



# DN04234A

## APPROVAL SIGNATURE BLOCK

THE FOLLOWING PARTIES HAVE REVIEWED THESE DOCUMENTS.

ALL DOCUMENTS ARE SUBJECT TO REVIEW BY THE LOCAL ZONING/BUILDING DEPARTMENTS AND MAY POSE CHANGES OR MODIFICATIONS.

\_\_\_\_\_  
PROJECT MANAGER (PRINT)

\_\_\_\_\_  
PROJECT MANAGER (PRINT)

\_\_\_\_\_  
DATE

- APPROVED
- REJECTED

\_\_\_\_\_  
RF ENGINEER (PRINT)

\_\_\_\_\_  
RF ENGINEER

\_\_\_\_\_  
DATE

- APPROVED
- REJECTED

\_\_\_\_\_  
SITE ACQUISITION (PRINT)

\_\_\_\_\_  
SITE ACQUISITION

\_\_\_\_\_  
DATE

- APPROVED
- REJECTED

\_\_\_\_\_  
TMO QUALITY ASSURANCE (PRINT)

\_\_\_\_\_  
TMO QUALITY ASSURANCE

\_\_\_\_\_  
DATE

- APPROVED
- REJECTED



**GENERAL NOTES**

1. ALL PLANS AND SPECIFICATIONS ARE INTENDED TO INCLUDE ALL ITEMS REQUIRED FOR THE PROPER EXECUTION AND COMPLETION OF THIS WORK. ANY ITEM OR WORK MENTIONED IN THE SPECIFICATION AND NOT SHOWN ON THE DRAWINGS, OR SHOWN ON THE DRAWINGS AND NOT MENTIONED IN THE SPECIFICATIONS SHALL BE PROVIDED BY THE CONTRACTOR AS IF INCLUDED IN BOTH.
2. THE DOCUMENTS FOR THIS PROJECT CONSIST OF DRAWINGS, AND SPECIFICATIONS PREPARED BY TRILEAF, INC.
3. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR SECURING ALL NECESSARY CONTRACT DOCUMENTS, CONSTRUCTION DOCUMENTS, SPECIFICATIONS AND SHOP DRAWINGS, AND ANY OTHER INFORMATION REQUIRED TO COORDINATE ALL INTENDED WORK.
4. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR SECURING ALL REQUIRED PERMITS, BONDS, OCCUPANCY PERMITS AND FEES.
5. ALL WORK NOTED "BY OTHER" OR "N.I.C." IS TO BE THE RESPONSIBILITY OF THE OWNER AND IS NOT TO BE PART OF THE GENERAL CONTRACTORS, CONSTRUCTION AGREEMENT. THE GENERAL CONTRACTOR SHALL COOPERATE WITH OWNER TO COORDINATE SAID WORK WITH OWNERS CONTRACTOR.
6. THE GENERAL CONTRACTOR SHALL PROVIDE ALL MATERIAL, AND LABOR NECESSARY TO COMPLETE THE WORK AS SPECIFIED IN THESE DRAWINGS AND SPECIFICATION.
7. DO NOT SCALE DRAWINGS. DIMENSIONS GOVERN. LARGER SCALE DETAILS GOVERN OVER SMALLER DETAILS. NOTIFY THE ARCHITECT OR ENGINEER OF ANY CONFLICTS.
8. THE GENERAL CONTRACTOR SHALL VERIFY ALL DIMENSIONS, PROPOSED AND EXISTING CONDITIONS ON THE SITE AND THOSE SHOWN ON THESE DRAWING PRIOR TO ORDERING OR STARTING ANY WORK. GENERAL CONTRACTOR SHALL NOTIFY THE ARCHITECT OR ENGINEER OF ANY DISCREPANCIES, OMISSIONS AND/OR CONFLICTS BEFORE COMMENCEMENT OF ANY WORK.
9. THE GENERAL CONTRACTOR SHALL NOTIFY THE ARCHITECT OR ENGINEER OF ANY DISCREPANCIES BETWEEN THE CONSULTANTS DRAWINGS AND TRILEAF'S DOCUMENTS.
10. NO PLEA OF IGNORANCE ON THE PART OF CONTRACTOR OR SUBCONTRACTOR REGARDING ANY EXISTING CONDITIONS SHALL BE VALID ONCE THE CONTRACT BETWEEN OWNER AND CONTRACTOR HAS BEEN EXECUTED.
11. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DAMAGES TO ADJACENT WORK THAT OCCUR, AND SHALL TAKE CARE TO PREVENT DAMAGE TO ALL OTHER TRADES LABOR AND MATERIAL. ALL SHALL REPAIR SUCH DAMAGE AT THEIR OWN EXPENSE. THIS INCLUDES TRACES OF SPLASHES, DROPPINGS, SMUDGES, AND ALL OTHER FOREIGN MATTER FROM ALL WALLS, FLOORS AND CEILINGS.
12. ALL MATERIAL TO BE USED FOR THIS PROJECT SHALL BE STORED IN A LEVEL AND DRY MANNER SO AS NOT TO OBSTRUCT THE COMPLETION OF OTHER WORK.
13. THE GENERAL CONTRACTOR SHALL SECURE ALL REQUIRED SHOP DRAWINGS AND REVIEW THEM FOR ANY ERROR PRIOR TO SUBMITTING THEM TO THE OWNER OR ARCHITECT.
14. THE GENERAL CONTRACTOR SHALL SUBMIT ALL NECESSARY PRODUCT DATA WHICH CLEARLY INDICATES THAT THE PRODUCT MEETS OR EXCEEDS ITEMS SPECIFIED.
15. ALL WORK PERFORMED SHALL CONFORM TO ALL APPLICABLE LOCAL, STATE AND FEDERAL BUILDING CODES IN CASE OF A CONFLICT THE MORE STRINGENT INTERPRETATION SHALL APPLY.

16. CONTRACTOR SHALL BE RESPONSIBLE FOR FOLLOWING ALL LAWS, REGULATIONS, AND RULES PROMULGATED BY FEDERAL STATE AND LOCAL AUTHORITIES WITH JURISDICTION OVER THE SALTIER. THIS RESPONSIBILITY IS IN EFFECT REGARDLESS OF WHETHER THE LAW, ORDINANCE, REGULATION OR RULE IS MENTIONED IN THESE DOCUMENTS.
17. CONTRACTOR SHALL HAVE AND MAINTAIN A VALID CONTRACTOR'S LICENSE FOR THE LOCATION IN WHICH THE WORK IS TO BE PERFORMED. FOR JURISDICTIONS THAT LICENSE INDIVIDUAL TRADES, THE TRADESMAN OR SUBCONTRACTOR PERFORMING THOSE TRADES SHALL BE LICENSED. RESEARCH AND COMPLY WITH THE LICENSING LAWS, PAY LICENSE FEES, AND SELECT AND INFORM SUBCONTRACTORS REGARDING THESE LAWS.
18. FOLLOW ALL APPLICABLE RULES AND REGULATIONS OF THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION AND STATE LAWS BASED IN THE FEDERAL OCCUPATIONAL SAFETY AND HEALTH ACT. THESE REGULATIONS INCLUDE, BUT ARE NOT LIMITED TO, REGULATIONS DEALING WITH TOWER CONSTRUCTION AND SAFETY, EXCAVATIONS AND TRENCHING, AND WORK IN CONFINED SPACES. ENSURE THAT EMPLOYEES AND SUBCONTRACTORS WEAR HARD HATS AT ALL TIMES DURING CONSTRUCTION.
19. PROVIDE PHOTOGRAPHIC EVIDENCE OF ALL FOUNDATION INSTALLATION, GROUNDING, AND TRENCHING AFTER PLACEMENT OF UTILITIES PRIOR TO BACKFILL.
20. CONTRACTOR SHALL SUBMIT CONSTRUCTION DOCUMENTS TO THE JURISDICTIONAL AUTHORITY FOR PLAN CHECK AND REVIEW. CONTRACTOR WILL SUBMIT LICENSING AND WORKMAN'S COMPENSATION INFORMATION TO THE JURISDICTION AS REQUIRED TO OBTAIN THE BUILDING PERMIT. CONTRACTOR SHALL COORDINATE AND SCHEDULE REQUIRED INSPECTIONS AND POST REQUIRED PERMITS AT THE JOB SITE. COMPLY WITH SPECIFIC PROJECT RELATED REQUESTS AND SUGGESTION MADE BY BUILDING INSPECTOR, AND INFORM CONSTRUCTION MANAGER OF ANY SUCH WORK THAT MAY BE BEYOND THE SCOPE OF THE CONTRACT OR DEVIATE FROM THE CONSTRUCTION DOCUMENTS. T-MOBILE WILL REIMBURSE THE CONTRACTOR FOR FEES, FOR PLAN REVIEW, BUILDING PERMIT, CONNECTIONS, AND INSPECTION. (INCLUDED IN THE BASE PROPOSAL).
21. CONTRACTOR SHALL SUBMIT FOR AND OBTAIN ALL ZONING AND CONDITIONAL USE PERMITS, SOME USE PERMITS MAY HAVE SPECIFIC REQUIREMENTS FOR THE SITE RELATED TO CONSTRUCTION, SUCH AS NOISE REGULATIONS, HOURS OF WORK, ACCESS LIMITATIONS, ETC. THE CONSTRUCTION MANAGER WILL INFORM THE CONTRACTOR OF THESE REQUIREMENTS AT THE PRE-BID MEETING OR AS SHOWN IN THE CONSTRUCTION DOCUMENTS.

