

**THIRD AMENDMENT TO COMMUNICATIONS SITE LEASE AGREEMENT**

THIS THIRD AMENDMENT TO COMMUNICATIONS SITE LEASE AGREEMENT (hereinafter “Third Amendment”) is made effective as of the latter signature below (hereinafter “Effective Date”) by and between the CITY OF BLOOMINGTON, a Minnesota municipal corporation with an address of 1800 Old Shakopee Road, Bloomington, Minnesota 55431 (hereinafter “Landlord”) and AT&T WIRELESS SERVICES OF MINNESOTA, INC., a Nevada corporation doing business as AT&T Wireless and working through NCWPCS MPL 32 – Year Sites Tower Holdings, LLC, a Delaware limited liability company, by CCATT, LLC, it’s Attorney-In-Fact, having a mailing address of 2000 Corporate Drive, Canonsburg, Pa 15317 (hereinafter “Tenant”).

WHEREAS, Landlord and Tenant are parties to that certain Communications Site Lease Agreement dated September 8, 2003, as amended by a Certain First Amendment to Communications Site Lease Agreement dated August 21, 2006 and a Certain Second Amendment to Communications Site Lease Agreement dated December 5, 2011 (collectively, the “Agreement”), through which Landlord leased to Tenant use of a portion of the real property (the “Property”), therein described, located at 10810 Bloomington Ferry Road, Bloomington, MN; and

WHEREAS, Landlord and Tenant desire to modify, amend and alter the terms of the Agreement to modify, alter, amend and change certain equipment, antennas and facilities to be installed by Tenant on the Premises, and to otherwise modify the terms and conditions of the Agreement all as more particularly set forth herein.

NOW THEREFORE, for and in consideration of the mutual covenants, promises and conditions contained herein and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, Landlord and Tenant do hereby mutually covenant, promise, and agree as follows:

**1. AMENDMENTS.** The Agreement is hereby amended as follows:

**(a) Exhibit C.** Exhibit C to the Agreement, entitled “Equipment Plans and Initial Installation”, is hereby deleted in its entirety and replaced with the attached Revised Exhibit C, attached hereto and incorporated hereto by reference. From and after the Effective Date, all references in the Agreement to the Monopole, the Antenna Facilities, the Site, and the equipment, improvements, structures, equipment cabinets and antennas shall be as set forth and refer to Revised Exhibit C.

**(b) Rent.** The parties hereto agree and acknowledge that the Rent payable by Tenant to Landlord pursuant to the Agreement is currently \$39,297 per year, paid annually on January 1 of each year. Within sixty (60) days of the Effective Date of this amendment, the Tenant shall pay an additional rent amount for calendar year 2016 of \$3,000, for a total of \$42,297. Effective on January 1, 2017, and each January 1 thereafter, the Rent, as defined in Section 6(a) of the Agreement, shall be compounded as shown in Exhibit F.

**(c) Notices.** The notice addresses set forth for Tenant and Landlord in Paragraph 15 of the Agreement are hereby amended and modified as follows:

If to Landlord:

City of Bloomington  
Attention: Parks and Recreation Manager  
1800 West Old Shakopee Road  
Bloomington, Minnesota 55431  
(952) 563-8774

With a copy to:

City of Bloomington  
Attention: City Attorney  
1800 West Old Shakopee Road  
Bloomington, Minnesota 55431  
(952) 563-8753

If to Tenant:

NCWPCS MPL 32 – Year Sites Tower Holdings LLC  
Legal Department  
Attn: Network Legal  
Re: FA #: 10104049  
208 S. Akard Street  
Dallas, TX 75202-4206

With a copy to:

CCATT, LLC  
c/o Crown Castle USA, Inc.  
Attn: Legal Department  
Re: Cell Site #: 856948  
2000 Corporate Drive  
Canonsburg, PA 15317

**2. MISCELLANEOUS.**

**(a) Full Force and Effect.** All of the terms, provisions, covenants and agreements contained in the Agreement are hereby incorporated herein by reference in the same manner and to the same extent as if all such terms, provisions, covenants and agreements were fully set forth herein. The Parties ratify, confirm and adopt the Agreement as of the date hereof and acknowledge that there are no defaults under the Agreement or events or circumstances which, with the giving of notice or passage of time or both, would ripen into events of default. Except as otherwise expressly amended herein, all the terms and conditions of the Agreement shall remain and continue in full force and effect. In case of any inconsistency between the Agreement, as amended, or this Third Amendment, this Third Amendment shall govern and control. The recitals set forth in this Third Amendment are incorporated herein by reference.

**(b) Binding Effect.** This Third Amendment shall be binding upon the heirs, legal representatives, successors and assigns of the parties. The parties shall execute and deliver such further

and additional instruments, agreements and other documents as may be necessary to evidence or carry out the provisions of this Third Amendment or of the Agreement.

(c) **Counterparts.** This Third Amendment may be executed in two (2) or more counterparts each of which shall be deemed an original, but all of which together shall constitute but one and the same instrument.

**THE REMAINDER OF THIS PAGE IS INTENTIONALLY LEFT BLANK  
SIGNATURE PAGE FOLLOWS**

IN WITNESS WHEREOF, the parties hereto have respectfully executed this Amendment Number Two to Site Agreement for Land effective as of the date of the latter signature below.

**LANDLORD:**

The City of Bloomington, a Minnesota municipal corporation

By: Gene Winstead

Its: Mayor

Date: \_\_\_\_\_

By: James Verbrugge

Its: City Manager

Date: \_\_\_\_\_

Reviewed and approved by the City Attorney.

\_\_\_\_\_  
**City Attorney**

**TENANT:**

**NCWPCS MPL 32 – Year Sites Tower Holdings, LLC**

By: CCATT, LLC, a Delaware limited liability company, its Attorney in Fact

By: \_\_\_\_\_

Its: **Jonathan Hart**

**Director of Real Estate, Midwest Area**

Date: \_\_\_\_\_

**7/5/2016**

IN WITNESS WHEREOF, the parties hereto have respectfully executed this Amendment Number Two to Site Agreement for Land effective as of the date of the latter signature below.

**LANDLORD:**

The City of Bloomington, a Minnesota municipal corporation

\_\_\_\_\_  
By: Gene Winstead  
Its: Mayor  
Date: \_\_\_\_\_

\_\_\_\_\_  
By: James Verbrugge  
Its: City Manager  
Date: \_\_\_\_\_

Reviewed and approved by the City Attorney.

\_\_\_\_\_  
**City Attorney**

**TENANT:**

**NCWPCS MPL 32 – Year Sites Tower Holdings, LLC**

By: CCATT, LLC, a Delaware limited liability company, its Attorney in Fact

\_\_\_\_\_  
By: \_\_\_\_\_  
Its: \_\_\_\_\_  
Date: \_\_\_\_\_

**REVISED EXHIBIT C**  
**Revised Plans Depicting the Site, Monopole and Antenna Facilities**

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.



**PROJECT INFORMATION**

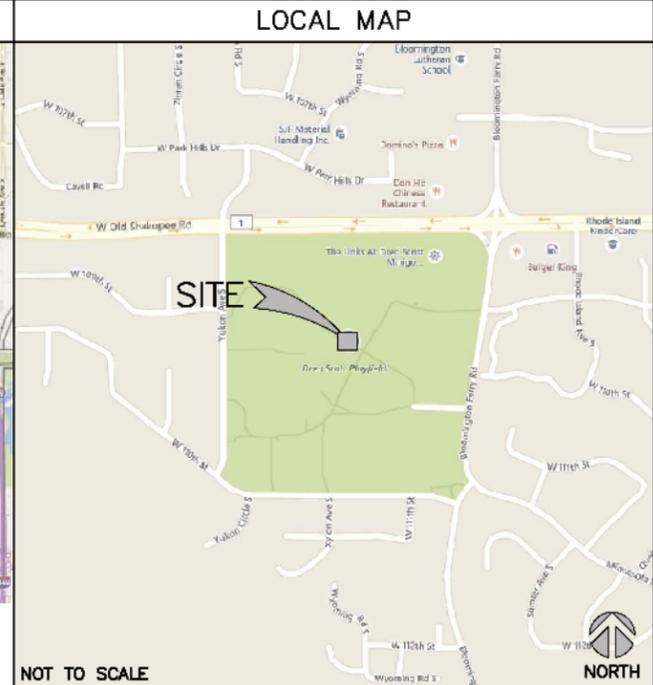
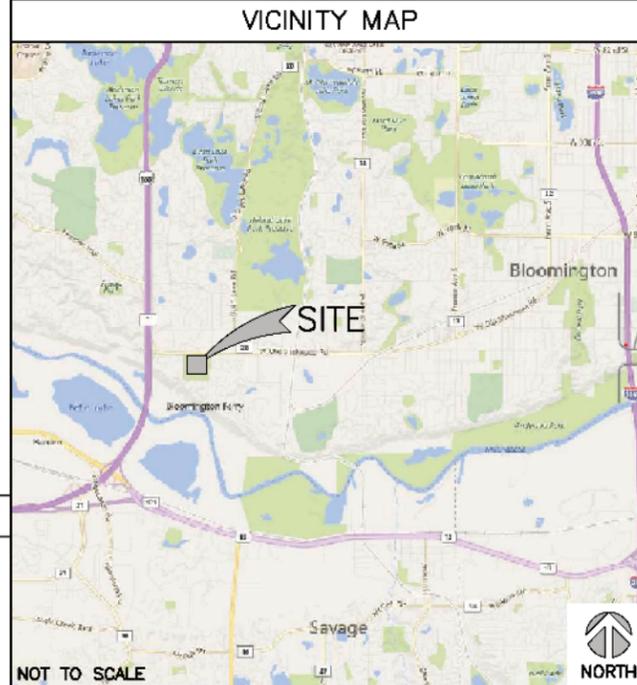
**SITE NAME:** HWY 169 AND 1  
**COUNTY:** HENNEPIN  
**ADDRESS:** 10810 BLOOMINGTON FERRY RD BLOOMINGTON, MN 55438  
**JURISDICTION:** BLOOMINGTON  
**SITE NUMBER:** MNL03189  
**FA NUMBER:** 10104049  
**PTN:** 3511561620 / 3511796600  
**PACE:** MRUMW008633 / MRUMW012759  
**CROWN BU NUMBER:** 856948  
**USID:** 46066  
**LATITUDE:** 44° 48' 21.3984" N ( 44.8059)  
**LONGITUDE:** -93° 23' 18.0990" W (-93.3884)  
**TOWER OWNER:** CITY OF BLOOMINGTON  
 1800 WEST OLD SHAKOPEE RD BLOOMINGTON, MN 55431  
**GROUND OWNER:** CITY OF BLOOMINGTON  
 1800 WEST OLD SHAKOPEE RD BLOOMINGTON, MN 55431  
**LANDLORD CONTACT:** MLA (CROWN)  
**APPLICANT:** AT&T WIRELESS  
 901 S. MARQUETTE AVE. MINNEAPOLIS, MN 55402  
**AT&T PROJECT MANAGER:** PETER MCENERY  
 PHONE: (952)-229-9667  
 EMAIL: PM753T@ATT.COM  
**AT&T CONSTRUCTION MANAGER:** EDWIN DE KOOKER  
 PHONE: (952)-229-9655  
 EMAIL: ED5853@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  
**SITE ACQUISITION:** SAC WIRELESS  
 540 W. MADISON ST. 17TH FLOOR CHICAGO, ILLINOIS 60661  
 CONTACT: BRET FORTUNA  
 EMAIL: BRET.FORTUNA@SACW.COM  
**ARCHITECT:** NESTOR POPOWYCH, A.I.A.  
 SAC WIRELESS ENGINEERING GROUP  
 540 W. MADISON ST. 16TH FLOOR CHICAGO, ILLINOIS 60661  
 CONTACT: KEVIN ALLEN  
 PHONE: (312) 895-4977 EXT. 4362  
 EMAIL: KEVIN.ALLEN@SACW.COM  
**CONSTRUCTION:** SAC WIRELESS  
 540 W. MADISON ST. 16TH FLOOR CHICAGO, ILLINOIS 60661  
 CONTACT: DIANA HUBBARD  
 EMAIL: DIANA.HUBBARD@SACW.COM

# AT&T MOBILITY

**PROJECT :** LTE 2C / 3C  
**SITE # :** MNL03189  
**FA # :** 10104049  
**PTN # :** 3511561620 / 3511796600  
**PACE # :** MRUMW008633 / MRUMW012759  
**CROWN BU#** 856948  
**CROWN APP ID #** 226671  
**SITE NAME :** HWY 169 AND 1  
**ADDRESS :** 10810 BLOOMINGTON FERRY RD BLOOMINGTON, MN 55438  
**JURISDICTION:** BLOOMINGTON



**DRIVING DIRECTIONS**

DIRECTIONS FROM: 901 SOUTH MARQUETTE AVENUE, MINNEAPOLIS, MN 55402

1. TURN RIGHT ONTO S 8TH ST
2. TURN RIGHT ONTO S 4TH AVE
3. TAKE RAMP AND FOLLOW SIGNS FOR MN-65 S
4. BEAR RIGHT ONTO I-35W S
5. AT EXIT 9B TAKE RAMP RIGHT AND FOLLOW SIGNS FOR MN-5 WEST / I-494 WEST
6. AT EXIT 10A TAKE RAMP RIGHT AND FOLLOW SIGNS FOR US-169 SOUTH
7. TAKE RAMP RIGHT AND FOLLOW SIGNS FOR CR-1 EAST
8. TURN LEFT ONTO W OLD SHAKOPEE RD / CR-1 E
9. TURN RIGHT ONTO BLOOMINGTON FERRY RD
10. ARRIVE AT 10810 BLOOMINGTON FERRY RD, BLOOMINGTON, MN 55438

