

Market: MNP
Cell Site Number: DESMIAU1753
Cell Site Name: WEST_HIGH-LLW-IASC-Sioux City
Fixed Asset Number: 13169467

PATRICK F. GILL
WOODBURY COUNTY
AUDITOR & RECORDER &
COMM. OF ELECTIONS

2013 SEP 27 67 9 24

THIRD AMENDMENT TO SITE LEASE AGREEMENT

It is agreed between the Woodbury County Board of Supervisors, c/o Starcomm Public Safety Board, the City of Sioux City, Iowa (“Lessors”) and New Cingular Wireless PCS, LLC, a Delaware limited liability company, having a mailing address of 575 Morosgo Drive NE, Atlanta, GA 30324 (“Lessee”) as follows:

WHEREAS, Lessors and Lessee (or their respective predecessors-in-interest) entered into a Site Lease Agreement between the parties signed on or about September 5, 2006 and went into effect on September 29, 2006 when the building permit was issued, with respect to a cell tower located at 3430 W. 23rd St, Sioux City, Iowa (the “Agreement”);

WHEREAS, the parties amended the Agreement on March 4, 2008 (“First Amendment”);

WHEREAS, Long Lines Communications, LLC a Delaware limited liability company, Long Lines Wireless, LLC, a Delaware limited liability company, Long Lines, LLC, a Delaware limited liability company, LL License Holdings, LLC, a Delaware limited liability company, LL License Holdings II, LLC, a Delaware limited liability company, Advanced Network Communications, L.L.C., an Iowa limited liability company (each an “Assignor” and, collectively, the “Assignors”), and LL Acquisition Company, LLC, a Delaware limited liability company (“Assignee”) entered into an Global Contribution, Bill Of Sale, Assignment, and Assumption Agreement dated December 20, 2013;

WHEREAS, LL Acquisition Company, LLC a Delaware limited liability company merged with and into New Cingular Wireless PCS, LLC a Delaware limited liability company on February 28, 2014.

WHEREAS, the parties amended the Site Lease Agreement on October 27, 2014 (“Second Amendment”);

WHEREAS, Lessors and Lessee desire to amend the Agreement to modify the notice section thereof;

WHEREAS, Lessors and Lessee desire to amend the Agreement to permit Lessee to add, modify and/or replace equipment in order to be in compliance with any current or future federal, state or local mandated application, including but not limited to emergency 911 communication services; and

WHEREAS, Lessors and Lessee, in their mutual interest, wish to amend the Agreement for a third time as set forth below accordingly (“Third Amendment”).

NOW THEREFORE, in consideration of the foregoing and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Lessors and Lessee agree as follows:

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575 Morosgo Drive NE
Atlanta, GA 30324

With a copy to: New Cingular Wireless PCS, LLC
Attn: Legal Department
Re: Cell Site # DESMIAU1753
Cell Site Name: WEST_HIGH-LLW-IASC - Sioux City
FA No: 13169467
208 S. Akard Street
Dallas, TX 75202-4206

The copy sent to the Legal Department is an administrative step which alone does not constitute legal notice.

If to Lessors: Woodbury County, Iowa
Board of Supervisors
620 Douglas Street, Suite 104
Sioux City, Iowa 51101

Starcomm Public Safety Board
P.O. Box 447
Sioux City, Iowa 51102
ATTN: Glenn Sedivy

City of Sioux City, Iowa
405 Sixth Street
P.O. Box 447
Sioux City, Iowa 51102
ATTN: City Clerk

6. Other Terms and Conditions Remain. In the event of an inconsistencies between the Agreement and this Third Amendment, the terms of this Third Amendment shall control. Except as expressly set forth in this Third Amendment, the Agreement otherwise is unmodified and remains in full force and effect. Each reference in the Agreement to itself shall be deemed also to refer to this Third Amendment.

7. Capitalized Terms. All capitalized terms used but not defined herein shall have the same meanings as defined in the Agreement.

IN WITNESS WHEREOF, this Third Amendment is effective and entered into as of the date last written below.

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LESSORS:

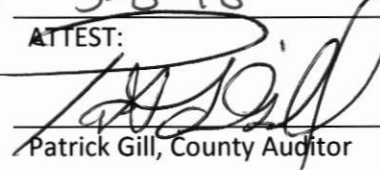
Woodbury County Board of Supervisors
c/o Starcomm Public Safety Board


By: Rocky DeWitt

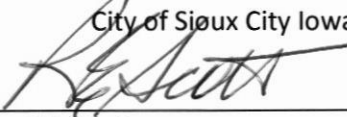
Title: Chairman

Date: 5-8-18

ATTEST:


Patrick Gill, County Auditor

City of Sioux City Iowa


By: Robert E. Scott

Title: Mayor

Date: 8-20-18

ATTEST:


Lisa L. McCardle, City Clerk

LESSEE:

Attest:

New Cingular Wireless PSC, LLC
By: AT&T Mobility Corporation
Its: Manager


By:

Title: Name: Michelle Durand

Date: Title: Manager of Real Estate & Construction

Date: 4/12/18

Market: MNP
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CONSENT TO SUBLEASE AMENDMENT

On this 13th day of August, 2018, Sioux City Community School District as Landlord and pursuant to Paragraph 8 of the Lease – Business Property dated October 25, 2004 hereby consents to the Sublease Amendment between Starcomm, Woodbury County, Iowa, the City of Sioux City and New Cingular Wireless ~~PSC~~, LLC.

PCS

Sioux City Community School District

By:



Print Name:

Jeremy Saint

Title:

Board President

[ACKNOWLEDGEMENTS APPEAR ON NEXT PAGE]

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LESSOR ACKNOWLEDGEMENT

STATE OF IOWA

COUNTY OF WOODBURY

On the 8th day of May in the year 2018 before me, the undersigned, personally appeared Rocky Dewitt personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name(s) is (are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacities, and that by his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument.

Michelle K Skaff
Notary Public

Printed Name: Michelle K. Skaff

My Commission Expires: 2-16-2021



STATE OF IOWA

COUNTY OF WOODBURY

On the 8th day of May in the year 2018 before me, the undersigned, personally appeared Pat Hill, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name(s) is (are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacities, and that by his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument.

Michelle K Skaff
Notary Public

Printed Name: Michelle K. Skaff

My Commission Expires: 2-16-2021



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LESSEE ACKNOWLEDGEMENT

STATE OF Minnesota

COUNTY OF Ramsey

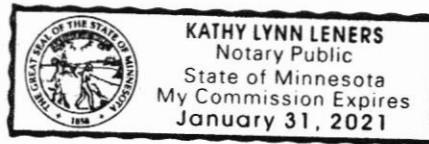
On the 12 day of April in the year 2018 before me, the undersigned authority, on this day personally appeared Michelle Dwan of AT&T Mobility Corporation, the Manager of New Cingular Wireless PCS, LLC, a Delaware limited liability company, known to me to be the person whose name is subscribed to the foregoing instrument and acknowledged to me that the same was the act of the said New Cingular Wireless PCS, LLC, and that he/she executed the same as the act of such Limited Liability Company for the purposes and consideration therein expressed, and in the capacity therein stated.

Kathy L Leners

Notary Public

Printed Name: _____

My Commission Expires: 1/31/2021



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EXHIBIT A-3

THE INFORMATION CONTAINED IN THIS SET OF CONSTRUCTION DOCUMENTS IS PROPRIETARY BY NATURE. ANY USE OR DISCLOSURE OTHER THAN THAT WHICH RELATES TO CARRIER SERVICES IS STRICTLY PROHIBITED.

SITE PHOTO



PROJECT INFORMATION

SITE NAME: LLW_IASC WEST HIGH WOODBURY
COUNTY: 3301 WEST 19TH STREET SIOUX CITY, IA 51103
ADDRESS: CITY OF SIOUX
JURISDICTION: CITY OF SIOUX
SITE NUMBER: IAL01753
FA NUMBER: 13169467
PTN: 3529A0AJB4
PACE: MRUMW020022
USID: 160381
LATITUDE: 42° 30' 43.9518" N (42.512209)
LONGITUDE: 96° 27' 17.9676" W (-96.454991)
GROUND OWNER: WOODBURY, IA
APPLICANT: AT&T WIRELESS 901 S. MARQUETTE AVE. MINNEAPOLIS, MN 55402

AT&T PROJECT MANAGER: PETER MCENERY
 PHONE: (952)-258-9629
 EMAIL: PM753T@ATT.COM
AT&T CONSTRUCTION MANAGER: ANTHONY J SANTI
 PHONE: (763) 203-3915
 EMAIL: AS539A@ATT.COM

PROJECT CONSULTANTS

PROJECT MANAGEMENT: SAC WIRELESS 540 W. MADISON ST. 17TH FLOOR CHICAGO, ILLINOIS 60661
 CONTACT: AMY HUTCHINGS
 EMAIL: AMY.HUTCHINGS@SACW.COM
 PHONE: (312) 967-4270
SITE ACQUISITION ZONING: SAC WIRELESS 540 W. MADISON ST. 17TH FLOOR CHICAGO, ILLINOIS 60661
 CONTACT: ASHLEY RICHARDSON
 EMAIL: ASHLEY.RICHARDSON@SACW.COM
ENGINEER: DARRIN KOTECKI CPD ENGINEERING AND ARCHITECTURE PROFESSIONAL CORPORATION 520 SOUTH MAIN STREET, STE. 2531 AKRON, OHIO 44311
 CONTACT: KEVIN FRALEIGH
 PHONE: (330) 572-2100
CONSTRUCTION: SAC WIRELESS 540 WEST MADISON ST., 16TH FLOOR CHICAGO, IL 60661
 CONTACT: DIANA HUBBARD
 PHONE: DIANA.HUBBARD@SACW.COM

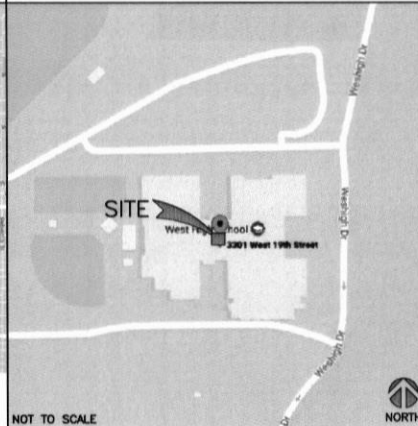


PROJECT : LTE 3C
SITE # : IAL01753
FA # : 13169467
PTN # : 3529A0AJB4
PACE # : MRUMW020022
SITE NAME : LLW_IASC WEST HIGH
ADDRESS : 3301 WEST 19TH STREET SIOUX CITY, IA 51103
JURISDICTION: CITY OF SIOUX