**CONSTRUCTION ADMINISTRATION**

1. PRIOR TO STARTING CONSTRUCTION GENERAL CONTRACTOR SHALL ASSIGN A PROJECT MANAGER THAT WILL BE RESPONSIBLE FOR THE COORDINATION AND SCHEDULING OF ALL WORK. THIS PROJECT MANAGER SHALL BE THE SINGLE CONTACT PERSON FOR ALL PERSONNEL WORKING ON THIS PROJECT. PRIOR TO THE START OF THIS PROJECT THE PROJECT MANAGER SHALL SCHEDULE A ON-SITE MEETING WITH ALL CONTRACTORS INVOLVED IN THIS PROJECT.
2. PRIOR TO STARTING CONSTRUCTION THE GENERAL CONTRACTOR SHALL SUBMIT A CONSTRUCTION SCHEDULE TO THE OWNER AND TRILEAF'S REPRESENTATIVE FOR THEIR REVIEW.
3. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING DAILY PROGRESS REPORTS THAT, INCLUDE ALL CONTRACTORS WORKING ON THE JOB SITE, MATERIALS ON SITE AND WEATHER CONDITIONS. THE GENERAL CONTRACTOR SHALL PROVIDE A WRITTEN WEEKLY REPORT TO THE OWNER AND TRILEAF FOR REVIEW.
4. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR FOLLOWING ALL OSHA, AND WPCS SAFETY REQUIREMENTS DURING CONSTRUCTION.
5. PRIOR TO POURING ANY CONCRETE, TOWER ERECTIONS OR TELECOM. EQUIPMENT BEING DONE, THE GENERAL CONTRACTOR SHALL PROVIDE THE PROJECT MANAGER AND TRILEAF WITH 48 HOUR NOTICE.
6. EACH SUBCONTRACTOR SHALL BE RESPONSIBLE FOR DAILY CLEAN UP OF ALL MATERIAL AND DEBRIS.
7. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR SCHEDULING ALL NECESSARY INSPECTIONS AS REQUIRED.
8. TRILEAF SHALL NOT HAVE CONTROL OR CHARGE OF AND SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, MATERIAL AND / OR METHODS OTHER THEN WHAT IS SHOWN ON THESE DRAWINGS AND SPECIFICATIONS
9. THE GENERAL CONTRACTOR SHALL FOR THE DURATION OF THE PROJECT CARRY AND MAINTAIN AT THEIR OWN EXPENSE ALL REQUIRED BONDS AND INSURANCES AS SPECIFIED IN MASTER AGREEMENT AND/OR CONSTRUCTION CONTRACT. THE INSURANCE SHALL LIST THE OWNER AS ADDITIONAL INSURED ON ALL POLICIES.
10. GENERAL CONTRACTOR SHALL PROVIDE WRITTEN PROOF OF ALL REQUIRED BONDS AND INSURANCE.

**EXCAVATION AND GRADING**

1. GENERAL CONTRACTOR SHALL NOTIFY ALL INSPECTORS AS REQUIRED, PRIOR TO POURING ANY AND ALL CONCRETE.
2. CONTRACTOR SHALL VERIFY ALL FILL MATERIAL REQUIRED WITH LOCAL AND PUBLIC HIGHWAY DEPARTMENTS.
3. ALL CONCRETE SHALL BE PLACED ON UNDISTURBED SOIL WITH A MIN. ALLOWABLE SOIL BEARING CAPACITY OF 3000 LBS PER SQUARE FOOT UNLESS OTHERWISE NOTED.
4. CONTRACTOR SHALL REMOVE ALL ORGANIC MATERIAL TO A MIN. OF 6" BELOW GRADE.
5. REMOVE ALL TREES, BRUSH AND DEBRIS FROM SITE AREA AND ACCESS ROAD RIGHT OF WAY AS REQUIRED.
6. GENERAL CONTRACTOR SHALL REMOVE ALL SOFT SPOTS AND UNSTABLE SOIL CONDITIONS, AND COMPACT TO 85% STANDARD PROCTOR, WHERE NECESSARY PROVIDE STABILIZER MAT PRIOR TO INSTALLING ANY FILL OR BASE MATERIAL.
7. ALL COMPACTING SHALL BE DONE BY MECHANICAL MEANS. LARGER AREAS SHALL USE SHEEPS FOOT, VIBRATORY OR RUBBER TIED ROLLERS, OF AT LEAST 5 TONS. SMALLER AREAS SHALL BE COMPACTED BY POWER DRIVEN HAND HELD TAMPERS. WATER TREATMENT MAY BE REQUIRED TO OBTAIN COMPACTION.

8. ALL EARTH WORK WITH ON SITE MATERIAL SHOULD BE PERFORMED WHEN TEMPERATURES ARE ABOVE FREEZING. FROZEN SOIL SHOULD NOT BE USED BENEATH STRUCTURES. ALL FOUNDATION EXCAVATION MUST BE INSULATED AGAINST FREEZING UNTIL CONSTRUCTION OF FOUNDATION IS COMPLETED.
9. ALL EXCESS SPOILS SHALL BE REMOVED FROM SITE.
10. ALL STONE FILL SHALL BE PLACED IN MAX. 6" LIFTS IN ACCORDANCE WITH ASTM-D1557, WITH 95% PROCTOR UNDER SLABS.
11. IN AREAS OF COMPACTED FILL WITH IN THE FOUNDATION LINE BACKFILLING AGAINST BOTH SIDES OF FOUNDATION SHALL BE DONE AT THE SAME RATE TO PREVENT STRESS AND OVERTURNING OF FOUNDATION.
12. ACCESS ROAD SHALL BE BROUGHT UP TO BASE COURSE LEVEL PRIOR TO PLACING FOUNDATION.
13. ALL SITE GRADING INCLUDING, SWALES, CULVERTS, AND DITCHES SHALL BE PLACED SO THAT NO WATER IS DIRECTED TO ADJACENT SITE.
14. WHERE SITE SLOPES OF ALL FENCED AREAS, PARKING AREAS EXCEEDS 2:1, RIPRAP SHALL BE APPLIED TO SLOPED SIDES. ALL CULVERT OPENING SHALL HAVE RIPRAP FOR THE ENTIRE FIRST 6'-0" OF DITCH.
15. ALL GRADING AND EXCAVATION SHALL INCLUDE, GRADING, DITCHING AND BANKING UNLESS OTHERWISE NOTED.
16. AFTER FINAL GRADING, ANY DEPRESSIONS THAT ALLOW PONDING WILL BE REJECTED.
17. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION OF ALL EROSION CONTROL DEVICES INCLUDING, BUT NOT LIMITED TO, SILT FENCE AROUND THE CONSTRUCTION LIMITS, STONE ACCESS DRIVES, AND FILTER FABRIC PROTECTORS AND STRAW BALES AROUND ALL MANHOLES AND INLETS PER DETAILS.



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SITE NAME:  
**SPRINT BLACK FOREST**

SBA SITE ID:  
**CO46107-A**

SITE ID:  
**DN04234A**

SITE ADDRESS:  
2746 RUSTIC OAK GROVE  
COLORADO SPRINGS, CO 80921

PROJECT NUMBER:  
**629064**

NO.	DATE	REV	ISSUE RECORD	BY	APP
3	3/15/17	1	REV C CD	JG	EB
2	3/7/17	1	REV B CD	EP	EB
1	3/1/17	1	PCD REV A	CSM	EB
NO.			REVISIONS		

NO REVISION THIS SHEET  
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22x34 SHEET SIZE AND ARE NOT REDUCED IN SIZE.

SHEET DESCRIPTION  
**GENERAL NOTES**

SHEET NUMBER  
**N-1.0**

**ANTENNA & TOWER CONSTRUCTION**

1. THIS SECTION INCLUDES THE INSTALLATION OF SIDE ARMS, MICROWAVE DISH ANTENNAS, GALVANIZED STEEL ANTENNA MOUNTS, AND WAVEGUIDE BRIDGE AS SHOWN ON THESE DRAWINGS AND SPECIFICATIONS.
2. ANTENNA CONTRACTOR SHALL VERIFY ALL REQUIREMENTS WITH CELL PROVIDERS REPRESENTATIVE PRIOR TO STARTING CONSTRUCTION.
3. PROVIDE MATERIAL AND LABOR TO IN INSULATED GROUND BAR AT EQUIPMENT CABINET. SEE GROUNDING NOTES
4. ANTENNA CONTRACTOR SHALL PERFORM ALL NECESSARY FIELD TEST, INCLUDING SWEEP TEST.
5. THE FOLLOWING REGULATOR AGENCIES APPLY TO THIS SECTION
  - A. EIA ELECTRONIC INDUSTRIES ASSOCIATION TIA/EIA-222-G STRUCTURAL STANDARDS FOR STEEL ANTENNA TOWERS AND ANTENNA SUPPORT STRUCTURES.
  - B. FAA FEDERAL AVIATION ADMINISTRATION ADVISORY CIRCULAR AC 70-7460-IH. OBSTRUCTION MARKING AND LIGHTING. IN ALL CASES PART 77.
  - C. FCC FEDERAL COMMUNICATIONS COMMISSION RULES AND REGULATIONS FORM # 715, OBSTRUCTION MARKING AND LIGHTING SPECIFICATIONS FOR ANTENNA STRUCTURES AND FORM 715A. HIGH INTENSITY OBSTRUCTIONS LIGHTING SPECIFICATIONS FOR ANTENNA STRUCTURES. AND IN ALL CASES PART 17, AND 22.
  - D. AISC AMERICAN INSTITUTE OF STEEL CONSTRUCTION.
  - E. NEC NATIONAL ELECTRICAL CODE, FOR TOWER LIGHTING.
  - F. UL UNDERWRITERS LABORATORIES.
  - G. NFPA-101 LIFE SAFETY CODE.