TO OBTAIN LOCATION OF PARTICIPANTS UNDERGROUND FACILITIES BEFORE YOU DIG IN MINNESOTA, CALL GOPHER STATE ONE CALL  
 TOLL FREE: 1-800-252-1168 OR FAX A LOCATE: 1-800-236-4967  
 www.gopherstateonecall.org  
 MINNESOTA STATUTE REQUIRES MIN OF 48 HOURS NOTICE BEFORE YOU EXCAVATE

**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	ANTENNA, RRH AND MOUNTING DETAILS
A8	CABLE NOTES & COLOR CODING
E1	GROUNDING DETAILS

**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:

- REMOVE (3) EXISTING AT&T LTE 1C/GSM ANTENNAS. (1) PER SECTOR IN POSITION 1. (TYP. OF 3 SECTORS)
- REMOVE (3) EXISTING AT&T UMTS ANTENNAS. (1) PER SECTOR IN POSITION 2. (TYP. OF 3 SECTORS)
- LOWER (3) EXISTING PIPE MOUNTS TO FACILITATE PROPOSED RRH INSTALLATION BELOW ANTENNAS. (1) PER SECTOR IN POSITION 1. (TYP. OF 3 SECTORS)
- INSTALL (3) PROPOSED AT&T LTE 1C/2C/3C ANTENNAS. (1) PER SECTOR IN POSITION 1. (TYP. OF 3 SECTORS)
- INSTALL (3) PROPOSED AT&T GSM/UMTS ANTENNAS. (1) PER SECTOR IN POSITION 2. (TYP. OF 3 SECTORS)
- INSTALL (3) PROPOSED AT&T LTE 2C RRHs. (1) PER SECTOR IN POSITION 1. (TYP. OF 3 SECTORS)
- INSTALL (3) PROPOSED AT&T LTE 3C RRHs. (1) PER SECTOR IN POSITION 1. (TYP. OF 3 SECTORS)
- INSTALL PROPOSED POWER PLANT TO REPLACE EXISTING POWER PLANT.
- INSTALL PROPOSED BATTERY TO REPLACE EXISTING.
- INSTALL (6) PROPOSED 15A BREAKERS INSTALLED IN PROPOSED POWER PLANT.
- INSTALL (2) PROPOSED 8 AWG 6 CONDUCTOR DC TRUNK LINES.
- INSTALL (1) PROPOSED FIBER TRUNK LINE.
- INSTALL PROPOSED DC/JUMPERS.
- INSTALL (1) PROPOSED RAYCAP DC6-48-60-18-8F (SQUID).
- INSTALL PROPOSED RAYCAP MODULES; TO BE INSTALLED IN THE PROPOSED POWER PLANT.
- INSTALL (1) PROPOSED RAYCAP DC12-48-60-0-25E ON EQUIPMENT PAD.

NOTE PER SCOPING DOCUMENT:  
 -ADJUST ALL EXISTING TECHNOLOGIES TO PROPOSED AZIMUTHS 90/210/330  
 -ALL PROPOSED ANTENNAS AND OTHER APPURTENANCES SUCH AS FEED LINES AND/OR JUMPERS, MOUNTING PIPES, BRACKETS, AND PLATFORMS SHALL BE PAINTED TO MATCH EXISTING CONDITIONS AND EXISTING AT&T TOWER (BROWN). DO NOT PAINT EXISTING & PROPOSED RRH's.

**CODE COMPLIANCE**

- 2015 MINNESOTA STATE BUILDING CODE
- 2014 NATIONAL ELECTRIC CODE
- TIA/EIA-222-G

**REFERENCE MATERIALS**

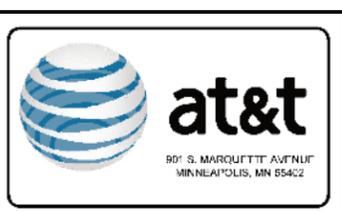
- THESE DRAWINGS ARE BASED AT&T SCOPING DOCUMENT DATED 01/15/16.
- CONTRACTOR TO USE LATEST 2C RFDS DATED 04/13/16 AND THE LATEST 3C RFDS DATED 04/13/16 WITH THE CD'S PER SCOPE OF WORK.

**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.



**REVISIONS**

REV.	DATE	DESCRIPTION	INITIALS
A	04/11/16	ISSUED FOR REVIEW	GD
B	04/25/16	ISSUED FOR REVIEW	GD
0	05/13/16	FOR CONSTRUCTION	GD

NOT FOR CONSTRUCTION UNLESS LABELED AS CONSTRUCTION SET

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ARCHITECT UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRINT NAME: NESTOR POPOWYCH  
 SIGNATURE:

DATE: 05/13/16 LICENSE # 47725  
 EXP. 06/30/16

LTE 2C / 3C  
 10104049  
 HWY 169 AND 1  
 10810 BLOOMINGTON FERRY RD  
 BLOOMINGTON, MN 55438

SHEET TITLE  
**TITLE SHEET**

SHEET NUMBER  
**T1**

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.

**GENERAL CONSTRUCTION**

- FOR THE PURPOSE OF CONSTRUCTION DRAWINGS, THE FOLLOWING DEFINITIONS SHALL APPLY:  
 CONTRACTOR/CM - SAC WIRELESS  
 SUB-CONTRACTOR - CER TRAD  
 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, FIELD CONDITIONS, DIMENSIONS, AND CONFIRMING THAT THE WORK MAY BE ACCOMPLISHED AS SHOWN PRIOR TO PROCEEDING WITH CONSTRUCTION. 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 APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS, AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF WORK.
- 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. SPACING BETWEEN EQUIPMENT IS THE MINIMUM REQUIRED CLEARANCE. THEREFORE, IT IS CRITICAL TO FIELD VERIFY DIMENSIONS. SHOULD THERE BE ANY QUESTIONS REGARDING THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING A CLARIFICATION FROM THE ENGINEER PRIOR TO PROCEEDING WITH THE WORK. DETAILS ARE INTENDED TO SHOW DESIGN INTENT. MODIFICATIONS MAY BE REQUIRED TO SUIT JOB DIMENSIONS OR CONDITIONS AND SUCH MODIFICATIONS SHALL BE INCLUDED AS PART OF WORK AND PREPARED BY THE ENGINEER PRIOR TO PROCEEDING WITH WORK.
- THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
- IF THE SPECIFIED EQUIPMENT CANNOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION SPACE FOR APPROVAL BY THE ENGINEER PRIOR TO PROCEEDING.
- GENERAL 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 THIS CONTRACT. WORK SHALL CONFIRM 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 WORKMAN IN ACCORDANCE WITH APPLICABLE CODES AND THE BEST ACCEPTED PRACTICE. ALL MEMBERS SHALL BE LAID PLUMB AND TRUE AS INDICATED ON THE DRAWINGS.
- SEAL PENETRATIONS THROUGH FIRE RATED AREAS WITH UL LISTED MATERIALS APPROVED BY LOCAL JURISDICTION. CONTRACTOR SHALL KEEP AREA CLEAN, HAZARD FREE, AND DISPOSE OF ALL DEBRIS.
- WORK PREVIOUSLY COMPLETED IS REPRESENTED BY LIGHT SHADED LINES AND NOTES. THE SCOPE OF 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.
- THE 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.
- THE 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 RATING OF NOT LESS THAN 2-A QT 2-A:10-B-C AND SHALL BE WITHIN 25 FEET OF 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 USED BY THE CONTRACTOR WHEN EXCAVATING OR DRILLING PIERS AROUND OR NEAR 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

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 80 PERCENT STANDARD PROCTOR DENSITY IN OPEN SPACE. ALL TRENCHES IN PUBLIC RIGHT OF WAY SHALL BE BACKFILLED WITH FLOWABLE FILL OR OTHER MATERIAL PRE-APPROVED BY THE LOCAL JURISDICTION.
- ALL NECESSARY RUBBISH, STUMPS, 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 REDLINES 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 REVISION AT&T MOBILITY GROUNDING STANDARD "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.
- CONTRACTOR SHALL REMOVE ALL TRASH AND DEBRIS FROM THE SITE ON A DAILY BASIS.
- 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.

**ANTENNA MOUNTING**

- 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 DOWNTILTS, ANTENNA CONTRACTOR SHALL CHECK THE ANTENNA MOUNT FOR TIGHTNESS AND ENSURE THAT THEY ARE PLUMB. ANTENNA AZIMUTHS SHALL BE SET FROM TRUE NORTH AND BE ORIENTED WITHIN +/- 5% AS DEFINED BY THE RFDS. ANTENNA DOWNTILTS SHALL BE WITHIN +/- 0.5% AS DEFINED BY THE RFDS. REFER TO ND-00246.
- JUMPERS 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 AT&T.
- 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 TORQUE MARK INSTALLED IN A CONTINUOUS STRAIGHT LINE FROM BOTH SIDES OF THE CONNECTION.  
 A. RF CONNECTION BOTH SIDES OF THE CONNECTOR.  
 B. GROUNDING AND ANTENNA HARDWARE ON THE NUT SIDE STARTING FROM THE THREADS TO THE SOLID SURFACE. EXAMPLE OF SOLID SURFACE: GROUND BAR, ANTENNA BRACKET METAL.

**FIBER & POWER CABLE MOUNTING**

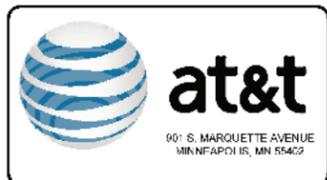
- THE FIBER OPTIC TRUNK CABLES SHALL BE INSTALLED INTO CONDUITS, CHANNEL CABLE TRAYS, OR CABLE TRAY. WHEN INSTALLING FIBER OPTIC TRUNK CABLES INTO A CABLE TRAY SYSTEM, THEY SHALL BE INSTALLED INTO AN INTER DUCT AND A PARTITION BARRIER SHALL BE INSTALLED BETWEEN THE 600 VOLT CABLES AND THE INTER DUCT 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. AN EXCEPTION; WHERE TYPE TC-ER CABLES ARE NOT SUBJECT TO PHYSICAL DAMAGE, CABLES SHALL BE PERMITTED TO MAKE A TRANSITION BETWEEN CONDUITS, CHANNEL CABLE TRAYS, OR CABLE TRAY WHICH ARE SERVING UTILIZATION EQUIPMENT OR DEVICES. A DISTANCE (6) SIX FEET SHALL NOT BE EXCEEDED WITHOUT CONTINUOUS SUPPORTING. NFPA 70 (NEC) ARTICLES 336 AND 392 RULES SHALL APPLY.
- WHEN INSTALLING OPTIC FIBER TRUNK CABLES OR TYPE TC-ER CABLES INTO CONDUITS, NFPA 70 (NEC) ARTICLE 300 RULES SHALL APPLY.

**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 JUMPERS 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 BOTH THE INSTALLATION AND GROUNDING OF ALL COAXIAL CABLES, CONNECTORS, ANTENNAS, AND ALL OTHER EQUIPMENT.
- CONTRACTOR SHALL GROUND ALL EQUIPMENT, INCLUDING ANTENNAS, RET MOTORS, TMA'S, COAX CABLES, AND RET CONTROL CABLES AS A COMPLETE SYSTEM. GROUNDING SHALL BE EXECUTED BY QUALIFIED WIREMEN IN COMPLIANCE WITH MANUFACTURER'S SPECIFICATION AND RECOMMENDATION.
- CONTRACTOR SHALL PROVIDE STRAIN-RELIEF AND CABLE SUPPORTS FOR ALL CABLE ASSEMBLIES, COAX CABLES, AND RET CONTROL CABLES. CABLE STRAIN-RELIEFS AND CABLE SUPPORTS SHALL BE APPROVED FOR THE PURPOSE. INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.
- CONTRACTOR TO VERIFY THAT EXISTING COAX HANGERS ARE STACKABLE SNAP IN HANGERS. IF EXISTING HANGERS ARE NOT STACKABLE SNAP IN HANGERS THE CONTRACTOR SHALL REPLACE EXISTING HANGERS WITH NEW SNAP IN HANGERS IF APPLICABLE.

**GENERAL CABLE AND EQUIPMENT NOTES**

- CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY ANTENNA, TMA'S, DIPLEXERS, AND COAX CONFIGURATION, MAKE AND MODEL 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 RET CONNECTORS. USING BUTYL TAPE AFTER INSTALLATION AND FINAL CONNECTIONS ARE MADE. 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 SHALL BE ABOVE 50° F.  
 B. PAINT COLOR MUST BE APPROVED BY BUILDING OWNER/LANDLORD.  
 C. FOR REGULATED TOWERS, FAA/FCC APPROVED PAINT IS REQUIRED.  
 D. DO NOT PAINT OVER COLOR CODING OR ON EQUIPMENT MODEL NUMBERS.
- ALL CABLES SHALL BE GROUNDED WITH COAXIAL CABLE GROUND KITS. FOLLOW THE MANUFACTURER'S RECOMMENDATIONS.  
 A. GROUNDING AT THE ANTENNA LEVEL.  
 B. GROUNDING AT MID LEVEL, TOWERS WHICH ARE OVER 200'-0", ADDITIONAL CABLE GROUNDING REQUIRED.  
 C. GROUNDING AT BASE OF TOWER PRIOR TO TURNING HORIZONTAL.  
 D. GROUNDING OUTSIDE THE EQUIPMENT SHELTER AT ENTRY PORT.  
 E. 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.



