SITE NUMBER: LA0209 (CLU1604)
SITE NAME: LA0209-03 FRAZIER MOUNTAIN

FA NUMBER: 10103495
PACE NUMBER: MRLOS044224/MRLOS044260/ MRLOS041468/MRLOS044468
PTN NUMBER: 3551A0CYGZ/3551A0CWVS/ 3551A0C7XQ/3551A0D77X
PROJECT: LTE 6C (B14)/5C (AWS)/4T4R (PCS)/RRH CHANGE OUT 4C (850)
SITE TYPE: GUYED TOWER (SHELTER)
SITE ADDRESS: FRAZIER MOUNTAIN/FRAZIER PARK VENTURA, CA 93225

ATC SITE #8055

SIGNATURE BLOCK

AT&T RF: _____

AT&T PM: _____

AT&T CM: _____

VINCULUMS PM: _____

VINCULUMS CM: _____

UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA 800-227-2600

48 HOURS BEFORE YOU DIG

SITE INFORMATION

PROPERTY OWNER:	AMERICAN TOWER 10 PRESIDENTIAL WAY, WOBURN, MA 01801
APPLICANT ADDRESS:	AT&T MOBILITY 1452 EDINGER AVE. TUSTIN, CA 92780
APPLICANT REPRESENTATIVE: ADDRESS:	VINCULUMS SERVICES 10 PASTEUR, SUITE 100 IRVINE, CA 92618
LATITUDE (NAD 83):	34° 46' 17.0821" N (34.774117°)
LONGITUDE (NAD 83):	118° 58' 5.9988 W (-118.968333°)
GROUND ELEVATION:	116' AMSL
OCCUPANCY:	U UNOCCUPIED
CONSTRUCTION TYPE:	II-B
APN #:	004-0-180-020
ZONING JURISDICTION:	COUNTY OF VENTURA
CURRENT ZONING:	OS 160 AC
PROPOSED USE:	UNMANNED TELECOM FACILITY

PROJECT TEAM

PROGRAM MANAGER (RE):
VINCULUMS SERVICES
CONTACT: HUGO BARRETO
PHONE: (714) 402-0266

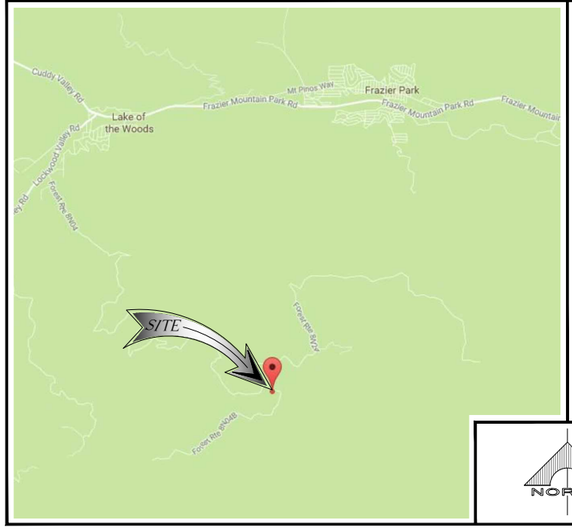
PROGRAM MANAGER (CX):
VINCULUMS SERVICES
CONTACT: PAULA SHAFFER
PHONE: (909) 489-6960

ENGINEER:
CASA INDUSTRIES, INC.
CONTACT: LUIS CARDONA
PHONE: (562) 652-5330

SITE ACQUISITION:
VINCULUMS SERVICES
CONTACT: MATT VIGIL
PHONE: (562) 889-7925

LOCATION MAPS

VICINITY MAP



LOCAL MAP

DRIVING DIRECTIONS

DIRECTIONS FROM AT&T OFFICE:

GET ON CA-55 N/STATE RTE 55 N FROM EDINGER AVE AND DEL AMO AVE, HEAD NORTHEAST, TURN LEFT TOWARD AT&T, TURN RIGHT ONTO AT&T, TURN LEFT ONTO EDINGER AVE, USE THE LEFT 2 LANES TO TURN LEFT ONTO DEL AMO AVE, USE THE RIGHT 2 LANES TO TAKE THE RAMP ONTO CA-55 N/STATE RTE 55 N, FOLLOW I-5 N TO FRAZIER MOUNTAIN PARK RD IN KERN COUNTY. TAKE EXIT 205 FROM I-5 N, MERGE ONTO CA-55 N/STATE RTE 55 N, USE THE RIGHT 2 LANES TO TAKE EXIT 10B TO MERGE ONTO I-5 N TOWARD SANTA ANA, KEEP RIGHT AT THE FORK TO STAY ON I-5 N, FOLLOW SIGNS FOR I-10 W/SANTA MONICA/INTERSTATE 5 N/SACRAMENTO, KEEP LEFT TO CONTINUE ON I-5 N/GOLDEN STATE FWY, FOLLOW SIGNS FOR SACRAMENTO/INTERSTATE 5 N, KEEP LEFT TO CONTINUE ON I-5 N, KEEP LEFT TO STAY ON I-5 N, KEEP LEFT AT THE FORK TO STAY ON I-5 N, KEEP LEFT TO STAY ON I-5 N, TAKE EXIT 205 FOR FRAZIER MOUNTAIN PARK RD, FOLLOW FRAZIER MOUNTAIN PARK RD AND FRAZIER MOUNTAIN RD TO FOREST RTE 8N24 IN VENTURA COUNTY, TURN LEFT ONTO FRAZIER MOUNTAIN PARK RD, TURN LEFT ONTO LOCKWOOD VALLEY RD, TURN LEFT ONTO FOREST RTE 8N04/FRAZIER MOUNTAIN RD, SLIGHT RIGHT ONTO FOREST RTE 8N24, DESTINATION WILL BE ON THE RIGHT.

DO NOT SCALE DRAWINGS

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

IF USING 11"X17" PLOT, DRAWINGS WILL BE HALF SCALE

PROJECT DESCRIPTION

AT&T MOBILITY PROPOSES TO MODIFY AN EXISTING APPROVED WIRELESS FACILITY.
THE SCOPE WILL CONSIST OF THE FOLLOWING:

ANTENNA LEVEL:
- REMOVE AND REPLACE 6 (E) PANEL ANTENNAS WITH 6 (N) 6' OCTO-PORT PANEL ANTENNAS @ POS. 2 AND POS.3 (2 PER SECTOR).
- REMOVE AND REPLACE 3 (E) PANEL ANTENNAS WITH 3 (N) 6' OCTO-PORT PANEL ANTENNAS @ POS. 1 (1 PER SECTOR).
- INSTALL 3 (N) LTE 6C RRUS-4478 B14 NEAR ANTENNA FOR POS. 2 & POS. 3 (1 PER SECTOR).
- INSTALL 3 (N) LTE 5C AWS RRUS-32 B66A NEAR ANTENNA FOR POS. 2 (1 PER SECTOR).
- INSTALL 3 (N) LTE 4T4R PCS RRUS-12 NEAR ANTENNA FOR POS. 1 (1 PER SECTOR).
- REMOVE 3 (E) LTE WCS RRUS-32 B30 AND REPLACE WITH 3 (N) LTE 850 RRUS-4478 B5 NEAR ANTENNA FOR POS. 2 & POS. 3 (1 PER SECTOR).
- INSTALL 3 (N) DC-6 (SQUID) SURGE SUPPRESSORS, (2) AT 95' AND (1) AT 112'.
- RELOCATE (E) UMTS FROM POS. 3 TO POS. 1.
- INSTALL 6 (N) POWER TRUNKS (2 AT UPPER RAD CENTER, 4 AT LOWER RAD CENTER).
- INSTALL 2 (N) FIBER TRUNKS (1 AT UPPER RAD CENTER, 1 AT LOWER RAD CENTER).

EQUIPMENT LEVEL:
- INSTALL 2 (N) BASEBAND 5216 UNITS INSIDE (N) 6601 V2 CHASSIS WITHIN (E) LTE RACK.
- INSTALL 2 (N) XMU INSIDE (N) 6601 V2 CHASSIS WITHIN (E) RACK.
- INSTALL 1 (N) DC/DC CONVERTER WITH 4 CONVERTER MODULES ONTO (E) LTE RACK.
- INSTALL 1 (N) DC-12 (INDOOR) ONTO (E) LTE RACK.
- INSTALL 1 (N) RECTIFIER ONTO (E) DC POWER PLANT.
- REMOVE (E) GSM CABINET.
- INSTALL 1 (N) BATTERY RACK WITH (5) 24V STRINGS (10 BATTERIES).
- INSTALL (N) IDLE CABLE.

By Others

DRAWING INDEX

SHEET NO:	SHEET TITLE
T-1	TITLE SHEET
GN-1	GENERAL NOTES
GN-2	BATTERY SPECIFICATIONS
A-1	SITE PLAN
A-2	ENLARGED SITE PLAN AND EQUIPMENT PLAN
A-3	ANTENNA PLAN & ANTENNA/RRU SCHEDULE
A-4	ELEVATIONS
A-5	ELEVATIONS
A-6	EQUIPMENT SPECS AND DETAILS
A-7	EQUIPMENT SPECS AND DETAILS
E-1	ELECTRICAL/GROUNDING PLAN AND DC POWER DIAGRAM
E-2	ELECTRICAL NOTES AND GROUNDING DETAILS

CODE COMPLIANCE

1. 2016 CALIFORNIA BUILDING CODE
2. 2016 CALIFORNIA ELECTRICAL CODE ADOPTED 2008 NEC
3. 2016 CALIFORNIA FIRE CODE
4. 2016 CALIFORNIA MECHANICAL CODE
5. 2016 CALIFORNIA PLUMBING CODE
6. 2016 CALIFORNIA ENERGY CODE
7. COUNTY COASTAL ZONE LAND USE ORDINANCE-TITLE 23
8. COUNTY FIRE CODE ORDINANCE - TITLE 16
9. COUNTY LAND USE ORDINANCE - TITLE 22
10. COUNTY BUILDING AND CONSTRUCTION ORDINANCE - TITLE 19

ALL WORKS AND MATERIALS SHALL BE PERFORMED AND INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THE LATEST EDITIONS OF THE FOLLOWING CODES.

AT&T
1452 EDINGER AVE.
TUSTIN, CA 92780

Vinculums
10 PASTEUR, SUITE 100
IRVINE, CA 92618

CASA INDUSTRIES
10650 REAGAN ST. #482
LOS ALAMITOS, CALIFORNIA 90720

REV	DATE	DESCRIPTION
1	11/13/17	100% CONSTRUCTION DRAWINGS
0	10/13/17	90% CONSTRUCTION DRAWINGS

REGISTERED PROFESSIONAL ENGINEER
PAUL C. PINA
NO. C41835
EXP. 05-18
CIVIL
STATE OF CALIFORNIA

LA0209 (CLU1604)
LA0209-03 FRAZIER MOUNTAIN
FRAZIER MOUNTAIN/FRAZIER PARK
VENTURA, CA 93225
GUYED TOWER (SHELTER)

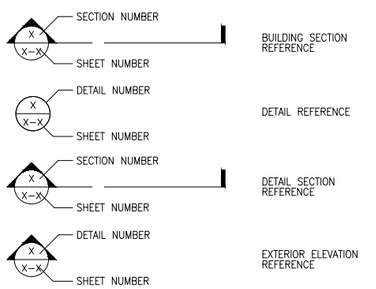
SHEET TITLE
TITLE SHEET

SHEET NUMBER
T-1

ABBREVIATIONS

AB	ANCHOR BOLT	LAM	LAMINATED
AC	ASPHALTIC CONCRETE	LBS	POUNDS
A/C	AIR CONDITIONING	LT	LIGHT
ADJ	ADJUSTABLE	LA	LIGHTNING ARRESTOR
A.F.F.	ABOVE FINISH FLOOR	LNA	LOW NOISE AMPLIFIER
ARCH	ARCHITECTURAL		
APPROX	APPROXIMATELY	MFR	MANUFACTURER
A.G.L.	ABOVE GRADE LEVEL	MAT	MATERIAL
A.M.S.L.	ABOVE MEAN SEA LEVEL	MAX	MAXIMUM
		MECH	MECHANICAL
BD	BOARD	MIN	MINIMUM
BLDG	BUILDING	MISC	MISCELLANEOUS
BLKG	BLOCKING	ML	METAL LATH
BOT	BOTTOM	MO	MASONRY OPENING
BSMT	BASEMENT	MS	MACHINE SCREW
BTS	BASE TRANSCEIVER STATION	MTD	MOUNTED
		MTL	METAL
C	COURSE(S)	(N)	NEW
CEM	CEMENT	NIC	NOT IN CONTRACT
CL	CHAIN LINK	NO	NUMBER
CLG	CEILING	NTS	NOT TO SCALE
CLR	CLEAR		
COL	COLUMN	OA	OVERALL
CONC	CONCRETE	O.C.	ON CENTER
CONST	CONSTRUCTION	OPNG	OPENING
CONT	CONTINUOUS	OPP	OPPOSITE
CORR	CORRIDOR		
CO	CONDUIT ONLY	PARTN	PARTITION
		PL	PLATE
DIA	DIAMETER	PLAS	PLASTER
DBL	DOUBLE	PLYWD	PLYWOOD
DEPT	DEPARTMENT	POC	POINT OF CONNECTION
DEMO	DEMOLITION	PROP	PROPERTY
DIM	DIMENSION	PT	PRESSURE TREATED
DN	DOWN	R	RISER
DR	DOOR	REQD	REQUIRED
DTL	DETAIL	RD	ROOF DRAIN
DWG	DRAWING	RM	ROOM
		RMS	ROOMS
(E)	EXISTING	RO	ROUGH OPENING
EA	EACH		
ELEC	ELECTRIC	SC	SOLID CORE
ELEV	ELEVATION	SCHED	SCHEDULE
EQUIP	EQUIPMENT	SECT	SECTION
EXP	EXPANSION	SHT	SHEET
EXT	EXTERIOR	SIM	SIMILAR
		SPECS	SPECIFICATIONS
FA	FIRE ALARM	SS	STAINLESS STEEL
FB	FLAT BAR	STL	STEEL
FF	FINISH FLOOR	STOR	STORAGE
FH	FLAT HEAD	STRUCT	STRUCTURAL
FIN	FINISH(ED)	SUSP	SUSPENDED
FLR	FLOOR	SW	SWITCH
FOS	FACE OF STUDS	SWBO	SWITCHBOARD
FS	FINISH SURFACE		
FT	FOOT, FEET	THK	THICK
FTG	FOOTING	TI	TENANT IMPROVEMENT
FW	FINISH WALL	TMA	TOWER MOUNTED AMPLIFIER
F.G.	FINISH GRADE	TOS	TOP OF SURFACE
FUT	FUTURE	TS	TUBE STEEL
		TYP	TYPICAL
GA	GAUGE	UNO	UNLESS NOTED OTHERWISE
GALV	GALVANIZED		
GL	GLASS	VCT	VINYL COMPOSITION TILE
GR	GRADE	VERT	VERTICAL
GYP	GYPSUM	V.I.F.	VERIFY IN FIELD
GFCI	GROUND FAULT CIRCUIT INTERRUPT	VG	VERTICAL GRAIN
GND	GROUND		
HC	HOLLOW CORE	W/	WITH
HDW	HARDWARE	WD	WOOD
HTR	HEATER	WR	WATER RESISTANT
HM	HOLLOW METAL	WT	WEIGHT
HORIZ	HORIZONTAL		
HR	HOUR	XFMR	TRANSFORMER
HT	HEIGHT		
HV	HIGH VOLTAGE	@	AT
		[	CHANNEL
ID	INSIDE DIMENSION	℄	CENTERLINE
INS	INSULATION	∠	ANGLE
INT	INTERIOR	ℙ	PROPERTY LINE
JT	JOINT		

SYMBOLS:



1 KEY NOTE REFERENCE

X DOOR NUMBER

XX AREA AND/OR ROOM NUMBER

X / X MECHANICAL UNIT

—— – —— – —— PROPERTY LINE

—X——X——X— FENCING

—E——E——E——E— ELECTRICAL SERVICE

—T——T——T——T— TELCO SERVICE

—E/T——E/T——E/T— ELECTRICAL & TELCO SERVICE

ABBREVIATIONS & SYMBOLS | 2

GENERAL:

1. THESE NOTES SHALL BE CONSIDERED A PART OF THE WRITTEN SPECIFICATIONS.

2. THE CONTRACTOR SHALL NOTIFY ARCHITECT/ENGINEER OF ANY ERRORS, OMISSIONS, OR DISCREPANCIES AS THEY MAY BE DISCOVERED IN THE PLANS, SPECIFICATIONS, AND NOTES PRIOR TO STARTING CONSTRUCTION. INCLUDING BUT NOT LIMITED BY DEMOLITION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CORRECTING ANY ERRORS, OMISSION, OR INCONSISTENCY AFTER THE START OF CONSTRUCTION WHICH HAS NOT BEEN BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER AND SHALL INCUR ANY EXPENSES TO RECTIFY THE SITUATION. THE METHOD OF CORRECTION SHALL BE APPROVED BY THE ARCHITECT/ENGINEER.

