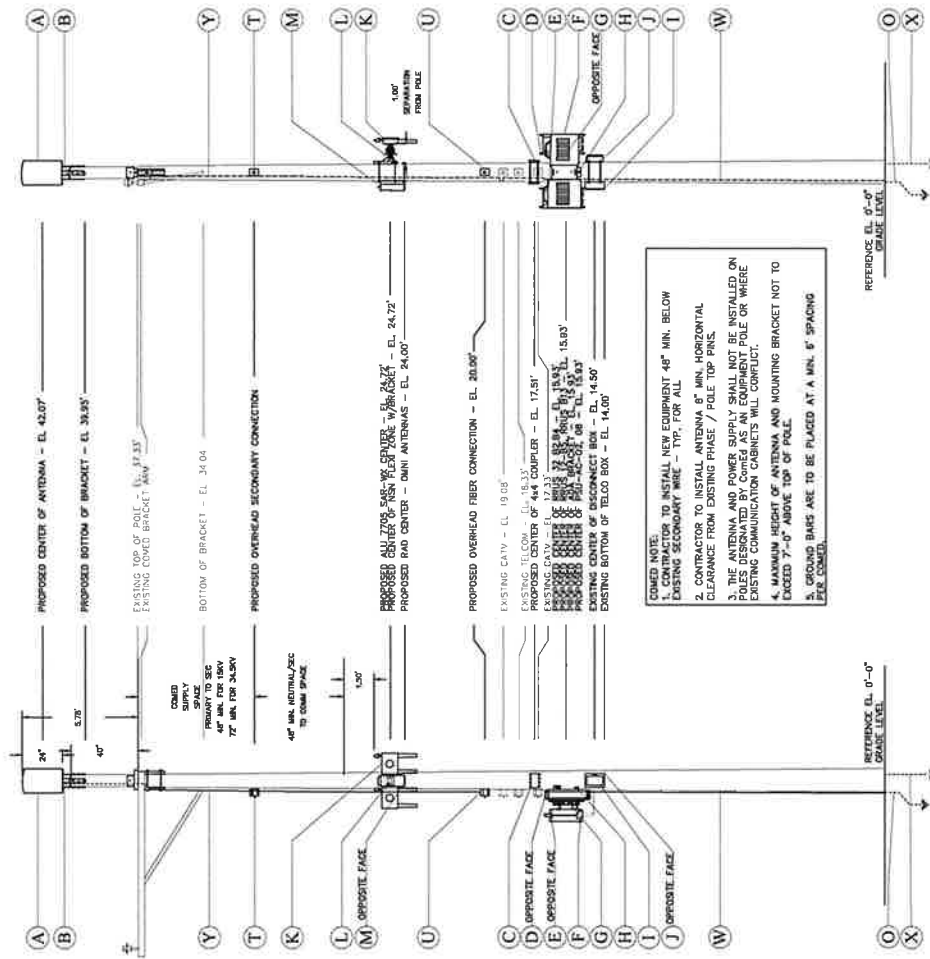
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POLE ELEVATION

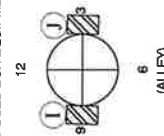
PROJECT MANAGER

CONFIGURATION #7

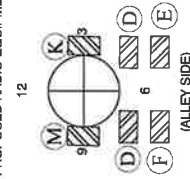


1. CONTRACTOR TO INSTALL NEW EQUIPMENT 48" MIN. BELOW EXISTING SECONDARY WIRE - TYP. FOR ALL.
2. CONTRACTOR TO INSTALL ANTENNA 8" MIN. HORIZONTAL CLEARANCE FROM EXISTING PHASE / POLE TOP PINS.
3. THE ANTENNA AND POWER SUPPLY SHALL NOT BE INSTALLED ON EXISTING COMMUNICATION CABINETS WILL CONFLICT.
4. MAXIMUM HEIGHT OF ANTENNA AND MOUNTING BRACKET NOT TO EXCEED 7'-0" ABOVE TOP OF POLE.
5. GROUND BARS ARE TO BE PLACED AT A MIN. 6" SPACING

SECTION VIEW OF POLE
QUADRANT LOCATION OF
PROPOSED BOX EQUIPMENT



SECTION VIEW OF POLE
QUADRANT LOCATION OF
PROPOSED RADIO EQUIPMENT



EXISTING POLE DETAIL

EXISTING POLE DETAIL

| REVIEWS | | | |
|---------|------|-------------------|----|
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| R4 | | | |

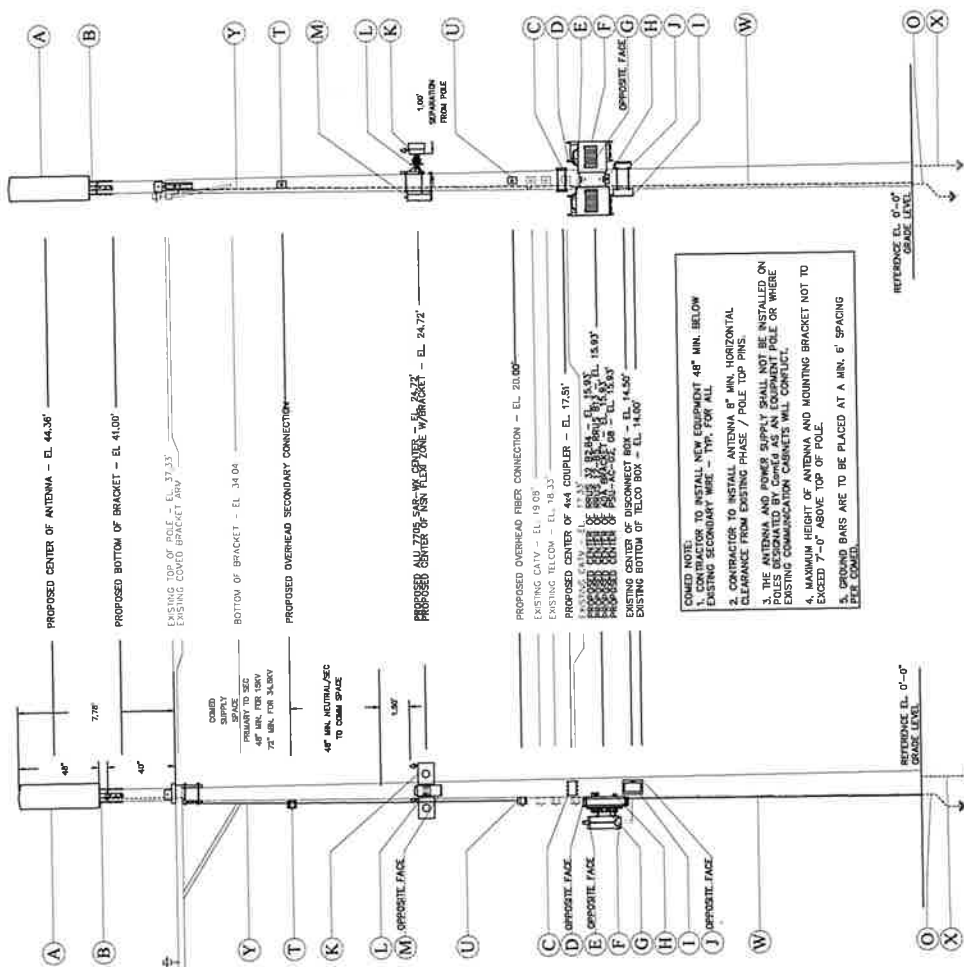
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PROJECT MANAGER