REVISIONS			
REV.	DATE	DESCRIPTION	INITIALS
A	04/11/16	ISSUED FOR REVIEW	GD
B	04/25/16	ISSUED FOR REVIEW	GD
C	05/13/16	FOR CONSTRUCTION	GD

NOT FOR CONSTRUCTION UNLESS LABELED AS CONSTRUCTION SET

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ARCHITECT UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRINT NAME: NESTOR POPOWYCH

SIGNATURE:

DATE: 05/13/16 LICENSE # 17725 EXP. 06/30/16

LTE 2C / 3C  
 10104049  
 HWY 169 AND 1  
 10810 BLOOMINGTON FERRY RD  
 BLOOMINGTON, MN 55438

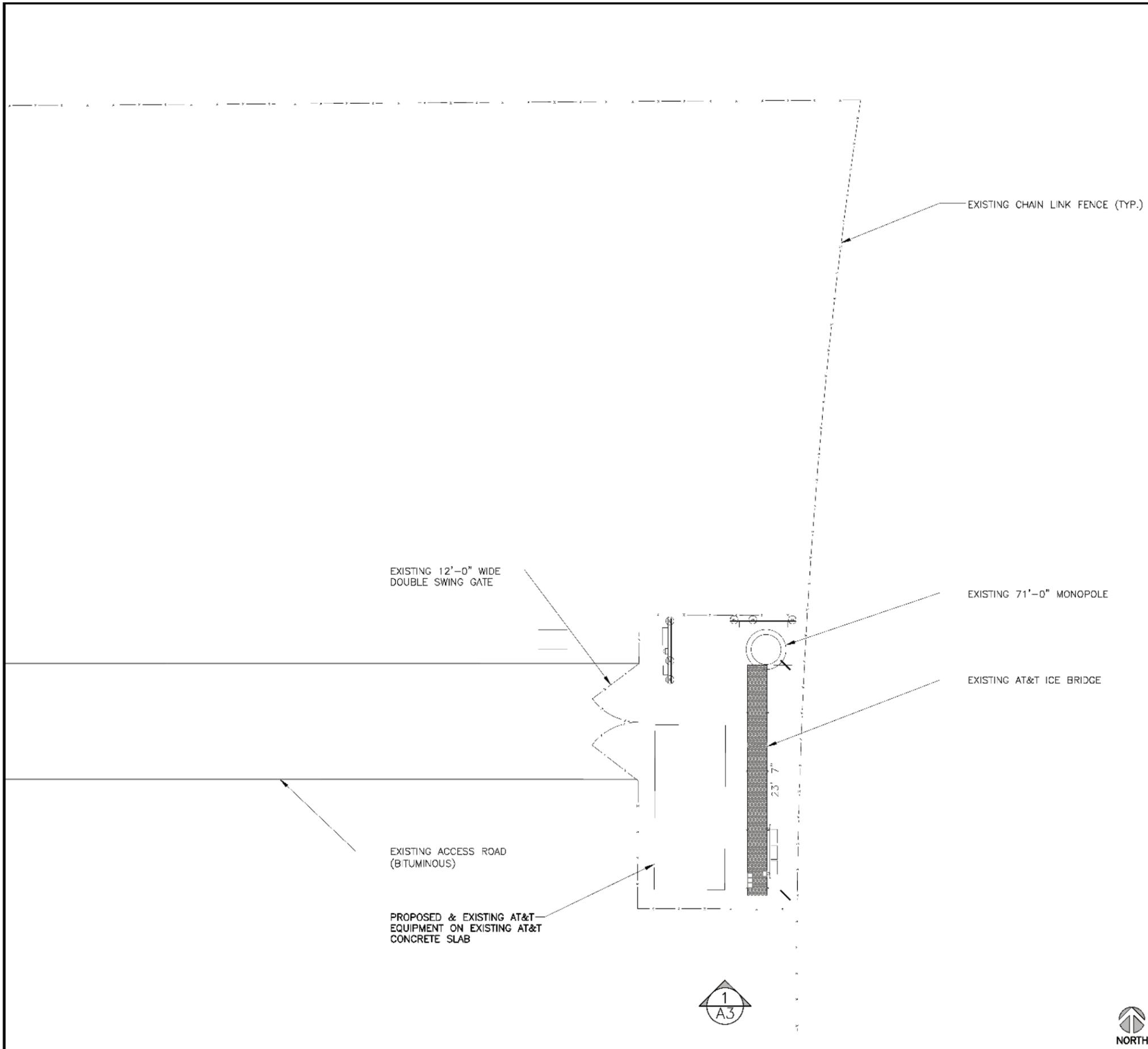
SHEET TITLE

**NOTES & SPECIFICATIONS**

SHEET NUMBER

**SP1**

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 2 2



SITE PHOTO 1 1



REVISIONS			
REV.	DATE	DESCRIPTION	INITIALS
A	04/11/16	ISSUED FOR REVIEW	GD
B	04/25/16	ISSUED FOR REVIEW	GD
0	05/13/16	FOR CONSTRUCTION	GD

NOT FOR CONSTRUCTION UNLESS LABELED AS CONSTRUCTION SET

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ARCHITECT UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRINT NAME: NESTOR POPOWYCH  
 SIGNATURE: *[Signature]*  
 DATE: 05/13/16 LICENSE # 17725  
 EXP. 06/30/16

LTE 2C / 3C  
 10104049  
 HWY 169 AND 1  
 10810 BLOOMINGTON FERRY RD  
 BLOOMINGTON, MN 55438

SHEET TITLE  
**COMPOUND PLAN**

SHEET NUMBER  
**A1**



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.



REVISIONS			
REV.	DATE	DESCRIPTION	INITIALS
A	04/11/16	ISSUED FOR REVIEW	GD
B	04/25/16	ISSUED FOR REVIEW	GD
0	05/13/16	FOR CONSTRUCTION	GD
NOT FOR CONSTRUCTION UNLESS LABELED AS CONSTRUCTION SET			

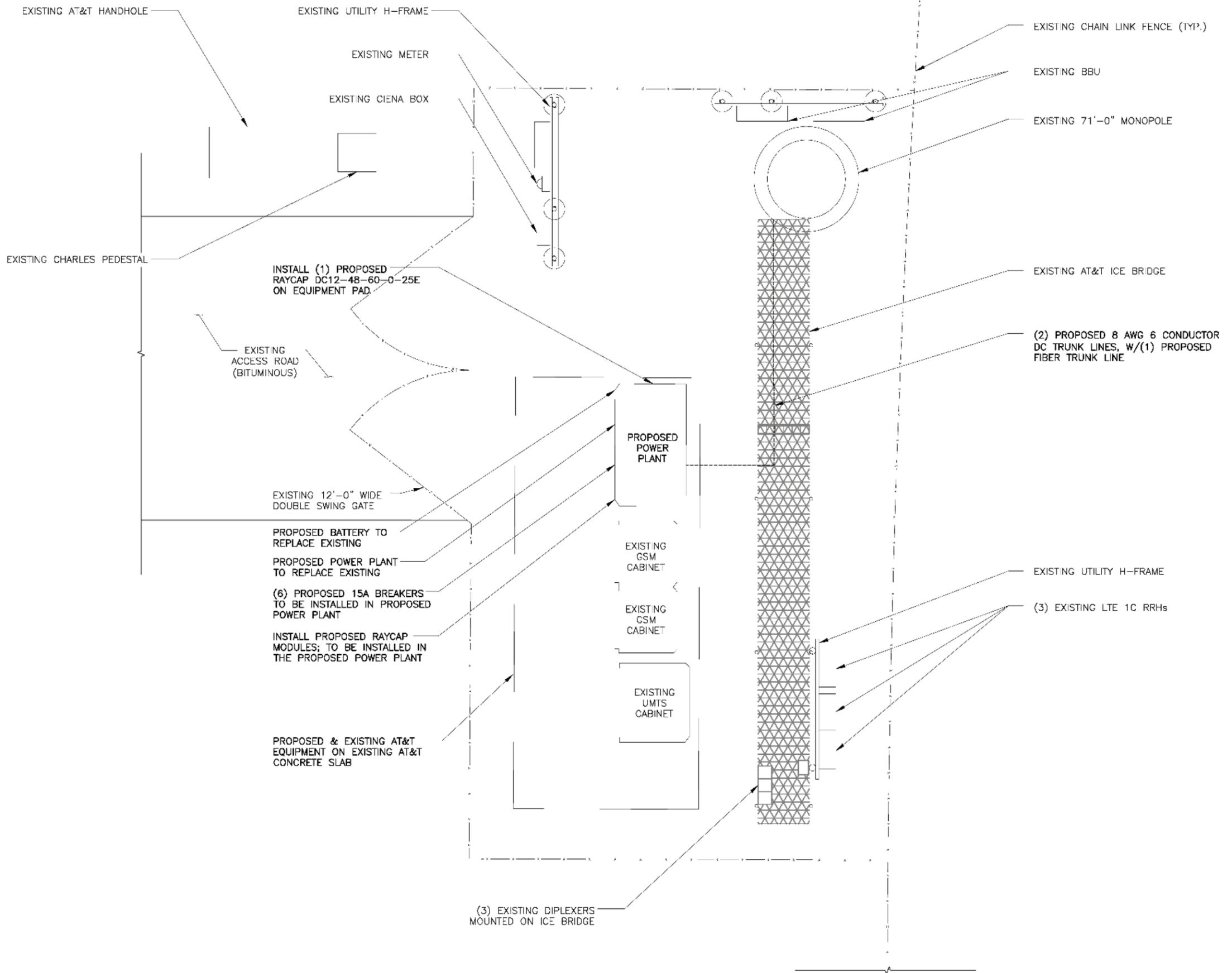
I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ARCHITECT UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRINT NAME: NESTOR POPOWYCH  
SIGNATURE:   
DATE: 05/13/16 LICENSE # 17725  
EXP. 06/30/16