3. PRIOR TO STARTING CONSTRUCTION THE CONTRACTOR HAS THE RESPONSIBILITY TO LOCATE ALL EXISTING UTILITIES, WHETHER OR NOT SHOWN ON THE PLANS, AND TO PROTECT THEM FROM DAMAGE. THE CONTRACTOR OR SUBCONTRACTOR SHALL BEAR THE EXPENSE OF REPAIRING OR REPLACING ANY DAMAGE TO THE UTILITIES CAUSED DURING THE EXECUTION OF THE WORK.

4. A COPY OF THE APPROVED PLANS SHALL BE KEPT IN A PLACE SPECIFIED BY THE GOVERNING AGENCY, AND BY LAW SHALL BE AVAILABLE FOR INSPECTION AT ALL TIMES. IT IS THE CONTRACTORS RESPONSIBILITY TO ENSURE ALL CONSTRUCTION SETS REFLECT THE SAME INFORMATION AS THE APPROVED PLANS. THE CONTRACTOR SHALL ALSO MAINTAIN ONE SET OF PLANS AT THE SITE FOR THE PURPOSE OF DOCUMENTING ALL AS–BUILT CHANGES, REVISIONS, ADDENDUM'S, OR CHANGE ORDERS. THE CONTRACTOR SHALL FORWARD THE AS–BUILT DRAWINGS TO THE ARCHITECT/ENGINEER AT THE CONCLUSION OF THE PROJECT.

5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COMPLETE SECURITY OF THE SITE FROM START OF PROJECT TO COMPLETION OF PROJECT.

6. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE TEMPORARY POWER, WATER, AND TOILET FACILITIES.

7. ALL CONSTRUCTION THROUGH THE PROJECT SHALL CONFORM TO THE 2016 C.B.C. AND ALL THE OTHER LATEST GOVERNING CODES.

8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH ALL SAFETY PRECAUTIONS AND REGULATIONS DURING THE WORK. THE ENGINEER WILL NOT ADVISE ON NOR PROVIDE DIRECTION AS TO SAFETY PRECAUTIONS AND PROGRAMS.

9. THE CONTRACTOR SHALL SUPERVISE AND COORDINATE ALL WORK, USING HIS PROFESSIONAL KNOWLEDGE AND SKILLS. HE IS SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, PROCEDURES AND SEQUENCING AND COORDINATING ALL PORTIONS OF THE WORK.

10. THE CONTRACTOR SHALL BE RESPONSIBLE TO OBTAIN AND PAY FOR ALL PERMITS, LICENSES AND INSPECTIONS WITH RESPECT TO THE WORK TO COMPLETE THE PROJECT. BUILDING PERMIT APPLICATIONS SHALL BE FILED BY THE OWNER OR HIS REPRESENTATIVE. CONTRACTOR SHALL OBTAIN THE PERMIT AND MAKE FINAL PAYMENT OF SAID DOCUMENT.

11. ALL DIMENSIONS TAKE PRECEDENCE OVER SCALE UNLESS NOTED OTHERWISE.

12. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY BLOCKING, BACKING, FRAMING, HANGERS OR SUPPORTS FOR INSTALLATION OF ITEMS INDICATED ON THE DRAWINGS.

13. THE CONTRACTOR SHALL PROVIDE THE FIRE MARSHALL APPROVED MATERIALS TO FILL/SEAL PENETRATIONS THROUGH FIRE RATED ASSEMBLIES.

14. NEW CONSTRUCTION ADDED TO EXISTING CONSTRUCTION SHALL BE MATCHED IN FORM, TEXTURE, MATERIAL AND PAINT COLOR UNLESS NOTED OTHERWISE IN THE PLANS.

15. WHERE SPECIFIED, MATERIALS TESTING SHALL BE TO THE LATEST STANDARDS AVAILABLE AS REQUIRED BY THE LOCAL GOVERNING AGENCY RESPONSIBLE FOR RECORDING THE RESULTS.

16. ALL GENERAL NOTES AND STANDARD DETAILS ARE THE MINIMUM REQUIREMENTS TO BE USED IN CONDITIONS WHICH ARE NOT SPECIFICALLY SHOWN OTHERWISE.

17. ALL DEBRIS AND REFUGE IS TO BE REMOVED FROM THE PROJECT DAILY. PREMISES SHALL BE LEFT IN A CLEAN BROOM FINISHED CONDITION AT ALL TIMES.

18. ALL SYMBOLS AND ABBREVIATIONS ARE CONSIDERED CONSTRUCTION INDUSTRY STANDARDS. IF A CONTRACTOR HAS A QUESTION REGARDING THEIR EXACT MEANING THE ARCHITECT/ENGINEER SHALL BE NOTIFIED FOR CLARIFICATIONS.

19. THE ENGINEER SHALL NOT BE RESPONSIBLE FOR THE METHODS, TECHNIQUES AND SEQUENCES OF PROCEDURES TO PERFORM THE WORK. THE SUPERVISION OF THE WORK IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

20. CONTRACTORS SHALL VISIT THE SITE PRIOR TO BID TO ASCERTAIN CONDITIONS WHICH MAY ADVERSELY AFFECT THE WORK OR COST THEREOF.

21. THE CONTRACTOR SHALL FIELD VERIFY THE DIMENSION, ELEVATION, ETC. NECESSARY FOR THE PROPER CONSTRUCTION AND ALIGNMENT OF THE NEW PORTION OF THE WORK TO THE EXISTING WORK. THE CONTRACTOR SHALL MAKE ALL MEASUREMENTS NECESSARY FOR FABRICATION AND ERECTION OF STRUCTURAL MEMBERS. ANY DISCREPANCY SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER.

22. ALL EXISTING ACTIVE SEWER, WATER, GAS, ELECTRIC, AND OTHER UTILITIES WHERE ENCOUNTERED IN THE WORK, SHALL BE PROTECTED AT ALL TIMES, AND WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, SHALL BE RELOCATED AS DIRECTED BY ENGINEERS. EXTREME CAUTION SHOULD BE USED BY THE CONTRACTOR WHEN EXCAVATING OR PIER DRILLING AROUND OR NEAR UTILITIES.

23. ALL EXISTING INACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE REMOVED AND SHALL BE CAPPED, PLUGGED OR OTHERWISE DISCONTINUED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK, SUBJECT TO THE APPROVAL OF THE ENGINEER.

24. NO CHANGES ARE TO BE MADE TO THESE PLANS WITHOUT THE KNOWLEDGE AND WRITTEN CONSENT OF THE ARCHITECT/ENGINEER. UNATHORIZED CHANGES RENDER THESE DRAWINGS VOID.

25. ANY REFERENCE TO THE WORDS APPROVED, OR APPROVAL IN THESE DOCUMENTS SHALL BE HERE DEFINED TO MEAN GENERAL ACCEPTANCE OR REVIEW AND SHALL NOT RELIEVE THE CONTRACTOR AND/OR HIS SUB–CONTRACTORS OF ANY LIABILITY IN FURNISHING THE REQUIRED MATERIALS OR LABOR SPECIFIED.

26. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE ALL EXISTING UTILITIES WHETHER SHOWN HEREON OR NOT, AND TO PROTECT THEM FROM DAMAGE. THE CONTRACTOR SHALL BEAR ALL EXPENSE OF REPAIR OR REPLACEMENT IN CONJUNCTION WITH THE EXECUTION OF THIS WORK. GENERAL CONTRACTOR SHALL NOTIFY THE ENGINEER AND ARCHITECT IMMEDIATELY OF ANY DISCREPANCIES FOUND WITHIN THE CONTRACT DOCUMENTS, PRIOR TO STARTING WORK.

SITE PREPARATION NOTES:

1. THE PREPARATION OF THE SITE FOR CONSTRUCTION SHALL INCLUDE THE REMOVAL OF ALL BROKEN CONCRETE, TREE TRUNKS AND ANY OTHER DEBRIS THAT WOULD BE DAMAGING TO THE FOOTINGS OF THE NEW STRUCTURE.

2. BACK FILLING AT TRENCHES SHALL BE OF CLEAN, STERILE SOIL HAVING A SAND EQUIVALENT OF 30 OR GREATER. BACK FILLING SHALL BE DONE IN 8 INCH LAYERS, MOISTURE CONDITIONED AND PROPERLY COMPACTED. ADEQUATE DRAINAGE SHALL BE PROVIDED SUCH THAT NO PONDING OCCURS.

3. ALL FOUNDATION FOOTINGS SHALL EXTEND INTO AND BEAR AGAINST NATURAL UNDISTURBED SOIL OR APPROVED COMPACTED FILL. FOOTINGS SHALL EXTEND INTO SOIL DEPTH AS INDICATED IN PLANS.

4. SHOULD ANY LOOSE FILL, EXPANSIVE SOIL, GROUND WATER OR ANY OTHER UNEXPECTED CONDITIONS BE ENCOUNTERED DURING THE EXCAVATION FOR THE NEW FOUNDATION, THE ARCHITECT/ENGINEER SHALL BE NOTIFIED AND ALL FOUNDATION WORK SHALL CEASE IMMEDIATELY.

5. WITHIN AN AREA A MINIMUM OF 5 FEET BEYOND THE BUILDING LIMITS, EXCAVATE A MINIMUM OF 4" OF EXISTING SOIL. REMOVE ALL ORGANICS, PAVEMENT, ROOTS, DEBRIS AND OTHERWISE UNSUITABLE MATERIAL.

6. THE SURFACE OF THE EXPOSED SUBGRADE SHALL BE INSPECTED BY PROBING OR TESTING TO CHECK FOR POCKETS OF SOFT OR UNSUITABLE MATERIAL. EXCAVATE UNSUITABLE SOIL AS DIRECTED BY THE GEOTECHNICAL ENGINEER/TESTING AGENCY.

7. PROOFROLL THE SURFACE OF THE EXPOSED SUBGRADE WITH A LOADED TANDEM AXLE DUMP TRUCK. REMOVE ALL SOILS WHICH PUMP OR DO NOT COMPACT PROPERLY AS DIRECTED BY THE GEOTECHNICAL ENGINEER/TESTING AGENCY.

8. FILL ALL EXCAVATED AREAS WITH APPROVED CONTROLLED FILL. PLACE IN 8" LOOSE LIFTS AND THE MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASTM D–698. COMPACT TO A MINIMUM OF 90% RELATIVE COMPACTION.

9. THE STRUCTURAL DRAWINGS HERE IN REPRESENT THE FINISHED STRUCTURE. THE CONTRACTOR SHALL PROVIDE ALL TEMPORARY GUYING AND BRACING REQUIRED TO ERECT AND HOLD THE STRUCTURE IN PROPER ALIGNMENT UNTIL ALL STRUCTURAL WORK AND CONNECTIONS HAVE BEEN COMPLETED. THE INVESTIGATION, DESIGN, SAFETY, ADEQUACY AND INSPECTION OF ERECTION BRACING, SHORING, TEMPORARY SUPPORTS, ETC. IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

10. PRIOR TO STARTING CONSTRUCTION, THE CONTRACTOR SHALL PROTECT ALL AREAS FROM DAMAGE WHICH MAY OCCUR DURING CONSTRUCTION. ANY DAMAGE TO NEW OR EXISTING SURFACES, STRUCTURES OR EQUIPMENT SHALL BE IMMEDIATELY REPAIRED OR REPLACED TO THE SATISFACTION OF THE PROPERTY OWNER. THE CONTRACTOR SHALL BEAR THE EXPENSE OF REPAIRING OR REPLACING ANY DAMAGED AREAS.

11. WHEN REQUIRED STORAGE OF MATERIALS OCCURS, THEY SHALL BE EVENLY DISTRIBUTED OVER THE FLOOR OR ROOF SO AS NOT TO EXCEED THE DESIGNED LIVE LOADS FOR THE STRUCTURE. TEMPORARY SHORING OR BRACING SHALL BE PROVIDED WHERE THE STRUCTURE OR SOIL HAS NOT ATTAINED THE DESIGN STRENGTH FOR THE CONDITIONS PRESENT.

12. PRIOR TO PROCEEDING WITH ANY WORK WITHIN THE EXISTING FACILITY, THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH EXISTING STRUCTURAL AND OTHER CONDITIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE ALL NECESSARY BRACING, SHORING AND OTHER SAFEGUARDS TO MAINTAIN ALL PARTS OF THE EXISTING WORK IN A SAFE CONDITION DURING THE PROCESS OF DEMOLITION AND CONSTRUCTION AND TO PROTECT FROM DAMAGE THOSE PORTIONS OF THE EXISTING WORK WHICH ARE TO REMAIN.

SUBMITTALS:

SUBMITTALS FOR SHOP DRAWINGS, MILL TESTS, PRODUCT DATA, ECT. FOR ITEMS DESIGNED BY THE ARCHITECT/ENGINEER OF RECORD SHALL BE MADE TO THE ARCHITECT/ENGINEER PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL REVIEW THE SUBMITTAL BEFORE FORWARDING TO THE ARCHITECT. SUBMITTALS SHALL BE MADE IN ADVANCED TO ARCHITECT–ENGINEER. SUBMITTALS REQUIRED FOR EACH SECTION OF THESE NOTES ARE SPECIFIED IN THAT SECTION.

SHOP DRAWING REVIEW:

REVIEW BY THE ARCHITECT/ENGINEER IS FOR GENERAL COMPLIANCE WITH THE DESIGN CONCEPT AND THE CONTRACT DOCUMENTS. MARKINGS OR COMMENTS SHALL NOT BE CONSTRUED AS RELIEVING THE CONTRACTOR FROM COMPLIANCE WITH THE PROJECT PLANS AND SPECIFICATIONS, NOR DEPARTURES THRERFROM. THE CONTRACTOR REMAINS RESPONSIBLE FOR DETAILS AND ACCURACY, FOR CONFIRMING AND CORRELATING ALL QUANTITIES AND DIMENSIONS, FOR SELECTION FABRICATION PROCESSES.