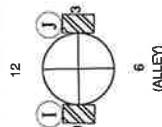
CONFIGURATION #8

POLE ELEVATION



3. CONTRACTOR TO INSTALL NEW EQUIPMENT 48" MIN. BELOW EXISTING SECONDARY WIRE - TOP FOR ALL
3. CONTRACTOR TO INSTALL ANTENNA 8" MIN. HORIZONTAL CLEARANCE FROM EXISTING PLE / POLE TOP PINS.
3. THE ANTENNA AND POWER SUPPLY SHALL NOT BE INSTALLED ON EXISTING ANTENNA OR AS AN EQUIPMENT POLE OR WHERE EXISTING COMMUNICATION CABINETS WILL CONFLICT.
4. MAXIMUM HEIGHT OF ANTENNA AND MOUNTING BRACKET NOT TO EXCEED 7'-0" ABOVE TOP OF POLE.
5. GROUND BARS ARE TO BE PLACED AT A MIN. 6" SPACING

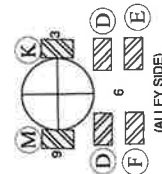
SECTION VIEW OF POLE
QUADRANT LOCATION OF
PROPOSED BOX EQUIPMENT



EXISTING POLE DETAIL

EXISTING POLE DETAIL

SECTION VIEW OF POLE
QUADRANT LOCATION OF
PROPOSED RADIO EQUIPMENT



| REVISIONS | | | | | |
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| 8/3 | | | | | |
| 8/4 | | | | | |

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| SHEET: | 1 OF 2 |

Exhibit 2

POLE ELEVATION

PROJECT MANAGER

CONFIGURATION #2

PROPOSED EQUIPMENT KEY

- [illegible]

POSTER

QUESTIONS



1999

POLE EXHIBIT
CHICAGO, ILLINOIS

Provisions

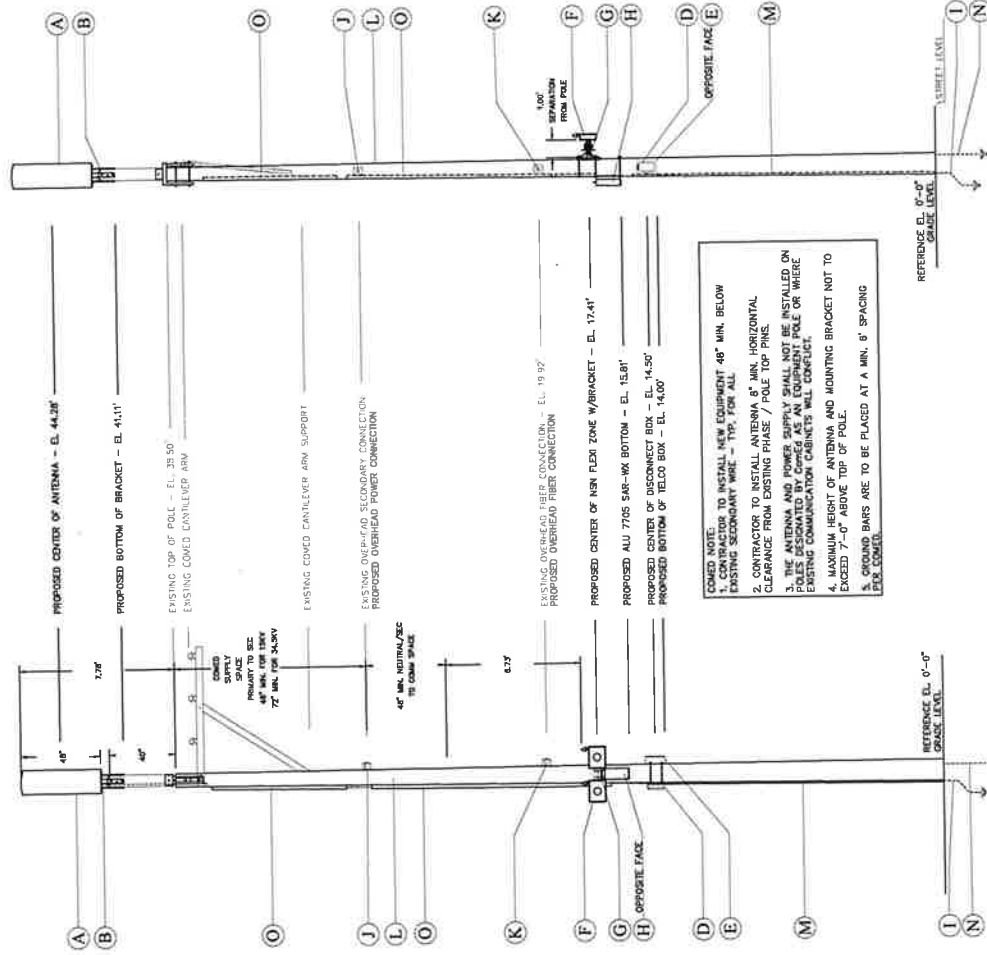
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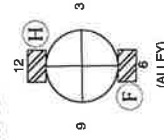
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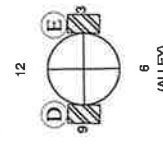


1. **POWER NOTE:** CONTRACTOR TO INSTALL NEW EQUIPMENT 48" MIN. BELOW EXISTING SECONDARY WIRE - TYP. FOR ALL.
2. CONTRACTOR TO INSTALL ANTENNA 8" MIN. HORIZONTAL CLEARANCE FROM EXISTING FIRE / POLE TOP PINS.
3. THE ANTENNA AND POWER SUPPLY SHALL NOT BE INSTALLED ON EXISTING EQUIPMENT. IF COMING AT AN EQUIPMENT POLE OR WHERE EXISTING COMMUNICATION CABINETS WILL CONFLICT.
4. MAXIMUM HEIGHT OF ANTENNA AND MOUNTING BRACKET NOT TO EXCEED 7'-0" ABOVE TOP OF POLE.
5. GROUND BARS ARE TO BE PLACED AT A MIN. 6" SPACING

EXISTING POLE DETAIL



EXISTING POLE DETAIL



**SECTION VIEW OF POLE
QUADRANT LOCATION OF
PROPOSED BOX EQUIPMENT**

Exhibit 3

PROJECT MANAGER

POLE ELEVATION

CODE: CONFIGURATION #1

PROPOSED EQUIPMENT KEY

[illegible]

CONCEPTS:

hbk

ENGINEERING

WEST VAN BUREN STREET, SUITE 100
CHICAGO, ILLINOIS 60607
STATE OF ILLINOIS DEPARTMENT
OF PROFESSIONAL REGULATION
JULY 19, 1981 100-000100

OWNERS/DEVELOPERS



**CROWN
CASTLE**

TITLE:

**POLE EXHIBIT
CHICAGO, ILLINOIS
JURISDICTION: CITY OF CHICAGO**

| REVISIONS | | | |
|-----------|------|----------------------------------|----|
| REV | DATE | DESCRIPTION FOR CLIENT REVIEW | BY |
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| 02 | | | |
| 03 | | | |

