SITE NUMBER: CLL01408

SITE NAME: PONTIAC FIREBIRD

2470 WEST PIONEER AVE. #A, FULLERTON, CA 92832

PACE #: MRLOS094248, USID: 317745, PTN #: 3551A12TDE, FA #: 13023941

SITE INFORMATION

PROPERTY OWNER:	CITY OF FULLERTON 303 W. COMMONWEALTH AVE, FULLERTON, CA 92832
APPLICANT ADDRESS:	AT&T MOBILITY 1452 EDINGER AVE. TUSTIN. CA 92780
APPLICANT REPRESENTATIVE: ADDRESS:	SMARTLINK 10 CHURCH CIRCLE, ANNAPOLIS, MD 21401
LATITUDE (NAD 83):	33° 53' 15.30" N (33.887583°)
LONGITUDE(NAD 83):	117° 58' 2.90" W (-117.967472°)
GROUND ELEVATION:	272.52' AMSL
OCCUPANCY:	UNMANNED TELECOMMUNICATIONS FACILITY
APN #:	280-021-03
ZONING JURISIDICTION:	CITY OF FULLERTON
CURRENT ZONING:	P-L PUBLIC LAND
NEW USE:	UNMANNED TELECOMMUNICATIONS FACILITY
LEASE SPACE:	±300 SQ. FT.

PROJECT TEAM

AT&T PROJECT MANAGER:
AT&T MOBILITY SERVICES LLC
CONTACT: IVAN OCEGUEDA
PHONE: (562) 210-9855
EMAIL: IO109X@att.com

SMARTLINK PROJECT MANAGER:
SMARTLINK
CONTACT: STACEY BROWN
PHONE: (714) 273-5261
EMAIL: stacey.brown@smartlinkgroup.com

LAND USE PLANNER:
SMARTLINK
CONTACT: JERMAINE TAYLOR
PHONE: (909) 917-1727
EMAIL: jttelecoms@gmail.com

A/E MANAGER:
CELLSITE CONCEPTS
16885 VIA DEL CAMPO CT., SUITE 318
SAN DIEGO, CA 92127
CONTACT: SEV FRANCISCO
PHONE: (858) 432-4112
EMAIL: sfrancisco@cellsite.net

SITE ACQUISITION:
SMARTLINK
CONTACT: JERMAINE TAYLOR
PHONE: (909) 917-1727
EMAIL: jttelecoms@gmail.com

CONSTRUCTION MANAGER:
AT&T MOBILITY SERVICES LLC
CONTACT: ANDRE CAMOU
PHONE: (562) 293-6236
EMAIL: ac2960@att.com

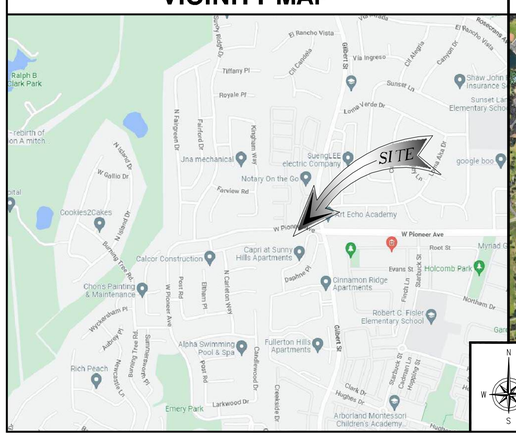
DO NOT SCALE DRAWINGS

SUBCONTRACTOR SHALL VERIFY ALL PLANS, EXISTING DIMENSIONS & FIELD 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.

811 Dig Alert
Know what's below. Call before you dig.
Call Two Working Days Before You Dig!
811 / 800-227-2600
digalert.org

LOCATION MAPS

VICINITY MAP



LOCAL MAP

DRIVING DIRECTIONS

DIRECTION FROM AT&T OFFICE (1452 EDINGER AVE., TUSTIN, CA 92780):

1. START OUT GOING SOUTHEAST ON EDINGER AVE TOWARD RED HILL AVE.
2. TURN LEFT ONTO RED HILL AVE.
3. MERGE ONTO I-5 N VIA THE RAMP ON THE LEFT TOWARD LOS ANGELES.
4. KEEP LEFT TO TAKE I-5 N TOWARD SANTA ANA/NEWPORT BEACH/CA-55 S.
5. TAKE THE MAGNOLIA AVE EXIT, EXIT 114, TOWARD CA-91 E.
6. TURN LEFT ONTO MAGNOLIA AVE.
7. TURN RIGHT ONTO W COMMONWEALTH AVE.
8. TURN LEFT ONTO N GILBERT ST.
9. TURN LEFT ONTO W PIONEER AVE.
10. 2470 W PIONEER AVE, ORANGE, CA, 92833 IS ON THE LEFT.

CODE COMPLIANCE

ALL WORK AND MATERIALS SHALL BE PERFORMED AND INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES.

- CALIFORNIA ADMINISTRATIVE CODE (INCL TITLE 24 & 25)
- 2022 CALIFORNIA BUILDING CODE
- 2022 CALIFORNIA MECHANICAL CODE
- 2022 CALIFORNIA PLUMBING CODE
- 2022 CALIFORNIA ELECTRICAL CODE
- 2022 CALIFORNIA FIRE CODE
- 2022 LOCAL BUILDING CODE
- BUILDING OFFICIALS & CODE ADMINISTRATORS (BOCA)
- CITY/COUNTY ORDINANCES
- ANSI/TIA-222-H
- LIFE SAFETY CODE NFPA-101

GENERAL NOTES

THE FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. HANDICAPPED ACCESS REQUIREMENTS ARE NOT REQUIRED IN ACCORDANCE WITH THE 2022 CALIFORNIA BUILDING CODE. A TECHNICIAN WILL VISIT THE SITE AS REQUIRED FOR ROUTINE MAINTENANCE. THE PROJECT WILL NOT RESULT IN ANY SIGNIFICANT DISTURBANCE OR EFFECT ON DRAINAGE; NO SANITARY SEWER SERVICE, POTABLE WATER, OR TRASH DISPOSAL IS REQUIRED AND NO COMMERCIAL SIGNAGE IS NEW.

ACCESSIBILITY NOTE

THE TELECOMMUNICATIONS EQUIPMENT SPACE SHOWN ON 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 2022 CALIFORNIA BUILDING CODE SECTION 1105B.3.4, AND/OR 11B-203.5 OF 2022 CALIFORNIA BUILDING CODE, EXCEPTION 1, THIS FACILITY SHALL BE EXEMPTED FROM ALL TITLE 24 ACCESS REQUIREMENTS.

PROJECT DESCRIPTION

AT&T MOBILITY PROPOSES TO CONSTRUCT AN UNMANNED WIRELESS COMMUNICATION FACILITY. THE SCOPE WILL CONSIST OF THE FOLLOWING:

ANTENNA LEVEL: [RFDS REV 2.00, DATED 02/29/2024]
- EXTEND (E) MONOPINE AND BRANCHES PER PLAN.
- NEW (12) PANEL ANTENNAS MOUNTED ON NEW MONOPINE EXTENSION. (4 PER SECTOR)
- NEW (9) RRUs MOUNTED BEHIND PANEL ANTENNAS. (3 PER SECTOR)
- NEW (3) DC9 SURGE SUPPRESSION UNITS MOUNTED ON NEW MONOPINE EXTENSION.
- NEW (9) DC POWER TRUNKS ROUTED UNDERGROUND TO NEW MONOPINE EXTENSION.
- NEW (3) FIBER TRUNKS ROUTED UNDERGROUND TO NEW MONOPINE EXTENSION.
- NEW (3) ANTENNA MOUNTING KIT WITH STIFFENER ARMS MOUNTED ON NEW MONOPINE EXTENSION. (1 PER SECTOR)
- RELOCATED (E) FAA LIGHT TO NEW MONOPINE EXTENSION PER PLAN.

EQUIPMENT LEVEL:
- NEW 15' x 20' x 7' HIGH CHAIN-LINK FENCE ENCLOSURE TO MATCH EXISTING.
- NEW (1) DC POWER PLANT WITH (11) RECTIFIERS AND (2) STRING OF 185Ah BATTERIES MOUNTED ON NEW CONCRETE PAD.
- NEW (2) PURCELL CABINETS (STACKED) WITH (1) 6651 BASEBAND UNIT, (1) 6648 BASEBAND UNIT, AND (1) XMU MOUNTED ON NEW CONCRETE PAD.
- NEW (1) 20KW GENERAC AC GENERATOR WITH 105 GALLON DIESEL TANK MOUNTED ON CONCRETE PAD.
- NEW (1) DC50 SURGE SUPPRESSION UNIT MOUNTED ON H-FRAME.
- NEW (2) FIBER WINDER BOXES MOUNTED ON H-FRAME.
- NEW (1) PTLC WITH ATS AND CAMLOK MOUNTED ON H-FRAME
- NEW (1) TELCO BOX AND CIENA BOX MOUNTED ON H-FRAME.
- NEW (1) STEP-DOWN TRANSFORMER WITH DISCONNECT SWITCH.
- NEW (1) ELECTRIC METER PEDESTAL MOUNTED ON NEW CONCRETE PAD.

DRAWING INDEX

SHEET NO:	SHEET TITLE
T-1	TITLE SHEET
T-2	NOTES AND SPECIFICATIONS
T-3	WARNING NOTES AND SIGNAGE
LS-1	TOPOGRAPHIC SURVEY
LS-2	TOPOGRAPHIC SURVEY
LS-3	TOPOGRAPHIC SURVEY
A-1	SITE PLAN
A-2	ENLARGED SITE PLAN (2)
A-3	NEW EQUIPMENT LAYOUT
A-3.1	EXISTING ANTENNA AND NEW ANTENNA PLANS (2)
A-4	ELEVATIONS
A-5	ELEVATIONS
A-6	ELEVATIONS
A-7	ELEVATIONS
A-8	EQUIPMENT DETAILS
A-9	EQUIPMENT DETAILS
A-10	EQUIPMENT DETAILS
A-11	EQUIPMENT DETAILS
A-12	EQUIPMENT DETAILS
A-12.1	EQUIPMENT DETAILS (2)
A-13	EQUIPMENT DETAILS
A-14	EQUIPMENT DETAILS
E-1	ELECTRICAL SITE PLAN
E-2	EQUIPMENT AND ANTENNA GROUNDING PLAN
E-3	ELECTRICAL NOTES, PANEL SCHEDULE AND SITE LANE DIAGRAM
E-4	DC POWER DIAGRAM
E-5	ELECTRICAL AND GROUNDING DETAILS
E-6	BATTERY SPECS MSDS AND KWH CALCULATION
E-7	PRELIMINARY POWER DESIGN (BY OTHERS)
E-8	FIBER DESIGN (BY OTHERS)
E-9	FIBER DESIGN (BY OTHERS)
E-10	FIBER DESIGN (BY OTHERS)
	TOWER DRAWING BY TOWER ENGINEERING PROFESSIONALS [DATED 07/30/24]
T-1	TITLE SHEET
N-1	MI CHECKLIST AND NOTES
N-2	PROJECT NOTES I
N-3	PROJECT NOTES II
N-4	NEXGEN2 INSTALLATION DETAILS
S-1	TOWER ELEVATION AND MODIFICATION SCHEDULE
S-2	SECTION DETAILS
S-3	SHAFT REINFORCEMENT DETAILS
S-4	TYP. SHAFT REINFORCEMENT DETAILS I
S-5	TYP. SHAFT REINFORCEMENT DETAILS II
S-6	TRANSITION STIFFENER DETAILS
S-7	SITE PLAN
S-8	FOUNDATION REINFORCEMENT DETAILS I
S-9	FOUNDATION REINFORCEMENT DETAILS II
S-10	FOUNDATION REINFORCEMENT DETAILS III
S-11	FOUNDATION REINFORCEMENT DETAILS IV
S-12	MICRO-PILE DETAILS
S-13	TOWER EXTENSION DETAILS I
S-14	TOWER EXTENSION DETAILS II
S-15	FLANGE BRACKET DETAILS
S-16	REPLACEMENT BRANCH RECEPTACLES
	BRANCHES DRAWING BY CELL TREES [DATED 07/23/24]
MP-1	TITLE SHEET
MP-2	ELEVATION VIEW & EPA VALUES
MP-3	BRANCH LAYOUT & RECEIVER

SIGNATURE BLOCK

	PRINT NAME	SIGNATURE	DATE
AT&T RF:			
AT&T PM:			
AT&T CM:			
SMARTLINK PM:			
SMARTLINK ZM:			
SMARTLINK SAQ:			
SMARTLINK CM:			

at&t
1452 EDINGER AVENUE
TUSTIN, CA 92780

smartlink
10 CHURCH CIRCLE,
ANNAPOLIS, MD 21401

cellsite concepts
16885 VIA DEL CAMPO CT., SUITE 318
SAN DIEGO, CA 92127
tel: (858) 432-4112 / (858) 432-4257

REV	DATE	DESCRIPTION
2	10/03/2024	PLAN CHECK COMMENTS
1	08/02/2024	PLAN CHECK COMMENTS/ ADDED FIBER DESIGN
0	04/26/2024	100% CD'S
B	04/19/2023	REMOVED MW ANTENNA
A	11/04/2022	90% CD'S FOR REVIEW

ISSUED DATE: 10/03/2024

ISSUED FOR: BP SUBMITTAL

LICENSURE:

Digitally signed by Michael B Leeper
Date: 2024.10.04 09:20:51-07'00'

LICENSED PROFESSIONAL ENGINEER MICHAEL B. LEEPER C 35940 EXP. 09/30/25 STATE OF CALIFORNIA CIVIL

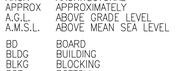
10/4/2024

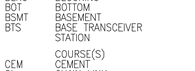
PROJECT INFORMATION:
CLL01408
PONTIAC FIREBIRD
2470 WEST PIONEER AVE. #A, FULLERTON, CA 92832

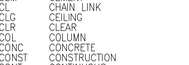
DRAWN BY: AJYR
CHECKED BY: SVF

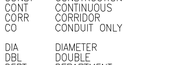
SHEET TITLE: TITLE SHEET

SHEET NUMBER: T-1









ABBREVIATIONS

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

SYMBOLS:

GENERAL

1. ALL MATERIALS AND CONSTRUCTION SHALL BE IN CONFORMANCE WITH THE BUILDING CODE AND ALL OTHER GOVERNING CODES. 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, & NOTES PRIOR TO STARTING CONSTRUCTION, INCLUDING BUT NOT LIMITED BY DEMOLITION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CORRECTING ANY ERROR, 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. WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, UTILITIES SHALL BE RELOCATED AS DIRECTED BY ENGINEERS. EXTREME CAUTION SHOULD BE USED BY THE CONTRACTOR WHEN EXCAVATING OR PIER DRILLING AROUND OR NEAR UTILITIES. CONTRACTOR SHALL PROVIDE SAFETY TRAINING FOR THE WORKING CREW.
4. 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.
5. 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 CONTRACTOR'S 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, ADDENDUMS, OR CHANGE ORDERS. THE CONTRACTOR SHALL FORWARD THE AS-BUILT/HIRED DRAWINGS TO THE ARCHITECT/ENGINEER AT THE CONCLUSION OF THE PROJECT.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COMPLETE SECURITY OF THE SITE WHILE THE WORK IS IN PROGRESS UNTIL THE JOB IS COMPLETE.
7. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE TEMPORARY POWER, WATER, AND TOILET FACILITIES AS REQUIRED BY THE PROPERTY OWNER OR GOVERNING AGENCY.
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 IS SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, PROCEDURES AND SEQUENCING AND COORDINATING ALL PORTIONS OF THE WORK UNDER THE PROJECT. FURTHERMORE, THE STRUCTURE IS DESIGNED AS A UNIT UPON COMPLETION. THE CONTRACTOR IS RESPONSIBLE FOR FURNISHING ALL TEMPORARY BRACING AND/OR SUPPORT THAT MAY BE REQUIRED AS THE RESULT OF THE CONTRACTOR'S CONSTRUCTION METHODS. THE INVESTIGATION, DESIGN, SAFETY, ADEQUACY AND INSPECTION OF BRACING, SHORING, TEMPORARY SUPPORTS, ETC. IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
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(S).
11. THE CONTRACTOR IS RESPONSIBLE FOR LIMITING THE AMOUNT OF LOAD IMPOSED ON THE STRUCTURAL FRAMING AND STRUCTURE DURING CONSTRUCTION. CONSTRUCTION LOADS SHALL NOT EXCEED THE DESIGN CAPACITY OF THE FRAMING AT THE TIME THE LOADS ARE IMPOSED. TEMPORARY SHORING OR BRACING SHALL BE PROVIDED WHERE THE STRUCTURE OR SOIL HAS NOT ATTAINED THE DESIGN STRENGTH FOR THE CONDITIONS PRESENT. THE CONTRACTOR SHALL ALSO RECOGNIZE AND CONSIDER THE EFFECTS OF THERMAL MOVEMENTS OF STRUCTURAL ELEMENTS DURING THE CONSTRUCTION PERIOD.
12. ALL DIMENSIONS TAKE PRECEDENCE OVER SCALE UNLESS OTHERWISE NOTED.
13. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY FRAMING, BACKING, HANGERS, BLOCKING OR SUPPORTS FOR INSTALLATION OF ITEMS INDICATED ON THE DRAWINGS.
14. THE CONTRACTOR SHALL PROVIDE FIRE MARSHALL APPROVED MATERIALS TO FILL/SEAL PENETRATIONS THROUGH FIRE RATED ASSEMBLIES.
15. NEW CONSTRUCTION ADDED TO EXISTING CONSTRUCTION SHALL BE MATCHED IN FORM, TEXTURE, MATERIAL AND PAINT COLOR EXCEPT AS NOTED IN THE PLANS.
16. WHERE SPECIFIED, MATERIALS TESTING SHALL BE TO THE LATEST STANDARDS AVAILABLE AS REQUIRED BY THE LOCAL GOVERNING AGENCY RESPONSIBLE FOR RECORDING THE RESULTS.
17. ALL GENERAL NOTES AND STANDARD DETAILS ARE THE MINIMUM REQUIREMENTS TO BE USED IN CONDITIONS WHICH ARE NOT SPECIFICALLY SHOWN OTHERWISE.
18. ALL DEBRIS AND REFUGE IS TO BE REMOVED FROM THE PROJECT. PREMISES SHALL BE LEFT IN A CLEAN BROOM FINISHED CONDITION AT ALL TIMES.
19. 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.
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 DIMENSIONS, ELEVATIONS, 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. REPRESENTATIONS OF TRUE NORTH, OTHER THAN THOSE FOUND ON THE PLOT OF SURVEY DRAWING (SHEET LS1), SHALL NOT BE USED TO IDENTIFY OR ESTABLISH THE BEARING OF TRUE NORTH AT THE SITE. THE CONTRACTOR SHALL RELY SOLELY ON THE PLOT OF SURVEY DRAWING AND ANY SURVEYOR'S MARKINGS AT THE SITE FOR THE ESTABLISHMENT OF TRUE NORTH, AND SHALL NOTIFY THE ARCHITECT/ ENGINEER PRIOR TO PROCEEDING WITH THE WORK. IF ANY DISCREPANCY IS FOUND BETWEEN THE VARIOUS ELEMENTS OF THE WORKING DRAWINGS AND THE TRUE NORTH ORIENTATION AS DEPICTED ON THE CIVIL SURVEY, THE CONTRACTOR SHALL ASSUME SOLE LIABILITY FOR ANY FAILURE TO NOTIFY THE ARCHITECT/ENGINEER.
23. NO CHANGES ARE TO BE MADE TO THESE PLANS WITHOUT THE KNOWLEDGE AND WRITTEN CONSENT OF THE ARCHITECT/ ENGINEER. UNAUTHORIZED CHANGES RENDER THESE DRAWINGS VOID. THIS INCLUDES THAT THE CONTRACTOR SHALL NOT BE RELIEVED OF ANY DEVIATION FROM THE PLANS BY THE PROFESSIONAL'S OF RECORD REVIEW OF SHOP DRAWINGS, PRODUCT DATA, ETC. UNLESS THE CONTRACTOR HAS SPECIFICALLY INFORMED THE PROFESSIONAL OF RECORD OF SUCH DEVIATION IN WRITING AT THE TIME OF SUBMISSION, AND THE PROFESSIONAL OF RECORD HAS GIVEN WRITTEN APPROVAL TO THE SPECIFIC DEVIATION.
24. 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.
25. STAIR TREADS SHALL BE MARKED BY A STRIP OF CLEARLY CONTRASTING COLOR AT LEAST 2-INCHES WIDE AND PLACED PARALLEL TO AND NOT MORE THAN 1 INCH FROM THE NOSE OF THE STEP. ALL TREAD SURFACES SHALL BE SLIP RESISTANCE. NOSING SHALL NOT PROJECT MORE THAN 1-1/2 INCHES PAST THE FACE OF THE RISER BELOW.

SUBMITTALS

SUBMITTALS: SUBMITTALS FOR SHOP DRAWINGS, MILL TESTS, PRODUCT DATA, ETC. 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 TIME TO PROVIDE A TWO-WEEK REVIEW PERIOD FOR THE 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 THEREFROM. THE CONTRACTOR REMAINS RESPONSIBLE FOR DETAILS AND ACCURACY, FOR CONFIRMING AND CORRELATING ALL QUANTITIES AND DIMENSIONS, FOR SELECTING FABRICATION PROCESSES, ETC. WHEN SHOP DRAWINGS DIFFER FROM OR ADD TO THE REQUIREMENTS OF THE STRUCTURAL DRAWINGS THEY SHALL BE DESIGNED AND STAMPED BY A SPECIALTY STRUCTURAL ENGINEER (SSE)

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. ALL FOUNDATION FOOTINGS SHALL EXTEND INTO AND BEAR AGAINST NATURAL UNDISTURBED SOIL OR APPROVED COMPACTED FILL. FOOTINGS SHALL EXTEND INTO SOIL DEPTH INDICATED ON DETAILS.
3. SHOULD ANY LOOSE FILL, EXPANSIVE SOIL, GROUND WATER OR ANY OTHER DANGEROUS CONDITIONS BE ENCOUNTERED DURING THE EXCAVATION FOR THE NEW FOUNDATION, THE ARCHITECT/ENGINEER SHALL BE NOTIFIED AND ALL FOUNDATION WORK SHALL CEASE IMMEDIATELY.
4. 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.
5. 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.
6. 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. ADEQUATE DRAINAGE SHALL BE PROVIDED SUCH THAT NO PONDING OCCURS AFTER THESE RECOMMENDATIONS ARE APPROVED BY THE ARCHITECT/ENGIENEER.
7. 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.
8. BEFORE 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.

FOUNDATIONS - GENERAL

1. BOTTOM OF EXTERIOR FOOTINGS SHALL BEAR A MINIMUM OF 18" BELOW FINAL GRADE AND BEAR ON FIRM NATIVE OR PROPERLY COMPACTED SOILS.
2. FOOTINGS MAY BE POURED INTO AN EARTH-FORMED TRENCH IF SOIL CONDITIONS PERMIT.
3. ALL BEARING MATERIAL SHALL BE INSPECTED BY THE INDEPENDENT TESTING AGENCY PRIOR TO CONCRETE PLACEMENT. THE INDEPENDENT TESTING AGENCY SHALL BE THE SOLE JUDGE AS TO THE SUITABILITY OF THE BEARING MATERIAL. FOOTING ELEVATIONS SHALL BE ADJUSTED AS REQUIRED.
4. FOUNDATION CONCRETE SHALL HAVE REACHED A MINIMUM COMPRESSIVE STRENGTH OF 2,000 PSI BEFORE BEING LOADED. STRENGTHS SHALL BE VERIFIED BY TEST.
5. FOUNDATION WALLS THAT RETAIN EARTH SHALL BE BRACED AGAINST BACKFILLING PRESSURES UNTIL THE SLABS AT TOP AND BOTTOM ARE IN PLACE AND CURED AS REQUIRED.
6. WHERE WALLS ARE TO HAVE EARTH PLACED ON EACH SIDE, SIMULTANEOUSLY PLACE FILL SO AS TO MAINTAIN A COMMON ELEVATION ON EACH SIDE OF WALL.
7. CONTRACTOR SHALL PROVIDE ALL SHORING AS REQUIRED.
8. ALL RETAINING WALLS SHALL HAVE AT LEAST 12" OF FREE-DRAINING GRANULAR BACKFILL FULL HEIGHT OF WALL. SEAL RETAINING FACE OF WALL AND FOOTING WITH 2 COATS OF HENRY'S 502 ASPHALTIC MASTIC. PROVIDE CONTINUOUS INSPECTION.
9. CONTRACTOR SHALL PROVIDE TEMPORARY AND PERMANENT DEWATERING FOR SURFACE WATER, GROUND WATER AND SEEPAGE WATER AS REQUIRED.
10. CONTRACTOR SHALL PROTECT ALL UTILITY LINES, ETC ENCOUNTERED DURING EXCAVATIONS AND BACKFILLING. ALL BACKFILL SHALL BE PROPERLY COMPACTED.
11. ALL FOOTINGS HAVE BEEN DESIGNED BASED UPON AN ASSUMED SOIL BEARING PRESSURE OF 1,000 PSF UNLESS NOTED OTHERWISE.

EPOXY AND EXPANSION ANCHORS

1. EPOXY OR EXPANSION ANCHORS SHALL NOT BE USED EXCEPT WHERE SPECIFICALLY SHOWN ON THE PLANS OR WHEN APPROVED IN ADVANCE BY THE STRUCTURAL ENGINEER.
2. DRILLED HOLES SHALL BE PREPARED AND ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND THE CURRENT ICC REPORT.
3. SPECIAL INSPECTION SHALL BE DONE IN ACCORDANCE WITH BUILDING CODE AND THE SPECIFIC INSPECTION REQUIREMENTS SET FORTH IN THE CURRENT ICC REPORT.
4. ANCHOR RODS USED FOR EPOXY ANCHORS SHALL BE THE TYPE SPECIFIED IN THE REFERENCED ICC REPORT.
5. THE ANCHOR SIZE AND EMBEDMENT SHALL BE AS INDICATED ON THE PLANS.
6. WHERE PERMITTED, EPOXY ANCHORING SHALL BE COMPLETED WITH THE FOLLOWING ALLOWED PRODUCT(S):
   HILTI RE-500 SD (ICC# ESR-2322, LARR-25700) - CONCRETE ONLY
   HILTI HIT-HY 150 (ICC# ER-5193, LARR-25652M) - MASONRY WALL ONLY.
   HILTI HIT-HY 20 (ICC# ER-4815, LARR-24564) - BRICK WALL ONLY.
7. WHERE PERMITTED, THE FOLLOWING EXPANSION ANCHORS MAY BE USED:
   HILTI KWIK BOLT TZ (ICC# ESR-1917, LARR-25701) - CONCRETE ONLY.
   SIMPSON STONG-BOLT (ICC# ESR-1771, LARR-25705) - CONCRETE ONLY.
   HILTI KWIK BOLT 3 (ICC#ESR-1385, LARR-25577)GROUTFILLED MASONRY ONLY
   SIMPSON WEDGE-ALL (ICC# ESR-1396, LARR-24682) - GROUT FILLED MASONRY ONLY.

FIRE DEPARTMENT NOTES

1. SCHEDULE REQUIRED FINAL FIRE DEPARTMENT INSPECTION 2 DAYS IN ADVANCE.
2. A UNIFORM FIRE CODE PERMIT TO OPERATE BATTERY SYSTEMS WITH STATIONARY LEAD-ACID BATTERIES MAY BE REQUIRED AND ISSUED BY FIRE INSPECTOR.
3. CONTRACTOR SHALL POST PERMANENT SIGNAGE IN A CONSPICUOUS LOCATION AT THE SITE IDENTIFYING WHOM SHOULD BE CALLED IN AN EMERGENCY WITH PHONE NUMBERS AND SITE-IDENTIFYING INFORMATION (SUCH AS ADDRESS, SITE #, ETC.) FOR FIRE DEPARTMENT EMERGENCY USE.
4. NFPA 704 PLACARD -PROVIDE AND INSTALL AN NFPA 704 PLACARD ON OUTSIDE ENTRY DOOR LEADING TO EQUIPMENT AREA WITH BATTERY STORAGE AND EMERGENCY GENERATOR AS REQUIRED BY CFC 2703.5. THE SIGN SHALL BE REFLECTIVE BACKGROUND, MINIMUM SIZE OF 15 INCHES BY 15 INCHES, WITH 6 INCH HIGH NUMBERS OR LETTERS. SIGN SHALL BE MOUNTED IN VISIBLE AREA REQUIRED BY FIRE DEPT AND LABELED AS STATED BELOW:
   HAZARD MARKING SING CATEGORIES MUST BE AS FOLLOWS: (FOR BATTERY STORAGE) HEALTH = 3.
   FLAMMABILITY = 3, REACTIVITY = 1, SPECIAL = W / CORROSIVE
   -SHOW THE HAZARD RANKING SIGN WITH APPROPRIATE IDENTIFIERS ABOVE ON PLAN.
5. PROVIDE 2A:40BC FIRE EXTINGUISHER, OR OTHER EQUIVALENT, IN RECESSED OR SEMI-RECESSED CABINET MOUNTED AT 48" AFF MAXIMUM TO TOP OF CABINET. IF CONSTRUCTION MATERIALS ARE NOT AMENABLE TO RECESSING THE CABINET, SURFACE MOUNTED CABINETS MAY BE APPROVED. CABINETS SHALL HAVE AN OPENABLE DOOR THAT DOES NOT REQUIRE BREAKAGE OF GLASS. EXTINGUISHERS SHALL BE HUNG ON THEIR HOOKS IN THE CABINETS.
6. SIGNS: A SIGN(S) IDENTIFYING THE ELECTRICAL POWER SHUTOFF SHALL BE POSTED ON THE ENCLOSURE AND OTHER LOCATIONS AS REQUIRED TO SATISFACTION OF FIRE DEPARTMENT. THE SIGN SHALL ALSO PROVIDE EMERGENCY CONTACT INFORMATION FOR PHONE COMPANY PERSONNEL AND INSTALLED PRIOR TO CERTIFICATE ON OCCUPANCY. THE SIGNAGE SHALL REMAIN IN GOOD CONDITION IN PERPETUITY.
7. EMERGENCY RADIO INTERFERENCE: THE NEW TELECOMMUNICATIONS EQUIPMENT, CELL TOWER AND GPS SIGNALS SHALL NOT CREATE INTERFERENCE WITH FIRE DEPARTMENT RADIO COMMUNICATION.
8. KNOX KEY BOX: SHALL BE PROVIDED ON EXTERIOR GATE.- A MASTER KEY SHALL BE PROVIDED FOR GATE AND THE ENTRY DOOR TO ACCESS CMU BUILDING. KNOX BOX SHALL BE MOUNTED IN AREA APPROVED BY FIRE DEPARTMENT AT HEIGHT OF 60 TO 66 INCHES ABOVE GRADE. KNOX BOX SHALL BE TYPE WITH SIDE HINGED DOOR.

PAINTING

1. THE CONTRACTOR SHALL PREPARE SURFACES, FURNISH ALL PAINT, MATERIAL, LABOR AND EQUIPMENT FOR THE PAINTING OF ALL SURFACES AS REQUIRED.
2. ALL PAINTS TO BE APPLIED IN WORKMANLIKE MANNER. AT COMPLETION, REMOVE ALL MATERIALS AND DEBRIS CAUSED BY THIS CONTRACTOR. ALL FLOORS, GLASS, HARDWARE, FRAMES, FIXTURES, ETC SHALL BE THOROUGHLY CLEANED OF PAINT.
3. ALL STEEL COLUMNS AND MISC. METALS SHALL BE PRIMED AND PAINTED.
4. FIRE PREVENTION: TAKE EVERY PRECAUTION AT THE END OF THE DAY TO REMOVE OILY RAGS AND COMBUSTIBLE MATERIALS FROM THE SITE OR STORE IN METAL CONTAINER WITH TIGHT COVERS.
5. FINAL TEXTURE & COLOR PER OWNER'S INSTRUCTIONS.
6. SHOP PAINTING: CONFORM TO AISC SPECIFICATION SEC M2 AND AISC CODE SEC. 6.5. DO NOT PRIME SURFACES TO BE FIREPROOFED, IN CONTACT WITH CONCRETE, OR FIELD WELDED. STEEL WORK TO BE CONCEALED BY INTERIOR BUILDING FINISHES OR IN CONTACT WITH CONCRETE DOES NOT REQUIRE PAINTING. ALL OTHER STEEL WORK SHALL BE GIVEN ONE COAT OF SHOP PAINT.
7. ALL VISIBLE ANTENNAS, ANTENNA SUPPORT STRUCTURES, CABLE TRAYS, EQUIPMENT MUST BE PAINTED TO BLEND WITH SURROUNDING ELEMENTS - U.N.O

REINFORCING STEEL

1. ALL REINFORCING SHALL BE NEW DEFORMED BARS CONFORMING TO ASTM A615, GRADE 60 OR ASTM A706, GRADE 60. ALL WELDED REINFORCING BARS SHALL CONFORM TO ASTM A706.
2. REINFORCING STEEL SPLICE/DEVELOPMENT LENGTHS SHALL CONFORM TO THE FOLLOWING MINIMUM LENGTHS UNLESS NOTED OTHERWISE: SPLICED BARS SHALL BE WIRED TOGETHER.
   SPLICE/DEVELOPMENT LENGTH (INCHES)

BAR SIZE	TOP BAR	OTHER BAR
#3	28	22
#4	37	29
#5	47	36
#6	56	43
#7	81	63
#8	93	72
#9	105	81
#10	116	89

   TOP BAR LENGTHS APPLY TO HORIZONTAL REINFORCEMENT PLACED WITH MORE THAN 12" OF FRESH CONCRETE CAST BELOW THE SPLICE OR DEVELOP LENGTH.
   COMPRESSION DOWEL EMBEDMENT: 22 BAR DIAMETERS.
   LAP WELDED WIRE FABRIC ONE SPACING OF CROSS WIRES PLUS 2".
3. MINIMUM CONCRETE COVER UNLESS NOTED OTHERWISE:

UNFORMED SURFACE IN CONTACT WITH THE GROUND:	3"
FORMED SURFACES EXPOSED TO EARTH OR WEATHER	
#6 BARS AND LARGER:	2"
#5 BARS AND SMALLER:	1.5"
FORMED SURFACES NOT EXPOSED TO EARTH OR WEATHER	
BEAMS, GIRDERS AND COLUMNS:	1.5"
SLABS, WALLS AND JOISTS	
#11 BARS AND SMALLER:	0.75"

4. BARS SHALL BE CLEAN OF MUD, OIL, OR OTHER COATINGS LIKELY TO IMPAIR BONDING.
5. ALL REINFORCING SHALL BE SECURED IN PLACE PRIOR TO INSPECTIONS, PLACING CONCRETE, OR GROUTING MASONRY.
6. WELDING: BARS SHALL NOT BE WELDED UNLESS AUTHORIZED. WHEN AUTHORIZED, CONFORM TO ACI 301 SEC 3.2, 2.2, AND AWS D1.4 "WELDING" AND PROVIDE ASTM A706, GRADE 60 REINFORCEMENT.
7. FIELD BENDING: CONFORM TO ACI 301 SEC 3.3.2.8 "FIELD BENDING OR STRAIGHTENING". BAR SIZES #3 THROUGH #5 MAY BE FIELD BENT COLD THE FIRST TIME. OTHER BARS REQUIRE PREHEATING. DO NOT TWIST BARS.
8. SPLICE ALL BARS IN MASONRY WITH A MINIMUM OF 48 BAR DIAMETER LAPS (2'-0" MINIMUM).
9. ALL VERTICAL WALL REINFORCEMENT SHALL BE CONTINUOUS BETWEEN SPLICE LOCATIONS SHOWN IN THE DETAILS.

CONCRETE

1. MIX DESIGN REQUIREMENTS: (UNLESS NOTED OTHERWISE)
   A. CEMENT SHALL CONFORM TO ASTM C-150, TYPE V.
   B. COMPRESSIVE STRENGTH = 4,000 PSI
   C. CONCRETE SLUMP SHALL BE 3"+/-1" FOR SLABS AND 4"+/-1" FOR ALL OTHER WORK.
   D. WATER CEMENT RATIO = 0.45 MAX
2. AGGREGATES FOR NORMAL WEIGHT CONCRETE SHALL CONFORM TO ASTM C-33 (1" MAXIMUM SIZE), AND ASTM C-330 FOR STRUCTURAL LIGHT WEIGHT CONCRETE.
3. WHERE CONCRETE WILL BE IN CONTACT WITH NATIVE OR IMPORTED SOIL WHICH HAS A VERY SEVERE SULFATE CONTENT, POZZOLAN SHALL BE ADDED AS REQUIRED.
4. EXTERIOR CONCRETE EXPOSED TO FREEZING TEMPERATURES AND/OR SALT OR DEICING CHEMICALS SHALL HAVE AIR ENTRAINMENT AND THE CEMENT CONTENT APPROPRIATE FOR THE EXPECTED EXPOSURE.
5. WATER SHALL BE POTABLE OR CLEAN, FREE FROM DELETERIOUS AMOUNTS OF ACIDS, ALKALIS OR ORGANIC MATERIALS, OILS, AND SALTS.
6. READY-MIX CONCRETE SHALL BE MIXED AND DELIVERED IN ACCORDANCE WITH ASTM C-94.
7. FLOOR SLABS SHALL CONFORM TO ASTM C-38 STANDARDS AND SHALL BE AT LEAST 3 $\frac{1}{2}$ INCHES THICK- SEE FOUNDATION PLANS FOR REINFORCEMENT, BASE, UNDERLAYMENT, VAPOR BARRIER OR OTHER SPECIFIC REQUIREMENTS.
8. FLOOR SLABS SHALL BE LEVEL OR TRUE SLOPES AS SHOWN ON DRAWINGS. TOLERANCE: 1/8 INCH IN 10 FEET.
9. PROVIDE LIGHT BROOM FINISH ON ALL EXPOSED CONCRETE UNLESS NOTED OTHERWISE.
10. PRIOR TO COMMENCING ANY FOUNDATION WORK, COORDINATE WORK WITH ANY EXISTING UTILITIES. FOUNDATIONS SHALL BE LOWERED WHERE REQUIRED TO AVOID UTILITIES.
11. ALL EDGES OF PERMANENTLY EXPOSED CONCRETE SURFACES SHALL BE CHAMFERED 3/4" UNLESS NOTED OTHERWISE.
12. FORMWORK SHALL REMAIN IN PLACE UNTIL CONCRETE HAS OBTAINED AT LEAST 90% OF COMPRESSIVE STRENGTH. THE CONTRACTOR SHALL PROVIDE ALL SHORING AND RESHORING.
13. PROVIDE CONCRETE SLABS OVER A 10 MIL POLYETHYLENE VAPOR BARRIER OVER 4" OF POROUS FILL UNLESS NOTED OTHERWISE.
14. ALL POROUS FILL MATERIAL SHALL BE A CLEAN GRANULAR MATERIAL. POROUS FILL SHALL BE COMPACTED TO 90% MAX. DRY DENSITY.
15. WALKWAYS AND OTHER EXTERIOR SLABS ARE NOT INDICATED ON THE STRUCTURAL DRAWINGS. SEE THE SITE PLAN AND ARCHITECTURAL DRAWINGS FOR LOCATIONS, DIMENSIONS, ELEVATIONS, JOINTING DETAILS AND FINISH DETAILS. PROVIDE 4" WALKS REINFORCED WITH 6x6 - WI.4xWI.4 WWF UNLESS OTHERWISE NOTED.
16. ALL CONCRETE MATERIALS AND WORKMANSHIP SHALL CONFORM TO CHAPTER 19 OF THE CBC AND TO ALL REQUIREMENTS OF ACI 301, "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS," EXCEPT AS SPECIFIED HEREIN.
17. ALL FOOTINGS SHALL REST ON FIRM NATURAL SOIL OR APPROVED COMPACTED FILL.
18. LATTICE TOWER CAISSONS ARE DESIGNED BY OTHERS. PROVIDE ADEQUATE SEPARATION AND/OR COMPRESSIBLE MATERIAL AROUND THE TOP OF THE CAISSON AS DIRECTED BY THE CAISSON ENGINEER TO PROTECT ADJACENT NEW AND EXISTING FOUNDATIONS AND OTHER
19. CONTROL JOINTS SHALL BE PLACED IN ALL CONCRETE SLABS PER THE SCHEDULE BELOW. SAWCUT WITHIN 4 HOURS AFTER THE POUR USING THE "SOFF-CUT" PROCEDURE.

SLAB THICKNESS	MAXIMUM SPACING
4"	10'-0"
5"	12'-0"
6" AND LARGE	15'-0"

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1452 EDINGER AVENUE
TUSTIN, CA 92780

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ANNAPOLIS, MD 21401

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16885 VIA DEL CAMPO CT., SUITE 318
SAN DIEGO, CA 92127
tel: (858) 432-4112 / (858) 432-4257

REV	DATE	DESCRIPTION
2	10/03/2024	PLAN CHECK COMMENTS
1	08/02/2024	PLAN CHECK COMMENTS/ ADDED FIBER DESIGN
0	04/26/2024	100% CD'S
B	04/19/2023	REMOVED MW ANTENNA
A	11/04/2022	90% CD'S FOR REVIEW

ISSUED DATE:
10/03/2024

ISSUED FOR:
BP SUBMITTAL

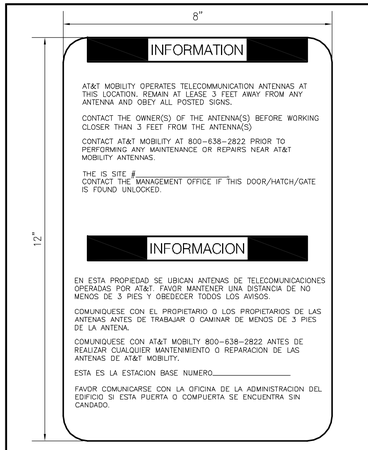
LICENSURE:
MICHAEL B.
83950
EXP. 09/30/25
CIVIL
10/4/2024

PROJECT INFORMATION:
CLL01408
PONTIAC FIREBIRD
2470 WEST PIONEER AVE. #A,
FULLERTON, CA 92832

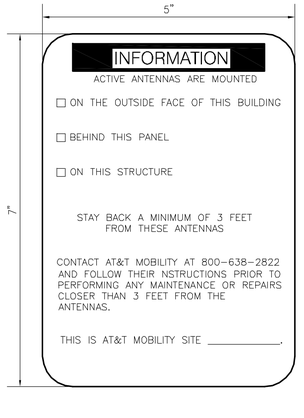
DRAWN BY: AJYR
CHECKED BY: SVF

SHEET TITLE:
NOTES AND SPECIFICATIONS

SHEET NUMBER:
T-2



A INFORMATION SIGN I-1
SCALE: 1/2" = 1"



B INFORMATION SIGN I-2
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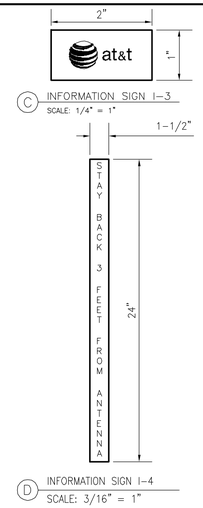


C INFORMATION SIGN I-3
SCALE: 1/4" = 1"

D INFORMATION SIGN I-4
SCALE: 3/16" = 1"

1. CONTRACTOR SHALL INSTALL ALL INFORMATION SIGNAGE IN ACCORDANCE WITH AT&T WIRELESS DOCUMENT #03-0074, RF EXPOSURE POLICY AND RF SAFETY COMPLIANCE PROGRAM, LATEST EDITION.
2. FABRICATION:

SIGN I-1: ENTRANCE DOOR, SEE DETAIL 1A, THIS SHEET

SIGN 1 IS TO BE MADE ON THE 50 MIL ALUMINUM SHEETING (SIZE 8 INCHES BY 12 INCHES) WITH FOUR (4) 1/4 INCH MOUNTING HOLES, ONE EACH CORNER OF THE SIGN FOR MOUNTING WITH HARDWARE WITH TIEWRAPS. THE MAIN BACKGROUND COLOR IS TO BE WHITE FRONT AND BACK WITH BLACK LETTERING.

THE INFORMATION BAND SHALL BE 1.2 INCH SOLID GREEN BAND WITH 0.5 INCH HIGH BLACK LETTERING. THE BODY TEXT SHALL BE IN BLACK LETTERING WITH 0.2 INCH HIGH LETTERS. THE REF LINE SHALL BE IN 1/8 INCH LETTERS.

THE PLACEMENT OF TEXT SHALL BE DONE IN A MANNER THAT WILL PERMIT EASY READING FROM DISTANCE OF APPROXIMATELY 6 FEET IN FRONT OF THE SIGN.

ALL PAINT WILL BE BAKED WITH ENAMEL WITH UV PROTECTIVE COATING OVER THE FACE OF THE SIGN.

* SIGN I-2: POLE, SEE DETAIL 1B, THIS SHEET

SIGN 2 MUST BE A NON-METALIC LABEL WITH AN ADHESIVE BACKING. THE LABEL SHALL BE MADE USING VINYL OR SIMILAR WEATHERPROOF MATERIAL. THE LABEL SHALL BE APPROXIMATELY 5 X 7 INCHES WITH A WHITE BACKGROUND AND BLACK LETTERING. THE GREEN BAND SHALL BE 1.375 INCH IN HEIGHT AND THE LETTERING SHALL BE BLACK WITH 0.75 INCH HIGH LETTERS. THE TEXT LETTERING SHALL BE BLACK WITH 1/8 INCH HIGH LETTERS. UV PROTECTION SHALL BE PLACED OVER THE FRONT OF THE LABEL.

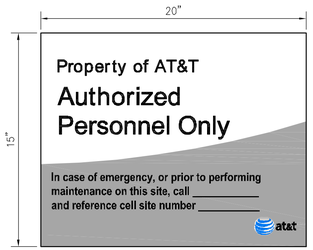
* SIGN I-3: BACK OF ANTENNAS, SEE DETAIL 1C & 3, THIS SHEET

SIGN 3 IS A 1 INCH X 2 INCH LABEL THAT CAN BE APPLIED TO THE BACK OR SIDE OF AN ANTENNA TO IDENTIFY IT AS A AT&T ANTENNA.

* SIGN I-4: SIDE OF ANTENNAS, SEE DETAIL 1D & 3, THIS SHEET

SIGN 4 IS MADE FROM TRANSPARENT MATERIAL 1-1/2 INCHES WIDE AND 24 INCHES LONG. THE LETTERING IS TO BE BLACK WITH 1/2 INCH LETTERING IN A VERTICAL COLUMN. THE SPACING BETWEEN WORDS MUST BE SUCH THAT IT IS EASILY READ AND FILLS THE LENGTH OF THE SIGN.

INFORMATION SIGNAGE
24"x36" SCALE: NTS
11"x17" SCALE: NTS
1

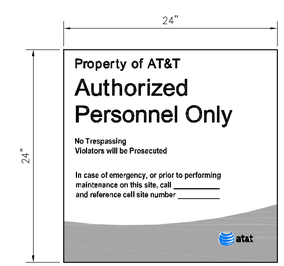


SIZE: 15" x 20"

SHELTER/CABINETS DOOR SIGN
24"x36" SCALE: NTS
11"x17" SCALE: NTS
4

SIZE: 10" x 14"

FENCED COMPOUND SIGNS
24"x36" SCALE: NTS
11"x17" SCALE: NTS
5



SIZE: 20" x 20"

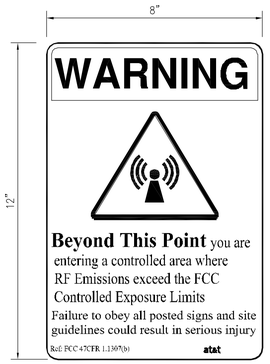
GATE SIGNAGE
24"x36" SCALE: NTS
11"x17" SCALE: NTS
7

SIZE: 10" x 14"

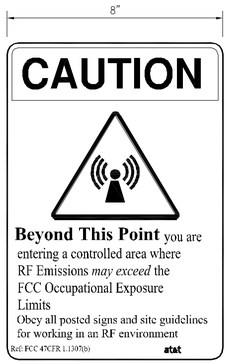
DOORS/EQUIPMENT SIGN
24"x36" SCALE: NTS
11"x17" SCALE: NTS
8

NOTE:

1. CONTRACTOR SHALL INSTALL ALL INFORMATION SIGNAGE IN ACCORDANCE WITH AT&T WIRELESS DOCUMENT # 03-0074, RF EXPOSURE POLICY AND RF SAFETY COMPLIANCE PROGRAM, LATEST EDITION.
2. CONTRACTOR SHALL CONTACT AT&T R-RFSC FOR INFORMATION ON MPE LEVELS AND INSTRUCTIONS ON LEVEL AND LOCATION OF SIGNAGE.

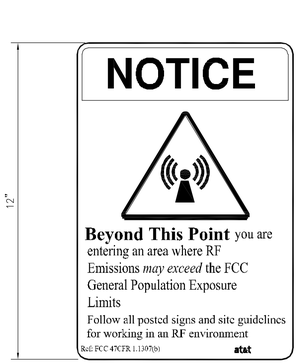


SIZE: 8" x 12"



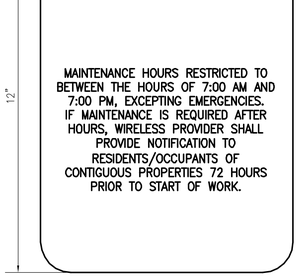
SIZE: 8" x 12"

CAUTION AND WARNING SIGN
24"x36" SCALE: NTS
11"x17" SCALE: NTS
2



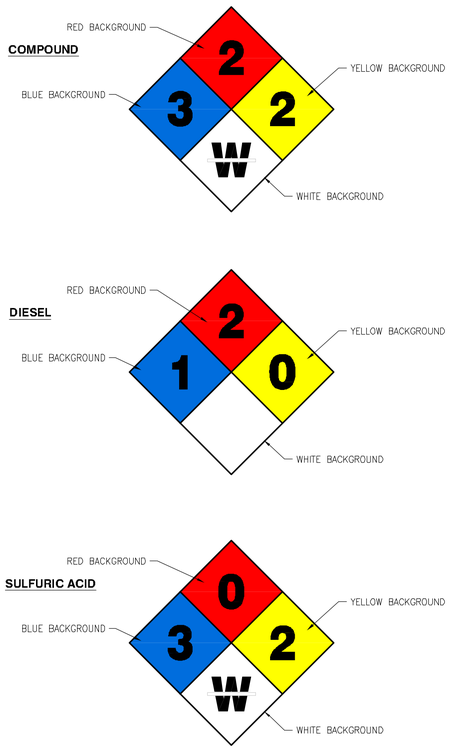
SIZE: 8" x 12"

NOTICE SIGN
24"x36" SCALE: NTS
11"x17" SCALE: NTS
3



MAINTENANCE HOURS SIGNS
24"x36" SCALE: NTS
11"x17" SCALE: NTS
6

NOT USED
24"x36" SCALE: NTS
11"x17" SCALE: NTS
9



NFPA SIGN
24"x36" SCALE: NTS
11"x17" SCALE: NTS
10

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SAN DIEGO, CA 92127
tel: (858) 432-4112 / (858) 432-4257

REV	DATE	DESCRIPTION
2	10/03/2024	PLAN CHECK COMMENTS
1	08/02/2024	PLAN CHECK COMMENTS/ ADDED FIBER DESIGN
0	04/26/2024	100% CD'S
B	04/19/2023	REMOVED MW ANTENNA
A	11/04/2022	90% CD'S FOR REVIEW

ISSUED DATE:
10/03/2024

ISSUED FOR:
BP SUBMITTAL

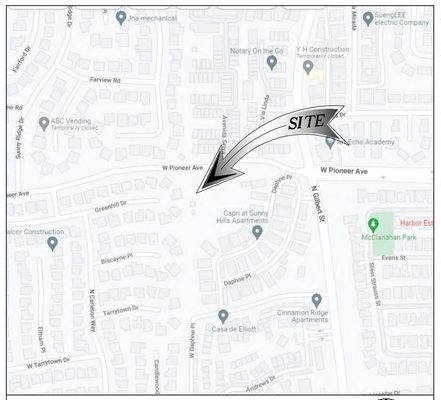
LICENSURE:


PROJECT INFORMATION:
CLL01408
PONTIAC FIREBIRD
2470 WEST PIONEER AVE. #A,
FULLERTON, CA 92832

DRAWN BY: AJYR
CHECKED BY: SVF

SHEET TITLE:
WARNING
NOTES AND
SIGNAGE

SHEET NUMBER:
T-3



VICINITY MAP

APN
280-021-03

SITE ADDRESS
2470 WEST PIONEER AVE. #A, FULLERTON, CA 92832

TITLE REPORT
TITLE REPORT WAS PREPARED BY COMMONWEALTH LAND TITLE INSURANCE COMPANY WITH ORDER NUMBER 92017749-920-CMM-CM8 AND GUARANTEE NUMBER CA-SFXFC-IMP-81G28-1-22-92017749 DATED APRIL 21, 2022.

BASIS OF BEARING
BEARINGS SHOWN HEREON ARE BASED UPON U.S. STATE PLANE NAD83 COORDINATE SYSTEM CALIFORNIA STATE PLANE COORDINATE ZONE SIX, DETERMINED BY GPS OBSERVATIONS.

BENCHMARK
ELEVATIONS ARE BASED ON CRTN (CSRC) NETWORK BROADCAST COORDINATES.

FLOODZONE
SITE IS LOCATED IN FLOOD ZONE "X" AS PER F.I.R.M. MAP NO. 06059C0039J EFFECTIVE DATE 12/3/2009.

NOTES:
1. THIS IS NOT A BOUNDARY SURVEY. THIS IS A SPECIALIZED TOPOGRAPHIC MAP. THE PROPERTY LINES AND EASEMENTS SHOWN HEREON ARE FROM RECORD INFORMATION AS NOTED HEREON. CELLSITE CONCEPTS TRANSLATED THE TOPOGRAPHIC SURVEY TO RECORD INFORMATION USING FOUND MONUMENTS SHOWN HEREON. THE LOCATION OF PROPERTY LINES SHOWN HEREON ARE APPROXIMATE AND FOR INFORMATIONAL PURPOSES ONLY. THEY ARE NOT TO BE RELIED UPON AS THE ACTUAL BOUNDARY LINES.
2. ANY CHANGES MADE TO THE INFORMATION ON THIS PLAN, WITHOUT THE WRITTEN CONSENT OF CELLSITE CONCEPTS, RELIEVES CELLSITE CONCEPTS OF ANY AND ALL LIABILITY.
3. THE HEIGHTS AND ELEVATIONS FOR THE TREES, BUSHES AND OTHER LIVING PLANTS SHOWN HEREON, SHOULD BE CONSIDERED APPROXIMATE (+/-) AND ONLY FOR THE DATE OF THIS SURVEY. THEY ARE PROVIDED AS A GENERAL REFERENCE AND SHOULD NOT BE USED FOR DESIGN PURPOSES.
4. WRITTEN DIMENSIONS SHALL TAKE PREFERENCE OVER SCALED & SHALL BE VERIFIED ON THE JOB SITE. ANY DISCREPANCY SHALL BE BROUGHT TO THE NOTICE OF THE SURVEYOR PRIOR TO COMMENCEMENT OF ANY WORK.
5. FIELD SURVEY COMPLETED ON MAY 17, 2022.

SCHEDULE B (EXCEPTIONS)
ITEM A IS PROPERTY TAX RELATED
ITEM B IS TAX RELATED
ITEM C IS LIENS RELATED
ITEM D IS LIEN OF SUPPLEMENTAL OR ESCAPED ASSESSMENTS OF PROPERTY TAXES RELATED
ITEM 1 IS WATER RIGHTS RELATED
ITEM 4 IS EFFECT RELATED
ITEM 5, 7, AND 8 ARE MATTERS RELATED
ITEM 11 AND 13 ARE MEMORANDUM OF LEASE RELATED
ITEM 14 IS DEEDS OF TRUST RELATED
ITEM 15 IS RIGHTS RELATED

TIE LINE TABLE		
NO.	LENGTH	BEARING
T1	50.00'	N89°14'26"W
T2	110.00'	N89°14'26"W
T3	95.37'	S78°41'22"W
T4	58.77'	N89°14'26"W

TIE CURVE TABLE			
NO.	DELTA	RADIUS	ARC LENGTH
C1	29°32'30"	200.00'	103.12'
C2	12°04'12"	200.00'	42.13'
C3	12°04'12"	255.00'	53.72'

LEGENDS
- CENTER LINE
- PROPERTY LINE
- EASEMENT LINE
- WROUGHT IRON FENCE
- EG EXISTING GRADE
- FS FINISH SURFACE
- TC TOP OF CURB
- TP TOP OF POLE
- UTILITY POLE
- TREE

MONUMENT
- FD. SPIKE AND WASHER

LEGAL DESCRIPTION
ALL THAT CERTAIN REAL PROPERTY SITUATED IN THE CITY OF FULLERTON, COUNTY OF ORANGE, STATE OF CALIFORNIA, DESCRIBED AS FOLLOWS:

ALL THAT PORTION OF THE NORTHEAST QUARTER OF SECTION 30, TOWNSHIP 3 SOUTH, RANGE 10 WEST, SAN BERNARDINO BASE AND MERIDIAN, PARTLY IN THE RANCHO LOS COYOTES AND PARTLY IN THE RANCHO SAN JUAN CAJON DE SANTA ANA, IN THE CITY OF FULLERTON, COUNTY OF ORANGE, STATE OF CALIFORNIA, DESCRIBED AS FOLLOWS:

BEGINNING AT THE NORTHWEST CORNER OF THE NORTHEAST QUARTER OF SAID SECTION 30, SAID POINT BEING MARKED BY A 2" IRON PIPE WITH R.E. 2244 TAG SET IN CONCRETE IN THE TOP OF SAID PIPE;

THENCE ALONG THE WEST LINE OF THE NORTHEAST QUARTER OF SAID SECTION 30, SOUTH 1° 12' 50" WEST 312.75 FEET;
THENCE LEAVING SAID WEST LINE NORTH 89° 26' 50" EAST 238.80 FEET;
THENCE NORTH 44° 32' 10" EAST 66.45 FEET;
THENCE NORTH 15° 13' 40" EAST 57.30 FEET;
THENCE NORTH 13° 24' 40" WEST 210.22 FEET, MORE OR LESS, TO A POINT IN THE NORTH LINE OF THE NORTHEAST QUARTER OF SAID SECTION 30;
THENCE ALONG SAID NORTH LINE NORTH 89° 14' 40"WEST 245.07 FEET, MORE OR LESS, TO THE POINT OF BEGINNING.

EXCEPTING THEREFROM ALL MINERALS, ORES AND PRECIOUS AND USEFUL METALS, SUBSTANCES AND HYDROCARBONS OF EVERY KIND AND CHARACTER, INCLUDING IN PART PETROLEUM, OIL, GAS, ASPHALTUM AND TAR, THAT MAY BE FOUND LOCATED, CONTAINED IN, DEVELOPED OR TAKEN FROM OR UNDER AS BY DEED RECORDED IN BOOK 632, PAGE 214 AND IN BOOK 1133, PAGE 525, BOTH OF OFFICIAL RECORDS.

APN: 280-021-03

EASEMENTS:

ITEM 2 IS NOT PLOTTED. THE EXACT LOCATION AND EXTENT OF SAID EASEMENT IS NOT DISCLOSED OF RECORD.

ITEM 3 IS NOT PLOTTED. THE LOCATION OF EASEMENT IS TOO FAR FROM THE SUBJECT PARCEL.

6 EASEMENT(S) FOR THE PURPOSE(S) SHOWN BELOW AND RIGHTS INCIDENTAL THERETO, AS GRANTED IN A DOCUMENT:
GRANTED TO: SUNNY HILLS MUTUAL WATER COMPANY
PURPOSE: WATER PIPE LINES AND FACILITIES
RECORDING DATE: APRIL 1, 1942
RECORDING NO: BOOK 1133, PAGE 525 OF OFFICIAL RECORDS
AFFECTS: A PORTION OF SAID LAND
AND RECORDING DATE: JUNE 8, 1942
AND RECORDING NO: BOOK 1149, PAGE 207 OF OFFICIAL RECORDS

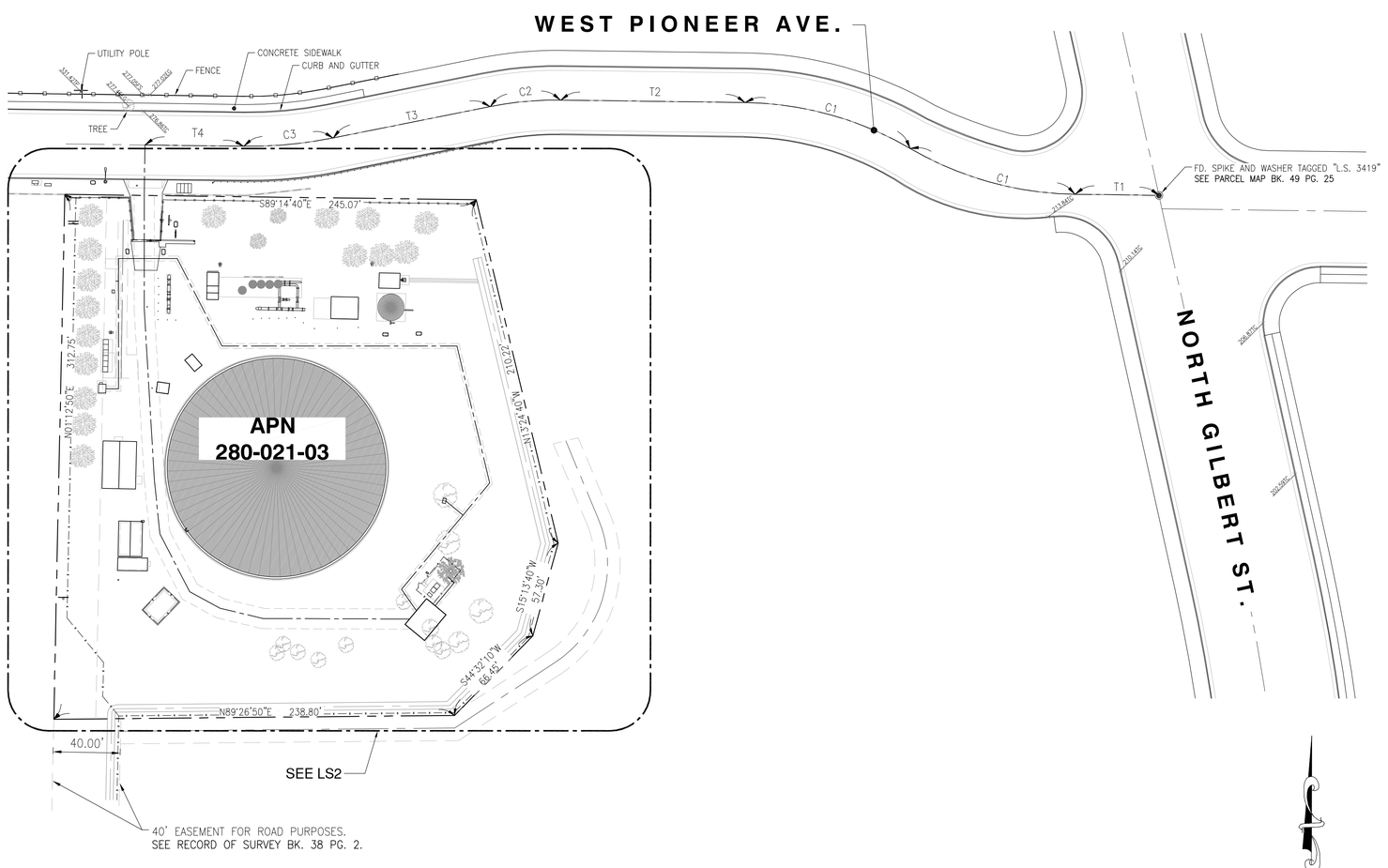
9 EASEMENT(S) FOR THE PURPOSE(S) SHOWN BELOW AND RIGHTS INCIDENTAL THERETO, AS GRANTED IN A DOCUMENT:
GRANTED TO: CITY OF FULLERTON
PURPOSE: STREET AND HIGHWAY
RECORDING DATE: MAY 24, 1961
RECORDING NO: BOOK 5732, PAGE 239 OF OFFICIAL RECORDS
AFFECTS: THE WESTERLY 25 FEET OF SAID LAND

10 EASEMENT(S) FOR THE PURPOSE(S) SHOWN BELOW AND RIGHTS INCIDENTAL THERETO, AS GRANTED IN A DOCUMENT:
GRANTED TO: SOUTHERN CALIFORNIA EDISON COMPANY, A CORPORATION
PURPOSE: PUBLIC UTILITIES
RECORDING DATE: APRIL 8, 1994
RECORDING NO: 94-245872 OF OFFICIAL RECORDS
AFFECTS: A PORTION OF SAID LAND

12 EASEMENT(S) FOR THE PURPOSE(S) SHOWN BELOW AND RIGHTS INCIDENTAL THERETO, AS GRANTED IN A DOCUMENT:
GRANTED TO: SOUTHERN CALIFORNIA EDISON COMPANY, A CORPORATION
PURPOSE: PUBLIC UTILITIES
RECORDING DATE: MAY 26, 2020
RECORDING NO: 2020-235001 OF OFFICIAL RECORDS
AFFECTS: A PORTION OF SAID LAND

PROPERTY LINES DERIVED FROM

RECORD OF SURVEY BK. 38 PG. 2	DATED OCTOBER 02, 1957
PARCEL MAP BK. 94 PG. 33	DATED MARCH 31, 1977
TRACT NO. 3871 BK. 205 PG. 11	DATED SEPTEMBER 15, 1964
PARCEL MAP BK. 49 PG. 25	DATED FEBRUARY 08, 1973
TRACT NO. 8331 BK. 336 PG. 44-45	DATED NOVEMBER 29, 1973
CORNER RECORD DOCUMENT NO. 2016-0411B	DATED FEBRUARY 26, 2016



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SAN DIEGO, CA 92127
tel: (858) 432-4112 / (858) 432-4257

REV	DATE	DESCRIPTION
4	10/03/2024	PLAN CHECK COMMENTS
3	07/15/2024	REVISED LEGAL DESCRIPTION
2	06/17/2022	FINAL SURVEY
1	06/01/2022	PRELIMINARY SURVEY

ISSUED DATE:
OCTOBER 03, 2024

ISSUED FOR:
FINAL SURVEY

LICENSURE:
LICENSED LAND SURVEYOR
MATT Y. HANNA
L.S. 8780
Exp. 12/31/24
10/03/24
STATE OF CALIFORNIA

PROJECT INFORMATION:
CLL01408
PONTIAC FIREBIRD
2470 WEST PIONEER AVE. #A,
FULLERTON, CA 92832

DRAWN BY: VNS
CHECKED BY: RH

SHEET TITLE:
TOPOGRAPHIC SURVEY

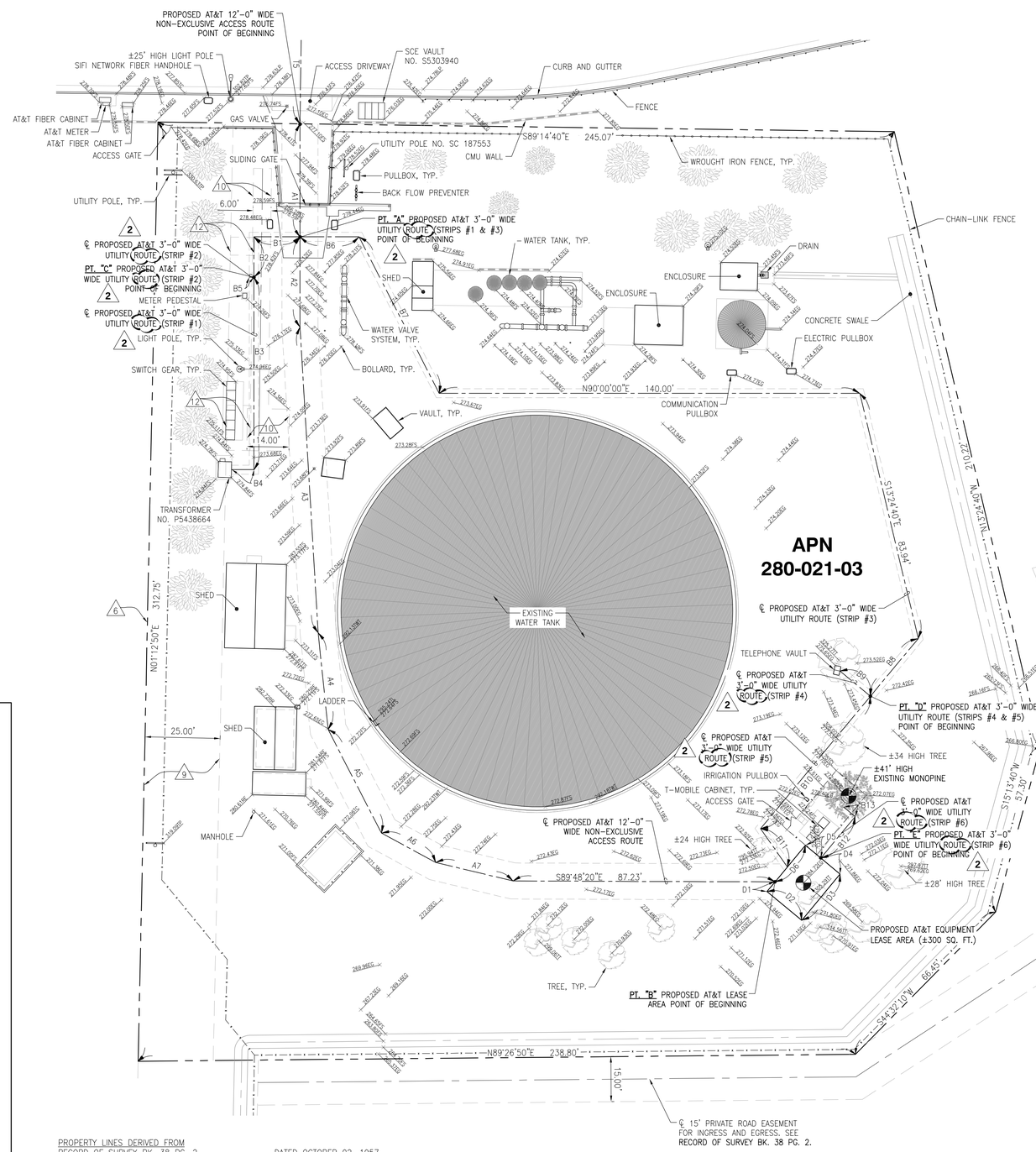
SHEET NUMBER:
LS-1

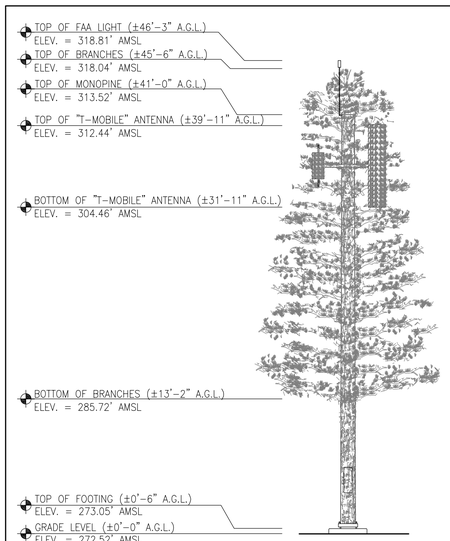
TIE LINE TABLE		
NO.	LENGTH	BEARING
T5	30.04'	S00°45'34"W

ACCESS ROUTE LINE TABLE		
NO.	LENGTH	BEARING
A1	37.54'	S00°00'00"E
A2	29.98'	S00°00'00"E
A3	102.02'	S03°24'14"E
A4	32.37'	S05°51'21"E
A5	38.77'	S27°15'40"E
A6	20.56'	S61°34'14"E
A7	26.41'	S76°31'41"E

LEASE AREA LINE TABLE		
NO.	LENGTH	BEARING
D1	4.19'	S39°40'18"W
D2	15.00'	S50°19'42"E
D3	20.00'	N39°40'18"E
D4	8.34'	N50°19'42"W
D5	6.66'	N50°19'42"W
D6	15.81'	S39°40'18"W

UTILITY EASEMENT LINE TABLE		
NO.	LENGTH	BEARING
B1	15.34'	N90°00'00"W
B2	13.42'	S00°00'00"W
B3	64.09'	S00°00'00"W
B4	7.41'	N90°00'00"W
B5	1.55'	N90°00'00"W
B6	19.66'	N90°00'00"E
B7	58.50'	S27°06'20"E
B8	24.94'	S39°40'18"W
B9	13.14'	N50°19'42"W
B10	57.29'	S39°40'18"W
B11	15.57'	S35°04'20"E
B12	17.86'	N39°40'18"E
B13	4.98'	N50°21'42"W





MONOPINE PROFILE

PROPERTY LINES DERIVED FROM
RECORD OF SURVEY BK. 38 PG. 2 — DATED OCTOBER 02, 1957
PARCEL MAP BK. 94 PG. 33 — DATED MARCH 31, 1977
TRACT NO. 3871 BK. 205 PG. 11 — DATED SEPTEMBER 15, 1964
PARCEL MAP BK. 49 PG. 25 — DATED FEBRUARY 08, 1973
TRACT NO. 8331 BK. 336 PG. 44-45 — DATED NOVEMBER 29, 1973
CORNER RECORD DOCUMENT NO. 2016-0411B — DATED FEBRUARY 26, 2016

LEGENDS

- CENTER LINE
- PROPERTY LINE
- EASEMENT LINE
- CHAIN-LINK FENCE
- WROUGHT IRON FENCE
- CMU WALL
- EG EXISTING GRADE
- FS FINISH SURFACE
- LP LIP OF GUTTER
- TC TOP OF CURB
- RE ROOF EDGE
- RR ROOF RIDGE
- TL TOP OF LADDER
- TWT TOP OF WATER TANK
- TCL TOP OF CHAIN-LINK FENCE
- TT TOP OF TREE
- TS TOP OF SHED
- TP TOP OF POLE
- EXISTING STREET LIGHT
- UTILITY POLE
- TREE
- BUSH

COORDINATES

EXISTING MONOPINE
LATITUDE: 33°53'15.30"N (33.887583)
LONGITUDE: 117°58'02.90"W (-117.967472)

NEW AT&T EQUIPMENT LEASE AREA
LATITUDE: 33°53'15"N (33.887501)
LONGITUDE: 117°58'03.05"W (-117.967514)

20' 0' 20' 40'
GRAPHIC SCALE: 1"=20'

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SAN DIEGO, CA 92127
tel: (858) 432-4112 / (858) 432-4257

REV	DATE	DESCRIPTION
4	10/03/2024	PLAN CHECK COMMENTS
3	07/15/2024	REVISED LEGAL DESCRIPTION
2	06/17/2022	FINAL SURVEY
1	06/01/2022	PRELIMINARY SURVEY

ISSUED DATE: OCTOBER 03, 2024

ISSUED FOR: FINAL SURVEY

LICENSURE:

LICENSED LAND SURVEYOR — RENE Y. HANNA — L.S. 8780 — Exp. 12/31/24 — 10/03/24 — STATE OF CALIFORNIA

PROJECT INFORMATION:

CLL01408
PONTIAC FIREBIRD
2470 WEST PIONEER AVE. #A,
FULLETON, CA 92832

DRAWN BY: VNS
CHECKED BY: RH

SHEET TITLE: TOPOGRAPHIC SURVEY

SHEET NUMBER: **LS-2**

12 FEET WIDE NON-EXCLUSIVE ACCESS ROUTE CENTERLINE DESCRIPTION:

ALL THAT CERTAIN REAL PROPERTY SITUATED IN THE CITY OF FULLERTON, COUNTY OF ORANGE, STATE OF CALIFORNIA, DESCRIBED AS FOLLOWS:

ALL THAT PORTION OF THE NORTHEAST QUARTER OF SECTION 30, TOWNSHIP 3 SOUTH, RANGE 10 WEST, SAN BERNARDINO BASE AND MERIDIAN, PARTLY IN THE RANCHO LOS COYOTES AND PARTLY IN THE RANCHO SAN JUAN CAJON DE SANTA ANA, IN THE CITY OF FULLERTON, COUNTY OF ORANGE, STATE OF CALIFORNIA.