**STRUCTURAL NOTES**

1. ALL DESIGN AND CONSTRUCTION SHALL COMPLY WITH THE INTERNATIONAL BUILDING CODE, CURRENT EDITION, AND ANY STATE OR LOCAL CODES THAT APPLY. IF A CONFLICT BETWEEN THE CODES THE MOST RESTRICTIVE CODE APPLIES.
2. DO NOT SCALE DRAWINGS
3. CONTRACTOR SHALL VERIFY ALL EQUIPMENT LOCATIONS AND MOUNT DIMENSIONS PER MANUFACTURES SPECIFICATIONS AND INSTALLATION DRAWINGS PRIOR TO STARTING ANY CONSTRUCTION.
4. CONTRACTOR SHALL PROVIDE A MIN. OF TWO COPIES OF ALL SHOP DRAWINGS TO THE ARCHITECT OR ENGINEER FOR APPROVAL PRIOR TO STARTING ANY INSTALLATION.
5. GENERAL CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS, SECTIONS AND DETAIL BETWEEN THESE DOCUMENTS AND THE MANUFACTURES SHOP DRAWINGS AND NOTIFY THE ARCHITECT / ENGINEER OF ANY DISCREPANCIES OR INCONSISTENCIES.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL NECESSARY TEMPORARY BRACING, SHORING, OR ANY OTHER MEANS TO AVOID EXCESSIVE STRESSES AND TO HOLD STRUCTURAL ELEMENTS IN PLACE DURING CONSTRUCTION.
7. CONTRACTOR SHALL VERIFY ALL SIZES, LOCATIONS AND NUMBER OF FLOOR AND ROOF OPENINGS PRIOR TO STARTING ANY WORK.

**GENERAL NOTES**

1. OBTAIN PERMITS AND PAY FEES RELATED TO ELECTRICAL WORK PERFORMED ON THIS PROJECT. DELIVER COPIES OF ALL PERMITS TO T-MOBILE.
2. SCHEDULE AND ATTEND INSPECTIONS RELATED TO ELECTRICAL WORK REQUIRED BY JURISDICTION HAVING AUTHORITY. CORRECT AND PAY FOR ANY WORK REQUIRED TO PASS ANY FAILED INSPECTION.
3. PROVIDE TWO COPIES OF OPERATION AND MAINTENANCE MANUALS IN THREE-RING BINDER.
4. FURNISH AND INSTALL THE COMPLETE ELECTRICAL SYSTEM, FIBER SYSTEM, AND THE GROUNDING SYSTEM AS SHOWN ON THESE DRAWINGS.
5. ALL WORK SHALL BE PERFORMED IN STRICT ACCORDANCE WITH ALL APPLICABLE BUILDING CODES AND LOCAL ORDINANCES. INSTALLED IN A NEAT MANNER AND SHALL BE SUBJECT TO APPROVAL BY T-MOBILE.
6. CONDUCT A PRE-CONSTRUCTION SITE VISIT AND VERIFY EXISTING SITE CONDITIONS AFFECTING THIS WORK. REPORT ANY OMISSIONS OR DISCREPANCIES FOR CLARIFICATION PRIOR TO THE START OF CONSTRUCTION.
7. PROTECT ADJACENT STRUCTURES AND FINISHES FROM DAMAGE. REPAIR TO ORIGINAL CONDITION ANY DAMAGED AREA.
8. REMOVE DEBRIS ON A DAILY BASIS. DEBRIS NOT REMOVED IN A TIMELY FASHION WILL BE REMOVED BY OTHERS AND THE RESPONSIBLE SUBCONTRACTOR SHALL BE CHARGED ACCORDINGLY. REMOVAL OF DEBRIS SHALL BE COORDINATED WITH THE SITE OWNERS REPRESENTATIVE. DEBRIS SHALL BE REMOVED FROM THE PROPERTY AND DISPOSED OF LEGALLY. USE OF THE PROPERTY'S DUMPSTER IS PROHIBITED.
9. CONTRACTOR TO CONFIRM AVAILABLE CAPACITY AT EXISTING UTILITY PEDESTAL AND ADVISE ENGINEER OF SERVICE SIZE AND FAULT CURRENT LEVEL.
10. IF PEDESTAL DOES NOT HAVE ADEQUATE CAPACITY, CONTRACTOR TO SUBMIT COST QUOTATION TO UPGRADE. UPON APPROVAL OF SUBMITTED COST QUOTATION, THE CONTRACTOR SHALL PROVIDE PROPOSED SERVICE AND/ OR UPGRADE SERVICE. FEEDERS AND EQUIPMENT/ ELECTRODE GROUNDING CONDUCTORS SIZE ACCORDINGLY.
11. CONTRACTOR SHALL VERIFY SEPARATION DIMENSION BETWEEN POWER COMPANY ELECTRICAL CONDUITS AND LP GAS PIPES AS PER UTILITY COMPANY, LOCAL CODES, NEC, NFPA, AND GAS TANK MANUFACTURER'S SPECIFICATION.
12. CONTRACTOR SHALL VERIFY THAT THE TOTAL NUMBER OF SERVICE ENTRANCE DISCONNECTS IN THE EXISTING UTILITY COMPANY PEDESTAL MUST NOT EXCEED SIX. IF THE PROPOSED SERVICE ADDED EXCEEDS THIS VALUE, CONTRACTOR MUST COORDINATE WITH THE UTILITY COMPANY AND AUTHORITY HAVING JURISDICTION. THE RUNNING OF AN ADDITIONAL EXCLUSIVE AND DEDICATED SERVICE LATERAL SET FOR THE PROPOSED LOAD ADDED TO THE COMPOUND AS PER NEC ARTICLE 230-2 (B).
13. THE EQUIPMENT/ PROTECTIONS MUST BE RATED FOR STANDARD AIC RATE HIGHER THAN INCOMING EQUIPMENT AND/ OR UTILITY COMPANY AIC RATE.

**ELECTRICAL NOTES**

1. REFERENCE T-MOBILE STANDARD CONSTRUCTION SPECIFICATIONS FOR WIRELESS SITES FOR GENERAL ELECTRICAL REQUIREMENTS.
2. WIRING SHALL BE AWG STRANDED COPPER WITH THHN OR EQUIVALENT INSULATION. #12 MINIMUM INSTALLED IN "MINIMUM CONDUIT. SIGNAL WIRING BE INSULATED #22 AWG, NO BX OR ROMEX CABLE IS PERMITTED. CONDUITS SHALL BE SURFACE MOUNTED.
3. WIRING DEVICES AND EQUIPMENT SHALL BE UL LISTED SPECIFICATIONS GRADE.
4. MATERIALS SHALL BE PROPOSED AND CONFORM TO THE APPLICABLE STANDARDS ESTABLISHED FOR EACH ITEM BY THE ORGANIZATIONS LISTED BELOW. -AMERICAN SOCIETY FOR TESTING MATERIAL (ASTM) - UNDERWRITER LABORATORY (UL) - NATIONAL ELECTRICAL MANUFACTURING ASSOCIATION (NEMA) - AMERICAN STANDARDS ASSOCIATION (ASA) - NATIONAL FIRE PROTECTION ASSOCIATION (NFFA).
5. INSTALLATION OF MATERIALS SHALL COMPLY WITH REGULATIONS OF: -THE NATIONAL ELECTRIC CODE (NFPA 70) - THE NATIONAL ELECTRICAL SAFETY CODE (ANSI-C-2) - THE LIFE SAFETY CODE (NFPA 101) - LOCAL BUILDING CODES.
6. THE ENTIRE SYSTEM SHALL BE SOLIDLY GROUNDED USING LOCKOUTS AND BONDING NUTS ON CONDUITS AND PROPERLY BONDED GROUND CONDUCTOR. RECEPTACLES AND EQUIPMENT BRANCH CIRCUITS SHALL BE GROUNDED WITH A FULL-SIZE EQUIPMENT GROUNDING CONDUCTOR RUN IN THE CIRCUITS CONDUIT.
7. OUTLET AND JUNCTION BOXES SHALL BE ZINC-COATED OR CADMIUM PLATED STEEL NOT LESS THAN 4" SQUARE AND SUITABLE FOR THE TYPE SERVICE AND OUTLET. OUTLET AND JUNCTION BOXES SHALL BE SURFACE MOUNTED AND LABELED WITH BRANCH CIRCUIT BREAKER NUMBER.
8. LABEL ALL EQUIPMENT SERVED FROM T-MOBILE PANEL BOARD WITH PHENOLIC LABELS SIZED IN RELATION TO USAGE.
9. INDOOR CONDUCTORS SHALL BE INSTALLED IN EMT UNLESS NOTED OTHERWISE. OUTDOOR CONDUCTORS SHALL BE INSTALLED IN RIGID GALVANIZED STEEL UNLESS NOTED OTHERWISE. WHERE EMT IS USED. IT SHALL BE WITH ONLY LISTED COMPRESSION FITTINGS. NO SET SCREW FITTINGS SHALL BE ALLOWED.
10. CONTRACTOR IS TO PROVIDE AND INSTALL ENGRAVES LABEL ON THE T-MOBILE METER SOCKET ENCLOSURE.
11. CONTRACTOR IS TO OBTAIN ALL PERMITS, PAY PERMITS FEES, AND BE RESPONSIBLE FOR SCHEDULING INSPECTIONS. THE CONTRACTOR IS TO OBTAIN LOCAL POWER AND TELEPHONE COMPANY APPROVAL & COORDINATE WITH UTILITY COMPANIES SERVICE ENTRANCE REQUIREMENTS.



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ISSUE RECORD  
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SHEET DESCRIPTION  
**GENERAL NOTES (CONTINUED)**

SHEET NUMBER  
**N-1.1**

NOTE:  
 1. GENERAL CONTRACTOR WILL NOT START CONSTRUCTION UNTIL AFTER THEY HAVE RECEIVED THE NTP PACKAGE AND HAVE A PRE-CON WALK WITH THE PROJECT MANAGER.  
 2. GENERAL CONTRACTOR TO HIRE PUBLIC (811) AND PRIVATE LOCATING SERVICE IN ORDER TO LOCATE AND PROTECT ALL SURFACE UTILITIES. DO NOT SCALE OFF THESE PLANS FOR ANY BELOW GRADE UTILITIES.  
 3. CONTRACTOR SHALL VERIFY ALL EXISTING BURIED AND OVERHEAD UTILITIES PRIOR TO EXCAVATION. CONTRACTOR SHALL REPAIR ALL DAMAGED UTILITIES AT HIS OWN COST AND COORDINATE ANY REPAIRS WITH RESPECTIVE UTILITY COMPANY.  
 4. CONTRACTOR TO VERIFY ALL HEIGHTS AND AZIMUTHS IN FIELD PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY T-MOBILE AND ENGINEERING FIRM OF ANY DISCREPANCIES BEFORE PROCEEDING.  
 5. CONTRACTOR SHALL RESTORE AND REPAIR ANY DAMAGED AREAS CAUSED BY CONSTRUCTION.