VICINITY MAP



LOCAL MAP



DRIVING DIRECTIONS

DIRECTIONS FROM: AT&T OFFICE: HEAD NORTH ON MARQUETTE AVE TURN RIGHT (EAST SOUTHEAST) ONTO 8TH ST S TURN RIGHT (SOUTH SOUTHWEST) ONTO SR 65 GO STRAIGHT (SOUTH) ONTO I-35W S RAMP AT EXIT 13B, GO STRAIGHT (WEST) ONTO I-90 W MN AT EXIT 400, KEEP RIGHT (SOUTH SOUTHWEST) ONTO I-229 S RAMP AT EXIT 1B, KEEP LEFT (SOUTH SOUTHEAST) ONTO I-29 S RAMP AT EXIT 4, KEEP RIGHT (SOUTH SOUTHEAST) ONTO N SHORE DR RAMP GO STRAIGHT (EAST) ONTO CR 23 TURN RIGHT (SOUTHEAST) ONTO SR 105 TURN LEFT (SOUTHEAST) ONTO MILITARY RD KEEP RIGHT (SOUTH SOUTHEAST) ONTO RIVERSIDE BLVD GO STRAIGHT (SOUTH) ONTO SR 12 TURN LEFT (EAST) ONTO PAUL AVE ARRIVE AT WEST 19TH STREET, SIOUX CITY, IA 51103



DRAWING INDEX

T1	TITLE SHEET
SP1	NOTES & SPECIFICATIONS
A1	COMPOUND PLAN
A2	EQUIPMENT PLAN
A3	TOWER ELEVATION
A4	ANTENNA PLAN
A5	ANTENNA & CABLE CONFIGURATION
A6	ANTENNA, RRH AND MOUNTING DETAILS
A7	CABLE NOTES & COLOR CODING
E1	GROUNDING DETAILS
E2	GROUNDING DETAILS & NOTES

SCOPE OF WORK

THIS IS NOT AN ALL INCLUSIVE LIST. CONTRACTOR SHALL UTILIZE SPECIFIED EQUIPMENT PART OR ENGINEER APPROVED EQUIVALENT. CONTRACTOR SHALL VERIFY ALL NEEDED EQUIPMENT TO PROVIDE A FUNCTIONAL SITE. THE PROJECT GENERALLY CONSISTS OF THE FOLLOWING:
 - INSTALL (3) NEW 3C ANTENNAS IN POSITION 4 (1 PER SECTOR)
 - INSTALL (3) NEW 3C RRRHs IN POSITION 4 (1 PER SECTOR)
 - INSTALL (1) NEW 8 AWG 6 DC TRUNK,
 - INSTALL NEW DC/FIBER JUMPERS
 - INSTALL (3) NEW 25 AMP DC BREAKERS IN EXISTING POWER PLANT



REVISIONS

REV.	DATE	DESCRIPTION	INITIALS
A	08/03/17	ISSUED FOR REVIEW	KRC
B	08/16/17	ISSUED FOR REVIEW	AJM
D	09/01/17	FOR CONSTRUCTION	CJM

NOT FOR CONSTRUCTION UNLESS LABELED AS CONSTRUCTION SET



I hereby certify that this engineering document was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Iowa.
DARRIN KOTECKI, PE
 Darrin Kotecki, PE 09/01/17
 Printed or type name
 License number 20666
 My license renewal date is December 31, 2018
 Pages or sheets covered by this seal:

CODE COMPLIANCE

- 2015 INTERNATIONAL BUILDING CODE
- ANSI/TIA-222 STRUCTURAL STANDARD FOR ANTENNA STRUCTURES
- NFPA 780-LIGHTNING PROTECTION CODE
- 2014 NATIONAL ELECTRICAL CODE

REFERENCE MATERIALS

- THESE DRAWINGS ARE BASED AT&T SCOPING DOCUMENT DATED 06/27/2017

SPECIAL NOTES

- ALL WORK SHALL BE INSTALLED IN CONFORMANCE WITH CURRENT AT&T CONSTRUCTION INSTALLATION GUIDE.
- EXISTING CONDITIONS WILL BE CHANGED & VERIFIED IN FIELD. IF SIGNIFICANT DEVIATIONS OR DETERIORATION ARE ENCOUNTERED AT THE TIME OF CONSTRUCTION, A REPAIR PERMIT WILL BE OBTAINED & CONTRACTOR SHALL NOTIFY ENGINEER IMMEDIATELY.
- THESE DRAWINGS ARE FULL SIZE & SCALEABLE ON 11"x17" SHEET SIZE.
- STATEMENT THAT COMPLIANCE WITH THE ENERGY CODE IS NOT REQUIRED. -SCOPE OF WORK DOES NOT INVOLVE MODIFICATIONS TO EXTERIOR ENVELOPE OF BUILDING, HVAC SYSTEMS OR ELECTRICAL LIGHTING.

DO NOT SCALE DRAWINGS

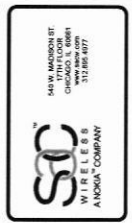
CONTRACTOR SHALL VERIFY ALL PLANS & EXISTING DIMENSIONS & CONDITIONS ON THE JOB SITE & SHALL IMMEDIATELY NOTIFY THE ARCHITECT OR ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.

I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA

LTE 3C
13169467
LLW_IASC WEST HIGH
3301 WEST 19TH STREET
SIOUX CITY, IA 51103

SHEET TITLE
TITLE SHEET

SHEET NUMBER
T1



REV	DATE	DESCRIPTION	INITIALS
A	08/03/17	ISSUED FOR REVIEW	AM
B	08/16/17	ISSUED FOR REVIEW	AM
D	09/01/17	FOR CONSTRUCTION	CMH

NOT FOR CONSTRUCTION UNLESS LABELED AS CONSTRUCTION SET

THIS ENGINEERING DOCUMENT PREPARED BY THE ENGINEER HAS BEEN REVIEWED AND APPROVED FOR THE PROJECT DESCRIBED HEREIN. IT IS THE ENGINEER'S RESPONSIBILITY TO VERIFY THAT THE WORK SHOWN ON THIS DRAWING IS IN ACCORDANCE WITH THE SPECIFICATIONS AND CODES REFERENCED HEREIN. THE ENGINEER'S LIABILITY IS LIMITED TO THE PROFESSIONAL SERVICES PROVIDED BY THIS ENGINEER. THIS DRAWING IS NOT TO BE USED FOR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

DATE: 09/09/17

LTE 3C
13169467
LLW JASC WEST HIGH
3301 WEST 19TH STREET
SIOUX CITY, IA 51103

NOTES & SPECIFICATIONS

SHEET NUMBER
SP1

- EXECUTION OF THE WORK, AS DIRECTED BY THE RESPONSIBLE ENGINEER, AND SUBJECT TO THE APPROVAL OF THE OWNER AND/OR LOCAL UTILITIES.
- THE AREAS OF THE OWNER'S PROPERTY DISTURBED BY THE WORK AND NOT COVERED BY THE TOWER, EQUIPMENT OR DRIVEWAY, SHALL BE GRADED TO A UNIFORM SLOPE, AND STABILIZED TO PREVENT EROSION.
- CONTRACTOR SHALL MINIMIZE DISTURBANCE TO THE EXISTING SITE DURING CONSTRUCTION. EROSION CONTROL MEASURES, IF REQUIRED DURING CONSTRUCTION, SHALL BE IN CONFORMANCE WITH THE FEDERAL AND LOCAL JURISDICTION FOR EROSION AND SEDIMENT CONTROL.
- NO FILL OR EMBANKMENT MATERIAL SHALL BE PLACED ON FROZEN GROUNDING. FROZEN MATERIALS, SNOW OR ICE SHALL NOT BE PLACED IN ANY FILL OR EMBANKMENT.
- THE SUBGRADE SHALL BE BROUGHT TO A SMOOTH UNIFORM GRADE AND COMPACTED TO 95 PERCENT STANDARD PROCTOR DENSITY UNDER PAVEMENT AND STRUCTURES AND 90 PERCENT STANDARD PROCTOR DENSITY UNDER DRIVEWAYS AND OTHER AREAS NOT COVERED BY THE LOCAL JURISDICTION.
- ALL NECESSARY RUBBER, STIMPS, DEBRIS, STICKS, STONES, AND OTHER REFUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF IN A LAWFUL MANNER.
- ALL BROCHURES, OPERATING AND MAINTENANCE MANUALS, CATALOGS, SHOP DRAWINGS, AND OTHER DOCUMENTS SHALL BE TURNED OVER TO THE GENERAL CONTRACTOR AT COMPLETION OF CONSTRUCTION AND PRIOR TO PAYMENT.
- CONTRACTOR SHALL SUBMIT A COMPLETE SET OF AS-BUILT REVISIONS TO THE GENERAL CONTRACTOR UPON COMPLETION OF PROJECT AND PRIOR TO FINAL PAYMENT.
- CONTRACTOR SHALL LEAVE PREMISES IN A CLEAN CONDITION.
- THE PROPOSED FACILITY WILL BE UNMANNED AND DOES NOT REQUIRE POTABLE WATER OR SEWER SERVICE, AND IS NOT FOR HUMAN HABITAT (NO HANDICAP ACCESS REQUIRED).
- OCCUPANCY IS LIMITED TO PERIODIC MAINTENANCE AND INSPECTION, APPROXIMATELY 2 TIMES PER MONTH, BY AT&T TECHNICIANS.
- NO OUTDOOR STORAGE OR SOLID WASTE CONTAINERS ARE PROPOSED.
- ALL MATERIAL SHALL BE FURNISHED AND WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE, THE NATIONAL FIRE ALARM AND SIGNALING CODE, THE NATIONAL BROADCASTING STANDARDS AND TECHNICAL SPECIFICATION FOR CONSTRUCTION OF GSM/GPRS WIRELESS SITES, AND TECHNICAL SPECIFICATION FOR FACILITY GROUNDING. IN CASE OF A CONFLICT BETWEEN THE CONSTRUCTION SPECIFICATION AND THE DRAWINGS, THE DRAWINGS SHALL GOVERN.
- CONTRACTORS SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND INSPECTIONS REQUIRED FOR CONSTRUCTION. IF CONTRACTOR CANNOT OBTAIN A PERMIT, THEY MUST NOTIFY THE GENERAL CONTRACTOR IMMEDIATELY.
- INFORMATION SHOWN ON THESE DRAWINGS WAS OBTAINED FROM SITE VISITS AND/OR DRAWINGS PROVIDED BY THE SITE OWNER. CONTRACTORS SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIAL OR PROCEEDING WITH CONSTRUCTION.
- NO WHITE STROBE LIGHTS ARE PERMITTED. LIGHTING IF REQUIRED, WILL MEET FAA STANDARDS AND REQUIREMENTS.
- DESIGN AND CONSTRUCTION OF ANTENNA SUPPORTS SHALL CONFORM TO CURRENT ANSI/TIA-222 OR APPLICABLE LOCAL CODES.
- ALL STEEL MATERIALS SHALL BE GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A123 ZINC (HOT-DIP GALVANIZED) COATINGS ON IRON AND STEEL PRODUCTS, UNLESS NOTED OTHERWISE.
- ALL BOLTS, ANCHORS AND MISCELLANEOUS HARDWARE SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 ZINC-COATING (HOT-DIP) ON IRON AND STEEL HARDWARE, UNLESS NOTED OTHERWISE.
- DAMAGED GALVANIZED SURFACES SHALL BE REPAIRED BY COLD GALVANIZING IN ACCORDANCE WITH ASTM A780.
- ALL ANTENNA MOUNTS SHALL BE INSTALLED WITH LOCK NUTS, DOUBLE NUTS AND SHALL BE TORQUED TO MANUFACTURER'S RECOMMENDATIONS.
- CONTRACTOR SHALL INSTALL ANTENNA PER MANUFACTURER'S RECOMMENDATION FOR INSTALLATION AND GROUNDING.
- ALL UNUSED PORTS ON ANY ANTENNAS SHALL BE TERMINATED WITH A 50-OHM LOAD TO ENSURE ANTENNAS PERFORM AS DESIGNED.
- PRIOR TO SETTING ANTENNA AZIMUTHS AND DOWN TILTS, ANTENNA CONTRACTOR SHALL VERIFY ANTENNA ALIGNMENT FOR PROPER ORIENTATION. ANTENNA CONTRACTOR SHALL VERIFY ANTENNA AZIMUTHS SHALL BE SET FROM TRUE NORTH AND NOT BE OBEYED WITHIN 5% AS DEFINED BY THE RFDS. ANTENNA DOWN TILTS SHALL BE WITHIN +/- 0.5% AS DEFINED BY THE RFDS. REFER TO ND-00246.
- JUMBERS FROM THE TMA'S MUST TERMINATE TO OPPOSITE POLARIZATION'S IN EACH SECTOR.
- CONTRACTOR SHALL RECORD THE SERIAL #, SECTOR, AND POSITION OF EACH ACTUATOR INSTALLED AT THE ANTENNAS AND PROVIDE THE INFORMATION TO AIRC.
- TMA'S SHALL BE MOUNTED ON PIPE DIRECTLY BEHIND ANTENNAS AS CLOSE TO ANTENNA AS FEASIBLE IN A VERTICAL POSITION.
- TORQUE REQUIREMENTS
- ALL RF CONNECTIONS SHALL BE TIGHTENED BY A TORQUE WRENCH.