A STRIP OF LAND FOR NON-EXCLUSIVE ACCESS ROUTE PURPOSES FOR THE LAND REFERRED TO HEREIN SITUATED IN THE CITY OF FULLERTON, COUNTY OF ORANGE, STATE OF CALIFORNIA, AND IS DESCRIBED AS FOLLOWS:

A ROUTE TWELVE (12.00) FEET IN WIDTH LYING SIX (6.00) FEET ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE TO WIT:

COMMENCING AT THE NORTH 1/4 CORNER OF SAID SECTION 30, ALSO BEING THE CENTERLINE INTERSECTION OF NORTH GILBERT STREET AND WEST PIONEER AVENUE ON A FOUND SPIKE AND WASHER TAGGED "L.S. 3419", AS SHOWN ON THAT PARCEL MAP, FILED IN BOOK 49 ON PAGE 25 IN THE OFFICE OF THE COUNTY RECORDER OF ORANGE COUNTY; THENCE NORTHWESTERLY ALONG THE CENTERLINE OF WEST PIONEER AVENUE, NORTH 89°14'26" WEST A DISTANCE OF 50.00 FEET TO THE BEGINNING OF A TANGENT CURVE CONCAVE TO THE NORTHEAST HAVING A RADIUS OF 200.00 FEET; THENCE NORTHWESTERLY, 103.12 FEET ALONG SAID CURVE THROUGH A CENTRAL ANGLE OF 29°32'30" TO THE BEGINNING OF A REVERSE CURVE CONCAVE TO THE SOUTHWEST HAVING A RADIUS OF 200.00 FEET; THENCE NORTHWESTERLY, 103.12 FEET ALONG SAID CURVE THROUGH A CENTRAL ANGLE OF 29°32'30"; THENCE NORTH 89°14'26" WEST A DISTANCE OF 110.00 FEET TO THE BEGINNING OF A TANGENT CURVE CONCAVE TO THE SOUTHEAST HAVING A RADIUS OF 200.00 FEET; THENCE SOUTHWESTERLY, 42.13 FEET ALONG SAID CURVE THROUGH A CENTRAL ANGLE OF 12°04'12"; THENCE SOUTH 78°41'22" WEST A DISTANCE OF 95.37 FEET TO THE BEGINNING OF A TANGENT CURVE CONCAVE TO THE NORTHWEST HAVING A RADIUS OF 255.00 FEET; THENCE SOUTHWESTERLY, 53.72 FEET ALONG SAID CURVE THROUGH A CENTRAL ANGLE OF 12°04'12"; THENCE NORTH 89°14'26" WEST A DISTANCE OF 58.77 FEET; THENCE LEAVING CENTERLINE OF WEST PIONEER AVENUE, SOUTH 00°45'34" WEST A DISTANCE OF 30.04 FEET TO THE **POINT OF BEGINNING** OF THIS CENTERLINE DESCRIPTION:

THENCE SOUTH 00°00'00" EAST, A DISTANCE OF 37.54 FEET TO A POINT REFERRED TO HEREINAFTER AS POINT "A";
THENCE SOUTH 00°00'00" EAST, A DISTANCE OF 29.98 FEET;
THENCE SOUTH 03°24'14" EAST, A DISTANCE OF 102.02 FEET;
THENCE SOUTH 05°51'21" EAST, A DISTANCE OF 32.37 FEET;
THENCE SOUTH 27°15'40" EAST, A DISTANCE OF 38.77 FEET;
THENCE SOUTH 61°34'14" EAST, A DISTANCE OF 20.56 FEET;
THENCE SOUTH 76°31'41" EAST, A DISTANCE OF 26.41 FEET;
THENCE SOUTH 89°48'20" EAST A DISTANCE OF 87.23 FEET TO A POINT ON THE SOUTHWESTERLY LINE OF THE **PROPOSED AT&T LEASE AREA**, REFERRED TO HEREINAFTER AS POINT "B", ALSO BEING THE **TERMINUS POINT** OF THIS CENTERLINE DESCRIPTION.

THE SIDE LINES OF SAID TWELVE (12.00) FEET WIDE ACCESS ROUTE IS TO BE EXTENDED AND/OR SHORTENED TO TERMINATE IN THE LANDS OF THE GRANTOR AND SHALL BE JOINED AT ALL ANGLE POINTS.

SUBJECT TO ALL EASEMENTS AND/OR RIGHT-OF-WAY RECORDS.

SEE NON-EXCLUSIVE ACCESS ROUTE ON SHEET LS-2.

PROPOSED AT&T LEASE AREA DESCRIPTION:

ALL THAT CERTAIN REAL PROPERTY SITUATED IN THE CITY OF FULLERTON, COUNTY OF ORANGE, STATE OF CALIFORNIA, DESCRIBED AS FOLLOWS:

ALL THAT PORTION OF THE NORTHEAST QUARTER OF SECTION 30, TOWNSHIP 3 SOUTH, RANGE 10 WEST, SAN BERNARDINO BASE AND MERIDIAN, PARTLY IN THE RANCHO LOS COYOTES AND PARTLY IN THE RANCHO SAN JUAN CAJON DE SANTA ANA, IN THE CITY OF FULLERTON, COUNTY OF ORANGE, STATE OF CALIFORNIA.

A STRIP OF LAND FOR AT&T LEASE AREA PURPOSES FOR THE LAND REFERRED TO HEREIN SITUATED IN THE CITY OF FULLERTON, COUNTY OF ORANGE, STATE OF CALIFORNIA, AND IS DESCRIBED AS FOLLOWS TO WIT:

BEGINNING AT SAID POINT "B";
THENCE SOUTH 39°40'18" WEST, A DISTANCE OF 4.19 FEET;
THENCE SOUTH 50°19'42" EAST, A DISTANCE OF 15.00 FEET;
THENCE NORTH 39°40'18" EAST, A DISTANCE OF 20.00 FEET;
THENCE NORTH 50°19'42" WEST, A DISTANCE OF 8.34 FEET TO A POINT REFERRED TO HEREINAFTER AS POINT "E";
THENCE NORTH 50°19'42" WEST, A DISTANCE OF 6.66 FEET;
THENCE SOUTH 39°40'18" WEST, A DISTANCE OF 15.81 FEET TO THE **POINT OF BEGINNING** OF THIS **PROPOSED AT&T LEASE AREA** DESCRIPTION.

CONTAINING 300 SQUARE FEET MORE OR LESS.

SUBJECT TO ALL EASEMENTS AND/OR RIGHT-OF-WAY RECORDS.

SEE AT&T LEASE AREA ON SHEET LS-2.

3 FEET WIDE UTILITY (ROUTE) CENTERLINE DESCRIPTION (STRIP #1):

ALL THAT CERTAIN REAL PROPERTY SITUATED IN THE CITY OF FULLERTON, COUNTY OF ORANGE, STATE OF CALIFORNIA, DESCRIBED AS FOLLOWS:

ALL THAT PORTION OF THE NORTHEAST QUARTER OF SECTION 30, TOWNSHIP 3 SOUTH, RANGE 10 WEST, SAN BERNARDINO BASE AND MERIDIAN, PARTLY IN THE RANCHO LOS COYOTES AND PARTLY IN THE RANCHO SAN JUAN CAJON DE SANTA ANA, IN THE CITY OF FULLERTON, COUNTY OF ORANGE, STATE OF CALIFORNIA.

A STRIP OF LAND FOR UTILITY EASEMENT PURPOSES FOR THE LAND REFERRED TO HEREIN SITUATED IN THE CITY OF FULLERTON, COUNTY OF ORANGE, STATE OF CALIFORNIA AND IS DESCRIBED AS FOLLOWS:

AN EASEMENT FOR POWER UTILITIES THREE (3.00) FEET IN WIDTH LYING ONE AND A HALF (1.50) FEET ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE TO WIT:

BEGINNING AT SAID POINT "A";
THENCE NORTH 90°00'00" WEST, A DISTANCE OF 15.34 FEET;
THENCE SOUTH 00°00'00" WEST, A DISTANCE OF 13.42 FEET TO A POINT REFERRED TO HEREINAFTER AS POINT "C";
THENCE SOUTH 00°00'00" WEST, A DISTANCE OF 64.09 FEET;
THENCE NORTH 90°00'00" WEST, A DISTANCE OF 7.41 FEET TO THE **TERMINUS POINT** OF THIS CENTERLINE DESCRIPTION.

THE SIDE LINES OF SAID THREE (3.00) FEET WIDE UTILITY EASEMENT IS TO BE EXTENDED AND/OR SHORTENED TO TERMINATE IN THE LANDS OF THE GRANTOR AND SHALL BE JOINED AT ALL ANGLE POINTS.

SUBJECT TO ALL EASEMENTS AND/OR RIGHT-OF-WAY RECORDS.

SEE UTILITY EASEMENT (STRIP #1) ON SHEET LS-2.

3 FEET WIDE UTILITY (ROUTE) CENTERLINE DESCRIPTION (STRIP #2):

ALL THAT CERTAIN REAL PROPERTY SITUATED IN THE CITY OF FULLERTON, COUNTY OF ORANGE, STATE OF CALIFORNIA, DESCRIBED AS FOLLOWS:

ALL THAT PORTION OF THE NORTHEAST QUARTER OF SECTION 30, TOWNSHIP 3 SOUTH, RANGE 10 WEST, SAN BERNARDINO BASE AND MERIDIAN, PARTLY IN THE RANCHO LOS COYOTES AND PARTLY IN THE RANCHO SAN JUAN CAJON DE SANTA ANA, IN THE CITY OF FULLERTON, COUNTY OF ORANGE, STATE OF CALIFORNIA.

A STRIP OF LAND FOR UTILITY EASEMENT PURPOSES FOR THE LAND REFERRED TO HEREIN SITUATED IN THE CITY OF FULLERTON, COUNTY OF ORANGE, STATE OF CALIFORNIA AND IS DESCRIBED AS FOLLOWS:

AN EASEMENT FOR POWER UTILITIES THREE (3.00) FEET IN WIDTH LYING ONE AND A HALF (1.50) FEET ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE TO WIT:

BEGINNING AT SAID POINT "C";
THENCE NORTH 90°00'00" WEST, A DISTANCE OF 1.55 FEET TO THE **TERMINUS POINT** OF THIS CENTERLINE DESCRIPTION.

THE SIDE LINES OF SAID THREE (3.00) FEET WIDE UTILITY EASEMENT IS TO BE EXTENDED AND/OR SHORTENED TO TERMINATE IN THE LANDS OF THE GRANTOR AND SHALL BE JOINED AT ALL ANGLE POINTS.

SUBJECT TO ALL EASEMENTS AND/OR RIGHT-OF-WAY RECORDS.

SEE UTILITY EASEMENT (STRIP #2) ON SHEET LS-2.

3 FEET WIDE UTILITY (ROUTE) CENTERLINE DESCRIPTION (STRIP #3):

ALL THAT CERTAIN REAL PROPERTY SITUATED IN THE CITY OF FULLERTON, COUNTY OF ORANGE, STATE OF CALIFORNIA, DESCRIBED AS FOLLOWS:

ALL THAT PORTION OF THE NORTHEAST QUARTER OF SECTION 30, TOWNSHIP 3 SOUTH, RANGE 10 WEST, SAN BERNARDINO BASE AND MERIDIAN, PARTLY IN THE RANCHO LOS COYOTES AND PARTLY IN THE RANCHO SAN JUAN CAJON DE SANTA ANA, IN THE CITY OF FULLERTON, COUNTY OF ORANGE, STATE OF CALIFORNIA.

A STRIP OF LAND FOR UTILITY EASEMENT PURPOSES FOR THE LAND REFERRED TO HEREIN SITUATED IN THE CITY OF FULLERTON, COUNTY OF ORANGE, STATE OF CALIFORNIA AND IS DESCRIBED AS FOLLOWS:

AN EASEMENT FOR POWER UTILITIES THREE (3.00) FEET IN WIDTH LYING ONE AND A HALF (1.50) FEET ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE TO WIT:

BEGINNING AT SAID POINT "A";
THENCE NORTH 90°00'00" EAST, A DISTANCE OF 19.66 FEET;
THENCE SOUTH 27°06'20" EAST, A DISTANCE OF 58.50 FEET;
THENCE NORTH 90°00'00" EAST, A DISTANCE OF 140.00 FEET;
THENCE SOUTH 13°24'40" EAST, A DISTANCE OF 83.94 FEET;
THENCE SOUTH 39°40'18" WEST, A DISTANCE OF 24.94 FEET TO A POINT REFERRED TO HEREINAFTER AS POINT "D", ALSO BEING THE **TERMINUS POINT** OF THIS CENTERLINE DESCRIPTION.

THE SIDE LINES OF SAID THREE (3.00) FEET WIDE UTILITY EASEMENT IS TO BE EXTENDED AND/OR SHORTENED TO TERMINATE IN THE LANDS OF THE GRANTOR AND SHALL BE JOINED AT ALL ANGLE POINTS.

SUBJECT TO ALL EASEMENTS AND/OR RIGHT-OF-WAY RECORDS.

SEE UTILITY EASEMENT (STRIP #3) ON SHEET LS-2.

3 FEET WIDE UTILITY (ROUTE) CENTERLINE DESCRIPTION (STRIP #4):

ALL THAT CERTAIN REAL PROPERTY SITUATED IN THE CITY OF FULLERTON, COUNTY OF ORANGE, STATE OF CALIFORNIA, DESCRIBED AS FOLLOWS:

ALL THAT PORTION OF THE NORTHEAST QUARTER OF SECTION 30, TOWNSHIP 3 SOUTH, RANGE 10 WEST, SAN BERNARDINO BASE AND MERIDIAN, PARTLY IN THE RANCHO LOS COYOTES AND PARTLY IN THE RANCHO SAN JUAN CAJON DE SANTA ANA, IN THE CITY OF FULLERTON, COUNTY OF ORANGE, STATE OF CALIFORNIA.

A STRIP OF LAND FOR UTILITY EASEMENT PURPOSES FOR THE LAND REFERRED TO HEREIN SITUATED IN THE CITY OF FULLERTON, COUNTY OF ORANGE, STATE OF CALIFORNIA AND IS DESCRIBED AS FOLLOWS:

AN EASEMENT FOR FIBER UTILITIES THREE (3.00) FEET IN WIDTH LYING ONE AND A HALF (1.50) FEET ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE TO WIT:

BEGINNING AT SAID POINT "D";
THENCE NORTH 50°19'42" WEST, A DISTANCE OF 13.14 FEET TO THE **TERMINUS POINT** OF THIS CENTERLINE DESCRIPTION.

THE SIDE LINES OF SAID THREE (3.00) FEET WIDE UTILITY EASEMENT IS TO BE EXTENDED AND/OR SHORTENED TO TERMINATE IN THE LANDS OF THE GRANTOR AND SHALL BE JOINED AT ALL ANGLE POINTS.

SUBJECT TO ALL EASEMENTS AND/OR RIGHT-OF-WAY RECORDS.

SEE UTILITY EASEMENT (STRIP #4) ON SHEET LS-2.

3 FEET WIDE UTILITY (ROUTE) CENTERLINE DESCRIPTION (STRIP #5):

ALL THAT CERTAIN REAL PROPERTY SITUATED IN THE CITY OF FULLERTON, COUNTY OF ORANGE, STATE OF CALIFORNIA, DESCRIBED AS FOLLOWS:

ALL THAT PORTION OF THE NORTHEAST QUARTER OF SECTION 30, TOWNSHIP 3 SOUTH, RANGE 10 WEST, SAN BERNARDINO BASE AND MERIDIAN, PARTLY IN THE RANCHO LOS COYOTES AND PARTLY IN THE RANCHO SAN JUAN CAJON DE SANTA ANA, IN THE CITY OF FULLERTON, COUNTY OF ORANGE, STATE OF CALIFORNIA.

A STRIP OF LAND FOR UTILITY EASEMENT PURPOSES FOR THE LAND REFERRED TO HEREIN SITUATED IN THE CITY OF FULLERTON, COUNTY OF ORANGE, STATE OF CALIFORNIA AND IS DESCRIBED AS FOLLOWS:

AN EASEMENT FOR FIBER AND POWER UTILITIES THREE (3.00) FEET IN WIDTH LYING ONE AND A HALF (1.50) FEET ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE TO WIT:

BEGINNING AT SAID POINT "D";
THENCE SOUTH 39°40'18" WEST, A DISTANCE OF 57.29 FEET;
THENCE SOUTH 35°04'20" EAST, A DISTANCE OF 15.57 FEET TO THE **TERMINUS POINT** OF THIS CENTERLINE DESCRIPTION.

THE SIDE LINES OF SAID THREE (3.00) FEET WIDE UTILITY EASEMENT IS TO BE EXTENDED AND/OR SHORTENED TO TERMINATE IN THE LANDS OF THE GRANTOR AND SHALL BE JOINED AT ALL ANGLE POINTS.

SUBJECT TO ALL EASEMENTS AND/OR RIGHT-OF-WAY RECORDS.

SEE UTILITY EASEMENT (STRIP #5) ON SHEET LS-2.

3 FEET WIDE UTILITY (ROUTE) CENTERLINE DESCRIPTION (STRIP #6):

ALL THAT CERTAIN REAL PROPERTY SITUATED IN THE CITY OF FULLERTON, COUNTY OF ORANGE, STATE OF CALIFORNIA, DESCRIBED AS FOLLOWS:

ALL THAT PORTION OF THE NORTHEAST QUARTER OF SECTION 30, TOWNSHIP 3 SOUTH, RANGE 10 WEST, SAN BERNARDINO BASE AND MERIDIAN, PARTLY IN THE RANCHO LOS COYOTES AND PARTLY IN THE RANCHO SAN JUAN CAJON DE SANTA ANA, IN THE CITY OF FULLERTON, COUNTY OF ORANGE, STATE OF CALIFORNIA.

A STRIP OF LAND FOR UTILITY EASEMENT PURPOSES FOR THE LAND REFERRED TO HEREIN SITUATED IN THE CITY OF FULLERTON, COUNTY OF ORANGE, STATE OF CALIFORNIA AND IS DESCRIBED AS FOLLOWS:

AN EASEMENT FOR POWER UTILITIES THREE (3.00) FEET IN WIDTH LYING ONE AND A HALF (1.50) FEET ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE TO WIT:

BEGINNING AT SAID POINT "E";
THENCE NORTH 39°40'18" EAST, A DISTANCE OF 17.86 FEET;
THENCE NORTH 50°21'42" WEST, A DISTANCE OF 4.98 FEET TO THE **TERMINUS POINT** OF THIS CENTERLINE DESCRIPTION.

THE SIDE LINES OF SAID THREE (3.00) FEET WIDE UTILITY EASEMENT IS TO BE EXTENDED AND/OR SHORTENED TO TERMINATE IN THE LANDS OF THE GRANTOR AND SHALL BE JOINED AT ALL ANGLE POINTS.

SUBJECT TO ALL EASEMENTS AND/OR RIGHT-OF-WAY RECORDS.

SEE UTILITY EASEMENT (STRIP #6) ON SHEET LS-2.

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SAN DIEGO, CA 92127
tel: (858) 432-4112 / (858) 432-4257

REV	DATE	DESCRIPTION
4	10/03/2024	PLAN CHECK COMMENTS
3	07/15/2024	REVISED LEGAL DESCRIPTION
2	06/17/2022	FINAL SURVEY
1	06/01/2022	PRELIMINARY SURVEY

ISSUED DATE:
OCTOBER 03, 2024

ISSUED FOR:
FINAL SURVEY

LICENSURE:

LICENSED LAND SURVEYOR
RAFT Y. HANNAH
L.S. 8780
Exp. 12/31/24
10/03/24
STATE OF CALIFORNIA

PROJECT INFORMATION:
CLL01408
PONTIAC FIREBIRD
2470 WEST PIONEER AVE. #A,
FULLETON, CA 92832

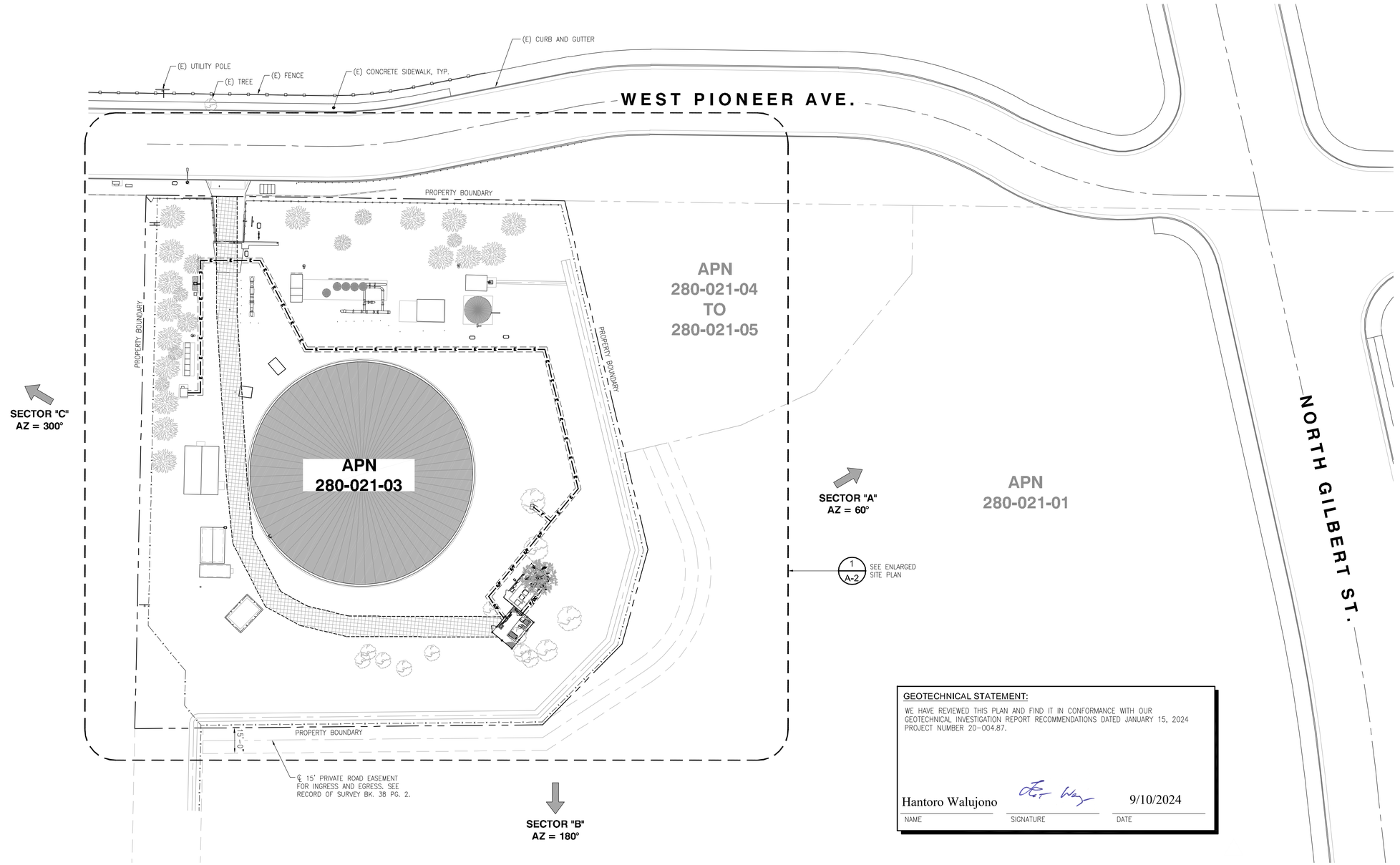
DRAWN BY: VNS
CHECKED BY: RH

SHEET TITLE:
TOPOGRAPHIC SURVEY

SHEET NUMBER:
LS-3

NOTES:
1. NO EXISTING PARKING STALLS ARE BEING ADDED OR REMOVED AS PART OF THE NEW INSTALLATION.

2. NEW POWER AND TELCO PLAN IS PRELIMINARY AND SUBJECT TO CHANGE PENDING FINAL DESIGN FROM THE UTILITY COMPANY.



GEOTECHNICAL STATEMENT:

WE HAVE REVIEWED THIS PLAN AND FIND IT IN CONFORMANCE WITH OUR GEOTECHNICAL INVESTIGATION REPORT RECOMMENDATIONS DATED JANUARY 15, 2024 PROJECT NUMBER 20-004.87.

Hantoro Walujono		9/10/2024
NAME	SIGNATURE	DATE

SITE PLAN

24"x36" SCALE: 1" = 30'-0"
11"x17" SCALE: 1" = 60'-0"

30' 15' 0' 30'

1

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REV	DATE	DESCRIPTION
2	10/03/2024	PLAN CHECK COMMENTS
1	08/02/2024	PLAN CHECK COMMENTS/ ADDED FIBER DESIGN
0	04/26/2024	100% CD'S
B	04/19/2023	REMOVED MW ANTENNA
A	11/04/2022	90% CD'S FOR REVIEW

ISSUED DATE: 10/03/2024

ISSUED FOR: BP SUBMITTAL

LICENSURE:

STEVEN V. FOSTER — No. 83940 — EXP. 09/30/25 — CIVIL — STATE OF CALIFORNIA
10/4/2024

PROJECT INFORMATION:

CLL01408
PONTIAC FIREBIRD
2470 WEST PIONEER AVE. #A,
FULLERTON, CA 92832

DRAWN BY: AJYR
CHECKED BY: SVF

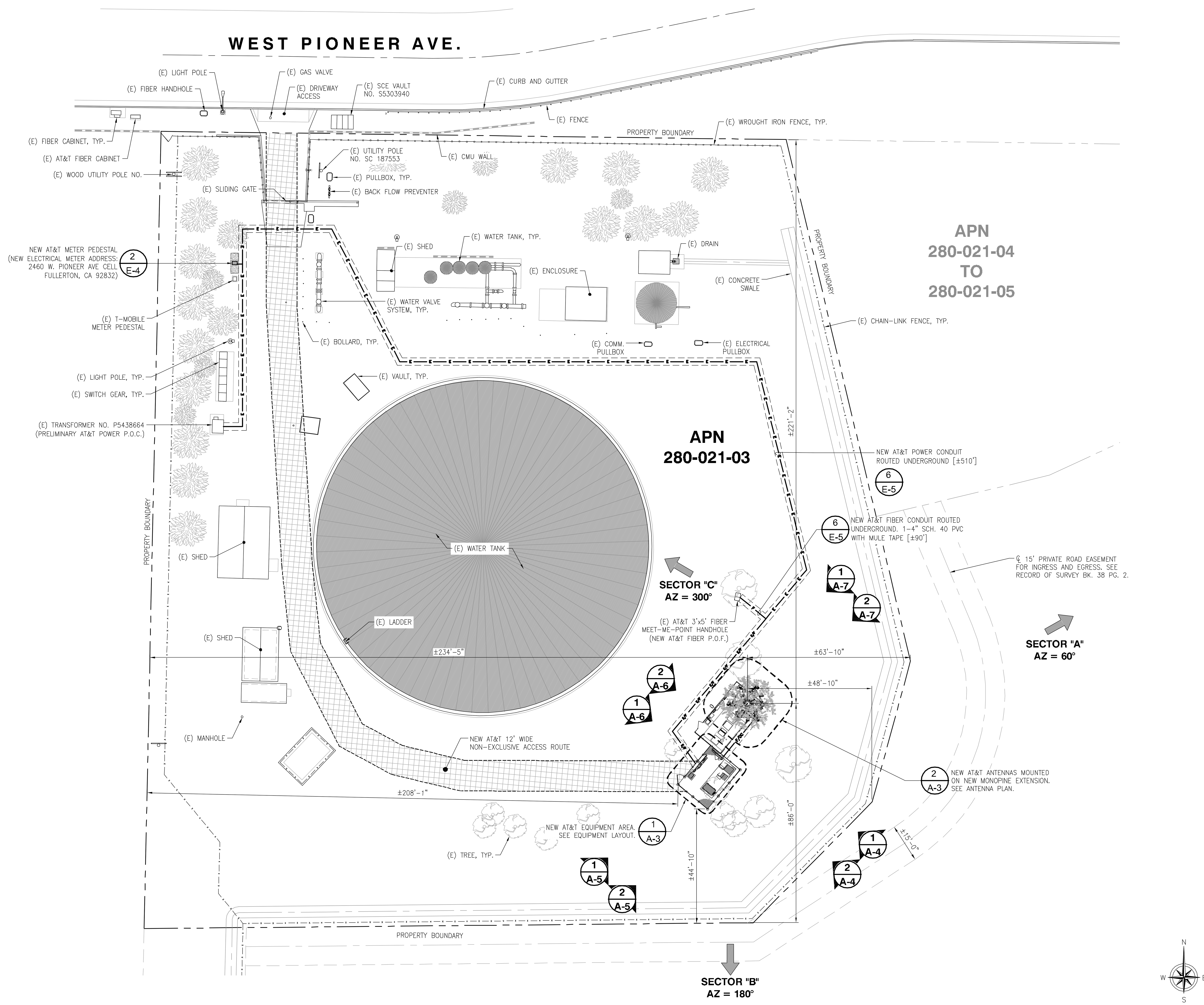
SHEET TITLE: SITE PLAN

SHEET NUMBER: A-1

NOTES:
1. NO EXISTING PARKING STALLS ARE BEING ADDED OR REMOVED AS PART OF THE NEW INSTALLATION.
2. NEW POWER AND TELCO PLAN IS PRELIMINARY AND SUBJECT TO CHANGE PENDING FINAL DESIGN FROM THE UTILITY COMPANY.

LEASE AREA CALCULATION:

EQUIPMENT LEASE AREA: ±300 SQ.FT.
NON EXCLUSIVE ACCESS: ±4560 SQ.FT. (12'x380')
FIBER UTILITY EASEMENT: ±270 SQ.FT (3'x90')
POWER UTILITY EASEMENT: ±1530 SQ.FT. (3'x510')



ENLARGED SITE PLAN

24"x36" SCALE: 1" = 20'-0"
11"x17" SCALE: 1" = 40'-0"

20' 10' 0' 20'

1

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tel: (858) 432-4112 / (858) 432-4257

2	10/03/2024	PLAN CHECK COMMENTS
1	08/02/2024	PLAN CHECK COMMENTS/ ADDED FIBER DESIGN
D	04/26/2024	100% CD'S
B	04/19/2023	REMOVED MW ANTENNA
A	11/04/2022	90% CD'S FOR REVIEW
REV	DATE	DESCRIPTION

ISSUED DATE:
10/03/2024

ISSUED FOR:
BP SUBMITTAL

LICENSURE:
PROFESSIONAL ENGINEER, EXP. 09/30/25, CIVIL, STATE OF CALIFORNIA
10/4/2024

PROJECT INFORMATION:
CLL01408
PONTIAC FIREBIRD
2470 WEST PIONEER AVE. #A,
FULLERTON, CA 92832

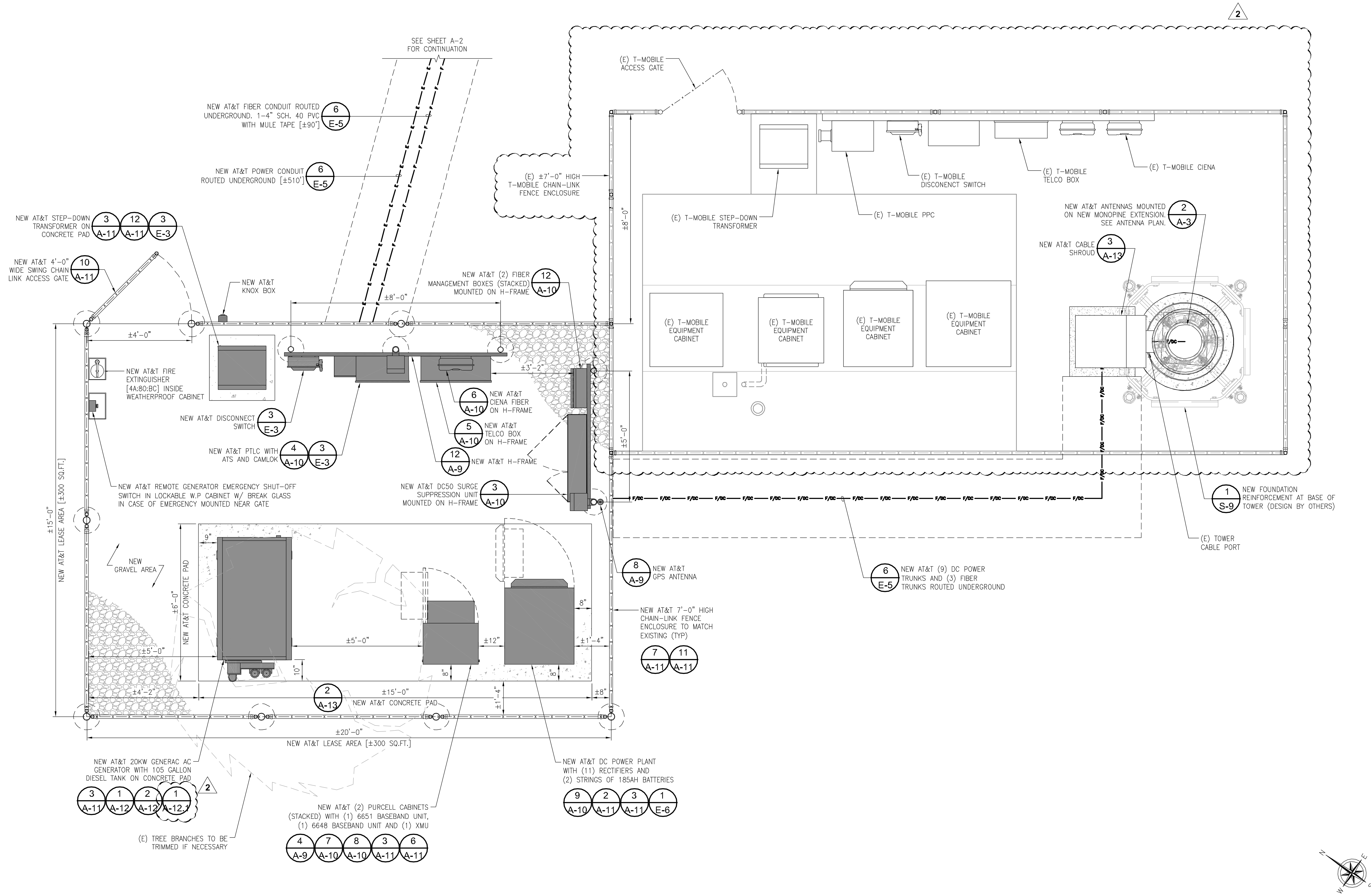
DRAWN BY: AJYR
CHECKED BY: SVF

SHEET TITLE:
ENLARGED SITE PLAN

SHEET NUMBER:
A-2

NOTES:
1. NO EXISTING PARKING STALLS ARE BEING ADDED OR REMOVED AS PART OF THE NEW INSTALLATION.
2. NEW POWER AND TELCO PLAN IS PRELIMINARY AND SUBJECT TO CHANGE PENDING FINAL DESIGN FROM THE UTILITY COMPANY.

NEW AT&T EQUIPMENT LEASE AREA:
±300 SQUARE FEET



NEW EQUIPMENT LAYOUT

24"x36" SCALE: 1/2" = 1'-0"
11"x17" SCALE: 1/4" = 1'-0"

1

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REV	DATE	DESCRIPTION
2	10/03/2024	PLAN CHECK COMMENTS
1	08/02/2024	PLAN CHECK COMMENTS/ ADDED FIBER DESIGN
0	04/26/2024	100% CD'S
B	04/19/2023	REMOVED MW ANTENNA
A	11/04/2022	90% CD'S FOR REVIEW

ISSUED DATE:
10/03/2024

ISSUED FOR:
BP SUBMITTAL

LICENSURE:
10/4/2024

PROJECT INFORMATION:
CLL01408
PONTIAC FIREBIRD
2470 WEST PIONEER AVE. #A,
FULLERTON, CA 92832

DRAWN BY: AJYR

CHECKED BY: SVF

SHEET TITLE:
NEW EQUIPMENT LAYOUT

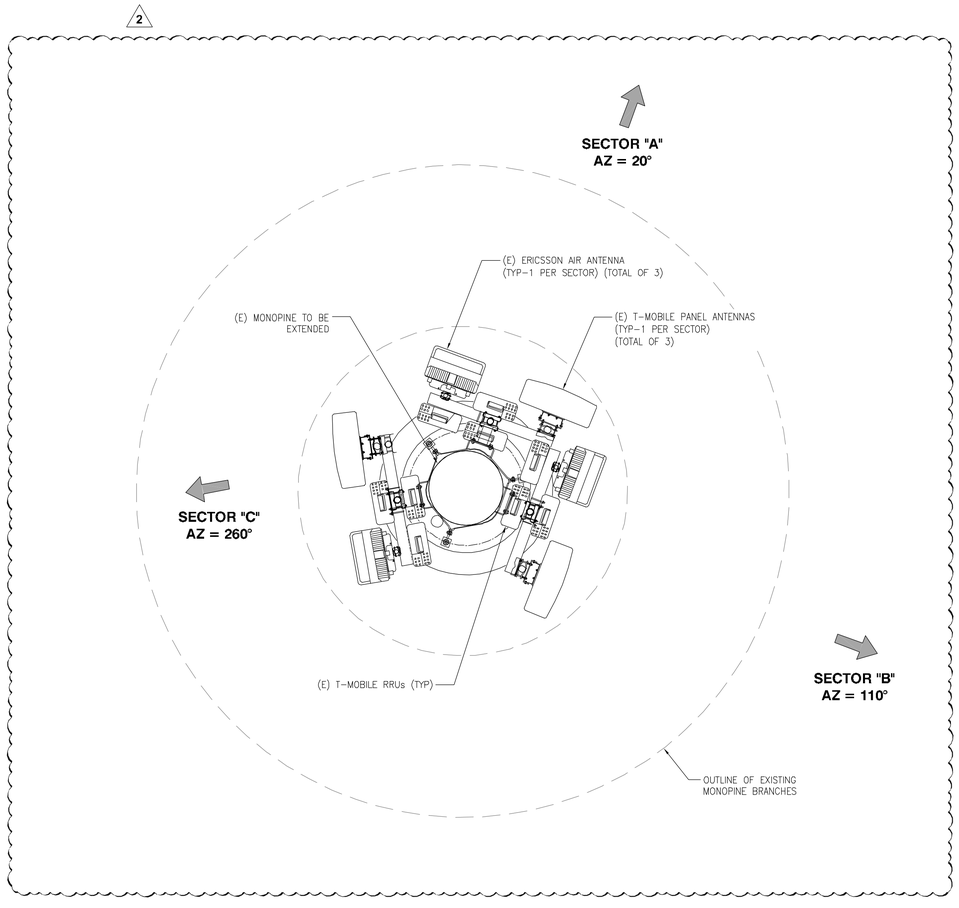
SHEET NUMBER:
A-3

NEW ANTENNA SCHEDULE [RFDS REV 2.00 DATED 02/29/2024]

	ANTENNA POSITION	STATUS	RAD CENTER	TECHNOLOGY	ANTENNA MAKE/MODEL	AZIMUTH	ANTENNA COUNT	FILTER COUNT	TMA COUNT	TRANSMISSION LENGTH	TRANSMISSION TYPE(S)	RRUS MAKE/MODEL	RRUS COUNT
ALPHA SECTOR	A1	NEW	±56'-0"	LTE 700/ 850/1900/AWS	COMMSCOPE NNH4-65C-R6-V3 96"HX19.6"WX7.8"D	60°	1	–	–	±85'-0"	(3) POWER TRUNKS AND (1) FIBER TRUNK	ERICSSON RRUS 4449 B5/B12	1
												ERICSSON RRUS 8843 B2/B66A	1
	A2	NEW	±58'-10"	C-BAND DOD	ERICSSON AIR 6419 B77G 28.3"HX16.1"WX7.9"D	60°	1	–	–	±85'-0"		ERICSSON AIR 6419 B77G	1
												–	–
	A2	NEW	±55'-4"	C-BAND	ERICSSON AIR 6449 B77D 31"HX15.9"WX8.7"D	60°	1	–	–	±85'-0"		ERICSSON AIR 6449 B77D	1
												–	–
	A3	NEW	±56'-0"	LTE 700FN	QUINTEL QD8612-7 96"HX18.1"WX9.6"D	60°	1	–	–	±85'-0"		ERICSSON RRUS 4478 B14	1
												–	–
BETA SECTOR	B1	NEW	±56'-0"	LTE 700/ 850/1900/AWS	COMMSCOPE NNH4-65C-R6-V3 96"HX19.6"WX7.8"D	180°	1	–	–	±85'-0"	(3) POWER TRUNKS AND (1) FIBER TRUNK	ERICSSON RRUS 4449 B5/B12	1
												ERICSSON RRUS 8843 B2/B66A	1
	B2	NEW	±58'-10"	C-BAND DOD	ERICSSON AIR 6419 B77G 28.3"HX16.1"WX7.9"D	180°	1	–	–	±85'-0"		ERICSSON AIR 6419 B77G	1
												–	–
	B2	NEW	±55'-4"	C-BAND	ERICSSON AIR 6449 B77D 31"HX15.9"WX8.7"D	180°	1	–	–	±85'-0"		ERICSSON AIR 6449 B77D	1
												–	–
	B3	NEW	±56'-0"	LTE 700FN	QUINTEL QD8612-7 96"HX18.1"WX9.6"D	180°	1	–	–	±85'-0"		ERICSSON RRUS 4478 B14	1
												–	–
GAMMA SECTOR	C1	NEW	±56'-0"	LTE 700/ 850/1900/AWS	COMMSCOPE NNH4-65C-R6-V3 96"HX19.6"WX7.8"D	300°	1	–	–	±85'-0"	(3) POWER TRUNKS AND (1) FIBER TRUNK	ERICSSON RRUS 4449 B5/B12	1
												ERICSSON RRUS 8843 B2/B66A	1
	C2	NEW	±58'-10"	C-BAND DOD	ERICSSON AIR 6419 B77G 28.3"HX16.1"WX7.9"D	300°	1	–	–	±85'-0"		ERICSSON AIR 6419 B77G	1
												–	–
	C2	NEW	±55'-4"	C-BAND	ERICSSON AIR 6449 B77D 31"HX15.9"WX8.7"D	300°	1	–	–	±85'-0"		ERICSSON AIR 6449 B77D	1
												–	–
	C3	NEW	±56'-0"	LTE 700FN	QUINTEL QD8612-7 96"HX18.1"WX9.6"D	300°	1	–	–	±85'-0"		ERICSSON RRUS 4478 B14	1
												–	–

NOTES:

1. THE NEW LAYOUT IS PRELIMINARY AND SUBJECT TO CHANGE PENDING FULL STRUCTURAL ANALYSIS.
2. NEW AT&T ANTENNAS, RRUs, SURGE SUPPRESSION UNITS AND ANTENNA MOUNTING KIT TO BE PAINTED GREEN FOR CONCEALMENT. COVER ANTENNAS WITH RF-FRIENDLY LEAF SOCKS



EXISTING T-MOBILE ANTENNA PLAN

2

24"x36" SCALE: 1/2" = 1'-0"
11"x17" SCALE: 1/4" = 1'-0"

NEW AT&T ANTENNA PLAN

1

24"x36" SCALE: 3/8" = 1'-0"
11"x17" SCALE: 3/16" = 1'-0"

2

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tel: (858) 432-4112 / (858) 432-4257

REV	DATE	DESCRIPTION
2	10/03/2024	PLAN CHECK COMMENTS
1	08/02/2024	PLAN CHECK COMMENTS/ ADDED FIBER DESIGN
0	04/26/2024	100% CD'S
B	04/19/2023	REMOVED MW ANTENNA
A	11/04/2022	90% CD'S FOR REVIEW

ISSUED DATE: 10/03/2024

ISSUED FOR: BP SUBMITTAL

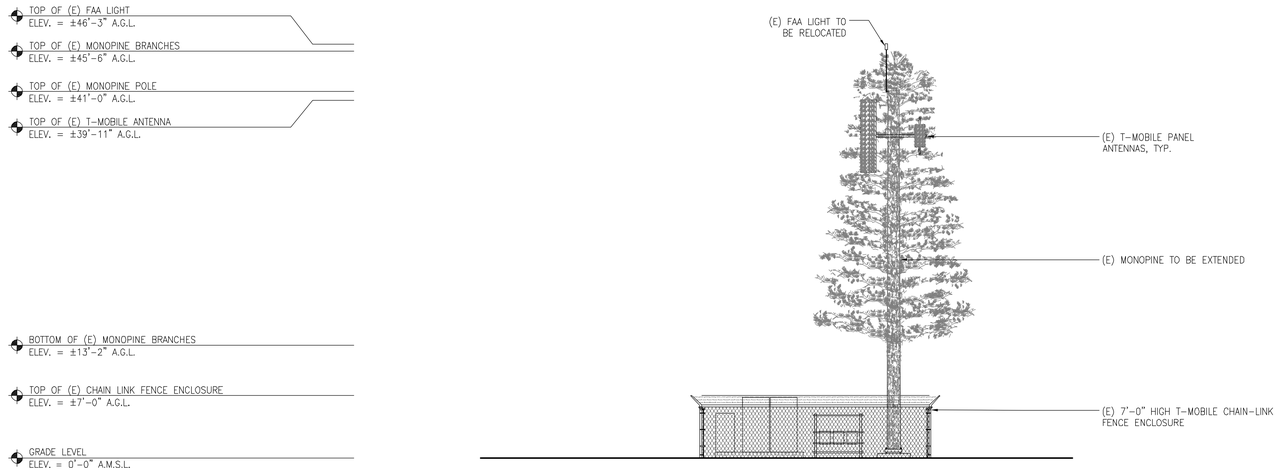
LICENSURE:

PROJECT INFORMATION:
CLL01408
PONTIAC FIREBIRD
2470 WEST PIONEER AVE. #A, FULLERTON, CA 92832

DRAWN BY: AJYR
CHECKED BY: SVF

SHEET TITLE: EXISTING ANTENNA AND NEW ANTENNA PLAN

SHEET NUMBER: A-3.1



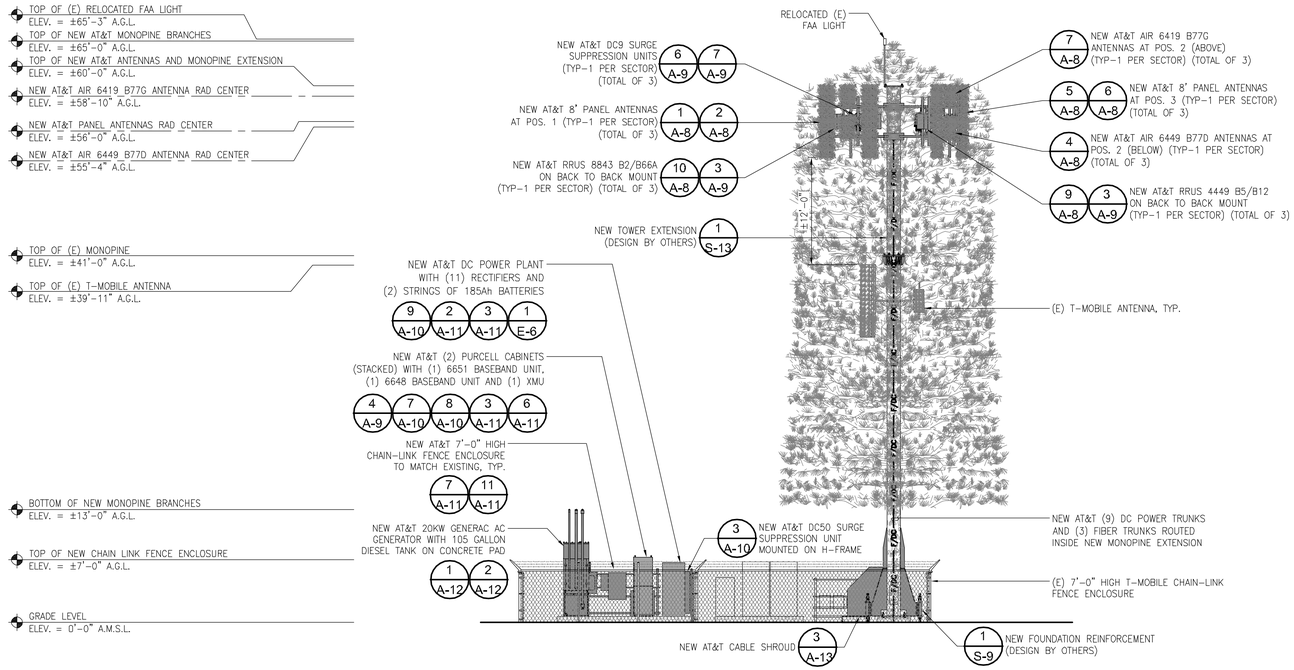
EXISTING SOUTHEAST ELEVATION

24"x36" SCALE: 1/8" = 1'-0"
11"x17" SCALE: 1/16" = 1'-0"
8' 6' 4' 2' 0' 8'

1

NOTES:

1. THE NEW LAYOUT IS PRELIMINARY AND SUBJECT TO CHANGE PENDING FULL STRUCTURAL ANALYSIS.
2. NEW AT&T ANTENNAS, RRUs, SURGE SUPPRESSION UNITS AND ANTENNA MOUNTING KIT TO BE PAINTED GREEN FOR CONCEALMENT. COVER ANTENNAS WITH RF-FRIENDLY LEAF SOCKS



NEW SOUTHEAST ELEVATION

24"x36" SCALE: 1/8" = 1'-0"
11"x17" SCALE: 1/16" = 1'-0"
8' 6' 4' 2' 0' 8'

2

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REV	DATE	DESCRIPTION
2	10/03/2024	PLAN CHECK COMMENTS
1	08/02/2024	PLAN CHECK COMMENTS/ ADDED FIBER DESIGN
0	04/26/2024	100% CD'S
B	04/19/2023	REMOVED MW ANTENNA
A	11/04/2022	90% CD'S FOR REVIEW

ISSUED DATE:
10/03/2024

ISSUED FOR:
BP SUBMITTAL

LICENSURE:

10/4/2024

PROJECT INFORMATION:
CLL01408
PONTIAC FIREBIRD
2470 WEST PIONEER AVE. #A,
FULLERTON, CA 92832

DRAWN BY: AJYR
CHECKED BY: SVF

SHEET TITLE:
ELEVATIONS

SHEET NUMBER:
A-4

TOP OF (E) FAA LIGHT
ELEV. = ±46'-3" A.G.L.

TOP OF (E) MONOPINE BRANCHES
ELEV. = ±45'-6" A.G.L.

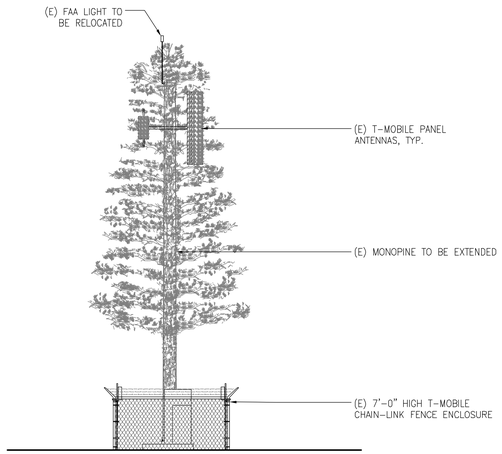
TOP OF (E) MONOPINE POLE
ELEV. = ±41'-0" A.G.L.

TOP OF (E) T-MOBILE ANTENNA
ELEV. = ±39'-11" A.G.L.

BOTTOM OF (E) MONOPINE BRANCHES
ELEV. = ±13'-2" A.G.L.

TOP OF (E) CHAIN LINK FENCE ENCLOSURE
ELEV. = ±7'-0" A.G.L.

GRADE LEVEL
ELEV. = 0'-0" A.M.S.L.



EXISTING SOUTHWEST ELEVATION

24"x36" SCALE: 1/8" = 1'-0"
11"x17" SCALE: 1/16" = 1'-0"
8' 6' 4' 2' 0' 8'

1

NOTES:

1. THE NEW LAYOUT IS PRELIMINARY AND SUBJECT TO CHANGE PENDING FULL STRUCTURAL ANALYSIS.
2. NEW AT&T ANTENNAS, RRUs, SURGE SUPPRESSION UNITS AND ANTENNA MOUNTING KIT TO BE PAINTED GREEN FOR CONCEALMENT. COVER ANTENNAS WITH RF-FRIENDLY LEAF SOCKS

TOP OF (E) RELOCATED FAA LIGHT
ELEV. = ±65'-3" A.G.L.

TOP OF NEW AT&T MONOPINE BRANCHES
ELEV. = ±65'-0" A.G.L.

TOP OF NEW AT&T ANTENNAS AND MONOPINE EXTENSION
ELEV. = ±60'-0" A.G.L.

NEW AT&T AIR 6419 B77G ANTENNA RAD CENTER
ELEV. = ±58'-10" A.G.L.

NEW AT&T PANEL ANTENNAS RAD CENTER
ELEV. = ±56'-0" A.G.L.

NEW AT&T AIR 6449 B77D ANTENNA RAD CENTER
ELEV. = ±55'-4" A.G.L.

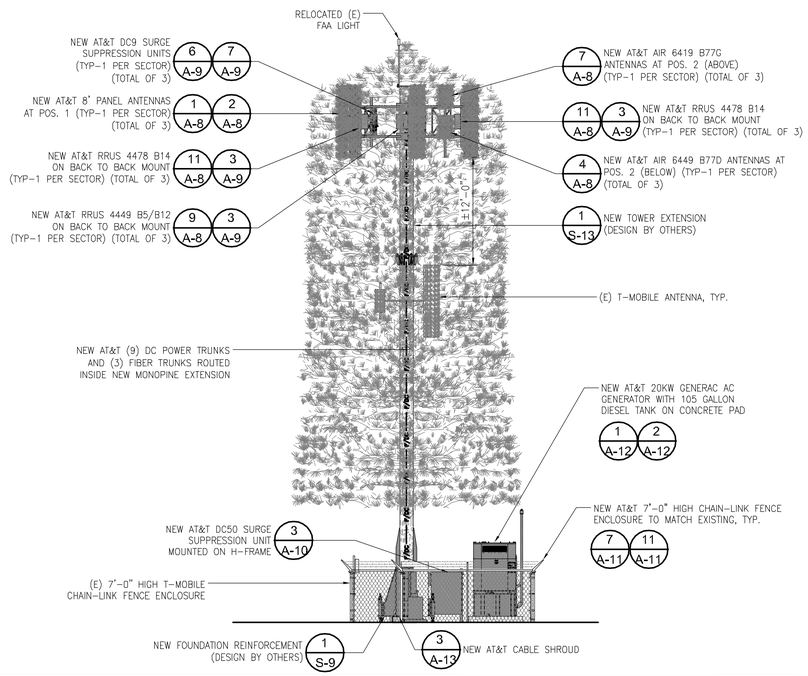
TOP OF (E) MONOPINE
ELEV. = ±41'-0" A.G.L.

TOP OF (E) T-MOBILE ANTENNA
ELEV. = ±39'-11" A.G.L.

BOTTOM OF NEW MONOPINE BRANCHES
ELEV. = ±13'-0" A.G.L.

TOP OF NEW CHAIN LINK FENCE ENCLOSURE
ELEV. = ±7'-0" A.G.L.

GRADE LEVEL
ELEV. = 0'-0" A.M.S.L.



NEW SOUTHWEST ELEVATION

24"x36" SCALE: 1/8" = 1'-0"
11"x17" SCALE: 1/16" = 1'-0"
8' 6' 4' 2' 0' 8'

2

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tel: (858) 432-4112 / (858) 432-4257

REV	DATE	DESCRIPTION
2	10/03/2024	PLAN CHECK COMMENTS
1	08/02/2024	PLAN CHECK COMMENTS/ ADDED FIBER DESIGN
0	04/26/2024	100% CD'S
B	04/19/2023	REMOVED MW ANTENNA
A	11/04/2022	90% CD'S FOR REVIEW

ISSUED DATE:
10/03/2024

ISSUED FOR:
BP SUBMITTAL

LICENSURE:

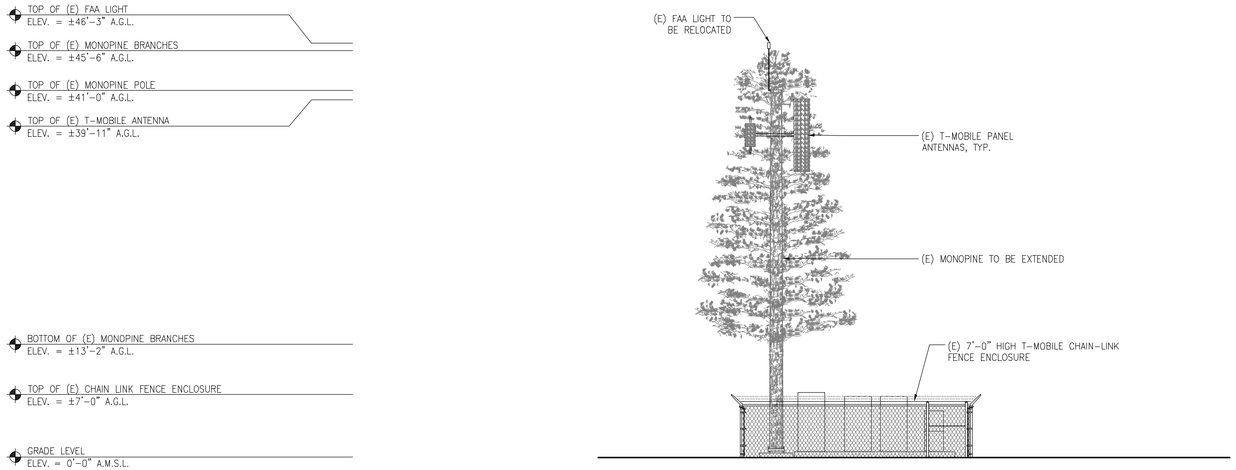
10/4/2024

PROJECT INFORMATION:
CLL01408
PONTIAC FIREBIRD
2470 WEST PIONEER AVE. #A,
FULLERTON, CA 92832

DRAWN BY: AJYR
CHECKED BY: SVF

SHEET TITLE:
ELEVATIONS

SHEET NUMBER:
A-5



EXISTING NORTHWEST ELEVATION

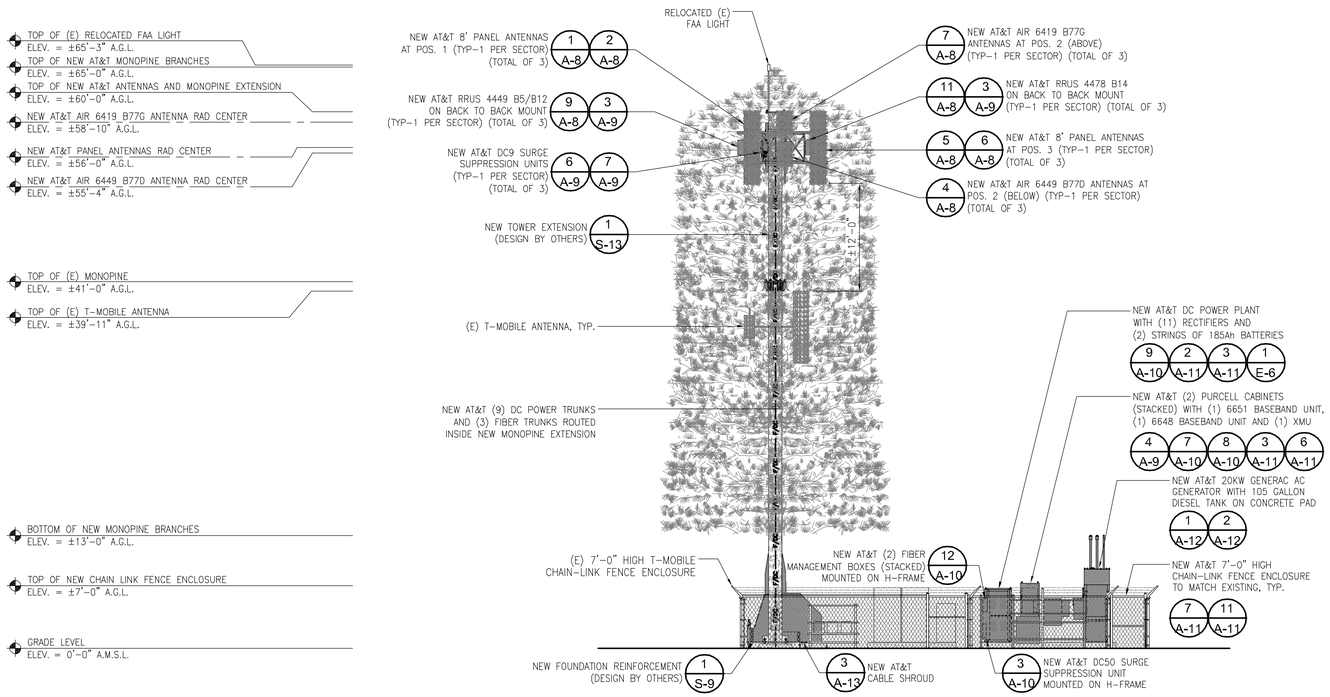
24"x36" SCALE: 1/8" = 1'-0"
11"x17" SCALE: 1/16" = 1'-0"

8' 6' 4' 2' 0' 8'

1

NOTES:

1. THE NEW LAYOUT IS PRELIMINARY AND SUBJECT TO CHANGE PENDING FULL STRUCTURAL ANALYSIS.
2. NEW AT&T ANTENNAS, RRUs, SURGE SUPPRESSION UNITS AND ANTENNA MOUNTING KIT TO BE PAINTED GREEN FOR CONCEALMENT. COVER ANTENNAS WITH RF-FRIENDLY LEAF SOCKS



NEW NORTHWEST ELEVATION

24"x36" SCALE: 1/8" = 1'-0"
11"x17" SCALE: 1/16" = 1'-0"

8' 6' 4' 2' 0' 8'

2

at&t
1452 EDINGER AVENUE
TUSTIN, CA 92780

smartlink
10 CHURCH CIRCLE,
ANNAPOLIS, MD 21401

cellsite concepts
16885 VIA DEL CAMPO CT., SUITE 318
SAN DIEGO, CA 92127
tel: (858) 432-4112 / (858) 432-4257

REV	DATE	DESCRIPTION
2	10/03/2024	PLAN CHECK COMMENTS
1	08/02/2024	PLAN CHECK COMMENTS/ ADDED FIBER DESIGN
0	04/26/2024	100% CD'S
B	04/19/2023	REMOVED MW ANTENNA
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ISSUED DATE:
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PROJECT INFORMATION:
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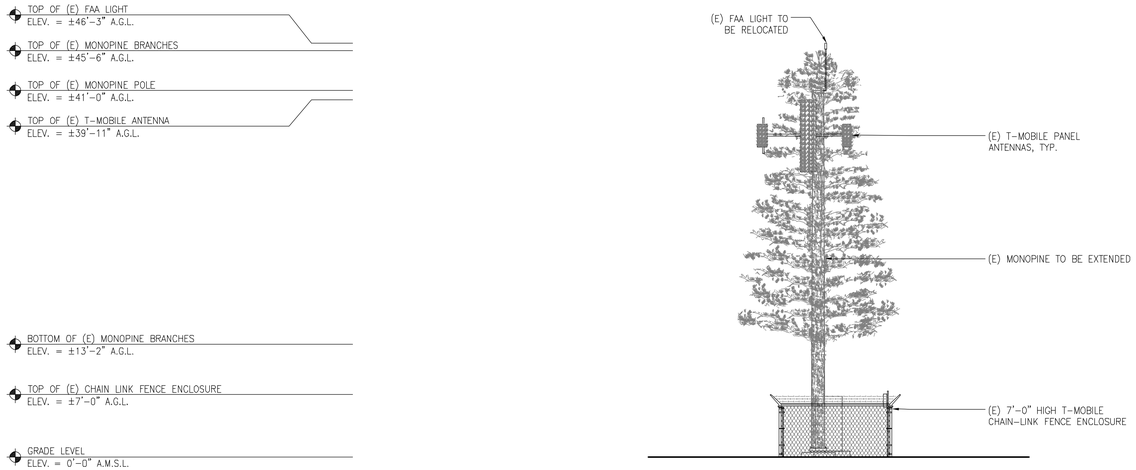
PONTIAC FIREBIRD
2470 WEST PIONEER AVE. #A,
FULLERTON, CA 92832

DRAWN BY:	AJYR
CHECKED BY:	SVF

SHEET TITLE:
ELEVATIONS

SHEET NUMBER:
A-6



EXISTING NORTHEAST ELEVATION

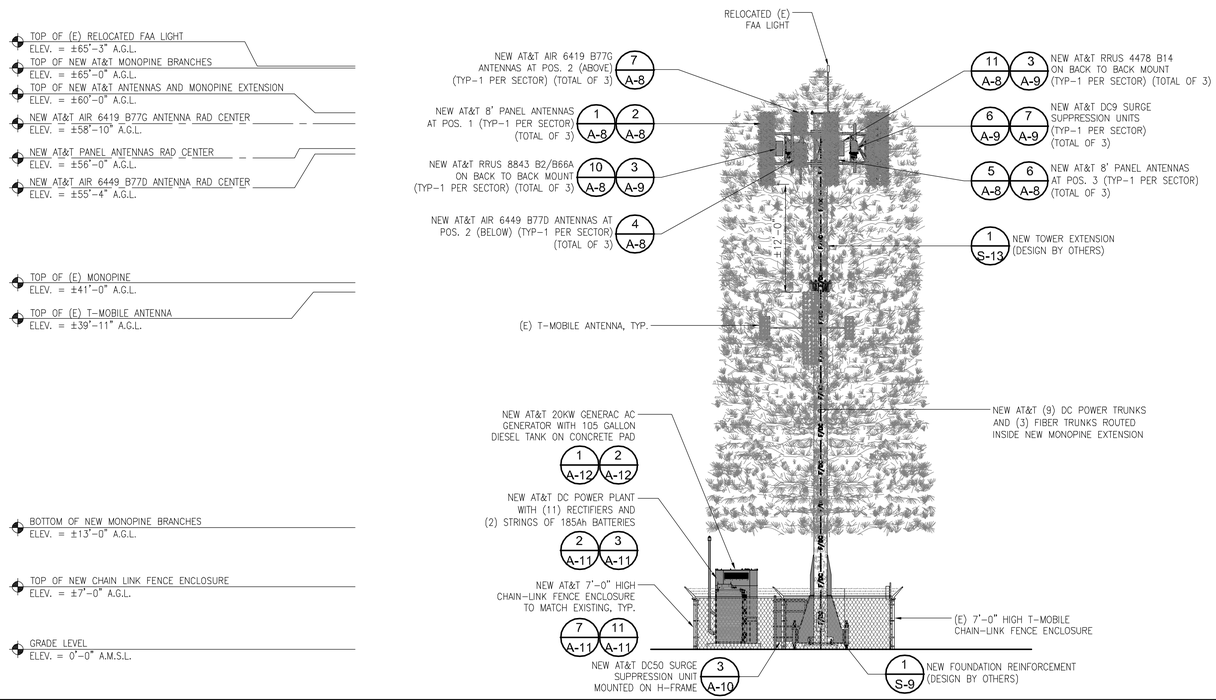
24"x36" SCALE: 1/8" = 1'-0"
11"x17" SCALE: 1/16" = 1'-0"

8' 6' 4' 2' 0' 8'

1

NOTES:

1. THE NEW LAYOUT IS PRELIMINARY AND SUBJECT TO CHANGE PENDING FULL STRUCTURAL ANALYSIS.
2. NEW AT&T ANTENNAS, RRUs, SURGE SUPPRESSION UNITS AND ANTENNA MOUNTING KIT TO BE PAINTED GREEN FOR CONCEALMENT. COVER ANTENNAS WITH RF-FRIENDLY LEAF SOCKS



NEW NORTHEAST ELEVATION

24"x36" SCALE: 1/8" = 1'-0"
11"x17" SCALE: 1/16" = 1'-0"

8' 6' 4' 2' 0' 8'

2

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REV	DATE	DESCRIPTION
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ISSUED DATE: 10/03/2024

ISSUED FOR: BP SUBMITTAL

LICENSURE:

10/4/2024

PROJECT INFORMATION:

CLL01408
PONTIAC FIREBIRD
2470 WEST PIONEER AVE. #A,
FULLERTON, CA 92832

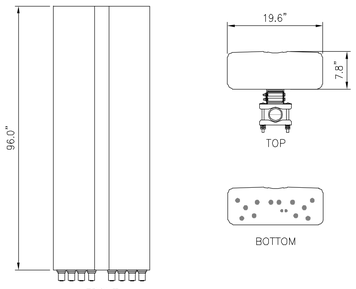
DRAWN BY:	AJYR
CHECKED BY:	SVF

SHEET TITLE: ELEVATIONS

SHEET NUMBER: A-7

COMMSCOPE NNH4-65C-R6-V3

DIMENSIONS: 96.0"Hx19.6"Wx7.8"D
WEIGHT: 102.5 LBS. (WITHOUT BRACKETS)
FREQUENCY RANGE: 698–896 MHz (R1)
698–896 MHz (R2)
1695–2360 MHz (Y1) ; 1695–2360 MHz (Y3)
1695–2360 MHz (Y2) ; 1695–2360 MHz (Y4)
STANDARD MOUNTING: INCLUDED FOR 2.4" TO 4.5" STD. PIPE
CONNECTORS: 12x 4.3–10 FEMALE



PANEL ANTENNA DETAIL

24"x36" SCALE: NTS
11"x17" SCALE: NTS

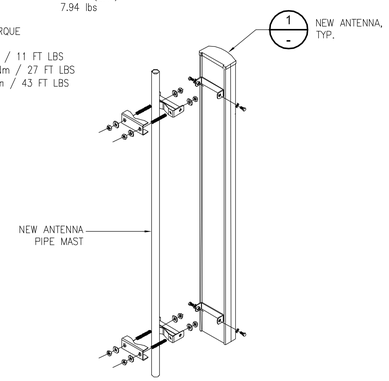
1

BSAMNT-F MOUNTING BRACKET

MAXIMUM DIAMETER: 114.3mm (4.5")
MINIMUM DIAMETER: 61mm (2.4")
NET WEIGHT: 7.94 lbs

MAXIMUM TORQUE

M8 – 15Nm / 11 FT LBS
M10 – 37 Nm / 27 FT LBS
M12 – 58Nm / 43 FT LBS



ANTENNA MOUNTING DETAIL

24"x36" SCALE: NTS
11"x17" SCALE: NTS

2

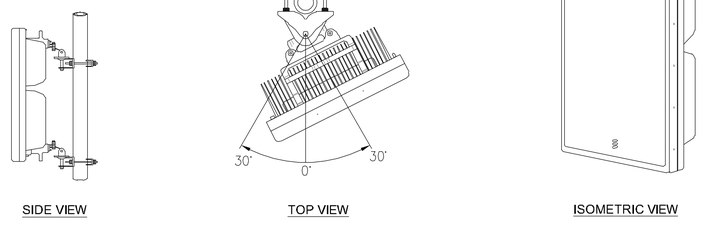
ERICSSON AIR 6449 B77D

DIMENSIONS: 31"Hx15.9"Wx8.7"D
WEIGHT: 82.5 LBS. (EXCL. MOUNTING HARDWARE)
95.5 LBS (WITH MOUNTING HARDWARE)
BREAKER SIZE: 50A DC, DC POWER CONSUMPTION = 1260W
CONNECTION: (4) ECPRI CONNECTIONS (25 GBPS)

THE –48V DC POWER CONNECTION IS MADE THROUGH A CONNECTOR WITH A 3–WIRE (DCI) CONNECTION OR A CONNECTOR WITH A 2–WIRE (DC–C) CONNECTION. EACH CONDUCTOR SHALL BE A MINIMUM OF 10–16 MM^2. THE GROUNDING INTERFACE ON THE AIR UNIT SHALL HAVE A 2X6 MM DUAL LUG.