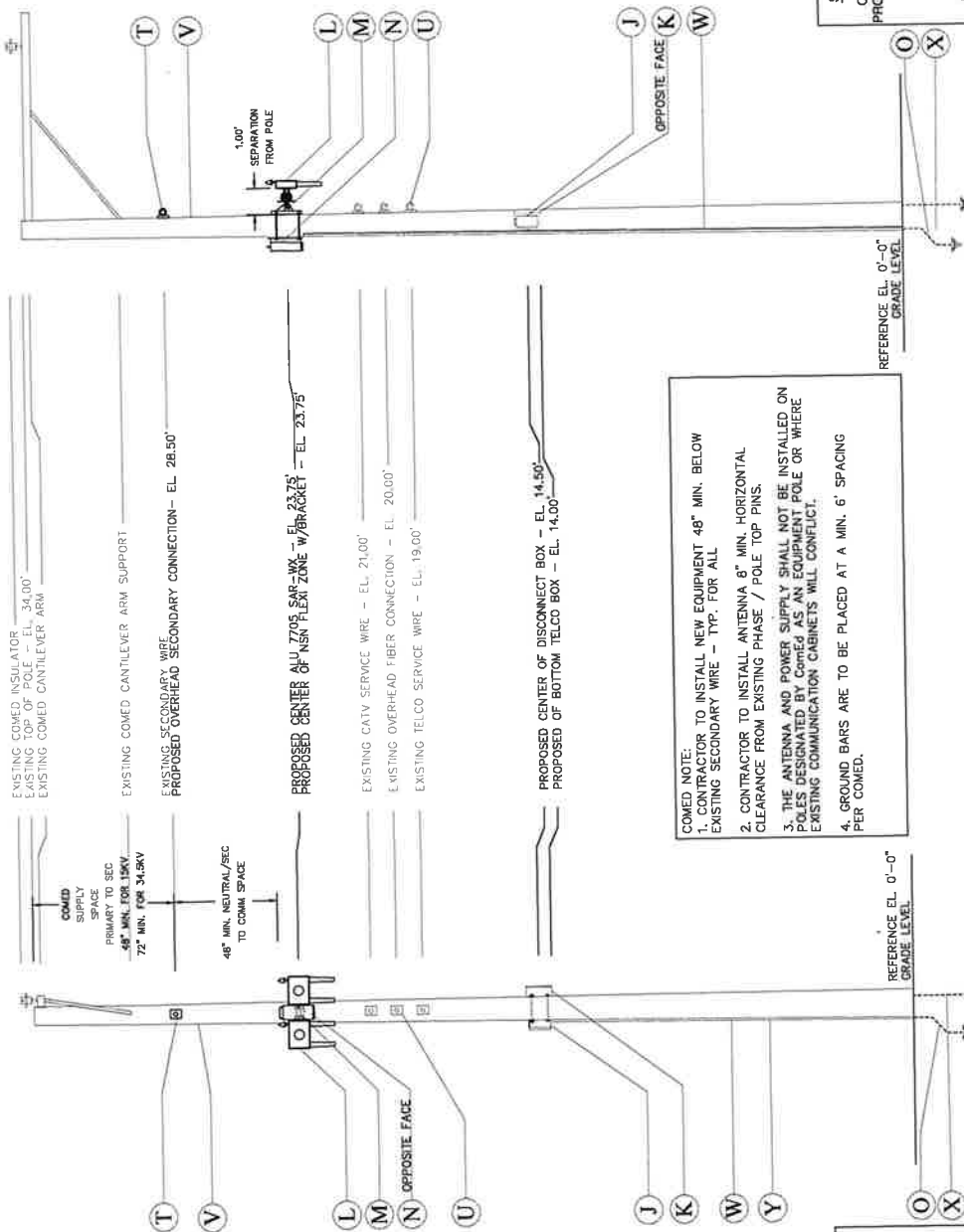
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| DATE | N T S |

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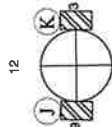
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CCF 000136



1. COME NOTE: CONTRACTOR TO INSTALL NEW EQUIPMENT 48" MIN. BELOW EXISTING SECONDARY WIRE - TYP. FOR ALL.
2. CONTRACTOR TO INSTALL ANTENNA 8" MIN. HORIZONTAL CLEARANCE FROM EXISTING PHASE / POLE TOP PINS.
3. THE ANTENNA AND POWER SUPPLY SHALL NOT BE INSTALLED ON POLES DESIGNATED AS EQUIPMENT POLE OR WHERE EXISTING COMMUNICATION CABINETS WILL CONFLICT.
4. GROUND BARS ARE TO BE PLACED AT A MIN. 6" SPACING PER COMED.