ACCESSIBILITY NOTE:

THE TELECOMMUNICATIONS EQUIPMENT SPACE SHOWN HEREON THESE PLANS IS NOT CUSTOMARILY OCCUPIED. WORK TO BE PERFORMED IN THIS FACILITY CANNOT REASONABLY BE PERFORMED BY PERSONS WITH A SEVERE IMPAIRMENT: MOBILITY, SIGHT, AND/OR HEARING. THEREFORE, PER 2016 C.B.C. CHAPTER 11B, THIS FACILITY SHALL BE EXEMPTED FROM ALL TITLE 24 ACCESS REQUIREMENTS.

BID WALK NOTES:

1. CONTRACTOR TO FIELD VERIFY ALL EXISTING CONSTRUCTION CONDITIONS BEFORE SUBMITTAL OF FINAL BIDS, START OF CONSTRUCTION AND/OR FABRICATION. AFTER THOROUGHLY EXAMINING THE PLANS AND EXISTING SITE CONDITIONS NOTIFY THE ENGINEER IN WRITING OF ANY DISCREPANCIES OR ANY ITEMS NEEDING CLARIFICATIONS PRIOR TO SUBMITTING FINAL BIDS.

2. IF THE ENGINEER IS NOT NOTIFIED OF ANY DISCREPANCIES OR CLARIFICATIONS IN WRITING AS DESCRIBED IN #1 IT WILL BE CONFIRMED THAT THE CONTRACTOR HAS CONSIDERED ALL ITEMS THAT WILL AFFECT THE COST OF THE CONSTRUCTION OF THE SITE UNDER THE MOST STRINGENT CONDITIONS. THE CONTRACTOR WILL NOT BE ENTITLED TO ANY ADDITIONAL COMPENSATION AFTER THE FINAL BIDS HAVE BEEN SUBMITTED AND AWARDED FROM THE CARRIER.

STRUCTURAL STEEL:

1. ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE LATEST REVISED EDITION OF THE AISC MANUAL OF STEEL CONSTRUCTION, WHICH INCLUDES THE SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS, THE CODE OF STANDARD PRACTICE AND THE AWS STRUCTURAL WELDING CODE. IDENTIFY AND MARK STEEL PER AISC 14TH EDITION AND C.B.C. 2016.

2. STRUCTURAL STEEL SHOP DRAWINGS SHALL BE REVIEWED BY THE ENGINEER/ARCHITECT PRIOR TO FABRICATION.

3. GROUTING OF COLUMN BASE PLATES: BASE PLATES SHALL BE DRYPACKED OR GROUTED WITH NON–SHRINK, NON–FERROUS GROUT. MINIMUM COMPRESSIVE STRENGTH SHALL BE 4,000 PSI AT 28 DAYS. ALL SURFACES SHALL BE PROPERLY CLEANED OF FOREIGN MATERIAL PRIOR TO GROUTING.

4. ALL EXPOSED WELDS SHALL BE FILLED AND GROUND SMOOTH WHERE METAL COULD COME IN CONTACT WITH THE PUBLIC.

5. NO HOLES OTHER THAN THOSE SPECIFICALLY DETAILED SHALL BE ALLOWED THRU STRUCTURAL STEEL MEMBERS. BOLT HOLES SHALL CONFORM TO AISC SPECIFICATION, AND SHALL BE STANDARD HOLES UNLESS NOTED OTHERWISE. NO CUTTING OR BURNING OF STRUCTURAL STEEL WILL BE PERMITTED WITHOUT PRIOR CONSENT OF THIS ENGINEER.

6. WELDING: CONFORM TO AWS D1 1. WELDERS SHALL BE CERTIFIED IN ACCORDANCE WITH WABO REQUIREMENTS. USE E70 ELECTRODES OF TYPE REQUIRED FOR MATERIALS TO BE WELDED.

7. BOLTING: ASTM A307 BOLTS SHALL BE INSTALLED "SNUG TIGHT" PER AISC. SECTION RCSC 8(C) ASTM A325 BOLTS SHALL CONFORM TO THE RCSC SPECIFICATION SECTION 8 (D).

8. FABRICATION: CONFORM TO AISC SPECIFICATION SEC M2 "FABRICATION" AND AISC CODE SEC 6 "FABRICATION AND DELIVERY" PERFORM WORK ON PREMISES OF A FABRICATOR APPROVED BY THE BUILDING OFFICIAL.

9. GALVANIZING: ALL EXPOSED STEEL OUTSIDE THE BUILDING ENVELOPE SHALL BE HOT–DIPPED GALVANIZED. APPLY FIELD TOUCH–UPS PER SPECIFICATIONS. PER ASTM A153.

10. MATERIALS: CONFORM TO

ANCHOR BOLTS (HEADED):	ASTM A307
ANCHOR BOLTS (J–TYPE):	ASTM A36
BARS AND PLATES:	ASTM A36
BOLTS:	ASTM A307
C–, M–, AND ANGLE SHAPES:	ASTM A36
DEFORMED WELDED WIRE FABRIC:	ASTM A497
EPOXY AND EXPANSION ANCHORS:	HILTI OR EQUIVALENT
GROUT:	EMBECO OR EQUIVALENT
HIGH–STRENGTH BOLTS:	ASTM A325SC OR (A325N)
OTHER STRUCTURAL SHAPES:	ASTM A36
REINFORCING BARS:	ASTM A615. GRADE 60, DEFORMED BARS
SMOOTH WELDED WIRE FABRIC:	ASTM A185
STRUCTURAL WF SHAPES:	ASTM A572–GR50
STEEL PIPE:	ASTM A53, GRADE B
TIE WIRE:	16.5 GAGE OR HEAVIER, BLACK ANNEALED
TUBE STEEL AND PIPE COLUMS:	ASTM A500, GRADE B
WELDING ELECTRODES:	E70XX
W – SHAPES:	ASTM A992, GRADE 50

11. HOLES IN STEEL SHALL BE DRILLED OR PUNCHED. ALL SLOTTED HOLES SHALL BE PROVIDED WITH SMOOTH EDGES. BURNING OF HOLES AND TORCH CUTTING AT THE SITE IS NOT PERMITTED.

12. ALL FRAMING CONNECTORS SUCH AS CONCRETE ANCHORS, HOLD–DOWNS, POST BASES, FRAMING CAPS, HANGER AND OTHER MISCELLANEOUS STRUCTURAL METALS SHALL BE AS MANUFACTURED BY SIMPSON STRONG TIE CO. OR APPROVED EQUAL.

GENERAL NOTES & SPECIFICATIONS | 1

AT&T
1452 EDINGER AVE.
TUSTIN, CA 92780

Vinculums
10 PASTEUR, SUITE 100
IRVINE, CA 92618

ASA INDUSTRIES
10650 REAGAN ST. #482
LOS ALAMITOS, CALIFORNIA 90720

REV	DATE	DESCRIPTION
1	11/13/17	100% CONSTRUCTION DRAWINGS
0	10/13/17	90% CONSTRUCTION DRAWINGS

LA0209 (CLU1604)
LA0209–03 FRAZIER MOUNTAIN
FRAZIER MOUNTAIN/FRAZIER PARK
VENTURA, CA 93225
GUYED TOWER (SHELTER)

SHEET TITLE

GENERAL NOTES

SHEET NUMBER

GN-1

FIRE DEPARTMENT NOTES

GENERAL

1.0 ADDRESS NUMBERS:

A. APPROVED ADDRESS NUMBERS, BUILDING NUMBERS OR APPROVED BUILDING IDENTIFICATION SHALL BE PLACED IN A POSITION THAT PLAINLY LEGIBLE AND VISIBLE FROM THE STREET, ROAD, ALLEY, AND WALKWAYS GIVING ACCESS TO AND WITHIN THE PROPERTY.

2.0 FIRE EXTINGUISHERS, IF REQUIRED:

A. PROVIDE A FIRE EXTINGUISHER (MINIMUM 2A-10BC) WITHIN A RECESSED OR SEMI-RECESSED CABINET WITHIN 75 FEET TRAVEL DISTANCE FROM ALL POINTS IN THE OCCUPANCY; THE EXTINGUISHER SHALL BE MOUNTED ON A HOOK WITHIN THE CABINET (ELEVATED OFF CABINET FLOOR); THE TOP OF THE EXTINGUISHER SHALL BE NO HIGHER THAN 48 INCHES (1219 mm) ABOVE THE FLOOR; EXTINGUISHER SHALL BE PLACED IN A EASILY ACCESSIBLE LOCATIONS WHERE THEY WILL BE READILY ACCESSIBLE AND IMMEDIATELY AVAILABLE FOR USE.

3.0 DOOR OPERATIONS:

A. ALL EXIT DOORS SHALL BE OPENABLE FROM THE INSIDE WITHOUT KEY, SPECIAL KNOWLEDGE, OR EFFORT. THE UNLATCHING OF ANY EXIT DOOR SHALL NOT REQUIRE MORE THAN ONE OPERATION.

4.0 ADDITIONAL PERMIT:

A. PRIOR TO THE FINAL INSPECTION, OBTAIN A HAZARDOUS MATERIALS PERMIT FROM THE FIRE DEPARTMENT. CONTACT THE ENVIROMENTAL MANAGEMENT CENTER OF THE CITY.

5.0 REQUIRED INSPECTIONS:

A. THE FIRE DEPARTMENT INSPECTION FOR THIS PROJECT INCLUDE THE FOLLOWING:

1. HAZARDOUS MATERIALS FINAL INSPECTION.
2. FIRE PREVENTION BUREAU FINAL INSPECTION – CONTRACTOR MUST REQUEST A SEPERATE INSPECTION. INSPECTION.INCLUDES. BUT IS NOT LIMITED TO: FIRE EXTINGUISHERS; SIGNAGE; DOOR HARDWARE AND MEANS OF EGRESS; EMERGENCY/EXIT LIGHTING; ETC.

NOTE: TO SCHEDULE INSPECTIONS: CALL OFFICE OF STATE FIRE MARSHALL OF THE CITY AT LEAST 48 HOURS IN ADVANCE.

FIRE DEPARTMENT | **2**

NOTES

GENERAL

1. PER CFC SECTION 2704.2.2 "THE GGREGATE QUANTITIES OF HAZARDOUS MATERIALS STORED OR USED IN A SINGLE FABRICATION AREA SHALL BE LIMITED AS SPECIFIECED IN THIS SECTION" AND REFERRING TO CFC 2013 SECTION 608.1 STATIONARY STORAGE BATTERY SYSTEMS HAVING AN ELECTROLYTE CAPACITY OF MORE THAN 50 GALLONS (189 L) FOR FLOODED LEAD-ACID, NICKEL CADMIUM (NI-CD) AND VALVE REGULATED LEAD-ACID (VRLA), OR MORE THAN 1,000 POUNDS (454 KG) FOR LITHIUM-ION AND LITHIUM METAL POLYMER, USED FOR FACILITY STAND BY POWER, EMERGENCY POWER OR UINTERRUPTIBLE POWER SUPPLIES SHALL COMPLY WITH THIS SECTION AND TABLE 608.1

2. PER CFC SECTION 602.1 AND PER CBC 2013 SECTION 307.2 THE DEFINITIONS:

VALVE-REGULATED LEAD ACID (VRLA) BATTERY (CBC 2013-CFC 2013-SECTION 202 GENERAL DEFINITIONS):
A LEAD-ACID BATTERY CONSISTING OF SEALED CELLS FURNISHED WITH A VALVE THAT OPENS TO VENT THE BATTERY WHENEVER THE INTERNAL PRESSURE OF THE BATTERY EXCEEDS THE AMBIENT PRESSURE BY A SET AMOUNT. IN VRLA BATTERIES, THE LIQUID ELECTROLYTES IN THE CELLS IS IMMOBILIZED IN A ABSORPTIVE GLASS MAT (AGM CELLS OR BATTERIES) OR BY THE ADDITION OF A GELLING AGENT (GEL CELL OR GELLED BATTERIES).

CORROSIVE (CBC 2013-CFC 2013-SECTION 202 GENERAL DEFINITIONS):
A CHEMICAL THAT CAUSES VISIBLE DESTRUCTION OF, OR IRREVERSIBLE ALTERATIONS IN, LIVING TISSUE BY CHEMICAL ACTION AT THE POINT OF CONTACT. A CHEMICAL SHALL BE CONSIDERED CORROSIVE IF, WHEN TESTED ON THE INTACT SKIN OF ALBINO RABBITS BY THE METHOD DESCRIBED IN DOTn 49 CFR, PART 17.137, SUCH A CHEMICAL DESTROYS OR CHANGES IRREVERSIBLY THE STRUCTURE OF THE TISSUE AT THE POINT OF CONTACT FOLLOWING AN EXPOSURE PERIOD OF 4 HOURS. THIS TERM DOES NOT REFER TO ACTION ON INANIMATE SURFACES.

HAZARDOUS MATERIALS (CBC 2013-CFC 2013-SECTION 202 GENERAL DEFINITIONS):
THOSE CHEMICALS OR SUBSTANCES THAT ARE PHYSICAL HAZARDS OR HEALTH HAZARDS AS DEFINED AND CLASSIFIED IN THIS SECTION AND THE CALIFORNIA FIRE CODE, WHETHER THE MATERIALS ARE IN USABLE OR WASTE CONDITION.

HEATH HAZARD (CBC 2013-CFC 2013-SECTION 202 GENERAL DEFINITIONS):
A CLASSIFICATION OF A CHEMICAL FOR WHICH THERE IS STATISTICALLY SIGNIFICANT EVIDENCE THAT ACUTE OR CHRONIC HEALTH EFFECTS ARE CAPABLE OF OCCURRING IN EXPOSED PERSONS. THE TERM "HEALTH HAZARD" INCLUDES CHEMICALS THAT ARE TOXIC OR HIGHLY TOXIC. AND CORROSSIVE.

PHYSICAL HAZARD (CBC 2013-CFC 2013-SECTION 202 GENERAL DEFINITIONS):
A CHEMICAL FOR WHICH THERE IS EVIDENCE THAT IS A COMBUSTIBLE LIQUID, CRYOGENIC FLUID, EXPLOSIVE, FLAMMABLE (SOLID, LIQUID, OR GAS), ORGANIC PEROXIDE (SOLID OR LIQUID), OXIDIZER (SOLID OR LIQUID), OXIDIZING GAS, PYROPHORIC (SOLID, LIQUID, OR GAS), UNSTABLE (REACTIVE) MATERIAL (SOLID, LIQUID, OR GAS), OR WATER REACTIVE MATERIAL (SOLID OR LIQUID).