LTE 2C / 3C  
10104049  
HWY 169 AND 1  
10810 BLOOMINGTON FERRY RD  
BLOOMINGTON, MN 55438

SHEET TITLE  
**EQUIPMENT PLAN**

SHEET NUMBER  
**A2**

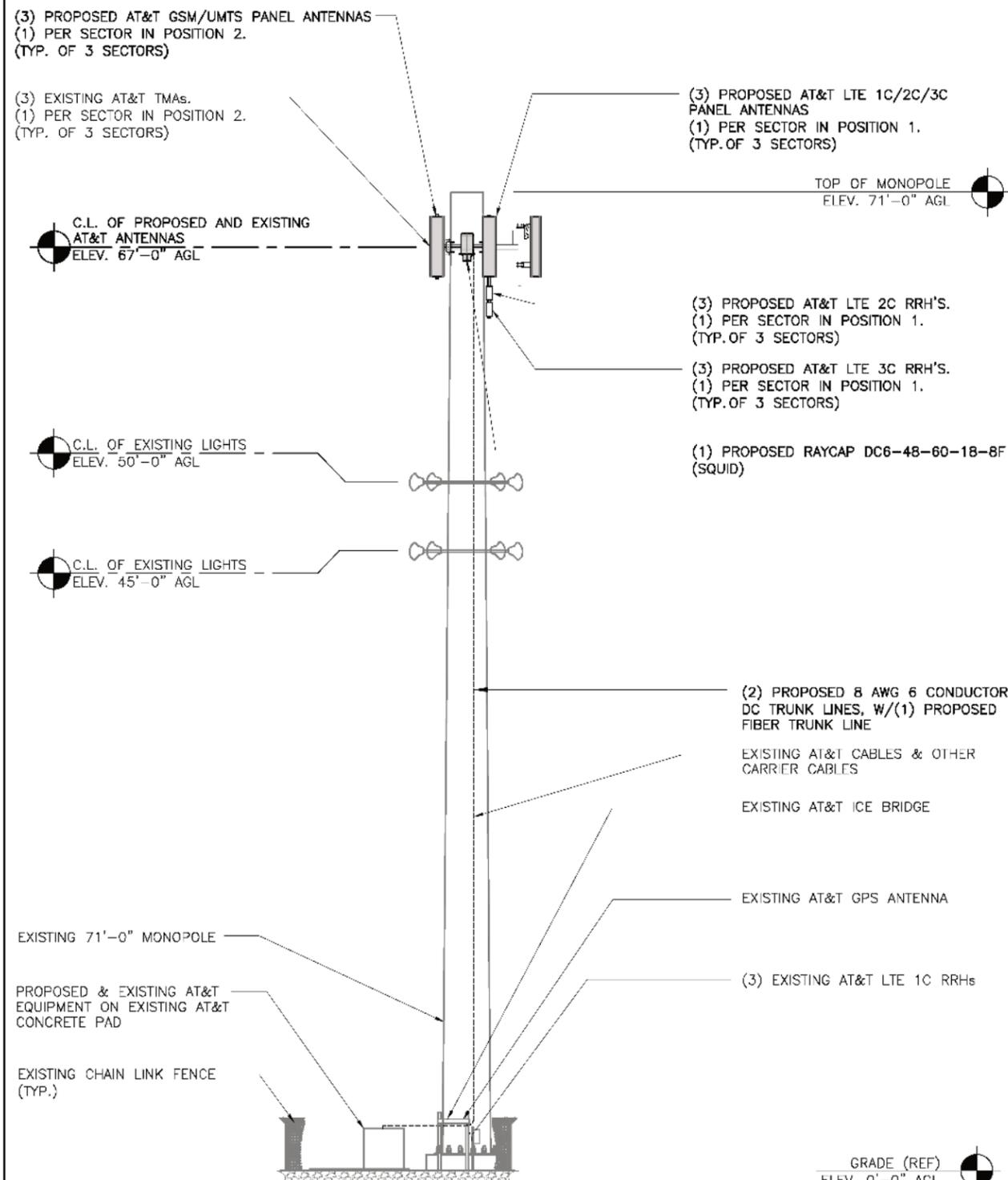
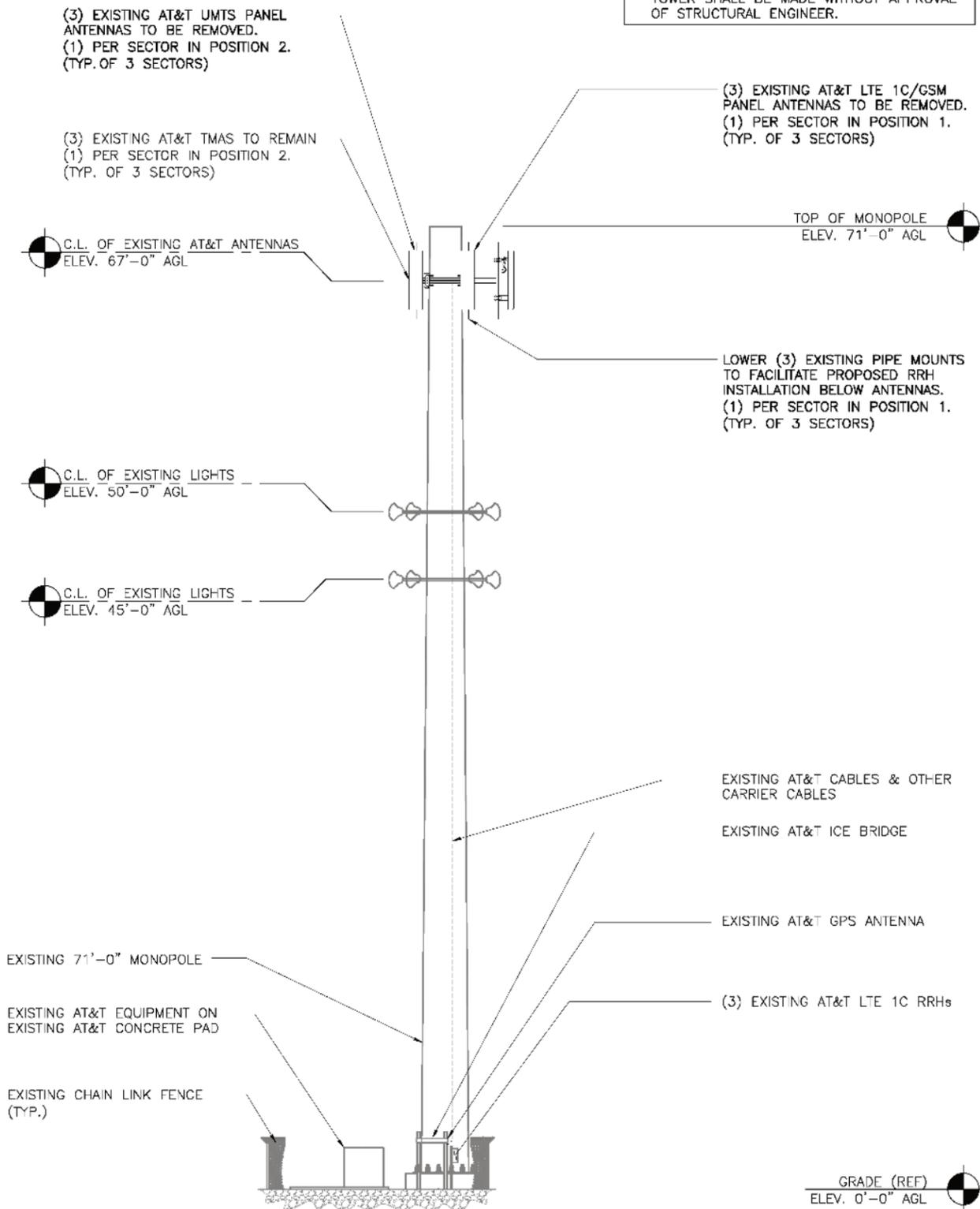


THE INFORMATION CONTAINED IN THIS SET OF CONSTRUCTION DOCUMENTS IS PROPRIETARY BY NATURE. ANY USE OR DISCLOSURE OTHER THAN THAT WHICH RELATES TO CARRIER SERVICES IS STRICTLY PROHIBITED.

- TOWER STRUCTURAL CALCULATIONS PREPARED BY OTHERS. CONTRACTOR TO VERIFY WITH PROJECT MANAGER TO OBTAIN A COPY
- CONTRACTOR TO REFER TO TOWER STRUCTURAL CALCULATIONS FOR ADDITIONAL LOADS. NO ERECTION OR MODIFICATION OF TOWER SHALL BE MADE WITHOUT APPROVAL OF STRUCTURAL ENGINEER.

NOTE:  
GENERAL CONTRACTOR SHALL MAKE SURE SAFETY CLIMB IS 100% FREE OF COAX AND MOUNTS AFTER INSTALL IS COMPLETE.

ALL PROPOSED ANTENNAS AND OTHER APPURTENANCES SUCH AS FEED LINES AND/OR JUMPERS, MOUNTING PIPES, BRACKETS, AND PLATFORMS SHALL BE PAINTED TO MATCH EXISTING CONDITIONS AND EXISTING AT&T TOWER (BROWN). DO NOT PAINT EXISTING & PROPOSED RRH'S.



REVISIONS				
REV.	DATE	DESCRIPTION	INITIALS	
A	04/11/16	ISSUED FOR REVIEW	GD	
B	04/25/16	ISSUED FOR REVIEW	GD	
0	05/13/16	FOR CONSTRUCTION	GD	

NOT FOR CONSTRUCTION UNLESS LABELED AS CONSTRUCTION SET

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ARCHITECT UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRINT NAME: NESTOR POPOWYCH

SIGNATURE:

DATE: 05/13/16 LICENSE # 17725 EXP. 06/30/18

LTE 2C / 3C  
10104049  
HWY 169 AND 1  
10810 BLOOMINGTON FERRY RD  
BLOOMINGTON, MN 55438

SHEET TITLE  
**TOWER ELEVATION**

SHEET NUMBER  
**A3**

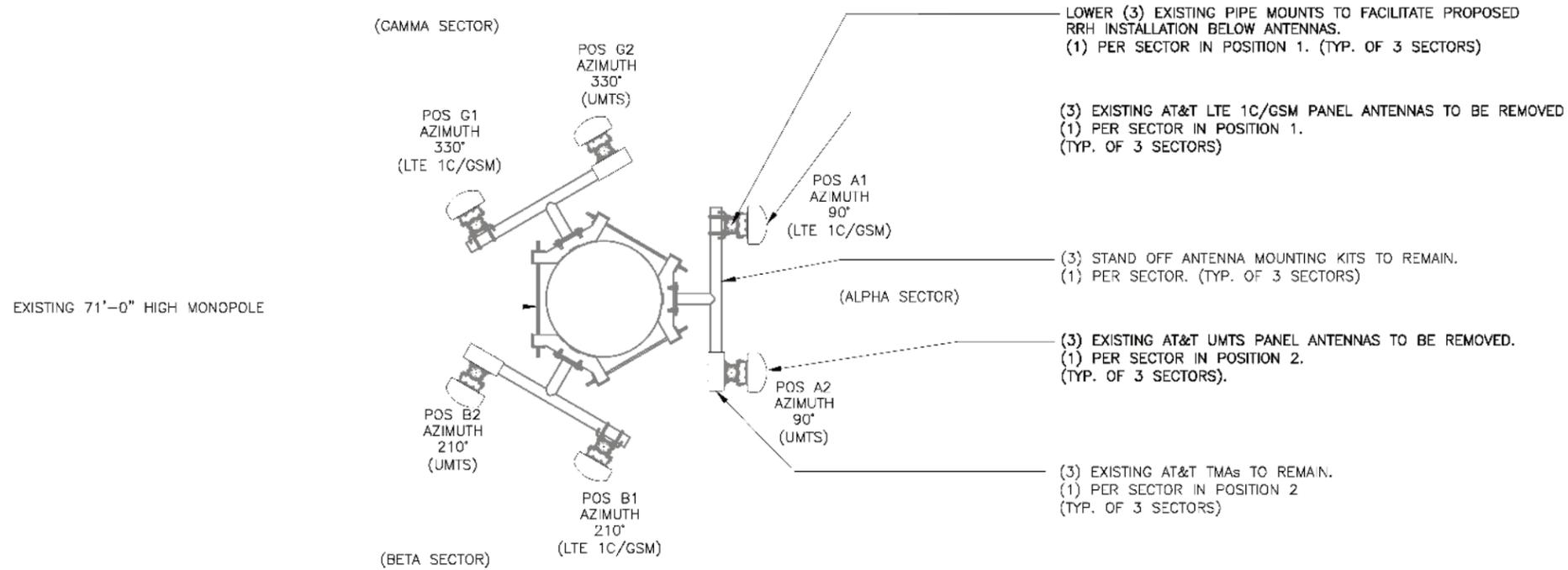
EXISTING TOWER ELEVATION

SCALE: 3/32" = 1'-0" 2

PROPOSED TOWER ELEVATION

SCALE: 3/32" = 1'-0" 1

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.



REVISIONS			
REV.	DATE	DESCRIPTION	INITIALS
A	04/11/16	ISSUED FOR REVIEW	GD
B	04/25/16	ISSUED FOR REVIEW	GD
0	05/13/16	FOR CONSTRUCTION	GD

NOT FOR CONSTRUCTION UNLESS LABELED AS CONSTRUCTION SET

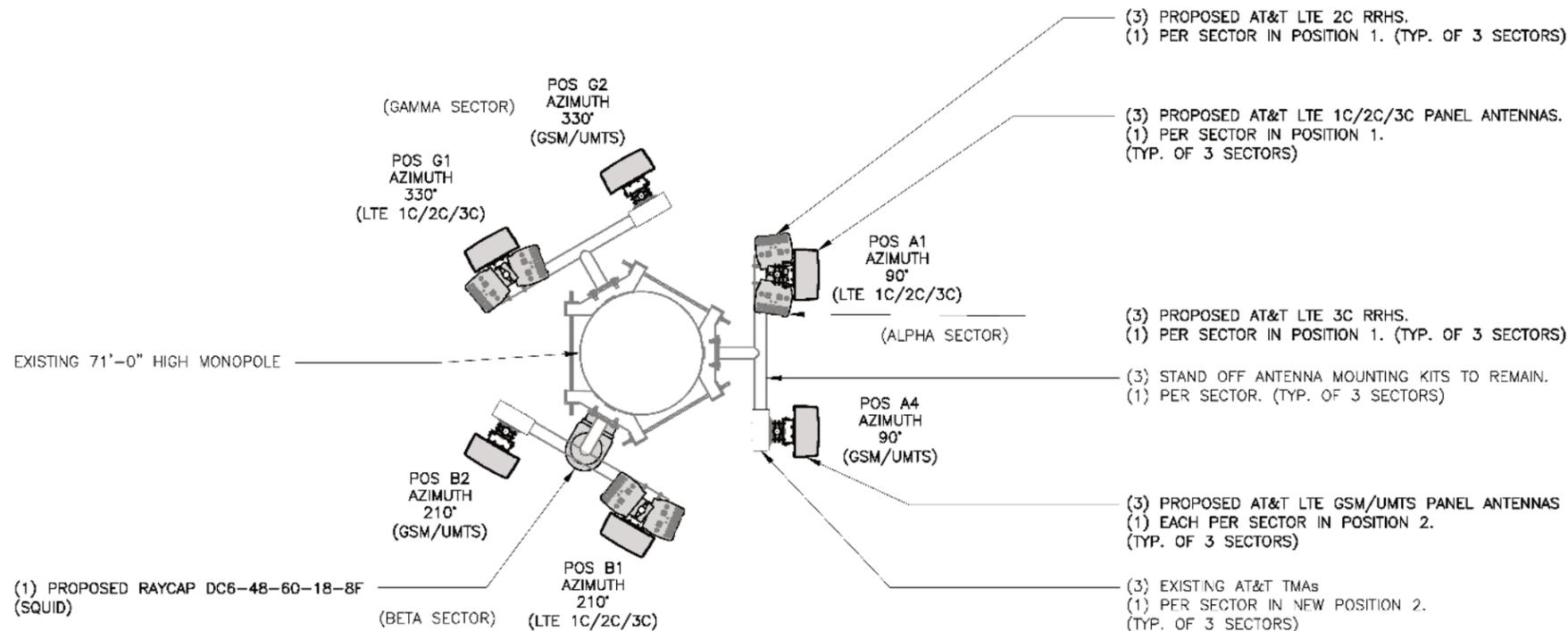
EXISTING ANTENNA PLAN

SCALE: 1/4" = 1'-0"



2

NOTE:  
 ADJUST ALL EXISTING TECHNOLOGIES TO PROPOSED AZIMUTHS 90/210/330



ALL PROPOSED ANTENNAS AND OTHER APPURTENANCES SUCH AS FEED LINES AND/OR JUMPERS, MOUNTING PIPES, BRACKETS, AND PLATFORMS SHALL BE PAINTED TO MATCH EXISTING CONDITIONS AND EXISTING AT&T TOWER (BROWN). DO NOT PAINT EXISTING & PROPOSED RRH'S.