SPECIFICATIONS:

- 3.7 – 3.98 GHz OPERATIONAL BANDWIDTH
- 64T64R, MAX 16 LAYERS (DL), 8 LAYERS (UL)
- 320W TOTAL OUTPUT POWER, 79 dBm EIRP10 (DUAL POLARIZATION)
- OBW / IBW : 200MHz
- NR ONLY
- 4 x 10/25 Gbps eCPRI PORTS



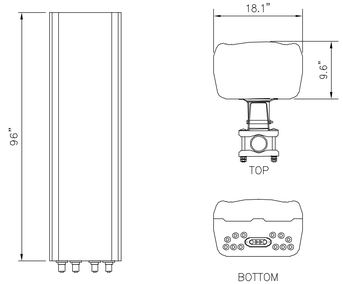
ANTENNA DETAIL

24"x36" SCALE: NTS
11"x17" SCALE: NTS

4

QUINTEL QD8612-7

DIMENSIONS: 96"Hx18.1"Wx9.6"D
WEIGHT: 127 LBS.
FREQUENCY RANGE: (2) PORTS (1&2): 698–728 MHz
(2) PORTS (3&4): 758–798 MHz
(2) PORTS (5&6): 758–798 MHz
(2) PORTS (7&8): 842–894 MHz
(2) PORTS (9&10): 1695–2400 MHz
(2) PORTS (11&12): 1695–2400 MHz
CONNECTORS: 12x 4.3–10.0 DIN FEMALE LONG NECK



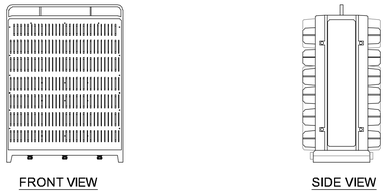
ANTENNA DETAIL

24"x36" SCALE: NTS
11"x17" SCALE: NTS

5

MANUFACTURER:		ERICSSON
MODEL NO.:		RRUS 4449 B5, B12
DIMENSIONS:		TOTAL WEIGHT :
HEIGHT	17.9"	
WIDTH	13.19"	±71 LBS
DEPTH	9.44"	(EXCL. MOUNTING HARDWARE)

- 4TX/4RX PER BAND (B5 & B12)
- 320W OF TOTAL POWER
  –4x40 W PER BAND (4T4R IN EACH BAND)
- FULL IBW IN EACH BAND
- CARRIER BW:–5, 10 MHZ
- LTE: MAX 6 CARRIERS PER PORT (DL), MAX 6 CARRIER PER PORT (UL)
- CPRI SUPPORT:–2.5; 4.9; 9.8; 10.1
- –48 VDC 3–WIRE (2–WIRE WITH ADAPTER)
  –TWO DC POWER PORTS (BOTH MUST CONNECTED)
- AISG TMA & RET SUPPORT VIA RS–485 OR RF CONNECTORS
- FOUR ANTENNA CONNECTORS: 4 X 4.3–10 PLUS (f)
- 2 EXTERNAL ALARM
- IP 65, –40 TO +55°C
- BREAKER SIZE: 2x25A
- MIN, MAX DC CABLE SIZE FROM SQUID TO RADIO=10,8 AWG
- GROUND CABLE SIZE: 2AWG



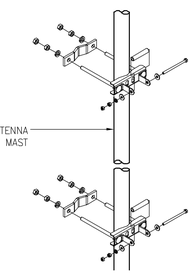
ANTENNA MOUNT BRACKET

24"x36" SCALE: NTS
11"x17" SCALE: NTS

6

SINGLE MOUNT ANTENNA BRACKET & FIXED TILT

QUINTEL DRAWING #: AS–008030
MAXIMUM DIAMETER: 4.72"
MINIMUM DIAMETER: 1.18"
NET WEIGHT: 9.7 lbs

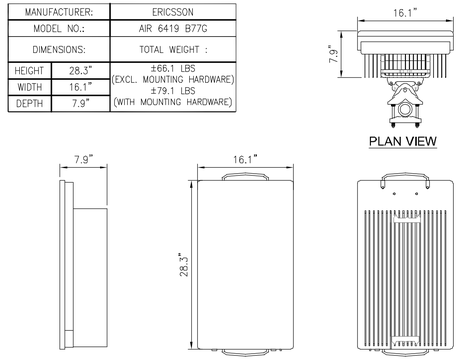


ANTENNA DETAIL

24"x36" SCALE: NTS
11"x17" SCALE: NTS

7

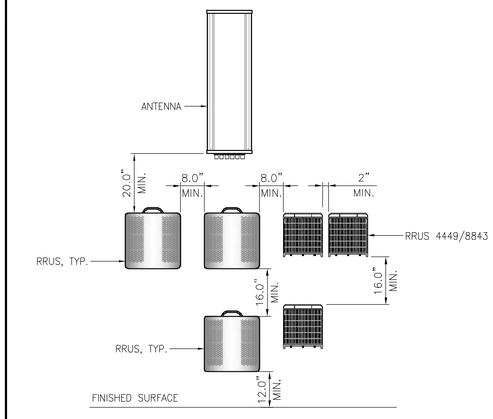
MANUFACTURER:		ERICSSON
MODEL NO.:		AIR 6419 B77G
DIMENSIONS:		TOTAL WEIGHT :
HEIGHT	28.3"	±66.1 LBS (EXCL. MOUNTING HARDWARE) ±79.1 LBS (WITH MOUNTING HARDWARE)
WIDTH	16.1"	
DEPTH	7.9"	



RRUS CLEARANCES DETAIL

24"x36" SCALE: NTS
11"x17" SCALE: NTS

8



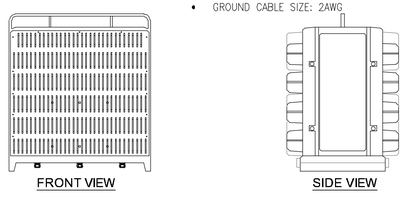
ANTENNA DETAIL

24"x36" SCALE: NTS
11"x17" SCALE: NTS

9

MANUFACTURER:		ERICSSON
MODEL NO.:		RRUS 8843
DIMENSIONS:		TOTAL WEIGHT :
HEIGHT	14.9"	
WIDTH	13.19"	±75 LBS
DEPTH	11.1"	(EXCL. MOUNTING HARDWARE)

- 4TX/4RX PER BAND (B2 & B66A)
- 320W OF TOTAL POWER
  –4x40 W PER BAND (4T4R IN EACH BAND)
- FULL IBW IN EACH BAND
- CARRIER BW:
  –5, 10, 15, 20 MHZ
- LTE: MAX 3 CARRIERS PER PORT (DL), MAX 3 CARRIER PER PORT (UL)
- CPRI SUPPORT:
  –2.5; 4.9; 9.8; 10.1
- –48 VDC 3–WIRE (2–WIRE WITH ADAPTER)
  –TWO DC POWER PORTS OF 20A
- AISG TMA & RET SUPPORT VIA RS–485 OR RF CONNECTORS
- EIGHT ANTENNA CONNECTORS: 8 X 4.3–10 PLUS (f)
- 2 EXTERNAL ALARM
- IP 65, –40 TO +55°C
- BREAKER SIZE: 2x25A
- MIN, MAX DC CABLE SIZE FROM SQUID TO RADIO=10,8 AWG
- GROUND CABLE SIZE: 2AWG



ANTENNA MOUNT BRACKET

24"x36" SCALE: NTS
11"x17" SCALE: NTS

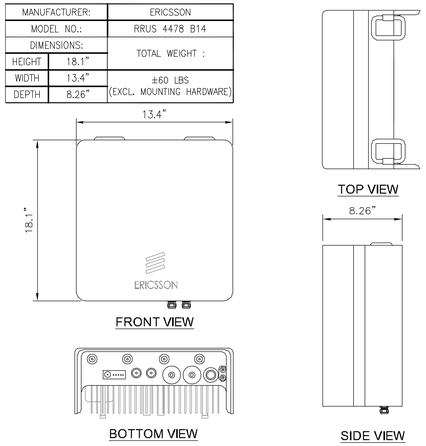
10

RRUS-4478 B14 DETAIL

24"x36" SCALE: NTS
11"x17" SCALE: NTS

11

MANUFACTURER:		ERICSSON
MODEL NO.:		RRUS 4478 B14
DIMENSIONS:		TOTAL WEIGHT :
HEIGHT	18.1"	
WIDTH	13.4"	±60 LBS
DEPTH	8.26"	(EXCL. MOUNTING HARDWARE)



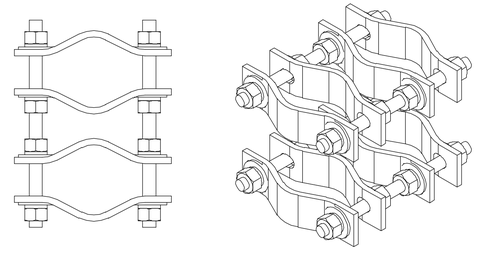
PIPE TO PIPE ADAPTER KIT

24"x36" SCALE: NTS
11"x17" SCALE: NTS

12

MANUFACTURER: SITEPRO
MODEL NUMBER: ACP10K
COMPATIBLE DIAMETER (MAX): 1.5 IN
COMPATIBLE DIAMETER (MIN): 3.5 IN
THICKNESS: 1/4"

DESCRIPTION:
- USED FOR ATTACHING SIMILAR SIZED PIPES IN PARALLEL ORIENTATION.
- ALL HARDWARE INCLUDED.
- HOT–DIP GALVANIZED
- KIT INCLUDES 2 CLAMP SETS



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REV	DATE	DESCRIPTION
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1	08/02/2024	PLAN CHECK COMMENTS/ ADDED FIBER DESIGN
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ISSUED DATE: 10/03/2024

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10/4/2024

PROJECT INFORMATION:
CLL01408
PONTIAC FIREBIRD
2470 WEST PIONEER AVE. #A,
FULLERTON, CA 92832

DRAWN BY: AJYR
CHECKED BY: SVF

SHEET TITLE: EQUIPMENT DETAILS

SHEET NUMBER: A-8

D220RRUDSM (CEQ.44405)

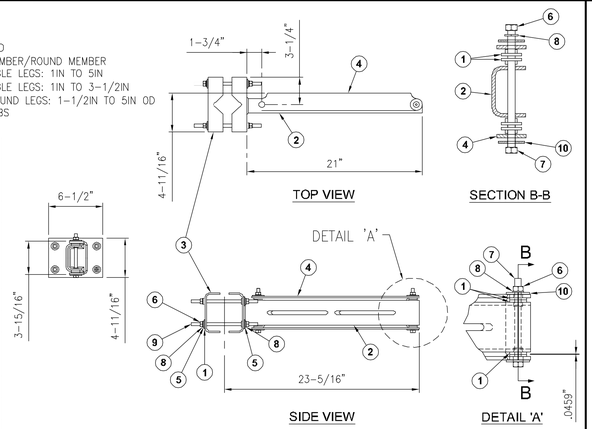
DUAL RRU MOUNT

LOW PIM UNIVERSAL REMOTE RADIO HEAD DUAL SWIVEL MOUNT. FITS ROUND LEGS 2-3/8" TO 4-1/2" ANGLE UP TO 3"x3".

MANUFACTURER: ROSENBERGER SITE SOLUTIONS, LLC
DIMENSIONS: 4.00"x22.75"x6.50"(HxLxD)
MATERIAL TYPE: STEEL

FINISH: HOT DIP GALVANIZED
MOUNTING TYPE: ANGLE MEMBER/ROUND MEMBER
MOUNTING RANGE: 60° ANGLE LEGS: 1IN TO 5IN
90° ANGLE LEGS: 1IN TO 3-1/2IN
FITS ROUND LEGS: 1-1/2IN TO 5IN OD
TORQUE: 25FT-LBS
PACKAGE QTY.: 1KIT

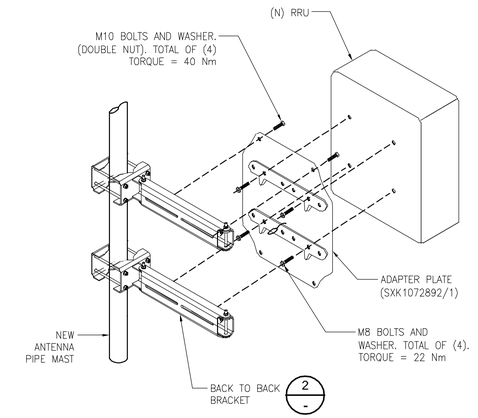
PARTS LIST			
ITEM	QUANTITY PER BRACKET	TOTAL QUANTITY REQUIRED*	DESCRIPTION
1	16	32	NYLON SHOULDER WASHER
2	1	2	MOUNTING ARM WELDMENT
3	1	2	BENT CLAMP PLATE
4	1	2	SWIVEL MOUNT PLATE
5	8	16	3/8" DIA. GALVANIZED WASHER
6	10	20	3/8" DIA. GALVANIZED NUT
7	2	4	3/8" DIA. X 5" LONG A-307 GRADE C GALVANIZED BOLT
8	10	20	3/8" DIA. GALVANIZED SPRING WASHER
9	4	8	3/8" DIA. X 8" LONG A-36 THREADED ROD
10	12	24	3/8" DIA. F436 GALVANIZED WASHER
*TWO BRACKETS ARE REQUIRED TO SUPPORT (2) RRU ASSEMBLIES			



BACK TO BACK MOUNTING DETAIL

24"x36" SCALE: NTS
11"x17" SCALE: NTS

2

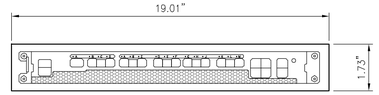


6648 BASEBAND UNIT

- DEFAULT BASEBAND FOR C-BAND OPERATION

DIMENSIONS (HxWxD): 1.73"x19.01"x12.32"
WEIGHT: 16.53 LBS (7.5KG)

DESCRIPTIONS:
- 12 RADIO INTERFACE PORTS (SFP28)
  - -eCPRI AND CPRI SUPPORT ON ALL PORTS
  - -25g SUPPORT ON ALL PORTS
- 3 + 1 TN AND IDL OPTICAL PORTS WITH 175Gbps AGGREGATED CAPACITY
  - -3x25Gbps PORTS, 1 QSFP28
- 1 ELECTRICAL TN PORT
  - -1Gbps
- LMT PORT + USB PORT FOR SIMPLIFIED O&M
- 8 EXTERNAL ALARMS
- SYNCH PORT, 1588v2 PTP SYNC
- DUAL POWER FEED



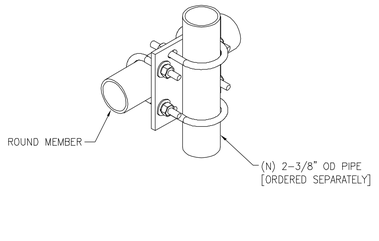
RRUS MOUNTING DETAIL

24"x36" SCALE: NTS
11"x17" SCALE: NTS

3

MANUFACTURER: SITEPRO
PART NUMBER: SCX23-K
PIPE SIZE: 2-3/8" TO 2-7/8"
THICKNESS: 3/8"

DESCRIPTION:
- HEAVY-DUTY CROSSOVER PLATE KITS ARE USED TO ATTACH PIPES IN 90° FASHION.
- U-BOLTS AND HARDWARE INCLUDED
- HOT-DIP GALVANIZED



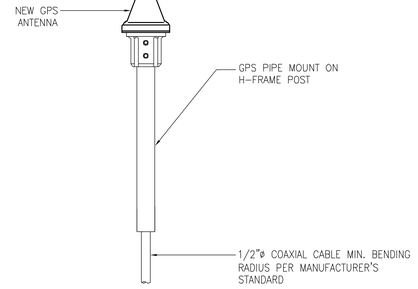
6648 BASEBAND UNIT DETAIL

24"x36" SCALE: NTS
11"x17" SCALE: NTS

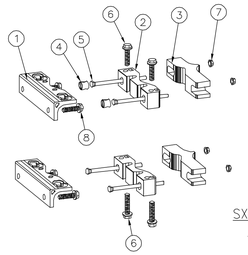
4

NOTES:

1. THE GPS ANTENNA MOUNT IS DESIGNED TO FASTEN TO A STANDARD 1-1/4"ø, SCHEDULE 40, GALVANIZED STEEL OR STAINLESS STEEL PIPE. THE PIPE MUST NOT BE THREADED AT THE ANTENNA STEEL PIPE. THE PIPE MUST NOT BE THREADED AT THE ANTENNA MOUNT END. THE PIPE SHALL BE CUT TO THE REQUIRED LENGTH (MINIMUM OF 18") USING A HAND OR ROTARY PIPE CUTTER TO ASSURE A SMOOTH AND PERPENDICULAR CUT. A HACK SAW SHALL NOT BE USED. THE CUT PIPE END SHALL BE DEBURRED AND SMOOTH IN ORDER TO SEAL AGAINST THE NEOPRENE GASKET ATTACHED TO THE ANTENNA MOUNT.



PRODUCT NO.	131.32-SXK 125 0245/1		SUPPLY FORM	FINISHED PRODUCT
NO.	DESCRIPTION	PART NUMBER	QUANTITY	UNITS
1	RRU BRACKET SHORT	SEF 901 230/1	2	PIECE
2	MAST BRACKET FRONT	SEF 901 227/1	2	PIECE
3	MAST BRACKET REAR	SEF 901 228/1	2	PIECE
4	BUSHING (M10)	SXA 215 3308/1	2	PIECE
5	SCREW (M10*140)	SXA 107 6125/3	4	PIECE
6	FLANGE SCREW M10*40	SXA 215 3525/0400	2	PIECE
7	FLANGE NUT M10	SXA 215 3528/1	4	PIECE
8	FLANGE SCREW M10*30	SXA 215 3525/0300	4	PIECE
9	LOCKING WASHER	SCL 114 100 M10-21	4	PIECE
10	CAPTIVE SCREW (M10*55)	SXA 215 4071/0550	2	PIECE



RRUS MOUNTING ASSEMBLY

24"x36" SCALE: NTS
11"x17" SCALE: NTS

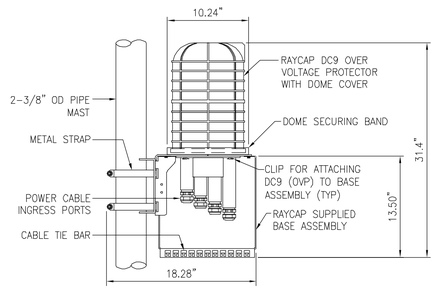
5

DC9 SURGE SUPPRESSION DETAIL

24"x36" SCALE: NTS
11"x17" SCALE: NTS

6

MANUFACTURER: RAYCAP
MODEL #: DC9-48-60-24-8C-EV
DIMENSIONS, WxDxH: 18.28"X10.24"X31.34"
NOMINAL OPERATING VOLTAGE: 48 VDC
NOMINAL DISCHARGE CURRENT: 20 Ka 8/20 µs
MAXIMUM IMPULSE CURRENT: 12.5 kA 10/350 µs
MAXIMUM CONTINUOUS OPERATING VOLTAGE: 60 VAC
VOLTAGE PROTECTION RATING: 330V
WIND LOADING: 150 MPH (SUSTAINED)
195 MPH (GUST)
TOTAL WEIGHT: 26.2 LBS.



CROSSOVER PLATE DETAIL

24"x36" SCALE: NTS
11"x17" SCALE: NTS

7

GPS MOUNTING DETAIL

24"x36" SCALE: NTS
11"x17" SCALE: NTS

8

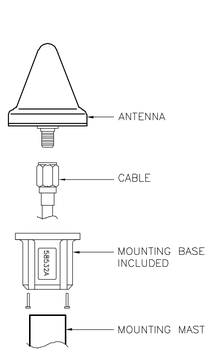
GPS ANTENNA DETAIL OR APPROVED EQUAL

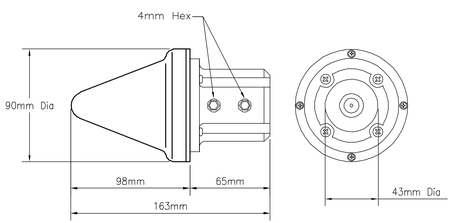
24"x36" SCALE: NTS
11"x17" SCALE: NTS

10

NOTES:

1. LOCATION OF ANTENNA MUST HAVE CLEAR VIEW OF SOUTHERN SKY AND CANNOT HAVE ANY BLOCKAGES EXCEEDING 25% OF THE SURFACE AREA OF A HEMISPHERE AROUND THE GPS ANTENNA.
2. ALL GPS ANTENNA LOCATIONS MUST BE ABLE TO RECEIVE CLEAR SIGNALS FROM A MINIMUM OF FOUR (4) SATELLITES. VERIFY WITH HANDHELD GPS BEFORE FINAL LOCATION OF GPS ANTENNA.
3. THE ANTENNA SHOULD NOT BE LOCATED WITHIN 3FT. OF ANY METALLIC WALLS OR OBJECTS IN ANY RADIAL DIRECTION OF THE DUAL BAND OMNI SECTION.





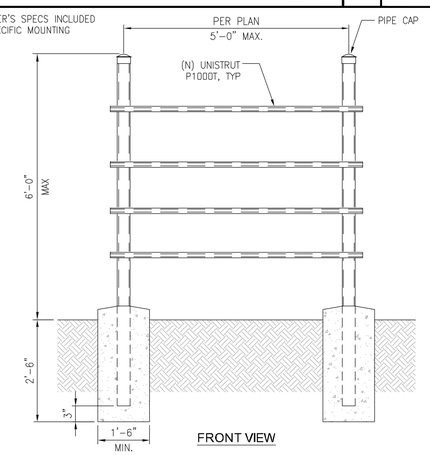
- GPS L1 REFERENCE ANTENNA
- N-TYPE RF CONNECTION (1575.42 MHZ)
- GAIN: 38 DBI TYPICAL @ ELEVATION ANGLE 90°)
- REQUIRES +5 VDC POWER (20 MA TYPICAL)
- CLIMATE: OUTDOOR (-40°C TO +85°C)
- WEIGHT
  - 187g ANTENNA WITHOUT MOUNTING BASE
  - 240g MOUNTING BASE (INCLUDED)
- FOR POLE MOUNTING USE 42mm OD TUBE

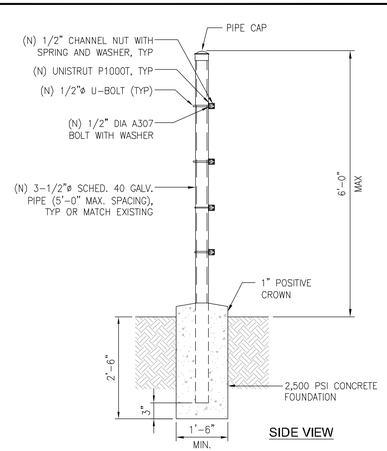
(TYP) H-FRAME DETAIL

24"x36" SCALE: NTS
11"x17" SCALE: NTS

12

NOTE: SEE MANUFACTURER'S SPECS INCLUDED WITH EQUIPMENT FOR SPECIFIC MOUNTING PATTERNS AND METHODS.





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16885 VIA DEL CAMPO CT., SUITE 318
SAN DIEGO, CA 92127
tel: (858) 432-4112 / (858) 432-4257

REV	DATE	DESCRIPTION
2	10/03/2024	PLAN CHECK COMMENTS
1	08/02/2024	PLAN CHECK COMMENTS/ ADDED FIBER DESIGN
0	04/26/2024	100% CD'S
B	04/19/2023	REMOVED MW ANTENNA
A	11/04/2022	90% CD'S FOR REVIEW

ISSUED DATE: 10/03/2024

ISSUED FOR: BP SUBMITTAL

LICENSURE:

PROJECT INFORMATION:
CLL01408
PONTIAC FIREBIRD
2470 WEST PIONEER AVE. #A,
FULLERTON, CA 92832

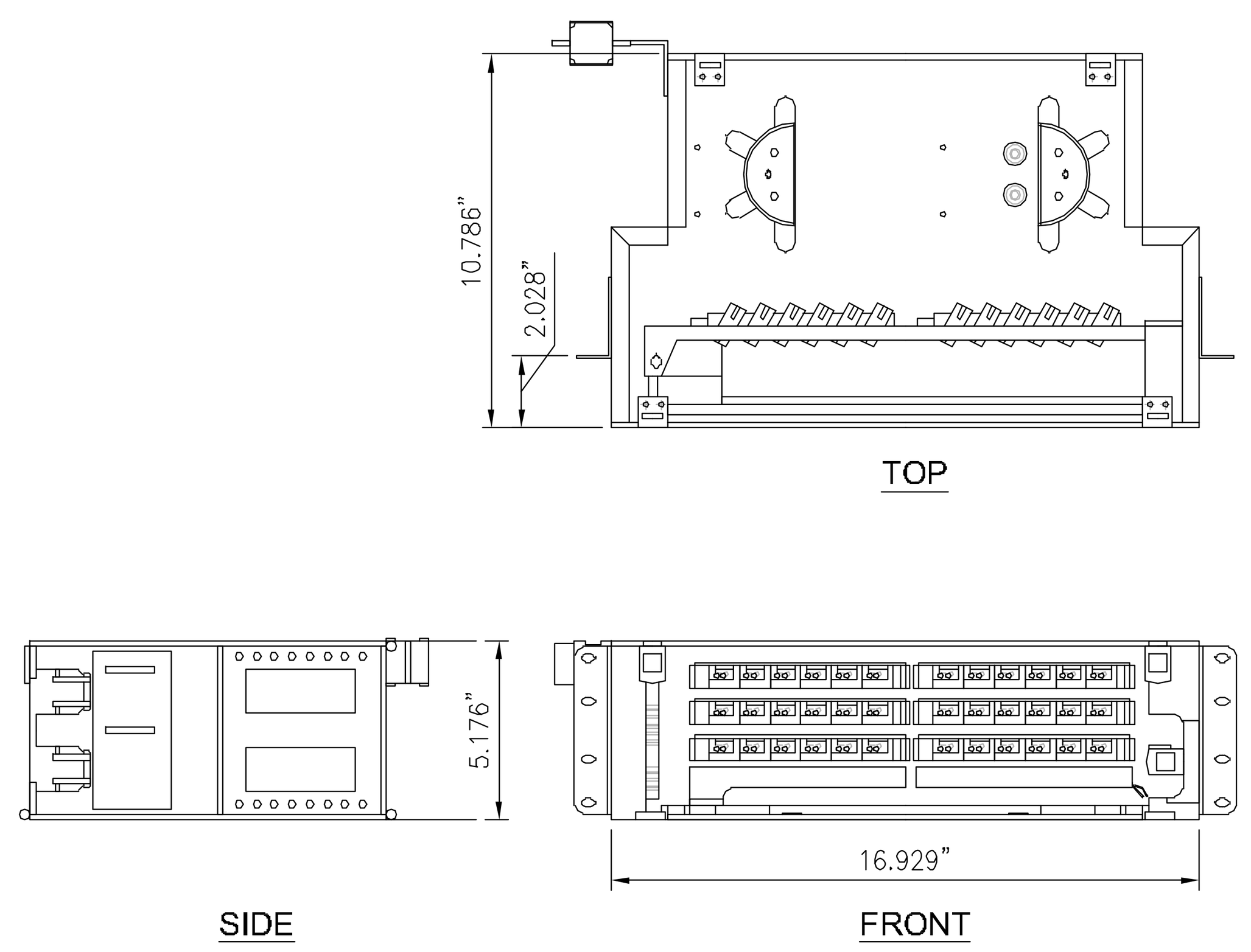
DRAWN BY: AJYR
CHECKED BY: SVF

SHEET TITLE: EQUIPMENT DETAILS

SHEET NUMBER: A-9

TECHNICAL SPECIFICATIONS:	
PART NUMBER:	PTS3750
NUMBER INTERCONNECTS:	72 POS. FIBER TRAY
FRONT INTERCONNECT:	72 BLANK (PAGE 2 OPTIONS)
CABLE ENTRY:	SWING OUT FRONT TRAY (HINGE LEFT)
CABLE ROUTING:	REAR/SIDE
CABLE SUPPORT:	1 BRACKET REAR FOR FIBER BUNDLE
FIBER WRAPPING:	2 SEMICIRCLE TRAYS
WEIGHT:	6 LBS. (APPROX.)
HEIGHT:	5.176"
DEPTH:	10.786"
WIDTH:	16.929"
MOUNTING:	19" AND 23" RACK MOUNT BRACKETS

*** NEQ. 178589



FIBER PATCH PANEL

24"x36" SCALE: NTS
11"x17" SCALE: NTS

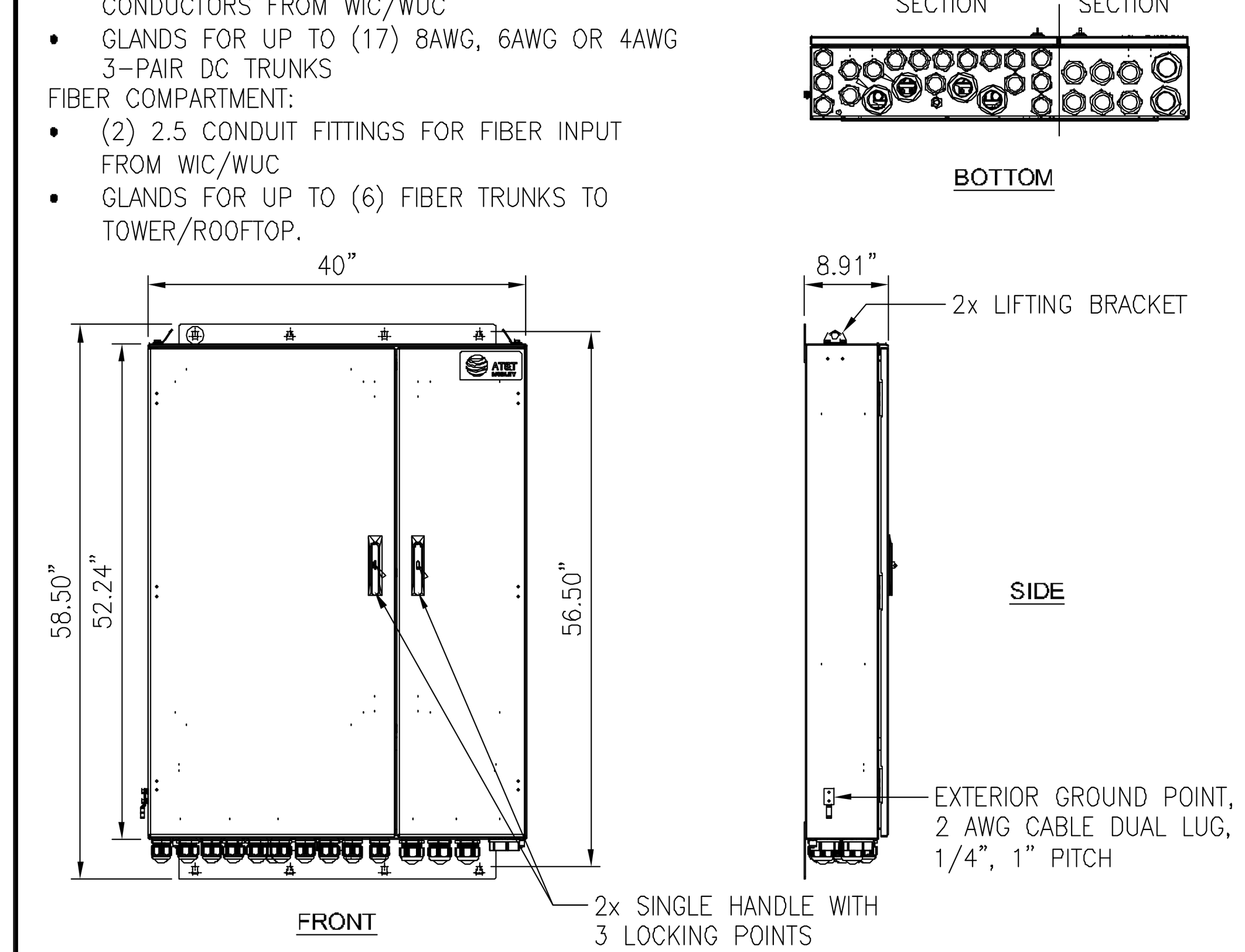
2

MANUFACTURER: RAYCAP
MODEL NUMBER: DC50-48-60-96-50F (CEQ.54898)
POWER COMPARTMENT:

- (2) 2.5 CONDUIT FITTINGS FOR DC INPUT CONDUCTORS FROM WIC/WUC
- GLANDS FOR UP TO (17) 8AWG, 6AWG OR 4AWG 3-PAIR DC TRUNKS

FIBER COMPARTMENT:

- (2) 2.5 CONDUIT FITTINGS FOR FIBER INPUT FROM WIC/WUC
- GLANDS FOR UP TO (6) FIBER TRUNKS TO TOWER/ROOFTOP.



DC50 SURGE SUPPRESSOR DETAIL

24"x36" SCALE: NTS
11"x17" SCALE: NTS

3

MANUFACTURER

- INTERSECT, INC. (WWW.INTERSECTINC.COM)

ELECTRICAL

UL LISTED CAM LOK-STYLE, 180° TWIST ON/OFF SINGLE-POLE RECEPTACLES

- CONFORMS TO NEC
- RATED UP TO 400 A, 208/120 V
- MAY BE USED FOR 240/120 SINGLE PHASE APPLICATIONS
- CAMLOK TERMINAL ACCEPTANCE 400 A

DOOR

- PAD LOCKABLE

WEIGHT

- 14 LBS (APPROX.)

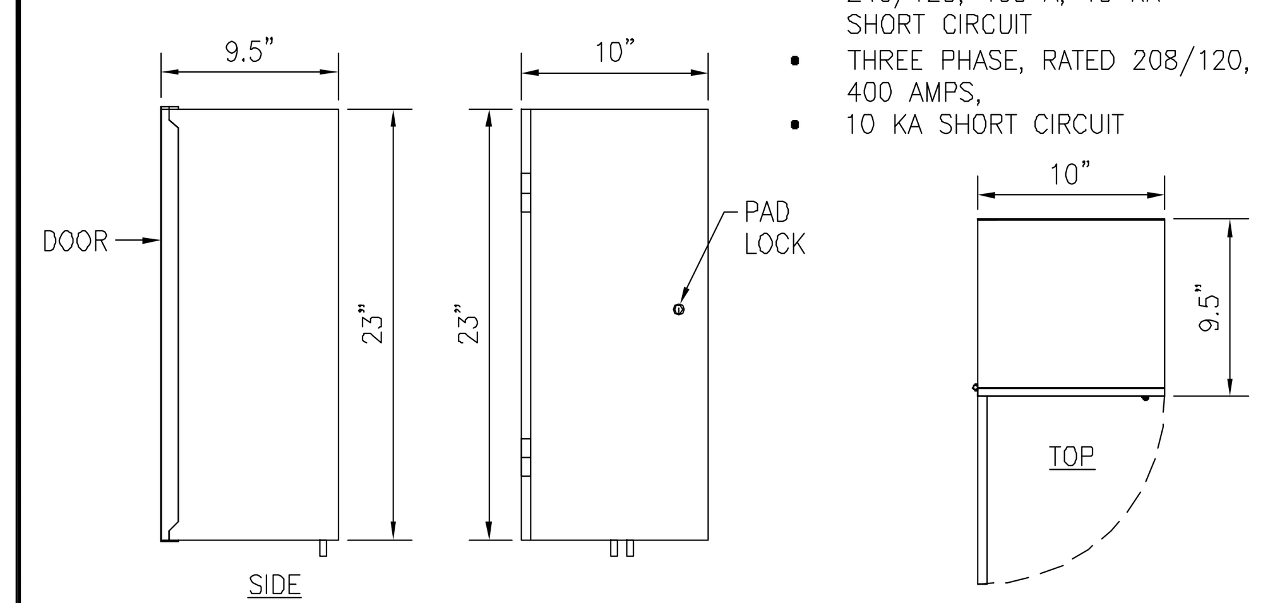
ENCLOSURE

- UL TYPE 3R ALUMINUM ENCLOSURE
- USES DIE-CAST PIN HINGES, BLACK POWDER COATED
- DEAD FRONT PANEL PROTECTS UTILITY GEN SET WIRING CONNECTIONS
- GASKET PROVIDED TO HELP INSURE WATER-TIGHT SEAL
- FLUSH MOUNT WELD

UL

UL 1008, 5TH ED, OR CURRENT

- SINGLE PHASE, RATED 240/120, 400 A, 10 KA SHORT CIRCUIT
- THREE PHASE, RATED 208/120, 400 AMPS,
- 10 KA SHORT CIRCUIT

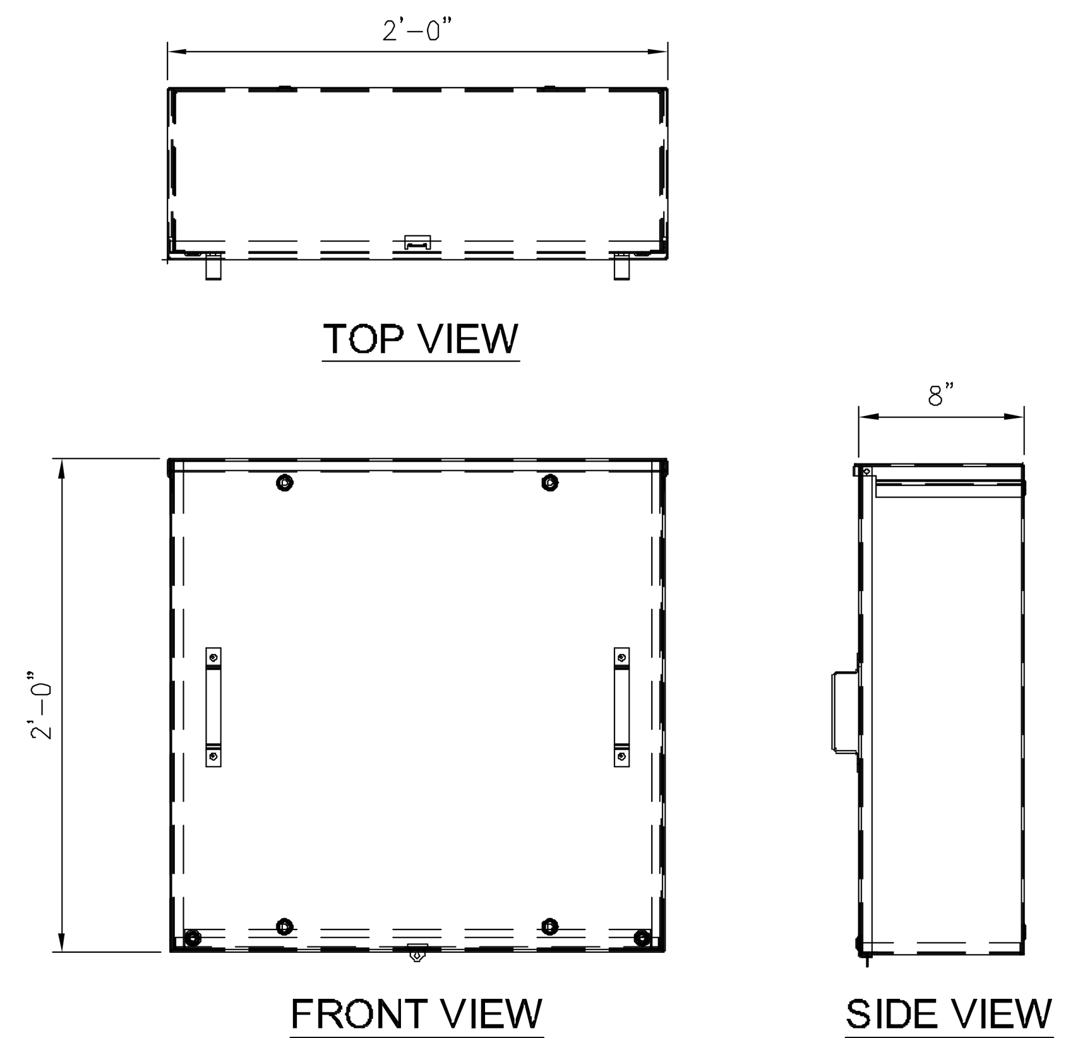


CAMLOK DETAIL

24"x36" SCALE: NTS
11"x17" SCALE: NTS

4

MANUFACTURER: HOFFMAN ENCLOSURES INC.
MODEL NUMBER: A24R248NK
DIMENSIONS: 24.0" (H) X 24.0" (W) X 8.0" (D)

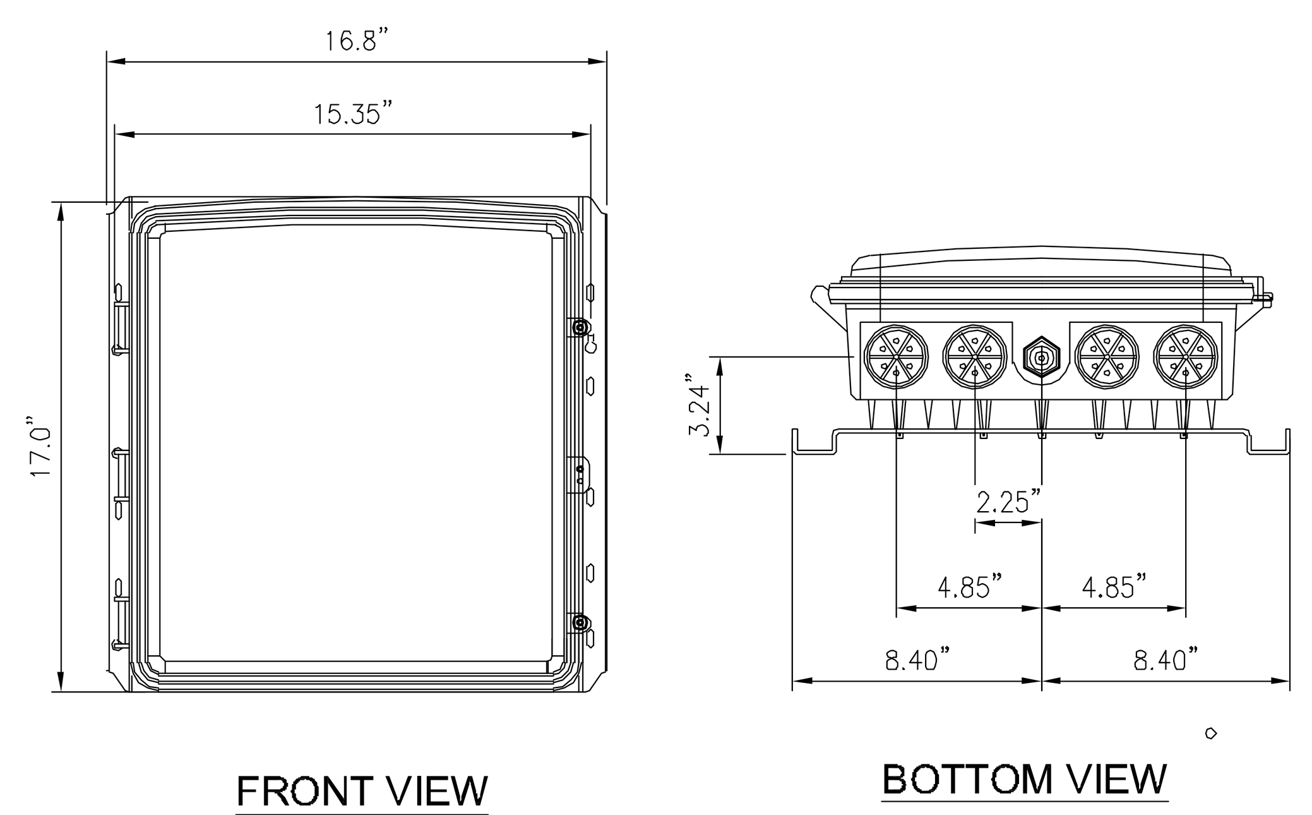


FIBER HOFFMAN BOX

24"x36" SCALE: NTS
11"x17" SCALE: NTS

5

MANUFACTURER: CIENA
MODEL: 3931
DIMENSIONS: 17.0" (H) X 16.8" (W) X 7.0" (D)
WEIGHT: APPROX. 28.6 LBS



CIENA FIBER BOX

24"x36" SCALE: NTS
11"x17" SCALE: NTS

6

6651 BASEBAND UNIT

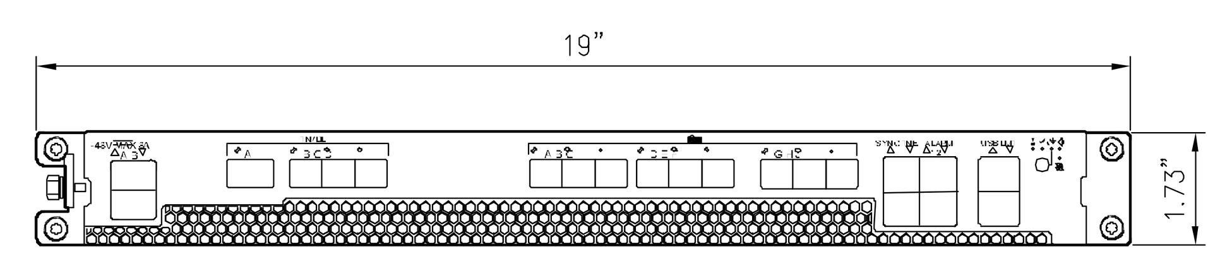
DIMENSIONS (HxW):	1.73"x19"
WEIGHT:	16.97 lbs

ENVIRONMENTAL DATA

TEMPERATURE:	0 TO +55°C
RELATIVE HUMIDITY:	5-85%
ABSOLUTE HUMIDITY:	1-29 g/m
MAXIMUM TEMPERATURE CHANGE:	0.5°C/MIN

POWER CHARACTERISTICS

NOMINAL VOLTAGE:	-48V DC
OPERATING VOLTAGE RANGE:	-38.0 TO -58.5 V DC
NON-DESTRUCTIVE RANGE:	0 TO -60V DC



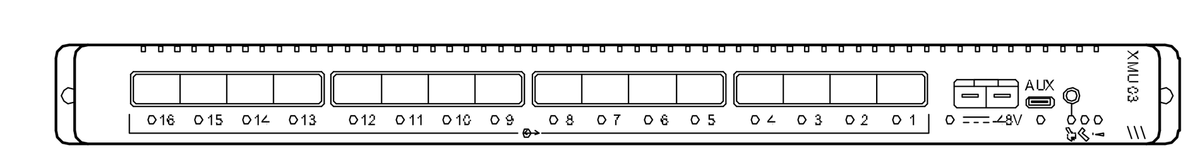
6651 BASEBAND UNIT DETAIL

24"x36" SCALE: NTS
11"x17" SCALE: NTS

7

DIMENSIONS, WxDxH: (WITH SOLAR SHIELD AND HANDLE)	350x280x31 mm (13.8"x11"x1.22")
WEIGHT:	5 LBS
HEAT DISSIPATION:	50W (TYPICAL) 80W (MAX)
OPERATING TEMPERATURE RANGE:	5 TO 50°C (41 TO 122°F)

- MOUNTING IN STANDARD DU SLOTS, DU ADAPTERS AND RADIO SHELF.
- MOUNTING IN 19" RACK OR IN TRANSMISSION COMPARTMENT BELOW AIR RESTRICTOR PLATE BY USE OF SUP 6601 V2.



UCXMU03 / KDU 137949/1

XMU DETAIL

24"x36" SCALE: NTS
11"x17" SCALE: NTS

8

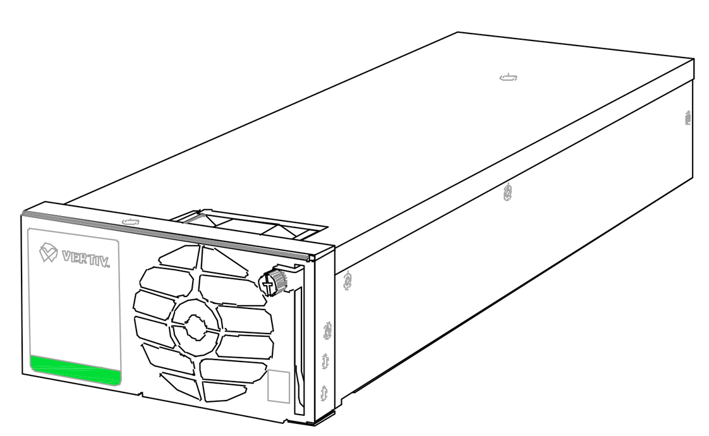
MANUFACTURER:	VERTIV
PART NUMBER:	1R482000e3 (NEQ.15930)
DESCRIPTION:	eSure™ RECTIFIER, -48VDC, 2000W
DIMENSIONS HxWxD:	1.61"x3.33"x9.94"
WEIGHT:	2.49 LBS

AC INPUT

VOLTAGE:	85 VAC TO 300VAC, 187 VAC TO 264 VAC (NOMINAL)
FREQUENCY:	45 Hz TO 65 Hz
MAXIMUM CURRENT:	12 A
POWER FACTOR:	>0.99 FROM 50 TO 100% LOAD
PROTECTION:	HIGH AND LOW VOLTAGE PROTECTION, SURGE AND LIGHTNING PROTECTION. ADAPTS TOO POOR QUALITY GRID (VOLTAGE DIP, WEAK MAINS). DISCONNECTION AT 415 VAC. MAINS FUSES IN BOTH LINES

DC OUTPUT

VOLTAGE:	-42 VDC TO -58 VDC
MAXIMUM POWER:	2000 W
MAXIMUM CURRENT:	42 A @ -48 VDC, LIMIT SET POINT TO 0 TO 42 A
PEAK EFFICIENCY:	96.2%
PROTECTION:	FUSE FOR REVERSE CONNECTION AND BACK FEEDING PROTECTION. HIGH VOLTAGE SHUTDOWN. HIGH TEMP PROTECTION
TEMPERATURE DERATING:	FULL OUTPUT POWER TO +65°C AT INPUT VOLTAGE RANGE 200 TO 250 VAC



RECTIFIER DETAIL

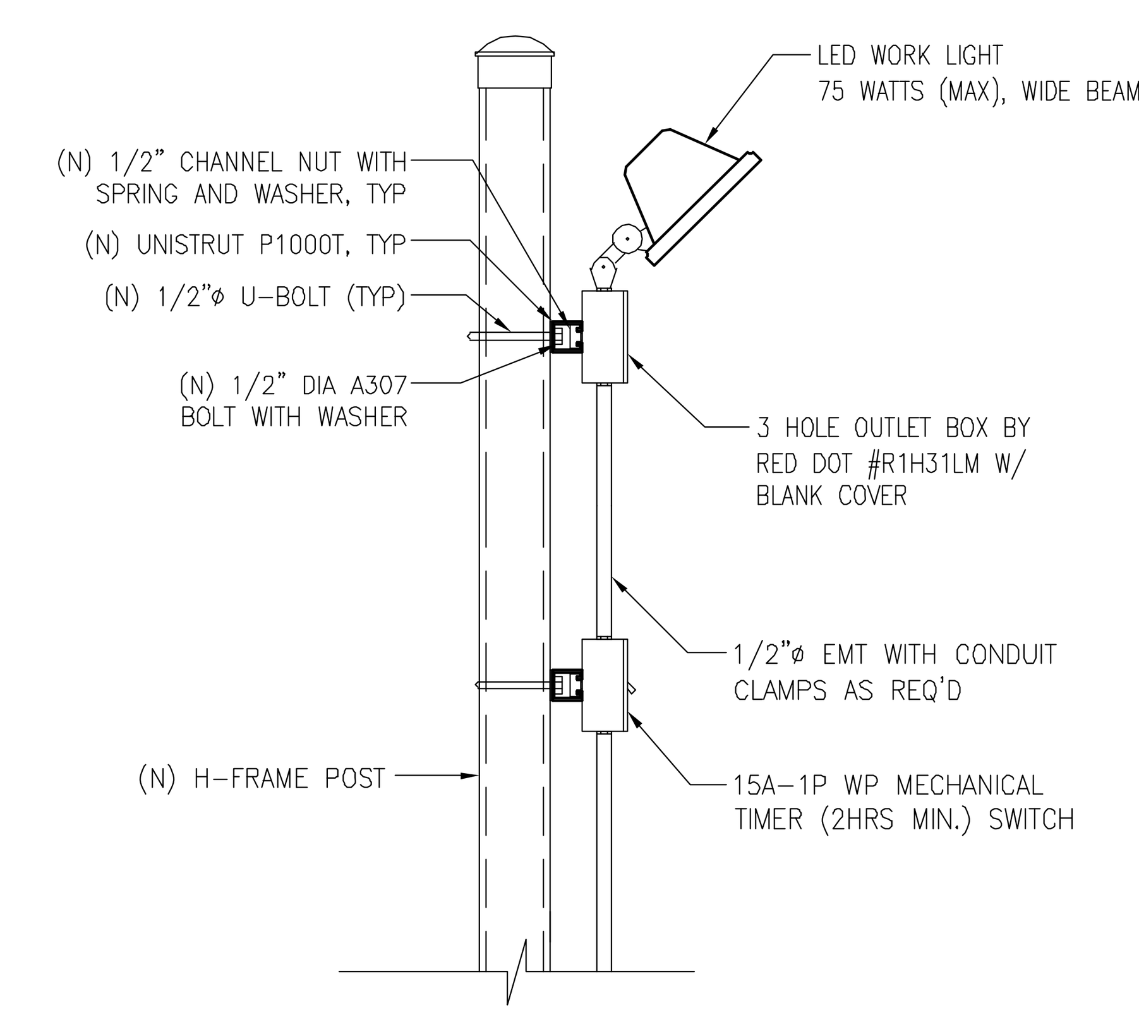
24"x36" SCALE: NTS
11"x17" SCALE: NTS

9

NOT USED

24"x36" SCALE: NTS
11"x17" SCALE: NTS

10

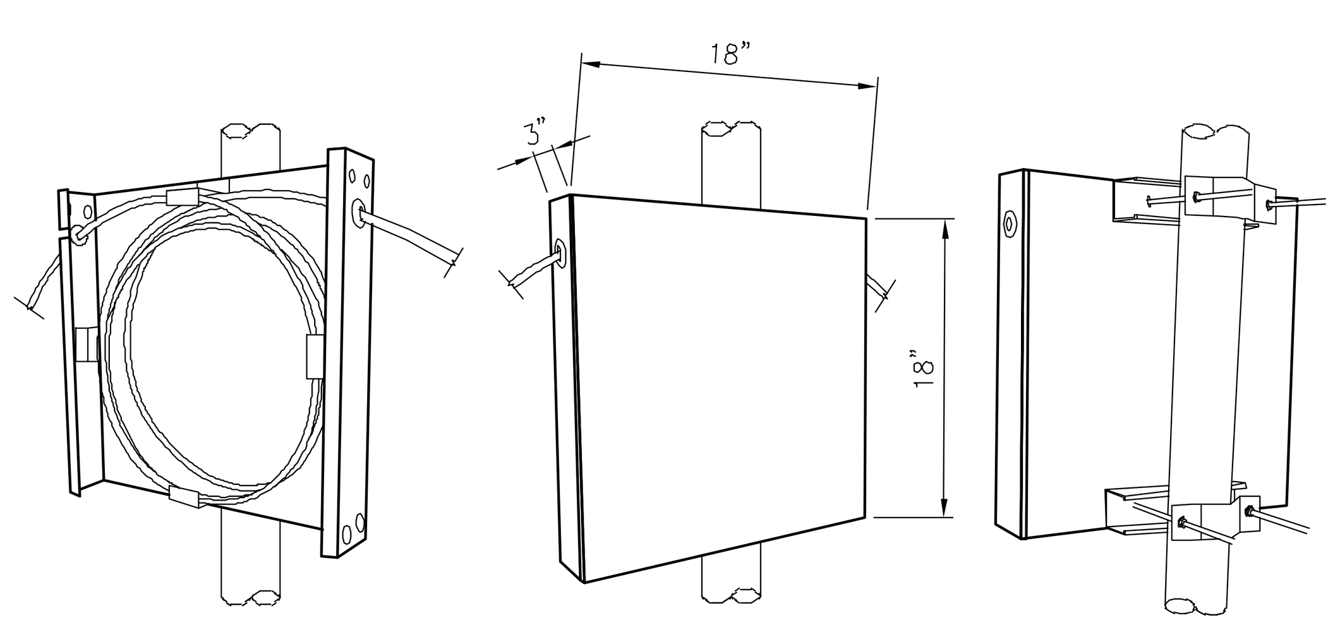


SERVICE LIGHT DETAIL

11

FIBER MANAGEMENT BOX

MANUFACTURER:	ROSENBERGER
MODEL:	FB-15-ABOX
DIMENSIONS, WxHxD:	18"x18"x3"
MATERIAL:	ALUMINUM, NON-PAINTED
PROTECTION:	WEATHER PROTECTIVE
CAPACITY:	35 METERS OF 10mm FIBER TRUNK CABLE OR 75 METERS OF 7mm FIBER JUMPER CABLE
I/O:	CABLE CAN ENTER ANY OF THE 4 SIDES AND EXIT ANY OF THE 3 REMAINING SIDES
MOUNTING:	WALL, H-BRACKET OR PIPE UP TO 3.5" O.D.
WEIGHT:	7 LBS



FIBER MANAGEMENT BOX

24"x36" SCALE: NTS
11"x17" SCALE: NTS

12

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1452 EDINGER AVENUE
TUSTIN, CA 92780

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10 CHURCH CIRCLE,
ANNAPOLIS, MD 21401

cellsite concepts
16885 VIA DEL CAMPO CT., SUITE 318
SAN DIEGO, CA 92127
tel: (858) 432-4112 / (858) 432-4257

REV	DATE	DESCRIPTION
2	10/03/2024	PLAN CHECK COMMENTS
1	08/02/2024	PLAN CHECK COMMENTS/ ADDED FIBER DESIGN
0	04/26/2024	100% CD'S
B	04/19/2023	REMOVED MW ANTENNA
A	11/04/2022	90% CD'S FOR REVIEW

ISSUED DATE:
10/03/2024

ISSUED FOR:
BP SUBMITTAL

LICENSURE:
LICENSED PROFESSIONAL ENGINEER
MICHAEL B. FEDER
C 83950
EXP. 09/30/25
CIVIL
STATE OF CALIFORNIA
10/4/2024

PROJECT INFORMATION:
CLL01408
PONTIAC FIREBIRD
2470 WEST PIONEER AVE. #A,
FULLERTON, CA 92832

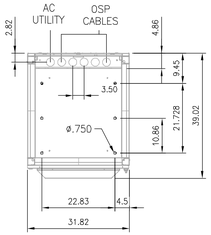
DRAWN BY: AJYR
CHECKED BY: SVF

SHEET TITLE:
EQUIPMENT
DETAILS

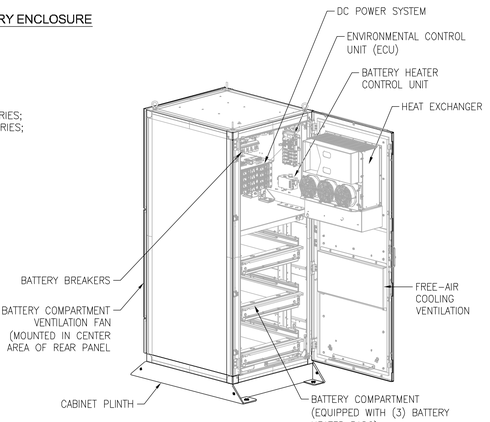
SHEET NUMBER:
A-10

OUTDOOR NETSURE 512 DC POWER SYSTEM
THE NETXTEND™ FLEX SERIES -48VDC/+24VDC POWER/BATTERY ENCLOSURE

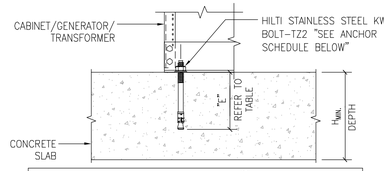
BATTERY:	VRLA GNB, UP TO 180 AH (OR EQUIVALENT) SAFT Ni-Cad, UP TO 180 AH (OR EQUIVALENT)
DIMENSIONS, HxWxD:	72.06"x31.81"x39.02"
FOOTPRINT:	72"x30"x30"
ENCLOSURE:	72"x30"x37.8"
WEIGHT:	690 LB WITHOUT BATTERIES AND RECTIFIERS 2300 LB WITH FULL COMPLEMENT OF GNB BATTERIES; 1800 LB WITH FULL COMPLEMENT OF SAFT BATTERIES;
MOUNTING:	PAD OR PLATFORM



ANCHORAGE PLAN



NOTES:
1. CONTRACTOR SHALL ACCURATELY LOCATE ALL EXISTING REINFORCING BY X-RAY OR EQUIVALENT METHODS. NO REBAR OR TENDONS SHALL BE CUT. ALL EXPENSES RELATED TO REPAIR OF CUT REBAR OR TENDONS SHALL BE ENTIRELY AT THE EXPENSE OF THE CONTRACTOR.
2. SPECIAL INSPECTION IS REQUIRED FOR INSTALLATION OF ANCHORS.
3. INSTALLATION OF WEDGE ANCHORS IN MASONRY IS NOT ALLOWED.
4. VERIFY BOLT PATTERN FOR EQUIPMENT BASE PER MANUFACTURER SPECS PRIOR TO ANCHORING EQUIPMENT.
5. IF MANUFACTURE RECOMMENDED BOLT DIAMETER, QUANTITY OR EMBEDMENT VARIES FROM MIN. REQUIRED, CONTACT THE ENGINEER OF RECORD LISTED ON THE T-1 SHEET OF THIS SET OF PLANS.
6. INFORMATION SHOWN IN THIS TABLE IS IN ACCORDANCE WITH: ICC-ESR-4266.



ANCHOR SCHEDULE[1]

DESCRIPTION	QTY.	BOLT DIA.	"E" EMBEDMENT	"HMIN." MIN. MEMBER THICKNESS
PWR PLANT	4	3/4"	3 3/4" MIN.	6"
PURCELL	4	1/2"	2 1/2" MIN.	6"
GENERATOR	6	1/2"	3 1/4" MIN.	6"
TRANSFORMER	4	1/2"	2" MIN.	6"

SPECIFICATIONS:
1) cULus LISTED (MEETING UL 1561 AND CSA C22.2)
2) NEMA 2 VENTILATED ENCLOSURE
   ENCLOSURE RATED FOR NEMA 3R WHEN OPTIONAL WEATHERSHIELD ACCESSORY IS INSTALLED.
3) MINIMUM CLEARANCE OF 3.00[76] BETWEEN VENT OPENINGS, WALL OR OTHER OBSTRUCTION
4) SHADED AREAS DENOTE CUSTOMER CONDUIT ENTRANCE LOCATIONS, AVAILABLE BOTH SIDES AND BOTTOM

TRANSFORMER SPECIFICATIONS:
50 KVA 1Ø 60 HZ
PRIMARY VOLTAGE 240 X 480
SECONDARY VOLTAGE 120/240
150°C RISE ABOVE 40°C AMBIENT
220°C INSULATION SYSTEM
ALUMINUM WINDINGS
APPROXIMATE WEIGHT: 420 LBS
GUARANTEED SOUND LEVEL: 45 dB
EFFICIENCY @35%: 98.3% AVG. CONFORMS TO NEMA TP 1 – 2002 AND CSA C802.2

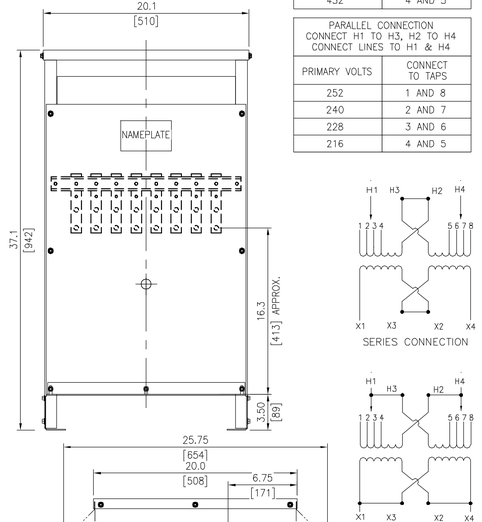
SEISMIC QUALIFICATION:
TO BE COMPLIANT WITH THE SEISMIC REQUIREMENTS OF ASCE/SEI 7, THIS UNIT HAS BEEN QUALIFIED BY SHAKE TABLE TESTING THROUGH SELF CERTIFICATION TO ICC ES AC156. CONTACT YOUR LOCAL SCHNEIDER ELECTRIC/SQUARE D REPRESENTATIVE FOR RELATED QUESTIONS.

SERIES CONNECTION
CONNECT H2 TO H3
CONNECT LINES TO H1 & H4

PRIMARY VOLTS	CONNECT TO TAPS
504	1 AND 8
492	1 AND 7
480	2 AND 7
468	2 AND 6
456	3 AND 6
444	3 AND 5
432	4 AND 5

PARALLEL CONNECTION
CONNECT H1 TO H3, H2 TO H4
CONNECT LINES TO H1 & H4

PRIMARY VOLTS	CONNECT TO TAPS
252	1 AND 8
240	2 AND 7
228	3 AND 6
216	4 AND 5



VERTIV DC POWER PLANT DETAIL

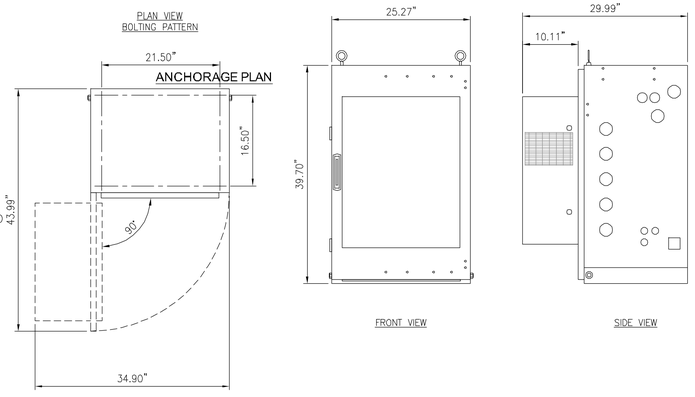
24"x36" SCALE: NTS
11"x17" SCALE: NTS

2

MANUFACTURER: PURCELL SYSTEMS
MODEL: FLX21-2520 (FLEXSURE WS OUTDOOR ENCLOSURE)

ENCLOSURE FEATURES:
- ULTRA-LIGHT GRAY POLYESTER POWDER COAT FINISH
- WEIGHT: 140 LBS (ENCLOSURE ONLY)
- 21RU 19" EQUIPMENT RAILS
- FRONT DOOR WITH THREE POINT LATCHING SYSTEM AND PAD-LOCKABLE PIN-IN-HEX HANDLE
- CABLE INGRESS/EGRESS : KNOCKOUTS ON BOTTOM AND SIDES OF ENCLOSURE
- 18 POSITION TIN-PLATE COPPER GROUND BAR PLUS EXTERNAL SITE GROUND PROVISIONS.
- INTERIOR LED SERVICE LIGHT

MOUNTING OPTIONS:
- POLE, 4" OR 12" RISER PLINTH, WALL/H-FRAME – SEPARATELY ORDERABLE KITS
- PAD, STACKING – NO ADDITIONAL KIT REQUIRED
  - FLX21-2520 IS STACKABLE ON TOP OF FLX12-2420 AND FLX16-2520 ENCLOSURES

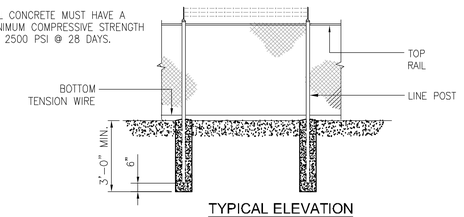


ANCHORAGE DETAIL

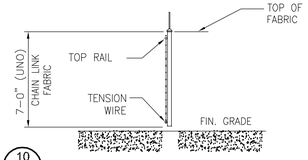
24"x36" SCALE: NTS
11"x17" SCALE: NTS

3

NOTE:
ALL CONCRETE MUST HAVE A MINIMUM COMPRESSIVE STRENGTH OF 2500 PSI @ 28 DAYS.



TYPICAL ELEVATION



TYPICAL SECTION

FLX21-2520 PURCELL CABINET DETAIL

24"x36" SCALE: NTS
11"x17" SCALE: NTS

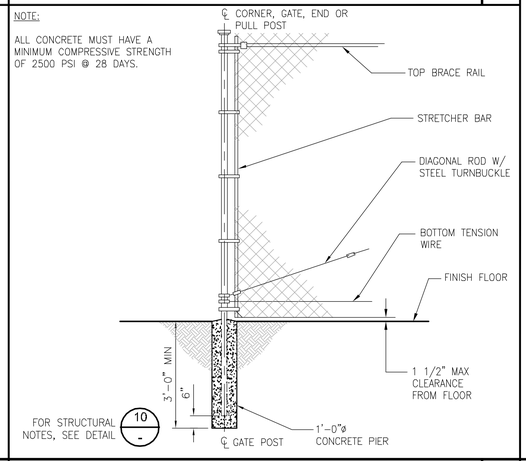
6

CHAINLINK FENCE DETAIL

24"x36" SCALE: NTS
11"x17" SCALE: NTS

7

NOTE:
ALL CONCRETE MUST HAVE A MINIMUM COMPRESSIVE STRENGTH OF 2500 PSI @ 28 DAYS.



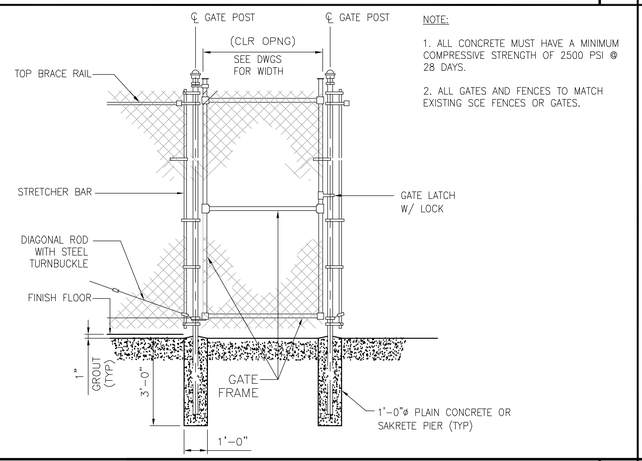
CHAINLINK FENCE ACCESS GATE

24"x36" SCALE: NTS
11"x17" SCALE: NTS

10

TYPICAL WOVEN WIRE GATE NOTES
(INSTALL SWING GATES PER ASTM F- 900)

1. GATE POST, CORNER, TERMINAL OR PULL POST SHALL BE 2 7/8"ø SCHEDULE 40 FOR GATE WIDTHS UP THROUGH 6 FEET OR 12 FEET FOR DOUBLE SWING GATE PER ASTM-F1083.
2. LINE POST: 2-3/8"ø SCHEDULE 40 PIPE PER ASTM-F1083.
3. GATE FRAME: 1 1/2"ø SCHEDULE 40 PIPE PER ASTM-F1083.
4. TOP RAIL & BRACE RAIL: 1 1/4"ø SCHEDULE 40 PIPE PER ASTM-F1083.
5. FABRIC: 9 GA. CORE WIRE SIZE 2" MESH, CONFORMING TO ASTM-A392 CLASS 1.
6. TIE WIRE: MINIMUM 11 GA GALVANIZED STEEL INSTALL A SINGLE WRAP TIE WIRE AT POSTS AND RAILS AT MAX. 24" INTERVALS. INSTALL HOG RINGS ON TENSION WIRE AT 24" INTERVALS.
7. TENSION WIRE: 7 GA. GALVANIZED STEEL.
8. GATE LATCH: 1-3/8" O.D. PLUNGER ROD W/ MUSHROOM TYPE CATCH AND LOCK (KEYED ALIKE FOR ALL SITES OR COMBINATION AS SPECIFIED BY AWS).
9. LOCAL ORDINANCE FOR BARBED WIRE PERMIT SHALL GOVERN INSTALLATION.
10. HEIGHT = 8'-0" VERTICAL
11. ALL WORK SHALL CONFORM WITH THE PROJECT SPECIFICATIONS.