BATTERY NOTES | **3**

CFC CHAPTER 6 COMPLIANCE				
NEW BATTERY RACK				
TOTAL ELECTROLYTE = 24.7 GAL. SINCE LESS THAN 50 GAL. OF ELECTROLYTE ARE FOUND, THIS SITE IS IN COMPLIANCE PER CFC CHAPTER 6, SECTION 608.5.2				
BATTERY MODEL		TOTAL # OF BATTERY UNITS INSTALLED	ELECTROLYTE VOLUME (GAL) PER UNIT	TOTAL ELECTROLYTE VOLUME (GAL) UNITS
(N)	M12V180FT	10	2.47	24.7
TOTAL		10		24.7

*

Battery type	Lead weight		Electrolyte volume		Electrolyte weight		Sulfuric Acid weight		Sulfuric Acid volume	
M12V30	6.2 kg	13.7 lb	1.39 l	0.37 gal	1.81 kg	3.99 lb	0.74 kg	1.63 lb	0.40 l	0.11 gal
M12V30T	7.2 kg	15.9 lb	1.52 l	0.40 gal	2.00 kg	4.41 lb	0.84 kg	1.85 lb	0.45 l	0.12 gal
M12V40	13.4 kg	29.5 lb	2.08 l	0.55 gal	2.74 kg	6.04 lb	1.15 kg	2.53 lb	0.62 l	0.16 gal
M12V45	11.9 kg	26.2 lb	2.61 l	0.69 gal	3.45 kg	7.60 lb	1.45 kg	3.19 lb	0.78 l	0.21 gal
M12V70	19.6 kg	43.3 lb	4.04 l	1.07 gal	5.34 kg	11.76 lb	2.24 kg	4.93 lb	1.21 l	0.32 gal
M12V90	23.2 kg	51.1 lb	4.53 l	1.20 gal	5.98 kg	13.17 lb	2.51 kg	5.53 lb	1.36 l	0.36 gal
M12V90FT	24.2 kg	53.2 lb	4.50 l	1.19 gal	6.01 kg	13.24 lb	2.61 kg	5.75 lb	1.35 l	0.36 gal
M12V105FT	24.5 kg	54.0 lb	5.36 l	1.42 gal	7.07 kg	15.58 lb	2.97 kg	6.54 lb	1.61 l	0.43 gal
M12V125FT	32.1 kg	70.8 lb	6.95 l	1.84 gal	9.17 kg	20.19 lb	3.85 kg	8.47 lb	2.08 l	0.55 gal
M12V155FT	36.8 kg	81.0 lb	8.19 l	2.17 gal	10.80 kg	23.80 lb	4.53 kg	9.98 lb	2.46 l	0.65 gal
M12V180FT	42.0 kg	92.6 lb	9.37 l	2.47 gal	12.37 kg	27.27 lb	5.19 kg	11.44 lb	2.82 l	0.74 gal
M6V190	23.8 kg	52.5 lb	5.06 l	1.34 gal	6.68 kg	14.71 lb	2.80 kg	6.17 lb	1.52 l	0.40 gal
M2V300	11.7 kg	25.8 lb	2.51 l	0.66 gal	3.31 kg	7.30 lb	1.39 kg	3.06 lb	0.75 l	0.20 gal
M2V550	24.4 kg	53.7 lb	5.21 l	1.38 gal	6.87 kg	15.13 lb	2.88 kg	6.35 lb	1.56 l	0.41 gal
M6V200	25.8 kg	56.8 lb	5.41 l	1.43 gal	7.14 kg	15.73 lb	3.01 kg	6.64 lb	1.62 l	0.43 gal
S12V120	9.6 kg	21.2 lb	1.45 l	0.38 gal	1.91 kg	4.21 lb	0.80 kg	1.77 lb	0.43 l	0.12 gal
S12V170	12.7 kg	28.0 lb	2.22 l	0.59 gal	2.93 kg	6.46 lb	1.23 kg	2.71 lb	0.67 l	0.18 gal
S12V285	19.6 kg	43.3 lb	4.04 l	1.07 gal	5.34 kg	11.76 lb	2.24 kg	4.93 lb	1.21 l	0.32 gal
S12V300	22.5 kg	49.6 lb	3.89 l	1.03 gal	5.14 kg	11.31 lb	2.15 kg	4.75 lb	1.17 l	0.31 gal
S12V370	26.1 kg	57.4 lb	4.80 l	1.27 gal	6.33 kg	13.95 lb	2.66 kg	5.85 lb	1.44 l	0.38 gal
S6V740	25.2 kg	55.6 lb	5.09 l	1.35 gal	6.72 kg	14.81 lb	2.82 kg	6.21 lb	1.53 l	0.40 gal
S12V500	35.5 kg	78.2 lb	7.11 l	1.88 gal	9.38 kg	20.67 lb	3.94 kg	8.67 lb	2.13 l	0.56 gal
S12V550NG	32.9 kg	72.6 lb	6.96 l	1.84 gal	9.19 kg	20.24 lb	3.86 kg	8.50 lb	2.10 l	0.56 gal
S12V370NG	22.9 kg	50.4 lb	4.85 l	1.28 gal	6.41 kg	14.12 lb	2.69 kg	5.92 lb	1.46 l	0.39 gal
S6V740NG	22.2 kg	49.0 lb	5.08 l	1.34 gal	6.71 kg	14.78 lb	2.82 kg	6.21 lb	1.53 l	0.40 gal

BATTERY SPECIFICATIONS | **1**

MARATHON

From the World Leader in VRLA Battery Technology

Designed for durability in Telecommunications and Electric Utility applications, the GNB® Industrial Power **Front Terminal MARATHON®** series provides high performance and reliability in long duration discharge applications. The location of the terminals on the front (vs. the top) of the battery greatly facilitates the installation and maintenance of the product when placed in a cabinet enclosure or on a standard relay rack tray. The **MARATHON®** Front Terminal battery series highlights another example of GNB's extensive experience and worldwide leadership in VRLA technology.

"Designed-in" Quality Manufacturing

Quality manufacturing processes for the **MARATHON®** series batteries incorporate the industry's most advanced technologies including: an automated helium leak detection system, a computer controlled "fill by weight" acid filler, and a temperature controlled water bath formation process. Each and every unit is capacity tested.

High Performance MARATHON® Features

- Patented "Diamond Side-Wall" Design maintains structural integrity in higher operating temperatures
- Durable Flame Retardant Polypropylene Container and Cover complies with UL94 V-0; 28% L.O.I.
- Carry Handles facilitate ease of installation
- High-Compression Absorbent Glass Mat (AGM) Technology ensures greater than 99% recombination efficiency
- Integrated Flash Arrestor ultrasonically welded into cover for secure and safe protection
- 10 Year Design Life in float applications @ 25°C (77°F); 12 year @ 20°C (68°F)
- Superior Lead-Tin-Calcium Positive Alloy helps to resist corrosion
- Higher Vent Opening Pressure minimizes unnecessary gassing; one-way self resealing device
- Front Accessible Copper Alloy, 6 mm, Female Terminals ensures low resistance, high integrity connections
- "Easy On\Easy Off" Terminal Post Protector provides added safety
- Post Design accomodates voltage/diagnostic probes
- Footprint Ready fits in all standard 23" Relay Rack Applications
- Compliance: Designed in accordance with IEC 60896-21/-22
- No Transport Restrictions: Complies with IATA/ICAO Special Provision A67; DOT-CFR Title 49; IMDG Amendment 34-08

UL Recognized Component

Applications

MARATHON® Batteries incorporate GNB's advanced VRLA technology designed for long life and high performance in:

Telecommunications
- Distributed Power
- PCS
- Cellular
- Broadband

Electric Utility
- Switchgear Control Power
- Communications

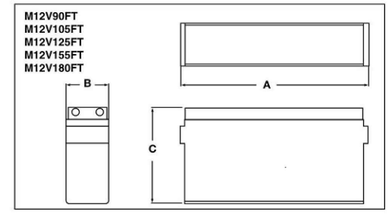
UPS
- Industrial Long Duration

MARATHON

MARATHON® Front Terminal Specifications

Model Number	Voltage	Capacity (AH) 8hr To 1.75 VPC @ 25°C	Capacity (AH) 10hr To 1.80 VPC @ 20°C	Nominal Dimensions Inches A	Inches B	Inches C	Millimeters A	Millimeters B	Millimeters C	Nominal Weight lbs.	Nominal Weight kg
M12V90FT	12	86	86	15.55	4.13	10.63	395	105	270	70	31.5
M12V105FT	12	104	100	20.12	4.33	9.38	511	110	238	79	35.8
M12V125FT	12	125	121	22.00	4.90	11.15	559	124	283	105	47.6
M12V155FT	12	155	150	22.00	4.90	11.15	559	124	283	119	53.8
M12V180FT	12	180	175	22.00	4.90	12.50	559	124	318	133	60.0

M12V90FT
M12V105FT
M12V125FT
M12V155FT
M12V180FT



Float Voltage & Charging

Constant Voltage charging is recommended

Recommended float voltage: 2.27 VPC @ 25°C (77°F)

Float Voltage Range: 2.25 to 2.30 VPC @ 25°C (77°F)

Equalize voltage: 2.35 VPC for 24 Hours or 2.40 VPC for 12 Hours

MARATHON® Front Terminal Electrical Data

Model Number	Short Circuit Current Amps	Internal Resistance (mOhms)
M12V90FT	2358	4.5
M12V105FT	3125	4.0
M12V125FT	3814	3.2
M12V155FT	3883	3.0
M12V180FT	4147	3.0

NOTE: Design and/or specifications subject to change without notice. If questions arise, contact your local GNB sales representative for clarification

AT&T
1452 EDINGER AVE.
TUSTIN, CA 92780

Vinculums
10 PASTEUR, SUITE 100
IRVINE, CA 92618

ASA INDUSTRIES
10650 REAGAN ST. #482
LOS ALAMITOS, CALIFORNIA 90720

REV	DATE	DESCRIPTION
1	11/13/17	100% CONSTRUCTION DRAWINGS
0	10/13/17	90% CONSTRUCTION DRAWINGS

REGISTERED PROFESSIONAL ENGINEER
PAUL C. PINA
NO. C41935
EXP. 06-13
CIVIL
STATE OF CALIFORNIA

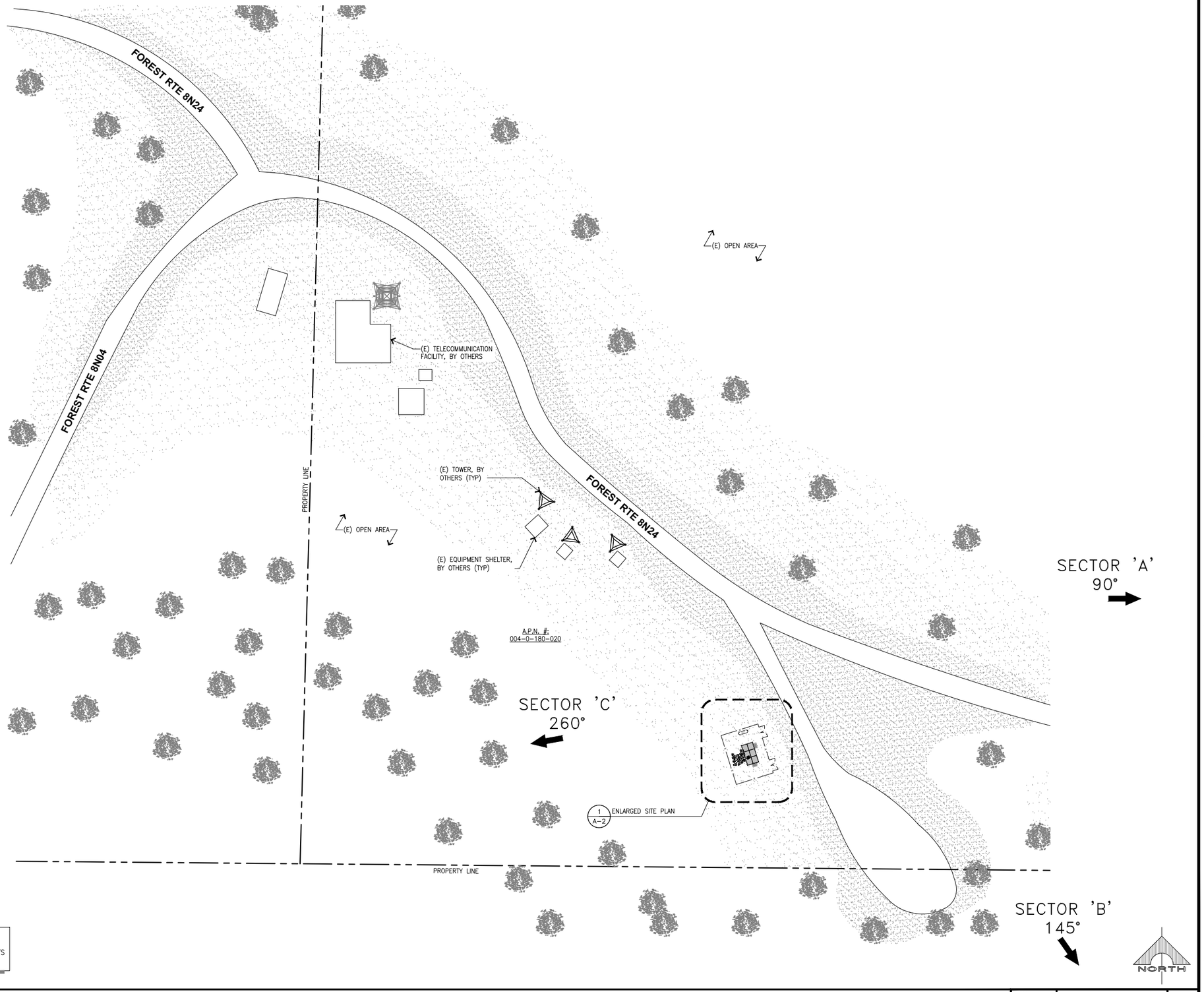
LA0209 (CLU1604)
LA0209-03 FRAZIER MOUNTAIN
FRAZIER MOUNTAIN/FRAZIER PARK
VENTURA, CA 93225
GUYED TOWER (SHELTER)

SHEET TITLE

BATTERY SPECIFICATIONS

SHEET NUMBER

GN-2



NOTE:
THESE DRAWINGS HAVE BEEN CREATED BY INFORMATION GATHERED AT THE SITE, (E) AS-BUILTS PROVIDED BY AT&T AND WITHOUT A SURVEY.