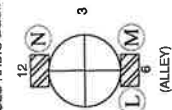
SECTION VIEW OF POLE
QUADRANT LOCATION OF
PROPOSED BOX EQUIPMENT



EXISTING POLE DETAIL

EXISTING POLE DETAIL

QUADRANT LOCATION OF
EXPOSED RADIO EQUIPMENT



| EQUIPMENT DETAILS | | PROJECT MANAGER | NOTE: CONFIGURATION # 1 |
|--|------------------------------------|--|-----------------------------------|
| <p>J TRANSTECTOR DISCONNECT BOX</p> | <p>K ERICSSON TELCO BOX</p> | <p>L NSN FLEXI ZONE RADIO WITH ANTENNA KIT 007F</p> | <p>N ALU 7705 SAR - Wx</p> |
| <p style="text-align: right;">WIRING CONNECTIONS</p> | | | |
| <p>PROPOSED EQUIPMENT KEY</p> <p>1. PROPOSED TRANSTECTOR DISCONNECT BOX - 4\"/> <p>2. PROPOSED NSN FLEXI ZONE RADIO WITH ANTENNA KIT 007F - 1\"/> <p>3. PROPOSED ERICSSON TELCO BOX - 1\"/> <p>4. PROPOSED ALU 7705 SAR - Wx - 1\"/> <p>5. PROPOSED 1\"/> <p>6. PROPOSED 1\"/> <p>7. PROPOSED 1\"/> <p>8. PROPOSED 1\"/> <p>9. PROPOSED 1\"/> <p>10. PROPOSED 1\"/> <p>11. PROPOSED 1\"/> <p>12. PROPOSED 1\"/> <p>13. PROPOSED 1\"/> <p>14. PROPOSED 1\"/> <p>15. PROPOSED 1\"/> <p>16. PROPOSED 1\"/> <p>17. PROPOSED 1\"/> <p>18. PROPOSED 1\"/> <p>19. PROPOSED 1\"/> <p>20. PROPOSED 1\"/> <p>21. PROPOSED 1\"/> <p>22. PROPOSED 1\"/> <p>23. PROPOSED 1\"/> <p>24. PROPOSED 1\"/> <p>25. PROPOSED 1\"/> <p>26. PROPOSED 1\"/> <p>27. PROPOSED 1\"/> <p>28. PROPOSED 1\"/> <p>29. PROPOSED 1\"/> <p>30. PROPOSED 1\"/> <p>31. PROPOSED 1\"/> <p>32. PROPOSED 1\"/> <p>33. PROPOSED 1\"/> <p>34. PROPOSED 1\"/> <p>35. PROPOSED 1\"/> <p>36. PROPOSED 1\"/> <p>37. PROPOSED 1\"/> <p>38. PROPOSED 1\"/> <p>39. PROPOSED 1\"/> <p>40. PROPOSED 1\"/> <p>41. PROPOSED 1\"/> <p>42. PROPOSED 1\"/> <p>43. PROPOSED 1\"/> <p>44. PROPOSED 1\"/> <p>45. PROPOSED 1\"/> <p>46. PROPOSED 1\"/> <p>47. PROPOSED 1\"/> <p>48. PROPOSED 1\"/> <p>49. PROPOSED 1\"/> <p>50. PROPOSED 1\"/> <p>51. PROPOSED 1\"/> <p>52. PROPOSED 1\"/> <p>53. PROPOSED 1\"/> <p>54. PROPOSED 1\"/> <p>55. PROPOSED 1\"/> <p>56. PROPOSED 1\"/> <p>57. PROPOSED 1\"/> <p>58. PROPOSED 1\"/> <p>59. PROPOSED 1\"/> <p>60. PROPOSED 1\"/> <p>61. PROPOSED 1\"/> <p>62. PROPOSED 1\"/> <p>63. PROPOSED 1\"/> <p>64. PROPOSED 1\"/> <p>65. PROPOSED 1\"/> <p>66. PROPOSED 1\"/> <p>67. PROPOSED 1\"/> <p>68. PROPOSED 1\"/> <p>69. PROPOSED 1\"/> <p>70. PROPOSED 1\"/> <p>71. PROPOSED 1\"/> <p>72. PROPOSED 1\"/> <p>73. PROPOSED 1\"/> <p>74. PROPOSED 1\"/> <p>75. PROPOSED 1\"/> <p>76. PROPOSED 1\"/> <p>77. PROPOSED 1\"/> <p>78. PROPOSED 1\"/> <p>79. PROPOSED 1\"/> <p>80. PROPOSED 1\"/> <p>81. PROPOSED 1\"/> <p>82. PROPOSED 1\"/> <p>83. PROPOSED 1\"/> <p>84. PROPOSED 1\"/> <p>85. PROPOSED 1\"/> <p>86. PROPOSED 1\"/> <p>87. PROPOSED 1\"/> <p>88. PROPOSED 1\"/> <p>89. PROPOSED 1\"/> <p>90. PROPOSED 1\"/> <p>91. PROPOSED 1\"/> <p>92. PROPOSED 1\"/> <p>93. PROPOSED 1\"/> <p>94. PROPOSED 1\"/> <p>95. PROPOSED 1\"/> <p>96. PROPOSED 1\"/> <p>97. PROPOSED 1\"/> <p>98. PROPOSED 1\"/> <p>99. PROPOSED 1\"/> <p>100. PROPOSED 1\"/> </p></p></p></p></p></p></p></p></p></p></p></p></p></p></p></p></p></p></p></p></p></p></p></p></p></p></p></p></p></p></p></p></p></p></p></p></p></p></p></p></p></p></p></p></p></p></p></p></p></p></p></p></p></p></p></p></p></p></p></p></p></p></p></p></p></p></p></p></p></p></p></p></p></p></p></p></p></p></p></p></p></p></p></p></p></p></p></p></p></p></p></p></p></p></p></p></p></p></p></p> | | | |
| <p>ENGINEER</p> <p>hbk</p> <p>ENGINEERING</p> <p>410 WEST VAN DYKE STREET, SUITE 100</p> <p>CHICAGO, ILLINOIS 60607</p> <p>REVISIONS</p> <p>DATE</p> <p>DESCRIPTION</p> <p>BY</p> <p>1</p> <p>2</p> <p>3</p> <p>4</p> <p>5</p> <p>6</p> <p>7</p> <p>8</p> <p>9</p> <p>10</p> <p>11</p> <p>12</p> <p>13</p> <p>14</p> <p>15</p> <p>16</p> <p>17</p> <p>18</p> <p>19</p> <p>20</p> <p>21</p> <p>22</p> <p>23</p> <p>24</p> <p>25</p> <p>26</p> <p>27</p> <p>28</p> <p>29</p> <p>30</p> <p>31</p> <p>32</p> <p>33</p> <p>34</p> <p>35</p> <p>36</p> <p>37</p> <p>38</p> <p>39</p> <p>40</p> <p>41</p> <p>42</p> <p>43</p> <p>44</p> <p>45</p> <p>46</p> <p>47</p> <p>48</p> <p>49</p> <p>50</p> <p>51</p> <p>52</p> <p>53</p> <p>54</p> <p>55</p> <p>56</p> <p>57</p> <p>58</p> <p>59</p> <p>60</p> <p>61</p> <p>62</p> <p>63</p> <p>64</p> <p>65</p> <p>66</p> <p>67</p> <p>68</p> <p>69</p> <p>70</p> <p>71</p> <p>72</p> <p>73</p> <p>74</p> <p>75</p> <p>76</p> <p>77</p> <p>78</p> <p>79</p> <p>80</p> <p>81</p> <p>82</p> <p>83</p> <p>84</p> <p>85</p> <p>86</p> <p>87</p> <p>88</p> <p>89</p> <p>90</p> <p>91</p> <p>92</p> <p>93</p> <p>94</p> <p>95</p> <p>96</p> <p>97</p> <p>98</p> <p>99</p> <p>100</p> | | | |
| <p>OWNER/INSTALLER</p> <p>CROWN CASTLE</p> <p>POLE EXHIBIT</p> <p>CHICAGO, ILLINOIS</p> <p>JURISDICTION: CITY OF CHICAGO</p> | | | |
| <p>REVISIONS</p> <p>DATE</p> <p>DESCRIPTION</p> <p>BY</p> <p>1</p> <p>2</p> <p>3</p> <p>4</p> <p>5</p> <p>6</p> <p>7</p> <p>8</p> <p>9</p> <p>10</p> <p>11</p> <p>12</p> <p>13</p> <p>14</p> <p>15</p> <p>16</p> <p>17</p> <p>18</p> <p>19</p> <p>20</p> <p>21</p> <p>22</p> <p>23</p> <p>24</p> <p>25</p> <p>26</p> <p>27</p> <p>28</p> <p>29</p> <p>30</p> <p>31</p> <p>32</p> <p>33</p> <p>34</p> <p>35</p> <p>36</p> <p>37</p> <p>38</p> <p>39</p> <p>40</p> <p>41</p> <p>42</p> <p>43</p> <p>44</p> <p>45</p> <p>46</p> <p>47</p> <p>48</p> <p>49</p> <p>50</p> <p>51</p> <p>52</p> <p>53</p> <p>54</p> <p>55</p> <p>56</p> <p>57</p> <p>58</p> <p>59</p> <p>60</p> <p>61</p> <p>62</p> <p>63</p> <p>64</p> <p>65</p> <p>66</p> <p>67</p> <p>68</p> <p>69</p> <p>70</p> <p>71</p> <p>72</p> <p>73</p> <p>74</p> <p>75</p> <p>76</p> <p>77</p> <p>78</p> <p>79</p> <p>80</p> <p>81</p> <p>82</p> <p>83</p> <p>84</p> <p>85</p> <p>86</p> <p>87</p> <p>88</p> <p>89</p> <p>90</p> <p>91</p> <p>92</p> <p>93</p> <p>94</p> <p>95</p> <p>96</p> <p>97</p> <p>98</p> <p>99</p> <p>100</p> | | | |
| <p>PROJECT NUMBER</p> <p>02-15-17</p> <p>SCALE</p> <p>N.T.S.</p> <p>2 OF 2</p> <p>CCF 000137</p> | | | |