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**OVERALL SITE PLAN**

SCALE: 1"=25'-0" (22x34)  
 (OR) 1/2"=25'-0" (11x17)

SHEET DESCRIPTION  
**OVERALL SITE PLAN**  
 SHEET NUMBER  
**A-1.0**



**TRILEAF**  
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FAX: (630) 227-1212

*Roger Allmiller*  
REGISTERED PROFESSIONAL ENGINEER  
ROGER ALLMILLER ZIMMER  
0050778  
3.25.17



SBASITE.COM

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COLORADO SPRINGS, CO 80921

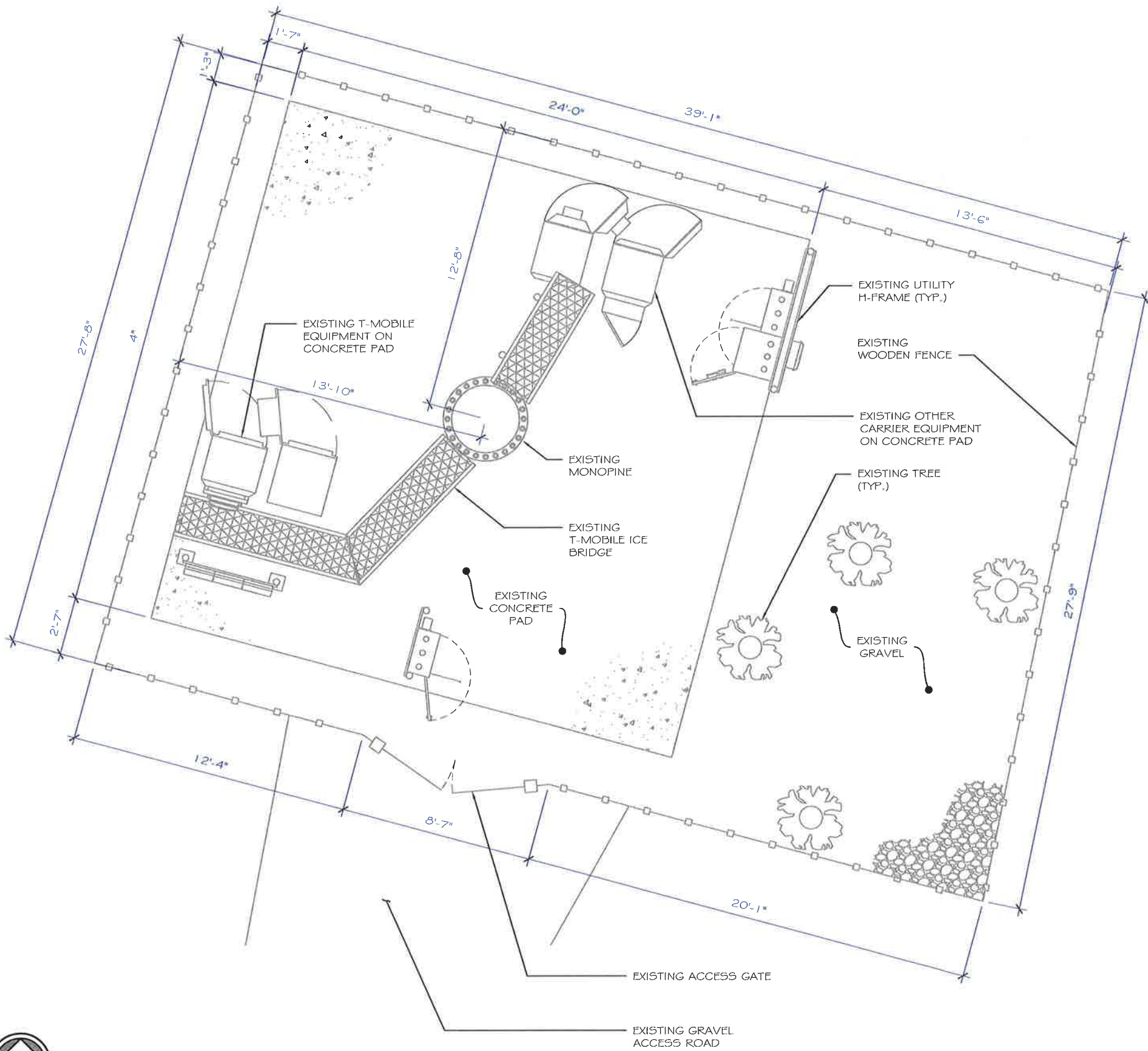
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SHEET DESCRIPTION  
**EXISTING COMPOUND PLAN**

SHEET NUMBER  
**A-1.1**



1 T-MOBILE EQUIPMENT PHOTOS  
A-1.1



**EXISTING COMPOUND PLAN**

SCALE: 3/8"=1'-0" (22x34)  
(OR) 3/16"=1'-0" (11x17)

SCALE  
N.T.S.

*Robert J. Zimmer*  
REGISTERED PROFESSIONAL ENGINEER  
0050778  
3-23-17



SITE NAME:  
**SPRINT BLACK FOREST**

SBA SITE ID:  
**CO46107-A**

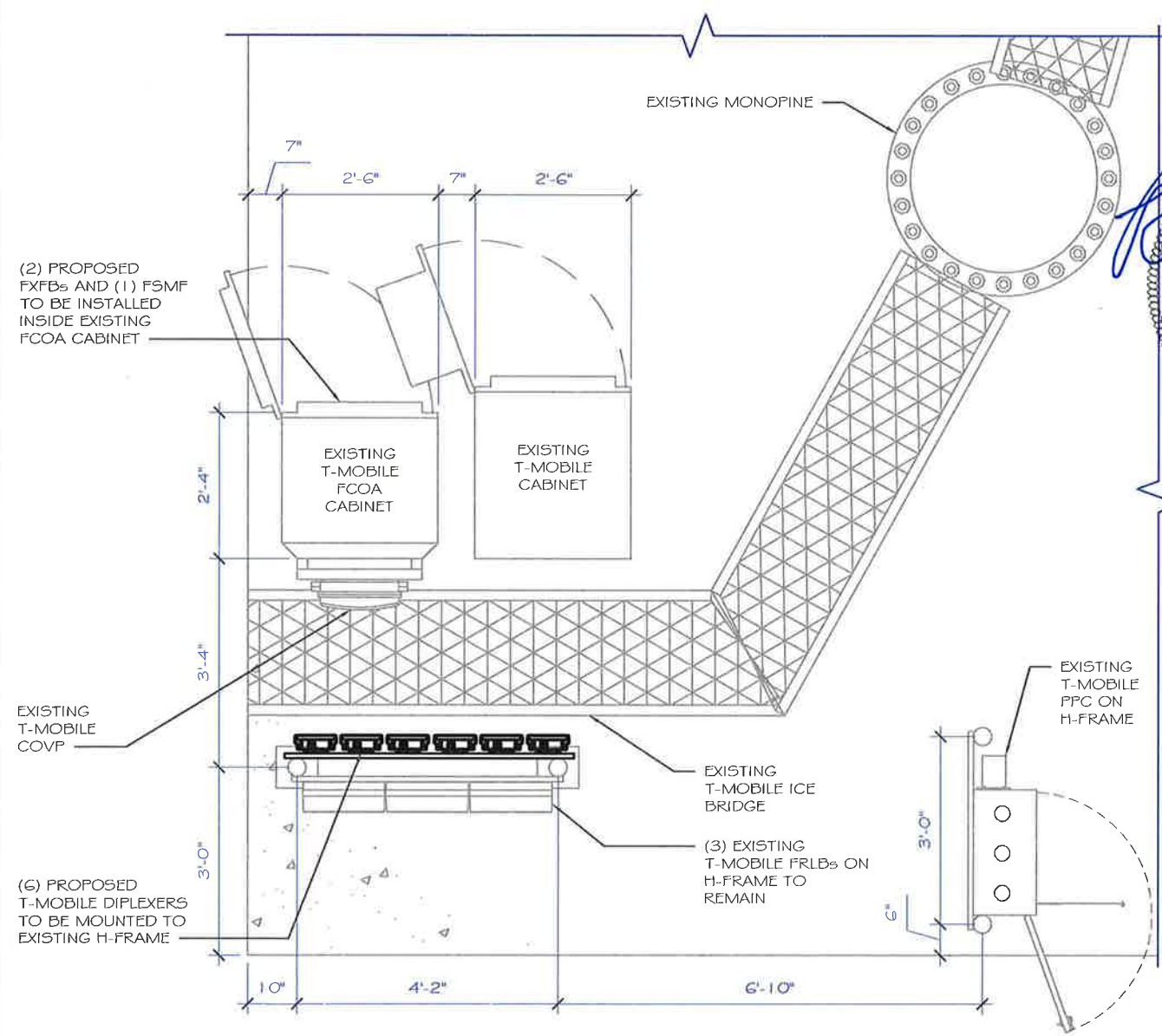
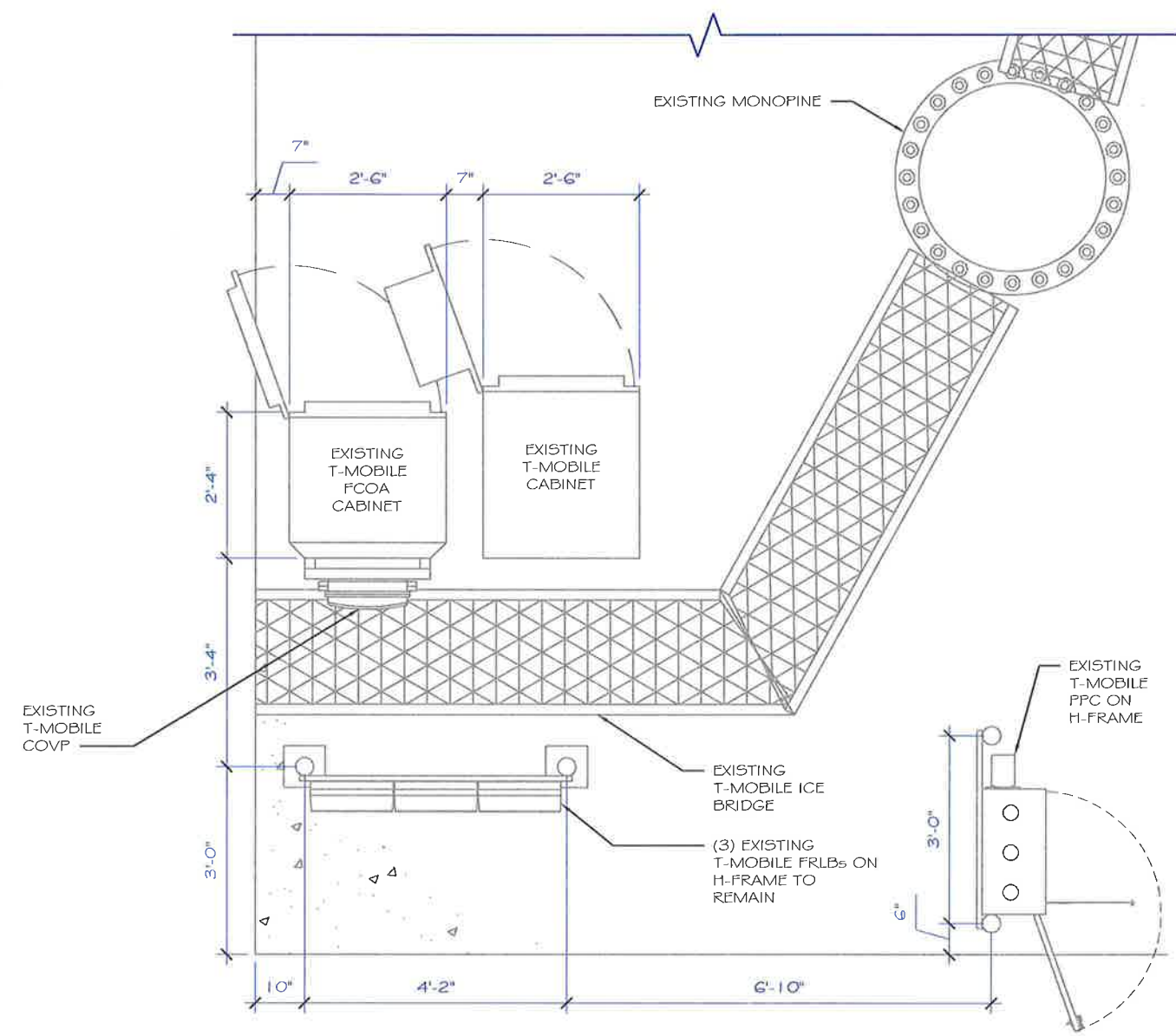
SITE ID:  
**DN04234A**