- ALL RF CONNECTIONS, GROUNDING HARDWARE, AND ANTENNA HARDWARE SHALL HAVE A CONNECTION TO A CONTINUOUS STRAIGHT LINE FROM BOTH SIDES OF THE CONNECTOR. A RF CONNECTION TO ANTENNA HARDWARE ON THE NUT SIDE STARTING FROM THE GROUNDING AND ANTENNA HARDWARE ON THE NUT SIDE STARTING FROM THE ANTENNA BRACKET METAL.
- FIBER & POWER CABLE MOUNTING
- THE FIBER OPTIC TRUNK CABLES SHALL BE INSTALLED INTO CONDUITS, CHANNEL CABLE TRAYS, OR CABLE TRAYS. WHEN INSTALLING FIBER OPTIC TRUNK CABLES INTO A CABLE TRAY, THE CABLE TRAY SHALL BE INSTALLED BETWEEN THE 600 VOLT CABLES AND THE INTER DUCT IN ORDER TO SEGREGATE CABLE TYPES. OPTIC FIBER TRUNK CABLES SHALL HAVE APPROVED CABLE RESTRAINTS EVERY (60) SIXTY FEET AND SECURELY FASTENED TO THE CABLE TRAY SYSTEM. NFPA 70 (NEC) ARTICLE 770 RULES SHALL APPLY.
- THE TYPE TC-ER CABLES SHALL BE INSTALLED INTO CONDUITS, CHANNEL CABLE TRAYS, OR CABLE TRAY AND SHALL BE SECURED AT INTERVALS NOT EXCEEDING (6) SIX FEET. THE TYPE TC-ER CABLES SHALL BE INSTALLED INTO CONDUITS, CHANNEL CABLE TRAYS, OR CABLE TRAYS, OR CABLE TRAY WHICH ARE TRANSITION UTILIZATION EQUIPMENT OR DEVICES. A DISTANCE (6) SIX FEET SHALL NOT BE EXCEEDED WITHOUT CONTINUOUS SUPPORTING. NFPA 70 (NEC) ARTICLES 536 AND 582 RULES SHALL APPLY.
- WHEN INSTALLING OPTIC FIBER TRUNK CABLES OR TYPE TC-ER CABLES INTO CONDUITS, COAXIAL CABLE NOTES
- TYPES AND SIZES OF THE ANTENNA CABLE ARE BASED ON ESTIMATED LENGTHS. PRIOR TO ORDERING CABLE, CONTRACTOR SHALL VERIFY ACTUAL LENGTH BASED ON CONSTRUCTION LAYOUT AND NOTIFY THE PROJECT MANAGER IF ACTUAL LENGTHS EXCEED ESTIMATED LENGTHS.
- CONTRACTOR SHALL VERIFY THE DOWN-TILT OF EACH ANTENNA WITH A DIGITAL LEVEL.
- CONTRACTOR SHALL CONFIRM COAX COLOR CODING PRIOR TO CONSTRUCTION.
- ALL JUMBERS TO THE ANTENNAS FROM THE MAIN TRANSMISSION LINE SHALL BE 1/2" DIA. LDF AND SHALL NOT EXCEED 6'-0".
- ALL COAXIAL CABLE SHALL BE SECURED TO THE DESIGNED SUPPORT STRUCTURE, IN AN APPROVED MANNER, AT DISTANCES NOT TO EXCEED 4'-0" OC.
- CONTRACTOR SHALL FOLLOW ALL MANUFACTURER'S RECOMMENDATIONS REGARDING BORN THE INSTALLATION AND GROUNDING OF ALL COAXIAL CABLES, CONNECTORS, ANTENNAS, AND ALL OTHER EQUIPMENT.
- CONTRACTOR SHALL GROUND ALL EQUIPMENT INCLUDING MOTORS, TRAYS, COAX CABLES, AND RET CONTROL CABLES AS A CONDUCTIVE GROUNDING SHALL BE EXECUTED BY QUALIFIED WIREMEN IN ACCORDANCE WITH THE SPECIFICATION AND RECOMMENDATION.
- CONTRACTOR SHALL PROVIDE STRAIN-RELIEF CABLE SUPPORTS FOR ALL COAXIAL CABLES. COAX CABLES, AND RET CONTROL CABLES SHALL BE APPROVED FOR USE BY THE MANUFACTURER'S SPECIFICATIONS. CONTRACTOR SHALL VERIFY THAT EXISTING COAX CABLES AND RET CONTROL CABLES ARE APPROVED FOR USE BY THE MANUFACTURER'S SPECIFICATIONS. CONTRACTOR SHALL REPLACE EXISTING HANGERS WITH PROPOSED SWP HANGERS AS SHOWN ON THIS DRAWING. CONTRACTOR SHALL VERIFY THAT EXISTING COAX CABLES AND RET CONTROL CABLES ARE APPROVED FOR USE BY THE MANUFACTURER'S SPECIFICATIONS. CONTRACTOR SHALL REPLACE EXISTING HANGERS WITH PROPOSED SWP HANGERS AS SHOWN ON THIS DRAWING.
- CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY ANTENNA HANGERS, DUPLEXERS, AND COAX CONFIGURATION, MAKE AND MODELS PRIOR TO INSTALLATION.
- ALL CONNECTIONS FOR HANGERS, SUPPORTS, BRACING, ETC. SHALL BE INSTALLED PER TOWER MANUFACTURER'S RECOMMENDATIONS.
- CONTRACTOR SHALL REFERENCE THE TOWER STRUCTURAL ANALYSIS/DESIGN DRAWINGS FOR DIRECTIONS ON CABLE DISTRIBUTION/ROUTING.
- ALL OUTDOOR RF CONNECTORS/CONNECTIONS SHALL BE WEATHERPROOFED, EXCEPT THE WEATHERPROOFING SHALL BE THE RESPONSIBILITY OF THE TOWER MANUFACTURER. MAKE BUTYL TAPE SHALL HAVE A MINIMUM OF ONE-HALF TAPE WIDTH OVERLAP ON EACH TURN AND EACH LAYER SHALL BE WRAPPED THREE TIMES. WEATHERPROOFING SHALL BE SMOOTH WITHOUT BUCKLING. BUTYL BLEEDING IS NOT ALLOWED.
- IF REQUIRED TO PAINT ANTENNAS AND/OR COAX:
 - A TEMPERATURE MUST BE ABOVE 50° F.
 - PAIN COLOR MUST BE APPROVED BY BUILDING OWNER/LANDLORD.
 - PAINT SHALL BE APPLIED TO THE SURFACE OF THE ANTENNA AND COAX.
 - DO NOT PAINT OVER COLOR CODING OR ON EQUIPMENT MODEL NUMBERS.
- ALL CABLES SHALL BE GROUNDING WITH COAXIAL CABLE GROUND KITS. FOLLOW THE MANUFACTURER'S RECOMMENDATIONS.
 - GROUNDING AT THE ANTENNA LEVEL.
 - GROUNDING AT MID LEVEL, TOWERS WHICH ARE OVER 200'-0". ADDITIONAL CABLE GROUNDING REQUIRED.
 - GROUNDING OF TOWER PRIOR TO TURNING HORIZONTAL.
 - GROUNDING OUTSIDE THE EQUIPMENT SHELTER AT THE ENTRY PORT.
 - GROUNDING INSIDE THE EQUIPMENT SHELTER AT THE ENTRY PORT.
- ALL PROPOSED GROUND BAR DOWNLEADS ARE TO BE TERMINATED TO THE EXISTING ADJACENT GROUND BAR DOWNLEADS A MINIMUM DISTANCE OF 4'-0" BELOW GROUND BAR. TERMINATIONS MAY BE EXOTHERMIC OR COMPRESSION.