SITE PLAN

SCALE: 1"=40'-0"

20' 40' 80'

1

AT&T
1452 EDINGER AVE.
TUSTIN, CA 92780

Vinculums
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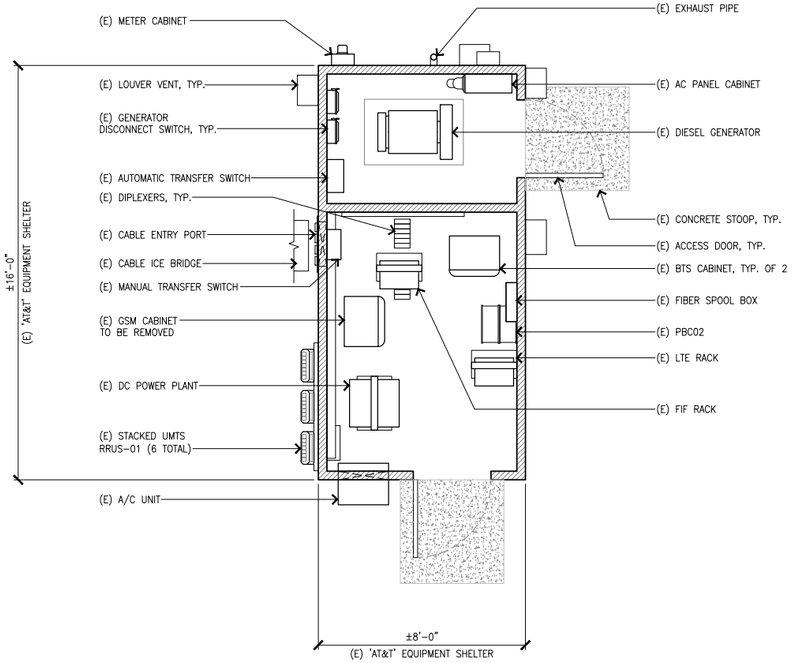
REGISTERED PROFESSIONAL ENGINEER
PAUL C. PINA
NO. C41835
EXP. 06-13-19
CIVIL
STATE OF CALIFORNIA

LA0209 (CLU1604)
LA0209-03 FRAZIER MOUNTAIN
FRAZIER MOUNTAIN/FRAZIER PARK
VENTURA, CA 93225
GUYED TOWER (SHELTER)

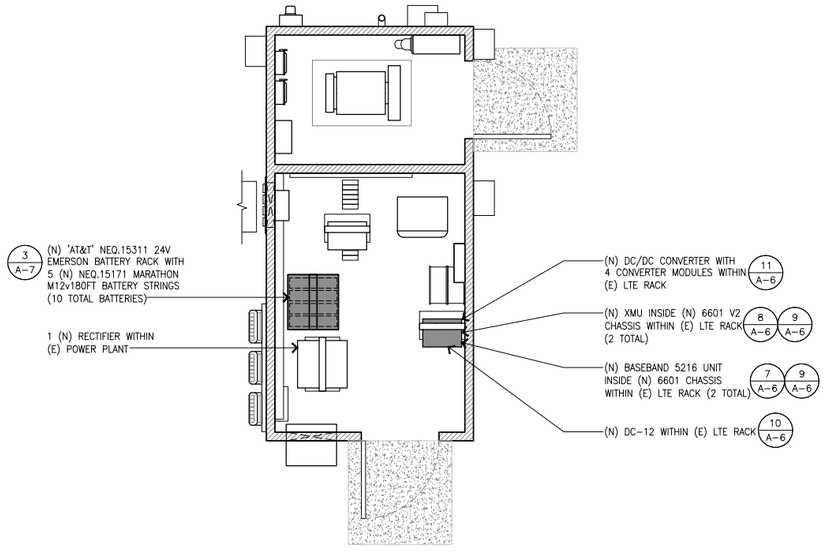
SHEET TITLE
SITE PLAN

SHEET NUMBER
A-1



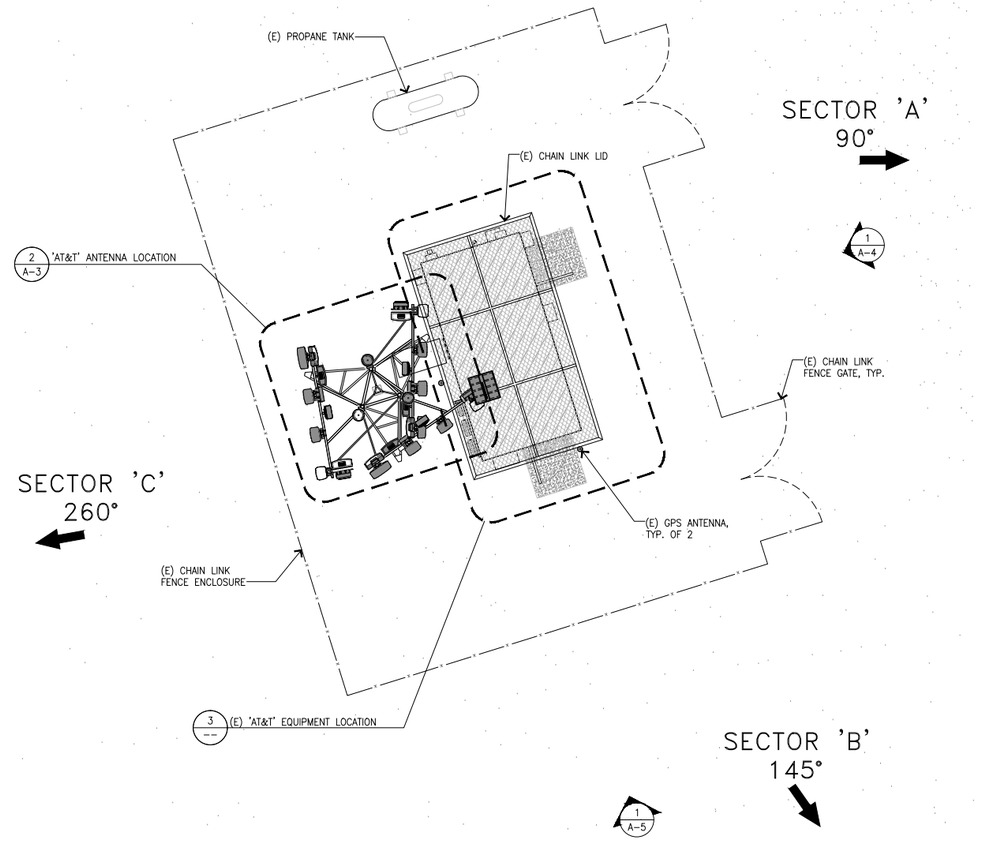
(E) EQUIPMENT PLAN

SCALE: 3/8"=1'-0" | 2



(N) EQUIPMENT PLAN

SCALE: 3/8"=1'-0" | 3



ENLARGED SITE PLAN

SCALE: 3/16"=1'-0" | 1

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1452 EDINGER AVE.
TUSTIN, CA 92780

Vinculums
10 PASTEUR, SUITE 100
IRVINE, CA 92618

ASA INDUSTRIES
10650 REAGAN ST. #482
LOS ALAMITOS, CALIFORNIA 90720

REV	DATE	DESCRIPTION
1	11/13/17	100% CONSTRUCTION DRAWINGS
0	10/13/17	90% CONSTRUCTION DRAWINGS

REGISTERED PROFESSIONAL ENGINEER PAUL C. PINA NO. C41835 EXP. 06-19 CIVIL STATE OF CALIFORNIA

LA0209 (CLU1604)
LA0209-03 FRAZIER MOUNTAIN
FRAZIER MOUNTAIN/FRAZIER PARK
VENTURA, CA 93225
GUYED TOWER (SHELTER)

SHEET TITLE
ENLARGED SITE PLAN AND EQUIPMENT PLAN

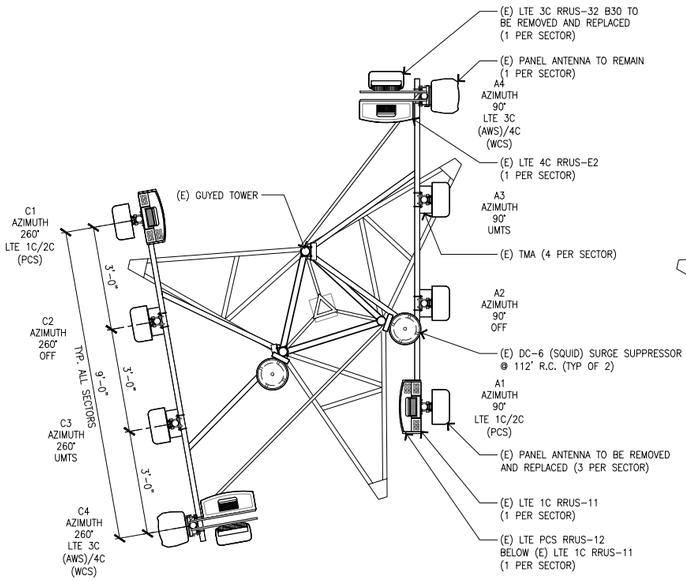
SHEET NUMBER
A-2

OPTIMUM ANTENNA AND TRANSMISSION CABLE REQUIREMENTS (VERIFY WITH CURRENT RFDS)

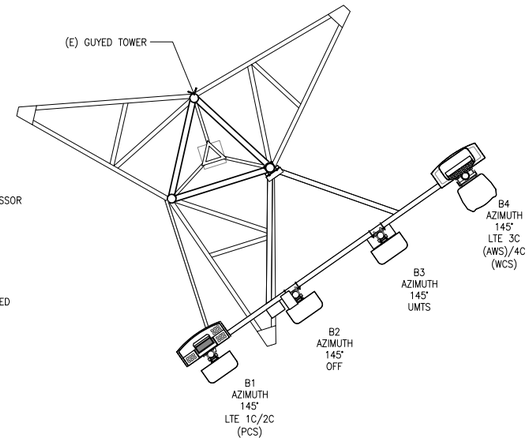
	SECTOR	TECHNOLOGY		ANTENNA MODEL		ANTENNA AZIMUTH		RAD RAD CENTER		TRANSMISSION CABLE	
		EXIST	PROP	EXISTING	PROPOSED	EXISTING	PROPOSED	EXIST	PROP	LENGTH	CABLE TYPE
ALPHA SECTOR	A1	LTE 1C/ 2C (PCS)	UMTS/LTE 1C/ 2C PCS 4T4R	POWERWAVE P65-16-XLH-RR	KATHREIN 800-10965K	90°	90°	112'-0"	112'-0"	±135'	FB-L98B-002-XXX
	A2	OFF	LTE 5C/6C	ANDREW MB48-RR65-VD-PALQ-R12	COMMSCOPE JAHH-65B-R3B	90°	90°	112'-0"	112'-0"	±135'	LDF5
	A3	UMTS	LTE 5C/6C	ANDREW MB48-RR65-VD-PALQ-R12	COMMSCOPE JAHH-65B-R3B	90°	90°	112'-0"	112'-0"	±135'	LDF5
	A4	LTE 3C (AWS) /4C (WCS)	LTE 3C (AWS) /4C (850)	QUINTEL QS6658-3	NO CHANGE	90°	–	112'-0"	–	±135'	FB-L98B-002-XXX
BETA SECTOR	B1	LTE 1C/ 2C (PCS)	UMTS/LTE 1C/ 2C PCS 4T4R	POWERWAVE P65-16-XLH-RR	KATHREIN 800-10965K	145°	145°	95'-0"	95'-0"	±115'	FB-L98B-002-XXX
	B2	OFF	LTE 5C/6C	ANDREW MB48-RR65-VD-PALQ-R12	COMMSCOPE JAHH-65B-R3B	145°	145°	95'-0"	95'-0"	±115'	LDF5
	B3	UMTS	LTE 5C/6C	ANDREW MB48-RR65-VD-PALQ-R12	COMMSCOPE JAHH-65B-R3B	145°	145°	95'-0"	95'-0"	±115'	LDF5
	B4	LTE 3C (AWS) /4C (WCS)	LTE 3C (AWS) /4C (850)	QUINTEL QS6658-3	NO CHANGE	145°	–	95'-0"	–	±115'	FB-L98B-002-XXX
GAMMA SECTOR	C1	LTE 1C/ 2C (PCS)	UMTS/LTE 1C/ 2C PCS 4T4R	POWERWAVE P65-16-XLH-RR	KATHREIN 800-10965K	260°	260°	112'-0"	112'-0"	±135'	FB-L98B-002-XXX
	C2	OFF	LTE 5C/6C	ANDREW MB48-RR65-VD-PALQ-R12	COMMSCOPE JAHH-65B-R3B	260°	260°	112'-0"	112'-0"	±135'	LDF5
	C3	UMTS	LTE 5C/6C	ANDREW MB48-RR65-VD-PALQ-R12	COMMSCOPE JAHH-65B-R3B	260°	260°	112'-0"	112'-0"	±135'	LDF5
	C4	LTE 3C (AWS) /4C (WCS)	LTE 3C (AWS) /4C (850)	QUINTEL QS6658-3	NO CHANGE	260°	–	112'-0"	–	±135'	FB-L98B-002-XXX

REMOTE RADIO UNITS (RRU'S)

	SECTOR	RRU TYPE	(E)	(N)	RRU LOCATION (DISTANCE FROM ANTENNA)	MINIMUM CLEARANCES			DC CABLE		
						ABOVE	BELOW	SIDES	QTY	LENGTH	AWG
ALPHA SECTOR	A1	ERICSSON 1C RRUS-11 (700)	1		±10'	16"	8"	8"	1	±135'	8
	A1	ERICSSON PCS RRUS-12 (1900)	1		±10'	16"	8"	8"	1	±135'	8
	A1	ERICSSON 4T4R PCS RRUS-12 (1900)		1	±10'	16"	8"	8"	1	±135'	8
	A2/A3	ERICSSON 5C RRUS-32 B66A		1	±10'	16"	8"	8"	1	±135'	8
	A2/A3	ERICSSON 6C RRUS-4478 (B14)		1	±10'	16"	8"	8"	1	±135'	8
	A4	ERICSSON RRUS-4478 (850)		1	±10'	16"	8"	8"	1	±135'	8
	A4	ERICSSON 4C RRUS-E2	1		±10'	16"	8"	8"	1	±135'	8
BETA SECTOR	B1	ERICSSON 1C RRUS-11 (700)	1		±10'	16"	8"	8"	1	±115'	8
	B1	ERICSSON PCS RRUS-12 (1900)	1		±10'	16"	8"	8"	1	±115'	8
	B1	ERICSSON 4T4R PCS RRUS-12 (1900)		1	±10'	16"	8"	8"	1	±115'	8
	B2/B3	ERICSSON 5C RRUS-32 B66A		1	±10'	16"	8"	8"	1	±115'	8
	B2/B3	ERICSSON 6C RRUS-4478 (B14)		1	±10'	16"	8"	8"	1	±115'	8
	B4	ERICSSON RRUS-4478 (850)		1	±10'	16"	8"	8"	1	±115'	8
	B4	ERICSSON 4C RRUS-E2	1		±10'	16"	8"	8"	1	±115'	8
GAMMA SECTOR	C1	ERICSSON 1C RRUS-11 (700)	1		±10'	16"	8"	8"	1	±135'	8
	C1	ERICSSON PCS RRUS-12 (1900)	1		±10'	16"	8"	8"	1	±135'	8
	C1	ERICSSON 4T4R PCS RRUS-12 (1900)		1	±10'	16"	8"	8"	1	±135'	8
	C2/C3	ERICSSON 5C RRUS-32 B66A		1	±10'	16"	8"	8"	1	±135'	8
	C2/C3	ERICSSON 6C RRUS-4478 (B14)		1	±10'	16"	8"	8"	1	±135'	8
	C4	ERICSSON RRUS-4478 (850)		1	±10'	16"	8"	8"	1	±135'	8
	C4	ERICSSON 4C RRUS-E2	1		±10'	16"	8"	8"	1	±135'	8