Exhibit 4

PROJECT MANAGER

POLE ELEVATION

CONFIGURATION #4

[illegible]

hbk
ENGINEERING
100 WEST VAN BUREN STREET, SUITE 110
CHICAGO, ILLINOIS 60601
STATE OF ILLINOIS DEPARTMENT
OF PROFESSIONAL REGULATION
JULY 1998 VOL. 10, NO. 1



**CROWN
CASTLE**

TITLE:

CHICAGO, ILLINOIS

JURISDICTION: CITY OF CHICAGO

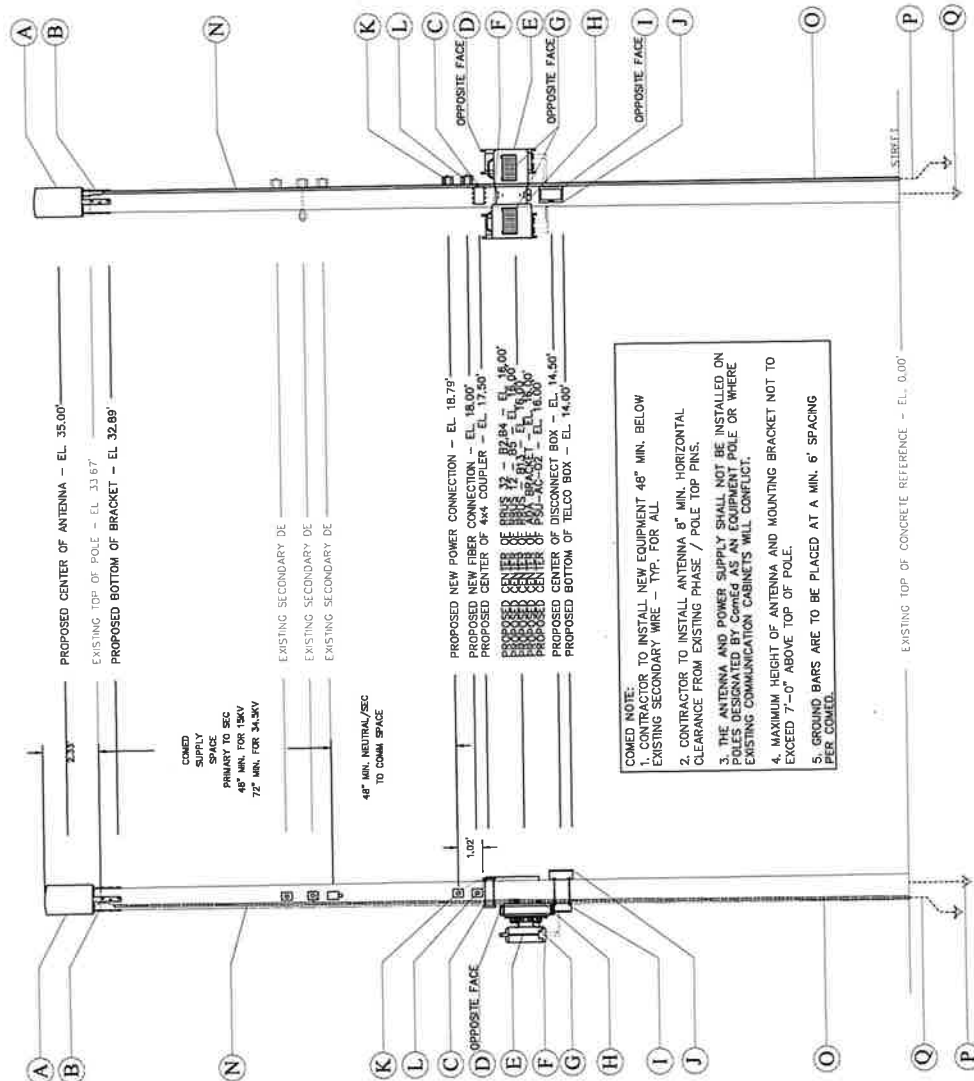
| REVISIONS | | | |
|-----------|------|-------------------|----|
| REV | DATE | DESCRIPTION | BY |
| 01 | — | FOR CLIENT REVIEW | — |
| 02 | | | |
| 03 | | | |

| DATE | DRAWN BY: | CHECKED BY: | AFFECTED BY: |
|----------|-----------|-------------|--------------|
| 11/11/00 | ***** | ***** | ***** |

| | |
|-----------------|------------|
| PROJECT NUMBER: | ***** |
| FILE NAME: | ***** |
| DATE BRANDED: | 02/15/2017 |
| W/ALB: | AS SHOWN |

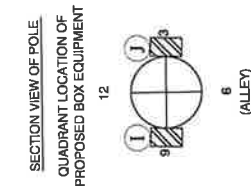
1 OF: 2

CCF 000139

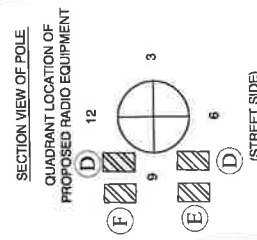


3. POWERED NOTE: CONTRACTOR TO INSTALL NEW EQUIPMENT 48" MIN. BELOW EXISTING SECONDARY WIRE - TYP. FOR ALL.
2. CONTRACTOR TO EXISTING ANTENNA 8" MIN. HORIZONTAL CLEARANCE FROM EXISTING PHASE / POLE TOP FINIS.
3. THE ANTENNA AND POWER SUPPLY SHALL NOT BE INSTALLED ON POLES DESIGNATED BY COMEG AS AN EQUIPMENT POLE OR WHERE EXISTING COMMUNICATION CABINETS WILL CONFLICT.
4. MAXIMUM HEIGHT OF ANTENNA AND MOUNTING BRACKET NOT TO EXCEED 7'-0" ABOVE TOP OF POLE.
5. GROUND BARS ARE TO BE PLACED AT A MIN. 6" SPACING AFTER CONDUIT.