NOTE:
1. ALL CONCRETE MUST HAVE A MINIMUM COMPRESSIVE STRENGTH OF 2500 PSI @ 28 DAYS.
2. ALL GATES AND FENCES TO MATCH EXISTING SCE FENCES OR GATES.

TRANSFORMER DETAIL [OR APP'D EQUAL]

12

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1452 EDINGER AVENUE
TUSTIN, CA 92780

smartlink
10 CHURCH CIRCLE,
ANNAPOLIS, MD 21401

ellsite concepts
16885 VIA DEL CAMPO CT., SUITE 318
SAN DIEGO, CA 92127
tel: (858) 432-4112 / (858) 432-4257

REV	DATE	DESCRIPTION
2	10/03/2024	PLAN CHECK COMMENTS
1	08/02/2024	PLAN CHECK COMMENTS/ ADDED FIBER DESIGN
0	04/26/2024	100% CD'S
B	04/19/2023	REMOVED MW ANTENNA
A	11/04/2022	90% CD'S FOR REVIEW

ISSUED DATE: 10/03/2024

ISSUED FOR: BP SUBMITTAL

LICENSURE:

10/4/2024

PROJECT INFORMATION:
CLL01408
PONTIAC FIREBIRD
2470 WEST PIONEER AVE. #A,
FULLERTON, CA 92832

DRAWN BY: AJYR
CHECKED BY: SVF

SHEET TITLE: EQUIPMENT DETAILS

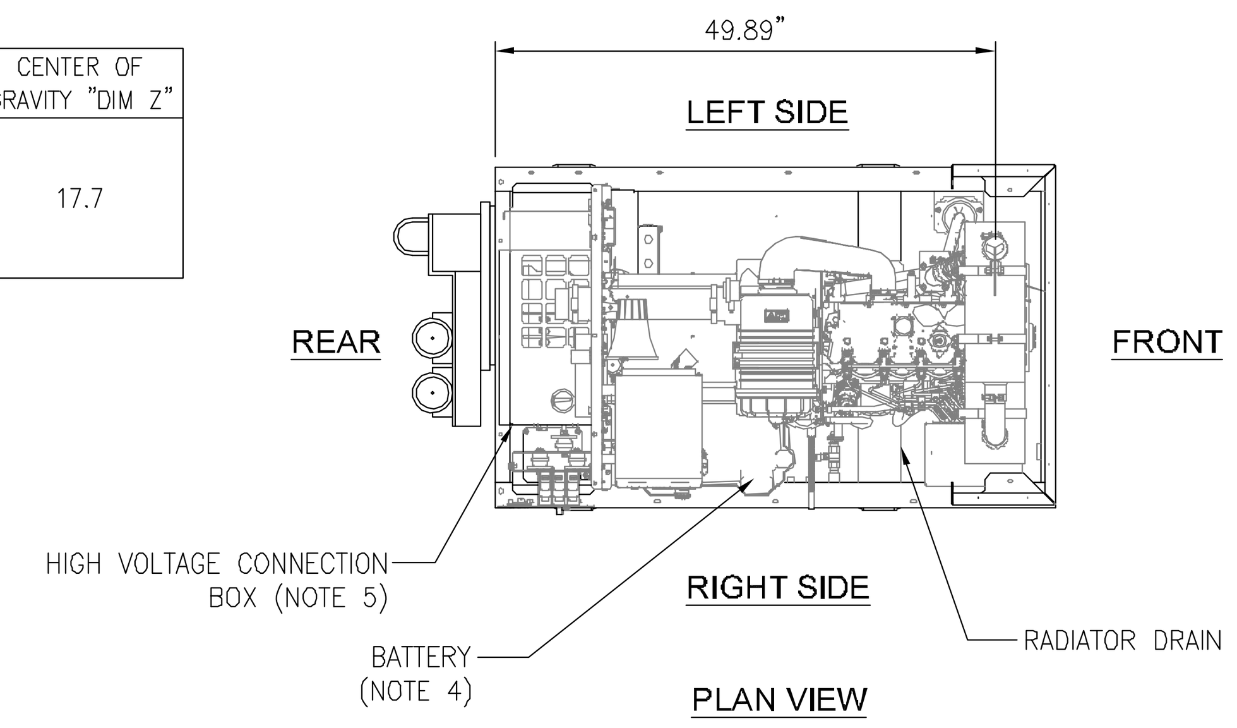
SHEET NUMBER: A-11

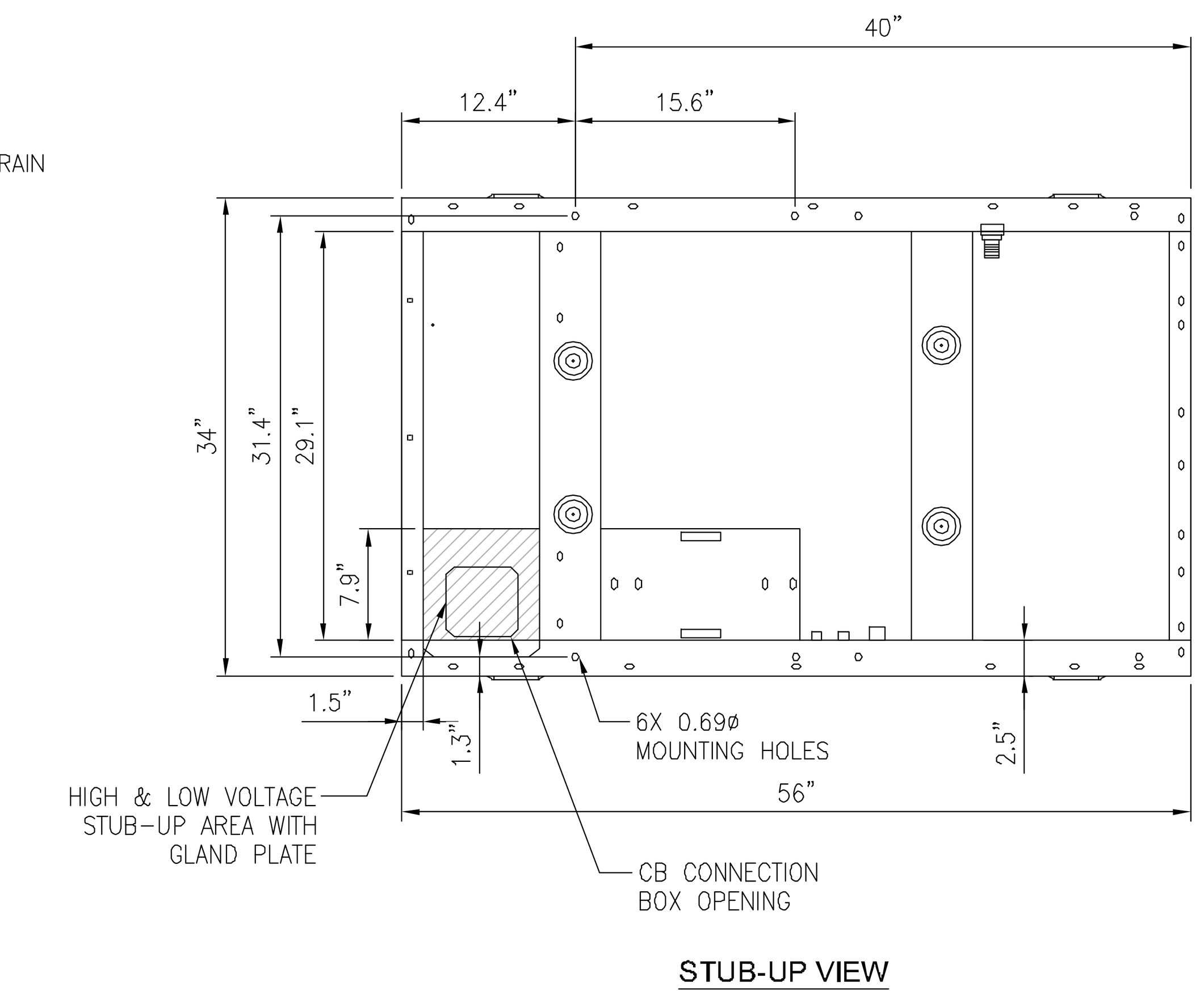
NOTES:
1. CONTROL PANEL. (2 AMP BATTERY CHARGER INSIDE)
2. 120V, 20A GFCI & 250V, 15A OUTLET (OPTIONAL)
3. CONNECTION POINTS FOR CONTROL WIRES PROVIDED IN THE LOW VOLTAGE CONNECTION BOX
4. BATTERY (12 VOLT NEGATIVE GROUND SYSTEM)
5. MAIN LINE CIRCUIT BREAKER (MLCB). AC LOAD LEADS.
   MAIN LINE CIRCUIT BREAKER INFORMATION:
   - SEE SPECIFICATON SHEET OR OWNERS MANUAL
   - ACCESSIBLE THROUGH CUSTOMER ACCESS ASSEMBLY DOOR ON REAR OF GENERATOR
   (DIMENSIONS MAY VARY DUE TO UNIT CONFIGURATION)
6. CENTER OF GRAVITY AND WEIGHT MAY CHANGE DUE TO UNIT OPTIONS FOR WEIGHT AND CENTER OF GRAVITY DATA SHEET 3.
7. ENGINE SERVICE CONNECTIONS:
   INLET DIESEL = 1/4" NPT
   RETURN DIESEL = 1/4" NPT
   OIL DRAIN = 1/2" NPT
   RADIATOR DRAIN = 1/4" NPT
   FLEX PIPE OUTLET = 2" ID
   EXHAUST OUTLET = 2 ID
   ****** SEE GENERATOR SIZING GUIDE FOR FUEL PIPE SIZING TO SUIT APPLICATION *****
8. GENERATOR SET MUST BE INSTALLED SUCH THAT FRESH COOLING AIR IS AVAILABLE AND DISCHARGE AIR FROM THE RADIATOR IS NOT RECIRCULATED.
9. BOTTOM OF GENERATOR SET MUST BE ENCLOSED TO PREVENT PEST INTRUSION AND RECIRCULATION OF DISCHARGE AIR AND/OR IMPROPER COOLING AIR FLOW.
10. EXHAUST SYSTEM MAXIMUM BACK PRESSURE = 10" H20 (ADDITIONAL)
11. REMOVE THE REAR ENCLOSURE COVER PANEL TO ACCESS THE STUB-UP AREAS AS FOLLOWS:
   -HIGH VOLTAGE CONNECTION INCLUDING AC LOAD LEAD CONDUIT CONNECTION, NEUTRAL CONNECTION, BATTERY CHARGER 120V AC (0.5 AMP MAX) CONNECTION LOW VOLTAGE CONNECTION INCLUDING TRANSFER SWITCH CONTROL WIRES.
12. BOLTS OR STUDS USED TO MOUNT UNIT TO PAD SHALL BE 5/8 - I I GRADE 5
13. ONE SIDE MAY HAVE A SMALLER CLEARANCE THAN THE OTHERS. IF THE SIDE WITH REDUCED CLEARANCE IS EITHER FRONT OF BACK THAT MINIMUM CLEARANCE IS 16". THE THREE REMAINING SIDES MUST HAVE 60" CLEARANCE. IF THE SIDE WITH REDUCED CLEARANCE IS THE LEFT OR RIGHT THAT MINIMUM CLEARANCE IS 30". THE THREE REMAINING SIDES MUST HAVE 60" CLEARANCE,

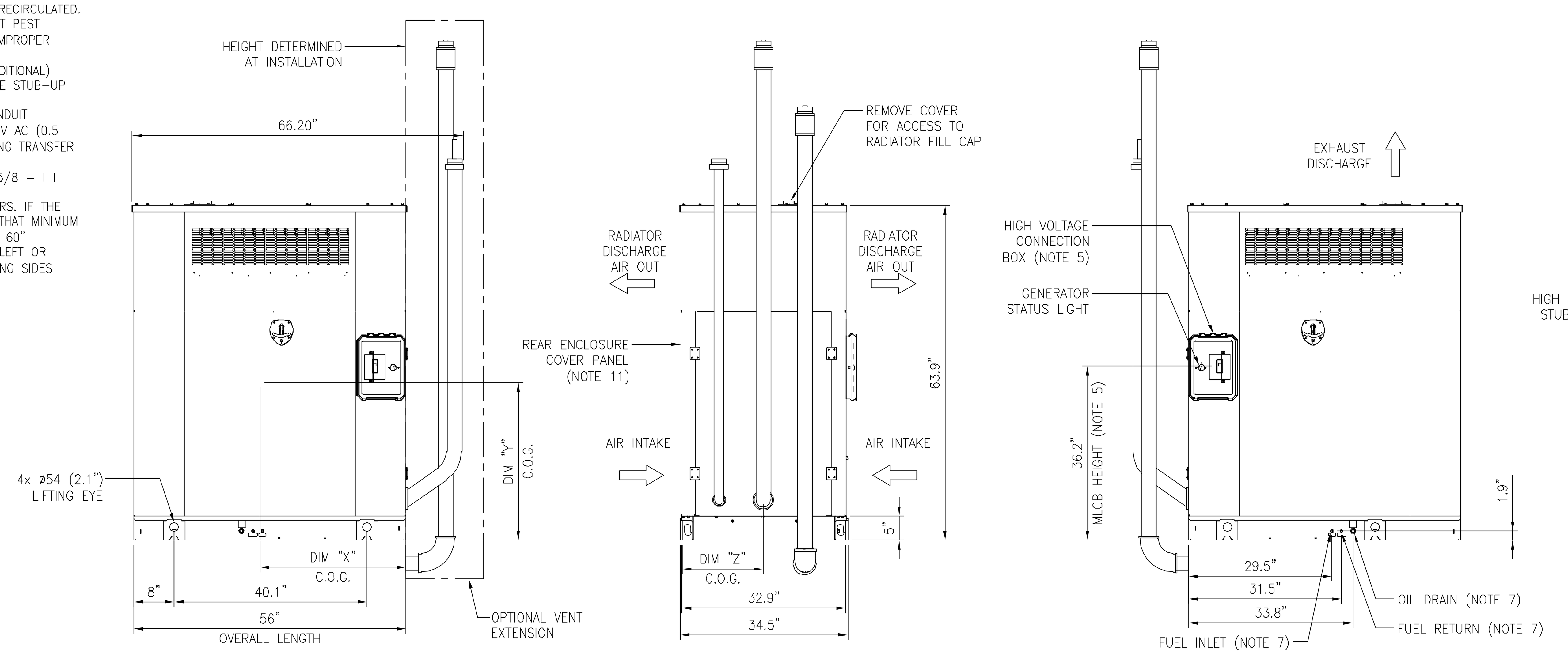
SERVICE ITEM	
OIL FILL CAP	RIGHT SIDE
OIL DIP STICK	RIGHT SIDE
OIL FILTER	RIGHT SIDE
OIL DRAIN HOSE	RIGHT SIDE
RADIATOR DRAIN HOSE	RIGHT SIDE
COOLANT RECOVERY BOTTLE	RIGHT SIDE
RADIOTOR FILL CAP ACCESS	ROOF
AIR CLEANER ELEMENT	RIGHT SIDE
FUEL FILTER	RIGHT SIDE
BATTERY	RIGHT SIDE

L2A ENCLOSURE, ALUMINUM

MODEL	VOLTAGE	WEIGHT	CENTER OF GRAVITY "DIM X"	CENTER OF GRAVITY "DIM Y"	CENTER OF GRAVITY "DIM Z"
SD20	240V, 1ø	1465 LBS	29.1	TBD	17.7
SD20	208V, 240V, 480V, 600V 3ø	1470.9 LBS	29.0	TBD	

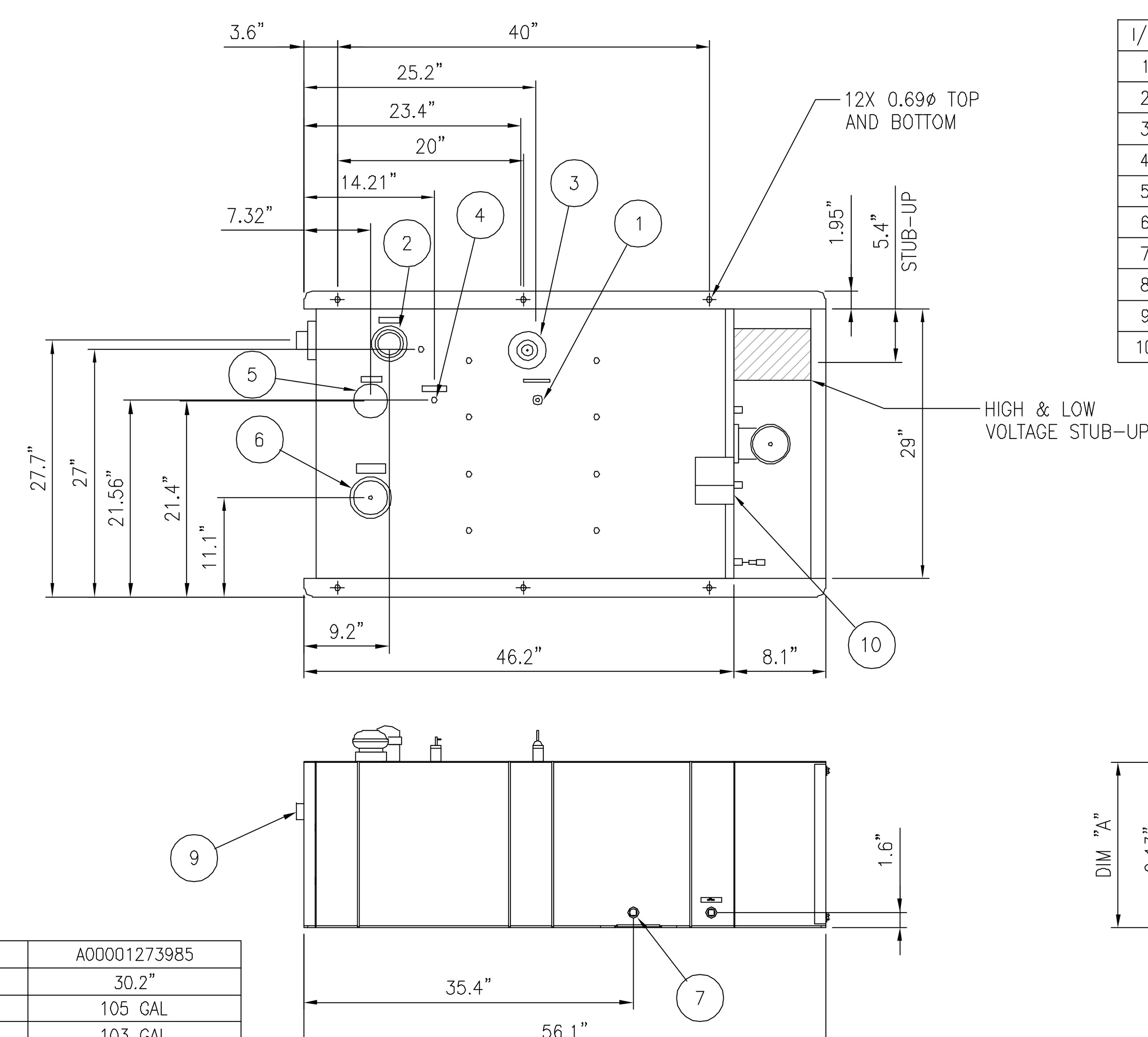






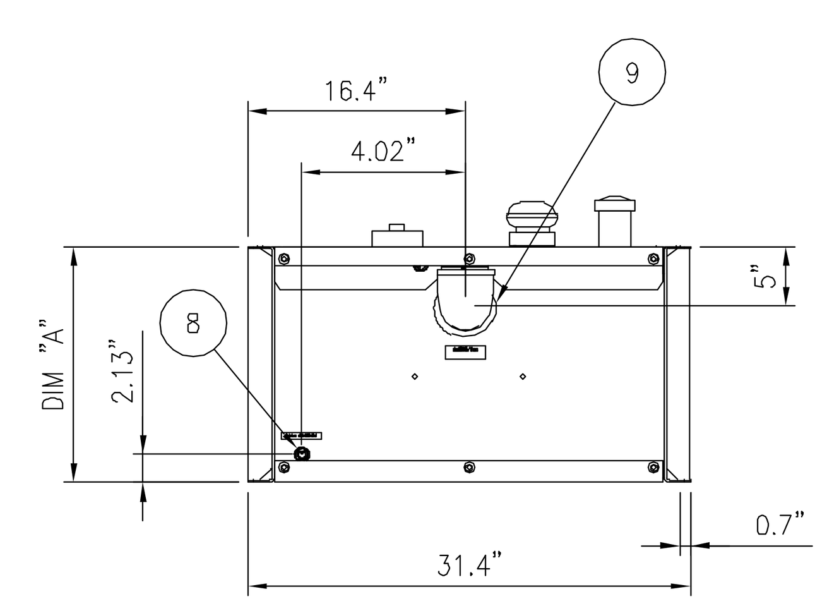
20kW GENERAC COMPACT AC GENERATOR SDC020 DETAIL

24"x36" SCALE: NTS
11"x17" SCALE: NTS
1



I/N	TANK FITTING	PROVIDING FUNCTION
1	3/8" NPT COUPLING	FUEL SUPPLY
2	2" NPT WELD FLANGE	FUEL FILL
3	FUEL LEVEL OPENING	FUEL LEVEL
4	3/8" NPT COUPLING	FUEL RETURN
5	2" NPT WELD FLANGE	VENT
6	3" NPT WELD FLANGE	EMERGENCY VENT
7	3/4" NPT COUPLING	VENT
8	1/2" NPT HALF COUPLING	LEAK DETECTOR
9	3" NPT WELD FLANGE	OUTER EMERGENCY VENT
10	1/2" NPT HALF COUPLING	FLUID DETECTOR (OPTIONAL)

UL = 142 / ULC-S601 LISTED



TANK P/N	A00001273353	A00001273985
DIM "A"	18.4"	30.2"
TOTAL CAPACITY	56 GAL	105 GAL
USABLE CAPACITY	51 GAL	103 GAL
DRY WEIGHT	449 LBS	625 LBS

20kW GENERAC COMPACT GENERATOR SDC020 FUEL TANK DETAILS

24"x36" SCALE: NTS
11"x17" SCALE: NTS
2

DANGER
NO SMOKING
NO OPEN FLAMES
NO SPARKS

DANGER
DIESEL FUEL

DANGER
CLASS II COMBUSTIBLE LIQUID & IRRITANT LIQUID

NOTES:
1. ALL LETTERS SHALL BE ON A CONTRASTING BACKGROUND.
2. SIGNS SHALL BE DURABLE CONSTRUCTION AND SUITABLE FOR THE ENVIRONMENT IN WHICH THEY ARE POSTED.
3. LETTERS SHALL NOT BE LESS THAN 3" IN HEIGHT

HAZARD SIGNAGE

24"x36" SCALE: NTS
11"x17" SCALE: NTS
3

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ANNAPOLIS, MD 21401

elite site concepts
16885 VIA DEL CAMPO CT., SUITE 318
SAN DIEGO, CA 92127
tel: (858) 432-4112 / (858) 432-4257

REV	DATE	DESCRIPTION
2	10/03/2024	PLAN CHECK COMMENTS
1	08/02/2024	PLAN CHECK COMMENTS/ ADDED FIBER DESIGN
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A	11/04/2022	90% CD'S FOR REVIEW

ISSUED DATE:
10/03/2024

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BP SUBMITTAL

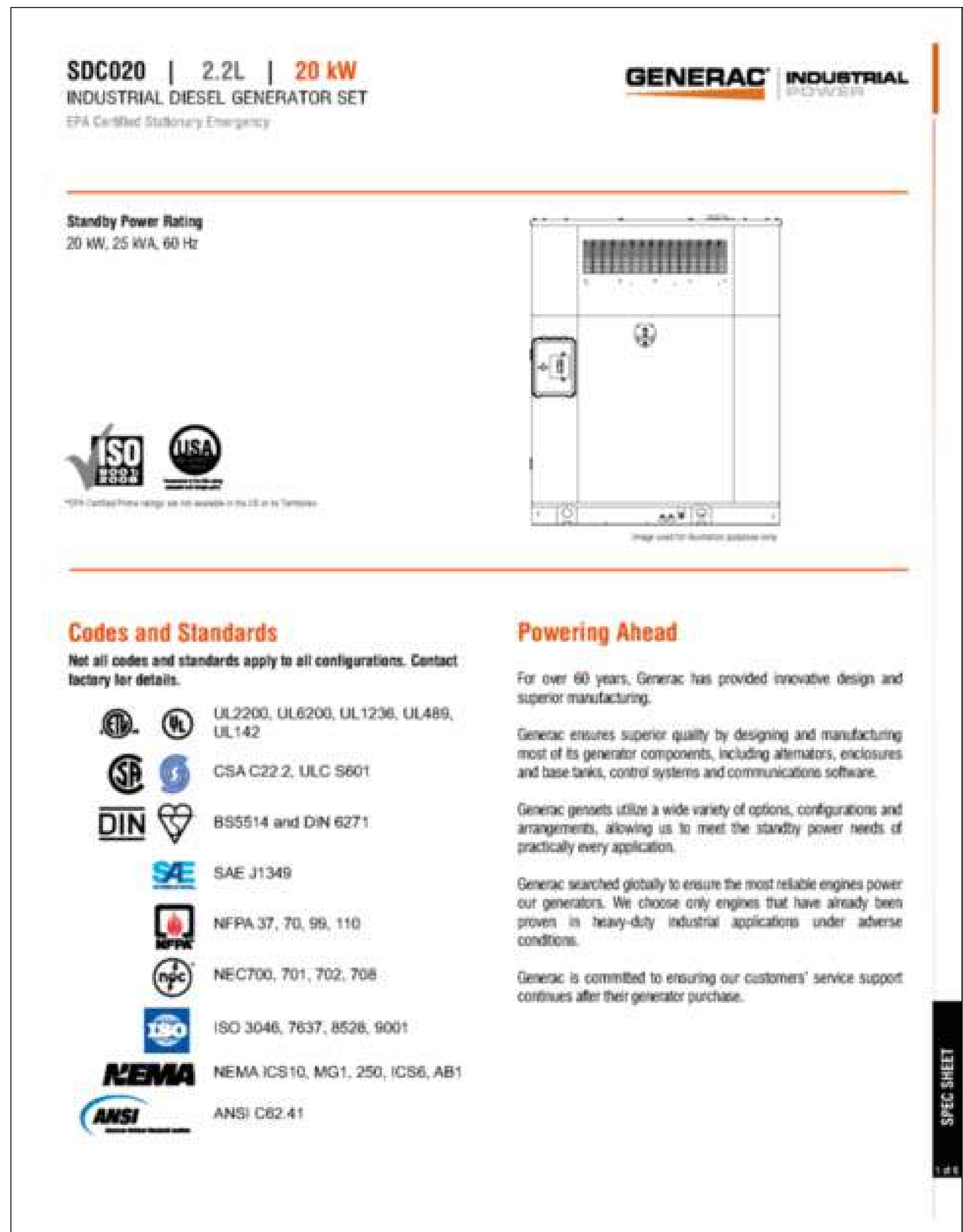
LICENSURE:

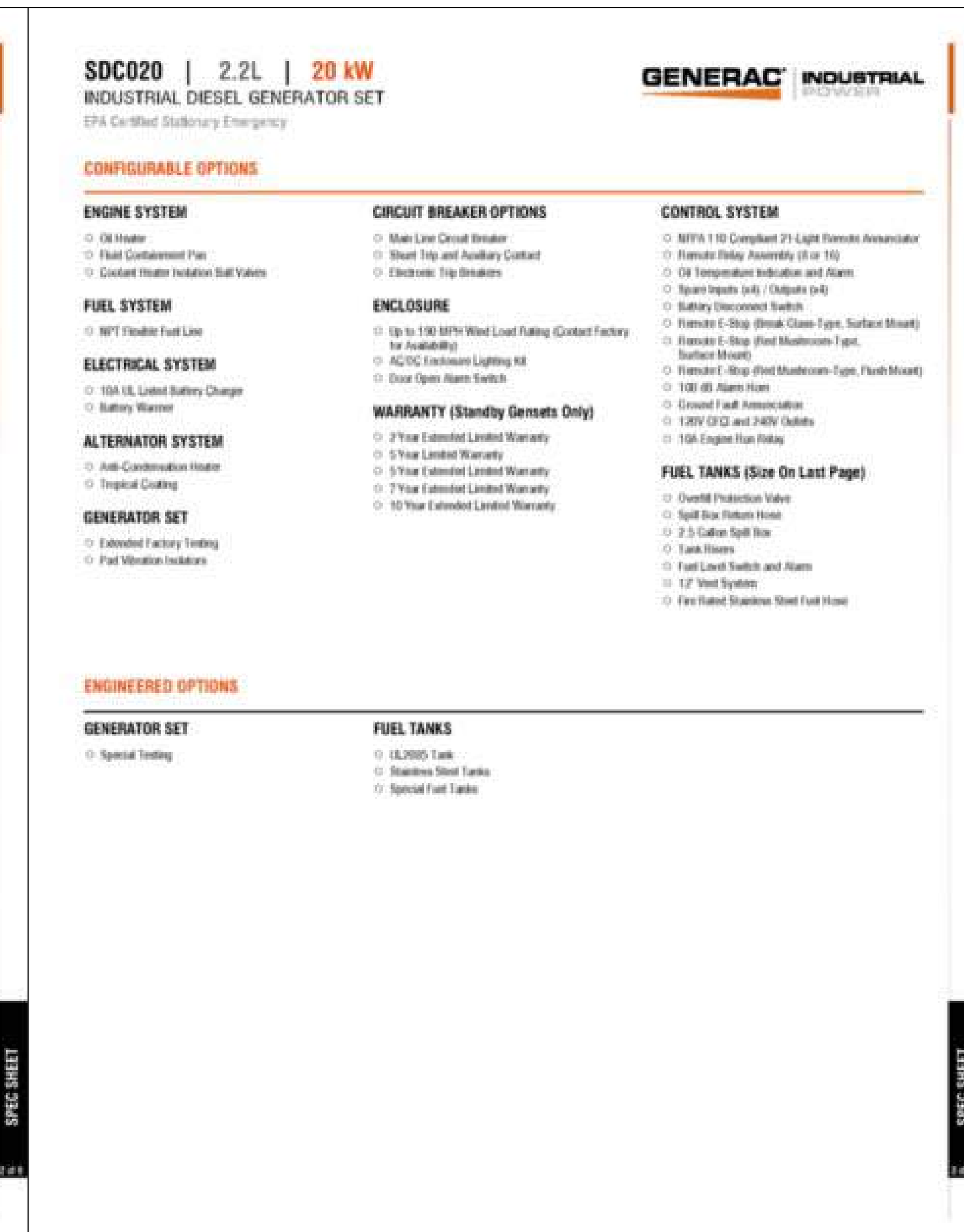
PROJECT INFORMATION:
CLL01408
PONTIAC FIREBIRD
2470 WEST PIONEER AVE. #A,
FULLERTON, CA 92832

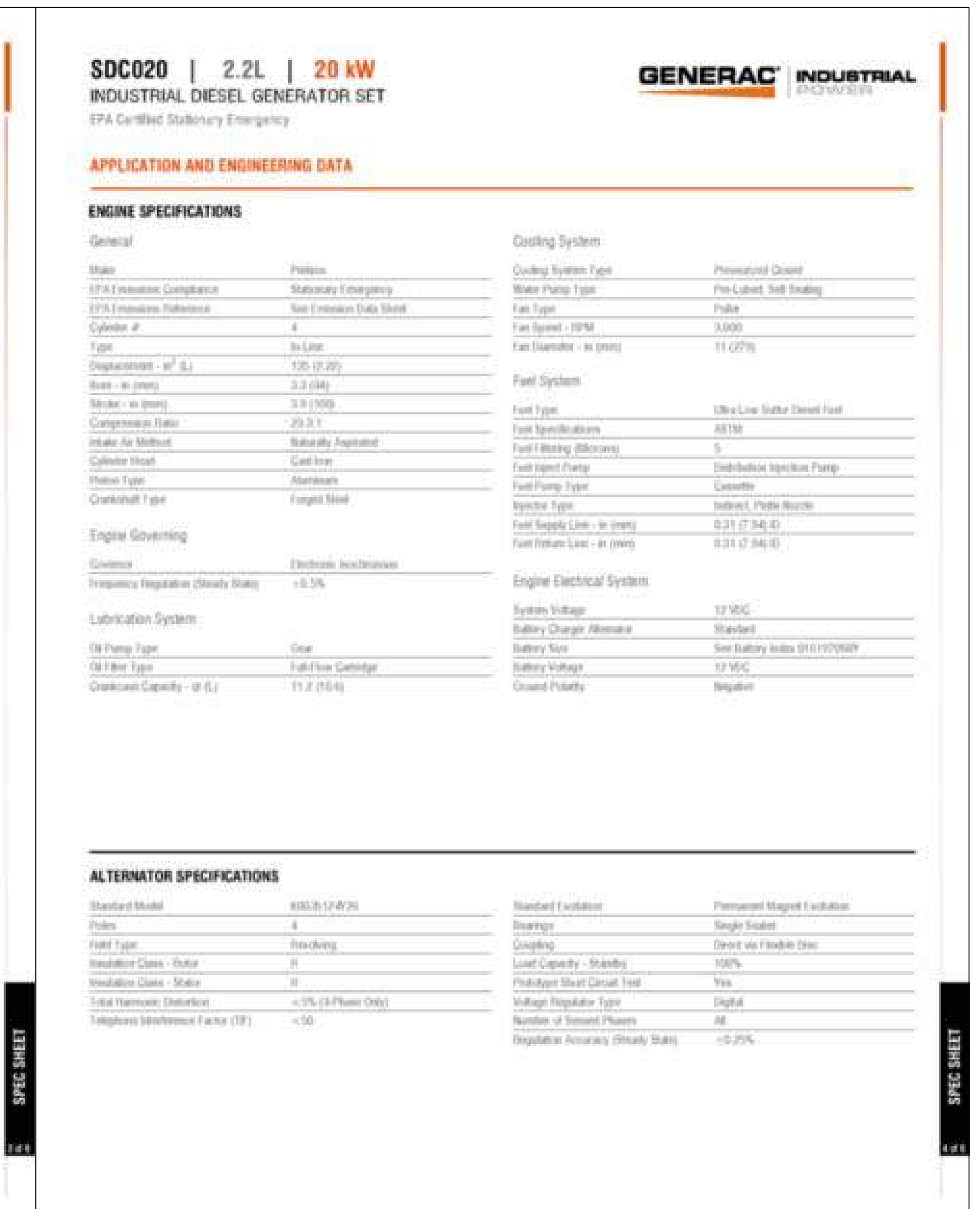
DRAWN BY: AJYR
CHECKED BY: SVF

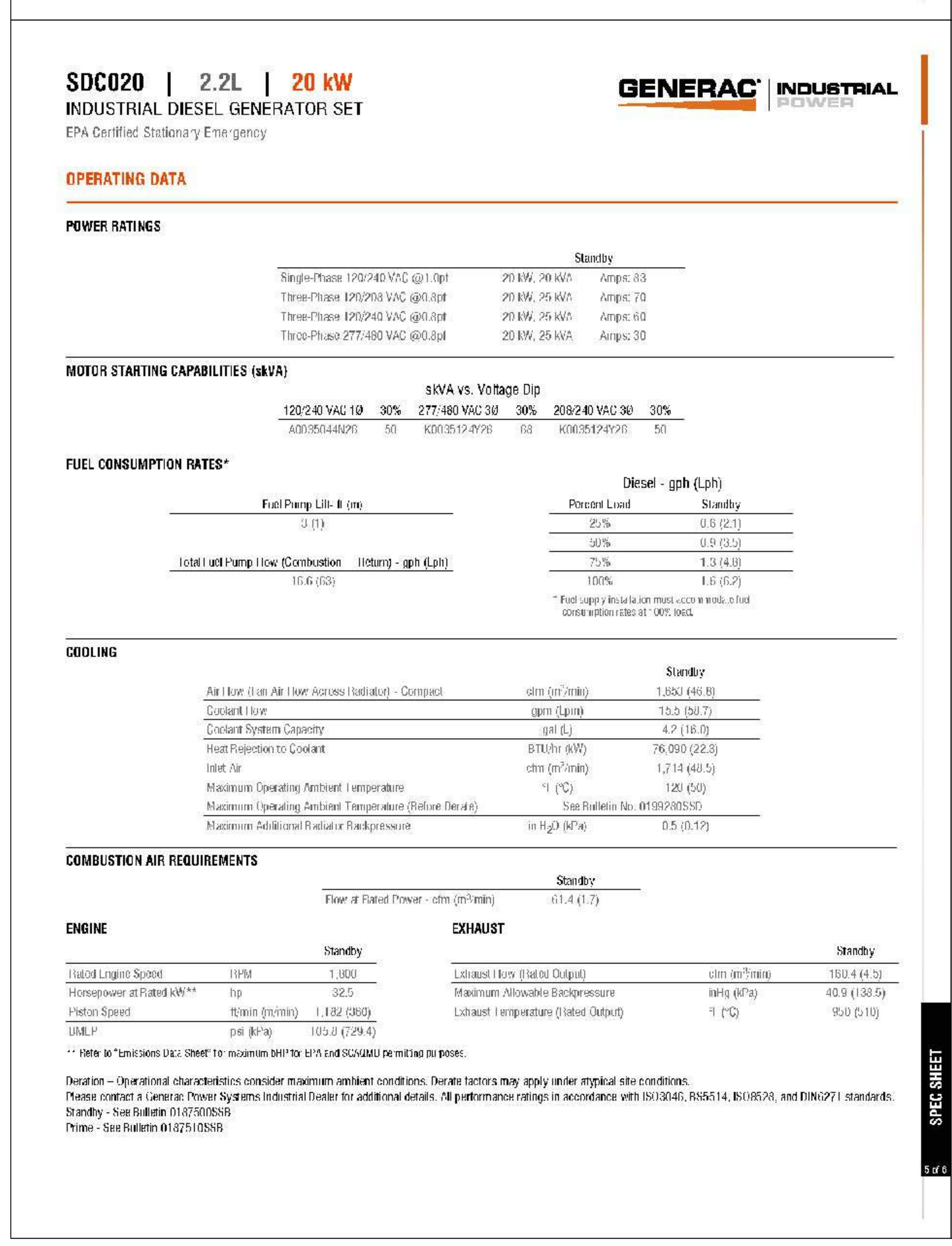
SHEET TITLE:
EQUIPMENT DETAILS

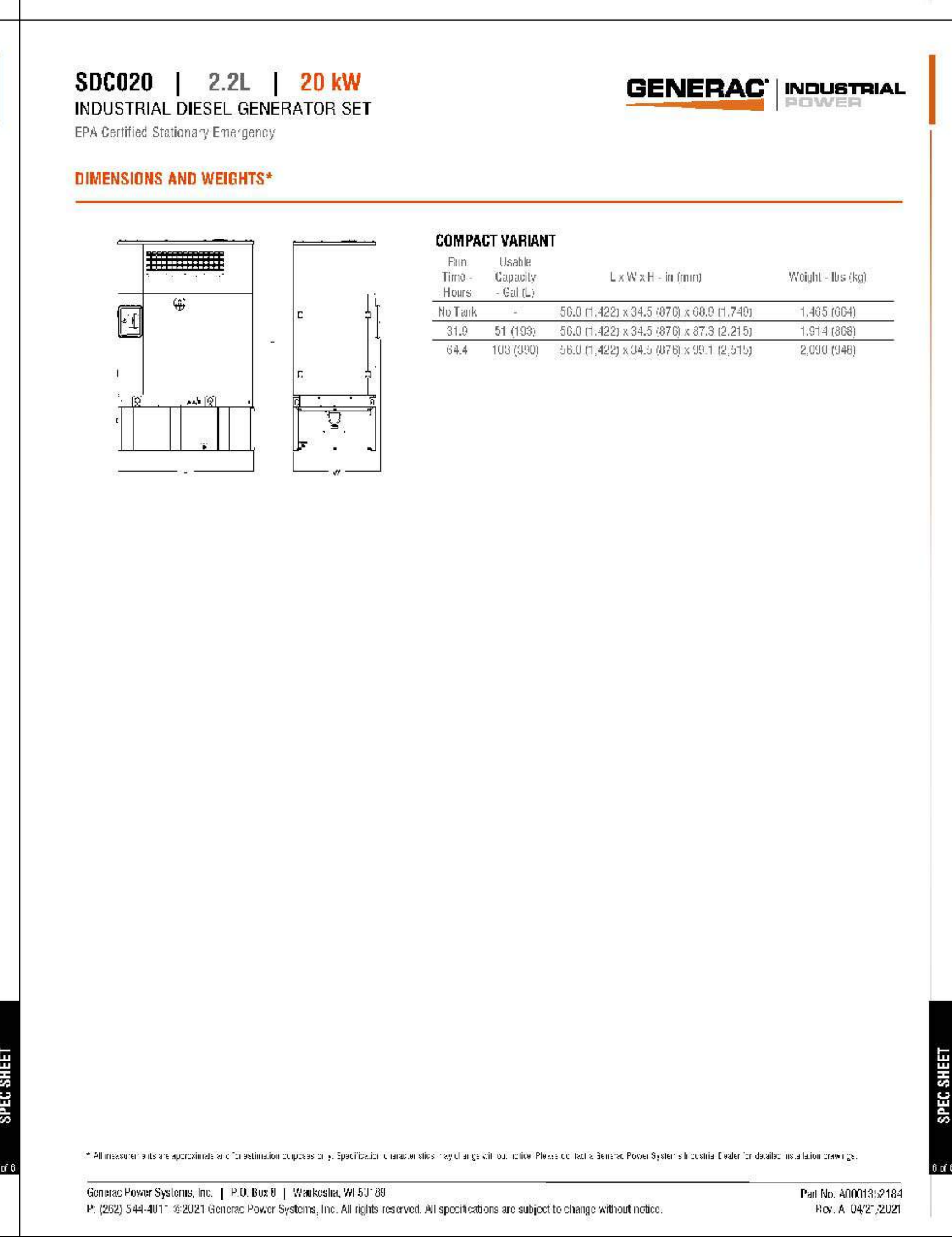
SHEET NUMBER:
A-12











GENERAC | INDUSTRIAL POWER

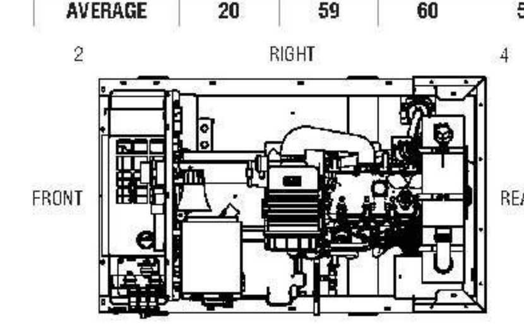
SOUND ATTENUATED ENCLOSURE
D2.2, Generac SDC020

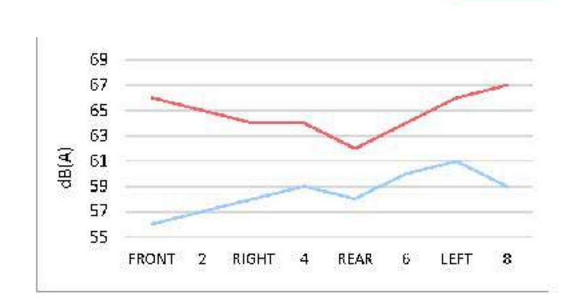
NO-LOAD, dB(A) — DISTANCE: 7 METERS

MICROPHONE LOCATION	31.5	63	125	250	500	1,000	2,000	4,000	8,000	dB(A)
	OCTAVE BAND CENTER FREQUENCY (Hz)									
FRONT	20	40	53	50	50	50	46	44	35	56
2	19	43	50	50	55	51	48	44	38	57
RIGHT	18	50	47	51	56	50	48	46	37	58
4	21	56	49	50	53	53	50	46	38	59
REAR	21	56	51	51	50	50	46	44	35	58
6	20	56	49	50	54	54	48	43	35	60
LEFT	18	53	47	52	59	53	50	47	39	61
8	19	43	54	52	55	54	48	44	38	59
AVERAGE	**20**	**50**	**50**	**51**	**54**	**52**	**48**	**45**	**37**	**59**

FULL-LOAD, dB(A) — DISTANCE: 7 METERS

MICROPHONE LOCATION	31.5	63	125	250	500	1,000	2,000	4,000	8,000	dB(A)
	OCTAVE BAND CENTER FREQUENCY (Hz)									
FRONT	21	57	65	52	55	53	50	50	40	66
2	19	59	61	52	57	55	51	51	43	65
RIGHT	19	59	59	54	57	54	52	52	44	64
4	21	60	58	54	55	54	52	51	42	64
REAR	23	58	59	52	53	52	49	49	38	62
6	21	60	55	53	57	55	52	49	39	64
LEFT	19	62	58	55	60	55	53	51	43	66
8	19	60	64	55	57	56	52	51	44	67
AVERAGE	**20**	**59**	**60**	**53**	**57**	**54**	**51**	**51**	**42**	**65**





- All positions at 23 feet (7 meters) from side faces of generator set.
- Test conducted on a 100 foot diameter asphalt surface.
- Sound pressure levels are subject to instrumentation, installation and testing conditions.
- Sound levels are ±2 dB(A).

SOUND DATA 1 of 1

Generac Power Systems, Inc. | P.O. Box 8 | Waukesha, WI 53187

Part No. A0001352186
Rev. A 2/17/21

SOUND DATA SHEET

20kW GENERAC COMPACT GENERATOR SDC020 FUEL TANK SPECIFICATIONS 2

24"x36" SCALE: NTS
11"x17" SCALE: NTS

1

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1452 EDINGER AVENUE
TUSTIN, CA 92780

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ANNAPOLIS, MD 21401

cellsite concepts
16885 VIA DEL CAMPO CT., SUITE 318
SAN DIEGO, CA 92127
tel: (858) 432-4112 / (858) 432-4257

REV	DATE	DESCRIPTION
2	10/03/2024	PLAN CHECK COMMENTS
1	08/02/2024	PLAN CHECK COMMENTS/ ADDED FIBER DESIGN
0	04/26/2024	100% CD'S
B	04/19/2023	REMOVED MW ANTENNA
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ISSUED DATE:
10/03/2024

ISSUED FOR:
BP SUBMITTAL

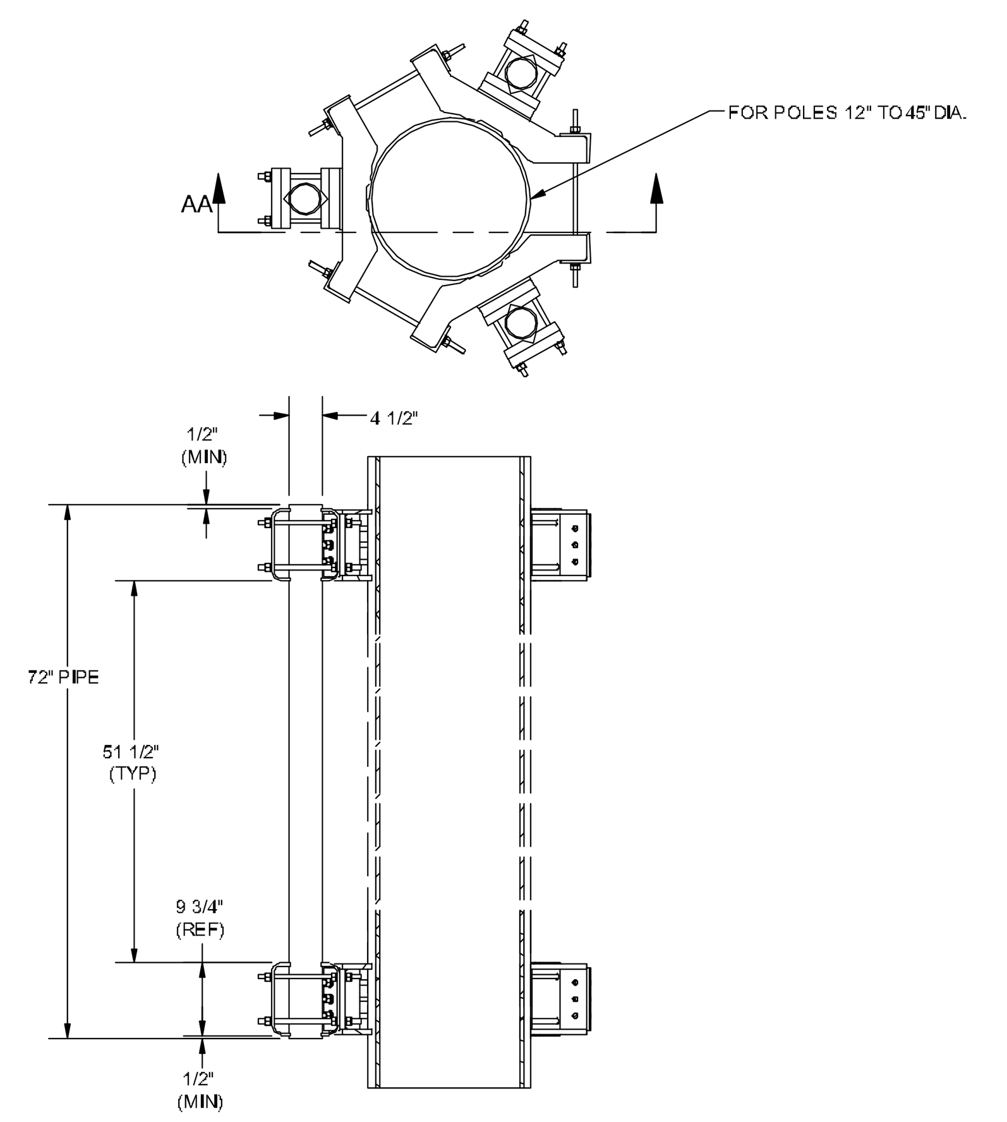
LICENSURE:
10/4/2024

PROJECT INFORMATION:
CLL01408
PONTIAC FIREBIRD
2470 WEST PIONEER AVE. #A,
FULLERTON, CA 92832

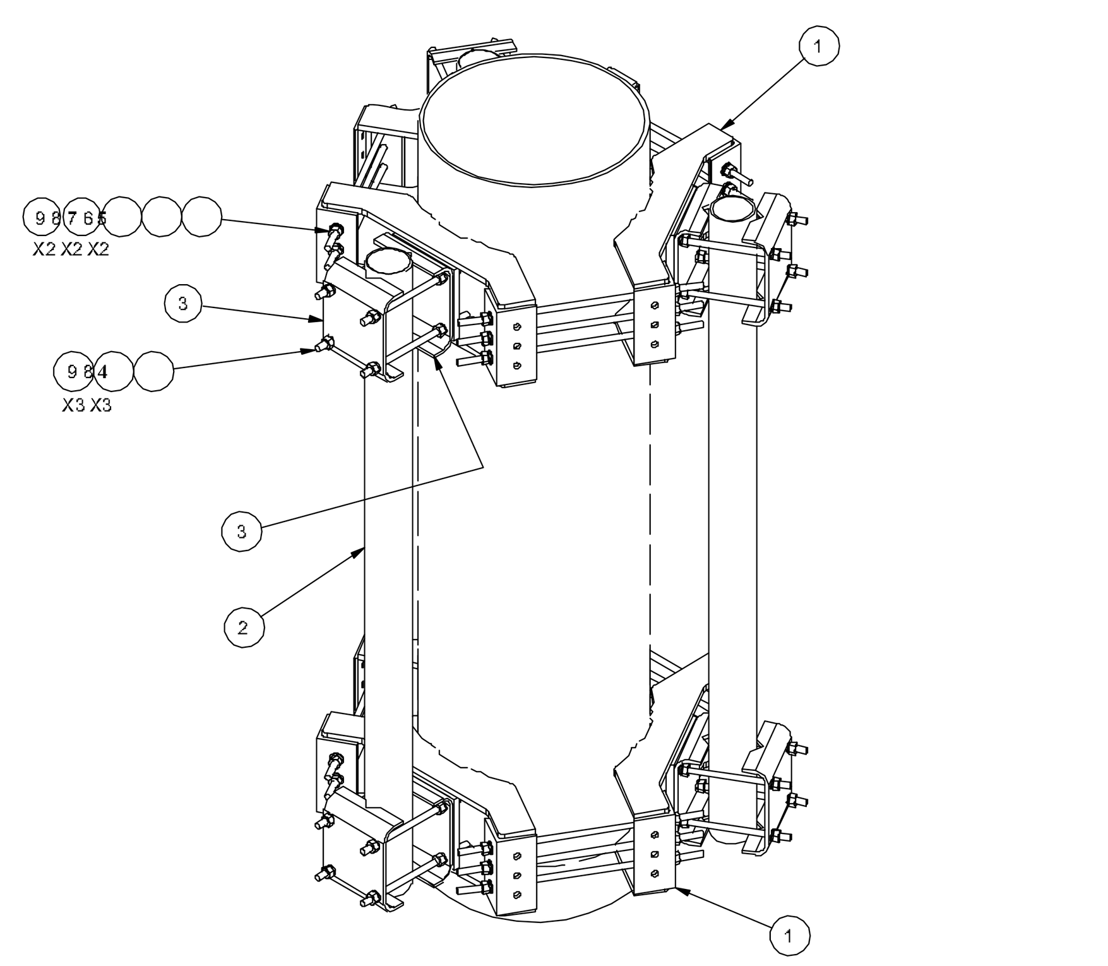
DRAWN BY: AJYR
CHECKED BY: SVF

SHEET TITLE:
EQUIPMENT DETAILS 2

SHEET NUMBER:
A-12.1 2



PARTS LIST						
ITEM	QTY	PART NO.	PART DESCRIPTION	LENGTH	UNIT WT.	NET WT
1	6	X-LWRM	RING MOUNT WELDMENT		68.16	408.96
2	3	P472	4-1/2" X 72" SCH. 40 GALVANIZED PIPE	72 in	64.89	194.68
3	12	X-214130	BENT PLATE V-CLAMP	12 5/8 in	11.43	137.16
4	24	G58R-14	5/8" x 14" THREADED ROD (HDG.)	14 in	0.40	9.57
5	18	G58R-48	5/8" x 48" THREADED ROD (HDG.)	48 in	.55	9.90
6	18	G58R-24	5/8" x 24" THREADED ROD (HDG.)	24 in	.55	9.90
7	36	A58FW	5/8" HDG A325 FLATWASHER		.03	1.08
8	108	G58LW	5/8" HDG LOCKWASHER		0.03	3.24
9	108	A58NUT	5/8" HDG A325 HEX NUT		0.13	14.04
					TOTAL WT. #	788.53



TOLERANCE NOTES

TOLERANCES ON DIMENSIONS, UNLESS OTHERWISE NOTED ARE:
SAWED, SHEARED AND GAS CUT EDGES (± 0.030")
DRILLED AND GAS CUT HOLES (± 0.030") - NO CONING OF HOLES
LASER CUT EDGES AND HOLES (± 0.010") - NO CONING OF HOLES
BENDS ARE ± 1/2 DEGREE
ALL OTHER MACHINING (± 0.030")
ALL OTHER ASSEMBLY (± 0.060")

PROPRIETARY NOTE:
THE DATA AND TECHNIQUES CONTAINED IN THIS DRAWING ARE PROPRIETARY INFORMATION OF VALMONT INDUSTRIES AND CONSIDERED A TRADE SECRET. ANY USE OR DISCLOSURE WITHOUT THE CONSENT OF VALMONT INDUSTRIES IS STRICTLY PROHIBITED.

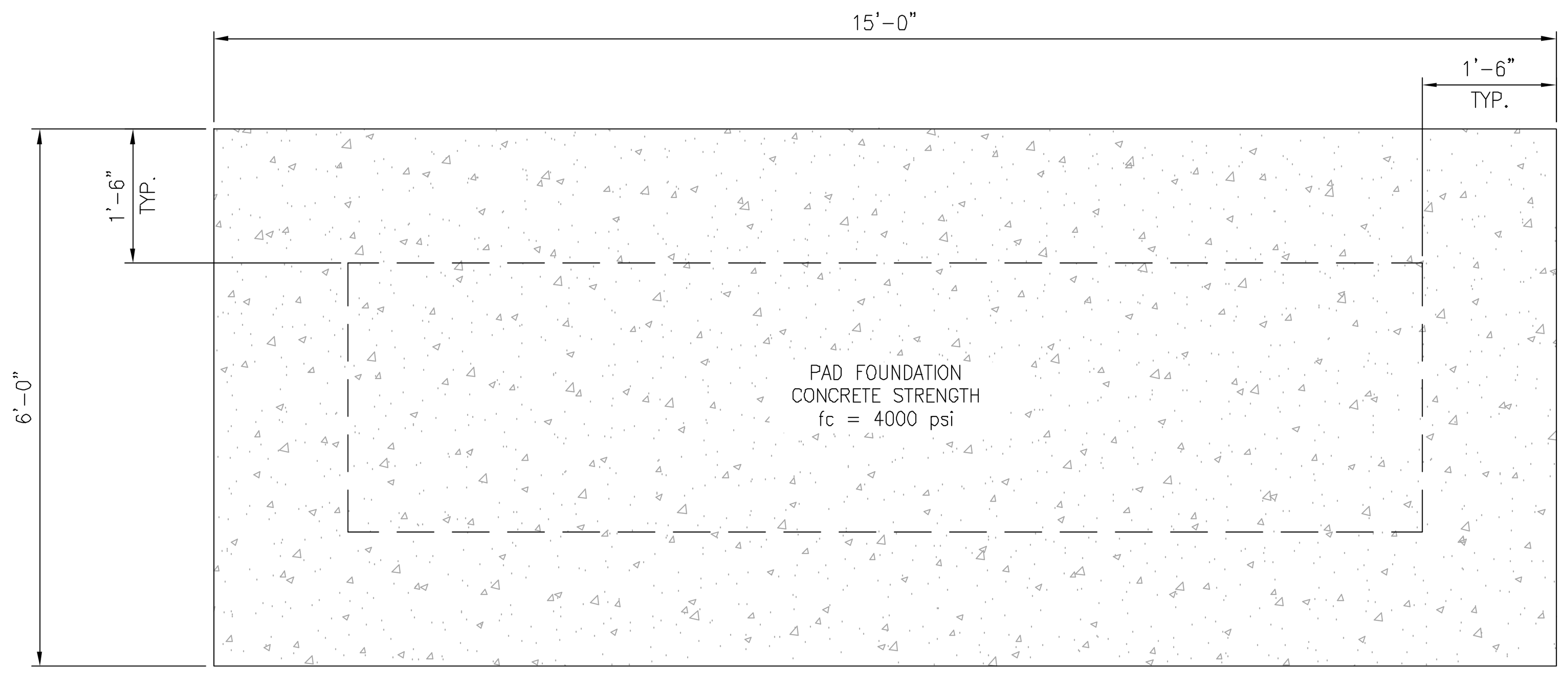
DESCRIPTION
MONOPOLE SECTOR FRAME
ATTACHMENT ASSEMBLY

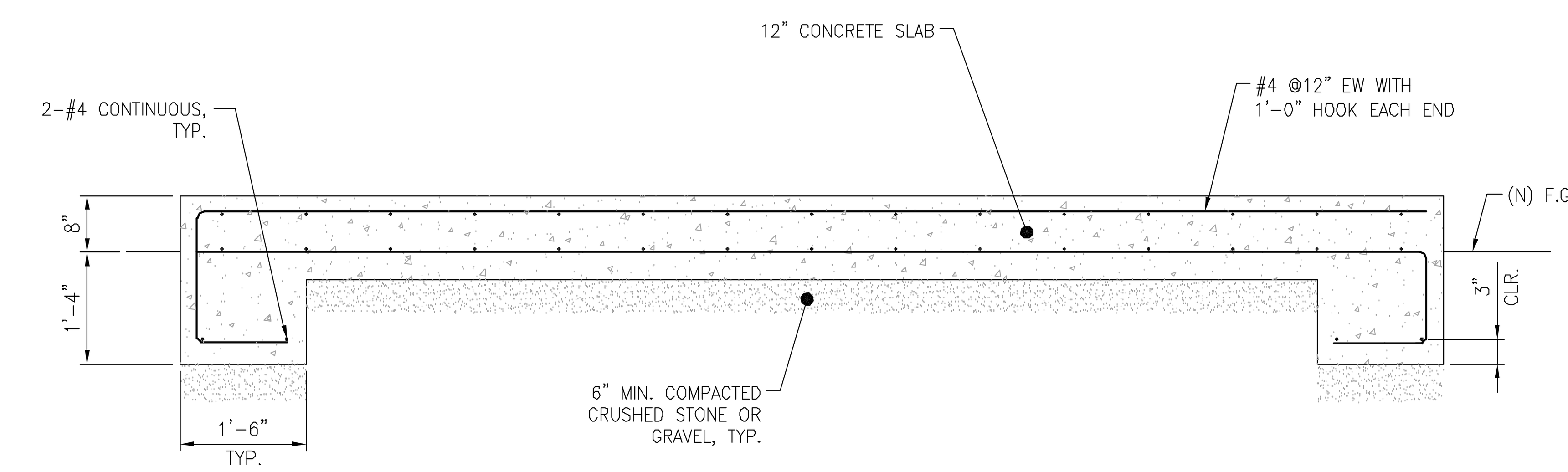
SITE PRO 1 — A valmont COMPANY
Engineering Support Team: 1-888-753-7446
Locations: New York, NY; Atlanta, GA; Los Angeles, CA; Plymouth, IN; Salem, OR; Dallas, TX

CPD NO.	DRAWN BY	ENG. APPROVAL	PART NO.	PAGE
	KC8 3/18/2016	3RD PARTY	MSFAA	1 OF 1
CLASS 01 / SUB 01	DRAWING USAGE: CUSTOMER	CHECKED BY: BMC 5/2/2016	DWG. NO.: MSFAA	

RING MOUNT DETAIL

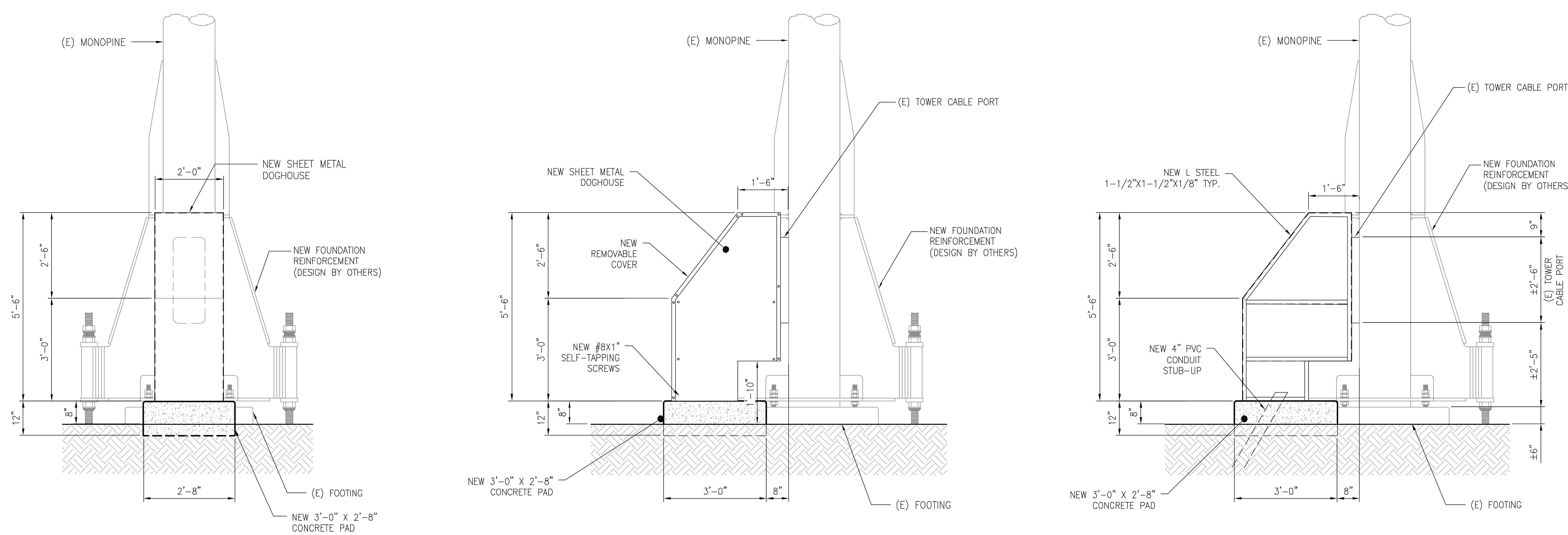
24"x36" SCALE: NTS
11"x17" SCALE: NTS
1





CONCRETE PAD DETAIL

24"x36" SCALE: NTS
11"x17" SCALE: NTS
2



CABLE SHROUD DETAIL

24"x36" SCALE: NTS
11"x17" SCALE: NTS
3

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1452 EDINGER AVENUE
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10 CHURCH CIRCLE,
ANNAPOLIS, MD 21401

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16885 VIA DEL CAMPO CT., SUITE 318
SAN DIEGO, CA 92127
tel: (858) 432-4112 / (858) 432-4257

REV	DATE	DESCRIPTION
2	10/03/2024	PLAN CHECK COMMENTS
1	08/02/2024	PLAN CHECK COMMENTS/ ADDED FIBER DESIGN
0	04/26/2024	100% CD'S
B	04/19/2023	REMOVED MW ANTENNA
A	11/04/2022	90% CD'S FOR REVIEW

ISSUED DATE:
10/03/2024

ISSUED FOR:
BP SUBMITTAL

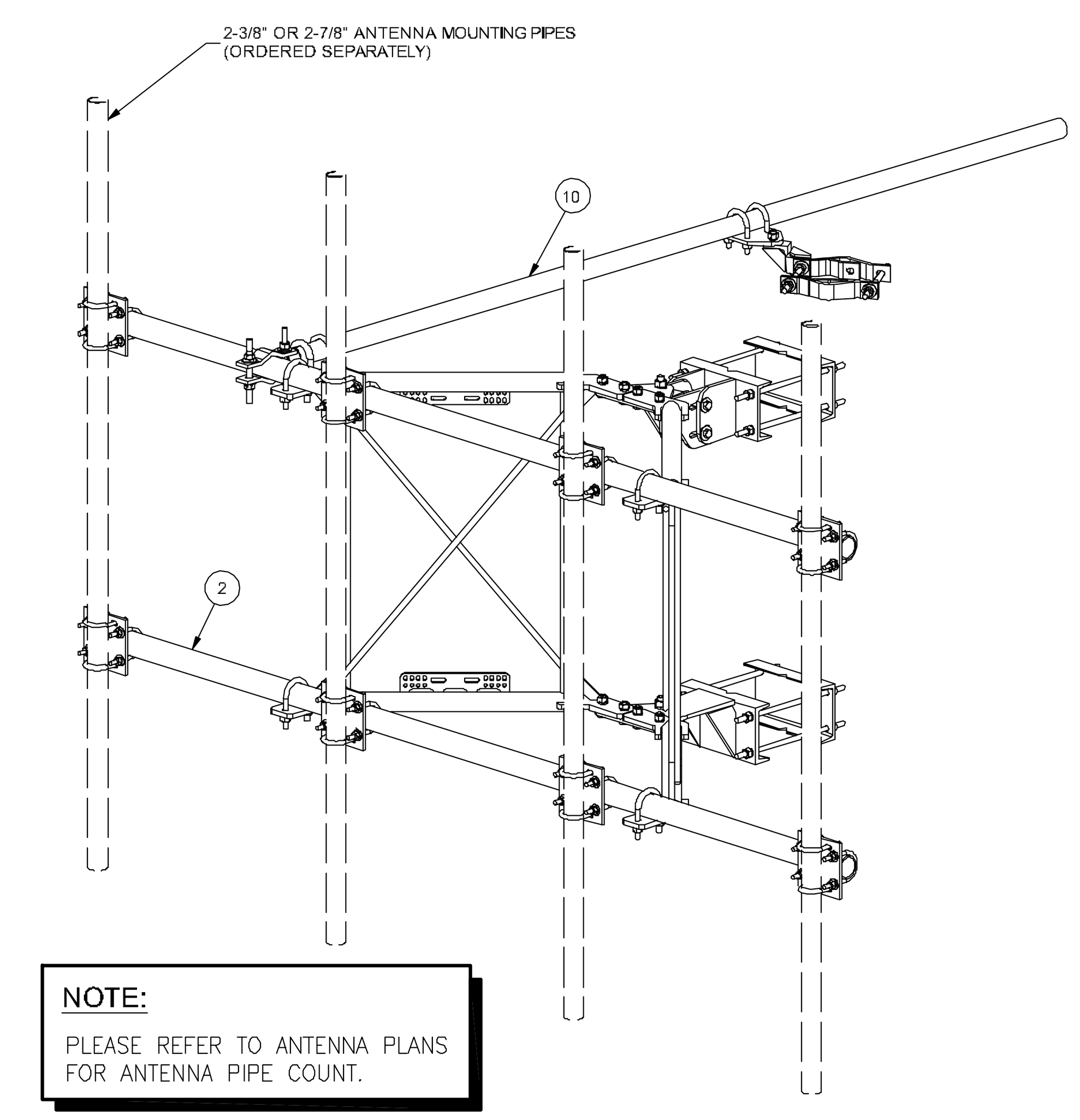
LICENSURE:
EXP. 09/30/25
CIVIL
STATE OF CALIFORNIA
10/4/2024

PROJECT INFORMATION:
CLL01408
PONTIAC FIREBIRD
2470 WEST PIONEER AVE. #A,
FULLERTON, CA 92832

DRAWN BY: AJYR
CHECKED BY: SVF

SHEET TITLE:
EQUIPMENT
DETAILS

SHEET NUMBER:
A-13



NOTE:

PLEASE REFER TO ANTENNA PLANS FOR ANTENNA PIPE COUNT.