SITE ADDRESS:  
2746 RUSTIC OAK GROVE  
COLORADO SPRINGS, CO 80921

PROJECT NUMBER:  
**629064**

NO.	DATE	REV	ISSUE RECORD	BY	APP
3	3/15/17	-	REV C CD	JG	EB
2	3/7/17	-	REV B CD	EP	EB
1	3/1/17	-	PCD REV A	CSM	EB

REVISION THIS SHEET NO REVISION THIS SHEET  
 THESE DRAWINGS ARE FULL SIZE AND ARE SCALABLE ON 11" X 17" OR 22X34 SHEET SIZE AND ARE NOT REDUCED IN SIZE.



**EXISTING EQUIPMENT PLAN**

SCALE: 1/4"=1'-0" (22x34)  
(OR) 1/8"=1'-0" (11x17)

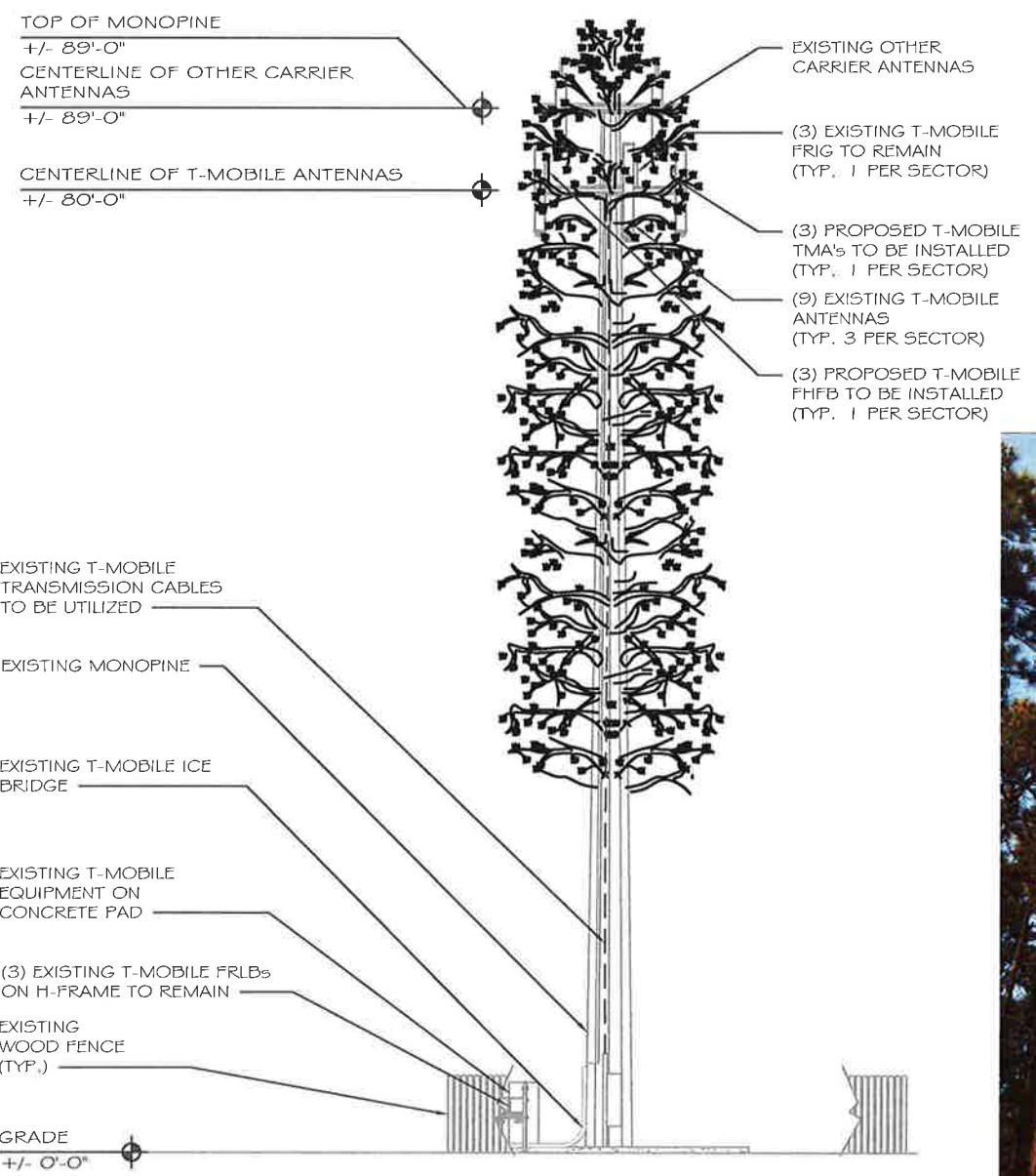


**PROPOSED EQUIPMENT PLAN**

SCALE: 3/4"=1'-0" (22x34)  
(OR) 3/8"=1'-0" (11x17)

SHEET DESCRIPTION  
**EXISTING & PROPOSED EQUIPMENT PLAN**  
SHEET NUMBER  
**A-2.0**

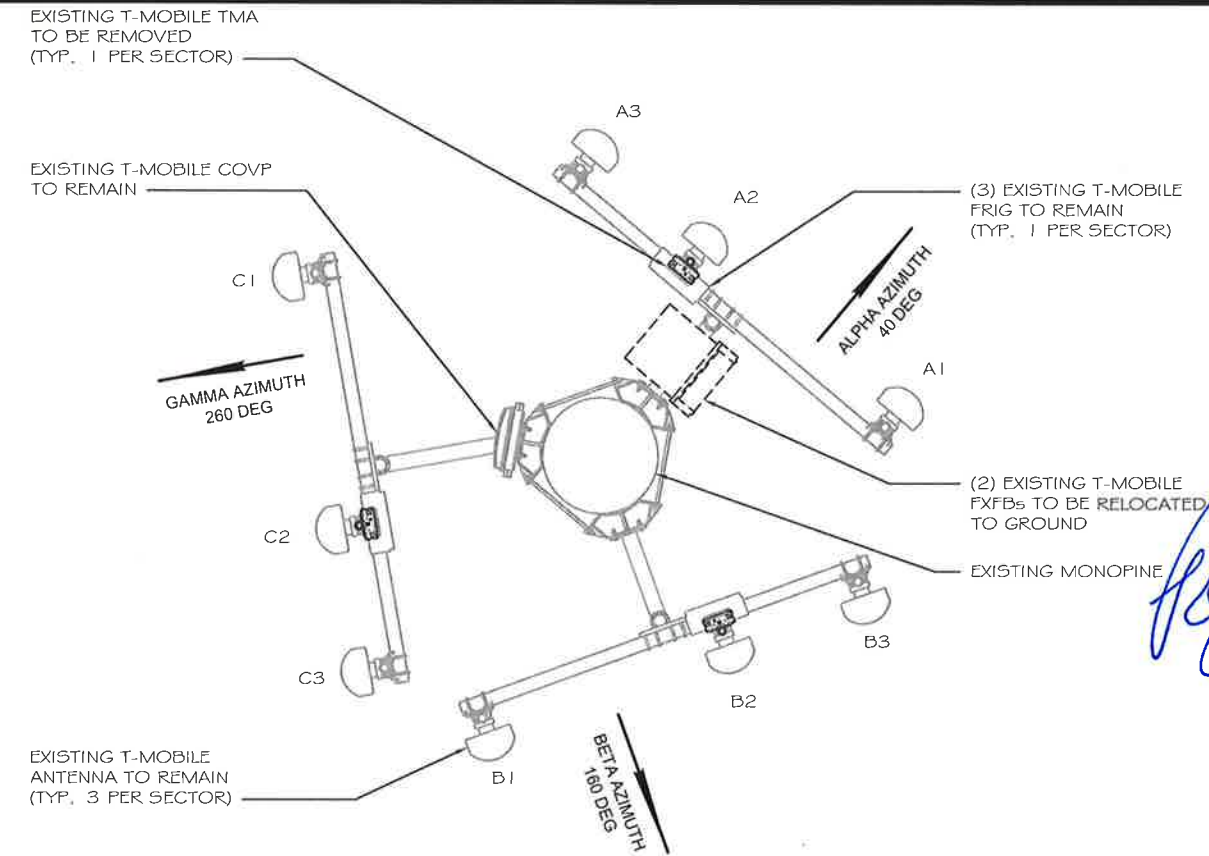
NOTE:  
A STRUCTURAL EVALUATION OF THE TOWER STRUCTURE AND SECTOR FRAME MOUNTS IS NOT WITHIN TRILEAF'S SCOPE OF WORK. NO WORK IS TO BE DONE WITHOUT AN APPROVED STRUCTURAL ANALYSIS PROVIDED BY TRILEAF OR OTHERS.