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ARCHITECT UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRINT NAME: NESTOR POPOWYCH

SIGNATURE:

DATE: 05/13/16 LICENSE # 17725 EXP. 06/30/18

LTE 2C / 3C  
 10104049  
 HWY 169 AND 1  
 10810 BLOOMINGTON FERRY RD  
 BLOOMINGTON, MN 55438

SHEET TITLE  
**ANTENNA PLAN**

SHEET NUMBER  
**A4**

PROPOSED ANTENNA PLAN

SCALE: 1/4" = 1'-0"



1

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.



PROPOSED ANTENNA CONFIGURATION AND CABLE SCHEDULE										
SUPPLIED BY AT&T WIRELESS, FROM 2C RF CONFIG DATED 04/13/16 AND A 3C RF CONFIG DATED 04/13/16, BY KSHITIJ SURYAWANSHI										
SECTOR	POS	TECH	ANTENNA	ANTENNA ☐ HEIGHT	AZIMUTH	TMA/RRU MODEL#	DC SURGE AND DISTRIBUTION	CABLE TYPE	CABLE LENGTH (+20%)	DOWNTILTS
A	1	LTE 1C/2C/3C	QUINTEL (N) QS4658-3	67' AGL	90°	RRH2x40-AWS+RDEM (N) RRH4x25-WCS-4R (N)	(1) RAYCAP (N) DC6-48-60-18-8F	(2) DC TRUNK LINE (N) (1) DC TRUNK LINE (X) (1) FIBER (X) (1) FIBER (N)	99'	0
	2	GSM/UMTS	QUINTEL (N) QS4658-3		90°	TT19-08BP111-001 (X)		(4) LDF (X) 1-5/8" COAX		0
B	1	LTE 1C/2C/3C	QUINTEL (N) QS4658-3	67' AGL	210°	RRH2x40-AWS+RDEM (N) RRH4x25-WCS-4R (N)	(1) RAYCAP (N) DC6-48-60-18-8F	DC TRUNK (SHARED WITH A1) FIBER (SHARED WITH A1)	99'	0
	2	GSM/UMTS	QUINTEL (N) QS4658-3		210°	TT19-08BP111-001 (X)		(4) LDF (X) 1-5/8" COAX		0
C	1	LTE 1C/2C/3C	QUINTEL (N) QS4658-3	67' AGL	330°	RRH2x40-AWS+RDEM (N) RRH4x25-WCS-4R (N)	(1) RAYCAP (N) DC6-48-60-18-8F	DC TRUNK (SHARED WITH A1) FIBER (SHARED WITH A1)	99'	0
	2	GSM/UMTS	QUINTEL (N) QS4658-3		330°	TT19-08BP111-001 (X)		(4) LDF (X) 1-5/8" COAX		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  
(XR) =  
EXISTING/RELOCATED  
(E) = ELECTRICAL  
(M) = MECH-ANICAL

REVISIONS			
REV.	DATE	DESCRIPTION	INITIALS
A	04/11/16	ISSUED FOR REVIEW	GD
B	04/25/16	ISSUED FOR REVIEW	GD
0	05/13/16	FOR CONSTRUCTION	GD

NOT FOR CONSTRUCTION UNLESS  
LABELED AS CONSTRUCTION SET

I HEREBY CERTIFY THAT THIS PLAN,  
SPECIFICATION, OR REPORT WAS  
PREPARED BY ME OR UNDER MY  
DIRECT SUPERVISION AND THAT I AM  
A DULY LICENSED PROFESSIONAL  
ARCHITECT UNDER THE LAWS OF THE  
STATE OF MINNESOTA.

PRINT NAME: NESTOR POPOWYCH

SIGNATURE:

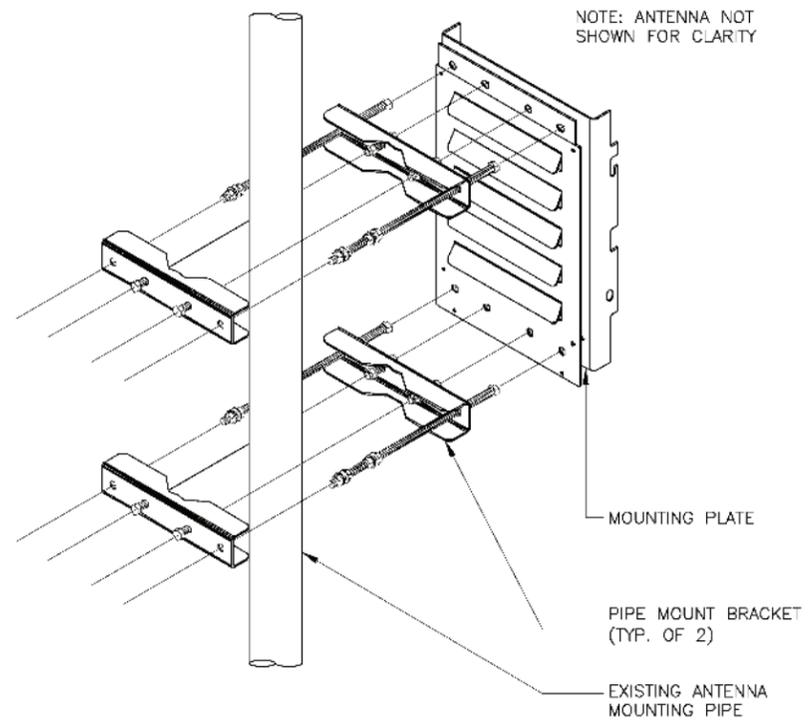
DATE: 05/13/16 LICENSE # 17725  
EXP. 06/30/18

LTE 2C / 3C  
10104049  
HWY 169 AND 1  
10810 BLOOMINGTON FERRY RD  
BLOOMINGTON, MN 55438

SHEET TITLE  
**ANTENNA &  
CABLE  
CONFIGURATION**

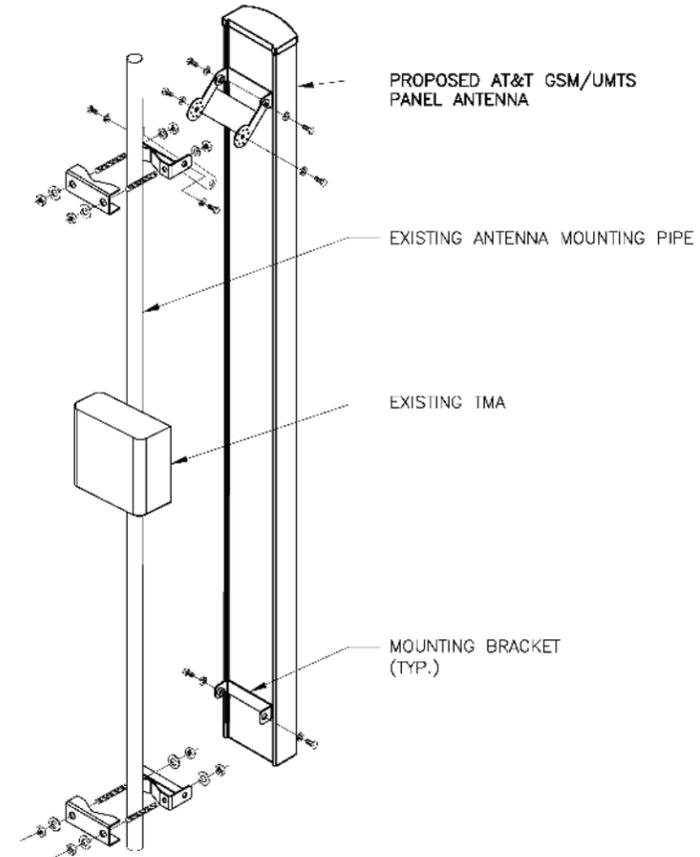
SHEET NUMBER  
**A5**

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.



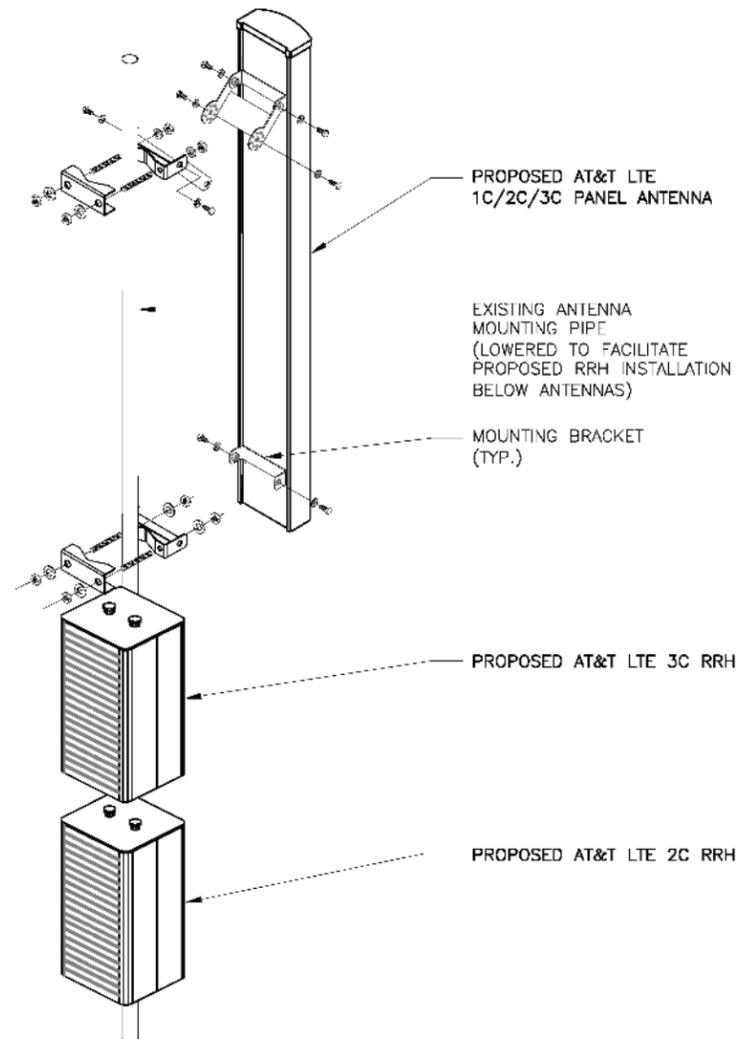
RRH MOUNTING DETAIL

NOT TO SCALE 6



GSM/UMTS ANTENNA MOUNTING DETAIL

NOT TO SCALE 4



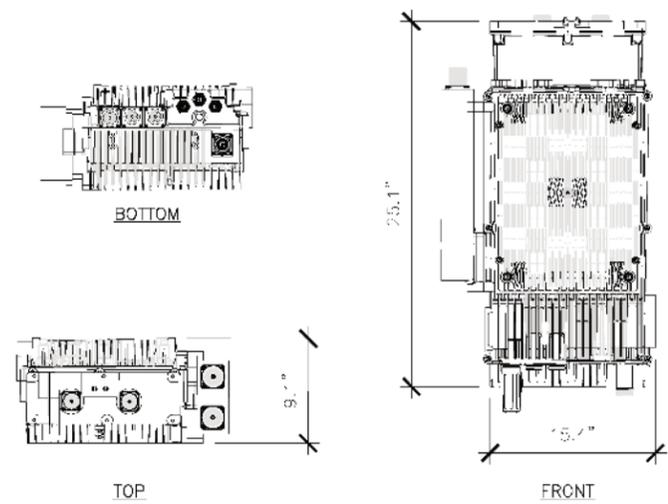
LTE 1C/2C/3C ANTENNA AND RRH MOUNTING DETAIL

NOT TO SCALE 2

ALCATEL-LUCENT RRH2X40-AWS+RDEM

DIMENSIONS, HXWXD: 640x390x230 (MM)  
(25.1"x15.4"x9.1")

WEIGHT, WITH SOLAR SHIELD AND PRE-MOUNTED BRACKETS: 21.7 KG (47.6 LBS)