PARTS LIST						
ITEM	QTY	PART NO.	PART DESCRIPTION	LENGTH	UNIT WT.	NET WT.
1	2	X-VFAW	SUPPORT ARM		71.41	142.81
2	2	P30126	2-7/8" O.D. X 126" SCH. 40 PIPE	126 in	64.63	129.25
3	1	X-HDMHTP	HEAVY DUTY MULTI-HOLE TAPER PLATE WELDMENT		29.36	29.36
4	1	X-HDCAMDSS	CLAMP WELDMENT FOR BCAM-HD		28.59	28.59
5	2	X-HDLCBB	HEAVY DUTY LEG CONNECTION BACKING BRACKET	13 in	16.66	33.33
6	1	X-HDCAMSS	ANGLE ADJUSTMENT WELDMENT FOR BCAM-HD		16.51	16.51
7	2	X-VFAPL3	VFA-HD PIVOT PLATE	24 in	9.69	19.38
8	1	X-HDCAMSP	POSITIONING PLATE WELDMENT FOR BCAM-HD		2.58	2.58
9	2	X-TBCA	TIE BACK CLIP ANGLE		2.01	4.01
10	1	P2126	2-3/8" X 126" (2" SCH. 40) GALVANIZED PIPE	126 in	40.75	40.75
11	2	X-SPTB	SLIDING PIPE TIE BACK PLATE	5 1/2 in	5.87	11.74
12	8	SCX2	CROSSOVER PLATE	7 in	4.80	38.37
13	2	MCP	CLAMP HALF 1/2" THICK, 11-5/8" LONG	12 1/16 in	3.59	7.19
14	4	DCP	1/2" THICK, 5-3/4" CNTER TO CENTER CLAMP HALF	8 1/8 in	2.36	9.45
15	2	A34212	3/4" x 2-1/2" UNC HEX BOLT (A325)	2 1/2 in	0.48	0.96
16	2	G34LW	3/4" HDG LOCKWASHER		0.04	0.09
17	2	G34NUT	3/4" HDG HEAVY 2H HEX NUT		0.21	0.42
18	8	G58R-18	5/8" x 18" THREADED ROD (HDG.)	18 in	0.40	3.19
19	2	G58R-12	5/8" x 12" THREADED ROD (HDG.)		1.05	2.09
20	4	G58R-8	5/8" x 8" THREADED ROD (HDG.)		0.70	2.79
21	4	X-UB5300	5/8" X 3" X 5-1/4" X 2-1/2" U-BOLT (HDG.)		1.15	4.60
22	4	X-UB5258	5/8" X 2-5/8" X 4-1/2" X 2" U-BOLT (HDG.)		1.00	4.00
23	2	G5807	5/8" x 7" HDG HEX BOLT GR5 FULL THREAD	7 in	0.70	1.41
24	1	G5806	5/8" x 6" HDG HEX BOLT GR5 FULL THREAD	6 in	0.62	0.62
25	4	G5804	5/8" x 4" HDG HEX BOLT GR5		0.44	1.78
26	8	A582114	5/8" x 2-1/4" HDG A325 HEX BOLT	2 1/4 in	0.31	2.50
27	2	G5802	5/8" x 2" HDG HEX BOLT GR5		0.27	0.54
28	15	G58FW	5/8" HDG USS FLATWASHER	1/8 in	0.07	1.06
29	52	G58LW	5/8" HDG LOCKWASHER		0.03	1.36
30	55	G58NUT	5/8" HDG HEAVY 2H HEX NUT		0.13	7.14
31	32	X-UB1300	1/2" X 3" X 5" X 2" GALV U-BOLT		0.74	23.64
32	16	X-UB1212	1/2" X 2-1/2" X 4-1/2" X 2" U-BOLT (HDG.)		0.63	10.00
33	64	G12FW	1/2" HDG USS FLATWASHER	3/32 in	0.03	2.18
34	64	G12LW	1/2" HDG LOCKWASHER	1/8 in	0.01	0.89
35	64	G12NUT	1/2" HDG HEAVY 2H HEX NUT		0.07	4.58
					TOTAL WT. #	598.51

ANT 16005

REV	DESCRIPTION OF REVISIONS	CPD	BY	DATE
A	UPDATED TIE-BACK / SECTOR FRAME LEG CONNECTION		CEK	12/22/2017

REVISION HISTORY

TOLERANCE NOTES

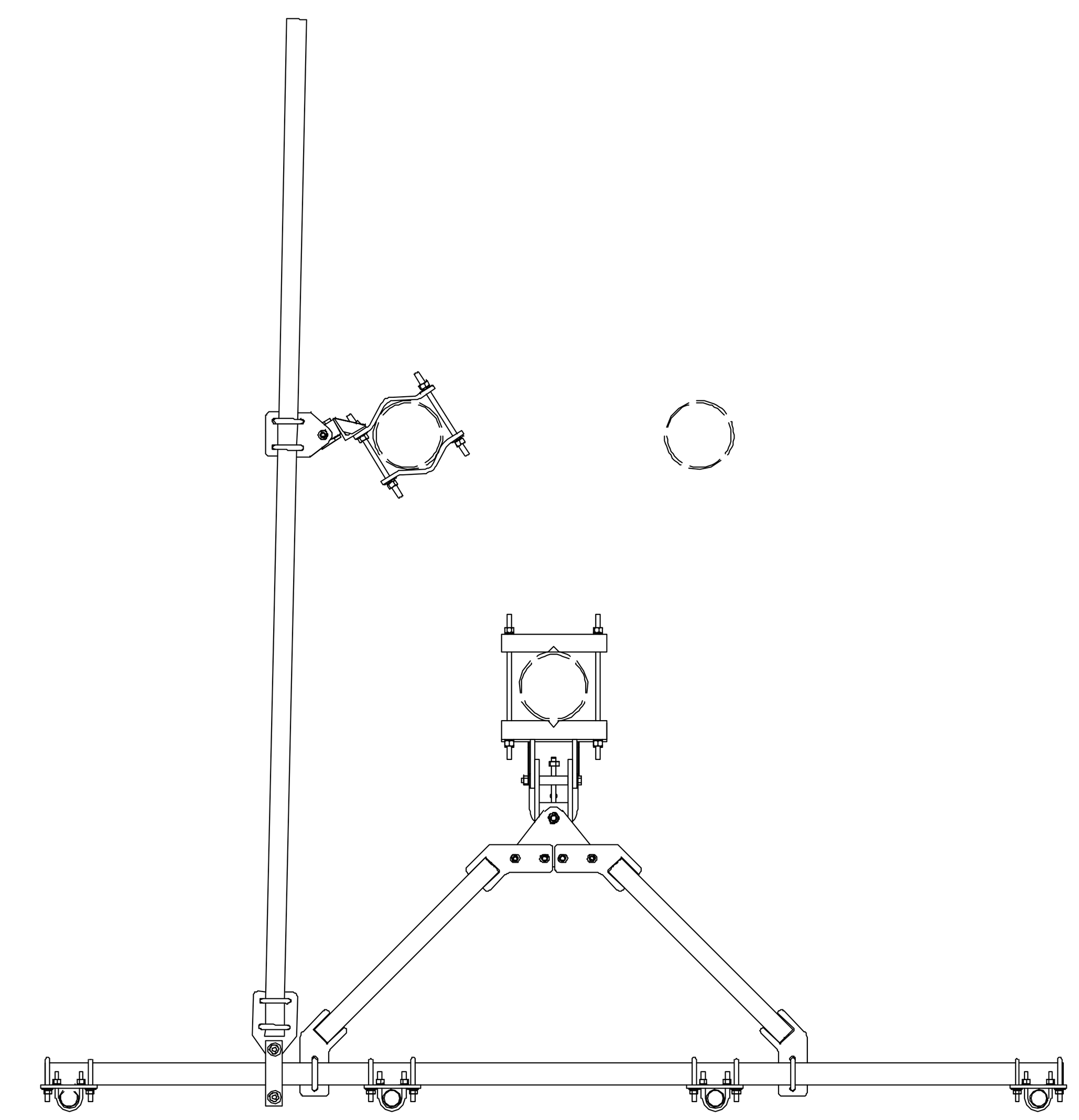
TOLERANCES ON DIMENSIONS, UNLESS OTHERWISE NOTED ARE:
SAWED, SHEARED AND GAS CUT EDGES (± 0.030")
DRILLED AND GAS CUT HOLES (± 0.030") - NO CONING OF HOLES
LASER CUT EDGES AND HOLES (± 0.010") - NO CONING OF HOLES
BENDS ARE ± 1/2 DEGREE
ALL OTHER MACHINING (± 0.030")
ALL OTHER ASSEMBLY (± 0.060")

PROPRIETARY NOTE: THE DATA AND TECHNIQUES CONTAINED IN THIS DRAWING ARE PROPRIETARY INFORMATION OF VALMONT INDUSTRIES AND CONSIDERED A TRADE SECRET. ANY USE OR DISCLOSURE WITHOUT THE CONSENT OF VALMONT INDUSTRIES IS STRICTLY PROHIBITED.

DESCRIPTION: ONE SECTOR HEAVY 10 FRAME AND SELF-SUPPORT / GUYED TOWER ATTACHMENT HDW., NO MOUNTING PIPES

SITE PRO 1 — A valmont COMPANY — Engineering Support Team: 1-888-753-7446 — Locations: New York, NY; Atlanta, GA; Los Angeles, CA; Plymouth, IN; Salem, OR; Dallas, TX

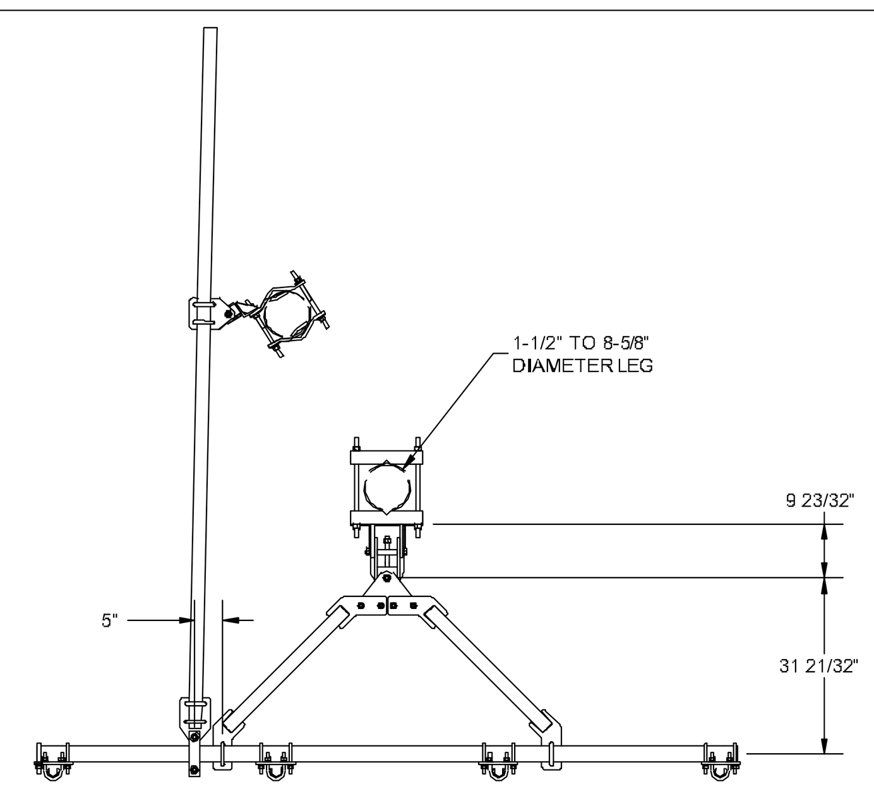
CPD NO.	DRAWN BY	ENG. APPROVAL	PART NO.	PAGE
	CEK 9/19/2016		VFA10-HD1T4NP	1 OF 4
CLASS 81 / SUB 02	DRAWING USAGE: CUSTOMER	CHECKED BY: BMC 12/22/2017	DWG. NO. VFA10-HD1T4NP	



ANT 16005

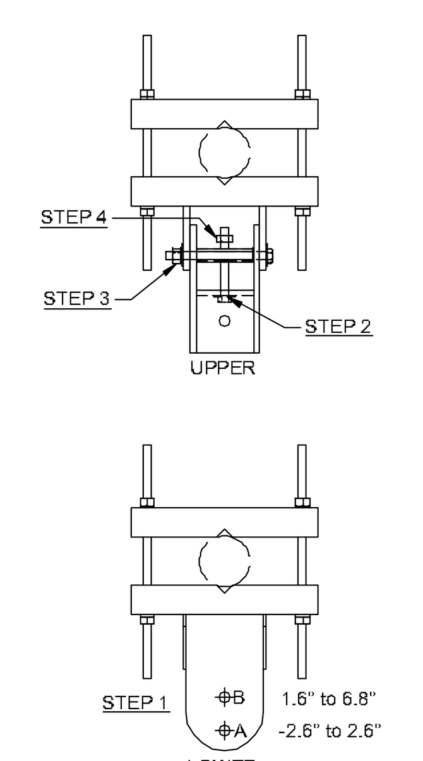
A UPDATED TIE-BACK / SECTOR FRAME LEG CONNECTION CEK 12/22/2017
REVISION HISTORY
TOLERANCE NOTES
ONE SECTOR HEAVY 10 FRAME AND SELF-SUPPORT / GUYED TOWER ATTACHMENT HDW., NO MOUNTING PIPES
CEK 9/19/2016 VFA10-HD1T4NP
81 02 CUSTOMER BMC 12/22/2017 VFA10-HD1T4NP

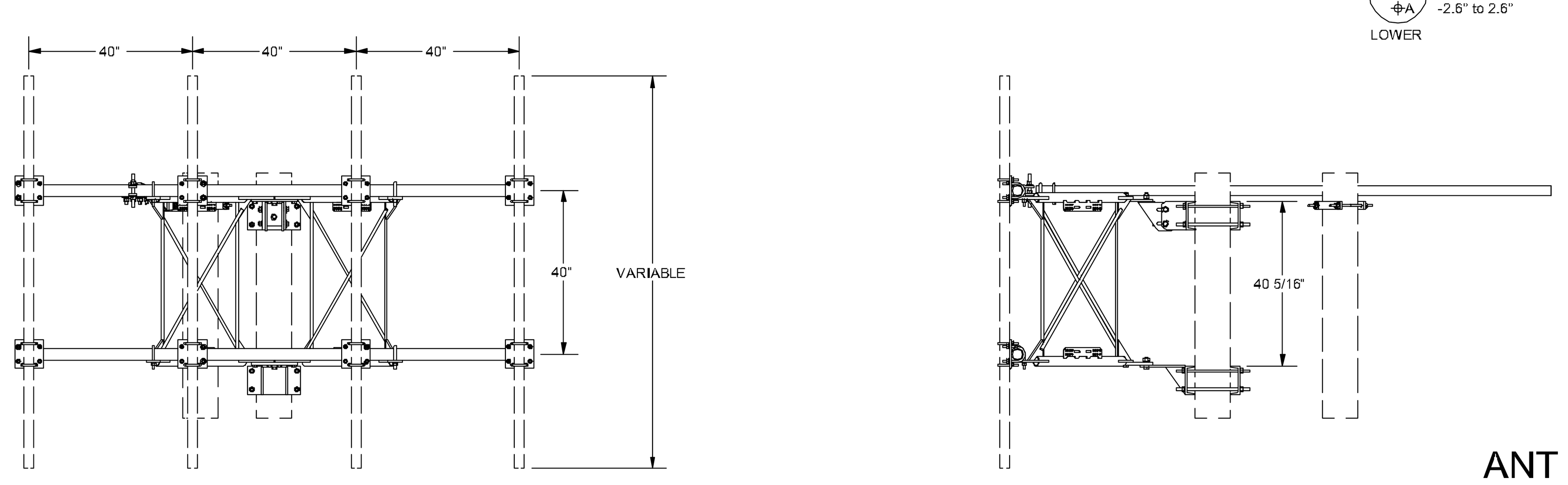
PAGE 2 OF 4



ANGLE CALIBRATING PROCEDURE:

1. MEASURE TOWER TAPER AND PICK LOWER BRACKET HOLE:
   HOLE A = -2.6" TO 2.6"
   HOLE B = 1.6" TO 6.8"
2. USE CALIBRATING BOLT TO ADJUST FRAME TO DESIRED TAPER
3. TORQUE LOCKING BOLTS TO 100 ft.-lbs.
4. ADVANCE LOCKING NUT TO POSITIONING PLATE, THEN TIGHTEN.





ANT 16005

A UPDATED TIE-BACK / SECTOR FRAME LEG CONNECTION CEK 12/22/2017
REVISION HISTORY
TOLERANCE NOTES
ONE SECTOR HEAVY 10 FRAME AND SELF-SUPPORT / GUYED TOWER ATTACHMENT HDW., NO MOUNTING PIPES
CEK 9/19/2016 VFA10-HD1T4NP
81 02 CUSTOMER BMC 12/22/2017 VFA10-HD1T4NP

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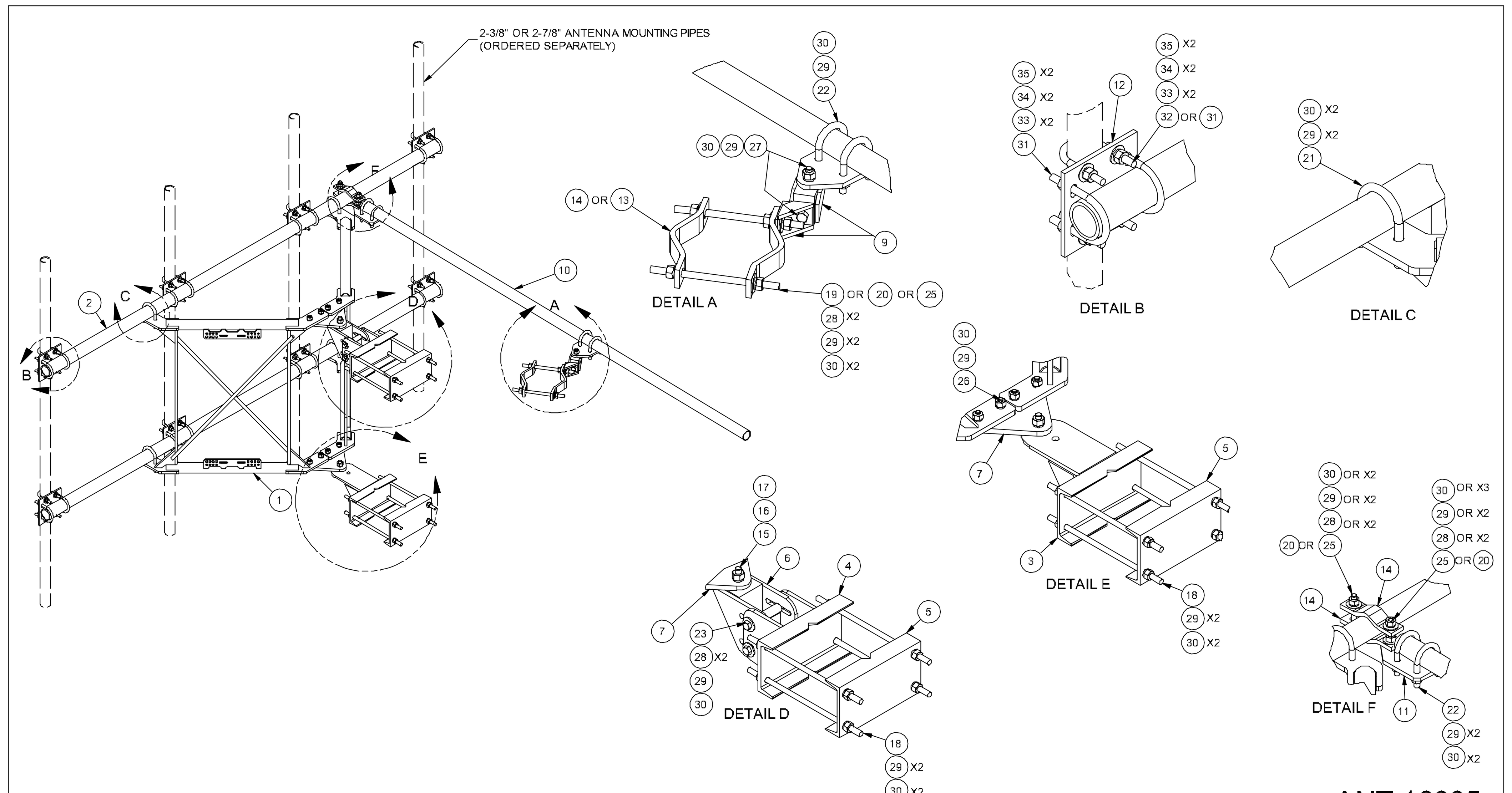

ANT 16005

A UPDATED TIE-BACK / SECTOR FRAME LEG CONNECTION CEK 12/22/2017
REVISION HISTORY
TOLERANCE NOTES
ONE SECTOR HEAVY 10 FRAME AND SELF-SUPPORT / GUYED TOWER ATTACHMENT HDW., NO MOUNTING PIPES
CEK 9/19/2016 VFA10-HD1T4NP
81 02 CUSTOMER BMC 12/22/2017 VFA10-HD1T4NP

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ANTENNA MOUNTING KIT DETAIL

24"x36" SCALE: NTS
11"x17" SCALE: NTS

1

at&t
1452 EDINGER AVENUE
TUSTIN, CA 92780

smartlink
10 CHURCH CIRCLE,
ANNAPOLIS, MD 21401

cellsite concepts
16885 VIA DEL CAMPO CT., SUITE 318
SAN DIEGO, CA 92127
tel: (858) 432-4112 / (858) 432-4257

REV	DATE	DESCRIPTION
2	10/03/2024	PLAN CHECK COMMENTS
1	08/02/2024	PLAN CHECK COMMENTS/ ADDED FIBER DESIGN
0	04/26/2024	100% CD'S
B	04/19/2023	REMOVED MW ANTENNA
A	11/04/2022	90% CD'S FOR REVIEW

ISSUED DATE:
10/03/2024

ISSUED FOR:
BP SUBMITTAL

LICENSURE:
EXP. 09/30/25
CIVIL
STATE OF CALIFORNIA
10/4/2024

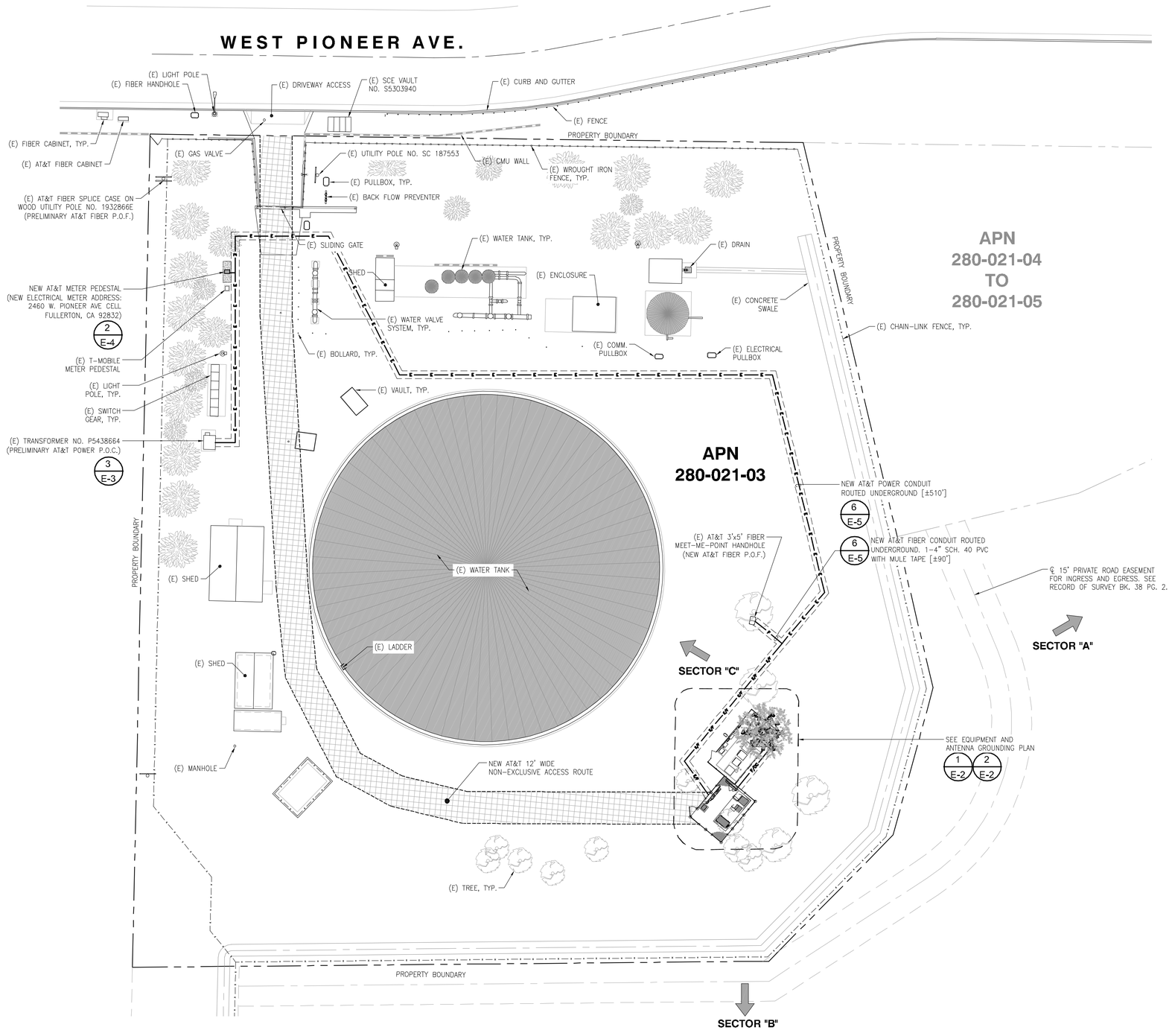
PROJECT INFORMATION:
CLL01408
PONTIAC FIREBIRD
2470 WEST PIONEER AVE. #A,
FULLERTON, CA 92832

DRAWN BY: AJYR
CHECKED BY: SVF

SHEET TITLE:
EQUIPMENT DETAILS

SHEET NUMBER:
A-14

NOTES:
1. NO EXISTING PARKING STALLS ARE BEING ADDED OR REMOVED AS PART OF THE NEW INSTALLATION.
2. NEW POWER AND TELCO PLAN IS PRELIMINARY AND SUBJECT TO CHANGE PENDING FINAL DESIGN FROM THE UTILITY COMPANY.



ELECTRICAL SITE PLAN

24"x36" SCALE: 1" = 20'-0"
11"x17" SCALE: 1" = 40'-0"
20' 10' 0' 20'

1

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tel: (858) 432-4112 / (858) 432-4257

REV	DATE	DESCRIPTION
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0	04/26/2024	100% CD'S
B	04/19/2023	REMOVED MW ANTENNA
A	11/04/2022	90% CD'S FOR REVIEW

ISSUED DATE: 10/03/2024

ISSUED FOR: BP SUBMITTAL

LICENSURE:

REGISTERED PROFESSIONAL ENGINEER
SVF TAN
C10995
EXP.06-30-25
ELECTRICAL
STATE OF CALIFORNIA

DATE SIGNED: 07/15/2024

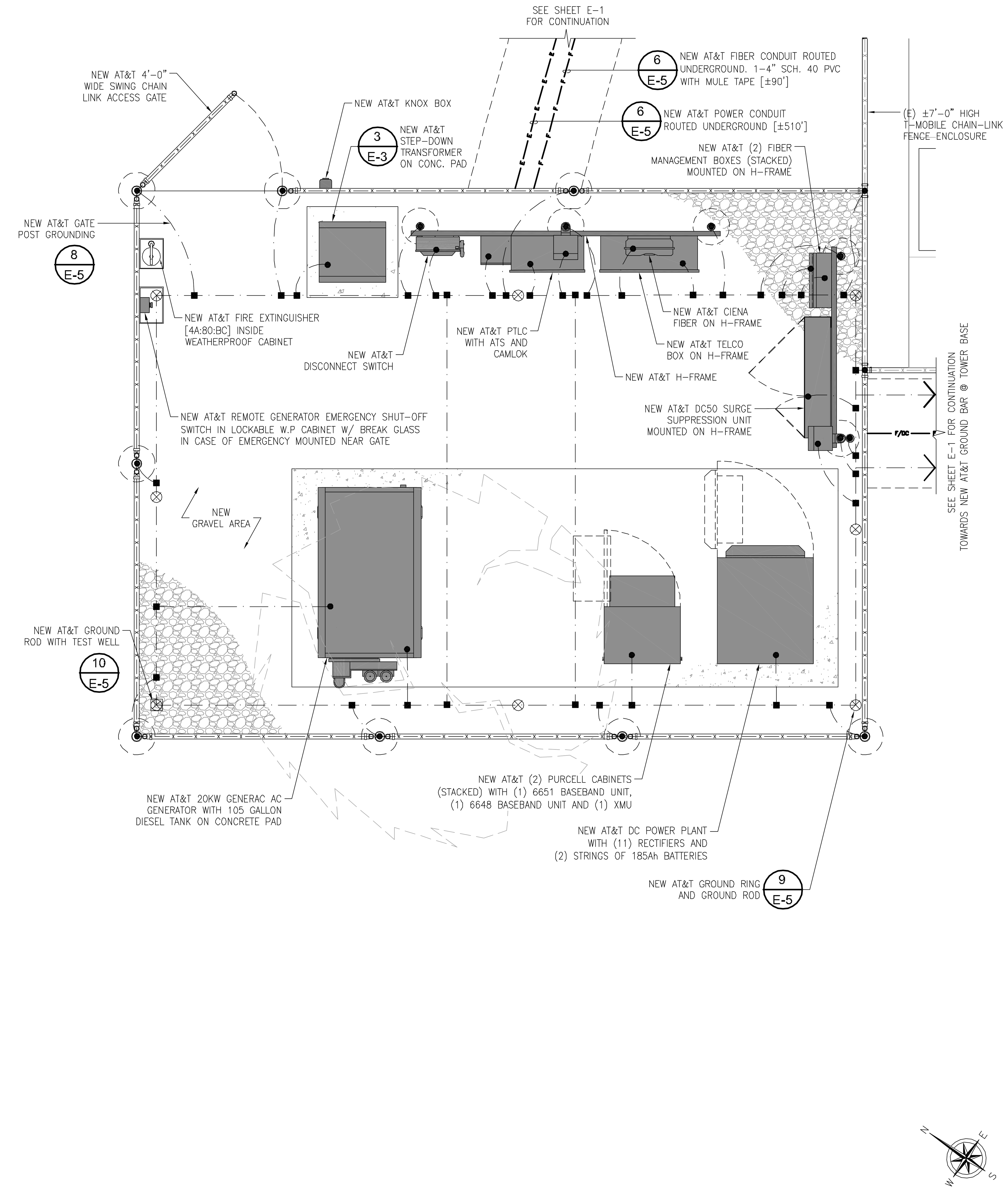
PROJECT INFORMATION:
CLL01408
PONTIAC FIREBIRD
2470 WEST PIONEER AVE. #A, FULLERTON, CA 92832

DRAWN BY: AJYR
CHECKED BY: SVF

SHEET TITLE: ELECTRICAL SITE PLAN

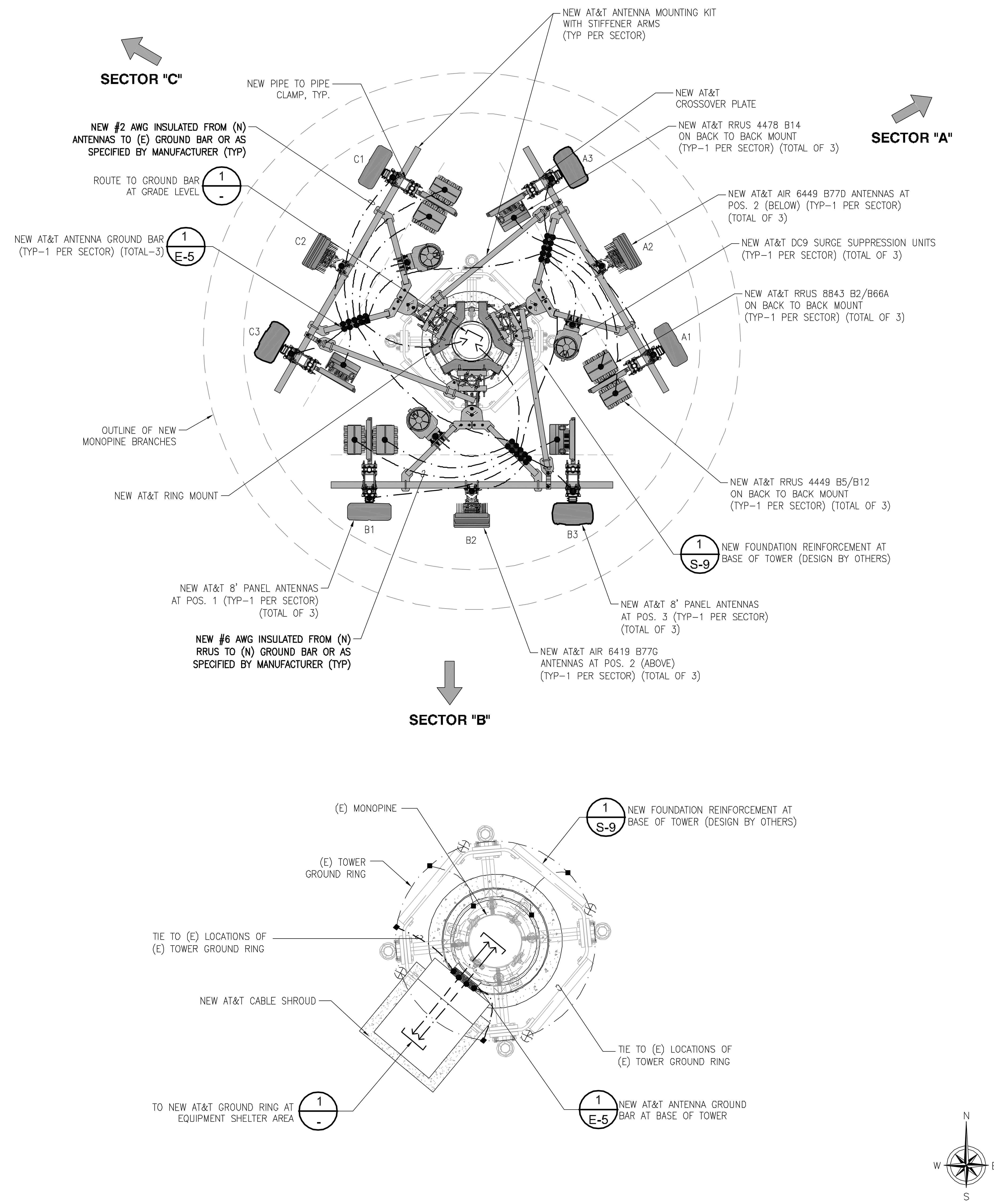
SHEET NUMBER: E-1

NOTES:
1. NO EXISTING PARKING STALLS ARE BEING ADDED OR REMOVED AS PART OF THE NEW INSTALLATION.
2. NEW POWER AND TELCO PLAN IS PRELIMINARY AND SUBJECT TO CHANGE PENDING FINAL DESIGN FROM THE UTILITY COMPANY.



EQUIPMENT GROUNDING PLAN 24"x36" SCALE: 1/2" = 1'-0" 11"x17" SCALE: 1/4" = 1'-0" 2' 1' 0" 2' **1**

NOTES:
1. ALL ANTENNA GROUND BARS ARE TO BE CONNECTED IN A CIRCLE WITH EXOTHERMIC CONNECTIONS.
2. BOTH GROUND DOWN LEADS ARE TO BE CONNECTED WITH EXOTHERMIC CONNECTIONS AT THE ANTENNA GROUND BARS AND AT THE GROUND BAR AT THE TOWER BASE.
3. THE TOWER BASE GROUND BAR IS TO BE CONNECTED TO THE SITE GROUND RING IN TWO SEPARATE PLACES. SEE PLANS.



ANTENNA GROUNDING PLAN 24"x36" SCALE: 3/8" = 1'-0" 11"x17" SCALE: 3/16" = 1'-0" 2' 1' 0" 2' **2**

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REV	DATE	DESCRIPTION
2	10/03/2024	PLAN CHECK COMMENTS
1	08/02/2024	PLAN CHECK COMMENTS/ ADDED FIBER DESIGN
D	04/26/2024	100% CD'S
B	04/19/2023	REMOVED MW ANTENNA
A	11/04/2022	90% CD'S FOR REVIEW

ISSUED DATE:
10/03/2024

ISSUED FOR:
BP SUBMITTAL

LICENSURE:
REGISTERED PROFESSIONAL ENGINEER E10995 EXP. 06-30-25 ELECTRICAL STATE OF CALIFORNIA
DATE SIGNED: 07/15/2024

PROJECT INFORMATION:
CLL01408
PONTIAC FIREBIRD
2470 WEST PIONEER AVE. #A,
FULLERTON, CA 92832

DRAWN BY: AJYR
CHECKED BY: SVF

SHEET TITLE:
EQUIPMENT AND ANTENNA GROUNDING PLANS

SHEET NUMBER:
E-2

ELECTRICAL NOTES

1. THIS INSTALLATION SHALL COMPLY WITH THE CURRENTLY ADOPTED EDITION OF THE NATIONAL ELECTRICAL CODE AND WITH UTILITY COMPANY AND LOCAL CODE REQUIREMENTS.
2. INSTALL SUFFICIENT LENGTHS OF LFMC INCLUDING ALL CONDUIT FITTINGS (NUTS, REDUCING BUSHINGS, ELBOWS, COUPLINGS, ETC) NECESSARY FOR CONNECTION FROM IMC OR PVC CONDUIT TO THE INTERIOR OF THE BTS CABINET.
3. POWER, CONTROL AND EQUIPMENT GROUND WIRING IN TUBING OR CONDUIT SHALL BE SINGLE CONDUCTOR (#14 AWG AND LARGER), 600V, OIL RESISTANT THHN OR THWN-2, CLASS B STRANDED COPPER CABLE RATED FOR 90°C (WET AND DRY) OPERATION; LISTED OR LABELED FOR THE LOCATION AND RACEWAY SYSTEM USED.
4. CUT, COIL AND TAPE A 3 FOOT PIGTAIL FROM END OF LFMC FOR TERMINATING BY BTS EQUIPMENT MANUFACTURER.
5. SUPPLEMENTAL EQUIPMENT GROUND WIRING LOCATED INDOORS SHALL BE SINGLE CONDUCTOR (#6 AWG AND LARGER), 600V, OIL RESISTANT THHN OR THWN-2 GREEN INSULATION, CLASS B STRANDED COPPER CABLE RATED FOR 90°C (WET AND DRY) OPERATION, LISTED OR LABELED FOR THE LOCATION AND RACEWAY SYSTEM USED.
6. SUPPLEMENTAL EQUIPMENT GROUND WIRING LOCATED OUTDOORS OR BELOW GRADE SHALL BE SINGLE CONDUCTOR #2 AWG SOLID, TINNED, COPPER CABLE.
7. POWER AND CONTROL WIRING, NOT IN TUBING OR CONDUIT, SHALL BE MULTI-CONDUCTOR, TYPE TC. CABLE (#14 AWG AND LARGER), 600V, OIL RESISTANT THHN OR THWN-2, CLASS B, STRANDED COPPER CABLE RATED FOR 90°C (WET OR DRY) OPERATION, WITH OUTER JACKET LISTED OR LABELED FOR THE LOCATION USED.
8. CABLES SHALL NOT BE ROUTED THROUGH LADDER-STYLE CABLE TRAY RUNGS.
9. RACEWAY AND CABLE TRAY SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE AND NEC.
10. NEW RACEWAY OR CABLE TRAY SHALL MATCH THE EXISTING INSTALLATION WHERE POSSIBLE.
11. ALL POWER AND GROUNDING CONNECTIONS SHALL BE CRIMP STYLE, COMPRESSION, WIRE LUGS AND WIRENUTS BY THOMAS AND BETTS (OR EQUAL). LUGS AND WIRENUTS SHALL BE RATED FOR OPERATION AT NO LESS THAN 75°C.
12. EACH END OF EVERY POWER, GROUNDING AND T1 CONDUCTOR AND CABLE SHALL BE LABELED WITH COLOR CODED INSULATION OR ELECTRICAL TAPE. THE IDENTIFICATION METHOD SHALL CONFORM WITH NEC & OSHA AND MATCH EXISTING INSTALLATION REQUIREMENTS.
13. ALL ELECTRICAL COMPONENTS SHALL BE CLEARLY LABELED WITH ENGRAVED LAMINATED PLASTIC LABELS. ALL EQUIPMENT SHALL BE LABELED WITH THEIR VOLTAGE RATING, PHASE CONFIGURATION, WIRE CONFIGURATION, POWER OR AMPACITY RATING AND BRANCH CIRCUIT ID NUMBERS (PANELBOARD AND CIRCUIT IDENTIFICATION).
14. ALL TIE WRAPS SHALL BE CUT FLUSH WITH APPROVED CUTTING TOOL TO REMOVE SHARP EDGES.
15. RIGID NONMETALLIC CONDUIT (PVC SCHEDULE 40 OR PVC SCHEDULE 80) SHALL BE USED UNDERGROUND, DIRECT BURIED IN AREAS OF OCCASIONAL LIGHT VEHICLE TRAFFIC OR ENCASED IN REINFORCED CONCRETE IN AREAS OF HEAVY VEHICLE TRAFFIC.
16. ALL CONDUIT RUN ABOVE GROUND OR EXPOSED SHALL BE LFMC, IMC OR RIGID STEEL.
17. ELECTRICAL METALLIC TUBING (EMT) SHALL BE USED FOR CONCEALED INDOOR LOCATIONS.
18. LIQUID TIGHT FLEXIBLE METALLIC CONDUIT SHALL BE USED INDOORS AND OUTDOORS WHERE VIBRATION OCCURS OR FLEXIBILITY IS NEEDED.
19. CONDUIT AND TUBING FITTINGS SHALL BE THREADED OR COMPRESSION TYPE AND APPROVED FOR THE LOCATION USED. SETSCREW FITTINGS ARE NOT ACCEPTABLE.
20. CABINETS, BOXES AND WIREWAYS SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE AND NEC.
21. CABINETS, BOXES AND WIREWAYS SHALL MATCH THE EXISTING INSTALLATION WHERE POSSIBLE.
22. PROVIDE NECESSARY TAGGING ON THE BREAKERS, CABLES AND DISTRIBUTION PANELS IN ACCORDANCE WITH APPLICABLE CODES AND STANDARDS TO SAFEGUARD LIFE AND PROPERTY.
23. THE SUBCONTRACTOR SHALL REVIEW AND INSPECT THE EXISTING FACILITY GROUNDING SYSTEM AND LIGHTNING PROTECTION SYSTEM (AS DESIGNED AND INSTALLED) FOR STRICT COMPLIANCE WITH THE NEC. THE SITE SPECIFIC LIGHTNING PROTECTION CODE AND GENERAL COMPLIANCE WITH TELCORDIA AND TIA GROUNDING STANDARDS. THE SUBCONTRACTOR SHALL REPORT ANY VIOLATIONS OR ADVERSE FINDINGS TO THE CONTRACTOR FOR RESOLUTION.
24. ALL ELECTRODE SYSTEMS (INCLUDING TELECOMMUNICATION, RADIO, LIGHTNING PROTECTION AND AC POWER GES'S) SHALL BE BONDED TOGETHER AT OR BELOW GRADE BY TWO OR MORE COPPER BONDING CONDUCTORS IN ACCORDANCE WITH THE NEC.
25. PERFORM IEEE FALL-OF-POTENTIAL RESISTANCE TO EARTH TESTING (PER IEEE 1100 AND 81) FOR NEW GROUND ELECTRODE SYSTEMS. THE SUBCONTRACTOR SHALL FURNISH AND INSTALL SUPPLEMENTAL GROUND ELECTRODES AS NEEDED TO ACHIEVE A TEST RESULT OF 5 OHMS OR LESS.
26. METAL RACEWAY SHALL NOT BE USED AS THE NEC REQUIRED EQUIPMENT GROUND CONDUCTOR. STRANDED COPPER CONDUCTORS WITH GREEN INSULATION SIZED IN ACCORDANCE WITH THE NEC SHALL BE FURNISHED AND INSTALLED WITH THE POWER CIRCUITS TO BTS EQUIPMENT.
27. EACH INDOOR BTS CABINET FRAME SHALL BE DIRECTLY CONNECTED TO THE MASTER GROUND BAR WITH SUPPLEMENTAL EQUIPMENT GROUND WIRES #6 OR LARGER.
28. EXOTHERMIC WELDS SHALL BE USED FOR ALL GROUNDING CONNECTIONS BELOW GRADE.
29. APPROVED ANTIOXIDANT COATINGS (I.E. CONDUCTIVE GEL OR PASTE) SHALL BE USED ON ALL COMPRESSION AND BOLTED GROUND CONNECTIONS.
30. ICE BRIDGE BONDING CONDUCTORS SHALL BE EXOTHERMICALLY BONDED OR BOLTED TO THE BRIDGE AND THE TOWER GROUND BAR.
31. SURFACES TO BE CONNECTED TO GROUND CONDUCTORS SHALL BE CLEANED TO A BRIGHT SURFACE AT ALL CONNECTIONS.
32. EXPOSED GROUND CONNECTIONS SHALL BE MADE WITH COMPRESSION CONNECTORS WHICH ARE THEN BOLTED TO EQUIPMENT USING STAINLESS STEEL HARDWARE. INSTALLATION TORQUE SHALL BE PER MANUFACTURER'S REQUIREMENTS.
33. DC POWER CABLES SHALL BE COBRA COP-FLEX 2000, FLEXIBLE CLASS B OR APPROVED EQUAL.
34. PROVIDE SUPPORTING DEVICES FOR ALL ELECTRICAL EQUIPMENT, FIXTURES, BOXES, PANEL, ETC., SUPPORT LUMINARIES FROM UNDERSIDE OF STRUCTURAL CEILING, EQUIPMENT SHALL BE BRACED TO WITHSTAND HORIZONTAL FORCES IN ACCORDANCE WITH STATE AND LOCAL CODE REQUIREMENTS. PROVIDE PRIOR ALIGNMENT AND LEVELING OF ALL DEVICES AND FIXTURES.
35. CUTTING, PATCHING, CHASES, OPENINGS: PROVIDE LAYOUT IN ADVANCE TO ELIMINATE UNNECESSARY CUTTING OR DRILLING OF WALLS, FLOORS CEILINGS, AND ROOFS. ANY DAMAGE TO BUILDING STRUCTURE OR EQUIPMENT SHALL BE REPAIRED BY THE CONTRACTOR. OBTAIN PERMISSION FROM THE ENGINEER BEFORE CORING.
36. IN DRILLING HOLES INTO CONCRETE WHETHER FOR FASTENING OR ANCHORING PURPOSES, OR PENETRATIONS THROUGH THE FLOOR FOR CONDUIT RUNS, PIPE RUNS, ETC., IT MUST BE CLEARLY UNDERSTOOD THAT TENDONS AND/OR REINFORCING STEEL WILL NOT BE DRILLED INTO, CUT OR DAMAGED UNDER THE CIRCUMSTANCES.
37. LOCATION OF TENDONS AND/OR REINFORCING STEEL ARE NOT DEFINITELY KNOWN AND THEREFORE, MUST BE SEARCHED FOR BY APPROPRIATE METHODS AND EQUIPMENT VIA X-RAY OR OTHER DEVICES THAT CAN ACCURATELY LOCATE THE REINFORCING AND/OR STEEL TENDONS.
38. PENETRATIONS IN FIRE RATED WALLS SHALL BE FIRE STOPPED IN ACCORDANCE WITH THE REQUIREMENTS OF THE C.B.C.

GROUNDING NOTES

1. ALL DETAILS ARE SHOWN IN GENERAL TERMS. ACTUAL GROUNDING INSTALLATION REQUIREMENTS AND CONSTRUCTION ACCORDING TO SITE CONDITIONS.
2. ALL GROUNDING CONDUCTORS: #2 AWG SOLID BARE TINNED COPPER WIRE UNLESS OTHERWISE NOTED.
3. GROUND BAR LOCATED IN BASE OF EQUIPMENT WILL BE PROVIDED, FURNISHED AND INSTALLED BY THE VENDOR.
4. ALL BELOW GRADE CONNECTIONS: EXOTHERMIC WELD TYPE, ABOVE GRADE CONNECTIONS: EXOTHERMIC WELD TYPE.
5. GROUND RING SHALL BE LOCATED A MINIMUM OF 24" BELOW GRADE OR 6" MINIMUM BELOW THE FROST LINE.
6. INSTALL GROUND CONDUCTORS AND GROUND ROD MINIMUM OF 1'-0" FROM EQUIPMENT CONCRETE SLAB, SPREAD FOOTING, OR FENCE.
7. EXOTHERMIC WELD GROUND CONNECTION TO FENCE POST: TREAT WITH A COLD GALVANIZED SPRAY.
8. GROUND BARS:
   EQUIPMENT GROUND BUS BAR (EGB) LOCATED AT THE BOTTOM OF ANTENNA POLE/MAST FOR MAKING GROUNDING JUMPER CONNECTIONS TO COAX FEEDER CABLES SHALL BE FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR. JUMPERS (FURNISHED BY OWNERS) SHALL BE INSTALLED AND CONNECTED BY ELECTRICAL CONTRACTOR.
9. ALL GROUNDING INSTALLATIONS AND CONNECTIONS SHALL BE MADE BY ELECTRICAL CONTRACTOR.
10. OBSERVE N.E.C. AND LOCAL UTILITY REQUIREMENTS FOR ELECTRICAL SERVICE GROUNDING.
11. GROUNDING ATTACHMENT TO TOWER SHALL BE AS PER MANUFACTURER'S RECOMMENDATIONS OR AT GROUNDING POINTS PROVIDED (2 MINIMUM).
12. IF EQUIPMENT IS IN A C.L. FENCE ENCLOSURE, GROUND ONLY CORNER POSTS AND SUPPORT POSTS OF GATE. IF CHAIN LINK LID IS USED, THEN GROUND LID ALSO.
13. GROUNDING AT PPC CABINET SHALL BE VERTICALLY INSTALLED.
14. ALL GROUNDING FOR ANTENNAS SHALL BE CONNECTED SO THAT IT WILL BY-PASS MAIN BUSS BAR.
15. ALL EMT RUNS SHALL BE GROUNDED AND HAVE A BUSHING, NO PVC ABOVE GROUND.
16. USE SEPARATE HOLES FOR GROUNDING AT BUSS BAR. NO "DOUBLE-UP" OF LUGS.
17. POWER AND TELCO CABINETS SHALL BE GROUNDED (BONDED) TOGETHER.
18. NO LB'S ALLOWED ON GROUNDING.
19. PROVIDE STAINLESS STEEL CLAMP AND BRASS TAGS ON COAX AT ANTENNAS AND DOGHOUSE.
20. ALL ELECTRICAL AND GROUNDING AT THE CELL SITE SHALL COMPLY WITH THE NATIONAL ELECTRICAL CODE (NEC), NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) 780 (LATEST EDITION), AND MANUFACTURER SPECIFICATION.
21. IF THE AC PANEL IN THE POWER CABINET IS WIRED AS SERVICE ENTRANCE, THE AC SERVICE GROUND CONDUCTOR SHALL BE CONNECTED TO GROUND ELECTRODE SYSTEM. WHEN THE AC PANEL IN THE POWER CABINET IS CONSIDERED A SUB-PANEL, THE GROUND WIRE SHALL BE INSTALLED IN THE AC POWER CONDUIT. THE INSTALLATION SHALL BE PER LOCAL AND NATIONAL ELECTRIC CODE (NFPA-70).
22. EXOTHERMIC WELDING IS RECOMMENDED FOR GROUNDING CONNECTION WHERE PRACTICAL. OTHERWISE, THE CONNECTION SHALL BE MADE USING COMPRESSION TYPE-2 HOLES. LONG BARREL LUGS OR DOUBLE CRIMP CLAMP "C" CLAMP. THE COPPER CABLES SHALL BE COATED WITH ANTIOXIDANT (COPPER SHIELD) BEFORE MAKING THE CONNECTIONS. THE MANUFACTURER'S TORQUING RECOMMENDATIONS ON THE BOLT ASSEMBLY TO SECURE CONNECTIONS SHALL BE FOLLOWED.
23. THE ANTENNA CABLES SHALL BE GROUNDED AT THE TOP AND BOTTOM OF THE VERTICAL RUN FOR LIGHTING PROTECTION. THE ANTENNA CABLE SHIELD SHALL BE BONDED TO A COPPER GROUND BUSS AT THE LOWER MOST POINT OF A VERTICAL RUN JUST BEFORE IT BEGINS TO BEND TOWARD THE HORIZONTAL PLANE. WIRE RUNS TO GROUND SHALL BE KEPT AS STRAIGHT AND SHORT AS POSSIBLE. ANTENNA CABLE SHIELD SHALL BE GROUNDED JUST BEFORE ENTERING THE CELL CABINET. ANY ANTENNA CABLES OVER 200 FEET IN LENGTH SHALL ALSO BE EQUIPPED WITH ADDITIONAL GROUNDING AT MID-POINT.
24. ALL GROUNDING CONDUCTORS INSIDE THE BUILDING SHALL BE RUN IN CONDUIT RACEWAY SYSTEM, AND SHALL BE INSTALLED AS STRAIGHT AS PRACTICAL WITH MINOR BENDS TO AVOID OBSTRUCTIONS. THE BENDING RADIUS OF ANY #2 GROUNDING CONDUCTOR IS 8". PVC RACEWAY MAY BE FLEXIBLE OR RIGID PER THE FIELD CONDITIONS. GROUNDING CONDUCTORS SHALL NOT MAKE CONTACT WITH ANY METALLIC CONDUITS, SURFACES OR EQUIPMENT.
25. PROVIDE PVC SLEEVES WHERE GROUNDING CONDUCTORS PASS THROUGH THE BUILDING WALLS AND /OR CEILINGS.
26. INSTALL GROUND BUSHINGS ON ALL METALLIC CONDUITS AND BOND TO THE EQUIPMENT GROUND BUSS IN THE PANEL BOARD.
27. GROUND ANTENNA BASES, FRAMES, CABLE RACKS AND OTHER METALLIC COMPONENTS WITH #2 GROUNDING CONDUCTORS AND CONNECT TO INSULATED SURFACE MOUNTED GROUND BARS. CONNECTION DETAILS SHALL FOLLOW MANUFACTURER'S SPECIFICATIONS FOR GROUNDING.
28. ALL NEW GROUNDING CONDUCTORS SHALL BE ROUTED AND CONNECTED TO THE MAIN GROUND BAR OR EXISTING GROUND RING.

BONDING & GROUNDING:

#6 AWG SOLID COPPER INSULATED GROUND WIRE (24" COILED IN TELCO SERVICE BOX) WITH BONDING CLAMPS IN PLACE. THE TELEPHONE GROUND MUST BE BONDED TO THE POWER GROUND. THE TELEPHONE SERVICE CABINET MUST BE BONDED TO THE TELEPHONE GROUND WIRE. ANY QUESTIONS REGARDING TELEPHONE GROUNDS SHOULD BE REFERRED TO THE INTERCONNECT ENGINEER.

SYMBOLS:

Symbol	Description	Symbol	Description
—G—	GROUNDING WIRE, DASHED LINE INDICATES UNDERGROUND	(M)	UTILITY METER
—E—	POWER LINE, DASHED INDICATES UNDERGROUND		CIRCUIT BREAKER
—T—	TELEPHONE LINE, DASHED LINE INDICATES UNDERGROUND		FUSE
—A—	COAXIAL CABLE, DASHED LINE INDICATES UNDERGROUND		DUPLEX RECEPTACLE WITH GFCI IN WEATHERPROOF ENCLOSURE
2/E3	DETAIL REFERENCE DETAIL NO. 2 ON SHEET E3	$M	SWITCH ab – SWITCH LEG M – MANUAL MOTOR STARTER
	GROUND ROD		CLAMP OR DOUBLE HOLE LUG TYPE GROUND CONNECTION
	GROUND ROD WITH ACCESS		EXOTHERMIC CONNECTION (CADWELD) TO GROUND RING AND COMPRESSION CONNECTION TO GROUND HALO
	FUSED DISCONNECT SWITCH		

ELECTRICAL, GROUNDING AND BONDING NOTES — 24"x36" SCALE: NTS; 11"x17" SCALE: NTS — **1**

NOTES:

1. MULTIPLE CIRCUITS COMMON NEUTRAL REQUIRED LISTED CIRCUIT BREAKER HANDLE TIES.
2. THIS PERMIT APPLICATION AUTHORIZES ONLY (11) 2000 WATT RECTIFIERS.
3. THIS LOAD PANEL IS FED FROM ONE OF THREE POSSIBLE SOURCES. SEE ONE LINE.

CONTINUOUS LOAD: 25KW
PEAK DEMAND: 30KW

VOLTS: 120/240 — FEED: 200A — MAIN: 200/200 AMP — LOCATION: EXTERIOR NEMA 3R
PHASE: 1Ø — BUSS: 200A — RATING: 42,000 AIC
WIRE: 3 — MOUNTING: SURFACE — PANEL: AT&T PANEL "A"

LOAD	ØA	ØB	LTG	REC	BRKR	CKT	A B	CKT	BRKR	REC	LTG	ØA	ØB	LOAD
RECTIFIER 1 & 2	2000				30/2	1		2	30/2			2000		RECTIFIER 3 & 4
		2000				3		4					2000	
RECTIFIER 5 & 6	2000				30/2	5		6	30/2			2000		RECTIFIER 7 & 8
		2000				7		8					2000	
RECTIFIER 9 & 10	2000				30/2	9		10	30/2			1000		RECTIFIER 11
		2000				11		12					1000	
SPACE	0					13		14				0		SPACE
SPACE		0				15		16					0	SPACE
GFCI RECEPT.	180				20/1P	17		18	20/1P			1500		BATTERY HEATER MAT
IRRIGATION CONTROL		0			20/1P	19		20	20/1P				180	LED WORK LIGHT W/ TIMER
SPACE	0					21		22				0		SPACE
SPACE		0				23		24					0	SPACE
SPACE	0					25		26				0		SPACE
SPACE		0				27		28					0	SPACE
SPACE	0					29		30				0		SPACE
SPACE		0				31		32					0	SPACE
SPACE	0					33		34				0		SPACE
SPACE		0				35		36					0	SPACE
SPACE	0					37		38				0		SPACE
SPACE		0				39		40					0	SPACE
SPACE	0					41		42				0		SPACE
VA SUB TOTALS	6180	6000										6500	5180	VA SUB TOTALS

VA/PHASE: PHASE A: 12,680 — PHASE B: 11,180
AMPS/PHASE: PHASE A: 52.83 — PHASE B: 46.58
CIRCUIT BREAKERS 10,000 A.I.C. — LCL = 2000 — TOTAL CONNECTED VA: 23,860

WIRING SIZE TABLE U.N.O.

10 AMP	#12 AWG
20 AMP	#12 AWG
30 AMP	#10 AWG
40 AMP	#8 AWG
60 AMP	#6 AWG

PANEL SCHEDULE - PANEL "A" — 24"x36" SCALE: NTS; 11"x17" SCALE: NTS — **2**

POWER AND TELCO NOTES:

1. POWER AND TELCO POINT OF CONNECTION AND ROUTES ARE PRELIMINARY AND SUBJECT TO CHANGE TO CONFIRMATION BY THE UTILITY COMPANIES RESPECTIVELY.
2. CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANY FOR FINAL AND EXACT WORK/MATERIALS REQUIREMENTS AND CONSTRUCT TO UTILITY ENGINEERING PLANS AND SPECIFICATIONS ONLY WHERE APPLICABLE PER PROJECT SCOPE OF WORK.
3. CONTRACTOR SHALL FURNISH AND INSTALL CONDUIT, PULL WIRES, CABLE PULL BOXES, CONCRETE ENCASEMENT OF CONDUIT, TRANSFORMER PAD, BARRIERS, POLE RISER TRENCHING, BACK FILL, AND UTILITY FEES, AND INCLUDE REQUIREMENTS IN SCOPE.
4. CONTRACTOR SHALL CLEARLY IDENTIFY NEW ELECTRICAL METERED SERVICE/DISCONNECT AND "AT&T-PPC" CABINET WITH ENGRAVED PHENOLIC NAME PLATES, WHITE 1/4" HIGH LETTERS ON BLACK BACKGROUND, MOUNT TO COVERS WITH SELF TAPING STAINLESS STEEL SCREWS.
5. PROVIDE CLEARLY TYPEWRITTEN PANEL "AT&T-A", CLEAR PLASTIC LAMINATED, PANEL SCHEDULE ON INSIDE OF DOOR.
6. TEST ALL ELECTRICAL & GROUNDING SYSTEMS (CONTINUITY, MEGGER, ETC.) UPON COMPLETION OF INSTALLATION PRIOR TO FINALIZING WORK.
7. RESISTANCE FROM THE MAIN ELECTRICAL METERED SERVICE, MAIN PANEL GROUND BUS, THROUGH THE GROUND ELECTRODE AT&T GROUND RING TO EARTH SHALL NOT EXCEED 5 OHMS.
8. CONTRACTOR TO VERIFY ALL CONDUIT ROUTING, (N) AT&T METER, (N) MTS, AND (N) GROUND ROD EXACT LOCATION WITH LANDLORD AND UTILITY COORDINATOR IN FIELD.

ELECTRICAL NOTES:

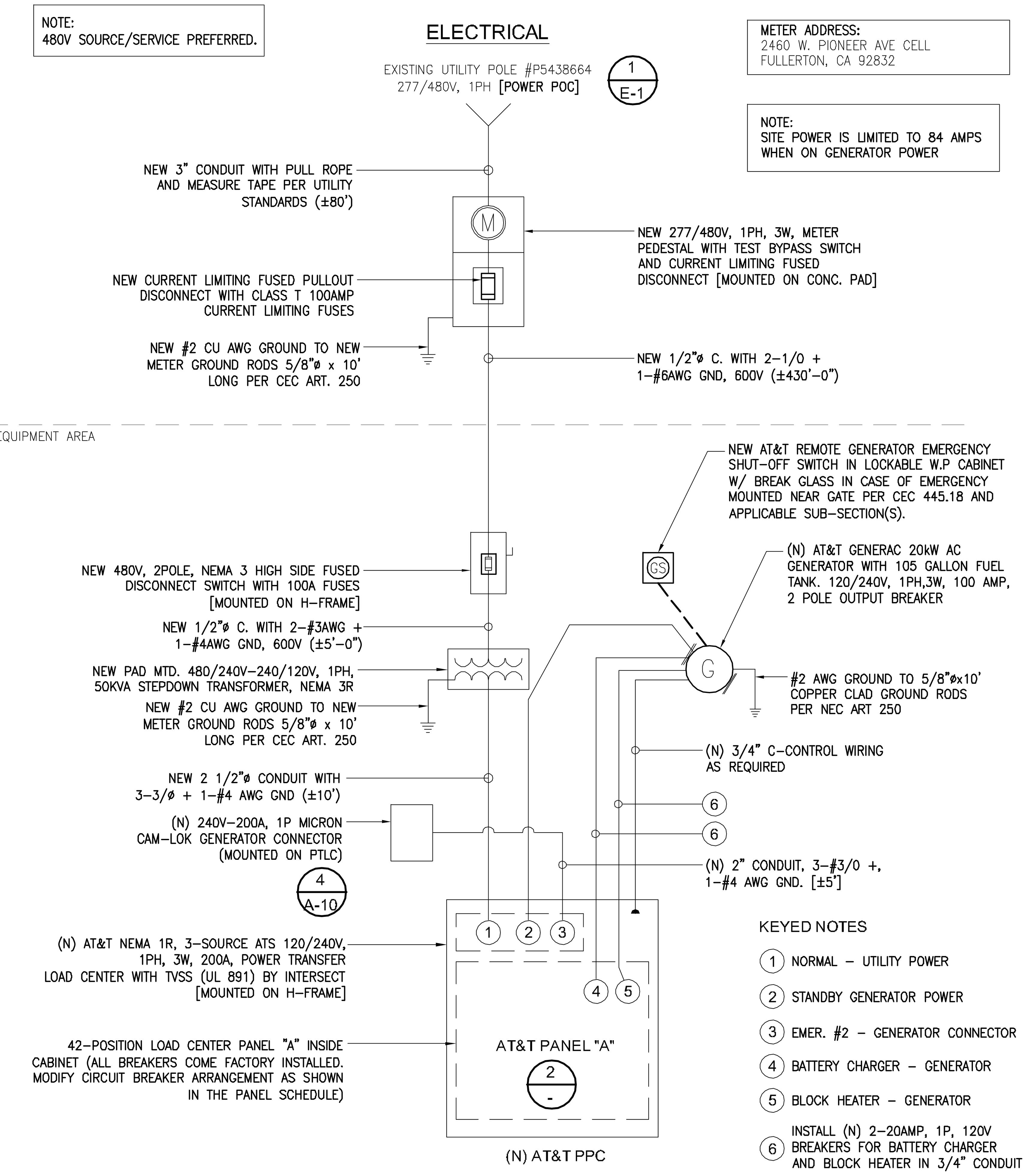
1. SERVICE POWER SHALL BE 120/240V, 1PH, 3W, 200AMP.
2. UTILITY RECEPTACLE IS A GFCI DUPLEX OUTLET INSTALLED IN THE DEADFRONT OF PPC.
3. PROVIDE A MIN. 36" WORK CLEARANCE IN FRONT OF PANELS/SERVICE EQUIP.
4. ALL BREAKERS IN THE ELEC PANEL RATED 10,000 RMS SYMMETRICAL AMPS, 240V MAX. 75° C.
5. ALL WIRING SHALL BE COPPER 75° C U.N.O.
6. CONDUIT REQUIREMENTS (TYP., U.N.O):
   UNDERGROUND: PVC (SCHED 40 OR 80)
   INDOOR: EMT (RGS) IN TRAFFIC AREAS
   OUTDOOR (ABOVE GRADE): RGS

NOTE:
ATS/MTS OPERATION IS BREAK BEFORE MAKE. AT NO TIME WILL SOURCES BE IN PARALLEL

NOTE:
480V SOURCE/SERVICE PREFERRED.

METER ADDRESS:
2460 W. PIONEER AVE CELL
FULLERTON, CA 92832

NOTE:
SITE POWER IS LIMITED TO 84 AMPS WHEN ON GENERATOR POWER



KEYED NOTES

1. NORMAL – UTILITY POWER
2. STANDBY GENERATOR POWER
3. EMER. #2 – GENERATOR CONNECTOR
4. BATTERY CHARGER – GENERATOR
5. BLOCK HEATER – GENERATOR
6. INSTALL (N) 2-20AMP, 1P, 120V BREAKERS FOR BATTERY CHARGER AND BLOCK HEATER IN 3/4" CONDUIT

SINGLE LINE DIAGRAM — 24"x36" SCALE: NTS; 11"x17" SCALE: NTS — **3**

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16885 VIA DEL CAMPO CT., SUITE 318
SAN DIEGO, CA 92127
tel: (858) 432-4112 / (858) 432-4257

REV	DATE	DESCRIPTION
2	10/03/2024	PLAN CHECK COMMENTS
1	08/02/2024	PLAN CHECK COMMENTS/ ADDED FIBER DESIGN
0	04/26/2024	100% CD'S
B	04/19/2023	REMOVED MW ANTENNA
A	11/04/2022	90% CD'S FOR REVIEW

ISSUED DATE: 10/03/2024

ISSUED FOR: BP SUBMITTAL

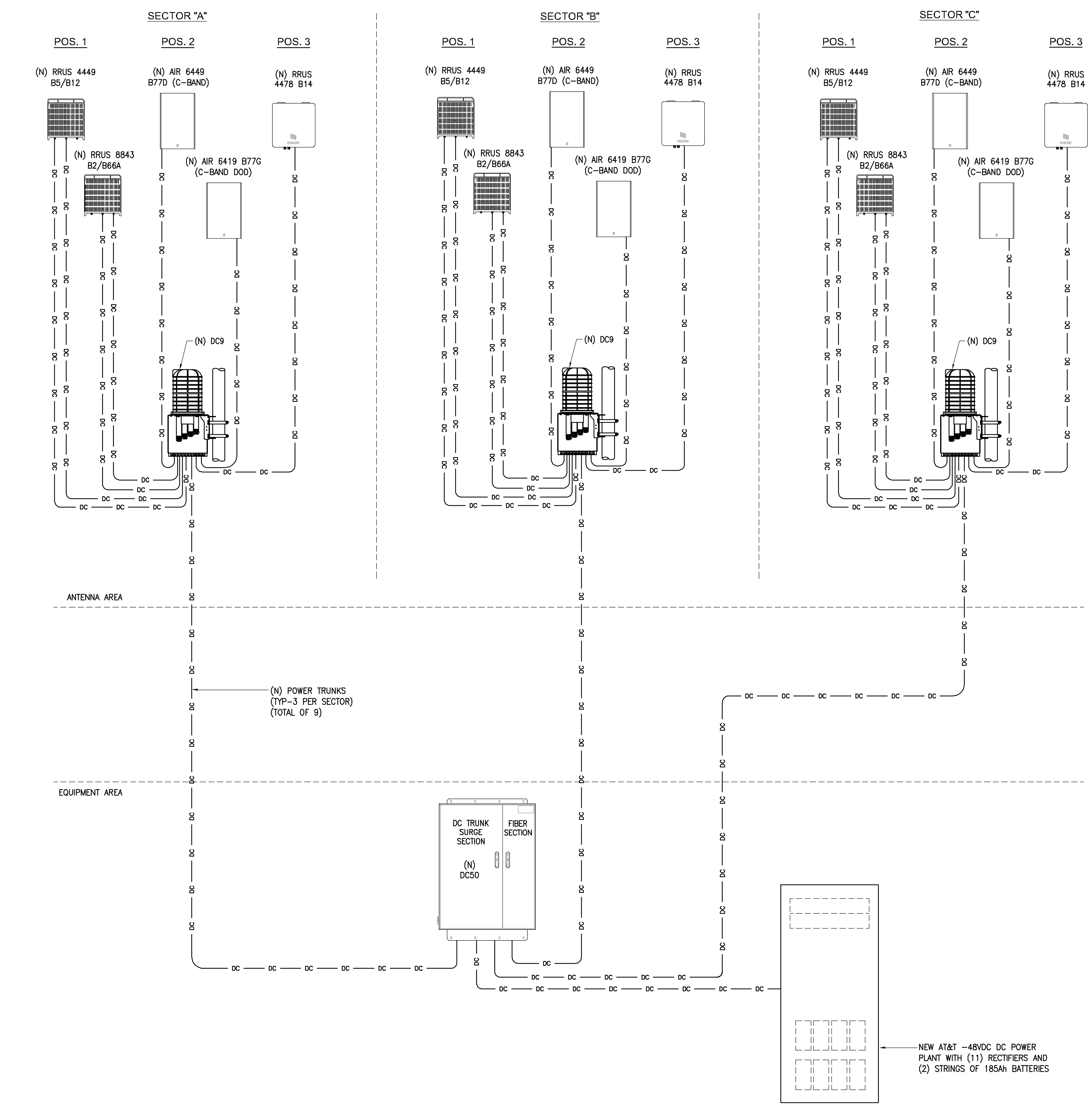
LICENSURE:
REGISTERED PROFESSIONAL ENGINEER — E10995 — EXP. 06-30-25 — ELECTRICAL — STATE OF CALIFORNIA
DATE SIGNED: 07/15/2024

PROJECT INFORMATION:
CLL01408
PONTIAC FIREBIRD
2470 WEST PIONEER AVE. #A,
FULLERTON, CA 92832

DRAWN BY: AJYR
CHECKED BY: SVF

SHEET TITLE:
ELECTRICAL NOTES, PANEL SCHEDULE & SINGLE LINE DIAGRAM

SHEET NUMBER:
E-3



DC POWER DIAGRAM

24"x36" SCALE: NTS
11"x17" SCALE: NTS

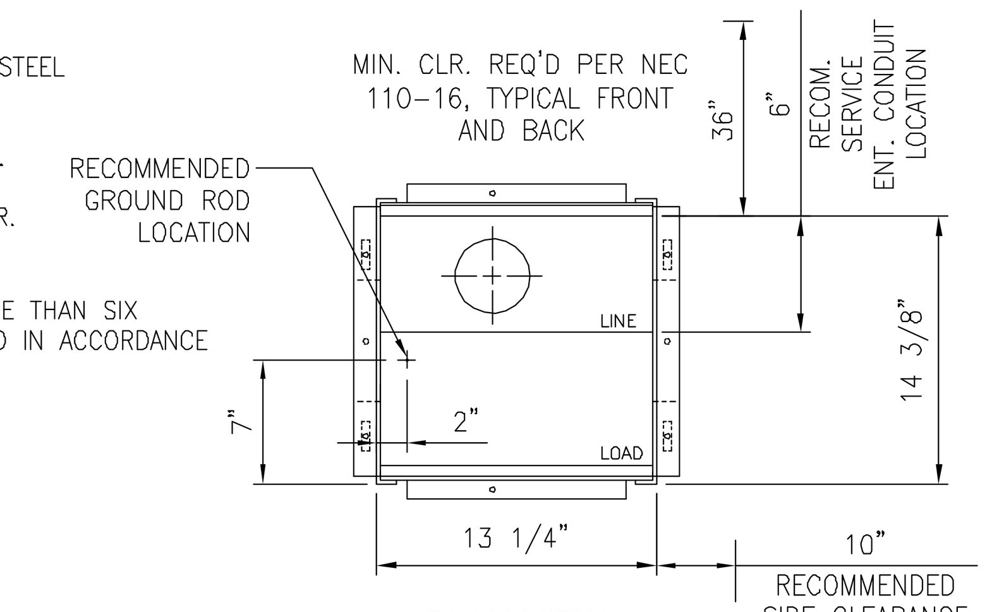
1

SPECIFICATIONS:

1. 12-GAUGE CORROSION-RESISTANT ZINC-COATED STEEL CONSTRUCTION. HOOD AND COVERS 14-GAUGE.
2. RAINPROOF TYPE 3R ENCLOSURE.
3. COMPLIES WITH CALTRANS SPECIFICATIONS ES-2E.
4. MEETS EUSERC 308 REQUIREMENTS.
5. ALL FACTORY WIRING IS 600 VOLT RATED COPPER.
6. ACCEPTABLE CIRCUIT BREAKERS ARE GE, ITE, CROUSE-HINDS/MURRAYM CUTLER-HAMMER.
7. SUITABLE FOR USE WITHOUT MAIN WHEN NO MORE THAN SIX SERVICE DISCONNECTS ARE INTSTALLED AND USED IN ACCORDANCE WITH ARTICLE 384 OF THE NEC.
8. LISTED BY UNDERWRITERS LABORATORIES, INC.

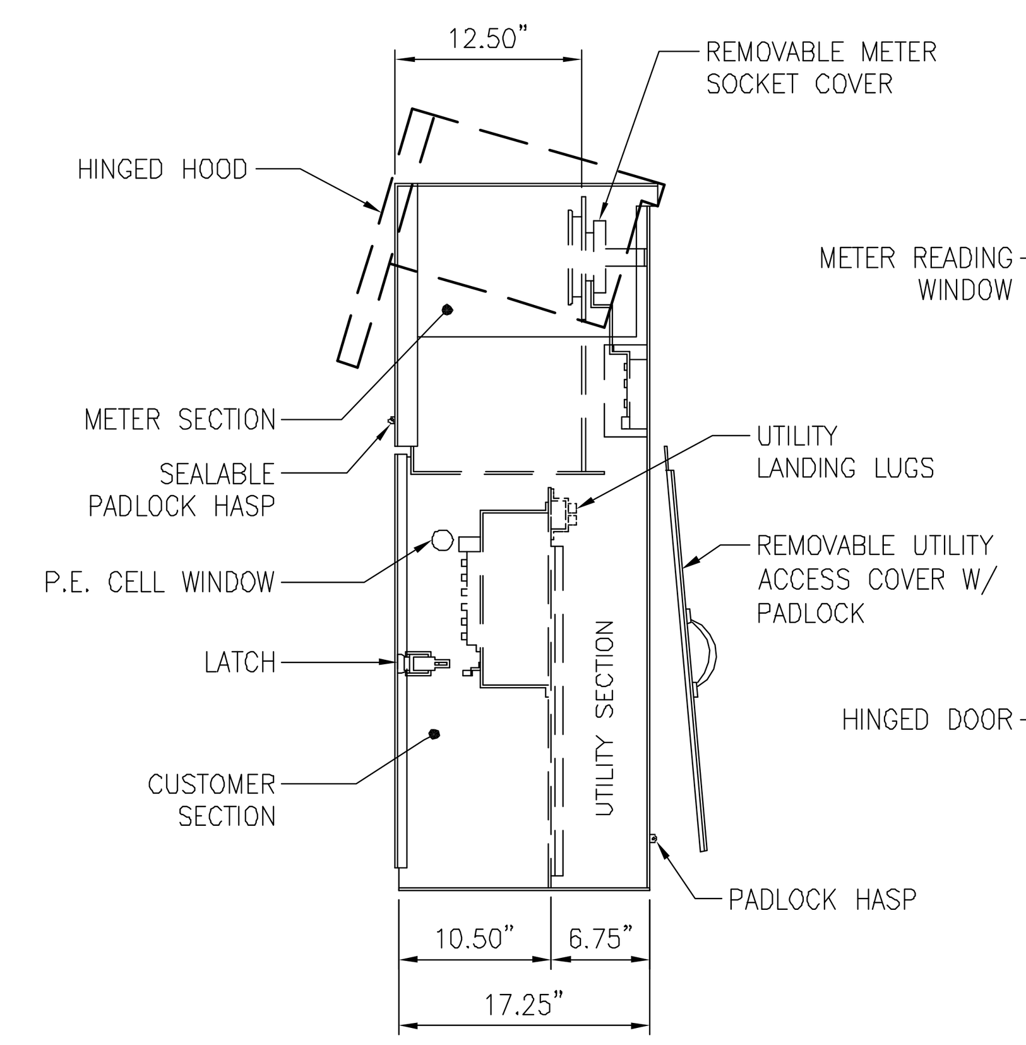
MFR: MYERS
MODEL: MEUG16

NOTE: 36" MINIMUM PEDESTAL CLEARANCE TYPICAL FRONT AND BACK REQUIRED PER N.E.C. 110-16.