- GENERAL CONSTRUCTION FOR THE PURPOSE OF CONSTRUCTION DRAWINGS, THE FOLLOWING DEFINITIONS SHALL APPLY:
 - CONTRACTOR/CM - SAC WIRELESS
 - SUB-CONTRACTOR - 1E3
 - OWNER - AT&T WIRELESS
- ALL SITE WORK SHALL BE COMPLETED AS INDICATED ON THE DRAWINGS AND AT&T PROJECT SPECIFICATIONS.
- GENERAL CONTRACTOR SHALL VISIT THE SITE AND SHALL FAMILIARIZE HIMSELF WITH ALL CONDITIONS AFFECTING THE PROPOSED WORK AND SHALL MAKE PROVISIONS. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR FAMILIARIZING HIMSELF WITH ALL CONTRACT DOCUMENTS, INCLUDING ALL CONDITIONS, SPECIFICATIONS, AND DRAWINGS. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO THE COMMENCEMENT OF WORK.
- ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. GENERAL CONTRACTOR SHALL ISSUE ALL NECESSARY PERMITS AND OBTAIN ALL NECESSARY APPROVALS FROM THE LOCAL JURISDICTION. CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND OBTAIN ALL NECESSARY APPROVALS FROM THE LOCAL JURISDICTION.
- ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES, AND APPLICABLE REGULATIONS.
- UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
- PLANS ARE NOT TO BE SCALED. THESE PLANS ARE INTENDED TO BE A DIAGRAMMATIC OUTLINE ONLY UNLESS OTHERWISE NOTED. DIMENSIONS SHOWN ARE TO FINISH SURFACES UNLESS OTHERWISE NOTED. DIMENSIONS TO FIELD VERTICES SHOULD THERE BE ANY QUESTIONS REGARDING THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING A CLARIFICATION FROM THE ENGINEER PRIOR TO COMMENCING WORK. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO COMMENCING WORK.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF WORK AREA, ADJACENT AREAS AND BUILDING OCCUPANTS THAT ARE LIKELY TO BE AFFECTED BY THE WORK UNDER CONTRACT. WORK SHALL CONFORM TO ALL OSHA REQUIREMENTS AND THE LOCAL JURISDICTION.
- GENERAL CONTRACTOR SHALL COORDINATE WORK AND SCHEDULE WORK ACTIVITIES WITH OTHER DISCIPLINES.
- ERECTION SHALL BE DONE IN A WORKMANLIKE MANNER BY COMPETENT EXPERIENCED WORKMEN IN ACCORDANCE WITH ALL APPLICABLE CODES AND REGULATIONS. ALL MEMBERS SHALL BE LAD PLUMB AND TRUE AS INDICATED ON THE DRAWINGS.
- SEA PENETRATIONS THROUGH FIRE RATED AREAS WITH UL LISTED MATERIALS APPROVED BY THE MANUFACTURER SHALL KEEP AREA CLEAR, HAZARD FREE, AND DISPOSE OF ALL DEBRIS.
- WORK PROGRESS COMPLETED IS REPRESENTED BY LIGHT SHADED LINES AND NOTES. COLOR WORK FOR THIS PROJECT IS REPRESENTED BY DARK SHADED LINES AND NOTES. CONTRACTOR SHALL NOTIFY THE GENERAL CONTRACTOR OF ANY EXISTING CONDITIONS THAT DEVIATE FROM THE DRAWINGS PRIOR TO BEGINNING CONSTRUCTION.
- CONTRACTOR SHALL PROVIDE WRITTEN NOTICE TO THE CONSTRUCTION MANAGER 48 HOURS PRIOR TO COMMENCEMENT OF WORK.
- CONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE OWNER.
- CONTRACTOR SHALL CONTACT UTILITY LOCATING SERVICES PRIOR TO THE START OF CONSTRUCTION.
- GENERAL CONTRACTOR SHALL COORDINATE AND MAINTAIN ACCESS FOR ALL TRADES AND CONTRACTORS TO THE SITE AND/OR BUILDING.
- THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR SECURITY OF THE SITE FOR THE DURATION OF CONSTRUCTION UNTIL JOB COMPLETION.
- THE GENERAL CONTRACTOR SHALL MAINTAIN IN GOOD CONDITION ONE COMPLETE SET OF PLANS WITH ALL REVISIONS, ADDENDA, AND CHANGE ORDERS ON THE PREMISES AT ALL TIMES.
- THE GENERAL CONTRACTOR SHALL PROVIDE PORTABLE FIRE EXTINGUISHERS WITH A TRAVEL DISTANCE TO ALL PORTIONS OF WHERE THE WORK IS BEING COMPLETED DURING CONSTRUCTION.
- ALL EXISTING ACTIVE SEWER, WATER, GAS, ELECTRIC, AND OTHER UTILITIES SHALL BE PROTECTED AT ALL TIMES, AND WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, SHALL BE RELOCATED AS DIRECTED BY THE ENGINEER. EXTREME CAUTION SHOULD BE EXERCISED TO PROTECT ALL UTILITIES. CONTRACTOR SHALL PROVIDE SAFETY TRAINING FOR THE WORKING CREW. THIS SHALL INCLUDE (BUT NOT BE LIMITED TO) A) FALL PROTECTION, B) CONFINED SPACE, C) ELECTRICAL SAFETY, AND D) TRENCHING & EXCAVATION.
- ALL EXISTING INACTIVE SEWER, WATER, GAS, ELECTRIC, AND OTHER UTILITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE REMOVED, CAPPED, PLUGGED OR OTHERWISE DISCONNECTED AT POINTS WHICH WILL NOT INTERFERE WITH THE



501 S MARQUETTE AVE
MINNEAPOLIS, MN 55402



540 W MADISON ST
CHICAGO, IL 60661
WIRELESS
A NOKIA COMPANY



300122000 Rev. 08/17/2018
GPD_JOB#_2017724231.60381.01

REV.	DATE	DESCRIPTION	INITIALS
A	08/03/17	ISSUED FOR REVIEW RJC	
B	08/16/17	ISSUED FOR REVIEW AJM	
0	08/01/17	FOR CONSTRUCTION CJM	

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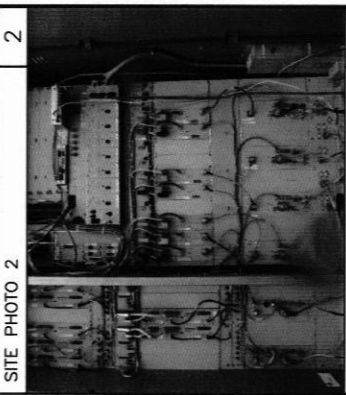
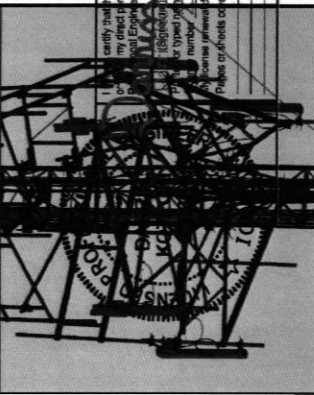
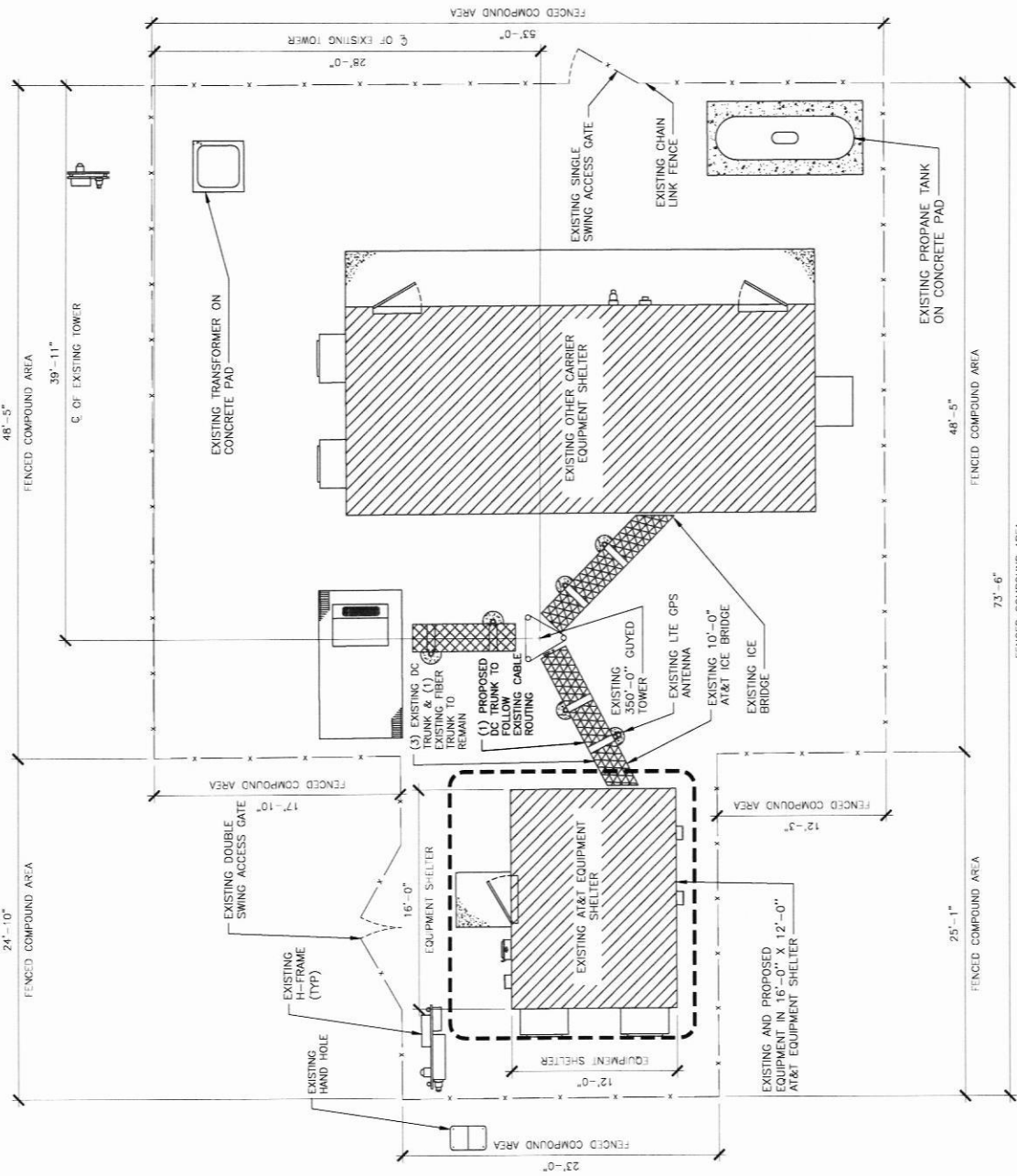
This engineering document was prepared by me or my direct supervisor and I warrant that it is fully licensed under the laws of the State of Minnesota. I warrant that I am duly registered under the laws of the State of Minnesota. License No. 09/099477
Professional Engineer
13566
The information herein is dated December 31, 2018.
Please graphics created by this seal.

DATE: _____
DRAWN BY: _____
CHECKED BY: _____
DATE: _____
SCALE: _____
SHEET TITLE: _____

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LLW LASC WEST HIGH
3301 WEST 19TH STREET
SIOUX CITY, IA 51103

COMPOUND PLAN

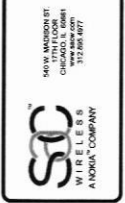
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SCALE: 1/8" = 1'-0"
3 SITE PHOTO 1
1