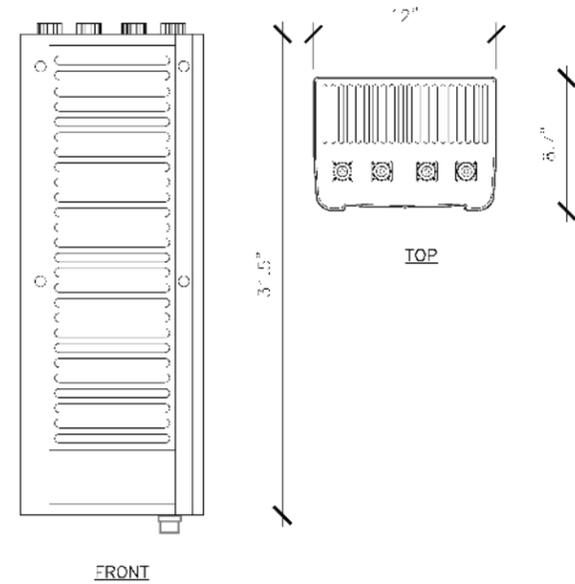
LTE 2C RRH DETAIL

NOT TO SCALE 5

ALCATEL-LUCENT RRH4X25-WCS-4R

DIMENSIONS, HxWxD: 31.5"x12"x8.7"

WEIGHT, WITHOUT MOUNTING KIT: 31.5 kg (70 lbs)



LTE 3C RRH DETAIL

NOT TO SCALE 3

QUINTEL ANTENNA QS4658-3

DIMENSIONS, HXWXD: 52"x12"x9"

SURVIVAL WIND SPEED: >150 MPH

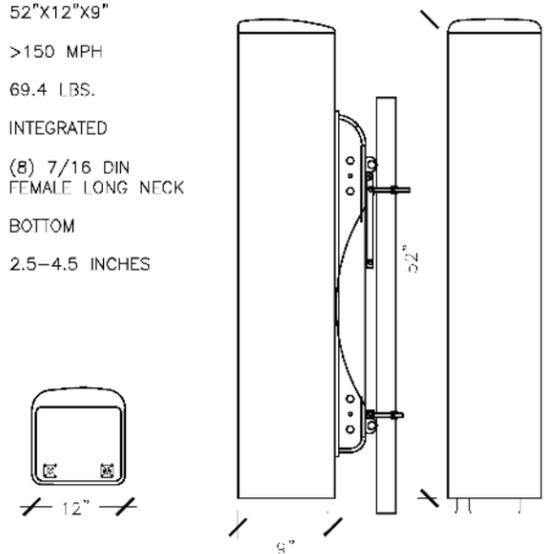
WEIGHT, WITHOUT MOUNTING: 69.4 LBS.

RET SYSTEM WEIGHT: INTEGRATED

CONNECTOR: (8) 7/16 DIN FEMALE LONG NECK

CONNECTOR POSITION: BOTTOM

MOUNTING POLE: 2.5-4.5 INCHES



LTE 2C/3C ANTENNA DETAIL

NOT TO SCALE 1



REVISIONS			
REV.	DATE	DESCRIPTION	INITIALS
A	04/11/16	ISSUED FOR REVIEW	GD
B	04/25/16	ISSUED FOR REVIEW	GD
0	05/13/16	FOR CONSTRUCTION	GD

NOT FOR CONSTRUCTION UNLESS LABELED AS CONSTRUCTION SET

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ARCHITECT UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRINT NAME: NESTOR POPOWYCH

SIGNATURE:

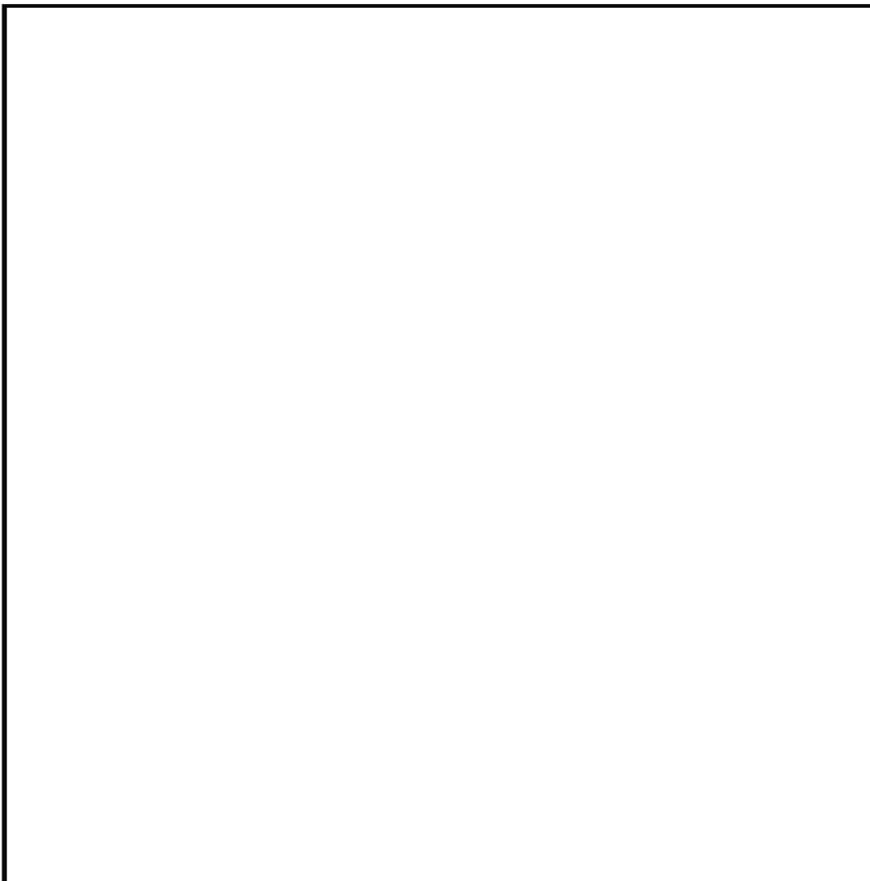
DATE: 05/13/16 LICENSE # 17725 EXP. 06/30/18

LTE 2C / 3C  
10104049  
HWY 169 AND 1  
10810 BLOOMINGTON FERRY RD  
BLOOMINGTON, MN 55438

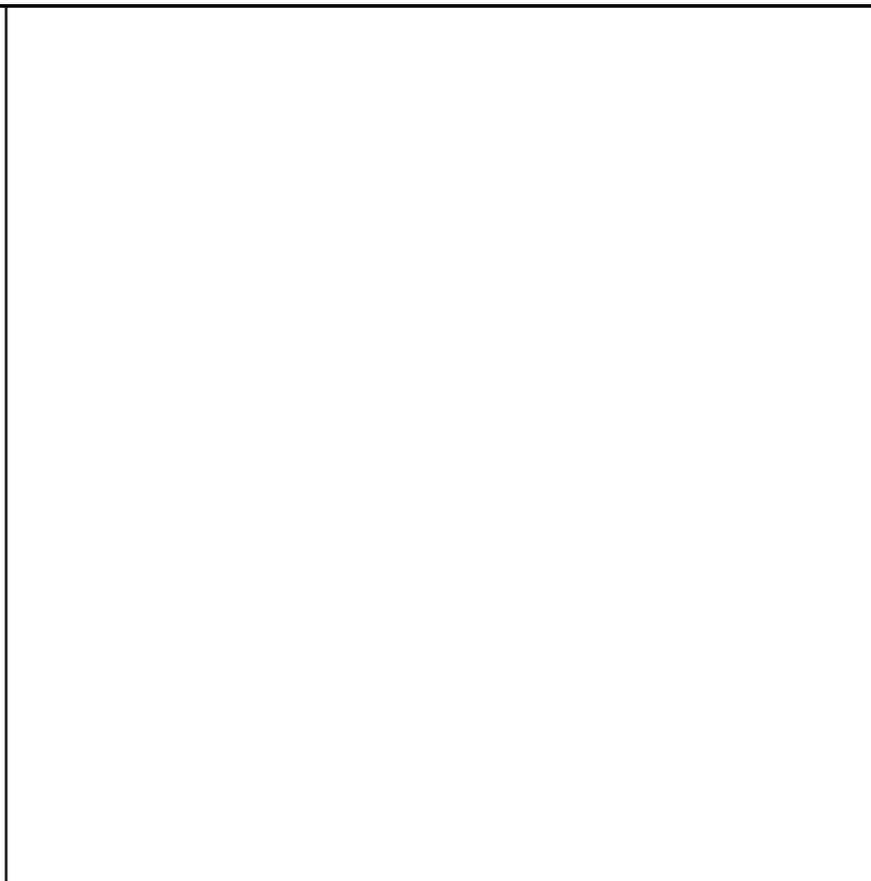
SHEET TITLE  
ANTENNA,  
RRH AND  
MOUNTING  
DETAILS

SHEET NUMBER  
**A6**

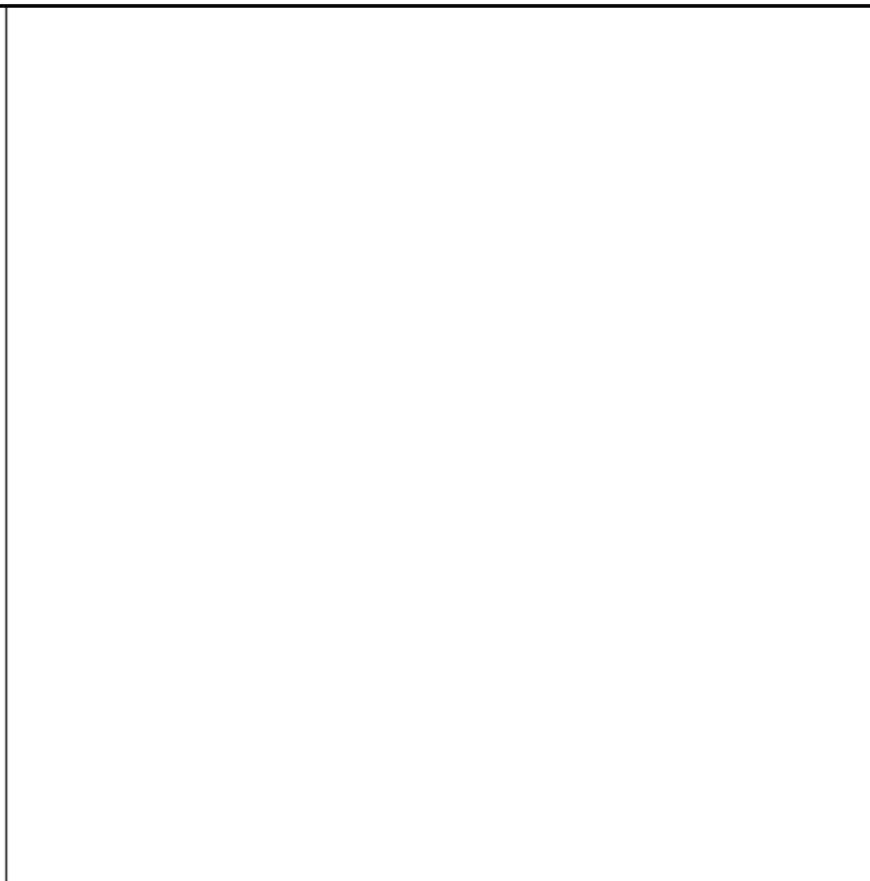
THE INFORMATION CONTAINED IN THIS SET OF CONSTRUCTION DOCUMENTS IS PROPRIETARY BY NATURE. ANY USE OR DISCLOSURE OTHER THAN THAT WHICH RELATES TO CARRIER SERVICES IS STRICTLY PROHIBITED.