### TOWER ELEVATION

1  
A-3.0

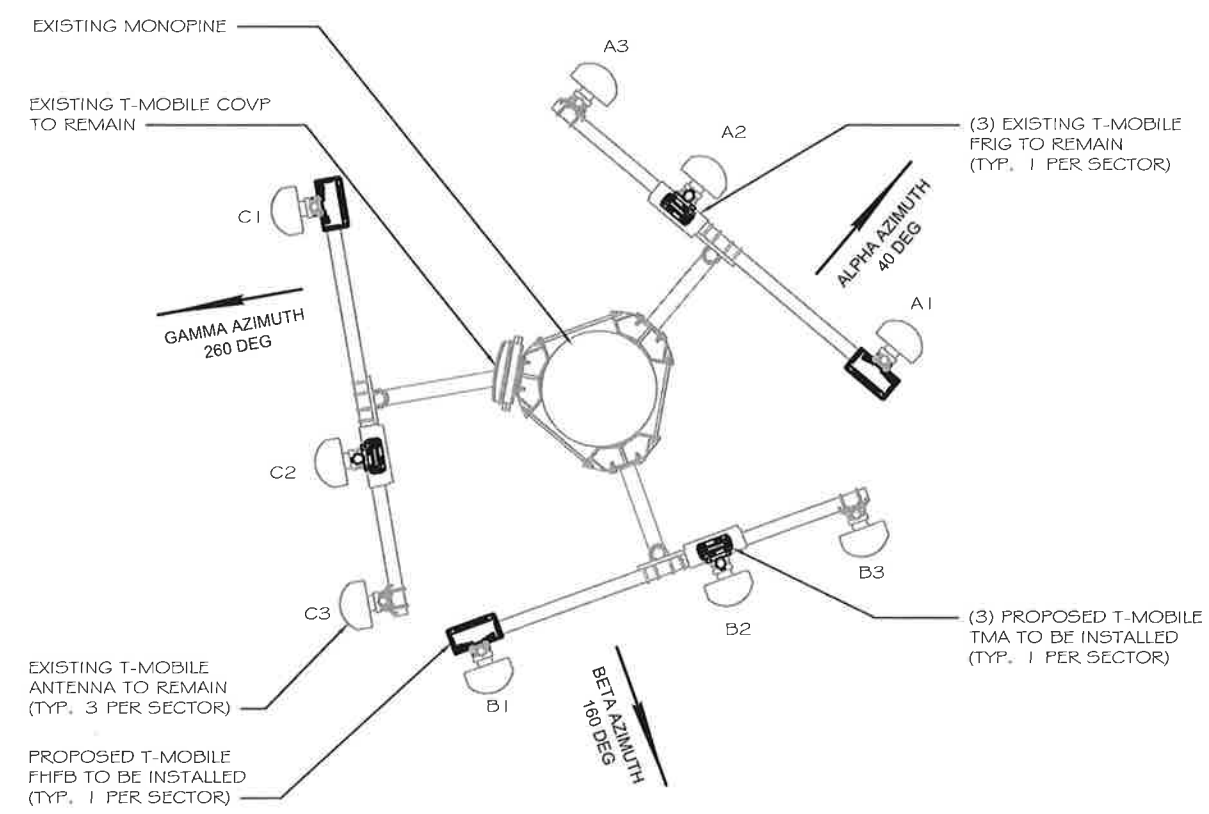
SCALE: 1/8"=1'-0" (22x34)  
(OR) 1/16"=1'-0" (11x17)



### EXISTING ANTENNA LAYOUT



SCALE  
N.T.S.



### PROPOSED ANTENNA LAYOUT



SCALE  
N.T.S.

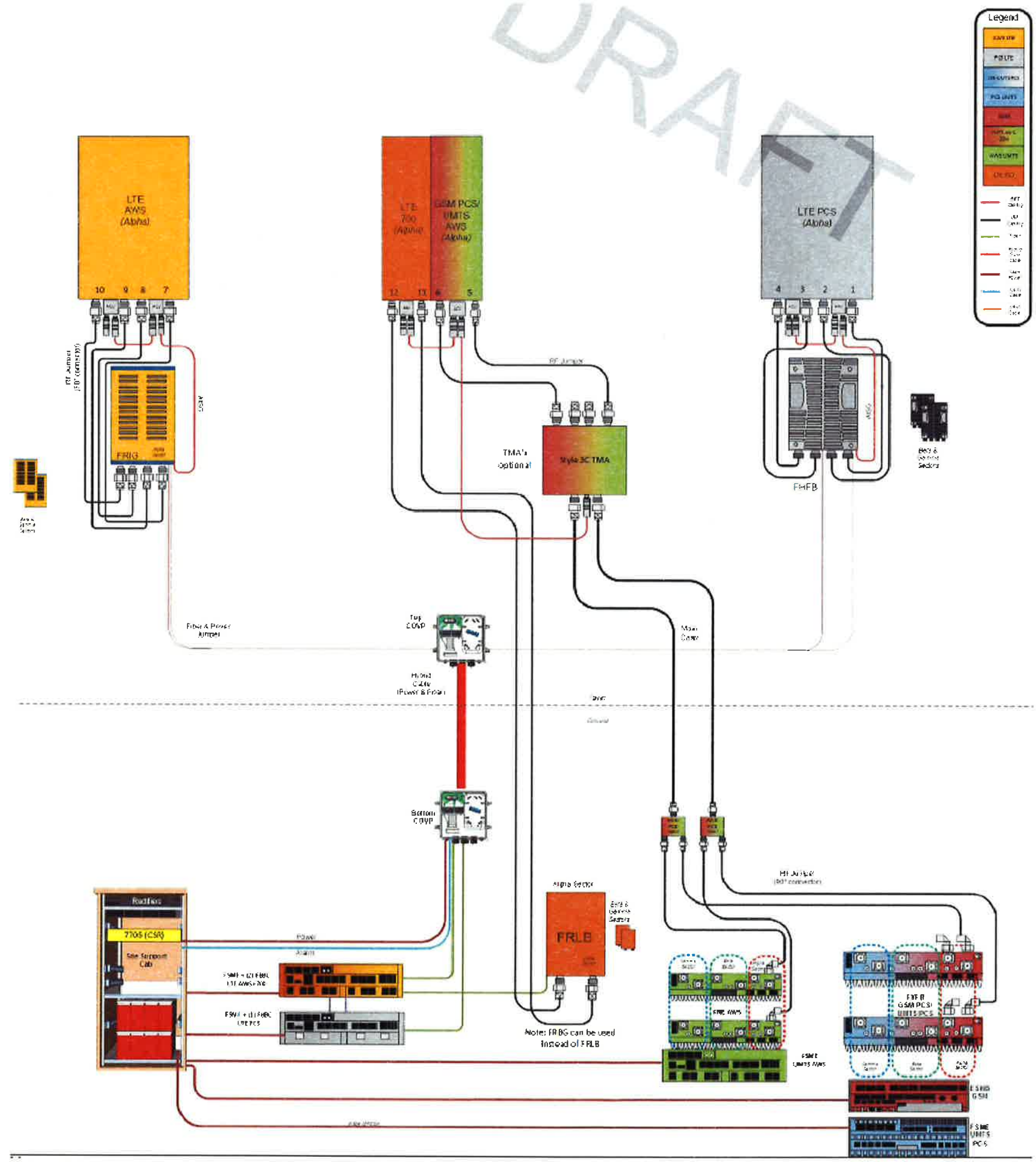


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2	3/7/17	EP	EB	NO REVISION THIS SHEET
1	3/1/17	PCD	REV A	REVISION THIS SHEET
				REVISIONS
				NO REVISION THIS SHEET

REVISIONS ARE FILED AND ARE AVAILABLE ON 11" X 17" OR 22x34 SHEET SIZE AND ARE NOT REDUCED IN SIZE.