COMPOUND PLAN

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B	08/16/17	ISSUED FOR REVIEW A&M	
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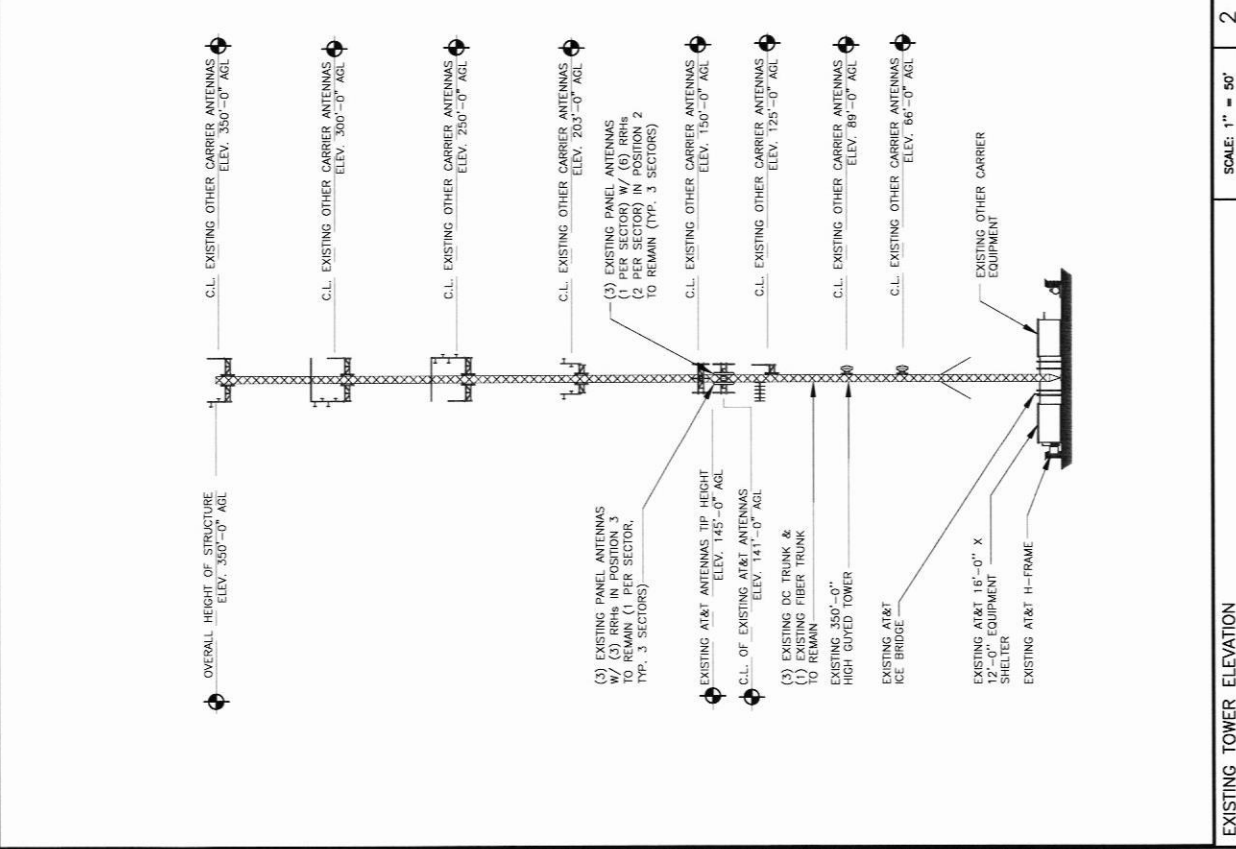
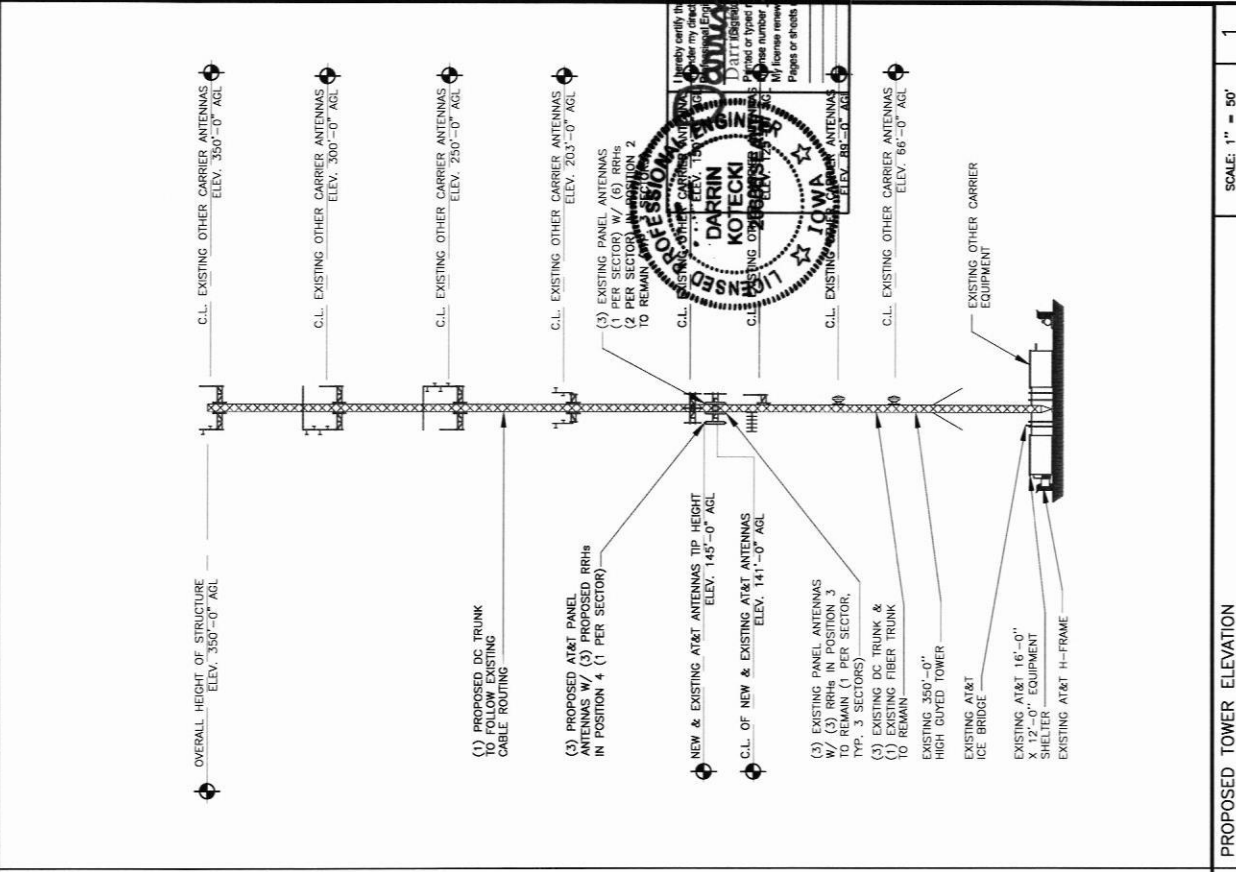
I hereby certify that the engineering document is prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Iowa.

DARRIN KOTECKI, P.E. (09/09)17
 License number: 17666
 Expires on December 31, 2018
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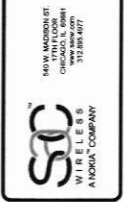
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SHEET TITLE
**TOWER
 ELEVATION**

SHEET NUMBER
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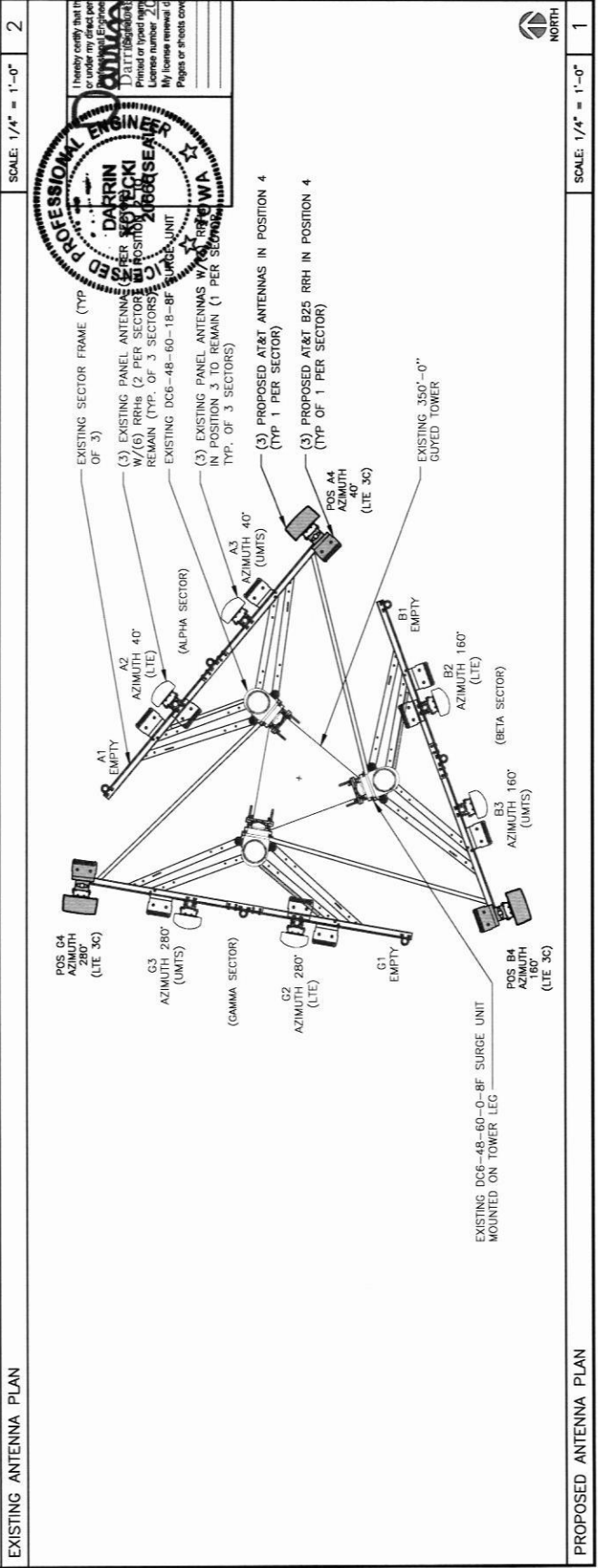
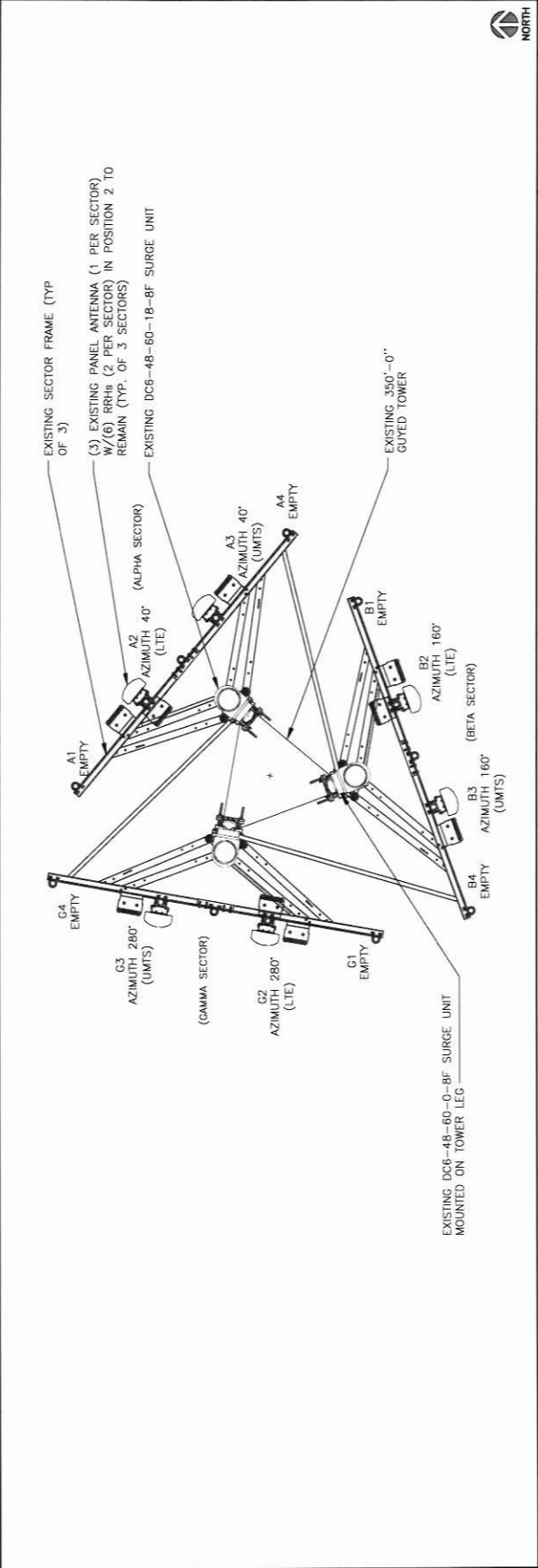
REV.	DATE	DESCRIPTION	REVISIONS
A	09/03/17	ISSUED FOR REVIEW KRC	
B	09/16/17	ISSUED FOR REVIEW AJM	
D	09/01/17	FOR CONSTRUCTION CUM	