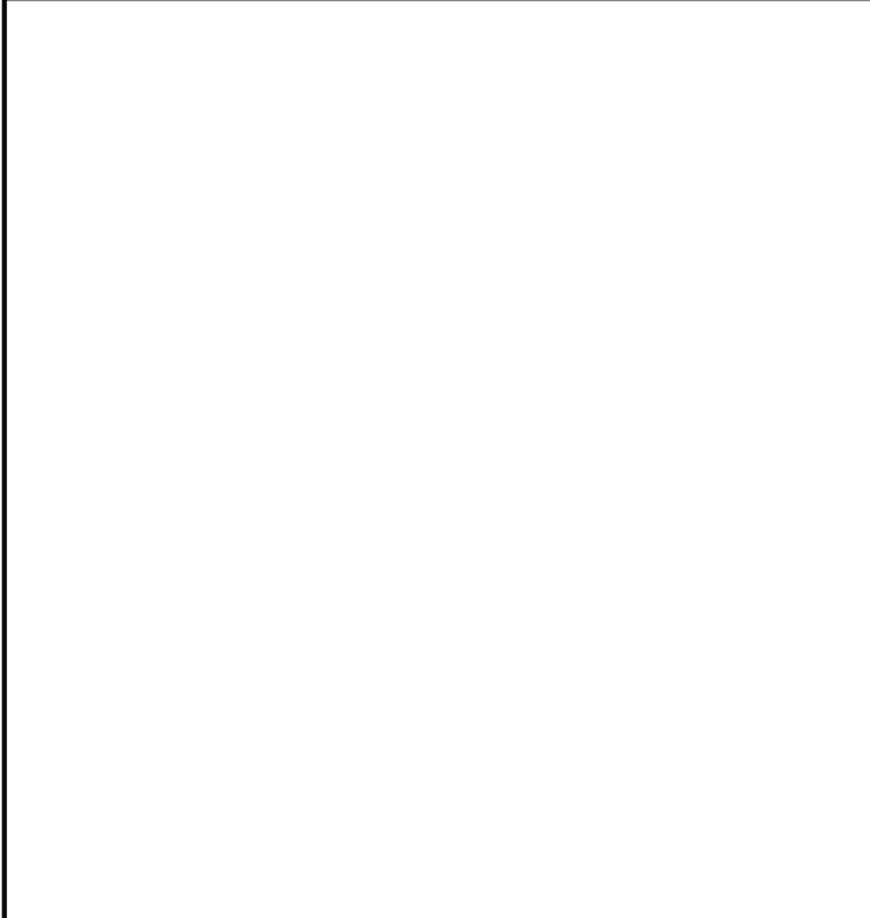
NOT USED NOT TO SCALE 6



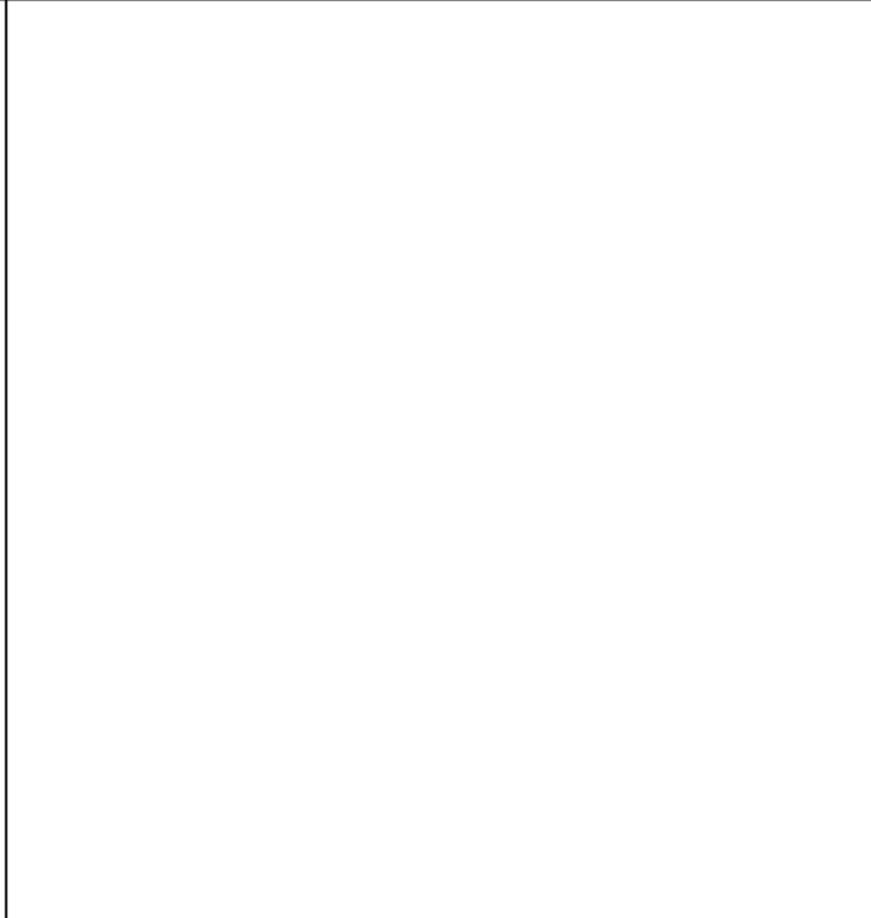
NOT USED NOT TO SCALE 4



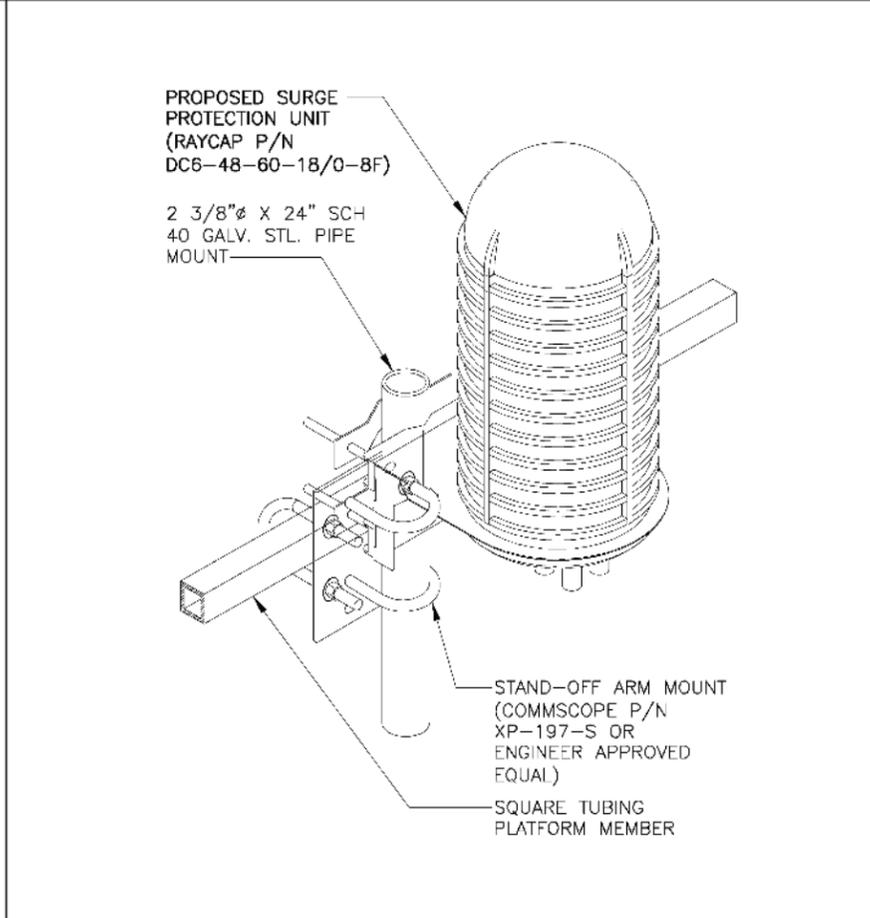
NOT USED NOT TO SCALE 2



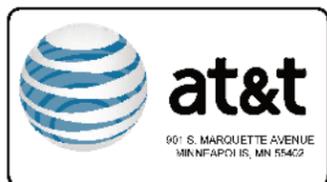
NOT USED NOT TO SCALE 5



NOT USED NOT TO SCALE 3



SQUID DETAIL NOT TO SCALE 1



REVISIONS			
REV.	DATE	DESCRIPTION	INITIALS
A	04/11/16	ISSUED FOR REVIEW	GD
B	04/25/16	ISSUED FOR REVIEW	GD
0	05/13/16	FOR CONSTRUCTION	GD

NOT FOR CONSTRUCTION UNLESS LABELED AS CONSTRUCTION SET

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ARCHITECT UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRINT NAME: NESTOR POPOWYCH

SIGNATURE: *[Signature]*

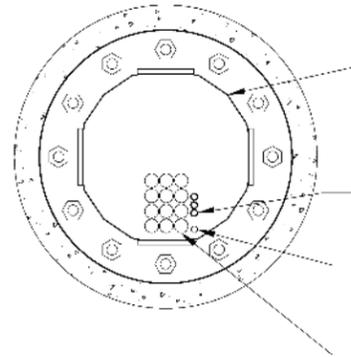
DATE: 05/13/16 LICENSE # 17725 EXP. 06/30/16

LTE 2C / 3C  
10104049  
HWY 169 AND 1  
10810 BLOOMINGTON FERRY RD  
BLOOMINGTON, MN 55438

SHEET TITLE  
**ANTENNA,  
RRH AND  
MOUNTING  
DETAILS**

SHEET NUMBER  
**A7**

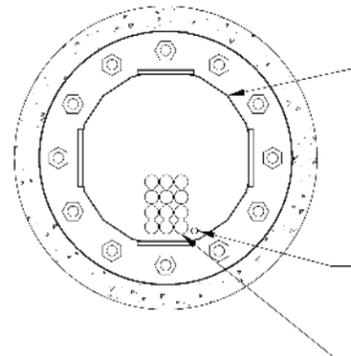
THE INFORMATION CONTAINED IN THIS SET OF CONSTRUCTION DOCUMENTS IS PROPRIETARY BY NATURE. ANY USE OR DISCLOSURE OTHER THAN THAT WHICH RELATES TO CARRIER SERVICES IS STRICTLY PROHIBITED.



- EXISTING MONOPOLE
- (2) PROPOSED AT&T 8 AWG 6 CONDUCTOR DC TRUNK LINES, W/(1) PROPOSED FIBER TRUNK LINE
- (1) EXISTING AT&T 8 AWG 6 DC TRUNK LINE W/(1) FIBER CABLE TO REMAIN
- (12) EXISTING AT&T 1-5/8" COAX CABLES TO REMAIN

**PROPOSED CABLE ROUTING PLAN**

SCALE: 1/4" = 1'-0" **6**



- EXISTING MONOPOLE
- (1) EXISTING AT&T 8 AWG 6 DC TRUNK LINE W/(1) FIBER CABLE TO REMAIN
- (12) EXISTING AT&T 1-5/8" COAX CABLES TO REMAIN

**EXISTING CABLE ROUTING PLAN**

SCALE: 1/4" = 1'-0" **5**

1. CONTRACTOR IS TO REFER TO AT&T'S MOST CURRENT RADIO FREQUENCY DATA SHEET (RFDS) PRIOR TO CONSTRUCTION.
2. 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.
3. CONTRACTOR SHALL VERIFY THE HEIGHT OF THE ANTENNA WITH THE AT&T WIRELESS PROJECT MANAGER.
4. VERIFY TYPE AND SIZE OF TOWER LEG PRIOR TO ORDERING ANY ANTENNA MOUNT.
5. UNLESS NOTED OTHERWISE THE CONTRACTOR MUST PROVIDE ALL MATERIAL NECESSARY.
6. ANTENNA AZIMUTHS ARE DEGREES OFF OF TRUE NORTH, BEARING CLOCKWISE, IN WHICH ANTIENNA FACE IS DIRECTED. ALL ANTIENNAS (AND SUPPORTING STRUCTURES AS PRACTICAL) SHALL BE ACCURATELY ORIENTED IN THE SPECIFIED DIRECTION.
7. CONTRACTOR SHALL VERIFY ALL RF INFORMATION PRIOR TO CONSTRUCTION.
8. 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.
9. CABLE LENGTHS WERE DETERMINED BASED ON THE DESIGN DRAWING. CONTRACTOR TO VERIFY ACTUAL LENGTH DURING PRE-CONSTRUCTION WALK.
10. 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	
NO	LOCATIONS
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.

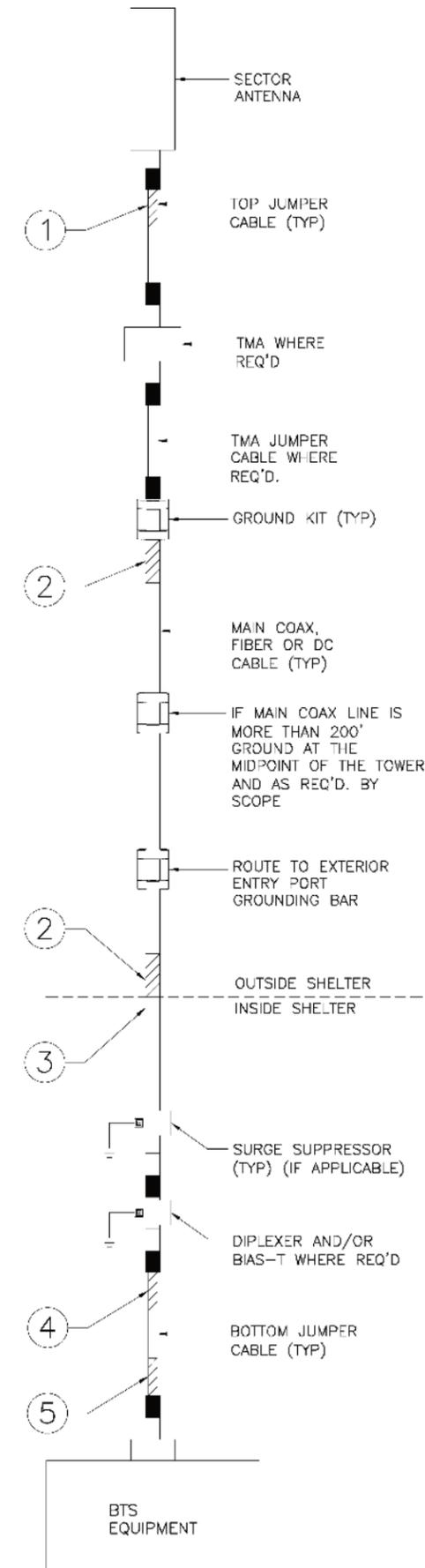
**CABLE MARKING DIAGRAM**

NO SCALE **3**

1. THE ANTENNA SYSTEM COAX SHALL BE LABELED WITH VINYL TAPE.
2. 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.
3. USING COLOR BANDS ON THE CABLES, MARK ALL RF CABLE BY SECTOR AND CABLE NUMBER AS SHOWN ON "CABLE COLOR CHART".
4. WHEN AN EXISTING COAXIAL LINE THAT IS INTENDED TO BE A SHARED LINE BETWEEN TECHNOLOGIES IS ENCOUNTERED, THE CONTRACTOR SHALL REMOVE THE EXISTING COLOR CODING SCHEME AND REPLACE IT WITH THE COLOR CODING STANDARD. IN THE ABSENCE OF AN EXISTING COLOR CODING AND TAGGING SCHEME, OR WHEN INSTALLING PROPOSED COAXIAL CABLES, THIS GUIDELINE SHALL BE IMPLEMENTED AT THAT SITE REGARDLESS OF TECHNOLOGY.
5. 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.
6. 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.
7. ALL COLOR CODES SHALL BE INSTALLED SO AS TO ALIGN NEATLY WITH ONE ANOTHER FROM SIDE-TO-SIDE.
8. IF EXISTING CABLES AT THE SITE ALREADY HAVE A COLOR CODING SCHEME AND THEY ARE NOT INTENDED TO BE REUSED OR SHARED WITH THE NEW TECHNOLOGY, THE EXISTING COLOR CODING SCHEME SHALL REMAIN UNTOUCHED.