DRAFT



SBASITE.COM

SITE NAME:  
**SPRINT BLACK FOREST**

SBA SITE ID:  
**CO46107-A**

SITE ID:  
**DN04234A**

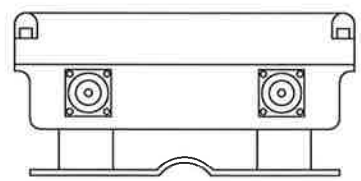
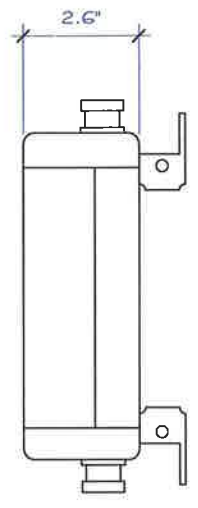
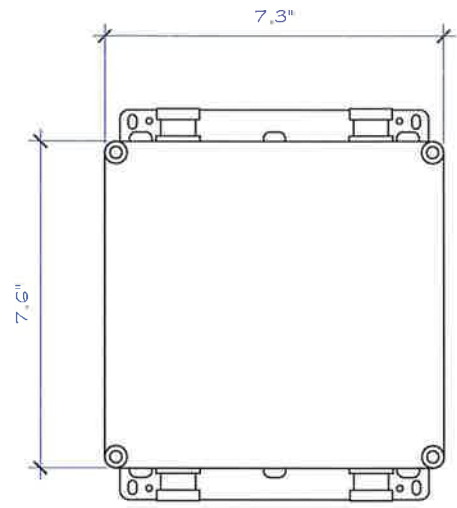
SITE ADDRESS:  
2746 RUSTIC OAK GROVE  
COLORADO SPRINGS, CO 80921

PROJECT NUMBER:  
**629064**

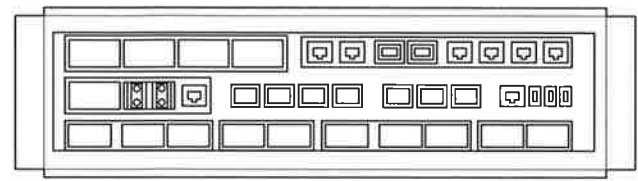
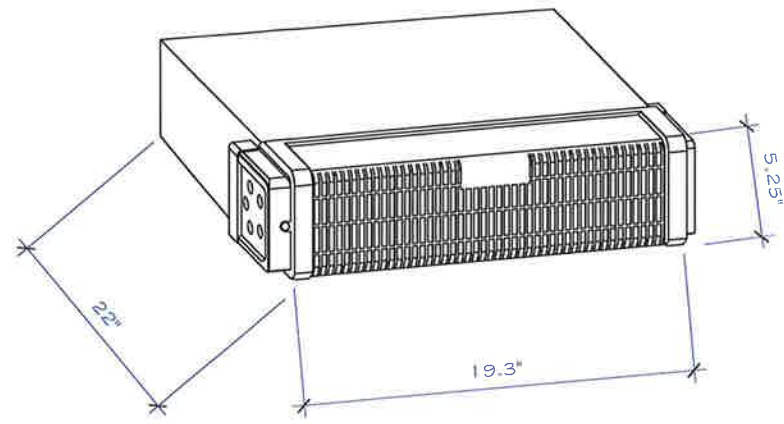
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3	JG	EB	3/15/17	
2	EP	EB	3/7/17	
1	PCD	REV A	3/1/17	

SHEET DESCRIPTION  
**RFDS DIAGRAM**

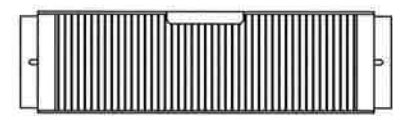
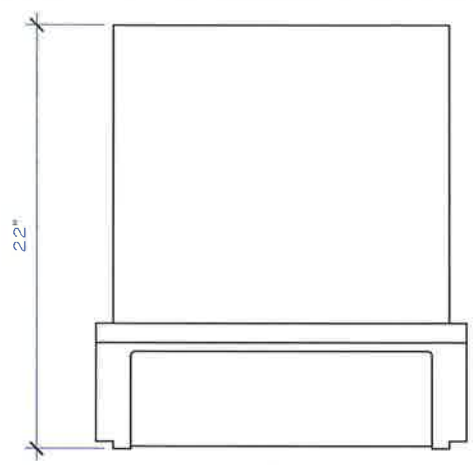
SHEET NUMBER  
**A-4.0**



MODEL #	ECC1920-VPUB
DIMENSIONS	7.6"x7.3"x2.6"
NET WEIGHT	7.9lbs



MODEL #	FSMF
DIMENSIONS	19.3"x22"x5.25"
NET WEIGHT	33.07 lbs



**TRILEAF**  
ARCHITECTURE  
& ENGINEERING  
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FAX: (630) 227-1212



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SITE NAME:  
SPRINT BLACK FOREST

SBA SITE ID:  
CO46107-A

SITE ID:  
DN04234A

SITE ADDRESS:  
2746 RUSTIC OAK GROVE  
COLORADO SPRINGS, CO 80921

PROJECT NUMBER:  
629064

REV	DATE	BY	APP	DESCRIPTION
3	3/15/17	JG	EB	REV C CD
2	3/7/17	EP	EB	REV B CD
1	3/1/17	CSM	EB	PCD REV A
				NO. REV

ISSUE RECORD  
 REVISION THIS SHEET NO REVISION THIS SHEET  
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SHEET DESCRIPTION  
EQUIPMENT DETAILS

SHEET NUMBER  
**A-5.0**

**1 DIPLEXER ECC1920-VPUB**

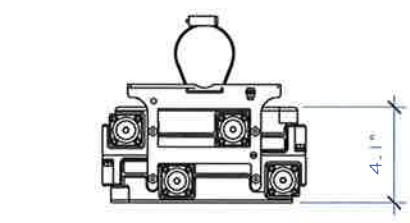
A-5.0

SCALE	N.T.S.
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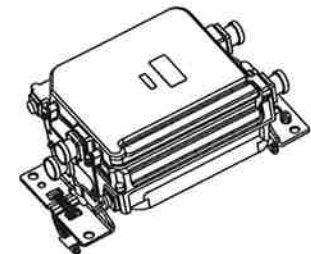
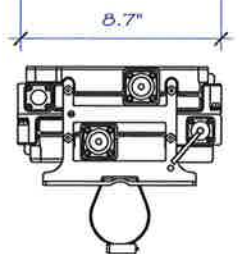
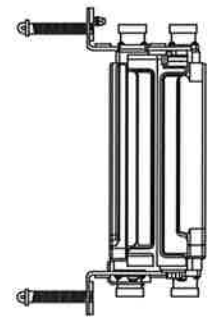
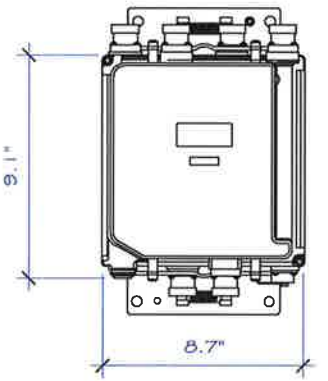
**2 FSMF DETAIL**

A-5.0

SCALE	N.T.S.
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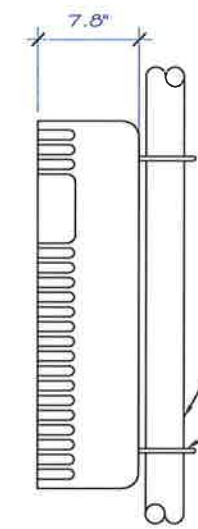
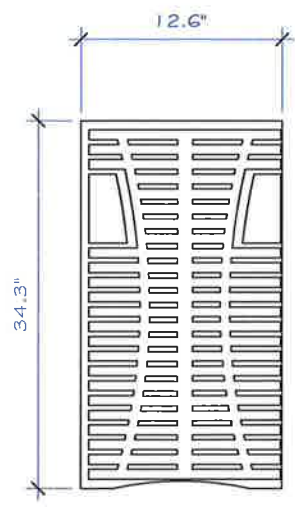
MODEL #	TMAT1921B78-21A
DIMENSIONS	9.1"x8.7"x4.1"
NET WEIGHT	17.6lbs



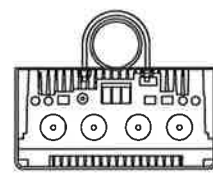
**3 ANDREW TMAT1921B78-21A DETAIL**

A-5.0

SCALE	N.T.S.
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MOUNTING PIPE. EXACT DIAMETER TO BE VERIFIED IN FIELD  
 (2) NEW 3/8" U-BOLTS TO BE BOLTED TO MOUNTING PIPE



MODEL #	NOKIA FHFB
DIMENSIONS (W/OUT BRACKETS OR SOLAR SHIELD)	34.3"x12.6"x7.8"
NET WEIGHT (W/OUT BRACKETS OR SOLAR SHIELD)	68.5 lb