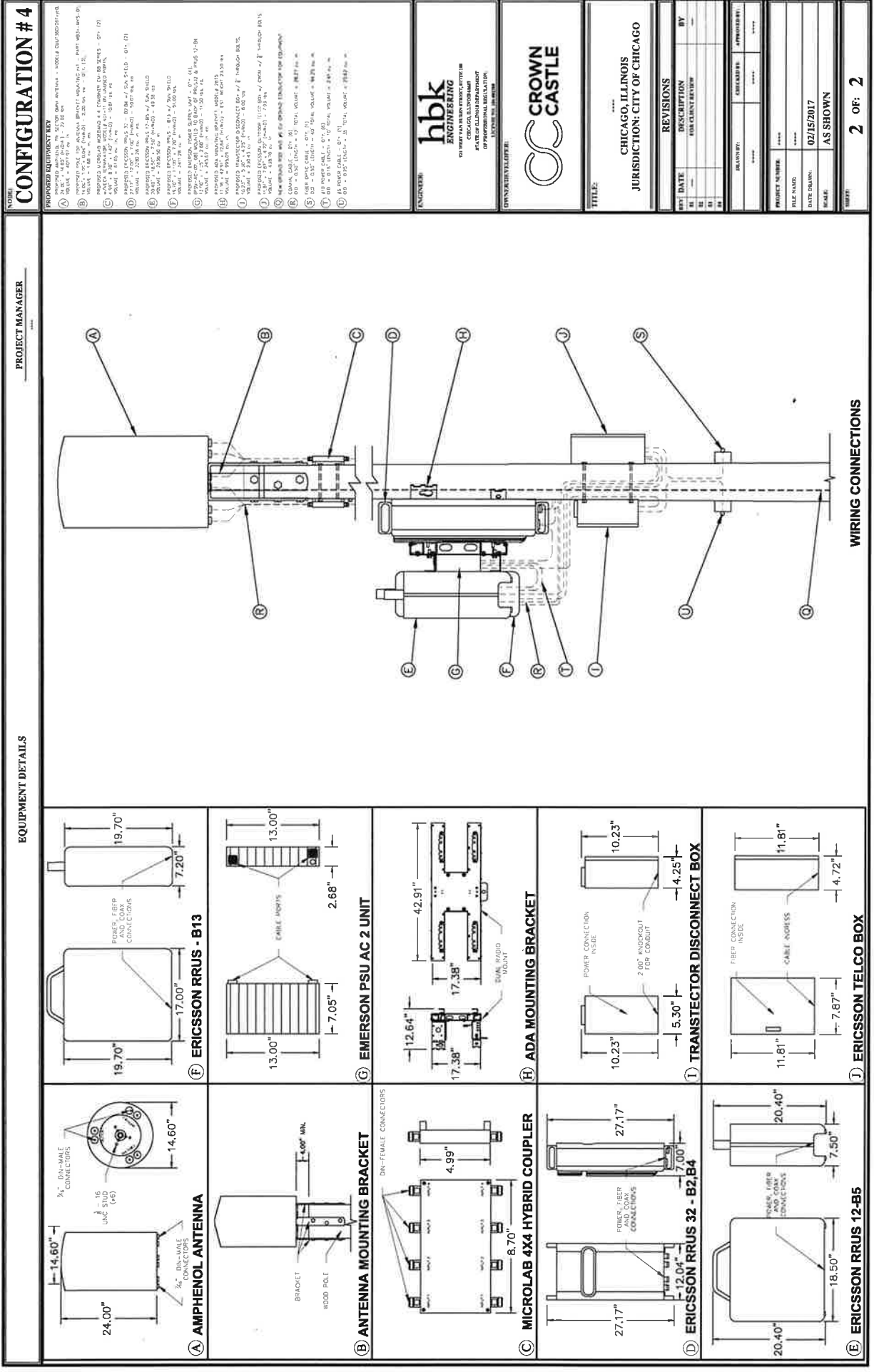
EXISTING TOP OF CONCRETE REFERENCE - FL. 0.00'



EXISTING POLE DETAIL



EXISTING POLE DETAIL



PROJECT MANAGER

CONFIGURATION # 4

ENGINEER

hbk

ENGINEERING

101 WEST WASHINGTON AVENUE, SUITE 1100
CHICAGO, ILLINOIS 60601
STATE OF ILLINOIS DEPARTMENT
OF PROFESSIONAL REGULATION
REGISTERED PROFESSIONAL ENGINEER

OWNER/CLIENT/OWNER

CROWN CASTLE

CHICAGO, ILLINOIS
JURISDICTION: CITY OF CHICAGO

REVISIONS

| REV | DATE | DESCRIPTION | BY |
|-----|------|-------------------|----|
| 1 | | FOR CLIENT REVIEW | |
| 2 | | | |
| 3 | | | |
| 4 | | | |

PROJECT NUMBER

02/15/2017

DATE DRAWN

AS SHOWN

SCALE

2 OF: 2

Exhibit 5



NODE NAME
CH90XSA54
 NODE SITE ADDRESS
1525 GROVE AVE
BERWYN, IL 60402
 HUB ID
CH51XC310



DATE: 01/11/2019

| | | |
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| NO. | DATE | DESCRIPTION |
| 1 | 01/11/2019 | ISSUED FOR REVIEW |
| 2 | 01/11/2019 | REVISED |
| 3 | 01/11/2019 | REVISED |
| 4 | 01/11/2019 | REVISED |
| 5 | 01/11/2019 | REVISED |
| 6 | 01/11/2019 | REVISED |
| 7 | 01/11/2019 | REVISED |
| 8 | 01/11/2019 | REVISED |
| 9 | 01/11/2019 | REVISED |
| 10 | 01/11/2019 | REVISED |