I hereby certify that this engineering document prepared by me or under my direct supervision and seal is a duly Licensed Professional Engineer in the State of Iowa.
DARRIN KOTECKI
 License number: 233565
 By license renewal expires on December 31, 2018
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SHEET TITLE
ANTENNA PLAN

SHEET NUMBER
A4





540 W MADISON ST.
CHICAGO, IL 60641
WIRELESS
A NOKIA COMPANY



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A	08/03/17	ISSUED FOR REVIEW KRC	
B	08/16/17	ISSUED FOR REVIEW AJM	
C	09/01/17	FOR CONSTRUCTION CJM	

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was prepared by me or under my direct supervision and that I am a duly Licensed
Professional Engineer in the State of Iowa.
DARRIN KOTECKI, P.E. 09/09/17
License number 24666
My license renewal date is December 31, 2018
Payment sheets completed by this seal.

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SIOUX CITY, IA 51103

SHEET TITLE
ANTENNA &
CABLE
CONFIGURATION

SHEET NUMBER
A5

PROPOSED ANTENNA CONFIGURATION AND CABLE SCHEDULE
SUPPLIED BY AT&T WIRELESS, FROM SCOPING DOCUMENT DATED 06/27/2017

SECTOR	POS	TECH	ANTENNA	ANTENNA CL. HEIGHT	AZIMUTH	TMA/RRU MODEL #	DC SURGE AND DISTRIBUTION	CABLE TYPE	CABLE LENGTH (+20%)	DOWNTILTS
A	1									
	2	1C/2C	KMW ET-X-UW-70-16-70- 18-IR- (X)	141' AGL	40°	(1) RRH2X40W-07AT (X) (1) RRH4X25-WCS-4R (X)	(1)DC6-48-60- 18-8F (X)	(2) DC / (1) FIBER (X)	±175'	0
	3	UMTS	KMW ET-X-UW-70-16-70- 18-IR- (X)		40°	(1) RRH2X60-850 (X)		(1) DC/SHARED FIBER (X)		0
	4	3C	KMW EPBQ-654-L8H8-L2 (N)		40°	(1) B25 RRH4X30-4R (N)	(1)DC6-48-0-8F (X)	(1) DC/SHARED FIBER (N)		0
B	1									
	2	1C/2C	KMW ET-X-UW-70-16-70- 18-IR- (X)	141' AGL	160°	(1) RRH2X40W-07AT (X) (1) RRH4X25-WCS-4R (X)		SHARED W/ A2		0
	3	UMTS	KMW ET-X-UW-70-16-70- 18-IR- (X)		160°	(1) RRH2X60-850 (X)		SHARED W/ A3		
	4	3C	KMW EPBQ-654-L8H8-L2 (N)		160°	(1) B25 RRH4X30-4R (N)		SHARED W/ A4		
C	1									
	2	1C/2C	KMW ET-X-UW-70-16-70- 18-IR- (X)	141' AGL	280°	(1) RRH2X40W-07AT (X) (1) RRH4X25-WCS-4R (X)		SHARED W/ A2		0
	3	UMTS	KMW ET-X-UW-70-16-70- 18-IR- (X)		280°	(1) RRH2X60-850 (X)		SHARED W/ A3		0
	4	3C	KMW EPBQ-654-L8H8-L2 (N)		280°	(1) B25 RRH4X30-4R (N)		SHARED W/ A4		0



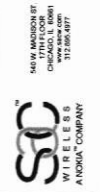
* INCLUDES SAFETY FACTOR OF 20% FT. (10 FT. AT BOTH ENDS OF CABLE RUN).
CONTRACTOR TO VERIFY RF DATA WITH AT&T WIRELESS CONSTRUCTION MANAGER
AND/OR RF ENGINEER PRIOR TO INSTALLATION

(N) = NEW
(X) = EXISTING
(RR) = EXISTING/RELOCATED
(E) = ELECTRICAL
(M) = MECHANICAL

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545 W. MADISON ST
CHICAGO, IL 60611
312.266.4877



545 W. MADISON ST
CHICAGO, IL 60611
312.266.4877



390372208 Fax: 312.266.4877
312.266.4877
CPD JOB# 201724251.60381.01

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A	09/03/17	ISSUED FOR REVIEW	KIC
B	09/16/17	ISSUED FOR REVIEW	AM
0	09/01/17	FOR CONSTRUCTION	CM

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DARRIN KOTECKI, PE 09/09/17
 License number: 210666
 My license renewal date is December, 31, 2018.
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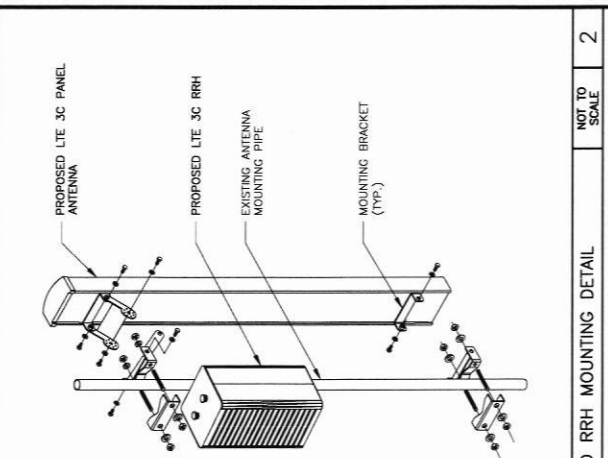
DATE: _____

THIS DRAWING, SPECIFICATION, PLAN, SECTION, ELEVATION, OR OTHER PART OF THIS SET, WHEN PREPARED BY ME, OR UNDER MY DIRECT SUPERVISION AND CONTROL, AND I AM A DULY LICENSED PROFESSIONAL ENGINEER IN THE STATE OF ILLINOIS.
 STATE OF ILLINOIS
 PROFESSIONAL ENGINEER

LTE 3C
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 LLW, JASC WEST HIGH
 3301 WEST 19TH STREET
 SIOUX CITY, IA 51103

SHEET TITLE
 ANTENNA,
 RRH AND
 MOUNTING
 DETAILS

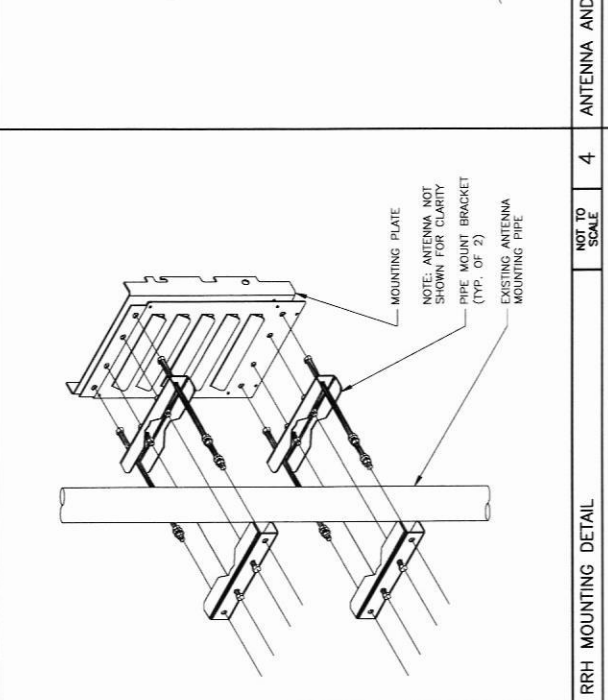
SHEET NUMBER
A6



NOT TO SCALE 2

ANTENNA AND RRH MOUNTING DETAIL

NOT TO SCALE 1

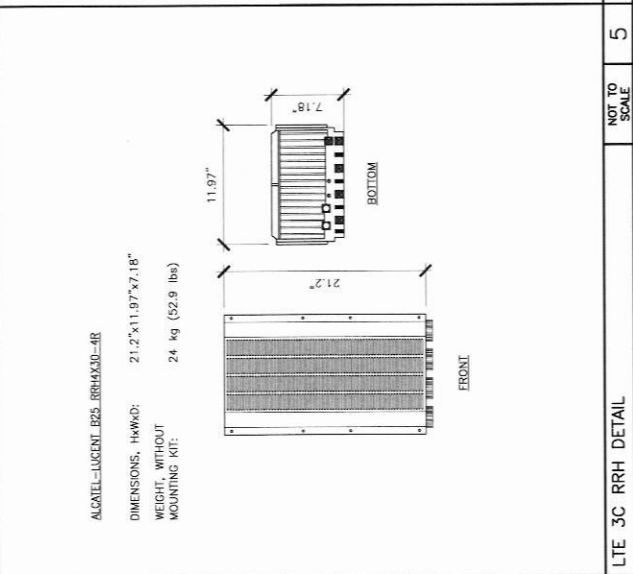
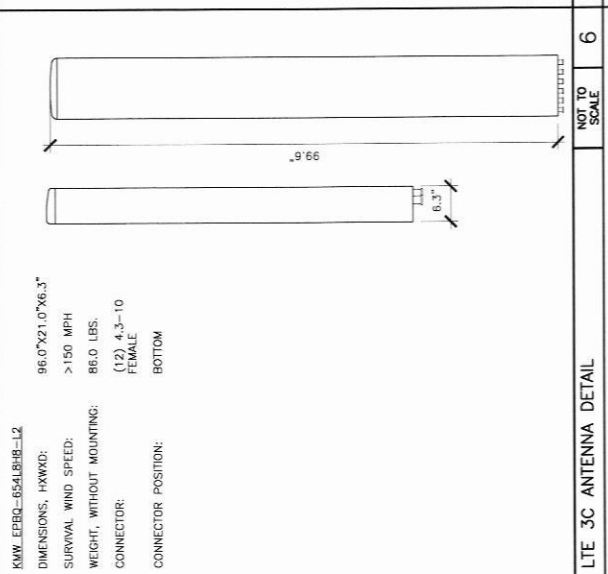