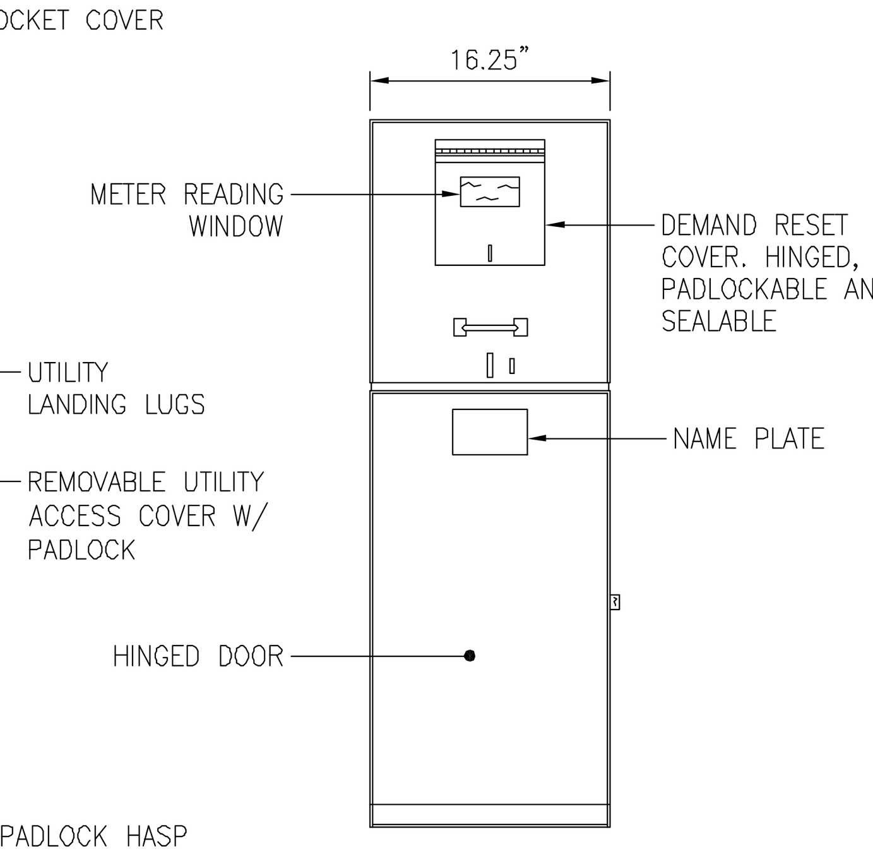


PLAN VIEW

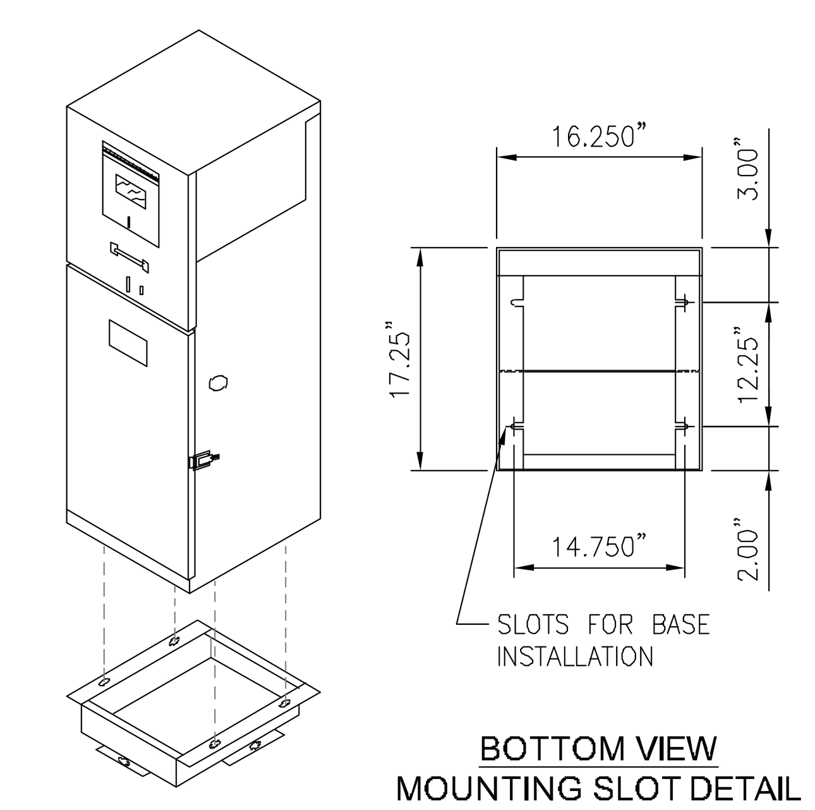
STANDARD MODELS CUSTOM CONFIGURATIONS ALSO AVAILABLE. CONSULT YOUR FACTORY REPRESENTATIVE	CATALOG NO.	AMPS	VOLTAGE	MAIN	AIC RATING
	MEUG16-M100	100	120/240	100A	10,000
	MEUG16-M200	200	120/240	200A	10,000
	FOR ALUMINUM ENCLOSURE, ORDER MEUG16A FOR STAINLESS STEEL ENCLOSURE, ORDER MEUG16X				



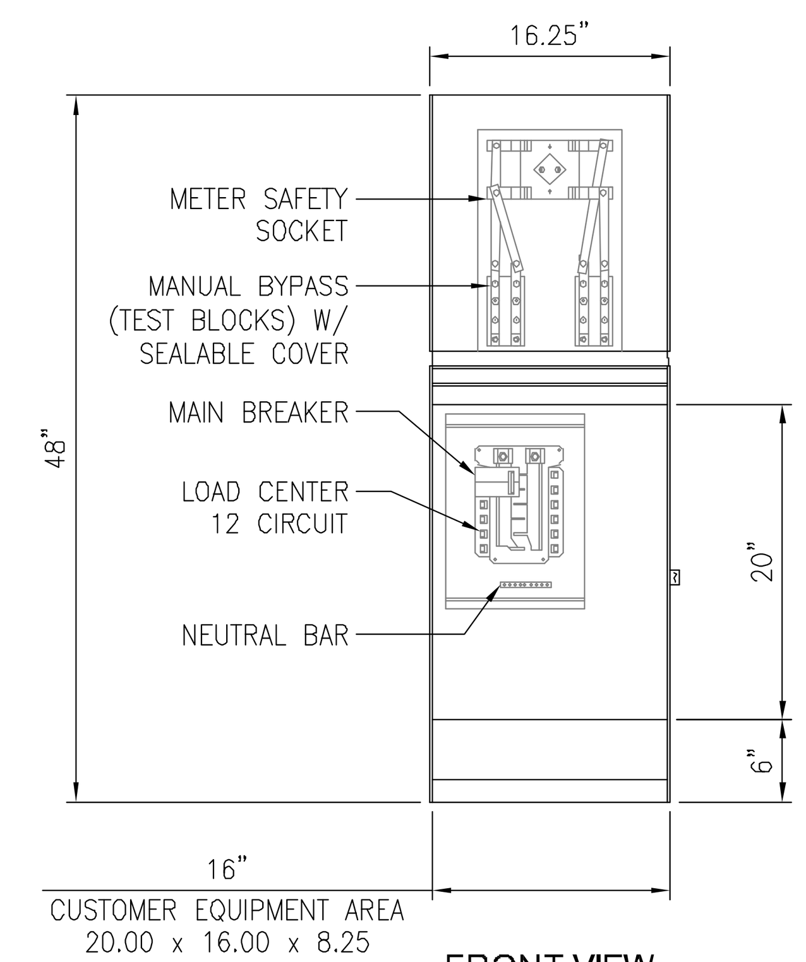
SIDE VIEW



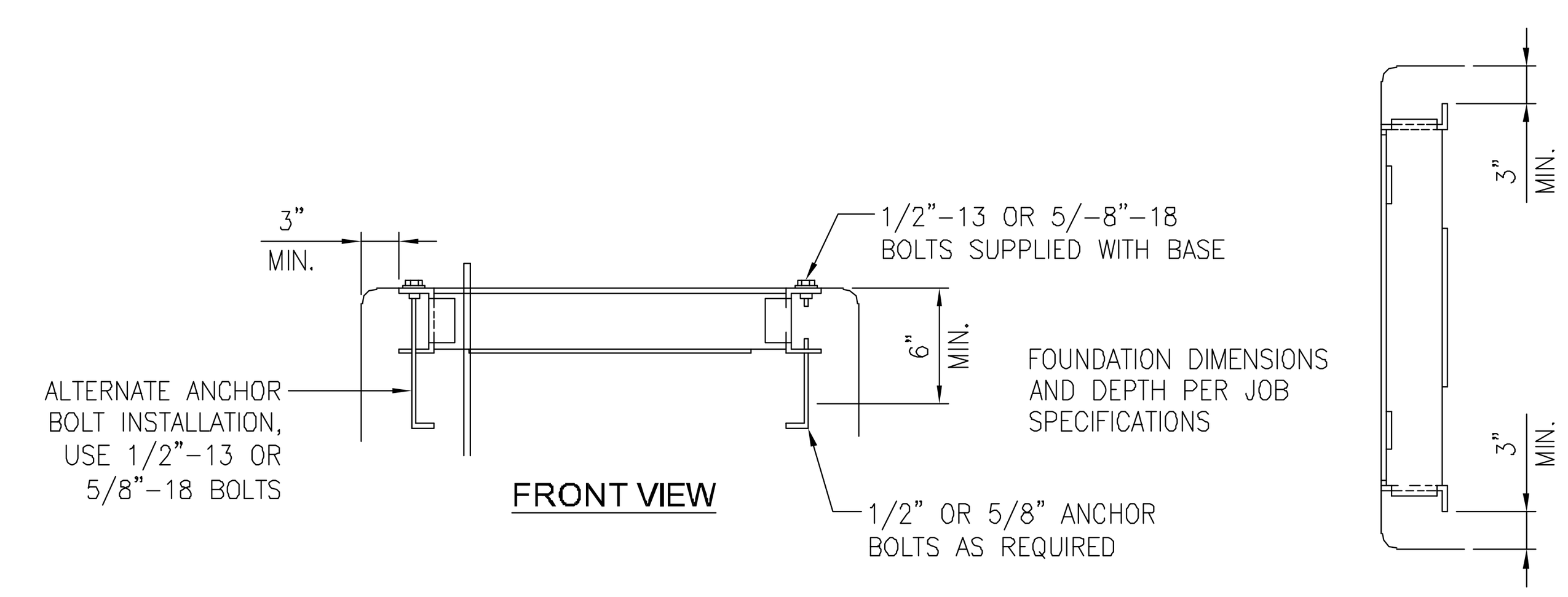
FRONT VIEW



BOTTOM VIEW
MOUNTING SLOT DETAIL



FRONT VIEW
LESS DOOR, DEADFRONT, AND COVER



FRONT VIEW

SIDE VIEW

METER PEDESTAL DETAIL (OR APPROVED EQUAL)

2

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SAN DIEGO, CA 92127
tel: (858) 432-4112 / (858) 432-4257

REV	DATE	DESCRIPTION
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10/03/2024

ISSUED FOR:
BP SUBMITTAL

LICENSURE:
E10995
EXP. 06-30-25
ELECTRICAL
STATE OF CALIFORNIA
DATE SIGNED: 07/15/2024

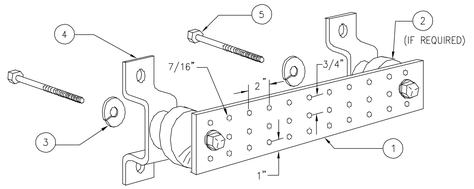
PROJECT INFORMATION:
CLL01408
PONTIAC FIREBIRD
2470 WEST PIONEER AVE. #A,
FULLERTON, CA 92832

DRAWN BY: AJYR
CHECKED BY: SVF

SHEET TITLE:
DC POWER DIAGRAM

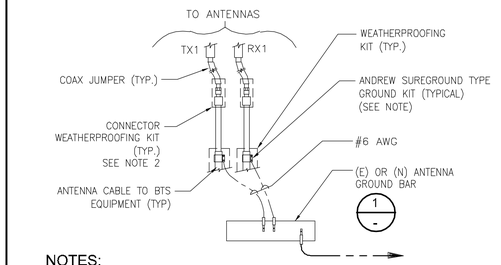
SHEET NUMBER:
E-4

NOTES:
1. ALL MOUNTING HARDWARE CAN ALSO BE USED ON 6", 12", 18", ETC. GROUND BARS.
2. ENTIRE ASSEMBLY AVAILABLE FROM NEWTON INSTRUMENT CO. CAT. NO. 2106060010.
3. PROVIDE SECURITY HARDWARE TO PREVENT THEFT



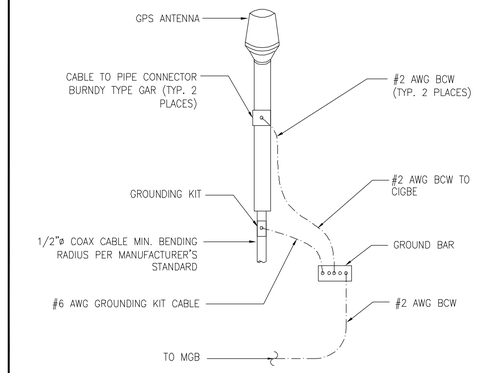
KEYNOTES:
1. COPPER GROUND BAR, NEWTON INSTRUMENT CO. OR EQUIVALENT. HOLE CENTERS TO MATCH NEMA DOUBLE LUG CONFIGURATION.
2. INSULATORS, NEWTON INSTRUMENT CO. CAT. NO. 3061-4 OR EQUIVALENT.
3. 5/8" LOCKWASHERS, NEWTON INSTRUMENT CO. CAT. NO. 3015-8 OR EQUIVALENT.
4. WALL MOUNTING BRACKET, NEWTON INSTRUMENT CO. CAT. NO. A-6056 OR EQUIVALENT.
5. 5/8-11 x 1" H.H.C.S. BOLTS, NEWTON INSTRUMENT CO. CAT. NO. 3012-1 OR EQUIVALENT.

GROUNDING BAR DETAIL
24"x36" SCALE: NTS
11"x17" SCALE: NTS
1

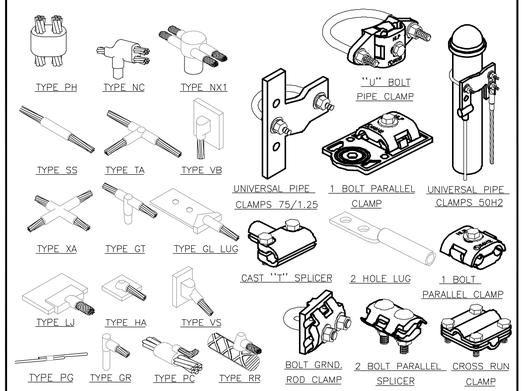


NOTES:
1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO ANTENNA GROUND BAR.
2. WEATHER PROOFING SHALL BE ANDREW TWO-PART TAPE KIT, COLD SHRINK SHALL NOT BE USED.

CONN. OF GRD WIRE TO GRD BAR
24"x36" SCALE: NTS
11"x17" SCALE: NTS
2

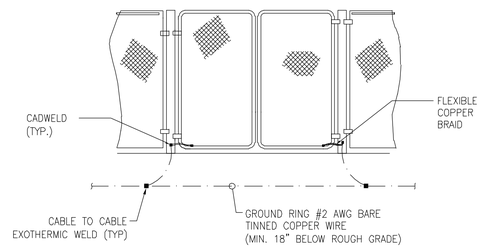


GPS ANTENNA GROUND DETAIL
24"x36" SCALE: NTS
11"x17" SCALE: NTS
3

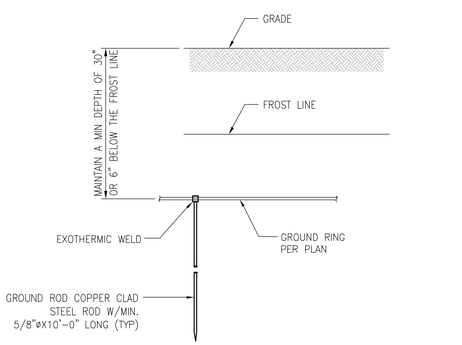


GROUNDING CONNECTIONS
24"x36" SCALE: NTS
11"x17" SCALE: NTS
4

NOTES:
1. THE #2 AWG SOLID, BARE, TINNED, COPPER WIRE FROM THE BURIED GROUND RING SHALL BE CONNECTED TO EACH GATE POST AND CORNER POST USING AN EXOTHERMIC WELD OR CLAMP CONNECTOR LISTED FOR THE PURPOSE.
2. EACH GATE SECTION SHALL BE BONDED TO HINGE POST WITH A #2AWG EQUIVALENT FLEXIBLE COPPER BRAID USING AN EXOTHERMIC WELDS OR CLAMP CONNECTORS LISTED FOR THE PURPOSE.
3. EACH HORIZONTAL POLE OR BRACE SHALL BE BONDED TO EACH OTHER AND TO THE VERTICAL POLE WHICH IS BONDED TO THE BURIED GROUND RING USING AN EXOTHERMIC WELDS OR CLAMPS CONNECTORS LISTED FOR THE PURPOSE.

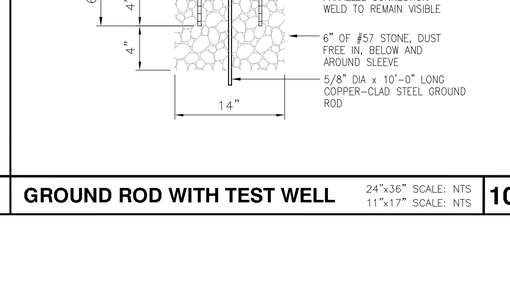


GATE POST BONDING
24"x36" SCALE: NTS
11"x17" SCALE: NTS
8

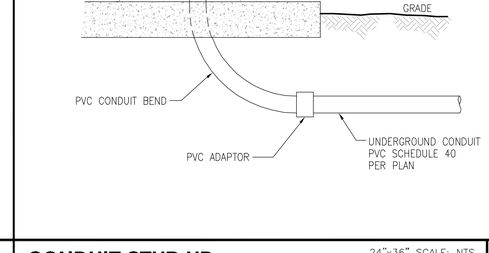


NOTES:
1. CONTRACTOR TO UTILIZE KOPR-SHIELD (THOMAS & BETTS) ON ALL LUG CONNECTIONS. OR APPROVED EQUAL.
2. ALL LUGS TO BE DUAL HOLE LONG BARREL AND CRIMPED WITH MANUFACTURE'S RECOMMENDED TOOL TWICE.

GROUND WIRE TO GROUND BAR CONNECTION
5



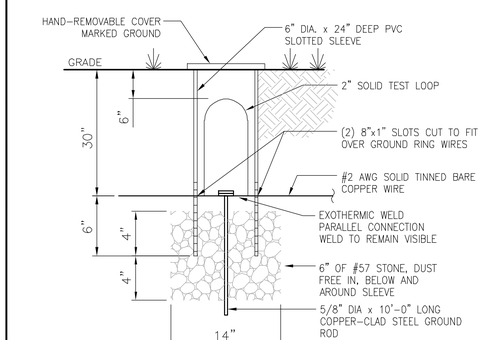
CONDUIT IN TRENCH DETAIL
24"x36" SCALE: NTS
11"x17" SCALE: NTS
6



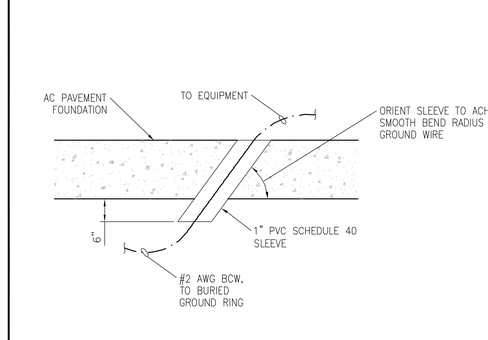
CONDUIT STUB-UP
24"x36" SCALE: NTS
11"x17" SCALE: NTS
7

NOT USED
24"x36" SCALE: NTS
11"x17" SCALE: NTS
12

GROUND ROD DETAIL
24"x36" SCALE: NTS
11"x17" SCALE: NTS
9



GROUND ROD WITH TEST WELL
24"x36" SCALE: NTS
11"x17" SCALE: NTS
10



CONDUIT SLEEVE DETAIL
24"x36" SCALE: NTS
11"x17" SCALE: NTS
11

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DATE SIGNED: 07/15/2024

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PONTIAC FIREBIRD
2470 WEST PIONEER AVE. #A,
FULLERTON, CA 92832

DRAWN BY: AJYR
CHECKED BY: SVF

SHEET TITLE:
ELECTRICAL AND GROUNDING DETAILS

SHEET NUMBER:
E-5

PYL12V185FT 12V 185Ah-8Hr
HIGH TEMPERATURE SUPER LONG LIFE BATTERY with *HT Element X Alloy™*

TECHNICAL DATA SHEET

HIGH TEMPERATURE LONG LIFE DESIGN
- + *HT Element X Alloy™* extends life in high temp applications
- + Additives to maintain compression
- + Designed to control charging current as temperature increases
- + No thermal runaway
- + Epoxy sealed terminals to prevent post leaks
- + Rugged ABS cases to minimize handling damage

10+ YEAR DESIGN LIFE
- + Exceeds Telcordia GR-1200 criteria
- + Greater than 5 years at 35°C

COMPLIANCE
- + VZ TPR-9802
- + GR-4228
- + GR-1089
- + GR-63 NEBS

SAFETY
- + UL 94V-0
- + UL 1989

Pb

SPECIFICATIONS

MODEL	NOMINAL VOLTAGE (V)	*RATED CAPACITY at 8 Hr (Ah)	** OPERATING RANGE	L		W		H		TH		WEIGHT		TERMINAL
				mm	in.	mm	in.	mm	in.	mm	in.	kg	lbs.	
PYL12V185FT	12	185	-40 to 65°C (-40 to 149°F)	556	21.9	125	4.9	317	12.5	317	12.5	60.7	133.8	Front-M6 Bolt Top-M8 Bolt

*Maximum Charge Current is 25% of the 8 Hr. Rate   **Refer to Product Manual for optimum temperature range

AMPERES TO FINAL VOLTAGE: 1.75V@25°C (77°F)

MODEL	DISCHARGE TIME (Hr)										
	2	3	4	5	6	7	8	9	10	12	20
PYL12V185FT	71.2	52.0	41.3	34.4	30.0	26.0	23.1	21.0	19.3	17.7	10.2

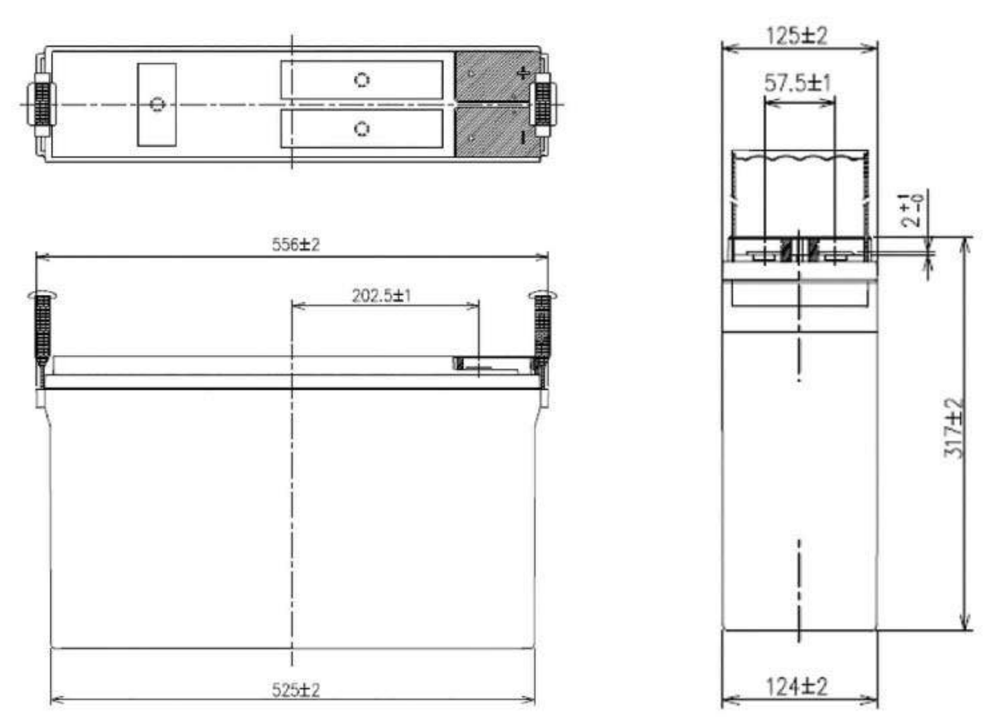
WATTS TO FINAL VOLTAGE: 1.75V@25°C (77°F)

MODEL	DISCHARGE TIME (Hr)										
	2	3	4	5	6	7	8	9	10	12	20
PYL12V185FT	829	609	487	407	351	315	275	250	232	215	123

GS YUASA
Creating the Future of Energy

PYL12V185FT 12V 185Ah-8Hr
HIGH TEMPERATURE SUPER LONG LIFE BATTERY with *HT Element X Alloy™*

units: mm



- Float Charge Voltage: 13.65 ±0.15 @ 25°C
- Temperature Compensation: Adjust float charge voltage +3mV/°C/cell for temperatures <25°C; -3mV/°C/cell for temperatures >25°C.
- Internal Resistance: Approximately 3.5mΩ measured with 1kHz AC bridge
- Terminal Hardware Torque: (Top, 8mm): 90 in-lbs. (10.17 Nm)
  (Front, 6mm): 43.4 in-lbs. (4.9 Nm)

ABOUT GS YUASA ENERGY SOLUTIONS, INC.
GS Yuasa Energy Solutions, Inc. is an American subsidiary of GS Yuasa Corporation, the world's second largest battery company and a 100+ year old Japanese corporation. GS Yuasa Energy Solutions (GYES) was formed in 2019 to address the growing energy storage and reserve power markets. GYES brings together and leverages GS Yuasa Group's advanced technologies with proven American market successes in lithium, telecom, UPS, alarm & security, and energy storage into a single business unit.

GS YUASA
Creating the Future of Energy

GS Yuasa Energy Solutions, Inc.
1150 Northmeadow Pkwy. Suite 110
Roswell, GA 30076 (800) 472-2879
www.gsyuasa-es.com

500-100-022 ver.3.0 7-2020

Material Safety Data Sheet

GS Battery USA Inc., a subsidiary of JAPAN STORAGE BATTERY CO. LTD.

GS PORTALAC, PE, PX, PXL, and PWL Series VALVE REGULATED LEAD ACID (VRLA) BATTERY, ABSORBED ELECTROLYGE (AGM)

Section I – Product Identification

Manufacturer's name:
GS Battery USA Inc.
1000 Mansell Exchange West Suite 350
Alpharetta GA 30022

Emergency Telephone Number
CHEMTREC: (800) 424-9300

Telephone Number for Information
GS Battery USA Inc.: (678) 762-4818

Date Issued: April 1 2002.
Date Updated: May 26. 2004.

Section II—Hazardous Ingredients/Identity Information

Components)	CAS Number	Approx wt%	OSHA PEL (μg/m³)	ACGIH TLV (μg/m³)	NIOSH (μg/m³)
Inorganic Lead/Lead Compounds	7439-92-1	65%-75%	50	150	10
Tin	7440-31-5	<.5%	2000	2000	N/A
Calcium	7440-70-2	<0.1%	N/A	N/A	N/A
Electrolyte: Dilute Sulfuric Acid	7664-93-9	14-20%	1000	1000	1000
Case Material: Acrylonitrile Butadiene Styrene	9003-56-9	5-10%	N/A	N/A	N/A

Inorganic lead and electrolyte (sulfuric acid) are the main components of every VALVE REGULATED LEAD ACID battery manufactured by Japan Storage Battery Co. LTD. Other ingredients may be present dependent upon the specific battery type. Contact Japan Storage Battery Co. LTD (JAPAN) or GS Battery USA Inc.(North America) for additional information.

Section III—Physical/Chemical Characteristics

ELECTROLYTE (Sulfuric Acid, dilute)

Boiling Point	203°F-240°F	Specific Gravity (H_2O = 1)	1.230 to 1.350
Vapor Pressure (mmHg)	10-17	Melting Point	N/A
Vapor Density (AIR = 1)	Greater than 1	Evaporation Rate (Butyl Acetate = 1)	Less than 1
Solubility in Water	100%	Appearance and Odor	Electrolyte: Clear liquid with sharp, penetrating, pungent odor.

Section IV—Fire and Explosion Hazard Data

Flash Point (Method Used): N/A   LEL 4.1% (H_2 Gas_)   UEL

Flammable Limits: LEL = 4.1% (Hydrogen Gas), UEL = 74.2%

Extinguishing Media: CO_2, foam, dry chemical

Special Fire Fighting Procedures: If batteries are on charge, shut of power. Use positive pressure, self-contained breathing apparatus. Beware of acid splatter during water application and wear acid resistant clothing, gloves, face and eye protection.

Unusual Fire and Explosion Hazards: VRLA batteries generate highly flammable hydrogen gas during operation. To avoid risk of fire or explosion, keep sparks and other sources of ignition away from batteries. Do not allow metallic articles to simultaneously contact the negative and positive terminal of the battery.

Section V—Reactivity Data

Stability			Conditions to Avoid
	Unstable		
	Stable	X	Prolonged overcharge on high current, ignition sources

Incompatibility *(Materials to Avoid)*

Sulfuric acid: Contact with combustibles and organic materials may cause fire and explosion. Also reacts violently with strong reducing agents, metals, sulfur trioxide gas, strong oxidizers, and water. Contact with metals may product toxic sulfur dioxide fumes and may release flammable hydrogen gas

Lead Compounds: Avoid contact with strong acids, bases, halides, halogenates, potassium nitrate, permanganate, peroxides, nascent hydrogen, and reducing agents.

Hazardous Decomposition or Byproducts

Sulfuric acid: Sulfur trioxide, carbon monoxide, sulfuric acid mist, sulfur dioxide, and hydrogen sulfide.

Lead Compounds: High temperatures above the melting point are likely to produce toxic metal fume, vapor, or dust; contact with strong acid or base or presence of nascent hydrogen may generate highly toxic arsine gas..

Hazardous Polymerization

Section VI—Health Hazard Data

Route(s) of Entry

Sulfuric acid: Harmful by all routes of entry.
Lead Compounds: Hazardous exposure can occur only when product is heated, oxidized, or otherwise process or damaged to create dust, vapor or fume.

Inhalation?

Sulfuric acid: Breathing sulfuric acid vapors and mists may cause severe respiratory.
Lead Compounds: Dust or fumes may cause irritation of upper respiratory tract or lungs

Skin Contact

Sulfuric acid: Severe irritation, burns and ulceration.
Lead Compounds: Not absorbed through the skin.

Ingestion

Sulfuric acid: May cause severe irritation of the mouth, throat, esophagus, and stomach.
Lead Compounds: May cause abdominal pain, nausea, vomiting, diarrhea, and severe cramping. Acute ingestion should be treated by a physician.

Eye Contact

Sulfuric acid: Severe irritation, burns, cornea damage, and possible blindness.
Lead Compounds: May cause eye irritation.

Acute Health Hazards

Sulfuric acid: Severe skin irritation, burns, damage to cornea may cause blindness, upper respiratory irritation.
Lead Compounds: May cause abdominal pain, nausea, headaches, vomiting, loss of appetite, severe cramping, muscular aches and weakness, and difficulty sleeping.

Chronic Health Hazards

Sulfuric acid: Possible scarring of the cornea, inflammation of the nose, throat and bronchial tubes, possible erosion of tooth enamel.
Lead Compounds: May cause anemia, damage to kidneys and nervous system, and damage to reproductive system in both males and females.

Carcinogenicity

Sulfuric acid: The National Toxicological Program (NTP) and The International Agency for Research on Cancer (IARC) have classified .strong inorganic acid mist containing sulfuric acid. as a Category 1 carcinogen, a substance that is carcinogenic to humans. The ACGIH has classified .strong inorganic acid mist containing sulfuric acid. as an A2 carcinogen (suspected human carcinogen). These classifications do not apply to liquid forms of sulfuric acid or sulfuric acid solutions contained within a battery. Inorganic acid mist (sulfuric acid mist) is not generated under normal use of this product. Misuse of the product, such as overcharging, may result in the generation of sulfuric acid mist.

Lead Compounds: - Human studies are inconclusive regarding lead exposure and an increased cancer risk. The EPA and the International Agency for Research on Cancer (IARC) have categorized lead and inorganic lead compounds as a B2 classification (probable/possible human carcinogen) based on sufficient animal evidence and inadequate human evidence.

Medical Conditions Generally Aggravated by Exposure

Inorganic lead and its compounds can aggravate chronic forms of kidney, liver, and neurologic diseases. Contact of battery electrolyte (acid) with the skin may aggravate skin diseases such as eczema and contact dermatitis. Overexposure to sulfuric acid mist may case lung damage and aggravate pulmonary conditions.

Emergency and First Aid Procedures

Inhalation:
- **Sulfuric acid**: Remove to fresh air immediately. If breathing is difficult, give oxygen
- **Lead Compounds**: Remove from exposure, gargle, wash nose and lips, consult physician

Ingestion:
- **Sulfuric acid**: Do not induce vomiting, consult a physician immediately.
- **Lead Compounds**: Consult a physician immediately

Eyes
- **Sulfuric acid**: Flush immediately with water for 15 minutes, consult a physician.
- **Lead Compounds**: Flush immediately with water for 15 minutes, consult a physician

Skin:
- **Sulfuric acid**: Flush with large amounts of water for at least 15 minutes, remove any contaminated clothing. **If** irritation develops seek medical attention.
- **Lead Compounds**: Wash with soap and water.

Section VII—Precautions for Safe Handling and Use

Steps to Be Taken in Case Material Is Released or Spilled

There is no release of material unless the case is damaged or battery is misused/overcharged. If release occurs stop flow of material, contain/absorb all spills with dry sand, earth, or vermiculite. Do not use combustible materials. Neutralize spilled material with soda ash, sodium bicarbonate, lime, etc. Wear acid-resistant clothing, boots, gloves, and face shield. Dispose of as hazardous waste. Do not discharge un-neutralized acid to sewer

Waste Disposal Method

Spent Batteries – send to secondary lead smelter for recycling. Follow applicable federal, state and local regulations Neutralize as in preceding step. Collect neutralized material in sealed container and handle as hazardous waste as applicable.

Precautions to Be Taken in Handling and Storing

Store batteries in a cool, dry, well ventilated area that are separated from incompatible materials and any activities which may generate flames, sparks, or heat. Keep all metallic articles that could contact the negative and positive terminals on a battery and create a short circuit condition.

Section VIII—Control Measures

Respiratory Protection *(Specify Type)*

None required under normal conditions. If battery is overcharged and concentrations of sulfuric acid are known to exceed PEL use NIOSH or MSHA approved respiratory protection.

Engineering Controls:

Store and handle batteries in a well ventilated area. If mechanical ventilation is used, components must be acid resistant

Protective Gloves	Eye Protection
None needed under normal conditions. If battery case is damaged use rubber or plastic gloves with elbow length gauntlet.	None needed under normal conditions. IF handling damaged or broken batteries use chemical splash goggles or face shield.

Other Protective Clothing or Equipment

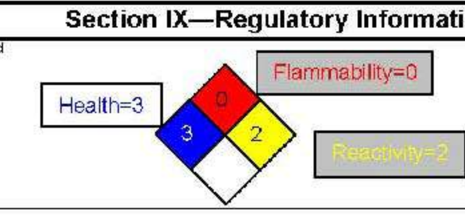
None needed under normal conditions. In case of damaged or broken battery use an acid resistant apron. Under severe exposure or emergency conditions wear acid resistant clothing.

Work/Hygienic Practices

Handle batteries carefully to avoid damaging the case. Do not allow metallic articles to contact the battery terminals during handling. Avoid contact with the internal components of the battery.

Section IX—Regulatory Information

NFPA Hazard Rating for sulfuric acid



Transportation:

U.S. DOT/IMDG/IATA Shipping information

Proper Shipping Name:	Batteries, wet, non-spillable
Hazard Class:	8
ID Number:	UN2800
Packing Group:	3
Label/Placard:	CORROSIVE

GS Battery USA Inc.'s Portalac series VRLA batteries have been tested and meet the "non-spillable electric storage batteries" criteria as required by DOT CFR 49, 173.159 (d), and IMO/IMDG, and ICAO/IATA packaging instructions 806 and A67, and therefore are non-regulated as long as the following criteria are met:

1. The batteries must be protected against short circuits and securely packaged.
2. The batteries and their outer packaging must be plainly and durably marked "NON-SPILLABLE" or "NONSPILLABLEBATTERY".

Contact your GS Battery USA Inc. representative for additional informational regarding the classification of batteries.

Regulatory Information

RCRA: Spent lead-acid batteries are not regulated as hazardous waste by the EPA when recycled, however state and International regulations may vary.

CERCLA (Superfund) and EPCRA:

(a) Reportable Quantity (RQ) for spilled 100% sulfuric acid under CERCLA (Superfund) and EPCRA (Emergency Planning Community Right to Know Act) is 1,000 lbs. State and local reportable quantities for spilled sulfuric acid may vary.
(b) Sulfuric acid is a listed "Extremely Hazardous Substance" under EPCRA, with a Threshold Planning Quantity (TPQ) of 1,000 lbs.
(c) EPCRA Section 302 notification is required if 1,000 lbs. or more of sulfuric acid is present at one site. The quantity of sulfuric acid will vary by battery type. Contact GS Battery USA Inc. for additional information.
(d) EPCRA Section 312 Tier 2 reporting is required for batteries if sulfuric acid is present in quantities of 500 lbs. or more and/or if lead is present in quantities of 10,000 lbs. or more.
(e) Supplier Notification: This product contains toxic chemicals, which may be reportable under EPCRA Section 313 Toxic Chemical Release Inventory (Form R) requirements. If you are a manufacturing facility under SIC codes 20 through 39, the following information is provided to enable you to complete the required reports:
(f)

Toxic Chemical	CAS Number	Approximate % by Wt.
Lead	7439-92-1	60
Sulfuric Acid	7664-93-9 10-	30
Arsenic	7440-38-2	0.2

If you distribute this product to other manufacturers in SIC Codes 20 through 39, this information must be provided with the first shipment of each calendar year. The Section 313 supplier notification requirement does not apply to batteries, which are "consumer products". Not present in all battery types. Contact GS Battery USA Inc. for additional information.

TSCA
Ingredients in GS Battery USA Inc.'s batteries are listed in the TSCA Registry as follows:

Components	CAS Number	TSCA Status
Electrolyte		
Sulfuric Acid (H2SO4)	7664-93-9	Listed
Inorganic lead Compound:		
Lead (Pb)	7439-92-1	Listed
Lead Oxide (PbO)	1317-36-8	Listed
Lead Sulfate (PbSO4)	7446-14-2	Listed
Arsenic (As)	7440-38-2	Listed
Calcium (Ca)	7440-70-2	Listed
Tin (Sn)	7440-31-5	Listed

2022 CFC SECTION 1206 COMPLIANCE	
NEW VERTIV DC POWER PLANT	
BATTERY TYPE:	(N) GS BATTERY PYL12V185FT
AMP-HR PER BATTERY	185 AH
VOLTS PER BATTERY	12 VOLTS
KWH PER BATTERY	2.22 KWH
BATTERY QUANTITY:	8
TOTAL KWH:	17.76 KWH

SINCE THE TOTAL KWH AT THIS SITE IS LESS THAN 70KWH, THIS SITE IS IN COMPLIANCE WITH 2022 CFC SECTION 1206.

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ANNAPOLIS, MD 21401

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16885 VIA DEL CAMPO CT., SUITE 318
SAN DIEGO, CA 92127
tel: (858) 432-4112 / (858) 432-4257

REV	DATE	DESCRIPTION
2	10/03/2024	PLAN CHECK COMMENTS
1	08/02/2024	PLAN CHECK COMMENTS/ ADDED FIBER DESIGN
0	04/26/2024	100% CD'S
B	04/19/2023	REMOVED MW ANTENNA
A	11/04/2022	90% CD'S FOR REVIEW

ISSUED DATE: 10/03/2024

ISSUED FOR: BP SUBMITTAL

LICENSURE:

REGISTERED PROFESSIONAL ENGINEER
S. P. L...
E10995
EXP. 06-30-25
ELECTRICAL
STATE OF CALIFORNIA

DATE SIGNED: 07/15/2024

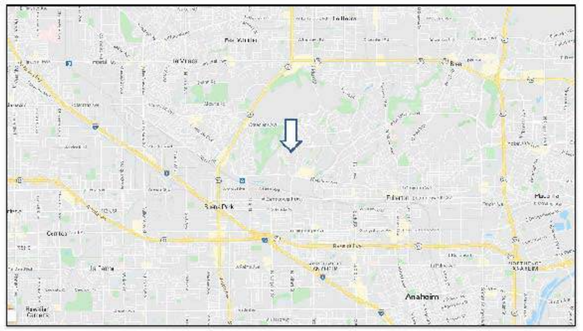
PROJECT INFORMATION:
CLL01408
PONTIAC FIREBIRD
2470 WEST PIONEER AVE. #A,
FULLERTON, CA 92832

DRAWN BY: AJYR
CHECKED BY: SVF

SHEET TITLE: BATTERY SPECS, MSDS AND KWH CALCULATION

SHEET NUMBER: E-6

BATTERY SPECS, MSDS AND KWH CALCULATION   1



SITE NUMBER: CLL01408
WALK DATE: MAY 17, 2022
SITE ADDRESS: 2470 W. PIONEER AVE.
FULLERTON, CA 92833
POWER CO. : SCE
LEC: AT&T

NOTE:

THE CD SITE DESIGN FOR POWER IS SUBJECT TO CHANGE BASED ON RECEIPT OF FINAL POWER DESIGN FROM UTILITIES.

PRELIMINARY POWER DESIGN (BY UTILITY PROVIDER)

24"x36" SCALE: NTS
11"x17" SCALE: NTS

1

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DRAWN BY:	AJYR
CHECKED BY:	SVF

SHEET TITLE:
PRELIMINARY
POWER DESIGN
(BY UTILITY PROVIDER)

SHEET NUMBER:
E-7

AT&T MOBILITY
FIBER FEED ETHERNET
CLL01408 / FA# 13023941
USID 317745

FOR SITE INFORMATION AND ACCESS CALL
Alisha Strasheim (951-440-0669)
DATE OF WALK SURVEY: 06/27/2024
Site Address:
2470 West Pioneer Ave. Fullerton, CA 92832

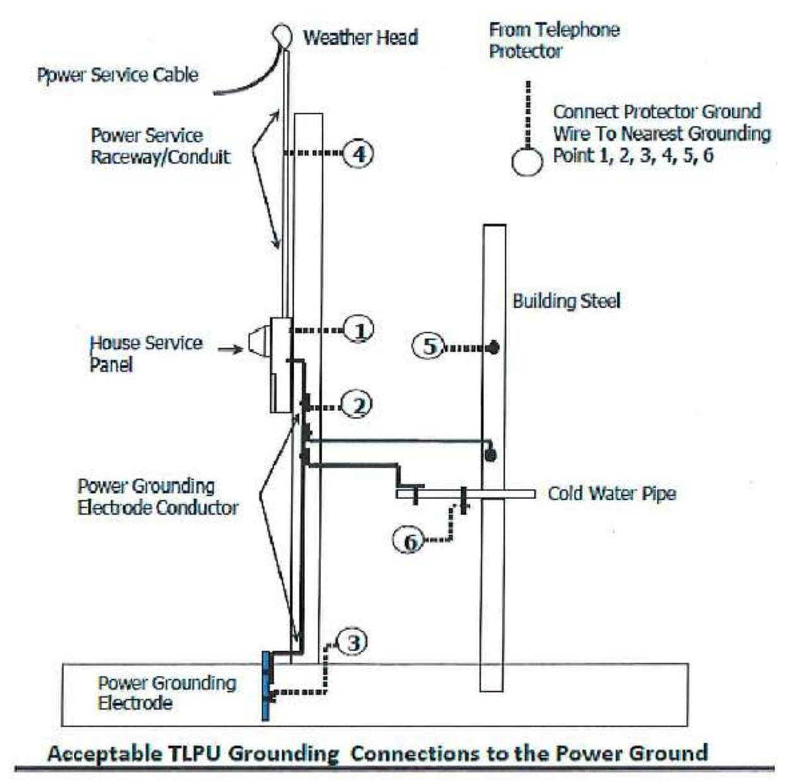
Walk Completed with Melanio Balmania
of ATTWL (714-267-4158)
MB3406@att.com

TELCO CELL SITE REQUIREMENTS
SPOC BINDER DATED 02/27/2022

CONDUIT
1.) 1-2" minimum diameter duct of approved material or 1-4" at carriers request
a.) Within or on buildings - rigid galvanized steel (when required), or electro-metallic tubing (EMT)
b.) In underground - PVC schedule 40 or equivalent
2.) Within or on buildings
a.) Electrical LB's and condulets are not acceptable as pull boxes
b.) No 90 degree transitions at or within a pull box
c.) In line pull box minimum dimensions = 12" L x 8" W x 8" D
d.) Vertical sections of conduit will require a pull box every 100 feet and the use of approved cable restraints
e,) A maximum of 300 feet horizontal between pull boxes
f.) A maximum of 2-90 degree sweeping radius bends between pull boxes g.) Minimum bending radius of 10 cable diameter (10") on buildings
h.) Fire stopping required when openings are made in any fire rated barrier (refer To BSP 620-100-105 and BSP 622-700-102)
I.) All external conduit terminations shall be weather-tight
3.) In underground construction
a.) A conduit length maximum of 300 feet between pull boxes
b.) A sweeping bend is a radius 10 times the conduit diameter (20" in the UG)
4.) Pull lines in all ducts (minimum of 3/8" poly rope) & a measuring tape must also be in place to determine "as built" conduit length; both must be continuous piece end-to-end.
TRENCHING
1.) Minimum coverage of duct on private property = 18" or as specified by permitting agent
2.) Minimum coverage of duct in public r/w = 24" or as specified by permitting agent
3.) Minimum of 12" separation in joint trench between power & telco, or as specified by permitting agent (vertical separation approved due to specific site conditions)
4.) Pull boxes = minimum 17" W x 30" L
5.) Splice boxes = minimum 30" W x 48" L
6.) All conduit to enter the ends of boxes (not sides) and be mortared (not swept into the bottom like power). Conduits to be cut flush with the inside face of the box
7.) Bases are required on all splice boxes. Splice boxes are to be equipped with cable racks and pulling eyes
8.) Traffic related boxes, bases & lids on all pull or splice boxes that are subject to vehicles
BONDING AND GROUNDING
1.) #6 AWG copper ground wire (6' coil), & bonding clamps in place at each attachment point
2.) Solid ground wire preferred (stranded as a second choice)
3.) Ground telco service cabinet to MGB (main ground buss) at Pacific Bell Central Office locations. MGB is tied to existing central office grounding ring
4.) Bond all metallic cabinets with non-metallic conduit to building ground or ground rod

GROUNDING THE TELEPHONE LINE PROTECTOR UNIT

1. A neutral bus of the AC Service Panel
2. A power grounding electrode conductor (GEL)
3. A power grounding electrode (power ground rod)
4. A metallic power service raceway / conduct
5. Building steel (building steel is required to be bonded to the power GEC)
6. A cold water pipe (cold water pipe is required to be bonded to the power GEC)



Acceptable TLPU Grounding Connections to the Power Ground

ENGINEERING NOTES:

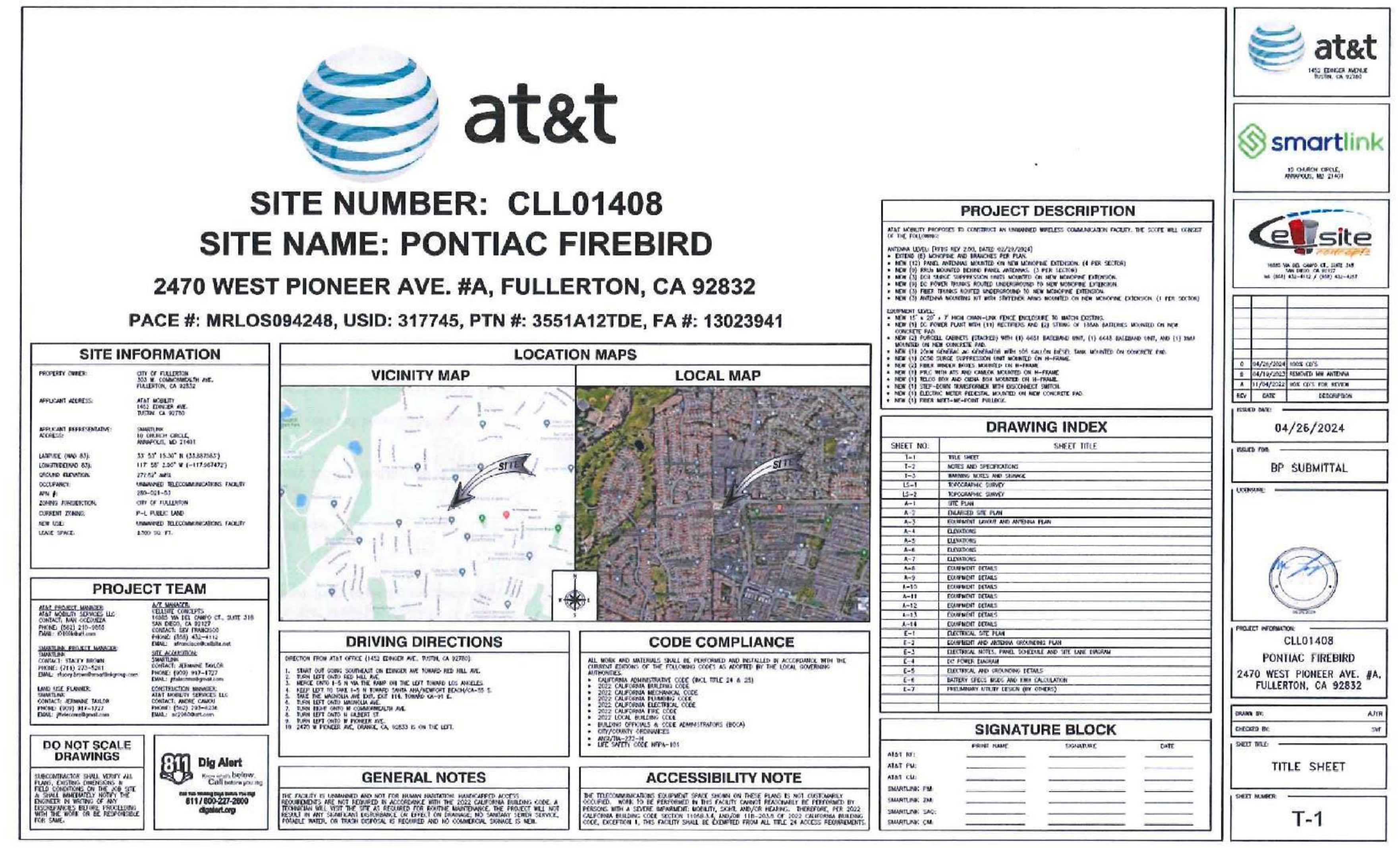
This site is located at the city of Fullerton Stewart pump Station on W. Pioneer Ave. Lease area is on the Southeast corner of the property.

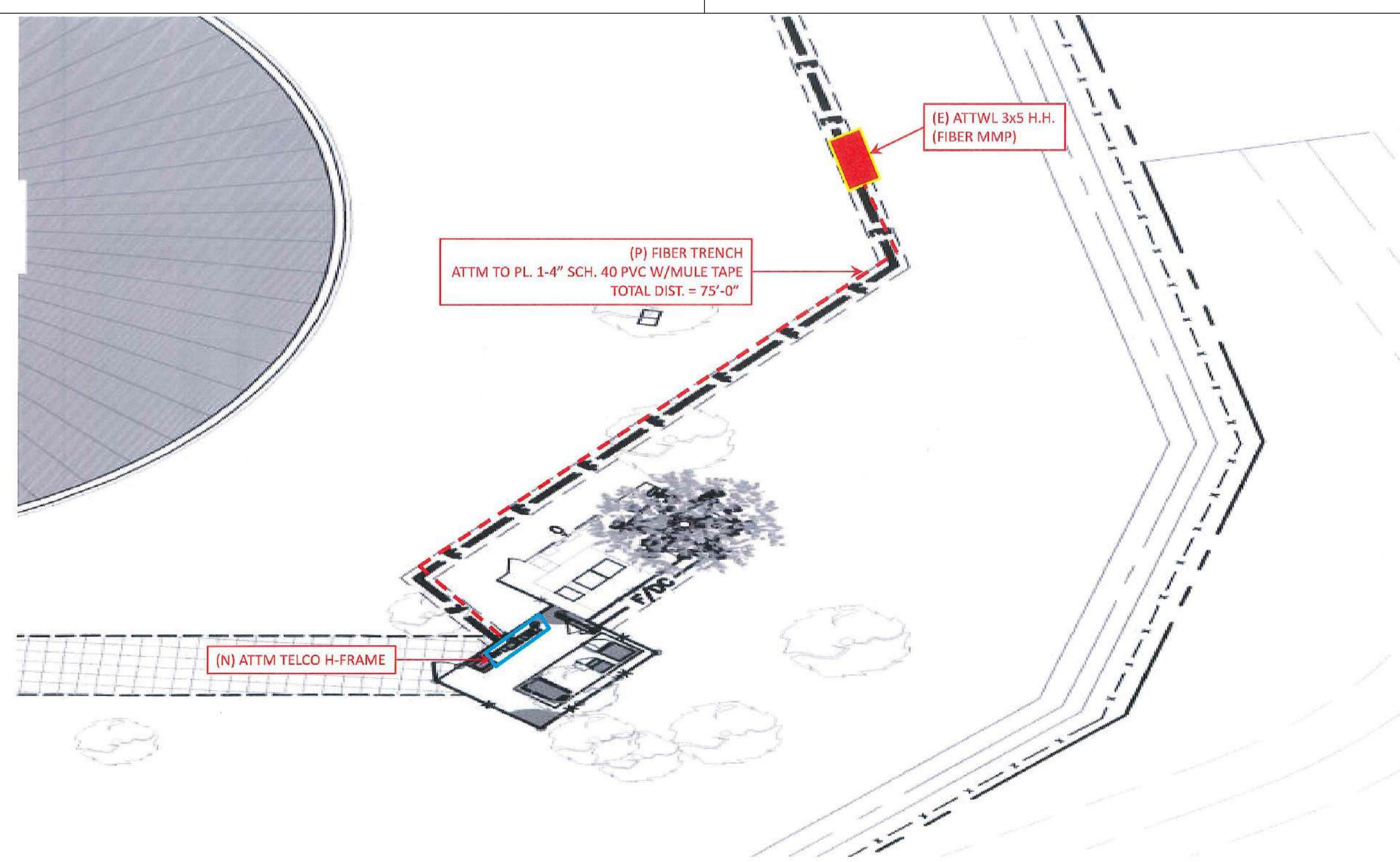
CONSTRUCTION NOTES:

- MMP is (E) ATTWL 3x5 Handhole on private property.
- Site does note have 24/7 access. Need keycard for entrance.
- Condult should have a minimum 3' sweeping radius-no right angles-no more than three 90° turns without a pull box. Paths longer than 300' or with two or more 90-degree turns will require a pull box. Minimum dimensions for an in-ground pull box is 17"x30"24" deep.
- Terminate conduit in pull boxes and splice boxes in the end wall of the box and perpendicular to the end wall. Trim conduit flush with end walls and grout around conduit to seal. Couplings on rigid conduit may extend into the box no more than 1"

SCOPE OF WORK:

- GC to survey proposed ATTM Telco route.
- MMP is (E) ATTWL 3x5 Handhole on private property.
- GC to notify and provide construction schedule to LL.
- GC to provide (N) 4" SCH. 40 PVC from MMP to Hoffman Box located at H-Frame in ATTM lease area approx. 75' away.
- Total OTAL MULE TAPE to be installed 75'.
- GC to install (n) 30"x36"x8" Hoffman Box and ATTWL Ciena (3931).
- GC to install & label 14AWG (Telco Flex), -48VDC, 5 AMP power from DC power plant to (E) H-Frame for ATTWL.
- GC to install & label #6 ground on telco H-Frame for ATTWL.
- GC to install & label #6 ground to mini-buss bar in (N) 30"x36"x8" Hoffman Box FTE.
- GC to install (N) buss bar on H-Frame.
- GC to install & label #6 ground wire at Ciena location.





PROPOSED ATTM 4" CONDUIT ROUTE FROM MMP TO TELCO H-FRAME

FIBER DESIGN (BY OTHERS)

24"x36" SCALE: NTS
11"x17" SCALE: NTS

1

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SAN DIEGO, CA 92127
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E10995
EXP. 06-30-25
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STATE OF CALIFORNIA
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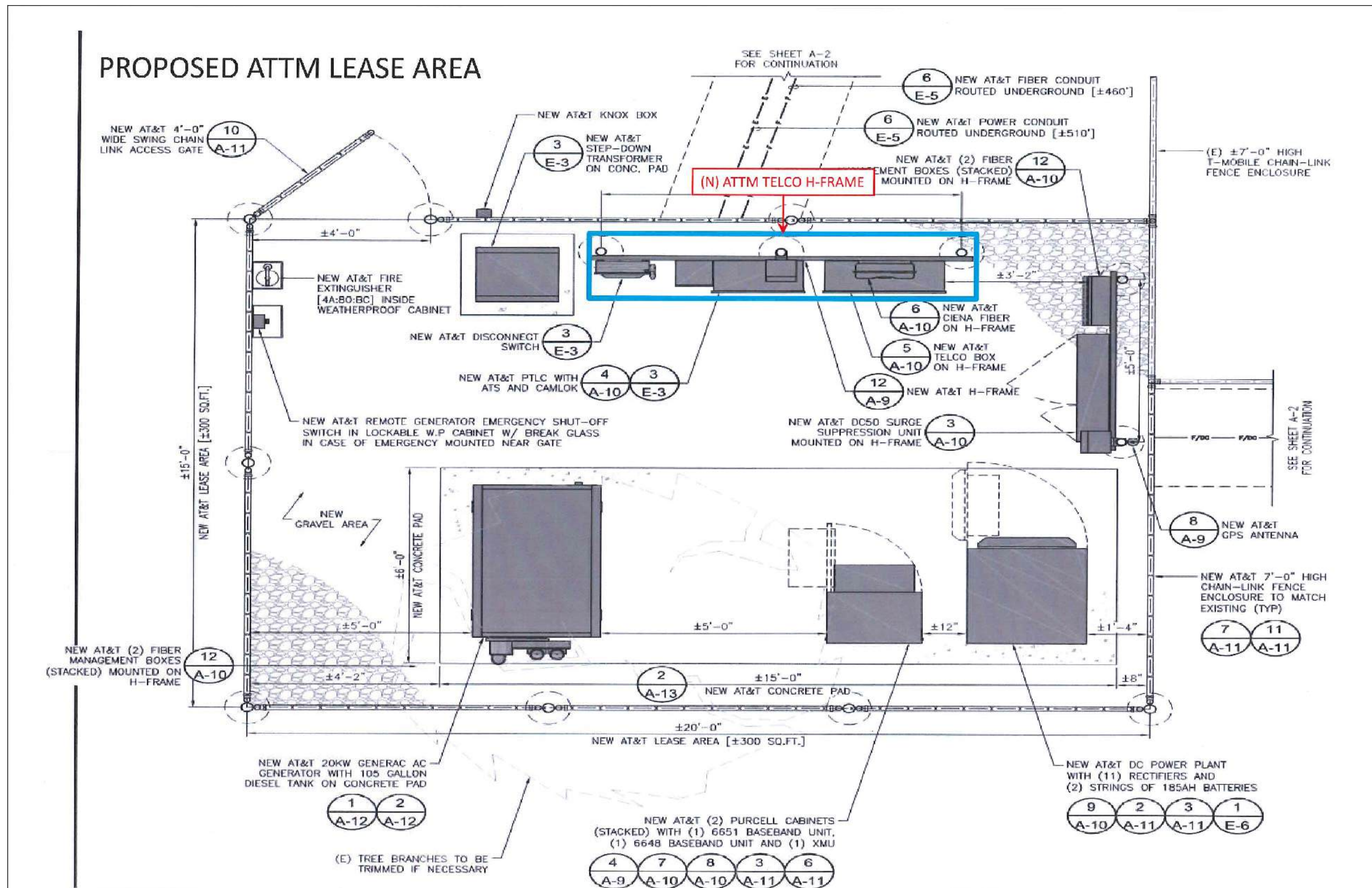
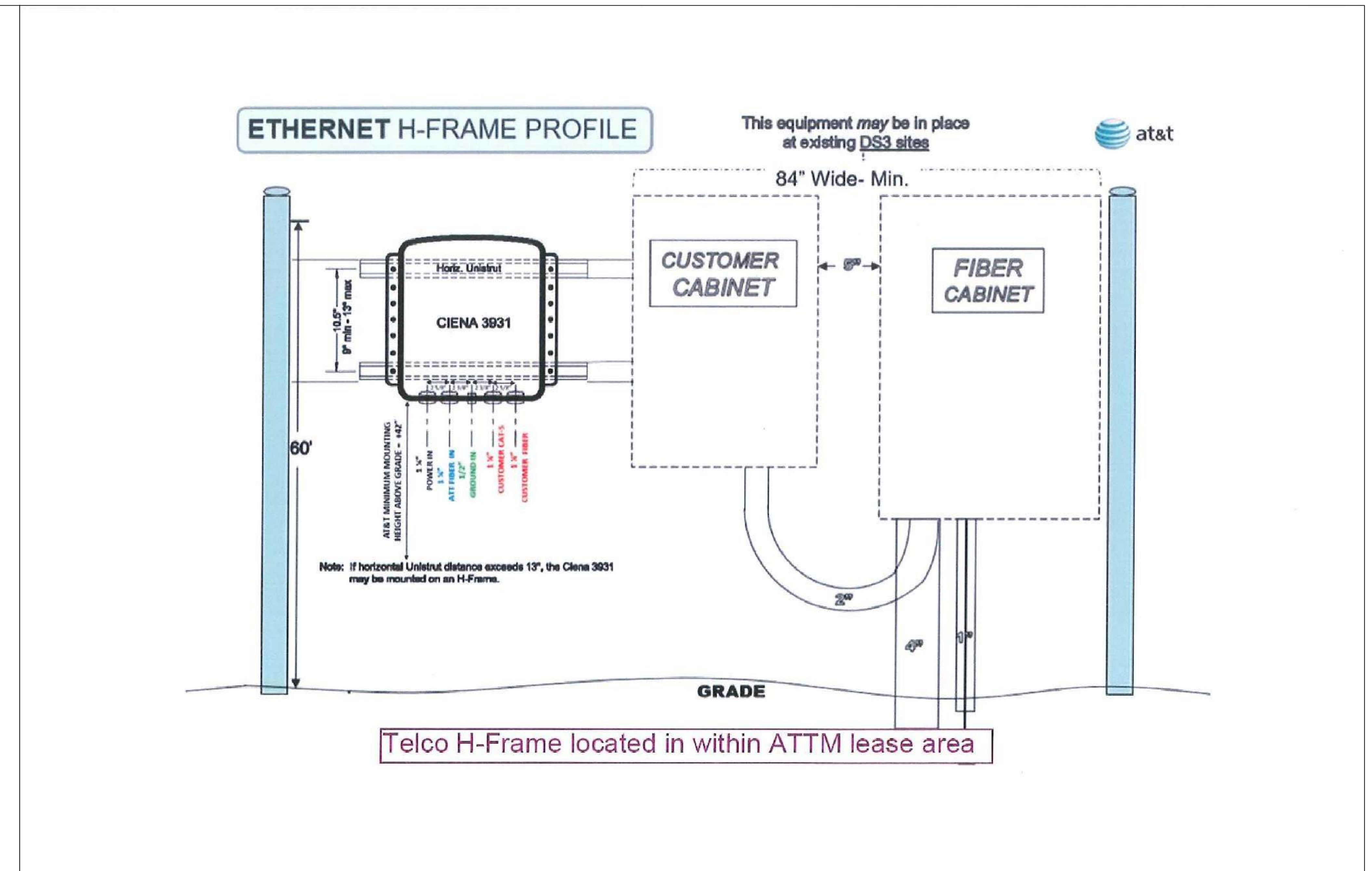
2470 WEST PIONEER AVE. #A,
FULLERTON, CA 92832

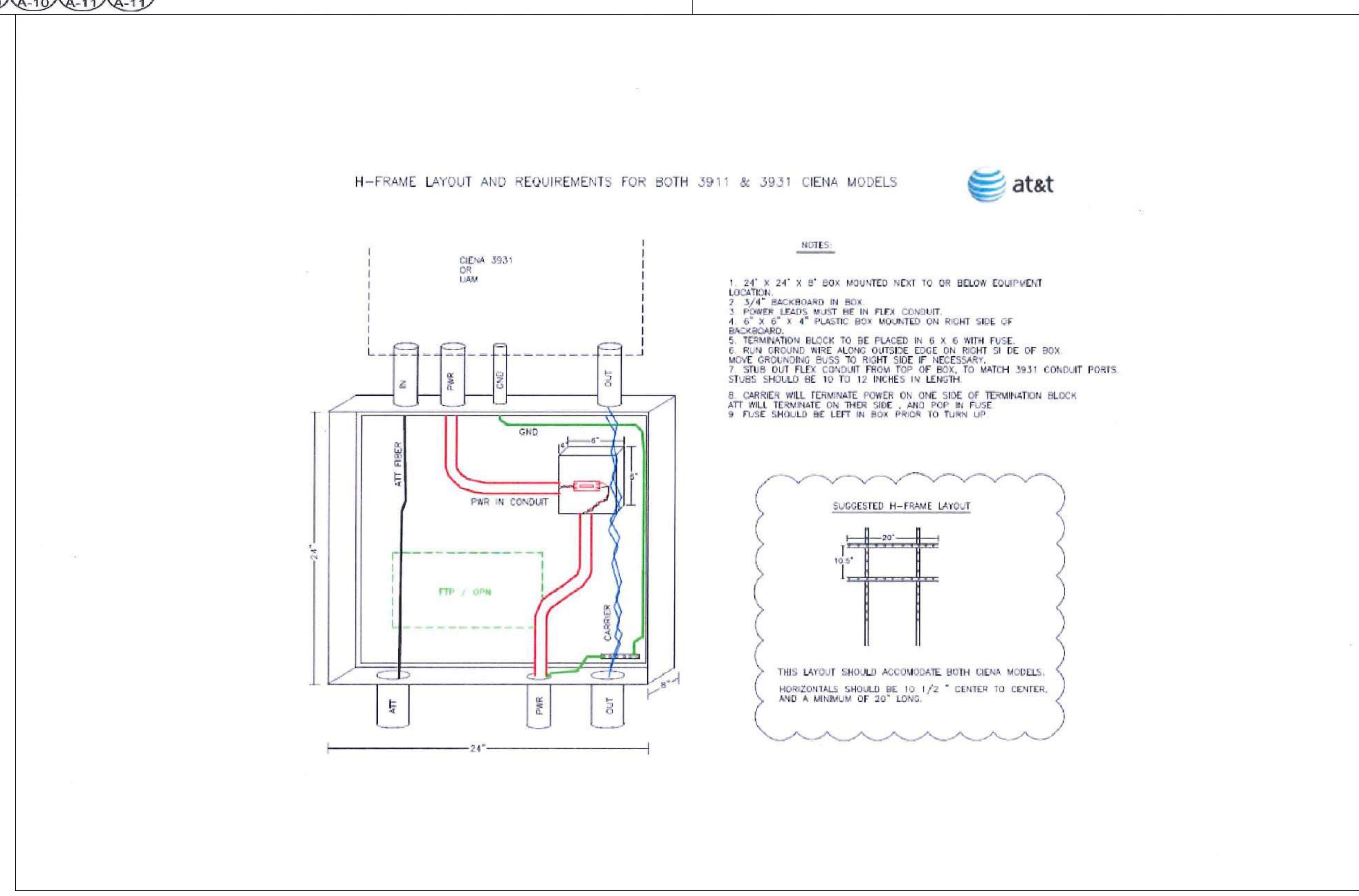
DRAWN BY: AJYR
CHECKED BY: SVF

SHEET TITLE:
FIBER DESIGN
(BY OTHERS)

SHEET NUMBER:
E-8







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NOTED

REGISTERED PROFESSIONAL ENGINEER, E10995, EXP. 06-30-25, ELECTRICAL, STATE OF CALIFORNIA

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2470 WEST PIONEER AVE. #A,
FULLERTON, CA 92832

DRAWN BY: AJYR
CHECKED BY: SVF

SHEET TITLE: FIBER DESIGN (BY OTHERS)

SHEET NUMBER: E-9

FIBER DESIGN (BY OTHERS)

24"x36" SCALE: NTS
11"x17" SCALE: NTS

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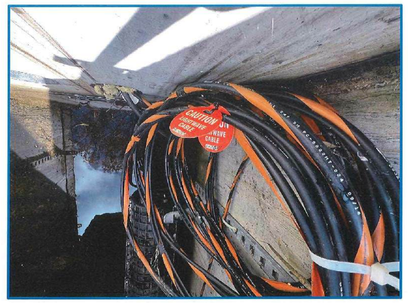
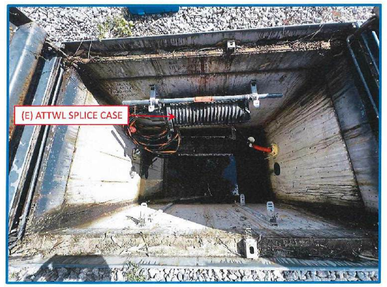
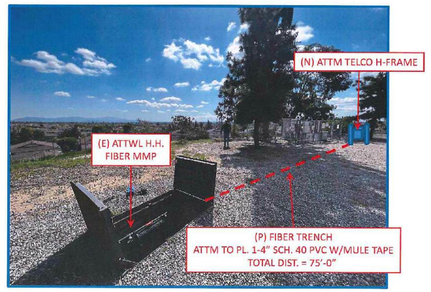


ATTWL FIBER



3X5 FIBER H.H

3X5 H.H (FIBER MMP)



FIBER TRENCH FROM MMP AT ENTRANCE OF LEASE ARE

FIBER DESIGN (BY OTHERS)

24"x36" SCALE: NTS
11"x17" SCALE: NTS

1

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REV	DATE	DESCRIPTION
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ISSUED FOR:
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C10995
EXP 06-30-25
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STATE OF CALIFORNIA

DATE SIGNED: 07/15/2024

PROJECT INFORMATION:
CLL01408
PONTIAC FIREBIRD
2470 WEST PIONEER AVE. #A,
FULLERTON, CA 92832

DRAWN BY:	AJYR
CHECKED BY:	SVF

SHEET TITLE:
FIBER DESIGN
(BY OTHERS)

SHEET NUMBER:
E-10

STRUCTURAL DESIGN DRAWINGS

SITE NAME: **PIONEER**

SITE NUMBER: **US-CA-1322**

SITE ADDRESS:

2470 PIONEER AVE #A
FULLERTON, CA 92832
(ORANGE COUNTY)
N 33°53'15.00", W 117°58'02.00"

MODIFICATION PROVISIONS

THE MODIFICATIONS DEPICTED ON THESE DRAWINGS ARE BASED ON THE RECOMMENDATIONS OUTLINED IN THE STRUCTURAL MODIFICATION ANALYSIS REPORT COMPLETED BY TOWER ENGINEERING PROFESSIONALS (TEP), JOB#: 72879.980281 DATED JULY 30, 2024 (REV 0) PER TIA-222-H. THIS REPORT IS BASED ON A SPECIFIC ANTENNA LOADING AND COAX CONFIGURATION. SEE THE REPORT FOR THE ANTENNA AND COAX LOADING INFORMATION. ANY OTHER ANTENNA OR COAX CONFIGURATION REQUIRES REVIEW BY TEP. SATISFACTORY COMPLETION OF THE MODIFICATIONS INDICATED ON THESE DRAWINGS WILL RESULT IN THE STRUCTURE MEETING THE REQUIREMENTS OF THE SPECIFICATIONS UNDER WHICH THE STRUCTURAL WAS COMPLETED.