**CABLE MARKING NOTES**

NO SCALE **2**



**CABLE COLOR CODING DIAGRAM**

NO SCALE **1**



REVISIONS			
REV.	DATE	DESCRIPTION	INITIALS
A	04/11/16	ISSUED FOR REVIEW	GD
B	04/25/16	ISSUED FOR REVIEW	GD
0	05/13/16	FOR CONSTRUCTION	GD

NOT FOR CONSTRUCTION UNLESS LABELED AS CONSTRUCTION SET

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ARCHITECT UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRINT NAME: NESTOR POPOWYCH  
 SIGNATURE: *[Signature]*  
 DATE: 05/13/16 LICENSE # 17725  
 EXP. 06/30/16

LTE 2C / 3C  
 10104049  
 HWY 169 AND 1  
 10810 BLOOMINGTON FERRY RD  
 BLOOMINGTON, MN 55438

SHEET TITLE  
**CABLE NOTES & COLOR CODING**

SHEET NUMBER  
**A8**

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.



901 S. MARQUETTE AVENUE  
MINNEAPOLIS, MN 55402



540 W. MADISON ST.  
16TH FLOOR  
CHICAGO, IL 60661  
WWW.SBCW.COM  
312.865.4977



540 W. MADISON ST.  
15TH FLOOR  
CHICAGO, IL 60661  
WWW.SBCW.COM  
312.865.4977

REVISIONS			
REV.	DATE	DESCRIPTION	INITIALS
A	04/11/16	ISSUED FOR REVIEW	GD
B	04/25/16	ISSUED FOR REVIEW	GD
0	05/13/16	FOR CONSTRUCTION	GD

NOT FOR CONSTRUCTION UNLESS LABELED AS CONSTRUCTION SET

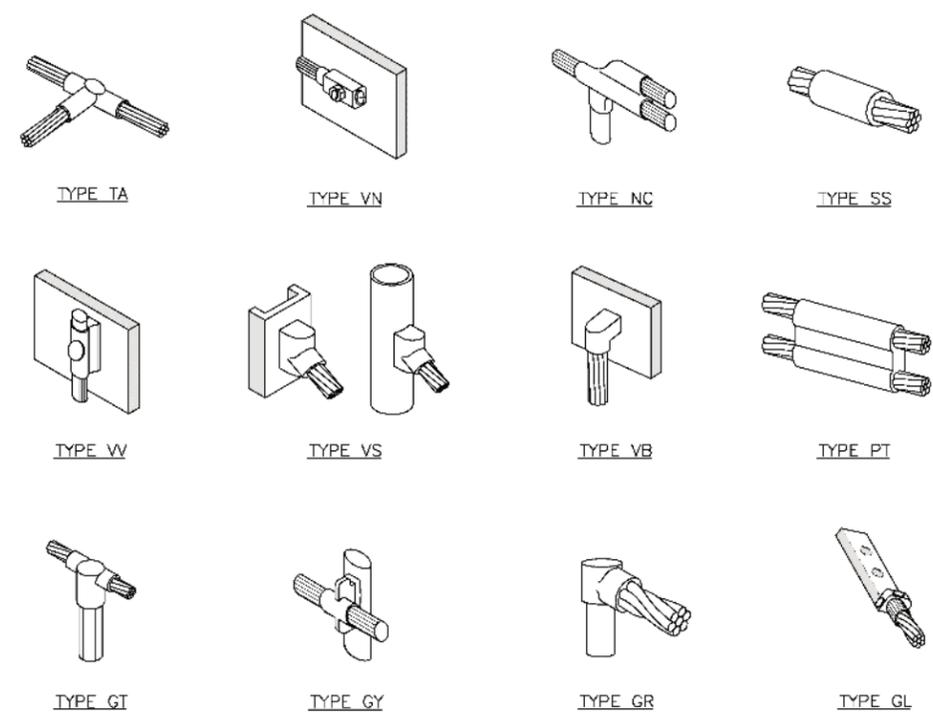
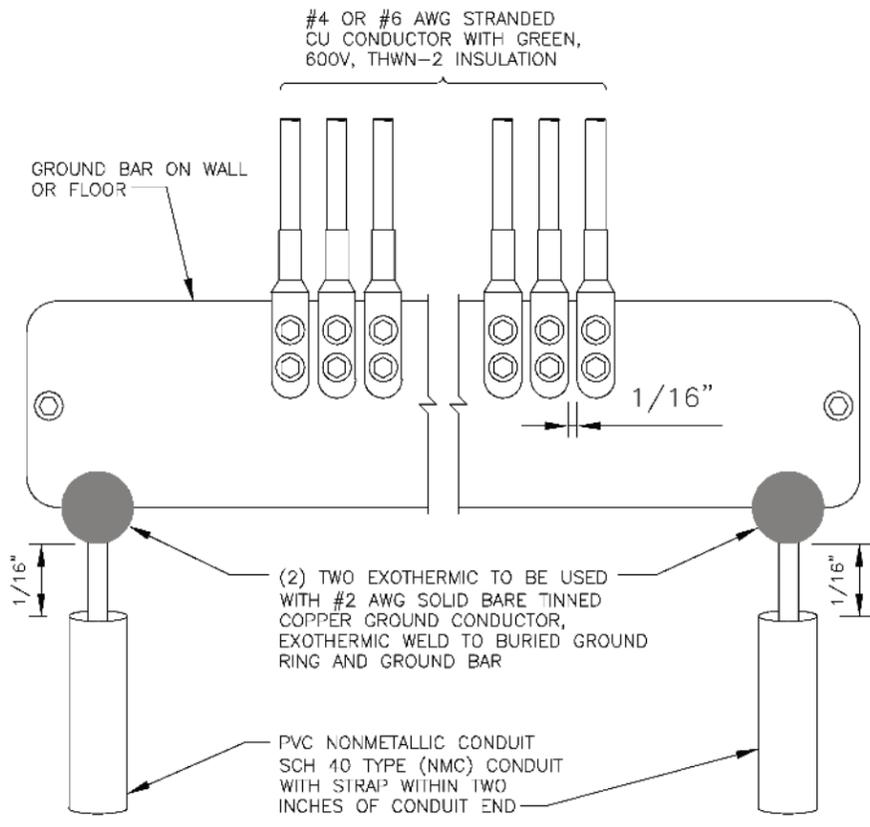
I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ARCHITECT UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRINT NAME: NESTOR POPOWYCH  
SIGNATURE:   
DATE: 05/13/16 LICENSE # 17725 EXP. 06/30/18

LTE 2C / 3C  
10104049  
HWY 169 AND 1  
10810 BLOOMINGTON FERRY RD  
BLOOMINGTON, MN 55438

SHEET TITLE  
**GROUNDING DETAILS**

SHEET NUMBER  
**E1**

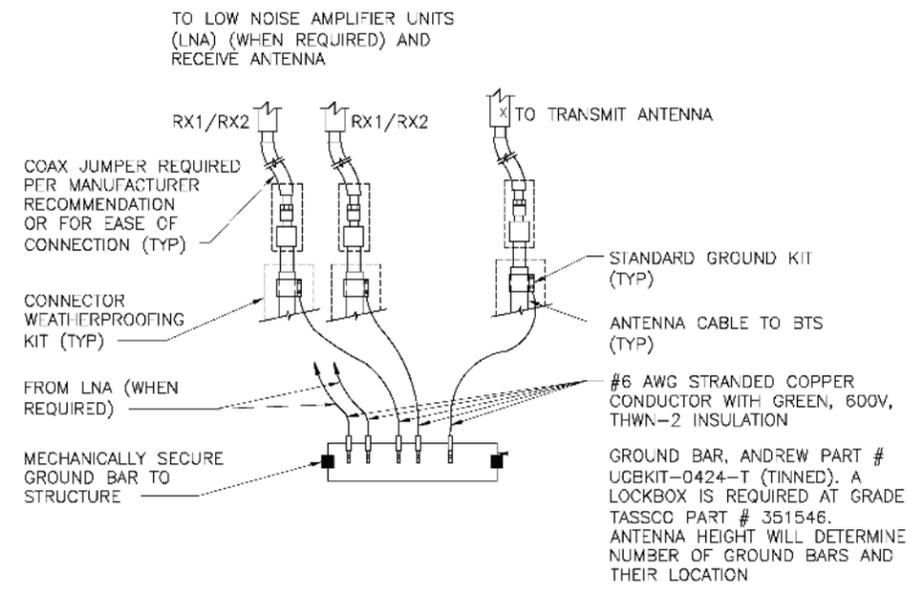
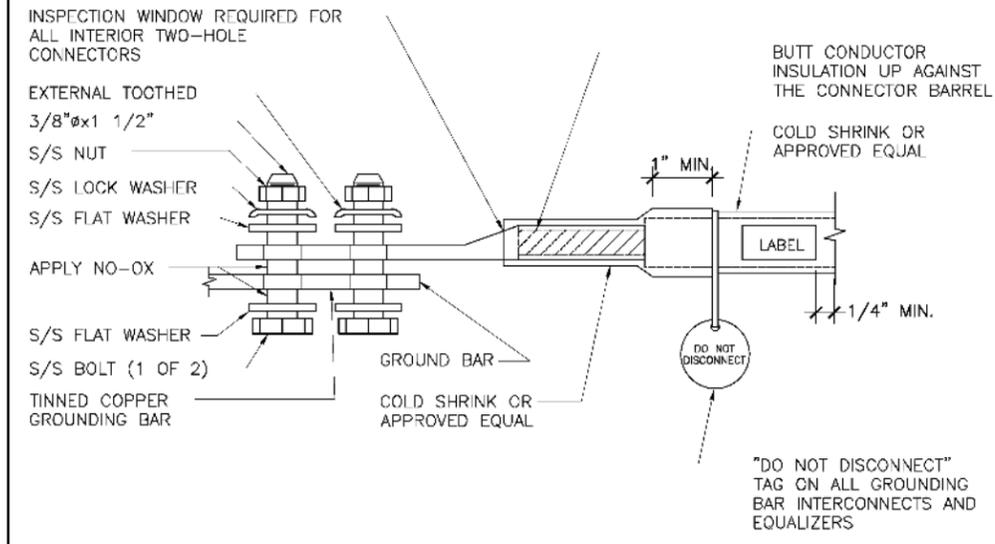
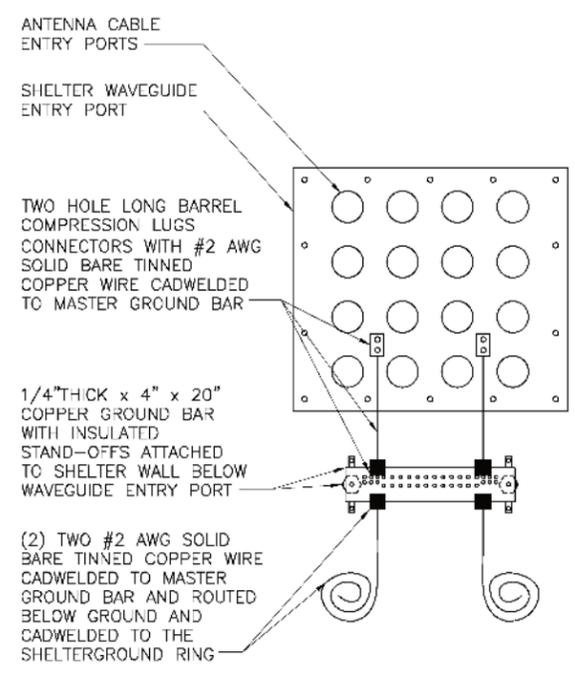


**GROUND BAR DETAILS**

NO SCALE 5

**CALDWELL DETAILS**

NO SCALE 4



**COAX GROUND KIT DETAIL**

NO SCALE 3

**EXTERIOR TWO HOLE LUG DETAIL**

NO SCALE 2

**ANTENNA GROUND BAR DETAIL**

NO SCALE 1

**EXHIBIT F – RENT SCHEDULE**

Year	Annual Rent
2017	\$44,411.85
2018	\$46,632.44
2019	\$48,964.06
2020	\$51,412.27
2021	\$53,982.88
2022	\$56,682.02
2023	\$59,516.13
2024	\$62,491.94
2025	\$65,616.54
2026	\$68,897.37
2027	\$72,342.24
2028	\$75,959.35