NOT TO SCALE 4

RRH MOUNTING DETAIL

NOT TO SCALE 3

NOT USED





540 W. WASHINGTON ST.
CHICAGO, IL 60611
WIRELESS
A T&T COMPANY



36372300 Rev. 10/15/2002
EPD_009F_201774231.003R1.01

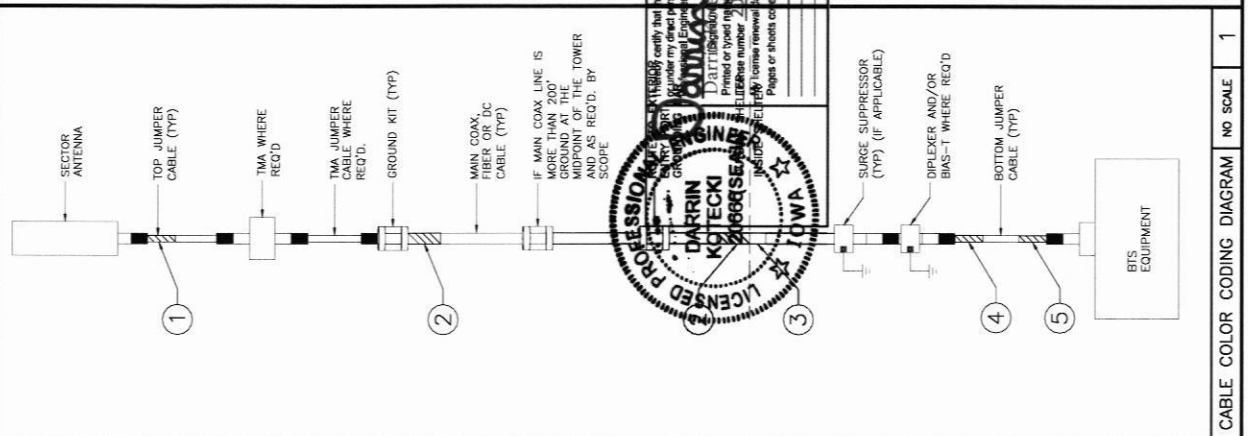
REV.	DATE	DESCRIPTION	INITIALS
A	09/02/17	ISSUED FOR REVIEW KIC	
B	09/16/17	ISSUED FOR REVIEW AM	
D	09/01/17	FOR CONSTRUCTION CUM	

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3501 WEST 19TH STREET
SIOUX CITY, IA 51103

SHEET TITLE
CABLE NOTES
& COLOR
CODING

SHEET NUMBER
A7



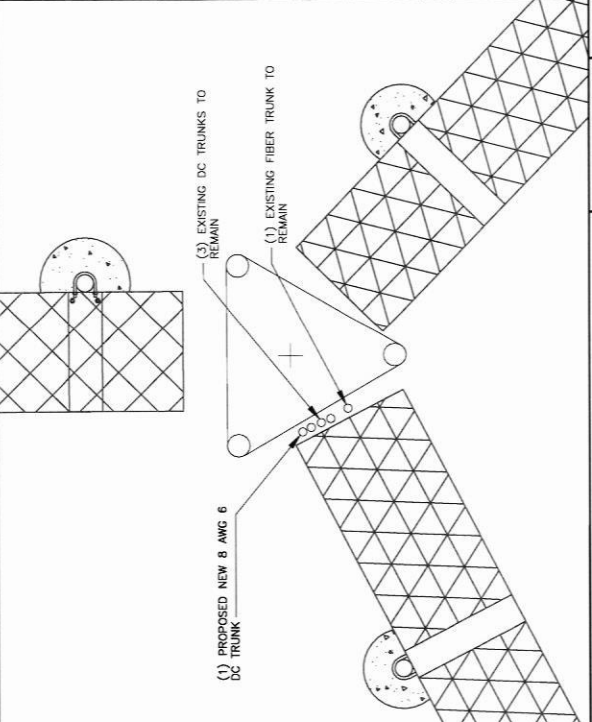
- CONTRACTOR IS TO REFER TO AT&T'S MOST CURRENT RADIO FREQUENCY DATA SHEET (RFSD) PRIOR TO CONSTRUCTION.
- THE SIZE, HEIGHT, AND DIRECTION OF THE ANTENNAS SHALL BE ADJUSTED TO ACHIEVE THE AZIMUTHS SPECIFIED AND LIMIT SHADOWING AND TO MEET THE SYSTEM REQUIREMENTS.
- CONTRACTOR SHALL VERIFY THE HEIGHT OF THE ANTENNA WITH THE AT&T WIRELESS PROJECT MANAGER.
- VERIFY TYPE AND SIZE OF TOWER LEG PRIOR TO ORDERING ANY ANTENNA MOUNT.
- UNLESS NOTED OTHERWISE THE CONTRACTOR MUST PROVIDE ALL MATERIAL NECESSARY.
- ANTENNA AZIMUTHS ARE DEGREES OFF OF TRUE NORTH, BEARING CLOCKWISE. IN WHICH ANTENNA FACE IS DIRECTED. ALL ANTENNAS (AND SUPPORTING STRUCTURES AS PRACTICAL) SHALL BE ACCURATELY ORIENTED IN THE SPECIFIED DIRECTION.
- CONTRACTOR SHALL VERIFY ALL RF INFORMATION PRIOR TO CONSTRUCTION.
- SWEEP TEST SHALL BE PERFORMED BY GENERAL CONTRACTOR AND SUBMITTED TO AT&T WIRELESS CONSTRUCTION SPECIALIST. TEST SHALL BE PERFORMED PER AT&T WIRELESS STANDARDS.
- CABLE LENGTHS WERE DETERMINED BASED ON THE DESIGN DRAWING. CONTRACTOR TO VERIFY ACTUAL LENGTH DURING PRE-CONSTRUCTION WALK.
- CONTRACTOR TO USE ROSENBERGER FIBER LINE HANGER COMPONENTS (OR ENGINEER APPROVED EQUAL).

ANTENNA & CABLING NOTES		NO SCALE	4
RF, DC, & COAX CABLE MARKING LOCATIONS TABLE			
LOCATIONS			
NO			
1	EACH TOP-JUMPER SHALL BE COLOR CODED WITH (1) SET OF 3" WIDE BANDS.		
2	EACH MAIN COAX SHALL BE COLOR CODED WITH (1) SET OF 3" WIDE BANDS NEAR THE TOP-JUMPER CONNECTION AND WITH (1) SET OF 3/4" WIDE COLOR BANDS JUST PRIOR TO ENTERING THE BTS OR TRANSMITTER BUILDING.		
3	CABLE ENTRY PORT ON THE INTERIOR OF THE SHELTER.		
4	ALL BOTTOM JUMPERS SHALL BE COLOR CODED WITH (1) SET OF 3/4" WIDE BANDS ON EACH END OF THE BOTTOM JUMPER.		
5	ALL BOTTOM JUMPERS SHALL BE COLOR CODED WITH (1) SET OF 3/4" WIDE BANDS ON EACH END OF THE BOTTOM JUMPER.		

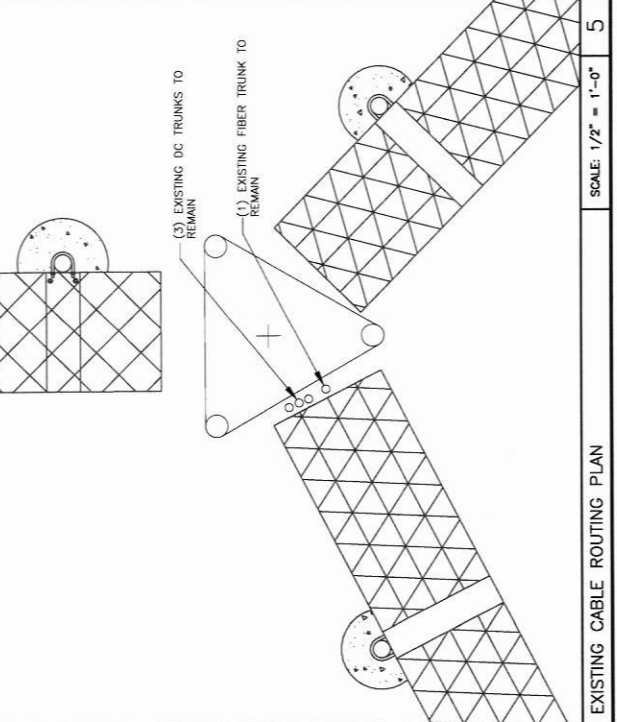
- THE ANTENNA SYSTEM COAX SHALL BE LABELED WITH VINYL TAPE.
- THE STANDARD IS BASED ON EIGHT COLORED TAPES—RED, BLUE, GREEN, YELLOW, ORANGE, BROWN, WHITE, AND VIOLET. THESE TAPES MUST BE 3/4" WIDE & UV RESISTANT SUCH AS SCOTCH 35 VINYL ELECTRICAL COLOR CODING TAPE AND SHOULD BE READILY AVAILABLE TO THE ELECTRICIAN OR CONTRACTOR ON SITE.
- USING COLOR BANDS ON THE CABLES. MARK ALL RF CABLE BY SECTOR AND CABLE NUMBER AS SHOWN ON "CABLE COLOR CHART".
- WHEN AN EXISTING COAXIAL LINE THAT IS INTENDED TO BE A SHARED LINE BETWEEN TECHNOLOGIES IS ENCOUNTERED, THE CONTRACTOR SHALL REMOVE THE EXISTING COAXIAL LINE AND INSTALL A NEW COAXIAL LINE TO THE COLORING SCHEME. OR WHEN INSTALLING PROPOSED COAXIAL CABLES, THIS GUIDELINE SHALL BE IMPLEMENTED AT THAT SITE REGARDLESS OF TECHNOLOGY.
- ALL COLOR CODE TAPE SHALL BE 3M-35 AND SHALL BE INSTALLED USING A MINIMUM OF (3) THREE WRAPS OF TAPE AND SHALL BE NEATLY TRIMMED AND SMOOTHED OUT SO AS TO AVOID UNRAVELING.
- ALL COLOR BANDS INSTALLED AT THE TOP OF THE TOWER SHALL BE A MINIMUM OF 3" WIDE, AND SHALL HAVE A MINIMUM OF 3/4" OF SPACE BETWEEN EACH COLOR.
- ALL COLOR CODES SHALL BE INSTALLED SO AS TO ALIGN NEATLY WITH ONE ANOTHER FROM SIDE-TO-SIDE.
- IF EXISTING CABLES AT THE SITE ALREADY HAVE A COLOR CODING SCHEME AND THEY ARE NOT INTENDED TO BE REUSED OR SHARED WITH THE PROPOSED TECHNOLOGY, THE EXISTING COLOR CODING SCHEME SHALL REMAIN UNTOUCHED.