@ 112'-0" RAD CENTER

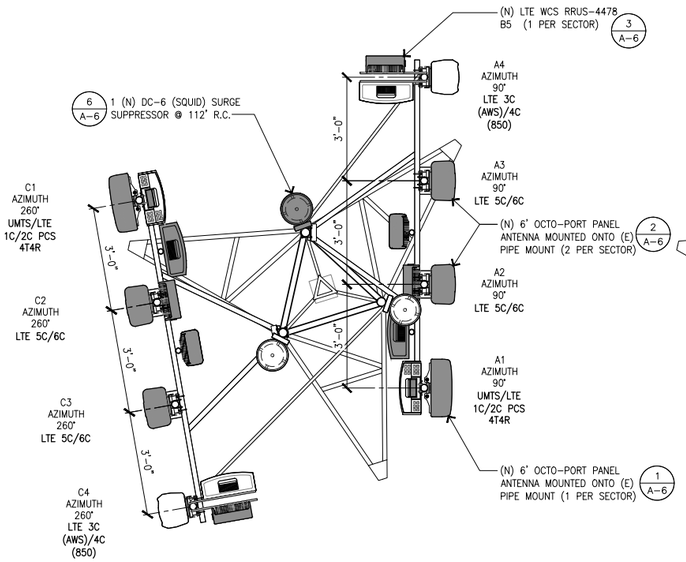


@ 95'-0" RAD CENTER

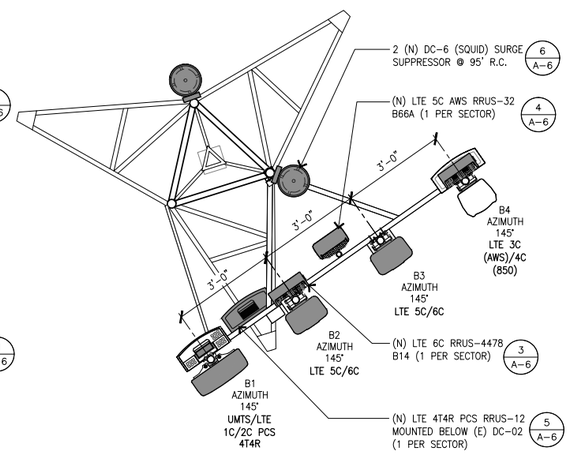
NORTH

(E) ANTENNA PLAN

SCALE: 1/2"=1'-0" | 1



@ 112'-0" RAD CENTER



@ 95'-0" RAD CENTER

NORTH

(N) ANTENNA PLAN

SCALE: 1/2"=1'-0" | 2

ANTENNA AND RRU SCHEDULE | 3

AT&T
1452 EDINGER AVE.
TUSTIN, CA 92780

Vinculums
10 PASTEUR, SUITE 100
IRVINE, CA 92618

ASA INDUSTRIES
10650 REAGAN ST. #482
LOS ALAMITOS, CALIFORNIA 90720

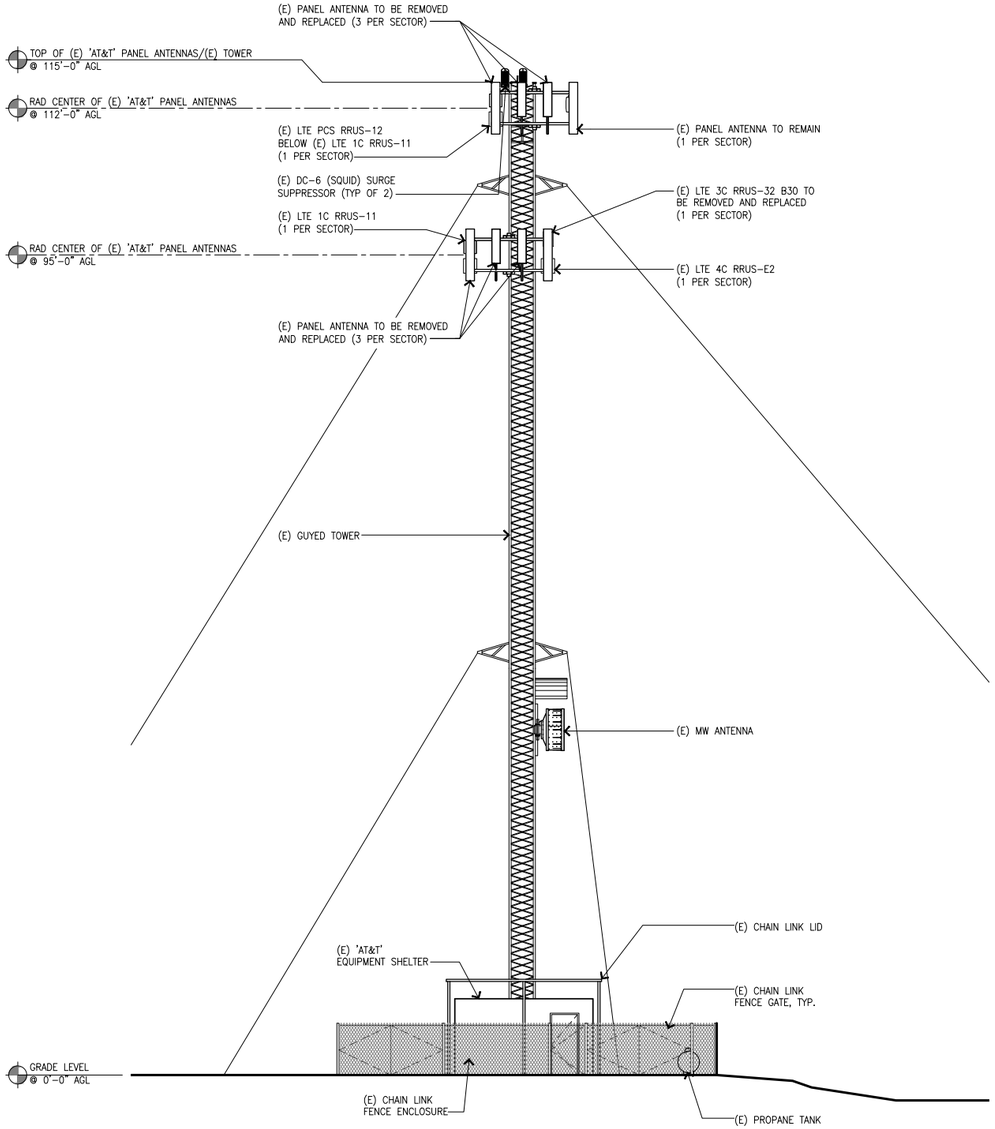
REV	DATE	DESCRIPTION
1	11/13/17	100% CONSTRUCTION DRAWINGS
0	10/13/17	90% CONSTRUCTION DRAWINGS

REGISTERED PROFESSIONAL ENGINEER PAUL C. PIRA NO. C41035 EXP. 06-13 CIVIL STATE OF CALIFORNIA

LA0209 (CLU1604)
LA0209-03 FRAZIER MOUNTAIN
FRAZIER MOUNTAIN/FRAZIER PARK
VENTURA, CA 93225
GUYED TOWER (SHELTER)

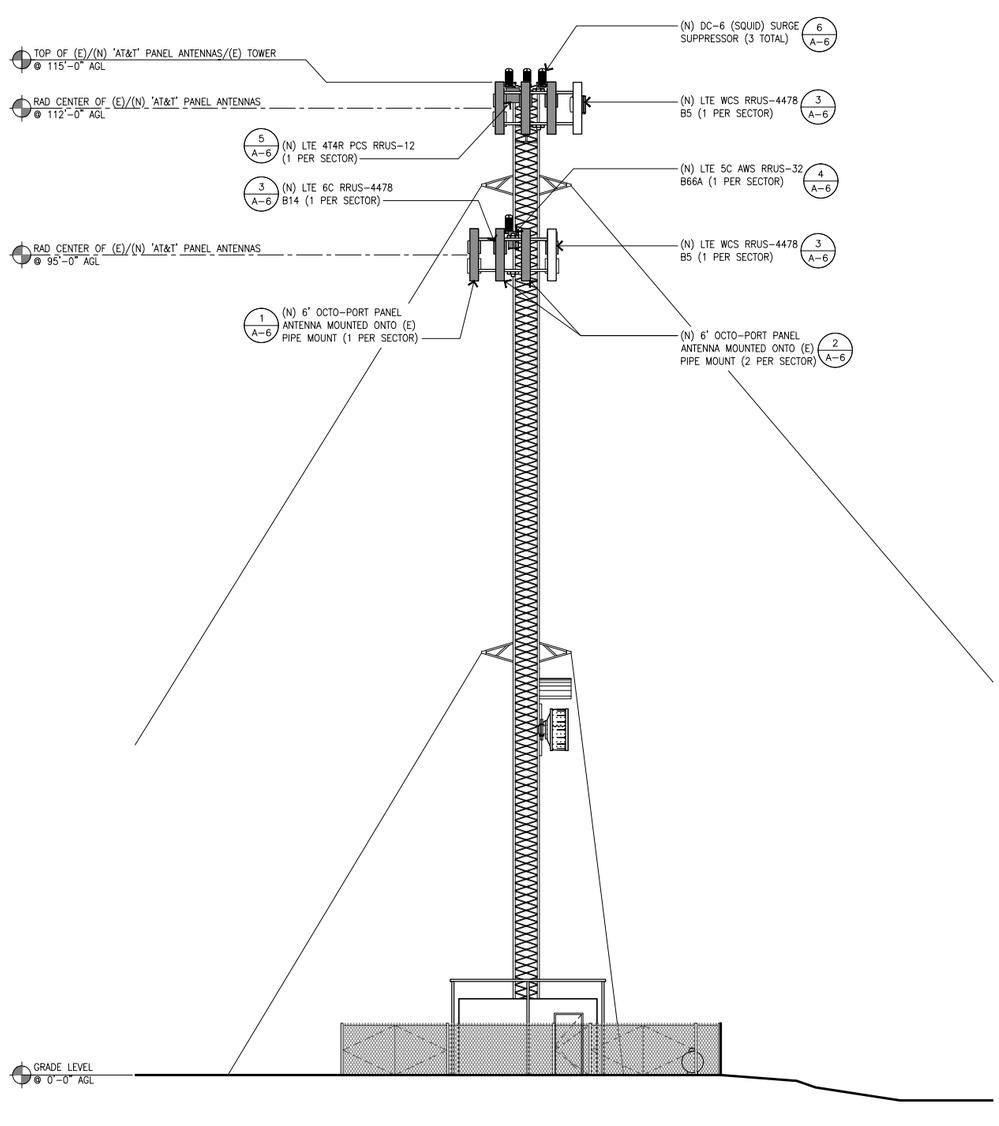
SHEET TITLE
ANTENNA PLAN
ANTENNA/RRU SCHEDULE

SHEET NUMBER
A-3



(E) EAST ELEVATION

SCALE: 1/8"=1'-0" | 2



(N) EAST ELEVATION

SCALE: 1/8"=1'-0" | 1

AT&T
1452 EDINGER AVE.
TUSTIN, CA 92780

Vinculums
10 PASTEUR, SUITE 100
IRVINE, CA 92618

ASA INDUSTRIES
10650 REAGAN ST. #482
LOS ALAMITOS, CALIFORNIA 90720

REV	DATE	DESCRIPTION
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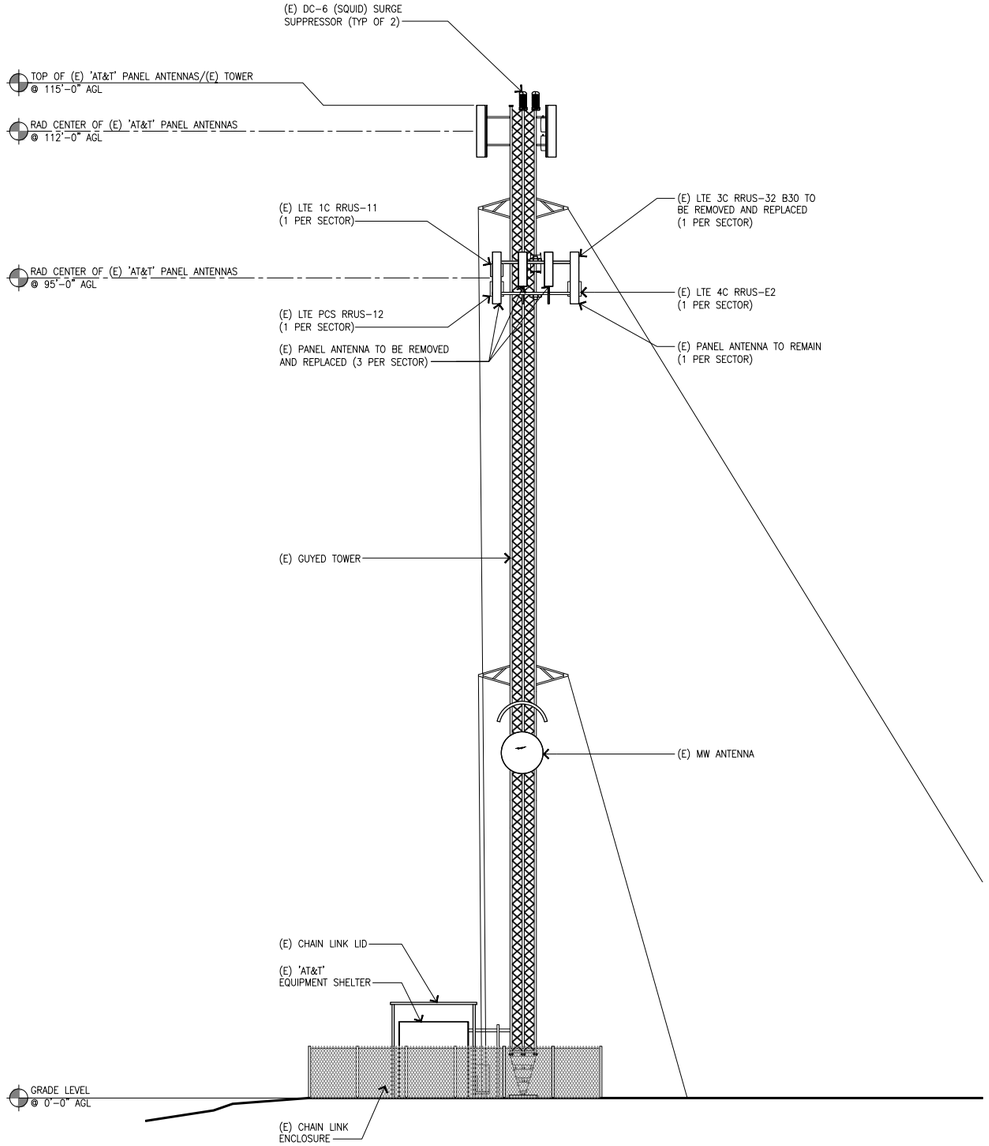
0	10/13/17	90% CONSTRUCTION DRAWINGS

REGISTERED PROFESSIONAL ENGINEER
PAUL C. PINA
NO. C41835
EXP. 06-19
CIVIL
STATE OF CALIFORNIA

LA0209 (CLU1604)
LA0209-03 FRAZIER MOUNTAIN
FRAZIER MOUNTAIN/FRAZIER PARK
VENTURA, CA 93225
GUYED TOWER (SHELTER)