CONTRACTOR SHALL FIELD VERIFY ALL: DIMENSIONS, QUANTITIES, PART NUMBERS AND COAX/ANTENNA PLACEMENTS PRIOR TO: BIDDING, ORDERING MATERIALS, AND CONSTRUCTION.

ATTENTION

QUALIFIED ENGINEERING SERVICES ARE AVAILABLE FROM TEP TO ASSIST CONTRACTORS IN CLASS IV RIGGING PLAN REVIEWS. FOR REQUESTED QUALIFIED ENGINEERING SERVICES, CONTACT TEP FOR QUOTE AT RIGGING@TEPGROUP.NET.

INDEX OF SHEETS

PROJECT TEAM

PROJECT CONTACT:

NAME	PHOENIX TOWER INTERNATIONAL
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CITY, STATE, ZIP	BOCA RATON, FL, 33431
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EMAIL	CHELSI.MONIHAN@TAEC.COM

ENGINEERING FIRM PROJECT MANAGER:

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CONTACT	JARRED L. WALLACE, P.E.
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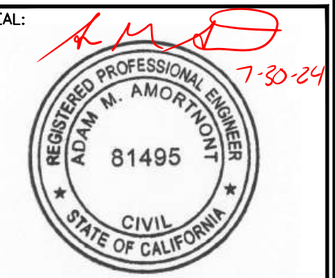

July 30, 2024

REV	DATE	ISSUED FOR:
0	07-30-24	MODIFICATION DRAWINGS

DRAWN BY: JLW | CHECKED BY: TLI

SHEET TITLE:

TITLE SHEET

SHEET NUMBER: **T-1**

REVISION: **0**

TEP#: 72879.980281

MI CHECKLIST

REQUIRED	REPORT ITEM	BRIEF DESCRIPTION
		PRE-CONSTRUCTION
NA	EOR APPROVED SHOP DRAWINGS	ONCE THE PRE-MODIFICATION MAPPING IS COMPLETE AND PRIOR TO FABRICATION, THE CONTRACTOR SHALL PROVIDE DETAILED ASSEMBLY DRAWINGS AND/OR SHOP DRAWINGS ALONG WITH EOR RFI FORM DETAILING ANY CHANGES FROM THE ORIGINAL DESIGN TO THE EOR FOR REVIEW AND APPROVAL.
X	FABRICATION INSPECTION	A LETTER FROM THE FABRICATOR, STATING THAT THE WORK WAS PERFORMED IN ACCORDANCE WITH INDUSTRY STANDARDS AND THE CONTRACT DOCUMENTS, SHALL BE PROVIDED TO THE MI INSPECTOR FOR INCLUSION IN THE MI REPORT.
X	FABRICATOR CERTIFIED WELD INSPECTION	A CWI SHALL INSPECT ALL WELDING PERFORMED ON STRUCTURAL MEMBERS DURING FABRICATION. A WRITTEN REPORT SHALL BE PROVIDED TO THE MI INSPECTOR FOR INCLUSION IN THE MI REPORT.
X	MATERIAL TEST REPORTS (MTR)	MATERIAL TEST REPORTS SHALL BE PROVIDED FOR MATERIAL USED. MTRS SHALL BE PROVIDED TO THE MI INSPECTOR FOR INCLUSION IN THE MI REPORT.
X	FABRICATOR NDE INSPECTION REPORT	CRITICAL SHOP WELDS THAT REQUIRE TESTING ARE NOTED ON THESE CONTRACT DRAWINGS. A CERTIFIED NDT INSPECTOR SHALL PERFORM NON-DESTRUCTIVE EXAMINATION AND A REPORT SHALL BE PROVIDED TO THE MI INSPECTOR FOR INCLUSION IN THE MI REPORT.
NA	NDE OF MONOPOLE BASE PLATE	A NDE OF THE POLE TO BASE PLATE CONNECTION IS REQUIRED AND A WRITTEN REPORT SHALL BE PROVIDED TO THE MI INSPECTOR FOR INCLUSION IN THE MI REPORT.
X	PACKING SLIPS	PACKING/SHIPPING LIST FOR ALL MATERIAL USED DURING CONSTRUCTION OF THE MODIFICATION
ADDITIONAL TESTING AND INSPECTIONS:		
NA		
		CONSTRUCTION
X	FOUNDATION INSPECTIONS	A VISUAL OBSERVATION OF THE EXCAVATION AND REBAR SHALL BE PERFORMED BEFORE PLACING THE CONCRETE. A VISUAL OBSERVATION OF THE REBAR SHALL BE PERFORMED BEFORE PLACING THE EPOXY. A SEALED WRITTEN REPORT SHALL BE PROVIDED TO THE MI INSPECTOR FOR INCLUSION IN THE MI REPORT.
NA	CONCRETE COMP. STRENGTH AND SLUMP TEST	THE CONCRETE MIX DESIGN, SLUMP TEST, AND COMPRESSIVE STRENGTH TESTS SHALL BE PROVIDED AS PART OF THE FOUNDATION REPORT.
NA	EARTHWORK: SOIL COMPACTION	FOUNDATION SOIL COMPACTION SHALL BE INSPECTED AND APPROVED BY AN APPROVED FOUNDATION INSPECTOR AND RESULTS INCLUDED AS PART OF THE FOUNDATION REPORT.
NA	EARTHWORK: BEARING CAPACITY	FOUNDATION SUB-GRADES SHALL BE INSPECTED AND APPROVED BY AN APPROVED FOUNDATION INSPECTOR AND RESULTS INCLUDED AS PART OF THE FOUNDATION REPORT.
X	MICROPILE/ROCK ANCHOR	MICROPILES/ROCK ANCHORS SHALL BE INSPECTED BY THE FOUNDATION INSPECTION VENDOR AND SHALL BE INCLUDED AS PART OF THE FOUNDATION INSPECTION REPORT, ADDITIONAL TESTING AND/OR INSPECTION REQUIREMENTS ARE NOTED IN THESE CONTRACT DOCUMENTS.
NA	POST-INSTALLED ANCHOR ROD VERIFICATION	POST INSTALLED ANCHOR ROD VERIFICATION SHALL BE PERFORMED AND A REPORT SHALL BE PROVIDED TO THE MI INSPECTOR FOR INCLUSION IN THE MI REPORT.
NA	BASE PLATE GROUT VERIFICATION	THE GENERAL CONTRACTOR SHALL PROVIDE DOCUMENTATION TO THE MI INSPECTOR THAT CERTIFIES THAT THE GROUT WAS REMOVED AND/OR INSTALLED IN ACCORDANCE WITH CONTRACTOR DOCUMENTS FOR INCLUSION IN THE MI REPORT.
X	FIELD CERTIFIED WELD INSPECTION	AN AWS CERTIFIED WELD INSPECTOR SHALL INSPECT AND TEST FIELD WELDS, IN ACCORDANCE WITH AWS D1.1/D1.1M: "STRUCTURAL WELDING CODE - STEEL". A REPORT SHALL BE PROVIDED. NDE OF FIELD WELDS SHALL BE PERFORMED AS REQUIRED PER CONTRACT DOCUMENTS. THE NDE REPORT SHALL BE INCLUDED IN THE CWI REPORT.
X	FIELD NDE	A NDE OF THE FIELD WELDS IN ACCORDANCE WITH AWS D1.1 AND ANY ADDITIONAL NDE REQUIREMENTS NOTED IN THESE DESIGN DOCUMENTS
X	ON-SITE COLD GALVANIZING VERIFICATION	THE GENERAL CONTRACTOR SHALL PROVIDE WRITTEN AND PHOTOGRAPHIC DOCUMENTATION TO THE MI INSPECTOR VERIFYING THAT ANY ON-SITE COLD GALVANIZING WAS APPLIED PER MANUFACTURER SPECIFICATIONS AND APPLICABLE STANDARDS.
NA	TENSION TWIST AND PLUMB	THE GENERAL CONTRACTOR SHALL PROVIDE A REPORT IN ACCORDANCE WITH APPLICABLE STANDARDS DOCUMENTING TENSION TWIST AND PLUMB.
NA	CANISTER DRAWINGS	THE CONTRACTOR SHALL SUBMIT A LEGIBLE COPY OF ANY FINAL FABRICATION OR PARTS DRAWINGS PROVIDED BY THE CANISTER VENDOR
X	GC AS-BUILT DRAWINGS	THE GENERAL CONTRACTOR SHALL SUBMIT A LEGIBLE COPY OF THE ORIGINAL DESIGN DRAWINGS EITHER STATING "INSTALLED AS DESIGNED" OR NOTING ANY CHANGES THAT WERE REQUIRED AND APPROVED BY THE ENGINEER OF RECORD. EOR/RFI FORMS APPROVING ALL CHANGES SHALL BE SUBMITTED
ADDITIONAL TESTING AND INSPECTIONS:		
NA		
		POST-CONSTRUCTION
X	CONSTRUCTION COMPLIANCE LETTER	A LETTER FROM THE GENERAL CONTRACTOR STATING THAT THE WORKMANSHIP WAS PERFORMED IN ACCORDANCE WITH INDUSTRY STANDARDS AND THESE CONTRACT DRAWINGS
NA	POST-INSTALLED ANCHOR ROD PULL TESTS	POST-INSTALLED ANCHOR RODS SHALL BE TESTED BY A PULL TEST INSPECTOR AND A REPORT SHALL BE PROVIDED INDICATING TESTING RESULTS.
X	PHOTOGRAPHS	PHOTOGRAPHS SHALL BE SUBMITTED TO THE MI. PHOTOS SHALL DOCUMENT ALL PHASES OF THE CONSTRUCTION. THE PHOTOS SHALL BE ORGANIZED IN A MANNER THAT EASILY IDENTIFIES THE EXACT LOCATION OF THE PHOTO.
NA	BOLT HOLE INSTALLATION VERIFICATION REPORT	THE MI INSPECTOR SHALL VERIFY THE HOLE SIZE AND CONDITION OF 10% OF ALL NON PRE-TENSIONED BOLTS INSTALLED AS PART OF THE MODIFICATION. THE MI REPORT SHALL CONTAIN THE COMPLETED BOLT INSTALLATION VERIFICATION REPORT, INCLUDING THE SUPPORTING PHOTOGRAPHS.
X	PUNCH LIST DEVELOPMENT AND CORRECTION DOCUMENTATION	FINAL PUNCH LIST INDICATING ALL NONCONFORMANCE(S) IDENTIFIED AND THE FINAL RESOLUTION/APPROVAL.
X	MI INSPECTOR RECORD DRAWING(S)	THE MI INSPECTOR SHALL OBSERVE AND REPORT ANY DISCREPANCIES BETWEEN THE CONTRACTOR'S REDLINE DRAWING AND THE ACTUAL COMPLETED INSTALLATION.
ADDITIONAL TESTING AND INSPECTIONS:		
NA		

THE MI CHECKLIST SHALL BE REVIEWED PRIOR TO THE START OF CONSTRUCTION. ALL PARTIES TO THE MODIFICATION SHALL UNDERSTAND INSPECTION/DOCUMENTATION THAT IS APPLICABLE TO THE SCOPE OF WORK THEY ARE PERFORMING. ERRORS ON THE MI CHECKLIST SHALL BE BROUGHT TO THE ATTENTION OF THE TOWER OWNER POINT OF CONTACT AND EOR AS SOON AS POSSIBLE.

MODIFICATION INSPECTION NOTES:

GENERAL

THE MI IS AN ON-SITE VISUAL AND HANDS-ON INSPECTION OF TOWER MODIFICATIONS INCLUDING A REVIEW OF CONSTRUCTION REPORTS AND ADDITIONAL PERTINENT DOCUMENTATION PROVIDED BY THE GENERAL CONTRACTOR (GC), AS WELL AS ANY INSPECTION DOCUMENTS PROVIDED BY 3RD PARTY INSPECTORS. THE MI IS TO ENSURE THE INSTALLATION WAS CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, NAMELY THE MODIFICATION DRAWING AS DESIGNED BY THE ENGINEER OF RECORD (EOR).

NO DOCUMENT, CODE OR POLICY CAN ANTICIPATE EVERY SITUATION THAT MAY ARISE. ACCORDINGLY, THIS CHECKLIST IS INTENDED TO SERVE AS A SOURCE OF GUIDING PRINCIPLES IN ESTABLISHING GUIDELINES FOR MODIFICATION INSPECTION.

THE MI IS TO CONFIRM INSTALLATION CONFIGURATION AND WORKMANSHIP ONLY AND IS NOT A REVIEW OF THE MODIFICATION DESIGN ITSELF, AND THE MI INSPECTOR DOES NOT TAKE OWNERSHIP OF THE MODIFICATION DESIGN. OWNERSHIP OF THE STRUCTURAL MODIFICATION DESIGN EFFECTIVENESS AND INTEGRITY RESIDES WITH THE EOR AT ALL TIMES. THE MI INSPECTOR SHALL INSPECT AND NOTE CONFORMANCE/NONCONFORMANCE AND PROVIDE TO THE TOWER OWNER POINT OF CONTACT FOR EVALUATION.

TO ENSURE THAT THE REQUIREMENTS OF THE MI ARE MET, IT IS VITAL THAT THE GENERAL CONTRACTOR (GC) AND THE MI INSPECTOR BEGIN COMMUNICATING AND COORDINATING AS SOON AS A PURCHASE ORDER (PO) IS RECEIVED. IT IS EXPECTED THAT EACH PARTY WILL BE PROACTIVE IN REACHING OUT TO THE OTHER PARTY. IF CONTACT INFORMATION IS NOT KNOWN THE GC AND/OR INSPECTOR SHALL CONTACT THE TOWER OWNER POINT OF CONTACT.

SERVICE LEVEL COMMITMENT

THE FOLLOWING RECOMMENDATIONS AND SUGGESTIONS ARE OFFERED TO ENHANCE THE EFFICIENCY AND EFFECTIVENESS OF DELIVERING AN MI REPORT:

- THE GC SHALL PROVIDE A MINIMUM OF 5 BUSINESS DAYS NOTICE, PREFERABLY 10, TO THE MI INSPECTOR AS TO WHEN THE SITE WILL BE READY FOR THE MI TO BE CONDUCTED.
- THE GC AND MI INSPECTOR COORDINATE CLOSELY THROUGHOUT THE ENTIRE PROJECT.
- WHEN POSSIBLE, IT IS PREFERRED TO HAVE THE GC AND MI INSPECTOR ON-SITE DURING THE MI TO HAVE ANY MINOR DEFICIENCIES CORRECTED DURING THE INITIAL MI. THEREFORE, THE GC MAY CHOOSE TO COORDINATE THE MI CAREFULLY TO ENSURE ALL CONSTRUCTION FACILITIES ARE AT THEIR DISPOSAL WHEN THE MI INSPECTOR IS ON SITE.

REQUIRED PHOTOS

BETWEEN THE GC AND THE MI INSPECTOR THE FOLLOWING PHOTOGRAPHS, AT A MINIMUM, ARE TO BE TAKEN AND INCLUDED IN THE MI REPORT:

- PRE-CONSTRUCTION GENERAL SITE CONDITION
- PHOTOGRAPHS DURING THE REINFORCEMENT MODIFICATION CONSTRUCTION/ERECTION AND INSPECTION
  - RAW MATERIALS
  - PHOTOS OF ALL CRITICAL DETAILS
  - FOUNDATION MODIFICATIONS
  - WELD PREPARATION
  - BOLT INSTALLATION
  - FINAL INSTALLED CONDITION
  - SURFACE COATING REPAIR
- POST CONSTRUCTION PHOTOGRAPHS
  - FINAL INFIELD CONDITION

PHOTOS OF ELEVATED MODIFICATIONS TAKEN ONLY FROM THE GROUND SHALL BE CONSIDERED INADEQUATE.

NOTE:

X DENOTES A DOCUMENT NEEDED FOR THE PMI REPORT
NA DENOTES A DOCUMENT THAT IS NOT REQUIRED FOR THE PMI REPORT

PLANS PREPARED FOR:

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PROJECT INFORMATION:

PIONEER
SITE #: US-CA-1322

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REGISTERED PROFESSIONAL ENGINEER
ADAM M. AMORTMONT
81495
CIVIL
STATE OF CALIFORNIA

7-30-24

July 30, 2024

REV	DATE	ISSUED FOR:
0	07-30-24	MODIFICATION DRAWINGS

DRAWN BY: JLW | CHECKED BY: TLI

SHEET TITLE:

MI CHECKLIST AND NOTES

SHEET NUMBER: **N-1**

REVISION: **0**

TEP#: 72879.980281

GENERAL NOTES:

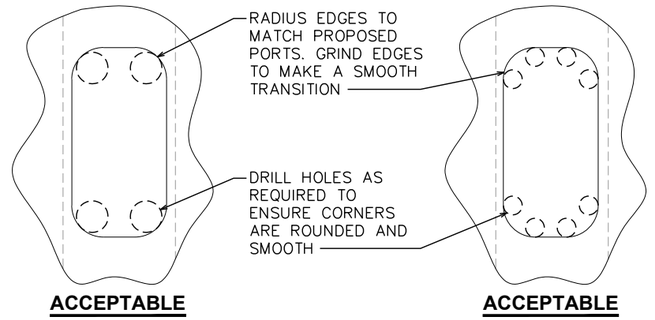
1. ALL REFERENCES TO THE OWNER IN THESE DOCUMENTS SHALL BE CONSIDERED PHOENIX TOWER INTERNATIONAL OR ITS DESIGNATED REPRESENTATIVE.
2. ALL WORK PRESENTED ON THESE DESIGN DRAWINGS MUST BE COMPLETED BY THE GENERAL CONTRACTOR (GC) UNLESS NOTED OTHERWISE. THE GC MUST HAVE CONSIDERABLE EXPERIENCE IN PERFORMANCE OF WORK SIMILAR TO THAT DESCRIBED HEREIN. BY ACCEPTANCE OF THIS ASSIGNMENT, THE GC IS ATTESTING THAT HE DOES HAVE SUFFICIENT EXPERIENCE AND ABILITY, THAT HE IS KNOWLEDGEABLE OF THE WORK TO BE PERFORMED AND THAT HE IS PROPERLY LICENSED AND PROPERLY REGISTERED TO DO THIS WORK IN THE STATE OF CALIFORNIA.
3. WORK SHALL BE COMPLETED IN ACCORDANCE WITH THE 2022 CALIFORNIA BUILDING CODE.
4. UNLESS SHOWN OR NOTED OTHERWISE ON THE DESIGN DRAWINGS, OR IN THE SPECIFICATIONS, THE FOLLOWING NOTES SHALL APPLY TO THE MATERIALS LISTED HEREIN, AND TO THE PROCEDURES TO BE USED ON THIS PROJECT.
5. ALL HARDWARE ASSEMBLY MANUFACTURER'S INSTRUCTIONS SHALL BE FOLLOWED EXACTLY AND SHALL SUPERSEDE ANY CONFLICTING NOTES ENCLOSED HEREIN.
6. ALL MATERIALS AND EQUIPMENT FURNISHED SHALL BE NEW AND OF GOOD QUALITY, FREE FROM FAULTS AND DEFECTS AND IN CONFORMANCE WITH THE DESIGN DRAWINGS. ANY AND ALL SUBSTITUTIONS MUST BE PROPERLY APPROVED AND AUTHORIZED IN WRITING BY THE OWNER AND ENGINEER OF RECORD (EOR) PRIOR TO INSTALLATION. THE GC SHALL FURNISH SATISFACTORY EVIDENCE AS TO THE KIND AND QUALITY OF THE MATERIALS AND EQUIPMENT BEING SUBSTITUTED.
7. THE GC SHALL BE RESPONSIBLE FOR INITIATING, MAINTAINING, AND SUPERVISING ALL SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK. THE GC IS RESPONSIBLE FOR ENSURING THAT THIS PROJECT AND RELATED WORK COMPLIES WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL SAFETY CODES AND REGULATIONS GOVERNING THIS WORK.
8. ACCESS TO THE PROPOSED WORK SITE MAY BE RESTRICTED. THE GC SHALL COORDINATE INTENDED CONSTRUCTION ACTIVITY, INCLUDING WORK SCHEDULE AND MATERIALS ACCESS, WITH THE RESIDENT LEASING AGENT FOR APPROVAL.
9. ALL PERMITS THAT MUST BE OBTAINED ARE THE RESPONSIBILITY OF THE GC. THE GC WILL BE RESPONSIBLE FOR ABIDING BY ALL CONDITIONS AND REQUIREMENTS OF THE PERMITS.
10. IF APPLICABLE, ALL CONCRETE WORK SHALL COMPLY TO LOCAL CODES AND THE ACI 318-19, "BUILDING REQUIREMENTS FOR STRUCTURAL CONCRETE".
11. 24 HOURS PRIOR TO THE BEGINNING OF ANY CONSTRUCTION, THE GC MUST NOTIFY THE APPLICABLE JURISDICTIONAL (STATE, COUNTY OR CITY) ENGINEER.
12. ALL MATERIALS AND WORKMANSHIP SHALL BE WARRANTED FOR ONE YEAR FROM ACCEPTANCE DATE.
13. ALL DIMENSIONS SHALL BE VERIFIED WITH THE DESIGN DRAWINGS (LATEST REVISION) PRIOR TO COMMENCING CONSTRUCTION. NOTIFY THE EOR IMMEDIATELY IF ANY DISCREPANCIES ARE DISCOVERED. THE OWNER SHALL HAVE A SET OF APPROVED DESIGN DRAWINGS AVAILABLE AT THE SITE AT ALL TIMES WHILE WORK IS BEING PERFORMED. A DESIGNATED RESPONSIBLE EMPLOYEE SHALL BE AVAILABLE FOR CONTACT BY GOVERNING AGENCY INSPECTORS.
14. THE CLIMBING FACILITIES, SAFETY CLIMB AND ALL PARTS THEREOF SHALL NOT BE IMPEDED, MODIFIED, OR ALTERED WITHOUT THE EXPRESS WRITTEN APPROVAL OF THE OWNER AND EOR. ALL ALTERATIONS TO A SAFETY CLIMB'S ORIGINAL MANUFACTURER'S CONFIGURATION MUST BE DESIGNED BY THE EOR. IF THE GC FINDS THAT THE CLIMBING FACILITIES ARE IMPEDED, EITHER DURING BIDDING, DURING PRE-FABRICATION MAPPING, OR WHILE ON-SITE, THE GC SHALL CONTACT THE OWNER AND EOR TO DETERMINE A METHOD OF RESOLUTION.
15. ANY WORK PERFORMED WITHOUT A PREFABRICATION MAPPING IS DONE AT THE RISK OF THE GC AND/OR FABRICATOR.
16. IF DURING THE COURSE OF A FOUNDATION MODIFICATION, THE GC ENCOUNTERS EXISTING CONDUIT LOCATED WITHIN THE CONFINES OF THE EXISTING OR PROPOSED FOUNDATION CONCRETE, AND THIS CONDUIT IS NOT IN A LOCATION THAT IS SPECIFIED WITHIN THESE DESIGN DRAWINGS, THE GC SHALL IMMEDIATELY CONTACT THE EOR FOR GUIDANCE BEFORE PROCEEDING WITH THE INSTALLATION OF THE PROPOSED FOUNDATION MODIFICATIONS. IF CONDUIT IS TO BE INSTALLED THROUGH THE EXISTING FOUNDATION OR PROPOSED FOUNDATION MODIFICATION AND HASN'T BEEN SPECIFIED WITHIN THESE DESIGN DRAWINGS THEN THE GC SHALL IMMEDIATELY CONTACT THE EOR FOR GUIDANCE PRIOR TO PROCEEDING WITH THE INSTALLATION OF THE PROPOSED FOUNDATION MODIFICATIONS.

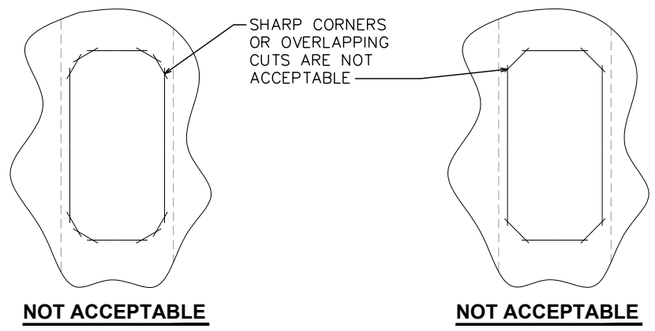
ATTENTION

ALL CONSTRUCTION MEANS AND METHODS; INCLUDING BUT NOT LIMITED TO, ERECTION PLANS, RIGGING PLANS, CLIMBING PLANS, AND RESCUE PLANS SHALL BE THE RESPONSIBILITY OF THE GC RESPONSIBLE FOR THE EXECUTION OF THE WORK CONTAINED HEREIN AND SHALL MEET ANSI/ASSE A10.48 (LATEST EDITION), FEDERAL, STATE, AND LOCAL REGULATIONS; AND ANY APPLICABLE INDUSTRY CONSENSUS STANDARDS RELATED TO THE CONSTRUCTION ACTIVITIES BEING PERFORMED. ALL RIGGING PLANS SHALL ADHERE TO ANSI/ASSE A10.48 (LATEST EDITION) INCLUDING THE REQUIRED INVOLVEMENT OF A QUALIFIED ENGINEER FOR CLASS IV CONSTRUCTION TO CERTIFY THE SUPPORTING STRUCTURE(S) IN ACCORDANCE WITH THE ANSI/TIA-322 (LATEST EDITION).

GUIDELINES FOR PORT HOLE CUTTING:

1. PORT HOLES SHALL BE CUT RADIALLY TO MATCH THE PROFILE OF THE PORT. THE USE OF DRILL HOLES AT THE CORNERS OF THE HOLES ARE RECOMMENDED TO ENSURE CORNERS ARE SMOOTH AND ROUNDED. OVERCUT HOLES CAUSING STRESS RISERS IN THE EXISTING TOWER SHAFT ARE NOT ACCEPTABLE. SEE BELOW FOR ACCEPTABLE METHODS OF CUTTING.
2. CONTRACTOR SHALL TAKE NECESSARY STEPS TO ENSURE EXISTING COAX ARE NOT DAMAGED DURING THE HOLE CUTTING PROCESS. TORCH CUTTING IS PROHIBITED.





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DRAWN BY: JLW | CHECKED BY: TLI

SHEET TITLE:

PROJECT NOTES I

SHEET NUMBER: **N-2**

REVISION: **0**

TEP#: 72879.980281

STRUCTURAL STEEL NOTES:

1. THE FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL CONFORM TO THE AISC STEEL CONSTRUCTION MANUAL, LOAD AND RESISTANCE FACTOR DESIGN (LRFD), 15TH EDITION.

2. UNLESS OTHERWISE NOTED, ALL STRUCTURAL ELEMENTS SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:
   STRUCTURAL STEEL:
   - ANGLE: ASTM A36
   - PIPE/TUBE: ASTM A500-46
   - PLATE: ASTM A36 (SELF SUPPORTING AND GUYED TOWERS)
   - PLATE: ASTM A572-65 (MONOPOLE)

   A. ALL BOLTS, ASTM A325 TYPE I GALVANIZED HIGH STRENGTH BOLTS.
   B. ALL U-BOLTS, ASTM A193 GRADE B7
   C. ALL NUTS, ASTM A563 CARBON AND ALLOY STEEL NUTS.
   D. ALL WASHERS, ASTM F436 HARDENED STEEL WASHERS.

3. ALL CONNECTIONS NOT FULLY DETAILED ON THESE PLANS SHALL BE DETAILED BY THE STEEL FABRICATOR IN ACCORDANCE WITH AISC STEEL CONSTRUCTION MANUAL, LRFD, 15TH EDITION.

4. HOLES SHALL NOT BE FLAME CUT THROUGH STEEL UNLESS APPROVED BY THE ENGINEER.

5. HOT-DIP GALVANIZE ALL ITEMS UNLESS OTHERWISE NOTED, AFTER FABRICATION WHERE PRACTICABLE. GALVANIZING: ASTM A123, ASTM, A153/A153M OR ASTM A653/A653M, G90, AS APPLICABLE. ADDITIONALLY, ALL NEW STEEL SHALL BE PAINTED TO MATCH EXISTING STEEL. CONTRACTOR SHALL OBTAIN WRITTEN PERMISSION TO PROTECT STEEL BY ANY OTHER MEANS.

6. REPAIR DAMAGED SURFACES WITH GALVANIZING REPAIR METHOD AND PAINT CONFORMING TO ASTM A780 OR BY APPLICATION OF STICK OR THICK PASTED MATERIAL SPECIFICALLY DESIGNED FOR REPAIR OF GALVANIZING. CLEAN AREAS TO BE REPAIRED AND REMOVE SLAG FROM WELDS. HEAT SURFACES TO WHICH STICK OR PASTE MATERIAL IS APPLIED, WITH A TORCH TO A TEMPERATURE SUFFICIENT TO MELT THE METALLICS IN STICK OR PASTED; SPREAD MOLTEN MATERIAL UNIFORMLY OVER SURFACES TO BE COATED AND WIPE OFF EXCESS MATERIAL. AFTER REPAIR, STEEL SHALL BE REPAINTED TO MATCH EXISTING FINISH (IF APPLICABLE).

7. A NUT LOCKING DEVICE SHALL BE INSTALLED ON ALL PROPOSED AND/OR REPLACED BOLTS.

8. ALL PROPOSED AND/OR REPLACED BOLTS SHALL BE OF SUFFICIENT LENGTH TO EXCLUDE THE THREADS FROM THE SHEAR PLANE.

9. ALL PROPOSED AND/OR REPLACED BOLTS SHALL BE OF SUFFICIENT LENGTH SUCH THAT THE END OF THE BOLT BE AT LEAST FLUSH WITH THE FACE OF THE NUT. IT IS NOT PERMITTED FOR THE BOLT END TO BE BELOW THE FACE OF THE NUT AFTER TIGHTENING IS COMPLETED.

10. GALVANIZED ASTM A325 BOLTS SHALL NOT BE REUSED.

WELDING NOTES:

1. ALL WELDING SHALL BE IN ACCORDANCE WITH THE AWS D1.1/D1.1M: 2015 "STRUCTURAL WELDING CODE-STEEL".

2. ALL WELDING SHALL BE PERFORMED BY AWS CERTIFIED WELDERS.

3. CONTRACTOR SHALL RETAIN AN AWS CERTIFIED WELD INSPECTOR TO PERFORM VISUAL INSPECTIONS ON FIELD WELDS. A LETTER AND REPORT SHALL BE ISSUED TO THE CONTRACTOR. CONTRACTOR SHALL SUBMIT LETTER AND REPORT TO TOWER ENGINEERING PROFESSIONALS.

4. GRIND THE SURFACE ADJACENT TO THE WELD FOR A DISTANCE OF 2" MINIMUM ALL AROUND. GRIND THE SURFACE OF THE ROD TO BE INSTALLED FOR A DISTANCE OF 2" MINIMUM ALL AROUND THE AREA TO BE WELDED. ENSURE BOTH AREAS ARE 100% FREE OF ALL GALVANIZING. SURFACES TO BE WELDED SHALL BE FREE FROM SCALE, SLAG, RUST, MOISTURE, GREASE OR ANY OTHER FOREIGN MATERIAL THAT WOULD PREVENT PROPER WELDING.

5. DO NOT WELD IF THE TEMPERATURE OF THE STEEL IN THE VICINITY OF THE WELD AREA IS BELOW 0 DEGREES (FAHRENHEIT). THE MINIMUM PREHEAT AND INTERPASS TEMPERATURE REQUIREMENTS SHALL COMPLY WITH SECTION 3.5.1 AND TABLE 3.2 OF THE AWS D1.1/D1.1M:2015.

6. DO NOT WELD ON WET OR FROST-COVERED SURFACES AND PROVIDE ADEQUATE PROTECTION FROM HIGH WINDS.

7. FOR ALL WELDING, USE 80 KSI LOW HYDROGEN ELECTRODES. ELECTRODES SHALL BE APPROPRIATE FOR THE WELDING POSITION REQUIRED TO MAKE THE JOINT.

8. AFTER FINAL INSPECTION, THE AREA OF THE WELDS, THE INSTALLATION AND ALL SURFACES DAMAGED BY WELDING OR GRINDING SHALL RECEIVE A COLD-GALVANIZED COATING. THIS COATING SHALL BE APPLIED BY BRUSH. THE GALVANIZING COMPOUND SHALL CONTAIN A MINIMUM OF 95% +/- PURE ZINC. THE FINISHED COATING SHALL BE A MINIMUM THICKNESS OF 3 MILS.

9. PROVIDE WELDS ALL AROUND OR ADD SEAL WELDS WHERE STRUCTURAL WELDS ARE NOT SPECIFIED.

BOLT TIGHTENING PROCEDURE:

1. UNLESS OTHERWISE NOTED, ALL BOLTED CONNECTIONS SHALL BE BROUGHT TO A SNUG TIGHT CONDITION AS DEFINED IN SECTION 8.1 OF THE AISC SPECIFICATION FOR STRUCTURAL JOINTS USING A325 OR A490 BOLTS, LOCATED IN THE AISC MANUAL OF STEEL CONSTRUCTION. ALL SNUG TIGHT BOLTS SHALL BE INSTALLED WITH A NUT-LOCKING DEVICE OR MECHANISM SUCH AS, BUT NOT LIMITIED TO, LOCK NUTS, LOCK WASHERS, OR PALNUTS, TO PREVENT LOOSENING.

2. WHEN SPECIFIED IN THE DRAWINGS, CONNECTION BOLTS SHALL BE INSTALLED AND TIGHTENED AS PER SECTION 8.2.1 OF THE AISC SPECIFICATION FOR STRUCTURAL JOINTS USING A325 OR A490 BOLTS, LOCATED IN THE AISC MANUAL OF STEEL CONSTRUCTION. THE INSTALLATION PROCEDURE IS PARAPHRASED AS FOLLOWS:

   8.2.1 TURN-OF-THE-NUT TIGHTENING

   BOLTS SHALL BE INSTALLED IN ALL HOLES OF THE CONNECTION AND BROUGHT TO A SNUG TIGHT CONDITION AS DEFINED IN SECTION 8.1, UNTIL ALL THE BOLTS ARE SIMULTANEOUSLY SNUG TIGHT AND THE CONNECTION IS FULLY COMPACTED. FOLLOWING THIS INITIAL OPERATION ALL BOLTS IN THE CONNECTION SHALL BE TIGHTENED FURTHER BY THE APPLICABLE AMOUNT OF ROTATION SPECIFIED BELOW. DURING THE TIGHTENING OPERATION THERE SHALL BE NO ROTATION OF THE PART NOT TURNED BY THE WRENCH. TIGHTENING SHALL PROGRESS SYSTEMATICALLY FROM THE MOST RIGID PART OF THE JOINT IN A MANNER THAT WILL MINIMIZE RELAXATION OF PREVIOUSLY PRETENSIONED BOLTS.

3. PRE-TENSIONED BOLTS AS SPECIFIED ON THE DRAWINGS SHALL BE TIGHTENED IN ACCORDANCE WITH AISC - "TURN OF THE NUT" METHOD, USING THE CHART BELOW.

BOLT LENGTHS UP TO AND INCLUDING FOUR DIA.

½"	BOLTS UP TO AND INCLUDING 2.0 INCH LENGTH	+⅓ TURN BEYOND SNUG TIGHT
⅝"	BOLTS UP TO AND INCLUDING 2.5 INCH LENGTH	+⅓ TURN BEYOND SNUG TIGHT
¾"	BOLTS UP TO AND INCLUDING 3.0 INCH LENGTH	+⅓ TURN BEYOND SNUG TIGHT
⅞"	BOLTS UP TO AND INCLUDING 3.5 INCH LENGTH	+⅓ TURN BEYOND SNUG TIGHT
1"	BOLTS UP TO AND INCLUDING 4.0 INCH LENGTH	+⅓ TURN BEYOND SNUG TIGHT

BOLT LENGTHS OVER FOUR DIA. BUT NOT EXCEEDING EIGHT DIA.

½"	BOLTS 2.25 TO 4.0 INCH LENGTH	+½ TURN BEYOND SNUG TIGHT
⅝"	BOLTS 2.75 TO 5.0 INCH LENGTH	+½ TURN BEYOND SNUG TIGHT
¾"	BOLTS 3.25 TO 6.0 INCH LENGTH	+½ TURN BEYOND SNUG TIGHT
⅞"	BOLTS 3.75 TO 7.0 INCH LENGTH	+½ TURN BEYOND SNUG TIGHT
1"	BOLTS 4.25 TO 8.0 INCH LENGTH	+½ TURN BEYOND SNUG TIGHT

4. ALL ONE-SIDED BOLTS SHALL BE TIGHTENED IN ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS.

FIELD NDE MINIMUM REQUIREMENTS:

1. ALL NDE SHALL BE IN ACCORDANCE WITH AWS D1.1.

2. FOR NEW BASE STIFFENERS (INCLUSIVE OF TRANSITION STIFFENERS) AND ANCHOR ROD BRACKETS, COMPLETE JOINT PENETRATION WELDS SHALL BE 100% INSPECTED BY ULTRASONIC TESTING (UT). ALL PARTIAL JOINT PENETRATION AND FILLET WELDS SHALL BE 100% INSPECTED BY MAGNETIC PARTICLE TESTING (MT).

3. FOR NEW FLAT PLATE REINFORCEMENT AT THE BASE OF THE TOWER, COMPLETE JOINT PENETRATION WELDS SHALL BE 100% INSPECTED BY ULTRASONIC TESTING (UT). ALL PARTIAL JOINT PENETRATION AND FILLET WELDS SHALL BE 100% INSPECTED BY MAGNETIC PARTICLE TESTING (MT), BUT MAY BE LIMITED TO A HEIGHT OF 10'-0".

4. FOR NDE OF THE EXISTING BASE PLATE CIRCUMFERENTIAL WELD, GC SHALL REFERENCE THE MI CHECKLIST FOR APPLICABILITY. NOTIFY THE EOR AND TOWER OWNER IMMEDIATELY IF ANY CRACKS ARE SUSPECTED OR HAVE BEEN IDENTIFIED. THE NDE SHALL INCLUDE ALL EXISTING MODIFICATIONS THAT HAVE BEEN WELDED TO THE BASE PLATE.

5. ALL TESTING LIMITATIONS SHALL BE DETAILED IN THE NDE REPORT.

PLANS PREPARED FOR:

PHOENIX TOWER INTERNATIONAL
999 YAMATO ROAD, SUITE 100
BOCA RATON, FL 33431
OFFICE: (503) 593-0282

PROJECT INFORMATION:

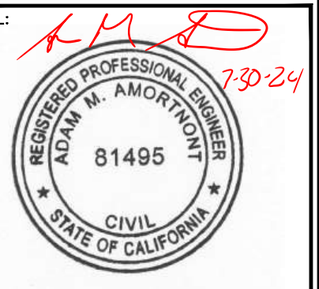
PIONEER
SITE #: US-CA-1322

2470 PIONEER AVE A
FULLERTON, CA 92832
(ORANGE COUNTY)

PLANS PREPARED BY:

TOWER ENGINEERING PROFESSIONALS
326 TRYON ROAD
RALEIGH, NC 27603
OFFICE: (919) 661-6351
www.tepgroup.net

SEAL:



July 30, 2024

REV	DATE	ISSUED FOR:
0	07-30-24	MODIFICATION DRAWINGS

DRAWN BY: JLW | CHECKED BY: TLI

SHEET TITLE:

PROJECT NOTES II

SHEET NUMBER: **N-3**

REVISION: **0**

TEP#: 72879.980281

NOTES:

1. ALL SHOP AND FIELD DRILLED HOLES SHALL BE NOMINAL 30MM DIAMETER. THE MAXIMUM HOLE DIAMETER PERMITTED IS 1 3/16".
2. THE NEXGEN2™ SHALL BE MAGNI 565 COATED PER ASTM F2833 AS APPROPRIATE.
3. INSTALL PER MANUFACTURER'S INSTRUCTIONS.
4. SHIMS FOR MONOPOLE REINFORCEMENT MEMBER SHALL BE REQUIRED WHERE GAPS BETWEEN THE POLE SHAFT AND REINFORCING MEMBER EXIST AT FASTENER LOCATIONS. FOR INTERMEDIATE CONNECTIONS, THE MINIMUM SHIM LENGTH AND WIDTH SHALL BE THE WIDTH OF THE REINFORCING MEMBER. FOR TERMINATION CONNECTIONS, A CONTINUOUS SHIM PLATE (PREFERRED) OR EQUIVALENT INDIVIDUAL SHIM PLATES THE WIDTH OF THE REINFORCING MEMBER MAY BE USED. ADJACENT SHIM PLATE THICKNESSES MAY TAPER IN INCREMENTS OF 1/16" AND SHALL BE NO LESS THAN 1/16". STACKING OF SHIMS IS PERMITTED. SHIMS GREATER THAN 1/4" IN THICKNESS LOCATED WITHIN THE TERMINATION LENGTH OF THE SHAFT REINFORCEMENT PLATE SHALL BE WELDED TO THE SHAFT REINFORCEMENT PLATE. TIGHTENING THE BOLTS TO COLD BEND THE STEEL PLATES AROUND THE SHIMS IS STRICTLY PROHIBITED IN LIEU OF SHIMS AND WILL BE CAUSE FOR REJECTION.

INSPECTION NOTES AND PROCEDURES:

1. REVIEW STRUCTURAL DESIGN DRAWINGS.
2. VISUALLY INSPECT SHEARED BOLT ENDS TO ENSURE CORRECT TENSION WAS ACHIEVED.
3. VERIFY BOLT ENDS ARE SUFFICIENTLY COATED WITH AN APPROVED COLD GALVANIZING COMPOUND.

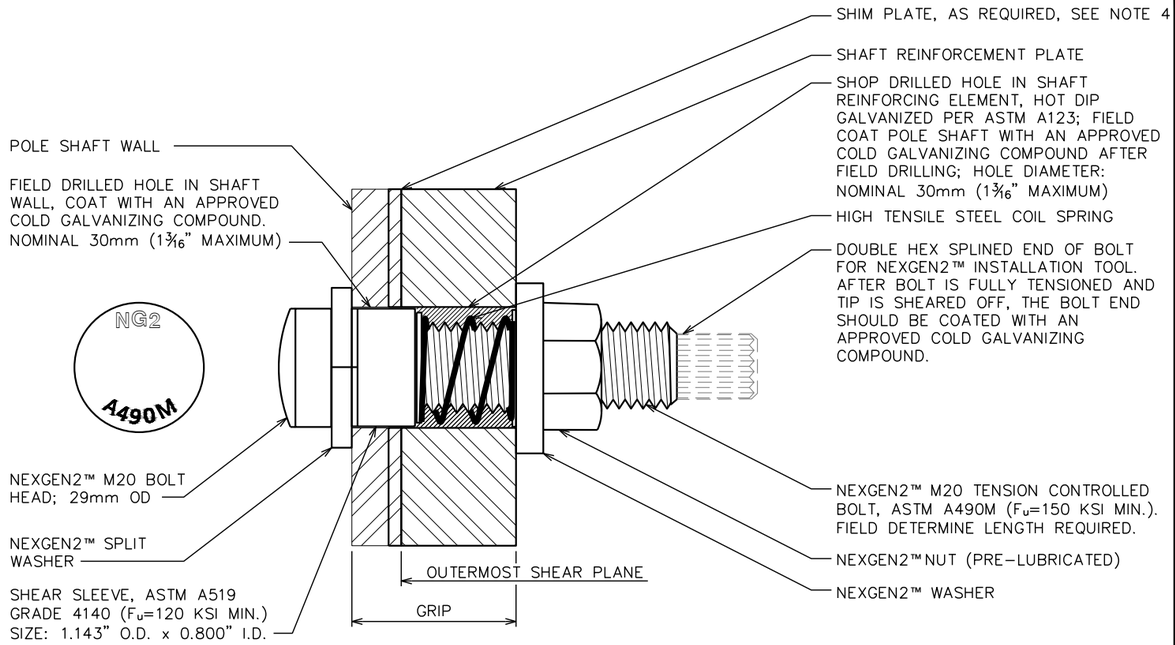
MANUFACTURER CONTACT:

ALLFASTENERS
- 959 LAKE ROAD, MEDINA, OHIO, USA 44256
- PHONE: 440-232-6060 | FAX: 440-232-6062
- WEBSITE: WWW.ALLFASTENERS.COM | WWW.AFTOWER.COM

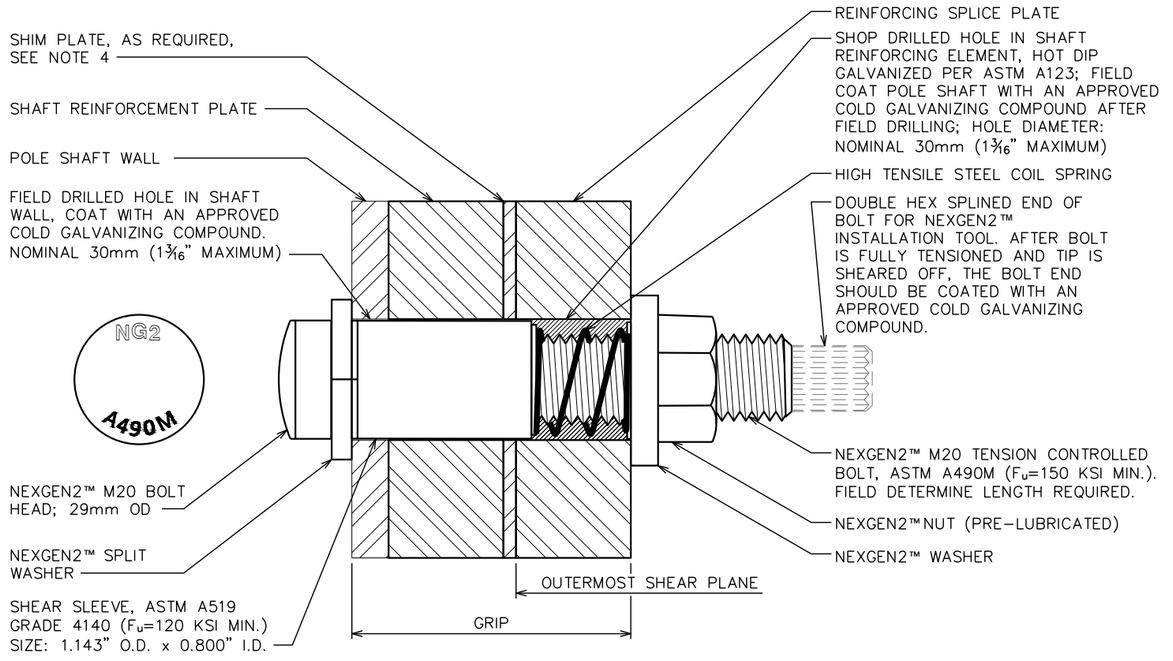
PART NUMBER	BOLT LENGTH	SLEEVE LENGTH	MIN. GRIP RANGE	MAX. GRIP RANGE
2NG2060	M20x60	1/2"	5/8"	5/8"
2NG2032	M20x75	1/2"	5/8"	1 3/8"
2NG2036	M20x95	1 1/16"	1 5/16"	1 7/16"
2NG2048	M20x95	1 3/16"	1 7/16"	1 7/8"
2NG2057	M20x95	1 5/8"	1 7/8"	2 1/8"
2NG2068	M20x135	1 3/4"	2 1/8"	2 1/16"
2NG2096	M20x135	2 7/16"	2 1/16"	3 3/4"
2NG2127	M20x175	3"	3 3/4"	5 3/16"
2NG2212	M20x250	4"	5"	8 5/16"

INTERIOR OF POLE SHAFT

EXTERIOR OF POLE SHAFT



NEXGEN2 BOLT DETAILS



NEXGEN2 BOLT DETAILS

PLANS PREPARED FOR:

PHOENIX TOWER INTERNATIONAL
999 YAMATO ROAD, SUITE 100
BOCA RATON, FL 33431
OFFICE: (503) 593-0282

PROJECT INFORMATION:

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PLANS PREPARED BY:

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www.tepgroup.net

SEAL:

REGISTERED PROFESSIONAL ENGINEER
ADAM M. AMORTMONT
81495
CIVIL
STATE OF CALIFORNIA

7-30-24

July 30, 2024

REV	DATE	ISSUED FOR:
0	07-30-24	MODIFICATION DRAWINGS

DRAWN BY: JLW | CHECKED BY: TLI

SHEET TITLE:

NEXGEN2 INSTALLATION DETAILS

SHEET NUMBER: **N-4**

REVISION: **0**

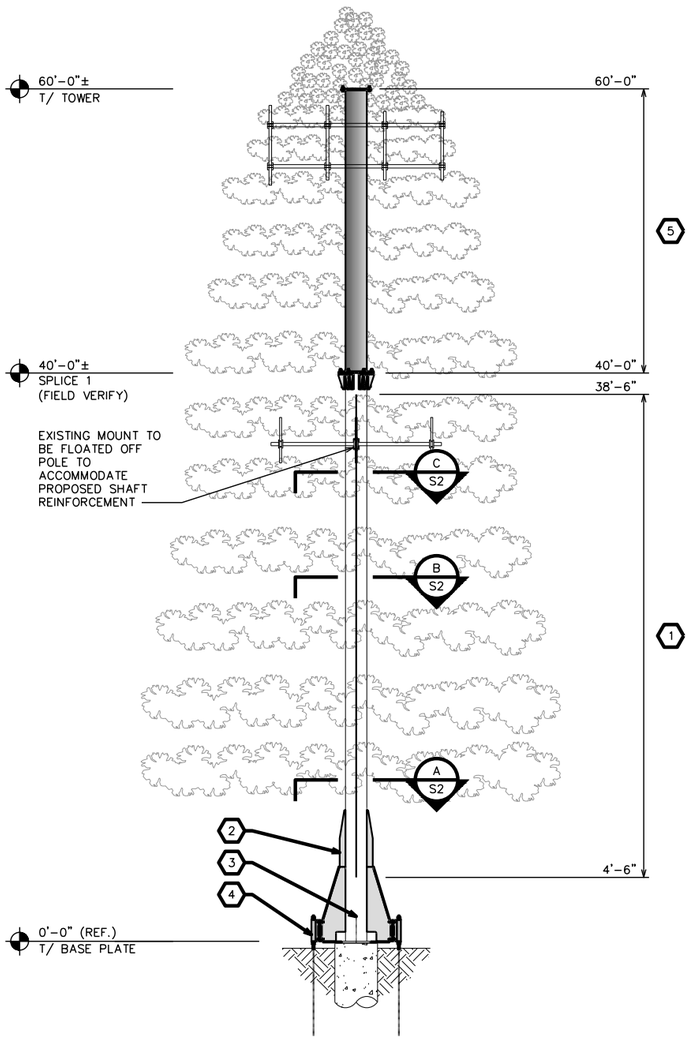
TEP#: 72879.980281

MANUFACTURER POLE SPECIFICATIONS

TAPER:	–
BASE PLATE STEEL (Fy):	ASTM A36 (36 KSI)
ANCHOR RODS:	1 1/2"ø ASTM A36

MANUFACTURER SHAFT SECTION DATA

SHAFT SECTION	SECTION SHAPE	SECTION LENGTH (FT.)	SECTION THICKNESS (IN.)	SECTION GRADE Fy (KSI)	FLANGE PLATE GRADE Fy (KSI)	LAP SPLICE (IN.)	DIAMETER ACROSS FLATS OR OF ROUND SECTION (IN.)	
							TOP	BOTTOM
1	ROUND	20.00	0.2500	35	50	–	18.000	18.000
2	ROUND	40.00	0.2500	42	–	–	18.000	18.000
NOTE: DIMENSIONS SHOWN DO NOT INCLUDE GALVANIZING TOLERANCES								



TOWER ELEVATION

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

MODIFICATION SCHEDULE

NO.	MODIFICATION DESCRIPTION	ELEVATION (FT.)	SHEET
1	INSTALL PROPOSED MONOPOLE SHAFT REINFORCEMENT.	4.50 – 38.50	S-2 THROUGH S-5
2	INSTALL PROPOSED TRANSITION STIFFENERS.	5.25	S-2 AND S-6
3	REMOVE EXISTING ANCHOR BOLT REINFORCEMENT.	0.00	S-7 AND S-8
4	INSTALL PROPOSED FOUNDATION REINFORCEMENT.	0.00	S-7 THROUGH S-12
5	INSTALL PROPOSED TOWER EXTENSION.	40.00 – 60.00	S-13 THROUGH S-16
6	REMOVE AND REPLACE EXISTING BARK AND BRANCHES TO ACCOMMODATE PROPOSED REINFORCEMENT.	–	–
7	CONTRACTOR TO REMOVE CLADDING AS NECESSARY PRIOR TO INSTALLING PROPOSED MODIFICATIONS. THE EXTENT OF THE CLADDING REMOVAL SHALL BE LIMITED TO ONLY THE AREA REQUIRED TO INSTALL THE PROPOSED REINFORCEMENT. CONTRACTOR SHALL VERIFY THAT THE REMAINING CLADDING IS SECURELY ATTACHED TO THE STRUCTURE.	–	–
8	PAINT PROPOSED MODIFICATIONS TO MATCH TOWER SHAFT.	–	–
9	CONTRACTOR TO PLUMB TOWER PER SECTION 13.3.3 OF ANSI/TIA-222-H.	–	–
10	MODIFICATION INSPECTION BY TEP. CONTACT TEP FOR FEE: PMI@TEPGROUP.NET	–	–

NOTES:

1. CONTRACTOR SHALL FIELD VERIFY SPLICE ELEVATION PRIOR TO INSTALLATION. CONTACT TOWER OWNER AND ENGINEER OF RECORD IF SPLICE ELEVATIONS DIFFER FROM WHAT IS SHOWN. SHAFT REINFORCEMENT ELEVATIONS ARE DEPENDENT ON SPLICE ELEVATIONS AND MAY NEED TO BE ADJUSTED TO ACCOMMODATE ACTUAL SPLICE ELEVATION.
2. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO PROVIDE THE MODIFICATION INSPECTOR/ ENGINEER OF RECORD WITH A SEALED CERTIFIED WELD INSPECTION REPORT. THIS REPORT SHALL DOCUMENT THE ENTIRE WELDING PROCESS (PRE/DURING/POST) WITH PROPER PHOTOS. WELDING SHALL CONFORM TO AWS D1.1/D1.1M: 2015 "STRUCTURAL WELDING CODE-STEEL", FOR ADDITIONAL NOTES, SEE WELDING NOTES.
3. ANTENNAS AND OTHER APPURTENANCES MAY NEED TO BE TEMPORARILY REMOVED OR MOVED DURING THE INSTALLATION OF THE MODIFICATIONS SHOWN ABOVE.
4. DUE TO THE MODIFICATIONS REQUIRED, CONTINUOUS INSPECTIONS AND MATERIAL TESTING WILL NEED TO BE PERFORMED.
5. CONTRACTOR SHALL ORDER AND INSTALL A NEW TOWER TAG IF THE EXISTING TOWER TAG IS MOVED OR DAMAGED DUE TO THE INSTALLATION OF THE MODIFICATION SHOWN ABOVE.
6. PRIOR TO FABRICATION AND INSTALLATION, CONTRACTOR SHALL FIELD VERIFY ALL LENGTHS AND QUANTITIES GIVEN. LENGTHS AND QUANTITIES PROVIDED ARE FOR QUOTING PURPOSES ONLY AND SHALL NOT BE USED FOR FABRICATION.
7. NO DETAILED INFORMATION REGARDING INTERFERENCES WAS PROVIDED. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS. REPORT ANY AND ALL DISCREPANCIES TO TOWER ENGINEERING PROFESSIONALS, INC. AND PHOENIX TOWER INTERNATIONAL CONSTRUCTION MANAGER IMMEDIATELY.

65KSI FLAT PLATE REINFORCEMENT SCHEDULE

QTY.	PART NO.	FLAT/ ANGLE	ELEV (FT.)		PLATE LENGTH (FT.)	TERMINATION BOLTS		MAX. INTERMEDIATE BOLT SPACING (IN.)	TOTAL BOLT QTY.	TOTAL STEEL WEIGHT (LB.)	TERMINATION DETAIL	
			BOT.	TOP		BOT.	TOP				BOT.	TOP
2	TEP-CFP-06012521	45, 315	4.50	25.50	21.00	12	12	20.00	64	1071.9	2	5
2	TEP-CFP-06012527	135, 225	4.50	31.00	26.50	12	12	20.00	72	1352.6	2	5
1	TEP-CFP-06012512	0	19.25	31.00	11.75	12	12	20.00	27	299.9	5	5
3	TEP-CFP-04512513	60, 180, 300	25.50	38.50	13.00	8	8	24.00	60	746.5	5	3A
								TOTALS:	223	3470.9		

NOTES:

1. SEE SHEETS N-4 FOR BOLT INSTALLATION DETAILS. SEE SHEET S-3 FOR FLAT PLATE DETAILS. SEE SHEETS S-4 AND S-5 FOR TERMINATION DETAILS.
2. FOR FLAT PLATES STARTING AT 6", THE BOTTOM OF THE FLAT PLATE SHALL BEGIN AT 6" +/- 1". FOR SINGLE PLATES OR MULTIPLE PLATES SPLICED TOGETHER, THE BOTTOM OF THE FLAT PLATE RUN SHALL BEGIN AT THE PROPOSED ELEVATION +/- 3". FOR MULTIPLE PLATES SPLICED TOGETHER, THE TOP OF THE FLAT PLATE IS TO BE PLACED SUCH THAT THERE IS NO MORE THAN A 3" DIFFERENCE BETWEEN THE ACTUAL OVERALL LENGTH OF THE SPAN AND THE PROPOSED OVERALL LENGTH OF THE SPAN, FROM THE BOTTOM OF THE BOTTOM PLATE TO THE TOP OF THE TOP PLATE.
3. SHIMS FOR MONOPOLE REINFORCEMENT MEMBER SHALL BE REQUIRED WHERE GAPS BETWEEN THE POLE SHAFT AND REINFORCING MEMBER EXIST AT FASTENER LOCATIONS. FOR INTERMEDIATE CONNECTIONS, THE MINIMUM SHIM LENGTH AND WIDTH SHALL BE THE WIDTH OF THE REINFORCING MEMBER. FOR TERMINATION CONNECTIONS, A CONTINUOUS SHIM PLATE (PREFERRED) OR EQUIVALENT INDIVIDUAL SHIM PLATES THE WIDTH OF THE REINFORCING MEMBER MAY BE USED. SHIM THICKNESSES SHALL BE NO LESS THAN 1/16". STACKING OF SHIMS IS PERMITTED. FINGER SHIMS AND HORSESHOE SHIMS ARE PERMITTED. STACKING OF SHIMS SHALL BE NO GREATER THAN 1/4" WITHOUT EOR APPROVAL.
4. SHIMS GREATER THAN 1/4" IN THICKNESS LOCATED WITHIN THE TERMINATION LENGTH OF THE SHAFT REINFORCEMENT PLATE SHALL BE WELDED TO THE SHAFT REINFORCEMENT PLATE. TIGHTENING THE BOLTS TO COLD BEND THE STEEL PLATES AROUND THE SHIMS IS STRICTLY PROHIBITED IN LIEU OF SHIMS AND WILL BE CAUSE FOR REJECTION.
5. FLAT PLATE REINFORCEMENTS SHALL BE INSTALLED ON THE CENTER OF THE TOWER SHAFT FLATS UNLESS OTHERWISE NOTED.
6. ADDITIONAL BOLT QUANTITY REFERS TO TOTAL NUMBER OF ADDITIONAL BOLTS WHEN SPLICING INTO EXISTING FLAT PLATE.

0 8 16
SCALE IN FEET

PLANS PREPARED FOR:

PHOENIX TOWER INTERNATIONAL
999 YAMATO ROAD, SUITE 100
BOCA RATON, FL 33431
OFFICE: (503) 593-0282

PROJECT INFORMATION:

PIONEER
SITE #: US-CA-1322

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(ORANGE COUNTY)

PLANS PREPARED BY:

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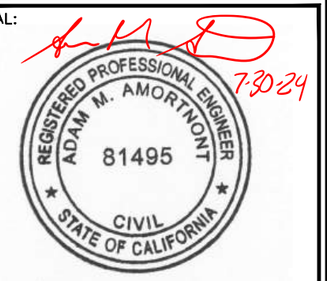
SEAL:



July 30, 2024

REV	DATE	ISSUED FOR:
0	07-30-24	MODIFICATION DRAWINGS

DRAWN BY: JLW | CHECKED BY: TLI

SHEET TITLE:

TOWER ELEVATION AND MODIFICATION SCHEDULE

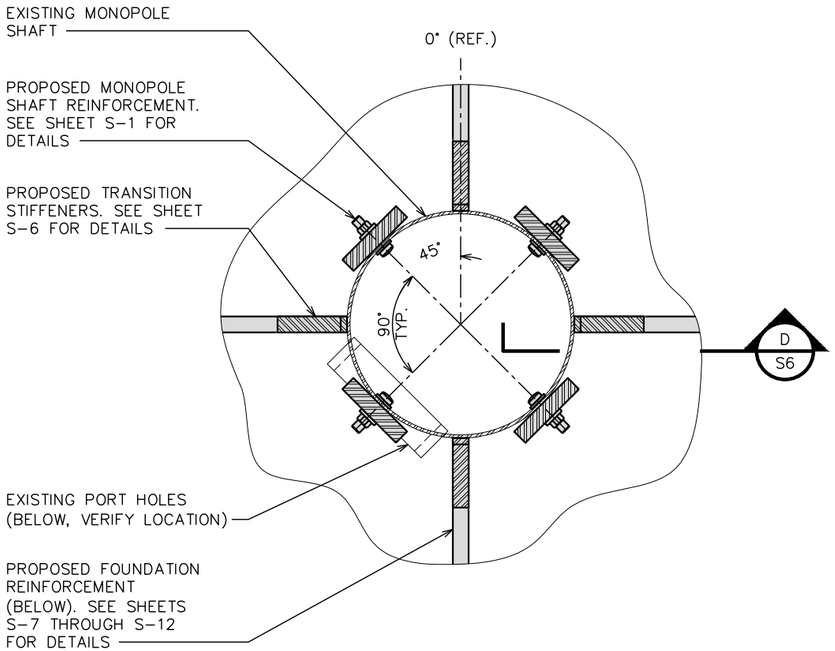
SHEET NUMBER: **S-1**

REVISION: **0**

TEP#: 72879.980281

ATTENTION

0° REF. WAS ASSUMED TO BE ALIGNED WITH NORTH. FIELD VERIFY BASE PLATE ORIENTATION PRIOR TO INSTALLATION. CONTACT TOWER OWNER AND ENGINEER OF RECORD SHOULD ANY DISCREPANCIES ARISE.



NOTE:

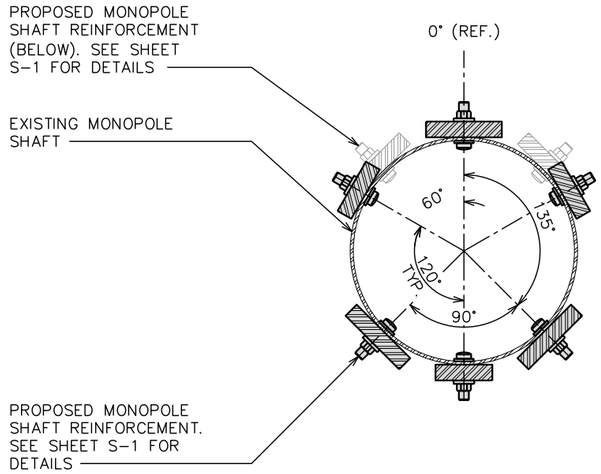
PROPOSED FOUNDATION REINFORCEMENT NOT SHOWN FOR CLARITY. SEE SHEET S-8 FOR FULL SECTION CUT VIEW.

SECTION (A)
SCALE: 1" = 1'-0"

0 1 2
SCALE IN FEET

ATTENTION

0° REF. WAS ASSUMED TO BE ALIGNED WITH NORTH. FIELD VERIFY BASE PLATE ORIENTATION PRIOR TO INSTALLATION. CONTACT TOWER OWNER AND ENGINEER OF RECORD SHOULD ANY DISCREPANCIES ARISE.

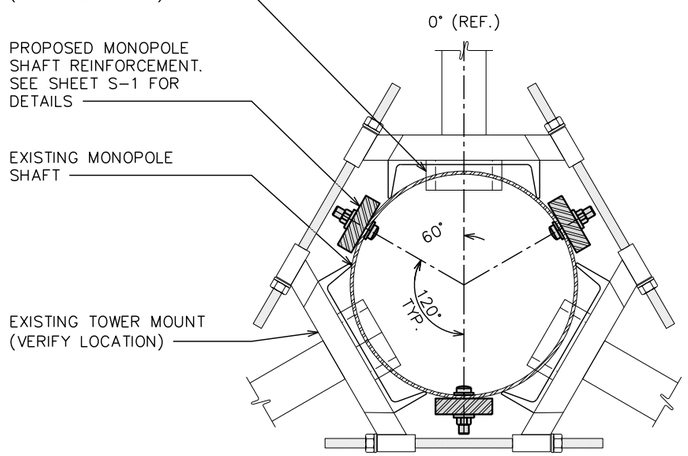


SECTION (B)
SCALE: 1" = 1'-0"

0 1 2
SCALE IN FEET

ATTENTION

0° REF. WAS ASSUMED TO BE ALIGNED WITH NORTH. FIELD VERIFY BASE PLATE ORIENTATION PRIOR TO INSTALLATION. CONTACT TOWER OWNER AND ENGINEER OF RECORD SHOULD ANY DISCREPANCIES ARISE.



SECTION (C)
SCALE: 1" = 1'-0"

0 1 2
SCALE IN FEET

PLANS PREPARED FOR:

PHOENIX TOWER INTERNATIONAL
999 YAMATO ROAD, SUITE 100
BOCA RATON, FL 33431
OFFICE: (503) 593-0282

PROJECT INFORMATION:

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(ORANGE COUNTY)

PLANS PREPARED BY:

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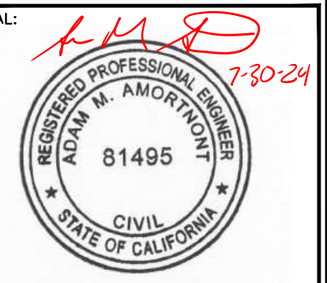
SEAL:



July 30, 2024

REV	DATE	ISSUED FOR:
0	07-30-24	MODIFICATION DRAWINGS

DRAWN BY: JLW | CHECKED BY: TLI

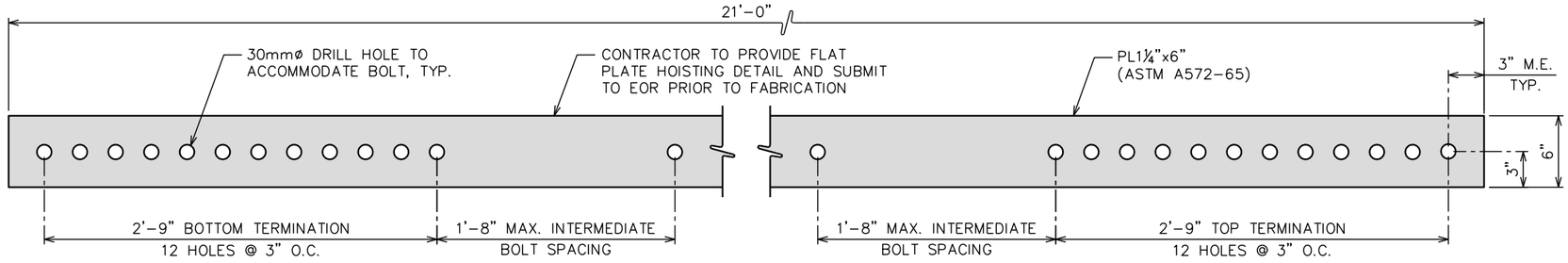
SHEET TITLE:

SECTION DETAILS

SHEET NUMBER: **S-2**

REVISION: **0**

TEP#: 72879.980281

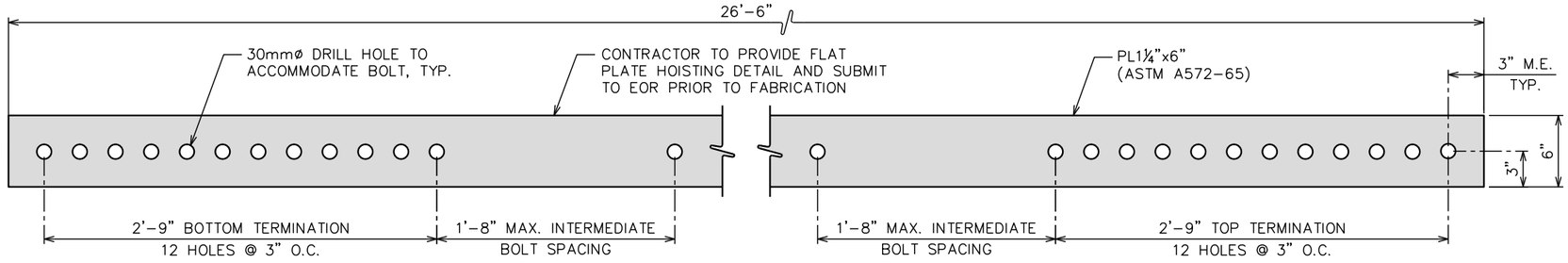


TEP-CFP-06012521

SCALE: 1" = 1'-0"

0 1 2

SCALE IN FEET

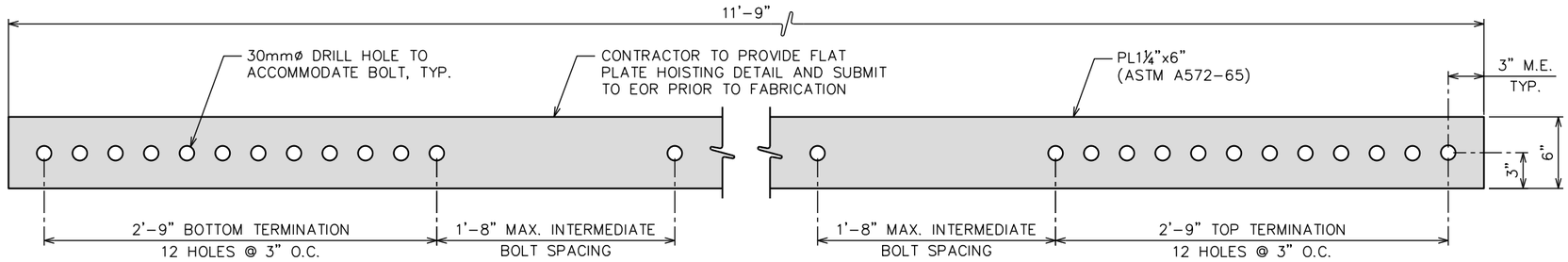


TEP-CFP-06012527

SCALE: 1" = 1'-0"

0 1 2

SCALE IN FEET

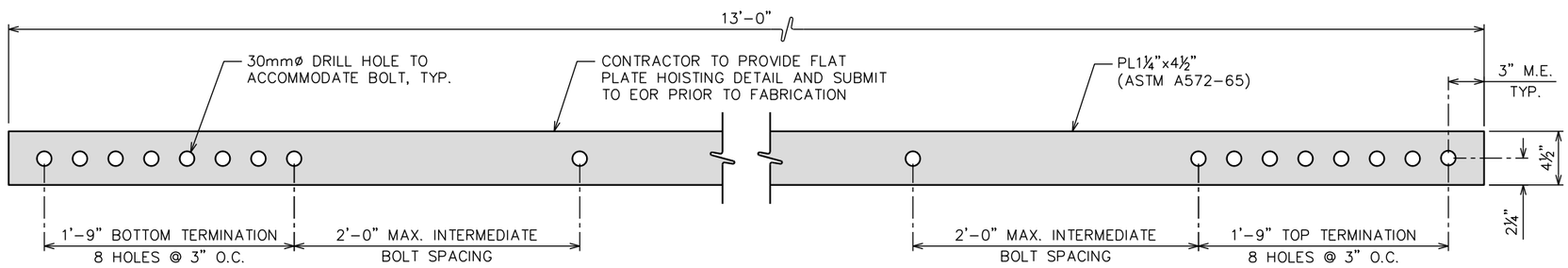


TEP-CFP-06012512

SCALE: 1" = 1'-0"

0 1 2

SCALE IN FEET



TEP-CFP-04512513

SCALE: 1" = 1'-0"

0 1 2

SCALE IN FEET

PLANS PREPARED FOR:

PHOENIX TOWER INTERNATIONAL

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PROJECT INFORMATION:

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SEAL:

REGISTERED PROFESSIONAL ENGINEER
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July 30, 2024

REV	DATE	ISSUED FOR:
0	07-30-24	MODIFICATION DRAWINGS

DRAWN BY: JLW | CHECKED BY: TLI

SHEET TITLE:

SHAFT REINFORCEMENT DETAILS

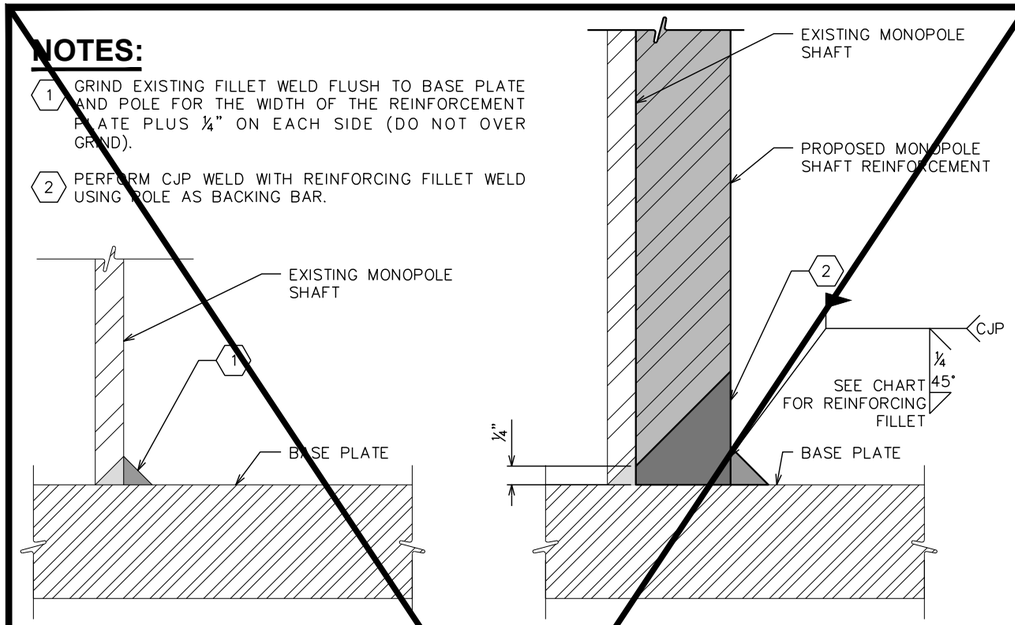
SHEET NUMBER: **S-3**

REVISION: **0**

TEP#: 72879.980281

NOTES:

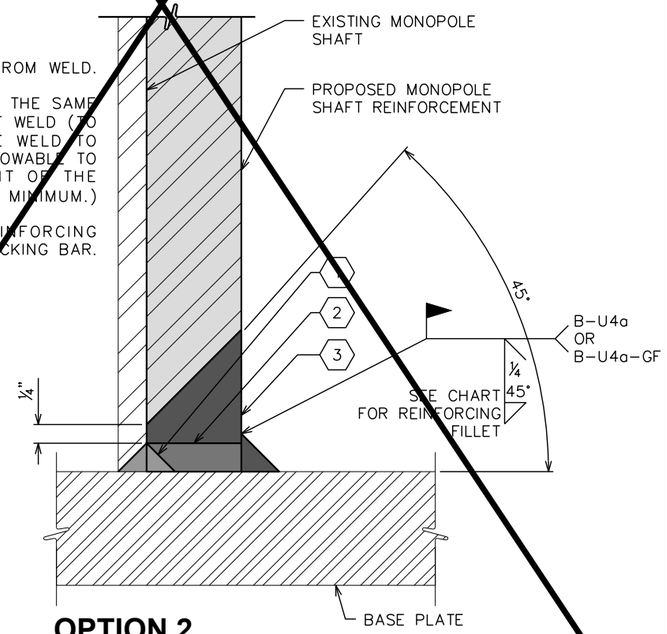
1. GRIND EXISTING FILLET WELD FLUSH TO BASE PLATE AND POLE FOR THE WIDTH OF THE REINFORCEMENT PLATE PLUS ¼" ON EACH SIDE (DO NOT OVER GRIND).
2. PERFORM CJP WELD WITH REINFORCING FILLET WELD USING POLE AS BACKING BAR.