SEAL NO. 184 000984

CH90XSA54
1525 GROVE AVE
BERWYN, IL 60402

PREPARED BY: KDI
CHECKED BY: KDI
APPROVED BY: KDI
DATE: 01/11/2019

NODE COVER SHEET

CH90XSA54-01

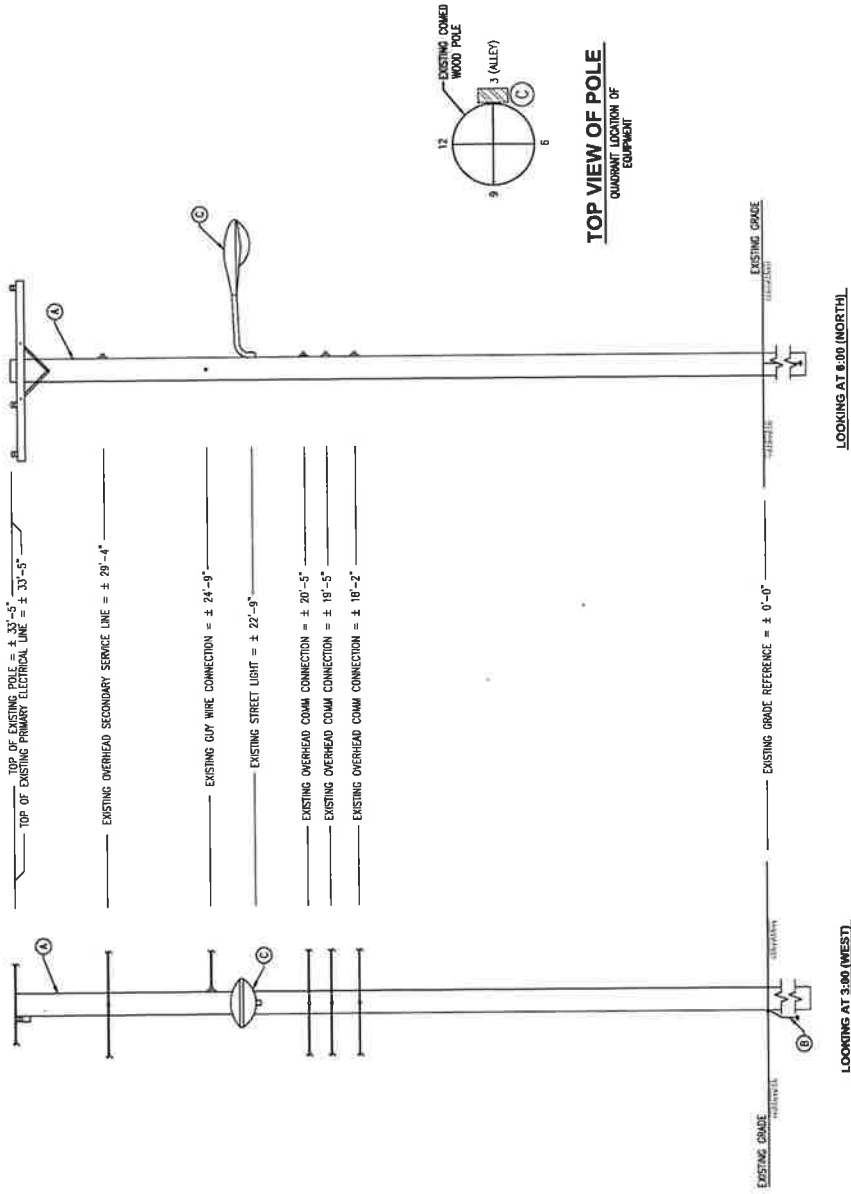
| | | | | | |
|--|--|--|--|---|--|
| GENERAL NOTES THE FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. A TECHNICIAN WILL VISIT THE SITE FOR ROUTINE MAINTENANCE. NO SIGNIFICANT DISTURBANCE OR EFFECT ON DRAINAGE, NO SANITARY SEWER SERVICE, POTABLE WATER OR TRASH DISPOSAL IS REQUIRED AND NO COMMERCIAL SERVICE IS PROPOSED. | | LOCATION MAP | | PLAN VIEW - INTERSECTION | |
| SITE INFORMATION APPLICANT: CROWN CASTLE NO. CENTRAL, LLC CROWN ADDRESS: 1525 GROVE AVE, BERWYN, IL 60402 UTILITIES: COOK COUNTY, ILLINOIS CONTRACT NAME: 1525 GROVE AVE CONTRACT NO.: 1525-GROVE-00000 NODE NAME: CH90XSA54 SIZE: 470044 HUB ID: CH51XC310 PROPERTY OWNER: PUBLIC RIGHT-OF-WAY SITE ADDRESS: 1525 GROVE AVE COUNTY: COOK JURISDICTION: BERWYN LATITUDE: 41° 51' 31.00" (41.858613) LONGITUDE: -87° 47' 39.25" (-87.794238) LAT/LONG DATUM: NAD 83 GROUND ELEV. (FT. MSL.): 615 VERTICAL DATUM: NAD 83 | | POLE ELEVATION - LOOKING SOUTH | | POLE ELEVATION - LOOKING NORTH | |
| IMPORTANT NOTICE THE EXISTING CONDITIONS REPRESENTED HEREIN ARE BASED ON THE INFORMATION PROVIDED BY THE CONTRACTOR. THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS PRIOR TO CONSTRUCTION. REPORT ANY CONFLICTS OR DISCREPANCIES PRIOR TO CONSTRUCTION. | | DIG ALERT <p>CALL JULIE FOR UNDERGROUND UTILITIES PRIOR TO DIGGING 800-892-0123</p> | | | |
| PROJECT DESCRIPTION END USER PROPOSES TO INSTALL EQUIPMENT ON AN EXISTING WOOD UTILITY POLE WITHIN THE EXISTING RIGHT-OF-WAY. | | CODES 2015 INTERNATIONAL BUILDING CODE 2014 NATIONAL ELECTRICAL CODE | | | |
| DRAWING INDEX SHEET NO. SHEET TITLE CH90XSA54-01 NODE COVER SHEET CH90XSA54-02 EXISTING POLE ELEVATIONS CH90XSA54-03 PROPOSED POLE ELEVATIONS CH90XSA54-04 EQUIPMENT DETAILS CH90XSA54-05 EQUIPMENT DETAILS CH90XSA54-06 EQUIPMENT DETAILS CH90XSA54-07 RF SCHEMATIC CH90XSA54-08 ELECTRICAL DETAILS | | ARCHITECT/ENGINEER KDI ENGINEERING, LLC 35 E. WACKER, SUITE 800 CHICAGO, IL 60601 CONTACT: NICK JOHNSON PHONE: 312.783.2198 TEL: (312) 783-2198 | | | |

PUBLIC VERSION

GENERAL CONTRACTOR NOTES:
1. EXISTING EQUIPMENT TO REMAIN ON POLE UNLESS OTHERWISE NOTED.

EQUIPMENT KEY

- (A) EXISTING CLASS 2 COMED WOOD POLE
- (B) EXISTING GROUND ROD AND #6 CU GROUND CONDUCTOR
- (C) EXISTING CITY STREET LIGHT (TO REMAIN)



EXISTING POLE ELEVATIONS

SCALE: NOT TO SCALE

1

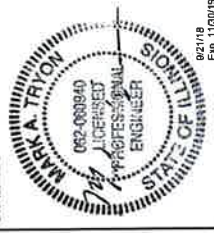
PREPARED BY:



DESIGN REVISIONS:

| NO. | DATE | REVISIONS | BY |
|-----|----------|---------------------------------------|-----|
| 1 | 08/17/18 | DESIGN FOR NEW POLE | ALL |
| 2 | 08/17/18 | REVISIONS | REV |
| 3 | 08/17/18 | LAST VAULT WITHOUT SIGNATURE AND DATE | |

PROFESSOR SEAL



SEAL NO. 184-000934

PROJECT NAME: FACILITY IMPROVEMENTS

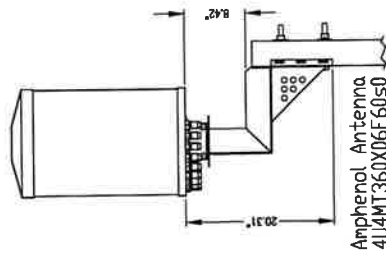
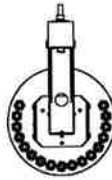
CH90XSA54
1525 GROVE AVE
BERWYN, IL 60402

PROJECT NO.
DESIGNED BY
APPROVED BY
DATE

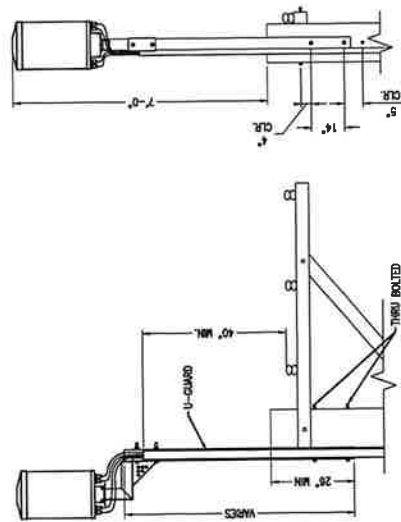
EXISTING POLE
ELEVATIONS

PROJECT NAME: FACILITY IMPROVEMENTS
CH90XSA54-02

DATE: 08/17/18

Amphenol Antenna
414MT360X06F6050

ANTENNA MOUNT DETAIL



POLE EXTENSION DETAIL

PROPOSED EQUIPMENT MOUNTING DETAIL

SCALE: NOT TO SCALE

2

SCALE: NOT TO SCALE

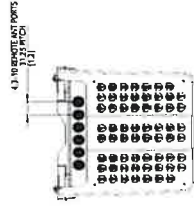
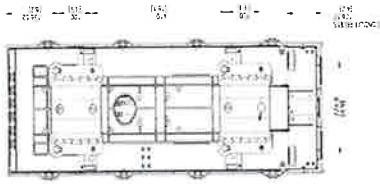
PROPOSED EQUIPMENT SPECIFICATIONS