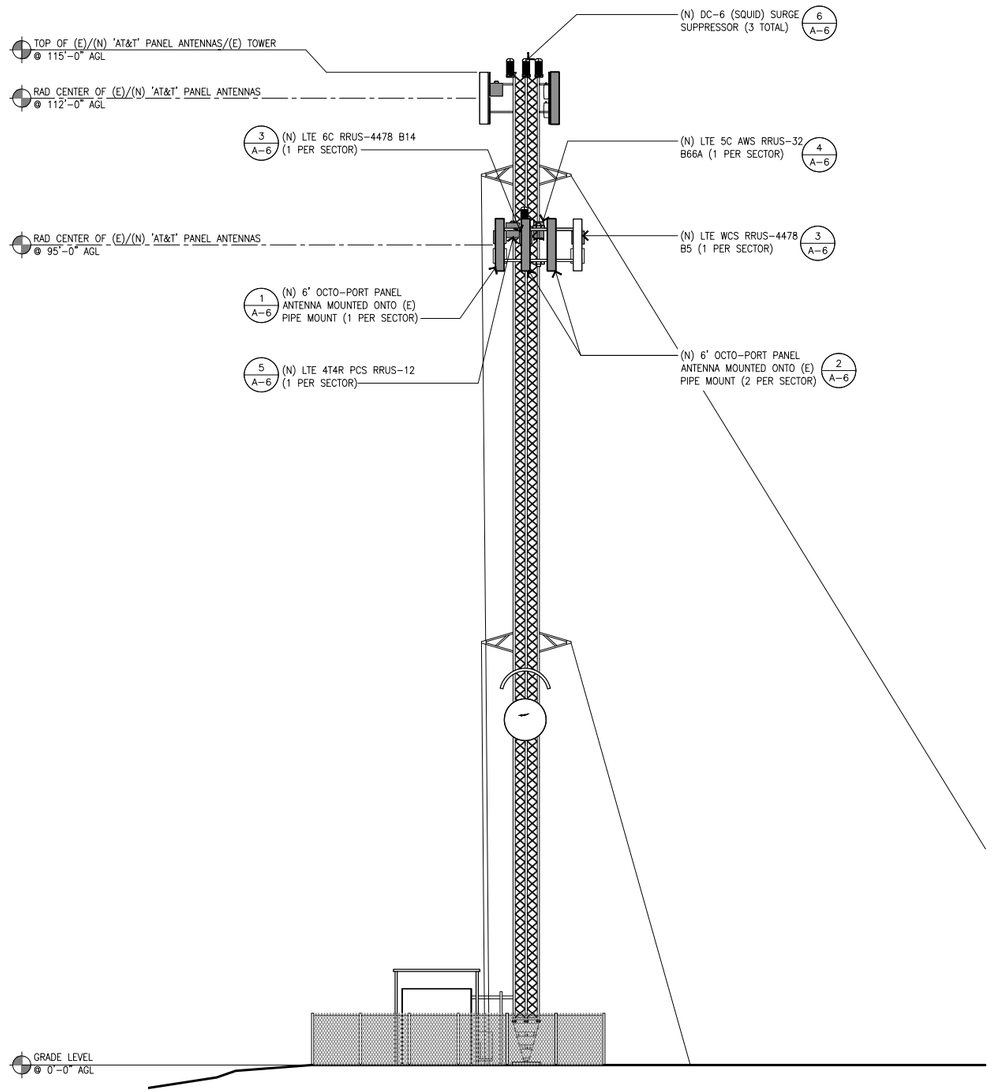
SHEET TITLE
ELEVATIONS

SHEET NUMBER
A-4



(E) SOUTH ELEVATION

SCALE: 1/8"=1'-0" | 2



(N) SOUTH ELEVATION

SCALE: 1/8"=1'-0" | 1

AT&T
1452 EDINGER AVE.
TUSTIN, CA 92780

Vinculums
10 PASTEUR, SUITE 100
IRVINE, CA 92618

ASA INDUSTRIES
10650 REAGAN ST. #482
LOS ALAMITOS, CALIFORNIA 90720

REV	DATE	DESCRIPTION
1	11/13/17	100% CONSTRUCTION DRAWINGS
0	10/13/17	90% CONSTRUCTION DRAWINGS

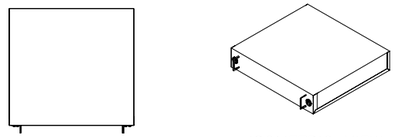
REGISTERED PROFESSIONAL ENGINEER PAUL C. PIRA NO. C41835 EXP. 06-19 CIVIL STATE OF CALIFORNIA

LA0209 (CLU1604)
LA0209-03 FRAZIER MOUNTAIN
FRAZIER MOUNTAIN/FRAZIER PARK
VENTURA, CA 93225
GUYED TOWER (SHELTER)

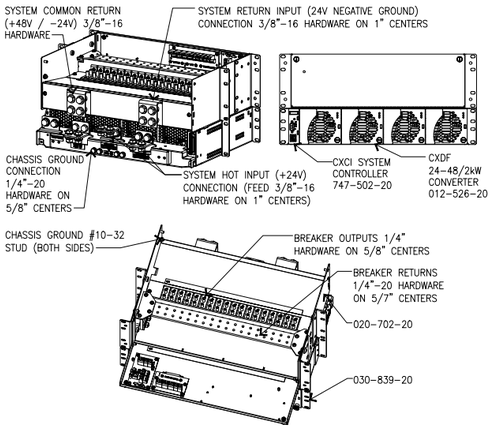
SHEET TITLE
ELEVATIONS

SHEET NUMBER
A-5

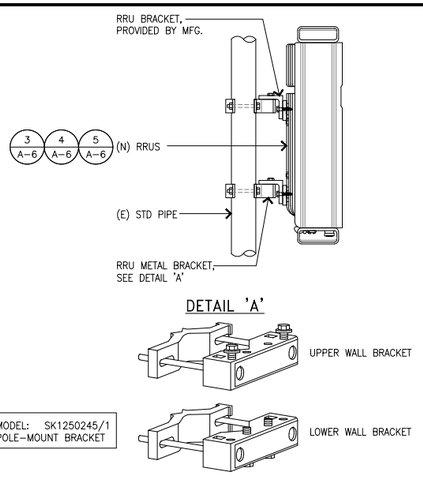
MANUFACTURER: RAYCAP
MODEL: DC12-48-60-RM
DIMENSIONS, WxDxH: (16.6"x15.5"x3.3")
TOTAL WEIGHT: ± 20 lbs



DC-12 SPECIFICATIONS | 10

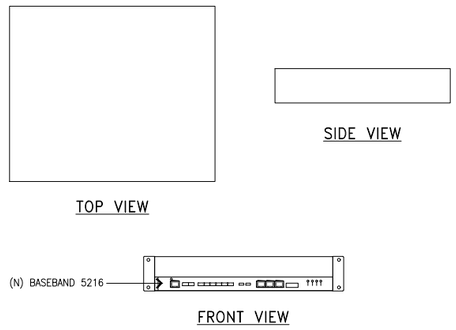


ARGUS 24-48 DC CONVERTER | 11



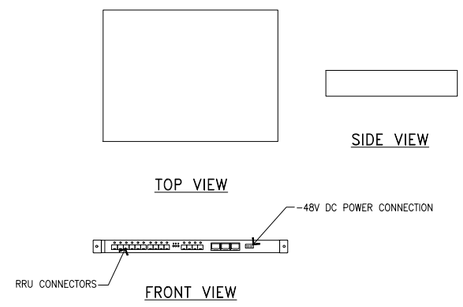
RRU MOUNT | 12

MANUFACTURER: ERICSSON
MODEL: BASEBAND 5216
DIMENSIONS, HxWxD: 350x31x280mm (13.78"x1.22"x11.02")
NOMINAL OPERATING VOLTAGE: 48 VDC
TOTAL WEIGHT: 8.82 lbs



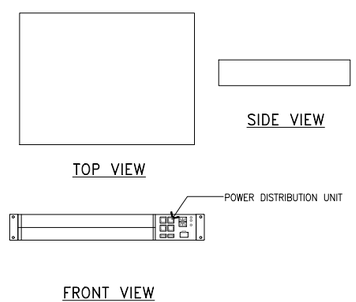
5216 BASEBAND UNIT SPECS | 7

DIMENSIONS, WxDxH: 350x282x30mm (13.7"x11.1"x1.2")
NOMINAL OPERATING VOLTAGE: 48 VDC
TOTAL WEIGHT: ± 4.62 lbs



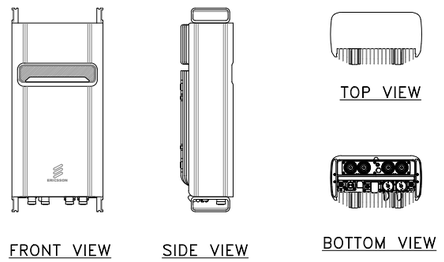
XMU SPECIFICATIONS | 8

DIMENSIONS, WxDxH: 482x350x66mm (19"x13.75"x2.63")
NOMINAL OPERATING VOLTAGE: 48 VDC
TOTAL WEIGHT: ±19.8 lbs



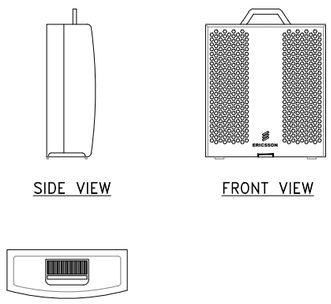
RBS6601 CHASSIS SPECIFICATIONS | 9

MANUFACTURER: ERICSSON
MODEL NO.: RRUS 32 B66a
DIMENSIONS, WxDxH: 12.1"x7.0"x27.2"
WEIGHT (W/O MOUNTING HARDWARE): 24 Kg/53 lbs



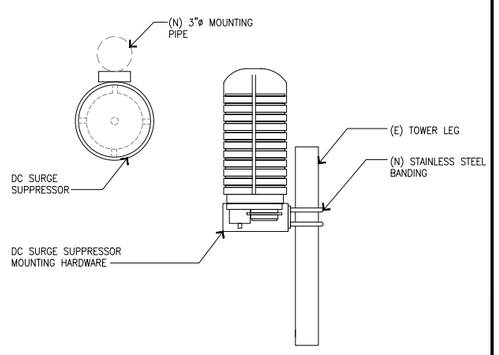
RRUS-32 SPECIFICATIONS | 4

MANUFACTURER: ERICSSON
MODEL NO.: RRUS 12 / E2 B29
DIMENSIONS, HxDxW: 20.4"x7.5"x18.5"
WEIGHT: 60 lbs



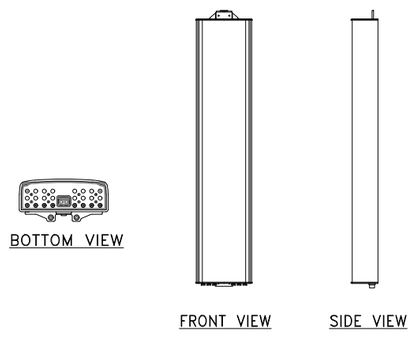
RRUS-12 / E2 B29 SPECIFICATIONS | 5

MANUFACTURER: RAYCAP
MODEL: DC6-48-60-0-8F
DIMENSIONS, HxWxD: 10"ø x24"
WEIGHT, WITH PRE-MOUNTED BRACKETS: 32.6 lbs



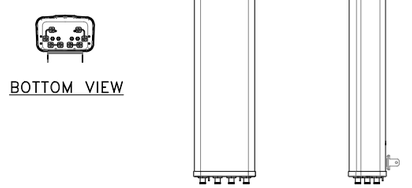
DC-06 (SQUID) SURGE SUPPRESSOR | 6

MANUFACTURER: KATHREIN
MODEL NO.: 800-10965K
DIMENSIONS, HxWxD: 78.7"X20"X6.9"
WEIGHT: 97.6 lb



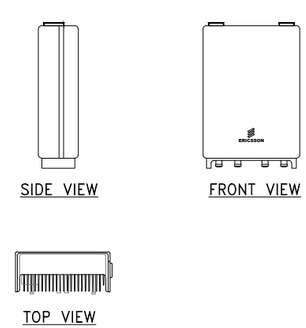
ANTENNA SPECIFICATIONS | 1

MANUFACTURER: COMMSCOPE
MODEL: JAHH-65B-R3B
DIMENSIONS, HxWxD: 72.0" x 13.8" x 8.2"
WEIGHT: 28.7 kg | 63.3 lb



ANTENNA SPECIFICATIONS | 1

MANUFACTURER: ERICSSON
MODEL NO.: RRUS 4478 B14/B5
DIMENSIONS, HxDxW: 15"x13.27"x7.3"
WEIGHT: 59.4 lbs



RRUS 4478 B14/B5 SPECIFICATIONS | 3

AT&T
1452 EDINGER AVE.
TUSTIN, CA 92780

Vinculums
10 PASTEUR, SUITE 100
IRVINE, CA 92618

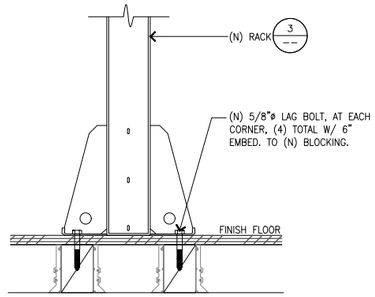
ASA INDUSTRIES
10650 REAGAN ST. #482
LOS ALAMITOS, CALIFORNIA 90720

REV	DATE	DESCRIPTION
1	11/13/17	100% CONSTRUCTION DRAWINGS
0	10/13/17	90% CONSTRUCTION DRAWINGS

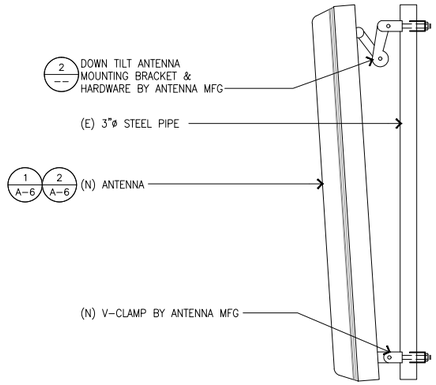
LA0209 (CLU1604)
LA0209-03 FRAZIER MOUNTAIN
FRAZIER MOUNTAIN/FRAZIER PARK
VENTURA, CA 93225
GUYED TOWER (SHELTER)

SHEET TITLE
EQUIPMENT SPECS AND DETAILS

SHEET NUMBER
A-6

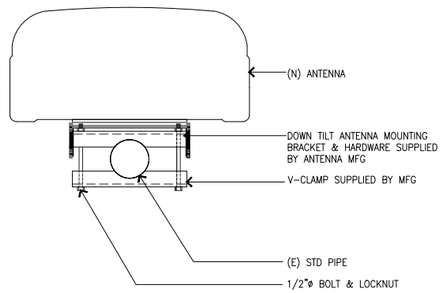


CABINET ANCHORAGE | 4



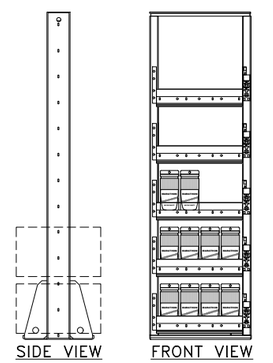
ANTENNA MOUNT | 1

NOTE:
GC TO VERIFY ANTENNA AND BRACKET HARDWARE PRIOR TO CONSTRUCTION



ANTENNA BRACKET | 2

ORACLE NUMBER:	NEQ.15311
WEIGHT (W/O BATTERIES):	600 lbs (3260 lbs FULLY LOADED)
DIMENSIONS, HxWxD:	84" x 25.8" x 22.5"
BATTERY STRINGS:	(5) 24V 180AH BATTERY STRING (10 TOTAL BATTERIES)



BATTERY & BATTERY RACK SPECS | 3

AT&T
1452 EDINGER AVE.
TUSTIN, CA 92780

Vinculums
10 PASTEUR, SUITE 100
IRVINE, CA 92618

ASA INDUSTRIES
10650 REAGAN ST. #482
LOS ALAMITOS, CALIFORNIA 90720

REV	DATE	DESCRIPTION
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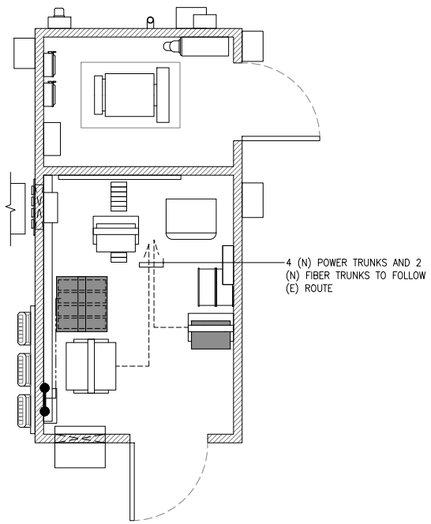
0	10/13/17	90% CONSTRUCTION DRAWINGS