CABLE MARKING DIAGRAM		NO SCALE	3
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- EXISTING DC TRUNKS TO REMAIN
- EXISTING FIBER TRUNK TO REMAIN
- EXISTING DC TRUNKS TO REMAIN
- EXISTING FIBER TRUNK TO REMAIN



PROPOSED CABLE ROUTING PLAN
SCALE: 1/2" = 1'-0"



EXISTING CABLE ROUTING PLAN
SCALE: 1/2" = 1'-0"



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B	09/16/17	ISSUED FOR REVIEW	AM
0	09/01/17	FOR CONSTRUCTION	CM

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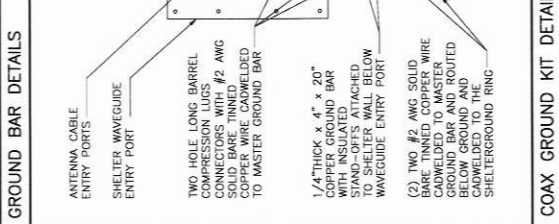
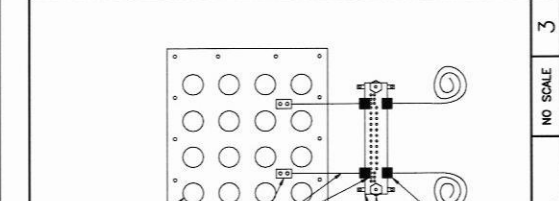
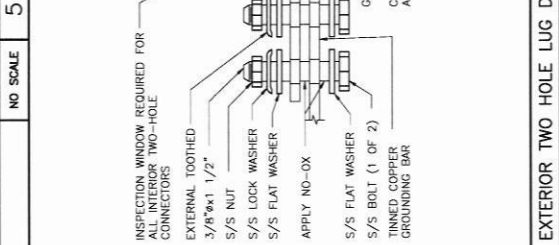
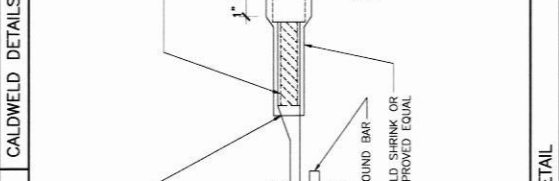
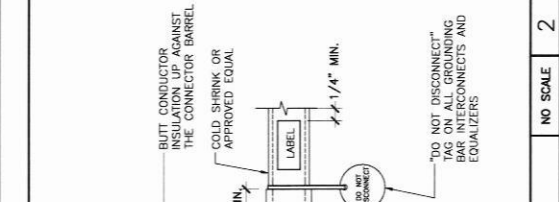
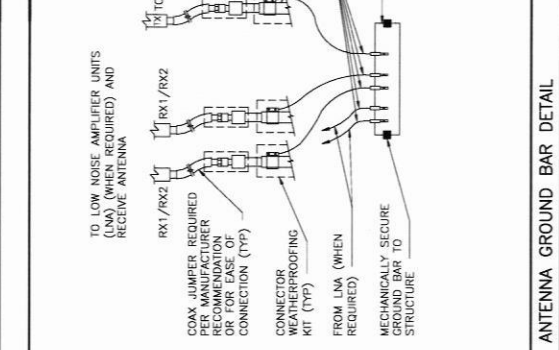
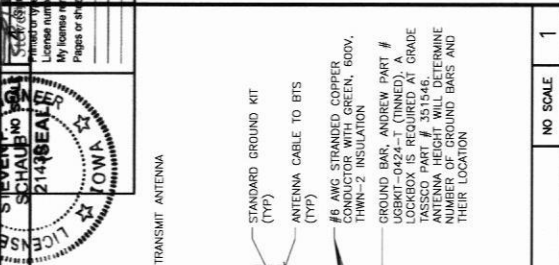
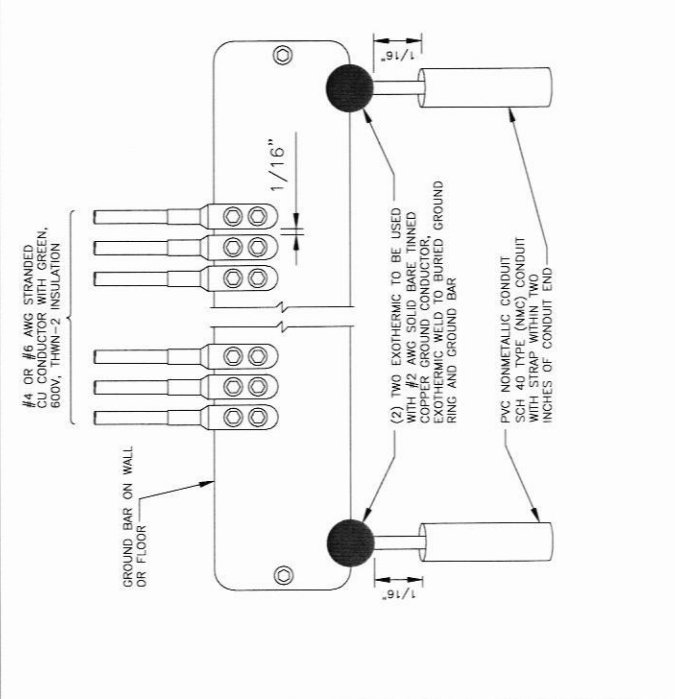
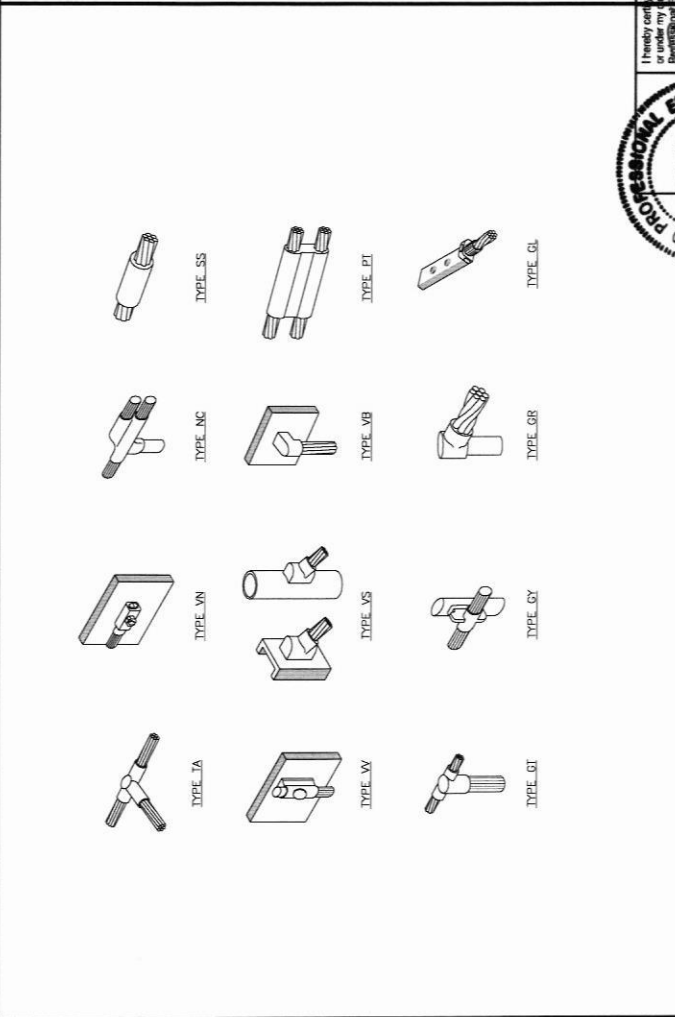
Professional Engineer
 STEVEN J. SCHAUER
 No. 21438EA
 License Number
 My license expires on December 31, 18

DATE: 09/17/17
 THIS ENGINEERING DOCUMENT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

LTE 3C
 13169487
 LLW_JASC WEST HIGH
 3301 WEST 19TH STREET
 SIOUX CITY, IA 51103

SHEET TITLE
**GROUNDING
 DETAILS**

SHEET NUMBER
E1



NO SCALE	NO SCALE	NO SCALE	NO SCALE
5	2	3	1

GROUND BAR DETAILS
 CALDWELDED DETAILS
 ANTENNA GROUND BAR DETAIL



540 W. MADISON ST.
CHICAGO, IL 60601
312.886.4877
SBC
WIRELESS
A NOKIA COMPANY



REV.	DATE	DESCRIPTION	INITIALS
A	08/02/17	ISSUED FOR REVIEW	KIC
B	08/16/17	ISSUED FOR REVIEW	AM
0	09/01/17	FOR CONSTRUCTION	CM

NOT FOR CONSTRUCTION UNLESS LABELED AS CONSTRUCTION SET

I hereby certify that this engineering document was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Iowa.
Steven P. Schaub, PE
 (Date) 09/01/17
 Printed or typed name
 License number 21430
 My license renewal date is December, 31, 18.
 Pages or sheets covered by this seal:

THIS SEAL IS VALID ONLY IF THE ENGINEER WHO PREPARED IT HAS BEEN LICENSED BY THE IOWA BOARD OF PROFESSIONAL ENGINEERS UNDER THE LAWS OF THE STATE OF IOWA.

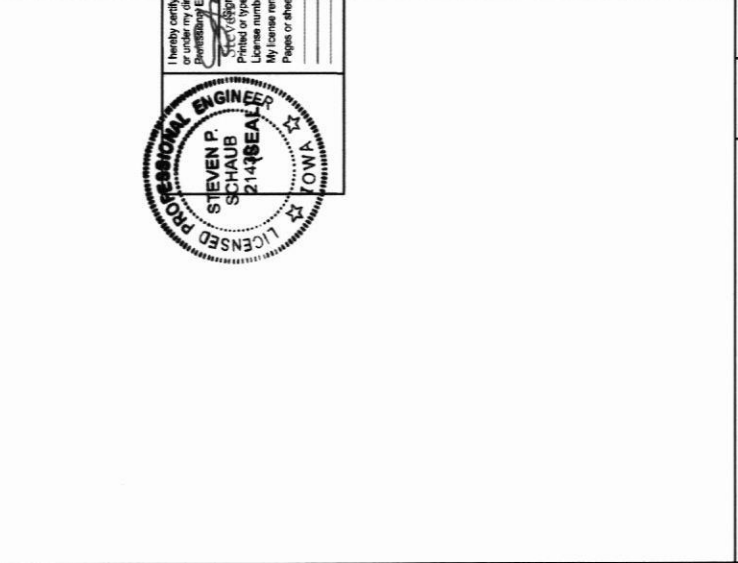
LTE 3C
 13169467
 LLW_JASC WEST HIGH
 3501 WEST 19TH STREET
 SIOUX CITY, IA 51103

SHEET TITLE
 GROUNDING
 DETAILS &
 NOTES

SHEET NUMBER
E2

NOTES:
 1. COORDINATE WITH CONSTRUCTION MANAGER FOR THE PROVISION OF DC CIRCUIT BREAKERS AND OTHER ANCILLARY ITEMS TO SUPPORT THE NEW EQUIPMENT.
 2. PROPERLY BOND ALL EQUIPMENT AND CONDUCTIVE SURFACES TO EXISTING GROUND PER NEC AND AT&T STANDARDS.
 LOADING NOTE:
 NO NEW LOADS ARE BEING ADDED TO THE EXISTING AC ELECTRICAL SERVICE PANEL OR FEEDER.

ELECTRICAL NOTES



NOTES:
 1. COORDINATE WITH CONSTRUCTION MANAGER FOR THE PROVISION OF DC CIRCUIT BREAKERS AND OTHER ANCILLARY ITEMS TO SUPPORT THE NEW EQUIPMENT.
 2. PROPERLY BOND ALL EQUIPMENT AND CONDUCTIVE SURFACES TO EXISTING GROUND PER NEC AND AT&T STANDARDS.
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ELECTRICAL NOTES



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ELECTRICAL NOTES