SCALE: NOT TO SCALE

[illegible][illegible][illegible]

PUBLIC VERSION

WOODEN POLE BOLT MOUNTING



TOP VIEW



BOTTOM VIEW

(K) NOKIA "3 UNIT FACE OUT" SMALL CELL SHROUD
37.4"x12.3"x12.0"x (HxWxD)



(H) AIRHARMONY - 4400 RADIO
20.0"x10.3"x8.3"x (HxWxD)



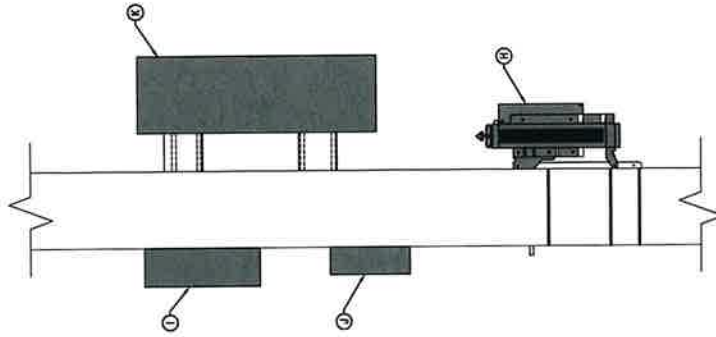
CFT-C

(I) CHARLES FIBER INTERCONNECT TERMINALS
18.00"x18.0"x6.0" (HxWxD)

(J) LOAD CENTER PART #00612L-100RB
12.65"x8.88"x4.27" (HxWxD)

NOTE:
FOR EQUIPMENT LAYOUT SEE PROPOSED POLE ELEVATIONS SHEET.
LOCATION AND CONNECTION OF EQUIPMENT MAY VARY.

EQUIPMENT POLE MOUNT DETAIL



1 PROPOSED EQUIPMENT MOUNTING DETAIL

SCALE: NOT TO SCALE

2 PROPOSED EQUIPMENT SPECIFICATIONS

SCALE: NOT TO SCALE

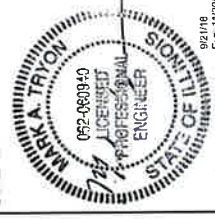
PREPARED FOR:



DESIGN REVISIONS:

| NO. | DATE | REVISIONS | BY |
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DESIGNER'S SEAL:



SEE IL COA NO. 184.008994

PROJECT NAME: PROJECT ADDRESS:

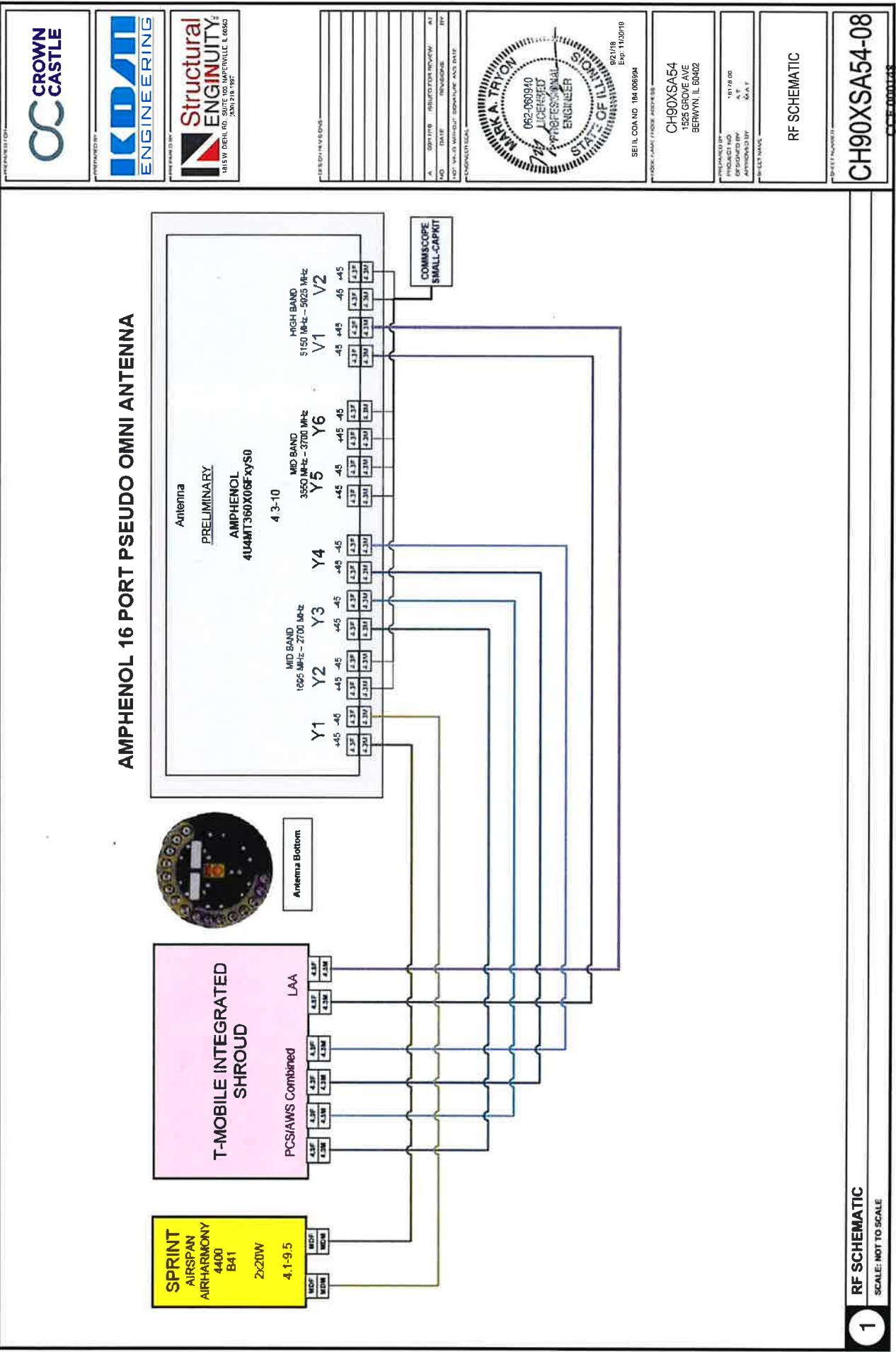
CH90XSA54
1925 GROVE AVE
BERWYN, IL 60402

PROJECT NO.: 98118-00
PROJECT NAME: A.T.
PROJECT ADDRESS: 6/1/17

EQUIPMENT DETAILS

CH90XSA54-05

CH90XSA54-05





CONDUCTORS TO MAIN BREAKER BASED ON CLOSE PROXIMITY TO POWERED POWER SUPPLY. CONTRACTOR SHALL VERIFY CONDUCTOR SIZE WITH ENGINEER BASED ON ACTUAL POWER SOURCE LOCATION.

AC POWER DISTRIBUTION DIAGRAM



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9/21/18
Exp. 11/30/19

CH90XSA54
1525 GROVE AVE
BERWYN, IL 60402

DESIGNED BY
MANUFACTURED BY
1817B 00
AT
MAI

ELECTRICAL DETAILS

CH90XSA54-09

—Experimento—

ELECTRICAL DETAILS

SCALE: NOT TO SCALE