REGISTERED PROFESSIONAL ENGINEER
PAUL C. PINA
NO. C41835
EXP. 06-19
CIVIL
STATE OF CALIFORNIA

LA0209 (CLU1604)
LA0209-03 FRAZIER MOUNTAIN
FRAZIER MOUNTAIN/FRAZIER PARK
VENTURA, CA 93225
GUYED TOWER (SHELTER)

SHEET TITLE
EQUIPMENT SPECS AND DETAILS

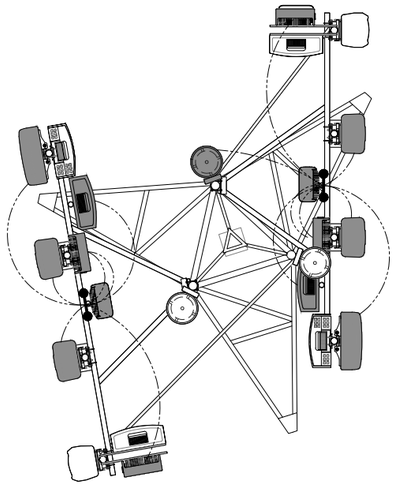
SHEET NUMBER
A-7



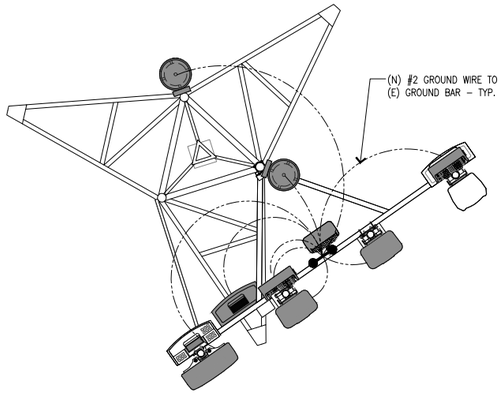
NORTH

EQUIPMENT ELECTRICAL AND GROUNDING PLAN

SCALE: 3/8"=1'-0" | 2



@ 112'-0" RAD CENTER

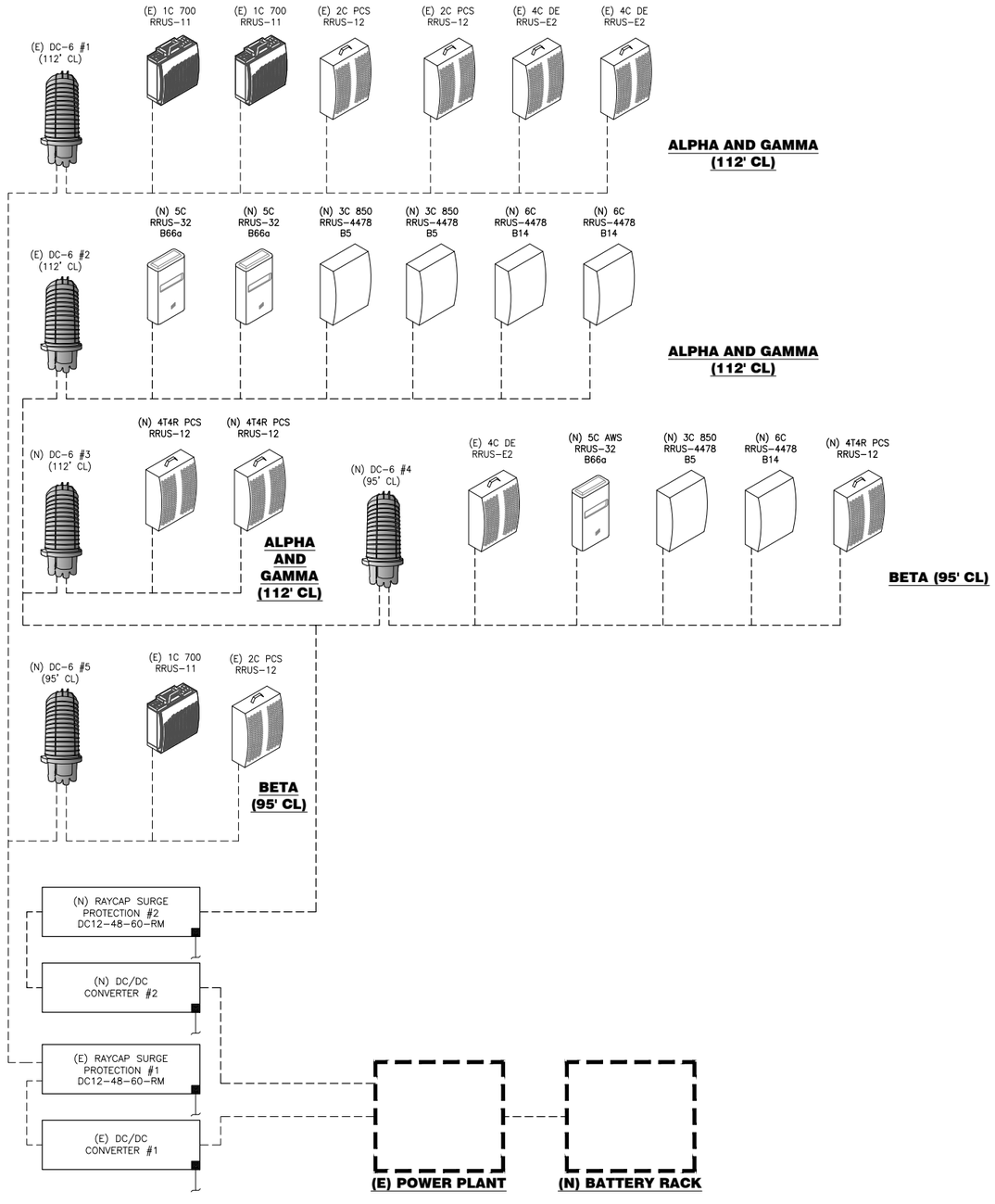


@ 95'-0" RAD CENTER

NORTH

ANTENNA GROUNDING PLAN

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



POWER BALANCE	
	TECHNOLOGY
(E) DCPP CONVERTER #1	LTE 700B12, AWSB66, PCS, 700DE, 6601
(N) DC/DC CONVERTER #2	LTE PCS 4T4R, 850, B14

DC POWER DIAGRAM

1

AT&T
1452 EDINGER AVE.
TUSTIN, CA 92780

Vinculums
10 PASTEUR, SUITE 100
IRVINE, CA 92618

ASA INDUSTRIES
10650 REAGAN ST. #482
LOS ALAMITOS, CALIFORNIA 90720

REV	DATE	DESCRIPTION
1	11/13/17	100% CONSTRUCTION DRAWINGS
0	10/13/17	90% CONSTRUCTION DRAWINGS

REGISTERED PROFESSIONAL ENGINEER
PAUL C. PINA
NO. C41835
EXP. 06-19
CIVIL
STATE OF CALIFORNIA

LA0209 (CLU1604)
LA0209-03 FRAZIER MOUNTAIN
FRAZIER MOUNTAIN/FRAZIER PARK
VENTURA, CA 93225
GUYED TOWER (SHELTER)

SHEET TITLE
ELECTRICAL/GROUNDING PLAN AND DC POWER DIAGRAM

SHEET NUMBER
E-1

NOTES

1. CONDUIT ROUTING AND GROUNDING ARE DIAGRAMMATICALLY SHOWN THE ON THE PLANS AND ARE ONLY APPROXIMATIONS. THE EXACT LOCATION AND ROUTING SHALL BE FIELD VERIFIED. FOR GROUNDING DETAILS SEE SHEET E-2.
2. ALL ELECTRICAL EQUIPMENT AND CONTROLLING DEVICES SHALL BE PROVIDED WITH ENGRAVED LAMICOID NAMEPLATES, INDICATING THE CIRCUITS ORIGINATION AND ALL EQUIPMENT TERMINATIONS.
3. CABLE SUPPORTS FOR ALL CABLE ASSEMBLIES, COAX CABLES, AND RET CONTROL CABLES. CABLE STRAIN-RELIEFS, CABLE SUPPORTS SHALL BE APPROVED FOR THE PURPOSE. INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.
4. SUBCONTRACTOR SHALL PROVIDE ALL BREAKERS, CONDUITS, AND CIRCUIT CONDUCTORS, AS REQUIRED FOR A COMPLETED SYSTEM AND SHALL BE IN COMPLIANCE WITH THE MANUFACTURER'S SPECIFICATIONS.
5. CONTRACTOR SHALL RESTORE ANY TRENCHED AREAS TO ORIGINAL CONDITIONS BY EITHER SEEDING OR SODDING GRASS AREAS, OR REPLACING ASPHALT OR CONCRETE AREAS TO ORIGINAL CROSS SECTION.
6. ALL UNDERGROUND CONDUITS SHALL BE SCHEDULE 80 PVC, EXCEPT THAT ELBOWS AND RISERS SHALL BE RMC. ALL UNDERGROUND ELBOWS SHALL BE SWEEPING BENDS (2" MINIMUM REQUIRED).
7. THE SUBCONTRACTOR SHALL SUPPLY AT&T WITH RESULTS FROM PRE-CONSTRUCTION AND POST-CONSTRUCTION OHM TESTING (GROUNDING) RESULTS.
8. THE SUBCONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE A "FALL OF POTENTIAL" TEST ON THE PROPOSED SUPPLEMENTAL GROUNDING FIELD PRIOR TO FINAL CONNECTION OF THE GROUNDING SYSTEM TO EQUIPMENT. THE TEST SHALL BE PERFORMED BY A QUALIFIED AND CERTIFIED TESTING AGENT. PROVIDE INDEPENDENT TEST RESULTS TO THE PROJECT MANAGER FOR REVIEW. THE GROUNDING SYSTEM RESISTANCE TO EARTH GROUNDING SHALL NOT EXCEED FIVE (5) OHMS. IF THE GROUNDING TEST EXCEEDS THE MAXIMUM OF (5) OHMS, THE SUBCONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE ADDITIONAL GROUNDING RODS AND CONNECTIONS AS REQUIRED TO MEET THE (5) OHMS' MAXIMUM.
9. THE INSPECTOR HAVING JURISDICTION SHALL INSPECT ALL GROUNDING CONNECTIONS FOR TIGHTNESS. EXOTHERMIC WELDED CONNECTIONS SHALL BE APPROVED BEFORE BEING PERMANENTLY CONCEALED.
10. SUBCONTRACTOR SHALL GROUND ALL EQUIPMENT AS A COMPLETE SYSTEM. GROUNDING SHALL BE PERFORMED BY QUALIFIED WIREMEN IN COMPLIANCE WITH MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.

GROUNDING NOTES 3

EACH GROUND CONDUCTOR TERMINATING ON ANY GROUND BAR SHALL HAVE AN IDENTIFICATION TAG ATTACHED AT EACH END THAT WILL IDENTIFY ITS ORIGIN AND DESTINATION.

SECTION "P" – SURGE PROTECTORS

CABLE ENTRY PORTS (HATCH PLATES) (2 AWG)
GENERATOR FRAMEWORK (IF AVAILABLE) (2 AWG)
TELCO GROUND BAR (2 AWG)
COMMERCIAL POWER COMMON NEUTRAL/GROUND BOND (2 AWG)
+24V POWER SUPPLY RETURN BAR (2 AWG)
-48V POWER SUPPLY RETURN BAR (2 AWG)
RECTIFIER FRAMES.
COAX SUPPRESSION

SECTION "A" – SURGE ABSORBERS

INTERIOR GROUND RING (2 AWG)
EXTERNAL EARTH GROUND FIELD (BURIED GROUND RING) (2 AWG)
METALLIC COLD WATER PIPE (IF AVAILABLE) (2 AWG)
BUILDING STEEL (IF AVAILABLE) (2 AWG)

SECTION "I" – ISOLATED GROUND ZONE

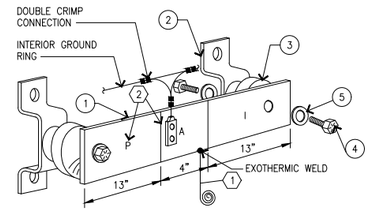
ALL COMMUNICATIONS EQUIPMENT FRAMES.
ISOLATED GROUND BAR – IGB (2 AWG)

DETAIL NOTES:

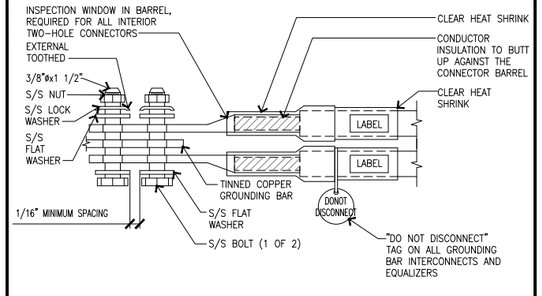
1. EXOTHERMICALLY WELD 2 AWG BARE TINNED SOLID COPPER CONDUCTOR TO GROUND BAR. ROUTE CONDUCTOR TO BURIED GROUND RING AND PROVIDE PARALLEL EXOTHERMIC WELD.
2. USE PERMANENT MARKER TO DRAW THE LINES BETWEEN EACH SECTION AND LABEL EACH SECTION ("P", "A", "I") WITH 1" HIGH LETTERS.

NEWTON INSTRUMENT COMPANY, INC.
BUTNER, N.C. OR APPROVED EQUAL

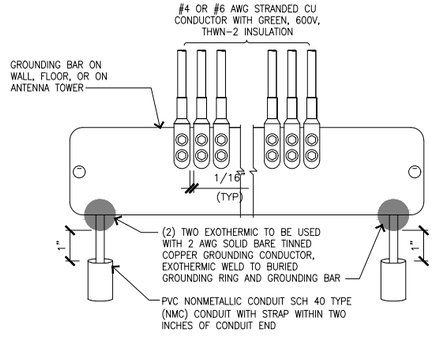
NO.	REQ.	PART NO.	DESCRIPTION
1	1	1/4"x4"x30"	SOLID GND. BAR
2	2	A-5056	WALL MTG. BRKT.
3	2	3061-4	INSULATORS
4	4	3012-1	5/8"-11x1" H.H.C.S.
5	4	3015-8	5/8 LOCKWASHER



GROUND BAR 1



INTERIOR TWO HOLE LUG 4



INSTL OF GRND CONDUCTOR 2

AT&T
1452 EDINGER AVE.
TUSTIN, CA 92780

Vinculums
10 PASTEUR, SUITE 100
IRVINE, CA 92618

ASA INDUSTRIES
10650 REAGAN ST. #482
LOS ALAMITOS, CALIFORNIA 90720

REV	DATE	DESCRIPTION
1	11/13/17	100% CONSTRUCTION DRAWINGS
0	10/13/17	90% CONSTRUCTION DRAWINGS

REGISTERED PROFESSIONAL ENGINEER
PAUL C. PINA
NO. C41035
EXP. 05-19
CIVIL
STATE OF CALIFORNIA

LA0209 (CLU1604)
LA0209-03 FRAZIER MOUNTAIN
FRAZIER MOUNTAIN/FRAZIER PARK
VENTURA, CA 93225
GUYED TOWER (SHELTER)

SHEET TITLE
ELECTRICAL NOTES AND GROUNDING DETAILS

SHEET NUMBER
E-2