**4 NOKIA FHFB DETAIL**

A-5.0

SCALE	N.T.S.
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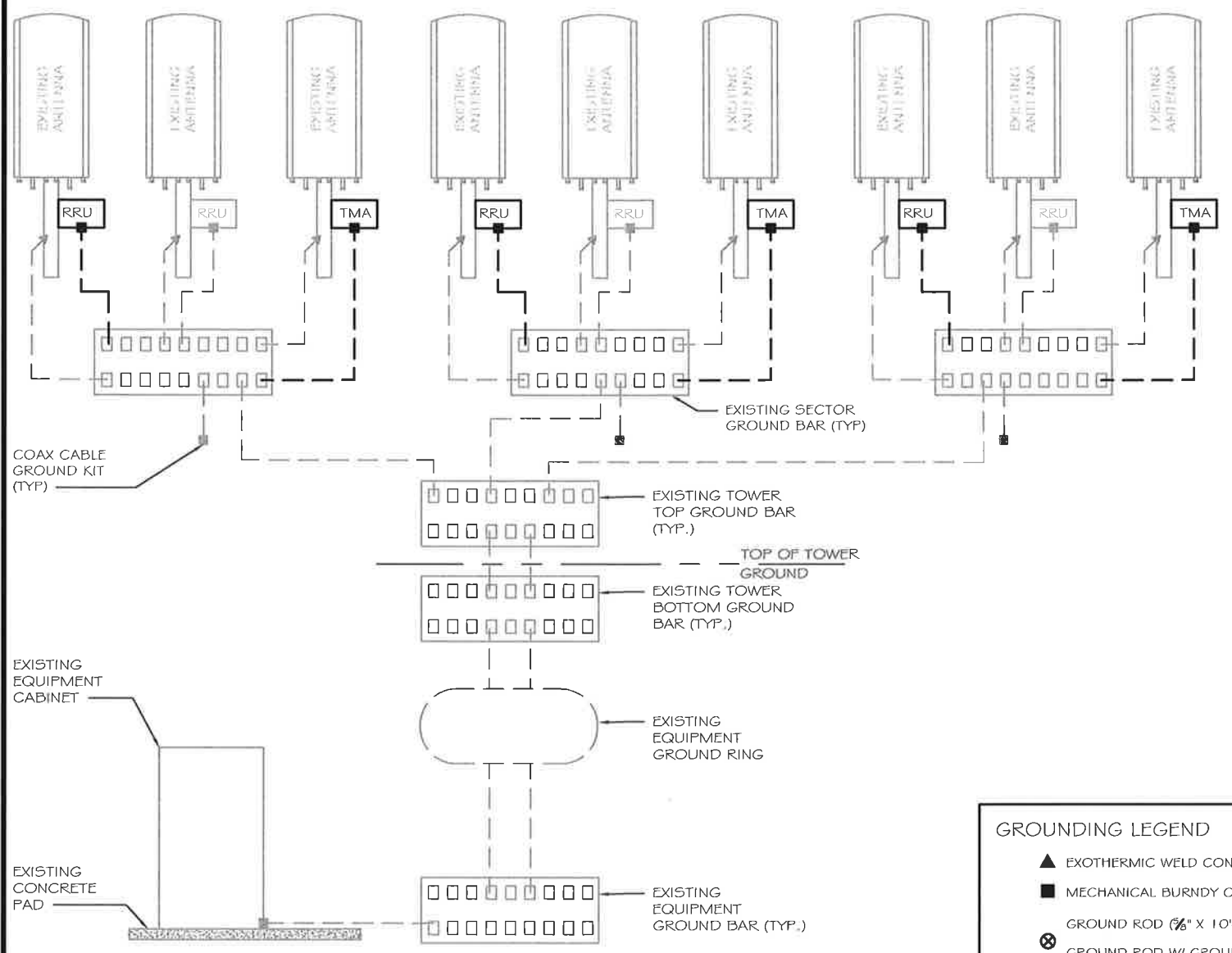
REV	NO.	DATE	BY	APP	REVISIONS
3	3/15/17		JG	EB	REV C CD
2	3/17/17		EP	EB	REV B CD
1	3/17/17		CSM	EB	PCD REVA

ISSUE RECORD  
NO REVISION THIS SHEET  
REVISION THIS SHEET  
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**ALPHA SECTOR**

**BETA SECTOR**

**GAMMA SECTOR**



**GROUNDING LEGEND**

- ▲ EXOTHERMIC WELD CONNECTION
- MECHANICAL BURNDY CONNECTION
- ⊗ GROUND ROD (3/8" X 10'-0" LONG)
- ⊙ GROUND ROD W/ GROUND VAULT
- #2 AWG SOLID TINNED COPPER

**1 ANTENNA GROUNDING DIAGRAM**

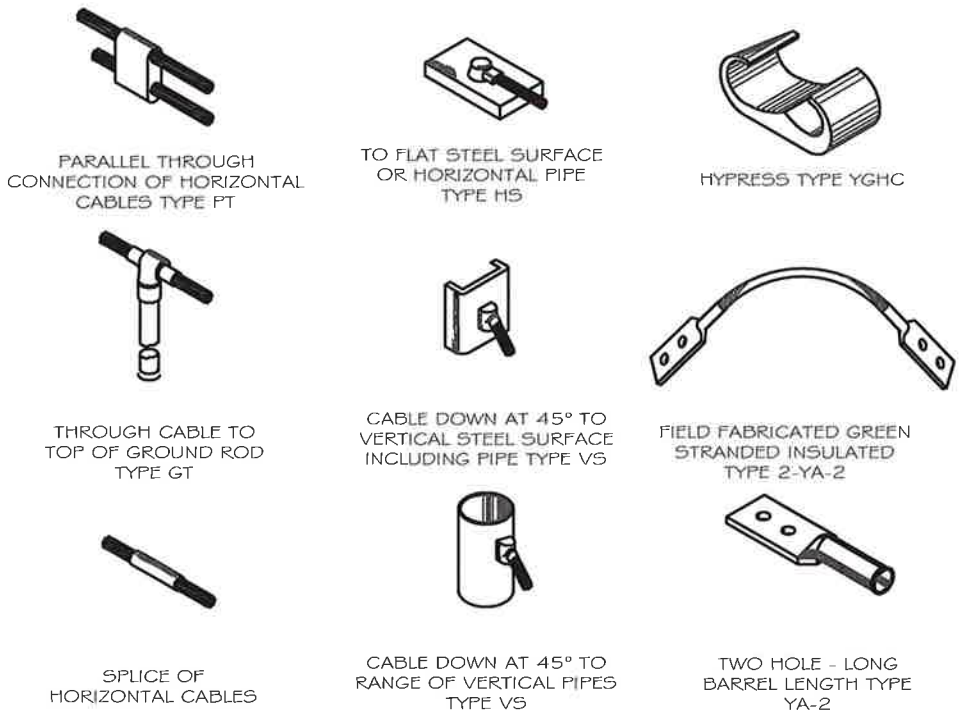
SCALE  
N.T.S.

**GROUNDING NOTES**

- THE DETAILS SHOWN ARE GENERAL IN NATURE, ACTUAL GROUNDING INSTALLATION AND CONSTRUCTION MAY VARY DUE TO SITE SPECIFIC CONDITIONS.
- GROUNDING SYSTEM SHALL BE TESTED PER SPECIFICATIONS AND SHALL HAVE A RESISTANCE OF 5 OHMS OR LESS.
- GROUNDING PLAN WAS PREPARED PRIOR TO THE COMPLETION OF THE GEO-TECHNICAL REPORT AND TOWER FOUNDATION DESIGN. THE LAYOUT AND RADIALS AND GROUNDING ROD ARE APPROX. IN NATURE AND MAY NEED TO BE ADJUSTED IN THE FIELD.
- GROUND RODS SHOULD NOT EXTEND THROUGH THE TOWER FOUNDATION OR OTHER STRUCTURAL ELEMENTS WITHOUT WRITTEN APPROVAL FROM THE ARCHITECT OR ENGINEER.

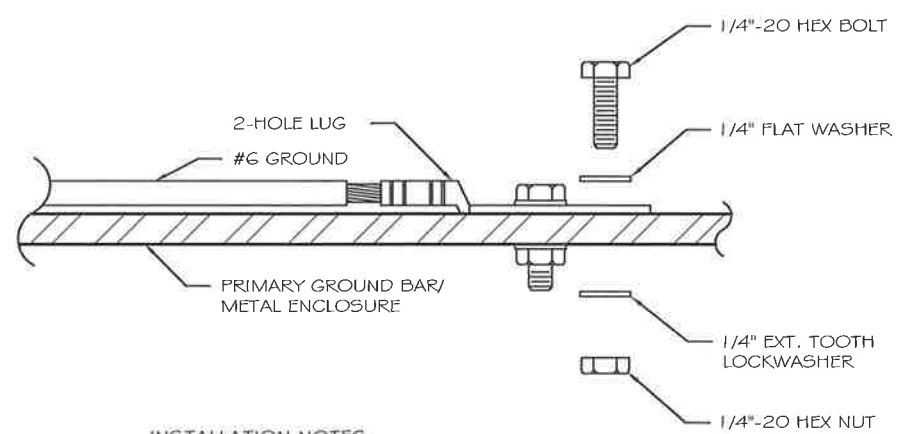
**EXOTHERMIC CONNECTION NOTES**

- ALL ELECTRICAL WORK SHALL BE IN ACCORDANCE WITH ALL LOCAL, STATE AND NATIONAL ELECTRICAL CODE.
- ALL GROUNDING SHALL CONFORM WITH ARTICLE 250 OF THE NATIONAL ELECTRICAL CODE. SEE GROUNDING NOTES.
- ALL WIRES AND CABLES FOR POWER AND LIGHTING SHALL BE INSTALLED IN GALVANIZED RIGID STEEL CONDUIT OR FLEXIBLE LIQUID TIGHT CONDUIT AS INDICATED ON DRAWING.
- GROUND COAXIAL CABLE SHIELDS AT BOTH ENDS WITH COAX CABLE GROUNDING KITS AND INSTALL WEATHER PROOFING KIT AT EACH CONNECTION.
- GROUNDING CONDUCTORS ROUTE SHALL BE ALONG THE SHORTEST AND STRAIGHTEST PATH POSSIBLE. EXCEPT WERE NOTED OTHERWISE.
- NOTIFY ALL LOCAL UTILITY COMPANIES PRIOR TO ANY INSTALLATION.
- ALL "CADWELDS" ABOVE FINISHED GRADE SHALL BE PAINTED WITH CO-GALVANIZED ZINC ENRICHED PAINT TO MATCH COLOR OBJECT BONDED TO.



**2 EXOTHERMIC CONNECTION DETAILS**

SCALE  
N.T.S.



**INSTALLATION NOTES**

- SELECT BOLT LENGTH TO PROVIDE A MINIMUM OF 2 EXPOSED THREADS
- BURNISH MOUNTING SURFACE TO REMOVE PAINT IN THE AREA OF LUG CONTACT
- APPLY ANTI-OXIDANT COMPOUND TO MATING SURFACE OF LUG AND WIPE CLEAN EXCESS COMPOUND
- USE SOLID COPPER WIRE AND MECHANICAL 2-HOLE LUG FOR ALL EXTERIOR GROUNDING

**3 PRIMARY GROUND BAR DETAIL**

SCALE  
N.T.S.