OPTION 1

NOTES:

1. CLEAN EXISTING GALVANIZING FROM WELD.
2. BUILD PLATFORM WITH WELD AT THE SAME HEIGHT OF THE EXISTING FILLET WELD (TO REDUCE THE AMOUNT OF THE WELD TO BUILD THE PLATFORM, IT IS ALLOWABLE TO PARTIALLY GRIND THE HEIGHT OF THE EXISTING FILET WELD TO A ¼" MINIMUM.)
3. PERFORM CJP WELD WITH REINFORCING FILLET WELD USING POLE AS BACKING BAR.



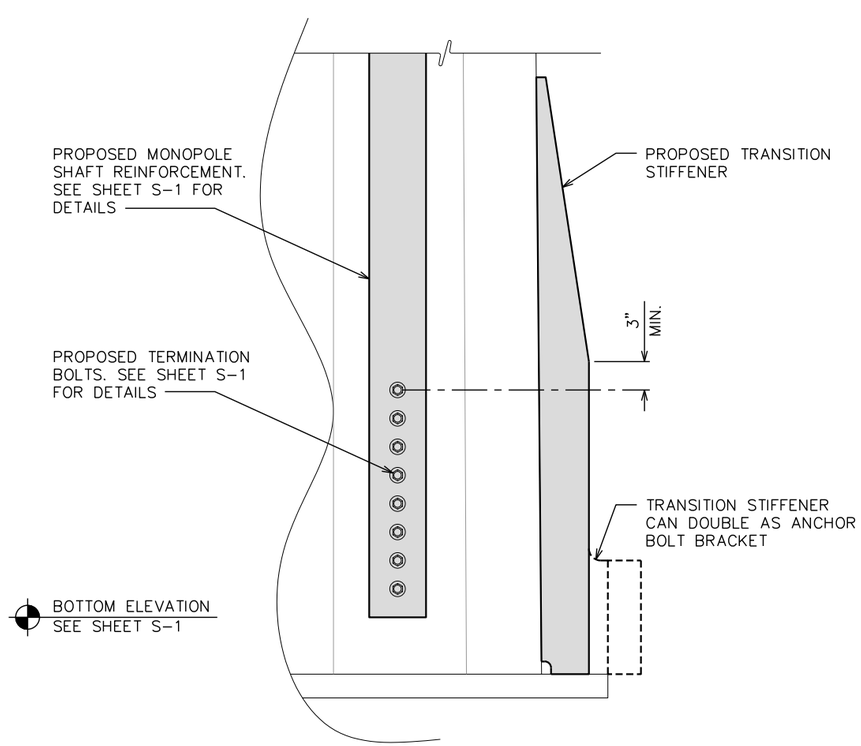
OPTION 2

BASE WELD TERMINATION DETAILS (1)

SCALE: N.T.S.

REINFORCING FILLET SIZE

PART NUMBER	PLATE SIZE	MINIMUM REINFORCING WELD
TEP-WSFP-040075 TEP-WAFP-040075 TEP-WCFP-040075	¾" x 4"	¼"
TEP-WSFP-040125 TEP-WAFP-040125 TEP-WCFP-040125	1¼" x 4"	¼"
TEP-WSFP-045100 TEP-WAFP-045100 TEP-WCFP-045100	1" x 4½"	¼"
TEP-WSFP-050125 TEP-WAFP-050125 TEP-WCFP-050125	1¼" x 5"	5⁄16"
TEP-WSFP-060100 TEP-WAFP-060100 TEP-WCFP-060100	1" x 6"	⅜"
TEP-WSFP-065125 TEP-WAFP-065125 TEP-WCFP-065125	1¼" x 6½"	½"
TEP-WSFP-085125 TEP-WAFP-085125 TEP-WCFP-085125	1¼" x 8½"	⅝"



TRANSITION STIFFENER TERMINATION DETAILS (2)

SCALE: N.T.S.

PLANS PREPARED FOR:

PHOENIX TOWER INTERNATIONAL
999 YAMATO ROAD, SUITE 100
BOCA RATON, FL 33431
OFFICE: (503) 593-0282

PROJECT INFORMATION:

PIONEER
SITE #: US-CA-1322

2470 PIONEER AVE A
FULLERTON, CA 92832
(ORANGE COUNTY)

PLANS PREPARED BY:

TOWER ENGINEERING PROFESSIONALS
326 TRYON ROAD
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www.tepgroup.net

SEAL:

REGISTERED PROFESSIONAL ENGINEER
ADAM M. AMORTMONT
81495
CIVIL
STATE OF CALIFORNIA

7-30-24

July 30, 2024

REV	DATE	ISSUED FOR:
0	07-30-24	MODIFICATION DRAWINGS

DRAWN BY: JLW | CHECKED BY: TLI

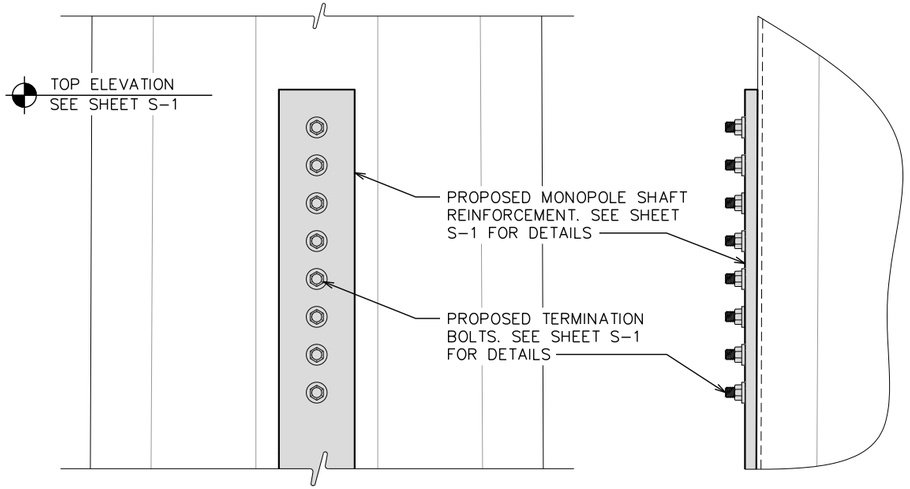
SHEET TITLE:

TYP. SHAFT REINFORCEMENT DETAILS I

SHEET NUMBER: **S-4**

REVISION: **0**

TEP#: 72879.980281

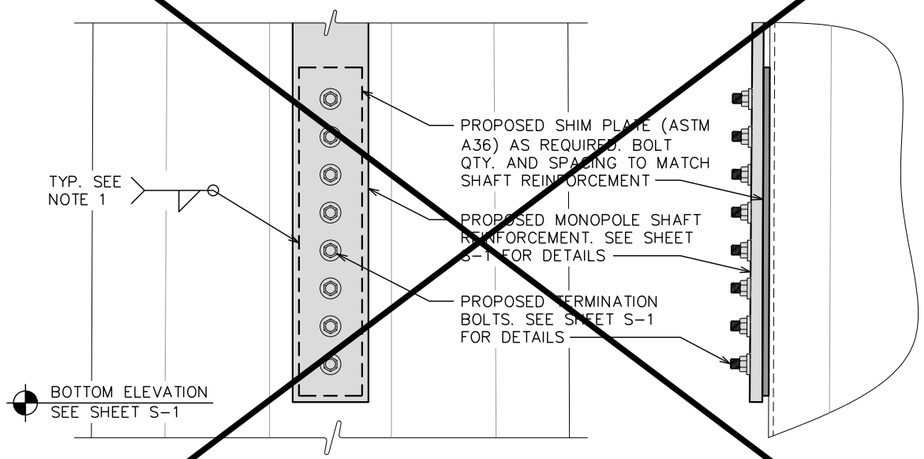


TOP TERMINATION DETAILS (3A)

SCALE: N.T.S.

NOTE:

1. SHIMS GREATER THAN ¼" IN THICKNESS LOCATED WITHIN THE TERMINATION LENGTH OF THE SHAFT REINFORCEMENT PLATE SHALL BE WELDED TO THE SHAFT REINFORCEMENT PLATE.

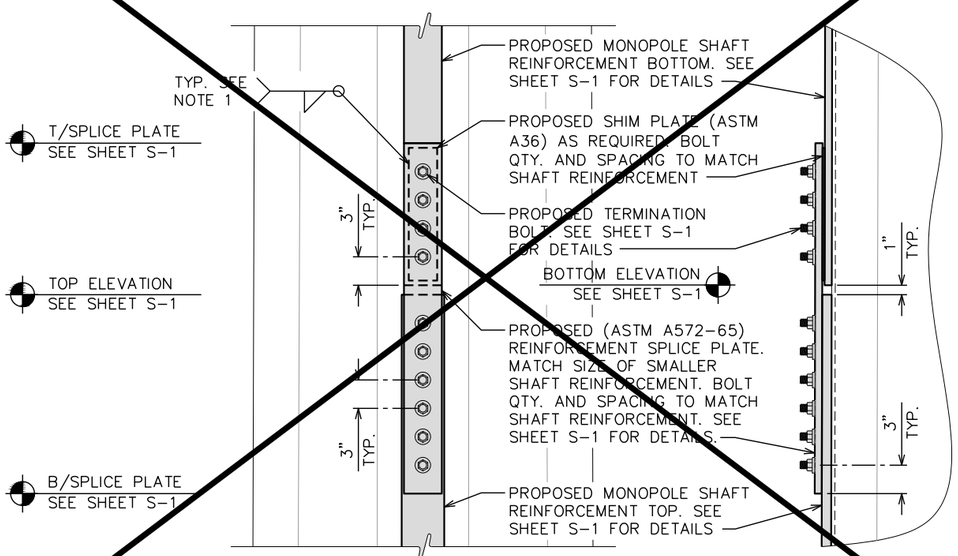


BOTTOM TERMINATION DETAILS (3B)

SCALE: N.T.S.

NOTE:

1. SHIMS GREATER THAN ¼" IN THICKNESS LOCATED BETWEEN THE SHAFT REINFORCEMENT PLATE AND THE REINFORCEMENT SPLICE PLATE SHALL BE WELDED TO THE SHAFT REINFORCEMENT PLATE.

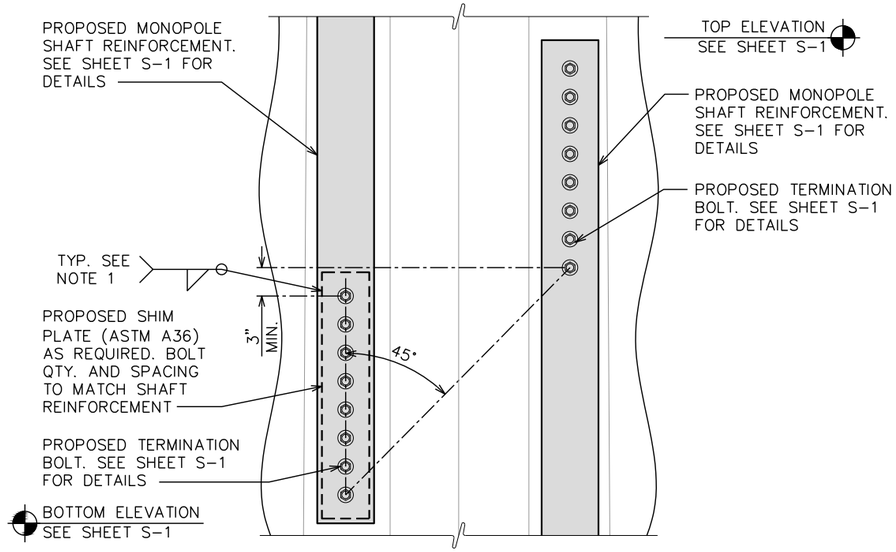


REINFORCEMENT SPLICE DETAILS (4)

SCALE: N.T.S.

NOTE:

1. SHIMS GREATER THAN ¼" IN THICKNESS LOCATED WITHIN THE TERMINATION LENGTH OF THE SHAFT REINFORCEMENT PLATE SHALL BE WELDED TO THE SHAFT REINFORCEMENT PLATE



OVERLAP SPLICE DETAILS (5)

SCALE: N.T.S.

PLANS PREPARED FOR:

PHOENIX TOWER INTERNATIONAL

999 YAMATO ROAD, SUITE 100
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PROJECT INFORMATION:

PIONEER
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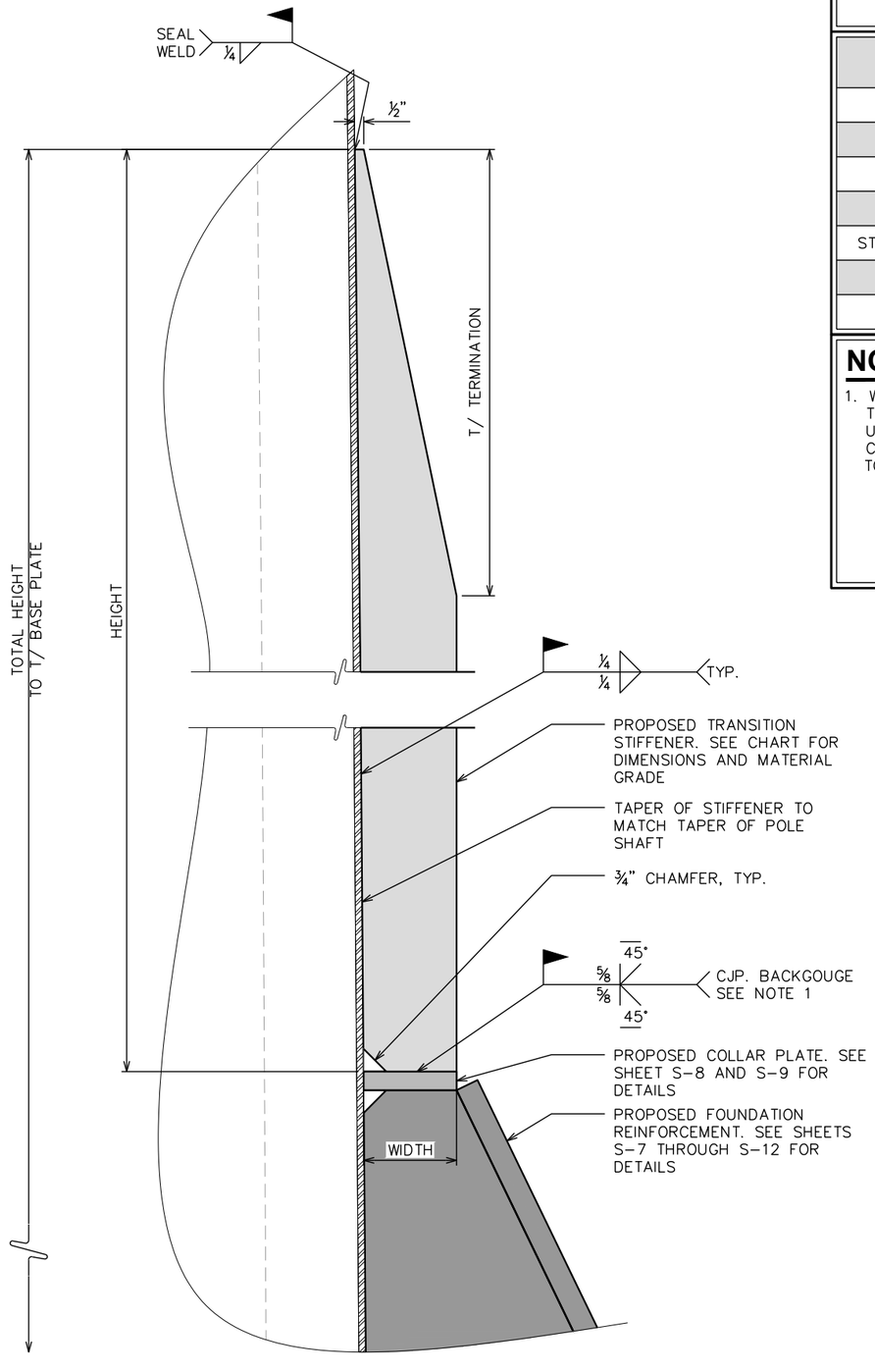
SHEET TITLE:

TYP. SHAFT REINFORCEMENT DETAILS II

SHEET NUMBER: **S-5**

REVISION: **0**

TEP#: 72879.980281

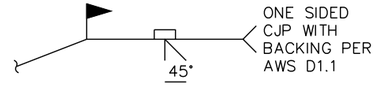


TRANSITION STIFFENER

DESCRIPTION	MEASUREMENT
HEIGHT	5'-0"
TOTAL HEIGHT	10'-4"
WIDTH	5½"
T/ TERMINATION	2'-6"
STIFFENER THICKNESS	1¼"
MATERIAL	ASTM A572-65
TOTAL QUANTITY	4

NOTE:

1. WHEN A TWO-SIDED CJP WELD IS UNATTAINABLE DUE TO FIT-UP, THE CONTRACTOR SHALL BE PERMITTED TO USE THE ONE-SIDED CJP WELD DEPICTED BELOW. CONTRACTOR SHALL RED-LINE AS-BUILT DRAWINGS TO INDICATE THE CHOSEN DETAIL.



TRANSITION STIFFENER DETAILS

SCALE: N.T.S.

D

PLANS PREPARED FOR:

PHOENIX TOWER INTERNATIONAL

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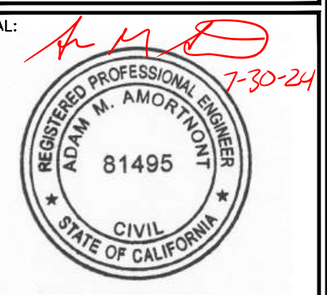

July 30, 2024

REV	DATE	ISSUED FOR:
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DRAWN BY: JLW | CHECKED BY: TLI

SHEET TITLE:

TRANSITION STIFFENER DETAILS

SHEET NUMBER: **S-6**

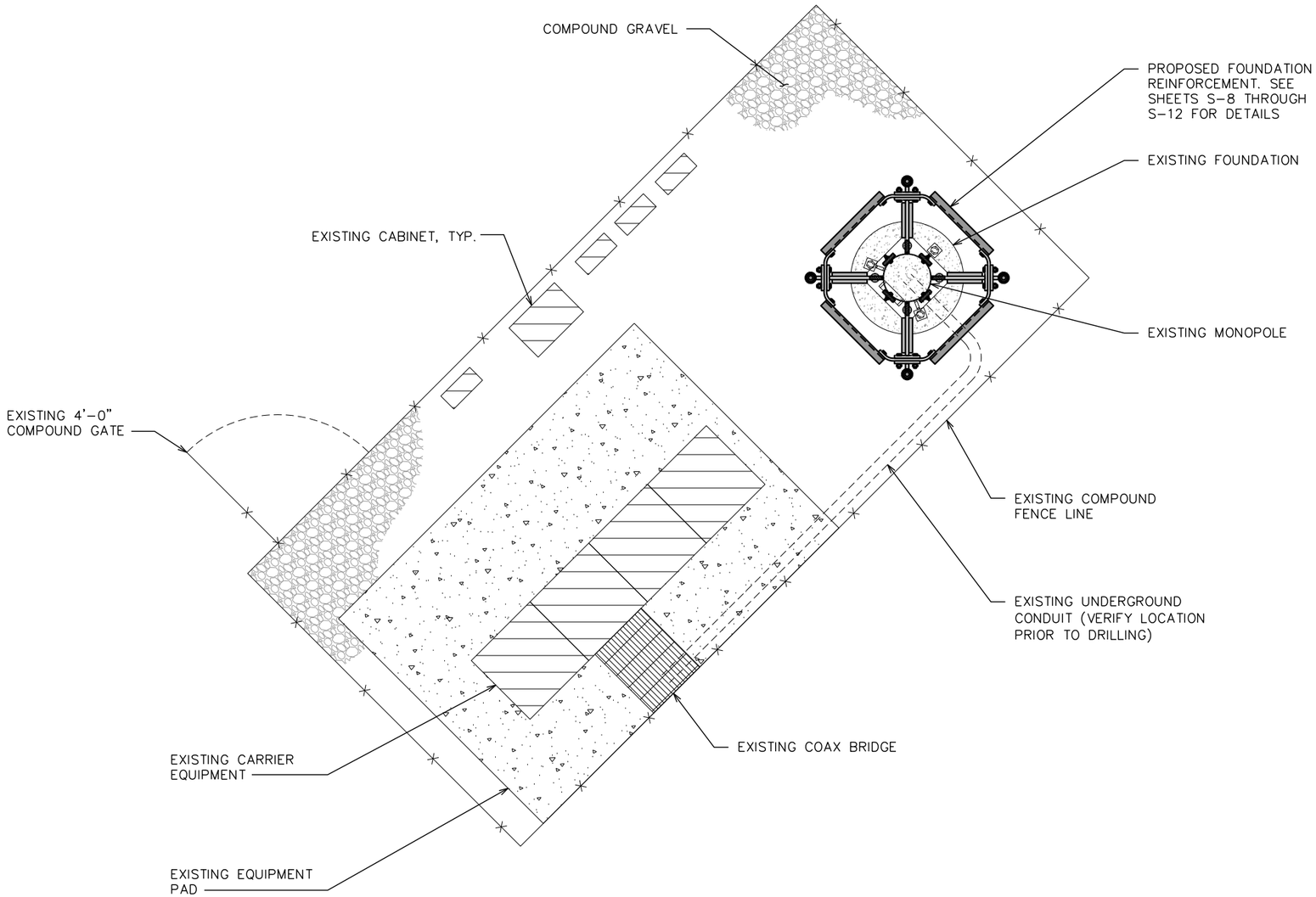
REVISION: **0**

TEP#: 72879.980281

NOTES:

1. CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING EQUIPMENT PRIOR TO CONSTRUCTION. COORDINATE WITH TOWER OWNER ANY REQ'D RELOCATION OF EXISTING EQUIPMENT THAT MAY INTERFERE WITH THE MAST FOUNDATION REINFORCEMENT.
2. CONTRACTOR SHALL VERIFY AS-BUILT DIMENSIONS OF EXISTING FOUNDATION PRIOR TO CONSTRUCTION.
3. CONTRACTOR TO COORDINATE RELOCATION OF INTERFERING ICE BRIDGE SUPPORTS WITH PHOENIX TOWER INTERNATIONAL CONSTRUCTION MANAGER.

VERIFY



SITE PLAN

SCALE: ¼" = 1'-0"

0 4 8

SCALE IN FEET

PLANS PREPARED FOR:

PHOENIX TOWER INTERNATIONAL

999 YAMATO ROAD, SUITE 100
BOCA RATON, FL 33431
OFFICE: (503) 593-0282

PROJECT INFORMATION:

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7-30-24

July 30, 2024

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0	07-30-24	MODIFICATION DRAWINGS

DRAWN BY: JLW | CHECKED BY: TLI

SHEET TITLE:

SITE PLAN

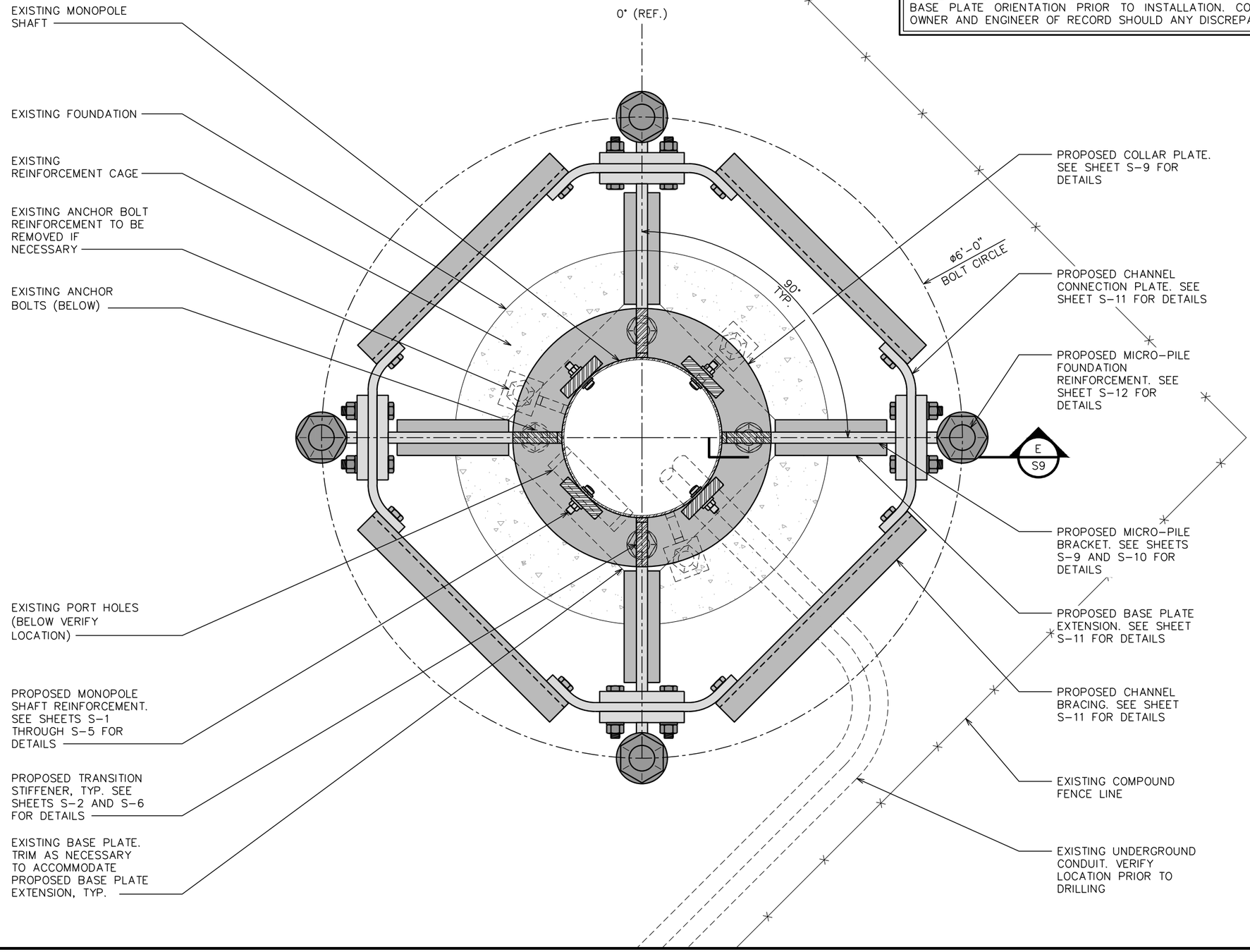
SHEET NUMBER: **S-7**

REVISION: **0**

TEP#: 72879.980281

ATTENTION

0° REF. WAS ASSUMED TO BE ALIGNED WITH NORTH. FIELD VERIFY BASE PLATE ORIENTATION PRIOR TO INSTALLATION. CONTACT TOWER OWNER AND ENGINEER OF RECORD SHOULD ANY DISCREPANCIES ARISE.



FOUNDATION REINFORCEMENT - PLAN VIEW

SCALE: 1" = 1'-0"

0 1 2

SCALE IN FEET

PLANS PREPARED FOR:

PHOENIX TOWER INTERNATIONAL

999 YAMATO ROAD, SUITE 100
BOCA RATON, FL 33431
OFFICE: (503) 593-0282

PROJECT INFORMATION:

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2470 PIONEER AVE A
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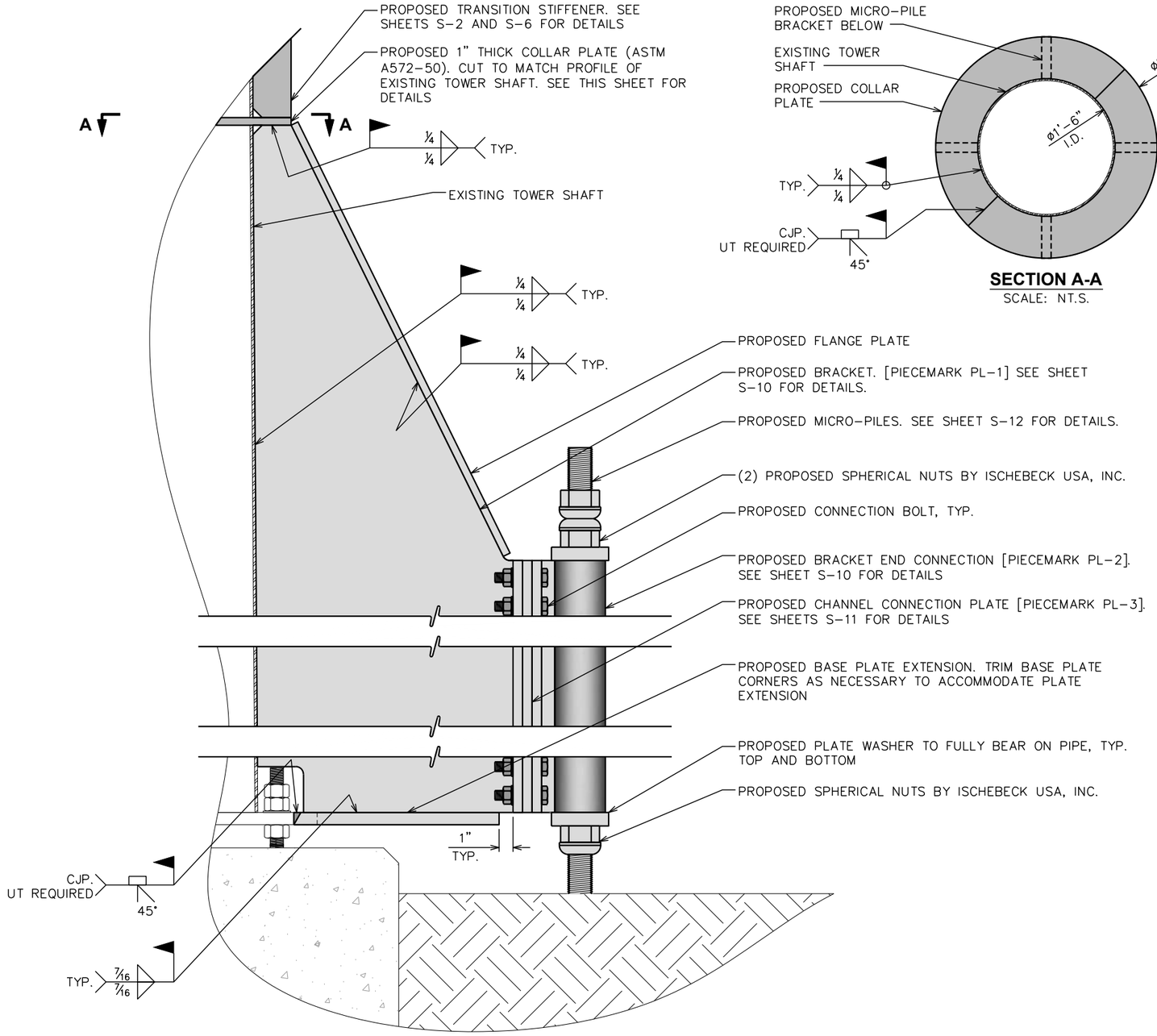
SHEET TITLE:

FOUNDATION REINFORCEMENT DETAILS I

SHEET NUMBER: **S-8**

REVISION: **0**

TEP#: 72879.980281



MICRO-PILE BRACKET DETAIL

SCALE: N.T.S.

SECTION A-A

SCALE: N.T.S.

CONNECTION BOLTS

DESCRIPTION	MEASUREMENT
CONNECTION BOLT DIA.	1"
MATERIAL	ASTM A325-X
TOTAL QUANTITY	32

SPHERICAL NUT

DESCRIPTION	MEASUREMENT
TOTAL QUANTITY	12

ACCESSORIES

DESCRIPTION	MEASUREMENT
FLANGE PLATE	PL4"x1"
MATERIAL	ASTM A572-50
TOTAL QUANTITY	4
DESCRIPTION	**MEASUREMENT**
BASE PLATE EXTENSION	PL4"x1'-0½"x1½"
MATERIAL	ASTM A572-50
TOTAL QUANTITY	4
DESCRIPTION	**MEASUREMENT**
PLATE WASHER	PL5½" O.D. x 1¼" TH. (3" I.D.)
MATERIAL	ASTM A572-65
TOTAL QUANTITY	8

PLANS PREPARED FOR:

PHOENIX TOWER INTERNATIONAL
999 YAMATO ROAD, SUITE 100
BOCA RATON, FL 33431
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PROJECT INFORMATION:

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2470 PIONEER AVE A
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SEAL:

July 30, 2024

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SHEET TITLE:

FOUNDATION REINFORCEMENT DETAILS II

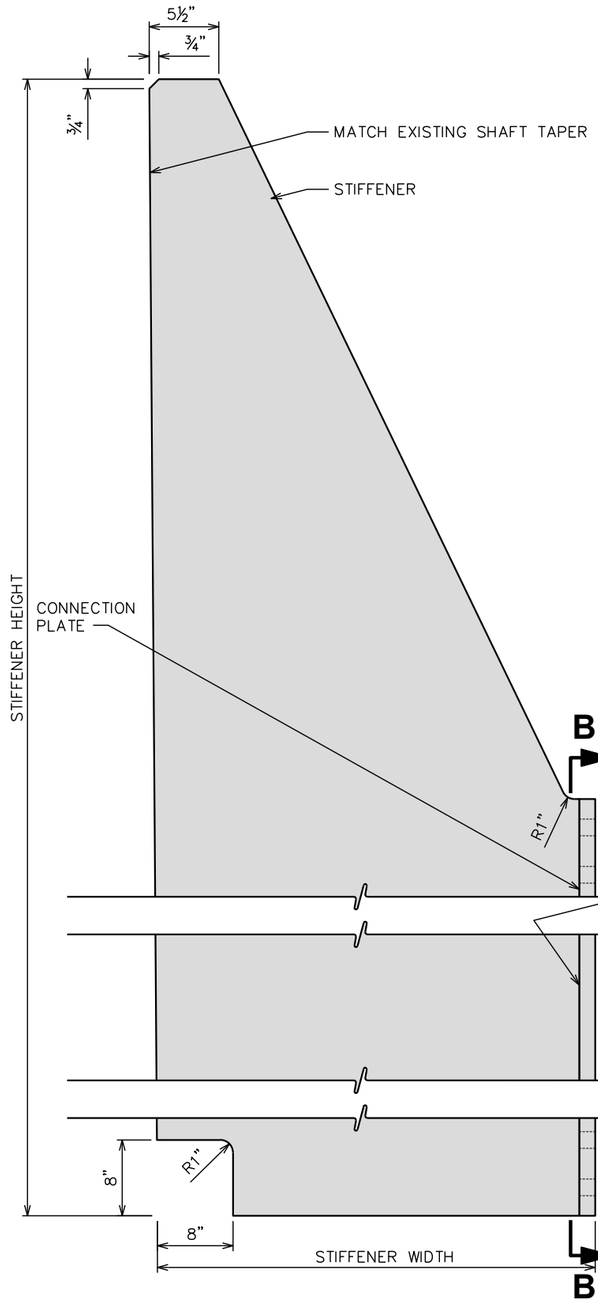
SHEET NUMBER: **S-9**

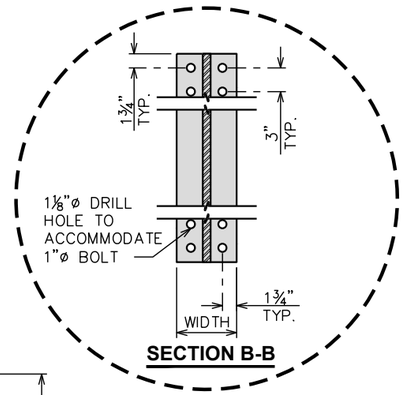
REVISION: **0**

TEP#: 72879.980281

MICRO-PILE BRACKET

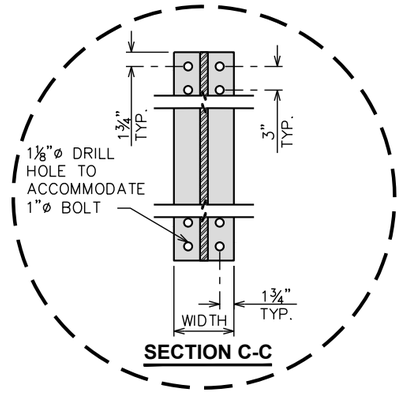
DESCRIPTION	MEASUREMENT
STIFFENER HEIGHT	5'-3"
STIFFENER WIDTH	1'-8¾"
STIFFENER THICKNESS	1¼"
STIFFENER MATERIAL	ASTM A572-65
CONNECTION PLATE HEIGHT	1'-6"
CONNECTION PLATE WIDTH	9½"
CONNECTION PLATE THICKNESS	1¼"
CONNECTION PLATE MATERIAL	ASTM A572-65
NO. BOLT HOLES	8
TOTAL QUANTITY	4





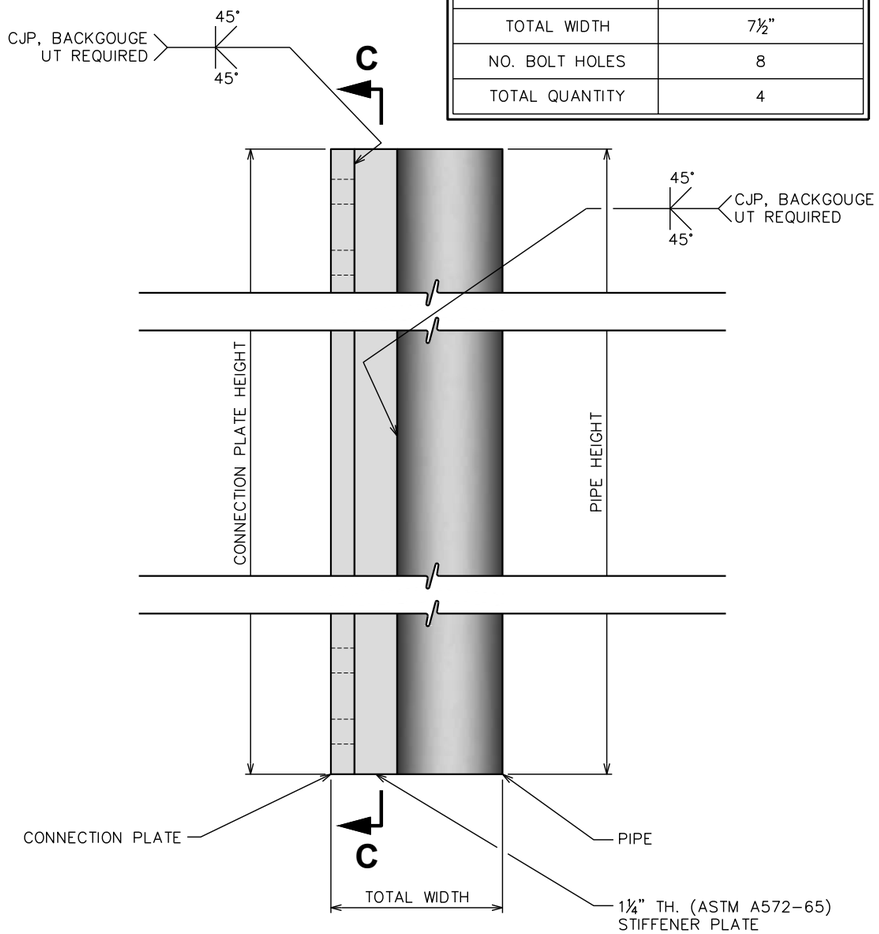
PIECEMARK: PL-1

SCALE: N.T.S.



END CONNECTION

DESCRIPTION	MEASUREMENT
PIPE SIZE	4 XXS
PIPE HEIGHT	1'-6"
PIPE MATERIAL	ASTM A500-46
CONNECTION PLATE HEIGHT	1'-6"
CONNECTION PLATE WIDTH	9½"
CONNECTION PLATE THICKNESS	1¼"
CONNECTION PLATE MATERIAL	ASTM A572-65
TOTAL WIDTH	7½"
NO. BOLT HOLES	8
TOTAL QUANTITY	4



PIECEMARK: PL-2

SCALE: N.T.S.

PLANS PREPARED FOR:

PHOENIX TOWER INTERNATIONAL
999 YAMATO ROAD, SUITE 100
BOCA RATON, FL 33431
OFFICE: (503) 593-0282

PROJECT INFORMATION:

PIONEER
SITE #: US-CA-1322

2470 PIONEER AVE A
FULLERTON, CA 92832
(ORANGE COUNTY)

PLANS PREPARED BY:

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SEAL:

July 30, 2024

REV	DATE	ISSUED FOR:
0	07-30-24	MODIFICATION DRAWINGS

DRAWN BY: JLW | CHECKED BY: TLI

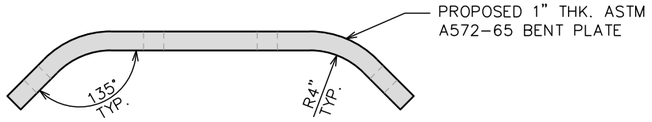
SHEET TITLE:

FOUNDATION REINFORCEMENT DETAILS III

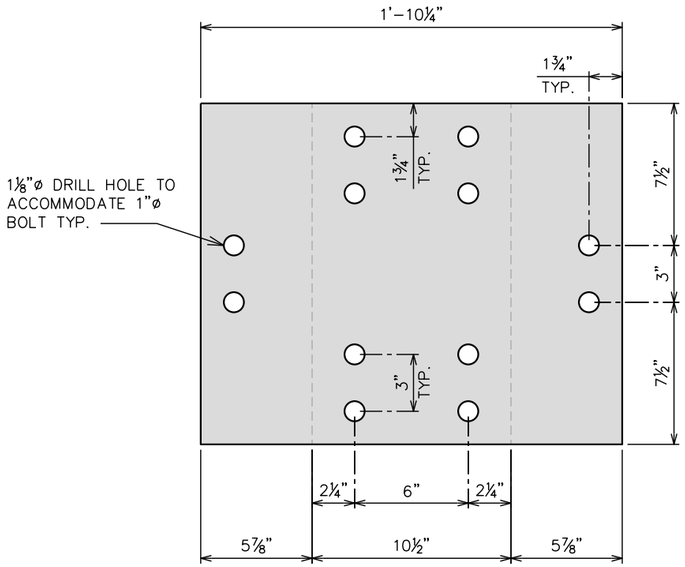
SHEET NUMBER: **S-10**

REVISION: **0**

TEP#: 72879.980281



PLAN VIEW



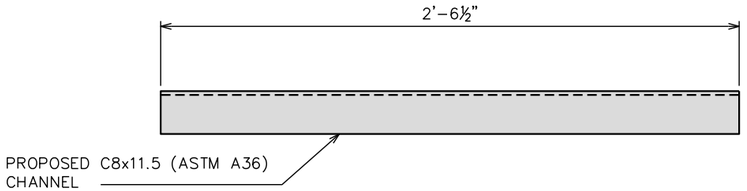
ELEVATION VIEW (FLAT)

PIECEMARK: PL-3

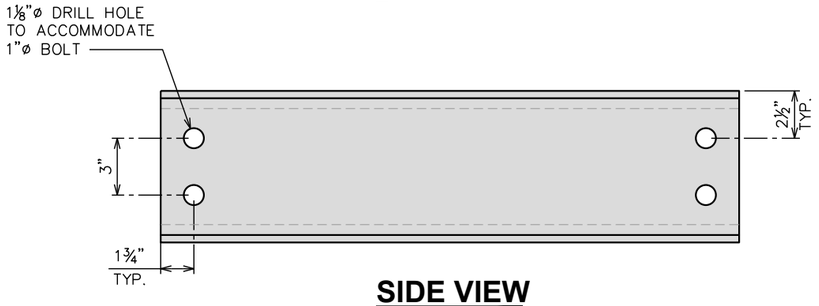
SCALE: 1½" = 1'-0"

0 1 2

SCALE IN FEET



TOP VIEW



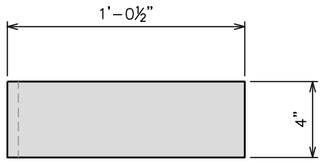
SIDE VIEW

CHANNEL BRACING DETAILS

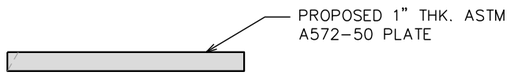
SCALE: 1½" = 1'-0"

0 1 2

SCALE IN FEET



TOP VIEW



SIDE VIEW

BASE PLATE EXTENSION DETAILS

SCALE: 1½" = 1'-0"

0 1 2

SCALE IN FEET

PLANS PREPARED FOR:
PHOENIX TOWER INTERNATIONAL
999 YAMATO ROAD, SUITE 100
BOCA RATON, FL 33431
OFFICE: (503) 593-0282

PROJECT INFORMATION:

PIONEER
SITE #: US-CA-1322

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SEAL:

REV	DATE	ISSUED FOR:
0	07-30-24	MODIFICATION DRAWINGS

DRAWN BY: JLW | CHECKED BY: TLI

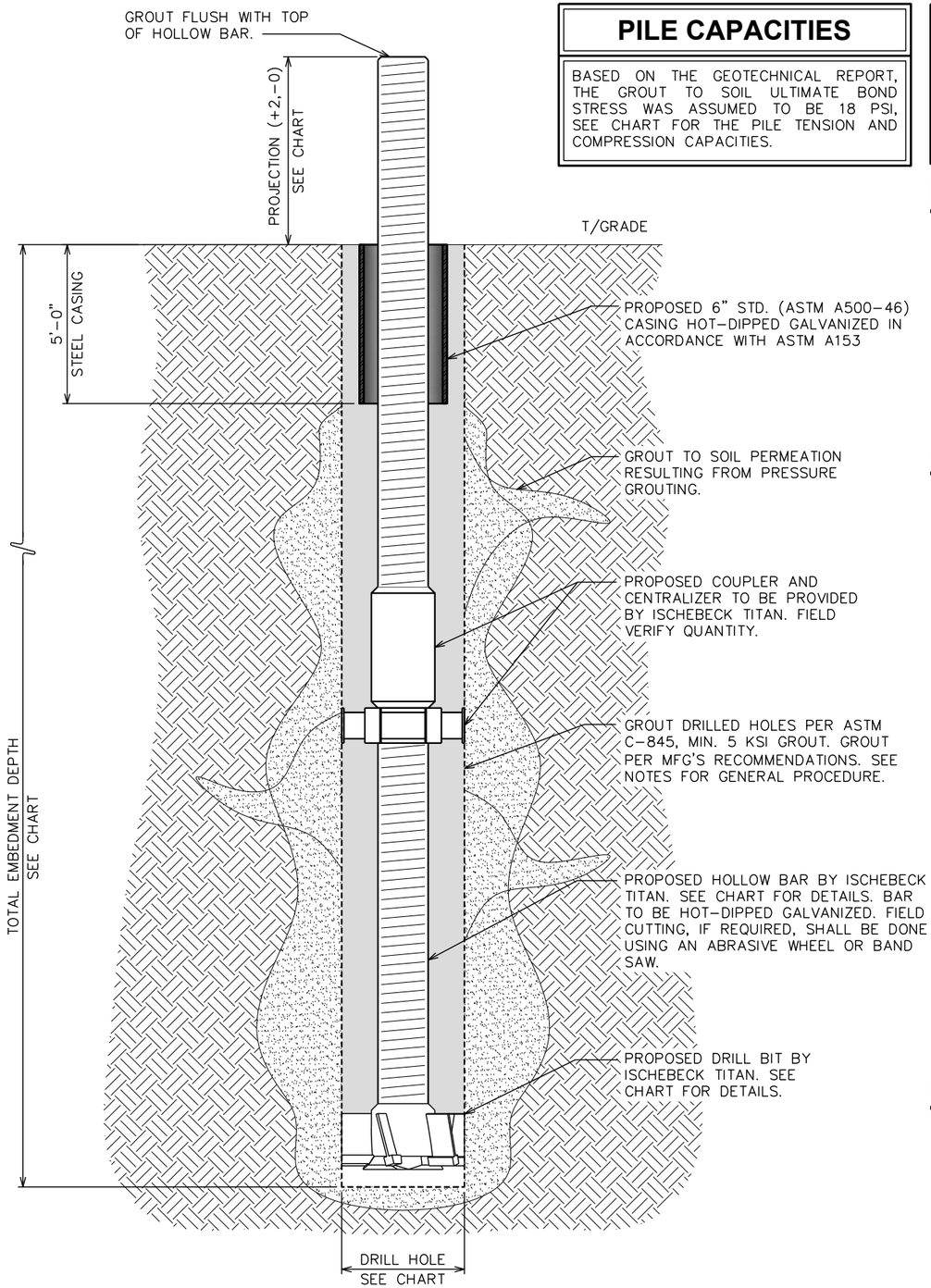
SHEET TITLE:

FOUNDATION REINFORCEMENT DETAILS IV

SHEET NUMBER: **S-11**

REVISION: **0**

TEP#: 72879.980281



PILE CAPACITIES

BASED ON THE GEOTECHNICAL REPORT, THE GROUT TO SOIL ULTIMATE BOND STRESS WAS ASSUMED TO BE 18 PSI, SEE CHART FOR THE PILE TENSION AND COMPRESSION CAPACITIES.

ISCHEBECK TITAN HOLLOW BARS

BAR SIZE	ALLOWABLE AXIAL PILE CAPACITY (KIPS)	DRILL BIT TYPE	DRILL BIT SIZE DRILL HOLE SIZE	EMBEDMENT DEPTH	PROJECTION
73 / 53	175.4	CROSS CUT	6.9" (175mm)	54'-0"	3'-9"

HOLLOW BAR SYSTEM

1. IN SOILS THAT DO NOT ALLOW FOR OPEN-HOLED DRILLING (I.E. GRANULAR SOILS THAT ARE COLLAPSIBLE IN NATURE), DRILLING WITH A GROUT FLUID SERVES THE PURPOSES OF FLUSHING SPOILS FROM THE BOREHOLE AND PREVENTS LOOSER, SURROUNDING MATERIAL FROM COLLAPSING DUE TO THE HIGHER RELATIVE DENSITY OF THE GROUT.
2. THE INJECTION BAR IS A HIGH-STRENGTH IMPACT-RESISTANT HEAVY WALL STEEL TUBING CONTINUOUSLY THREADED OVER ITS LENGTH WITH A HEAVY DUTY THREAD PATTERN. THE STEEL TUBING PROVIDES MAXIMUM FLOW WITH MINIMUM RESISTANCE DURING HIGH PRESSURE FLUSHING AND GROUTING OPERATIONS.
3. THE HOLLOW BAR SERVES AS THE DRILL STEEL. A SACRIFICIAL BIT IS INSTALLED ON THE END OF THE BAR AND THE CONTRACTOR ADVANCES THE BAR CONTINUALLY PUMPING AND CIRCULATING GROUT TO MAINTAIN AN OPEN BOREHOLE. THIS TECHNIQUE IS THE SAME AS WASH BORING EXCEPT THAT GROUT RATHER THAN BENTONITE DRILLING MUD SERVES AS THE DRILLING FLUID.

MICRO-PILE INSTALLATION NOTES

1. GENERALLY THE SYSTEM IS INSTALLED WITH ROTARY PERCUSSIVE DRILLING AND CONTINUOUS GROUTING.
2. THE THICKNESS OF GROUT CAN BE VARIED DEPENDING ON SUSCEPTIBILITY OF THE BOREHOLE TO COLLAPSE. HOWEVER, A GROUT MIXTURE OF 0.4 WATER TO CEMENT RATIO IS RECOMMENDED IN POOR COLLAPSIBLE SOILS TO ENSURE A HIGH ENOUGH DENSITY TO SUPPORT THE ANNULUS. IN ALL CASES, A FINAL GROUT MIXTURE OF 0.4 WATER TO CEMENT RATIO SHALL BE USED ONCE THE ANCHOR HAS REACHED ITS TERMINATION DEPTH TO COMPLETELY FLUSH ALL DRILLING GROUT AND DEBRIS FOR ADEQUATE IN-SITU STRUCTURAL CAPACITY. SPECIFIC GRAVITY OF THE FINAL GROUT MIXTURE SHALL BE CHECKED USING A MUD BALANCE SCALE (PRODUCT CODE: 115-00 BY OFI TESTING EQUIPMENT, OR EQUIVALENT) TO ENSURE A VALUE OF 1.9 OR HIGHER PRIOR TO PUMPING AND UPON EXIT FROM THE BOREHOLE.
3. GROUTS ARE DESIGNED TO PROVIDE HIGH STRENGTH AND STABILITY, BUT MUST ALSO BE PUMPABLE. GROUTS ARE TO BE PRODUCED WITH POTABLE WATER TO REDUCE THE DANGER OF REINFORCEMENT CORROSION. TYPE IL (MS) BLENDED CEMENT CONFORMING TO ASTM C595 AND SUITABLE FOR EXPOSURE TO MODERATE SULFATE CONDITIONS IS RECOMMENDED, SUPPLIED EITHER IN BAGGED OR BULK FORM DEPENDING ON AVAILABILITY.
4. IT IS RECOMMENDED THAT THE GROUT BE MIXED IN A COLLOIDAL (SHEAR TYPE) MIXER, SO ONCE PUMPED THE FINE GROUT PARTICLES ARE FULLY ABLE TO DISPERSE INTO THE SMALL VOIDS OF THE SURROUNDING SOIL. THE WELL MIXED GROUT EXITS THE SIDE PORTS OF THE DRILL BIT UNDER PRESSURE TO FLUSH AND REMOVE THE SOFTER PARTS OF THE SOIL WHILE PENETRATING INTO THE FIRMER MATERIAL FOR INCREASED BOND CAPACITY.
5. IT IS RECOMMENDED THAT THE CONTRACTOR PARTIALLY WITHDRAW EACH FULLY DRILLED SECTION UP THE DRILL MAST PRIOR TO ATTACHING NEW SECTIONS. THIS WAY THE DRILLING CAN BEGIN IN PLUNGING TYPE ACTION TO EVEN FURTHER IMPROVE GROUT PENETRATION.
6. IN ALL CASES THE HOLLOW BAR SYSTEM SHOULD BE DRILLED SLOW ENOUGH TO ENSURE ROTATION THROUGH THE SOIL AS OPPOSED TO EXCESSIVE PERCUSSION AND FEED PRESSURE WITH LIMITED ROTATION. SUCH PRACTICE WILL PROVIDE THE FORMATION OF A TRUE BOREHOLE WITH CONSISTENT GROUT COVER. GROUTING PRESSURE SHOULD BE SUFFICIENT TO MAINTAIN CIRCULATION AT ALL TIMES WITH A SMALL AMOUNT OF GROUT RETURN VISIBLE AT THE MOUTH OF THE BOREHOLE. NORMAL DRILLING ROTATION IS IN THE RANGE OF 40 AND 100 RPM.
7. THE MICRO-PILE HAS BEEN DESIGNED SUCH THAT THE FAILURE WILL OCCUR BETWEEN THE SOIL/ANCHOR INTERFACE, NOT THE GROUT/ANCHOR INTERFACE. THEREFORE, THE INSTALLATION SHALL BE OBSERVED BY A QUALIFIED PERSON EXPERIENCED IN THE INSTALLATION AND INSPECTION OF THIS TYPE OF MICRO-PILE AND SHALL BE WORKING UNDER THE DIRECTION OF A PROFESSIONAL ENGINEER.

CONTACT INFORMATION

1. GEOTECHNICAL ENGINEER:
   - JOHN D. LONGEST, P.E. (TEP)
   - (919) 661-6351
2. STRUCTURAL ENGINEER:
   - ADAM M. AMORTNONT, P.E. (TEP)
   - (919) 661-6351
3. ISCHEBECK TITAN CONTACT:
   - MARC MASTRANTUONO, P.E.
   - (239) 316-2049

MICRO-PILE DETAILS

SCALE: N.T.S.

PLANS PREPARED FOR:

PHOENIX TOWER INTERNATIONAL
999 YAMATO ROAD, SUITE 100
BOCA RATON, FL 33431
OFFICE: (503) 593-0282

PROJECT INFORMATION:

PIONEER
SITE #: US-CA-1322

2470 PIONEER AVE A
FULLERTON, CA 92832
(ORANGE COUNTY)

PLANS PREPARED BY:

TOWER ENGINEERING PROFESSIONALS
326 TRYON ROAD
RALEIGH, NC 27603
OFFICE: (919) 661-6351
www.tepgroup.net

SEAL:

REGISTERED PROFESSIONAL ENGINEER
ADAM M. AMORTNONT
81495
CIVIL
STATE OF CALIFORNIA

7-30-24

July 30, 2024

REV	DATE	ISSUED FOR:
0	07-30-24	MODIFICATION DRAWINGS

DRAWN BY: JLW | CHECKED BY: TLI

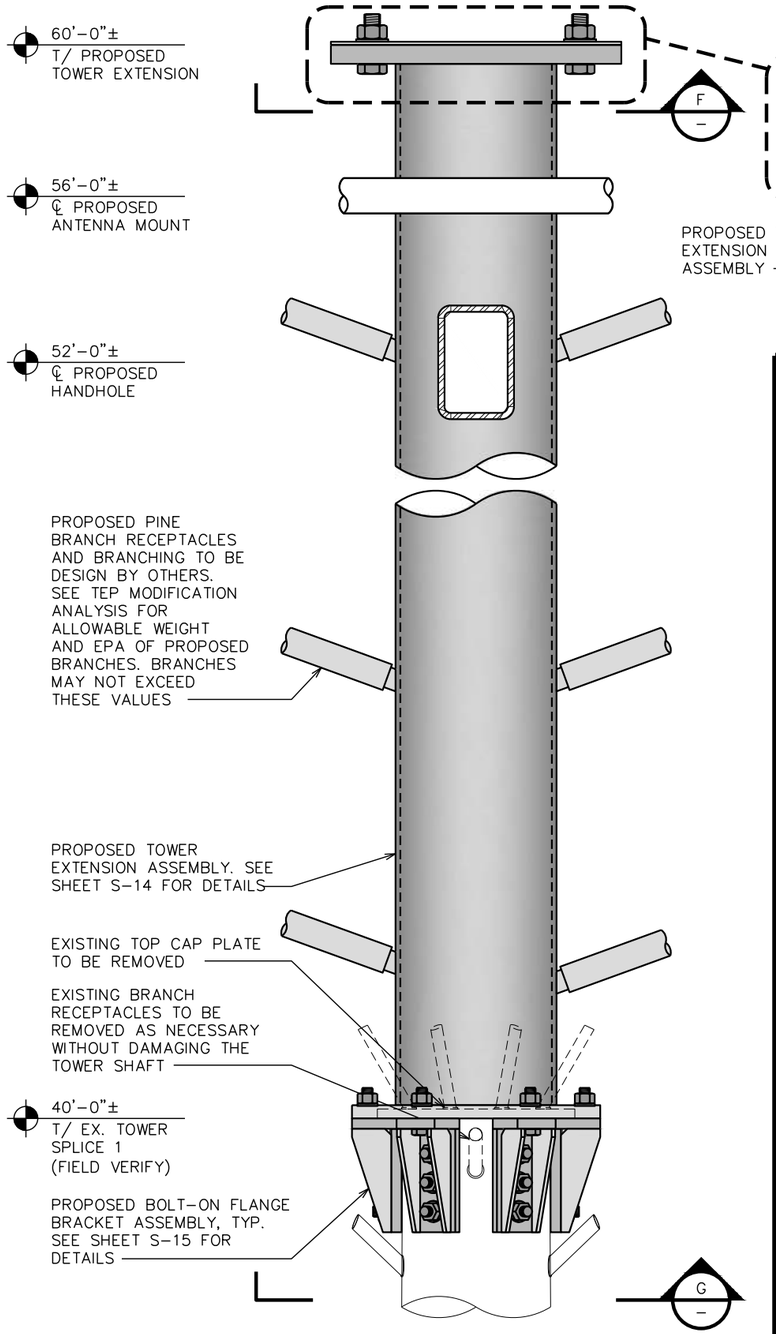
SHEET TITLE:

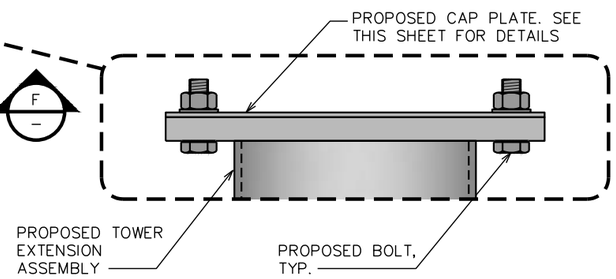
MICRO-PILE DETAILS

SHEET NUMBER: **S-12**

REVISION: **0**

TEP#: 72879.980281



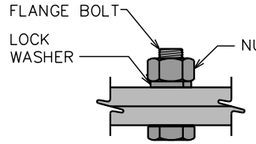


TOWER EXTENSION DETAILS

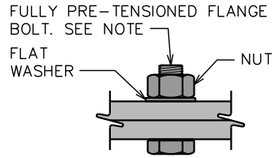
SCALE: N.T.S.

NOTE:

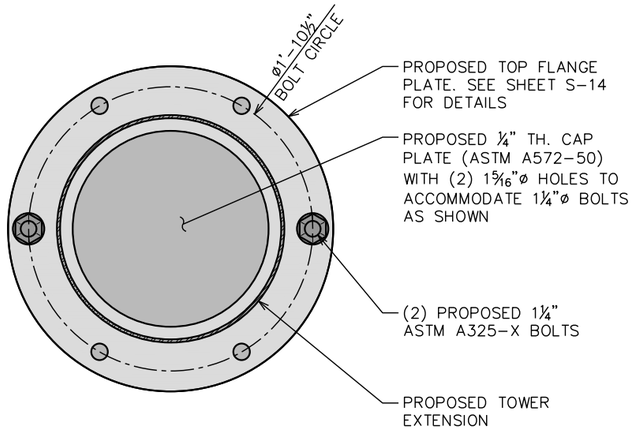
FULLY PRE-TENSION FLANGE BOLTS USING THE "TURN OF THE NUT" METHOD IN ACCORDANCE WITH THE AISC STEEL CONSTRUCTION MANUAL (LATEST EDITION).



TYP. BOLT ASSEMBLY

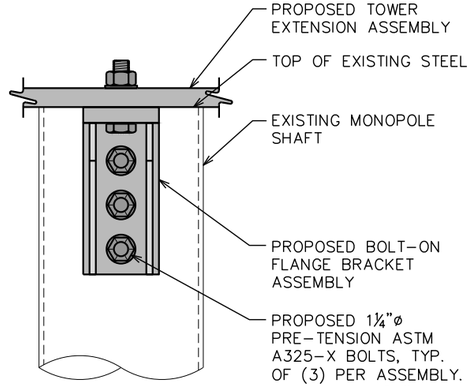


PRE-TENSIONED BOLT ASSEMBLY



SECTION F

SCALE: 1" = 1'-0"

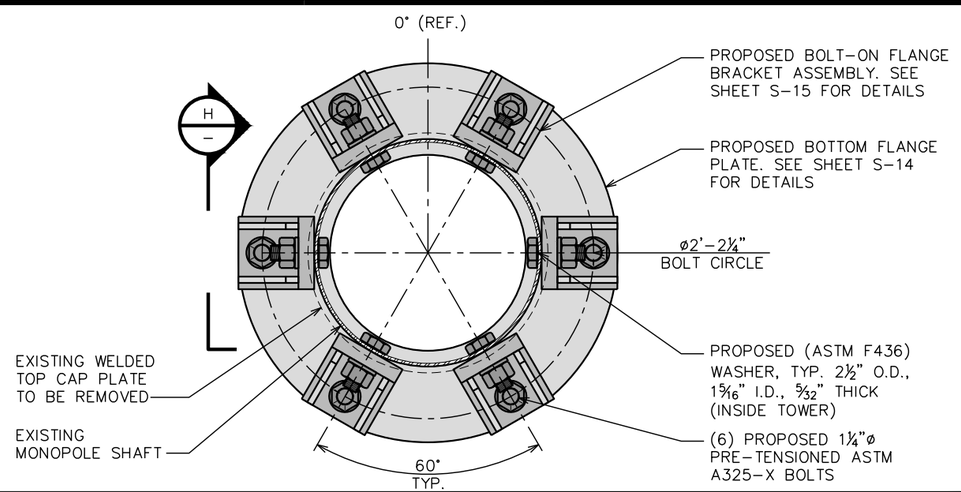


SECTION H

SCALE: N.T.S.

0 1 2

SCALE IN FEET



SECTION G

SCALE: 1" = 1'-0"

0 1 2

SCALE IN FEET

PLANS PREPARED FOR:

PHOENIX TOWER INTERNATIONAL

999 YAMATO ROAD, SUITE 100
BOCA RATON, FL 33431
OFFICE: (503) 593-0282

PROJECT INFORMATION:

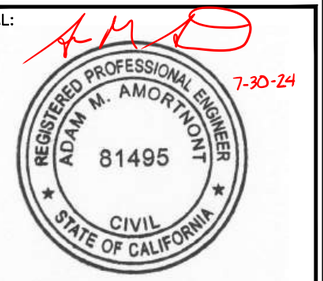
PIONEER
SITE #: US-CA-1322

2470 PIONEER AVE A
FULLERTON, CA 92832
(ORANGE COUNTY)

PLANS PREPARED BY:

TOWER ENGINEERING PROFESSIONALS
326 TRYON ROAD
RALEIGH, NC 27603
OFFICE: (919) 661-6351
www.tepgroup.net

SEAL:



REV	DATE	ISSUED FOR:
0	07-30-24	MODIFICATION DRAWINGS

DRAWN BY: JLW | CHECKED BY: TLI

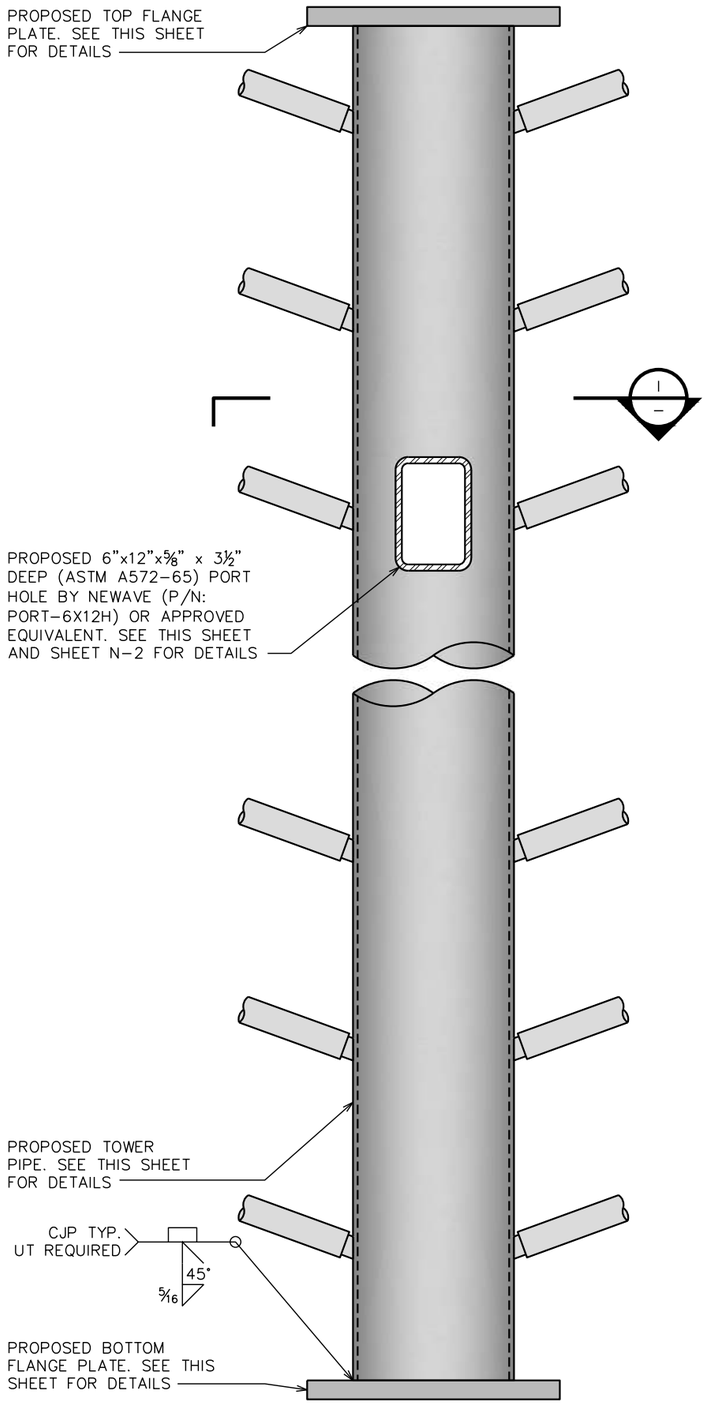
SHEET TITLE:

TOWER EXTENSION DETAILS I

SHEET NUMBER: **S-13**

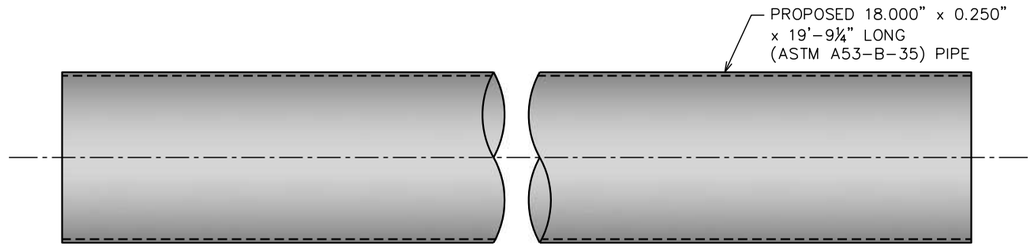
REVISION: **0**

TEP#: 72879.980281



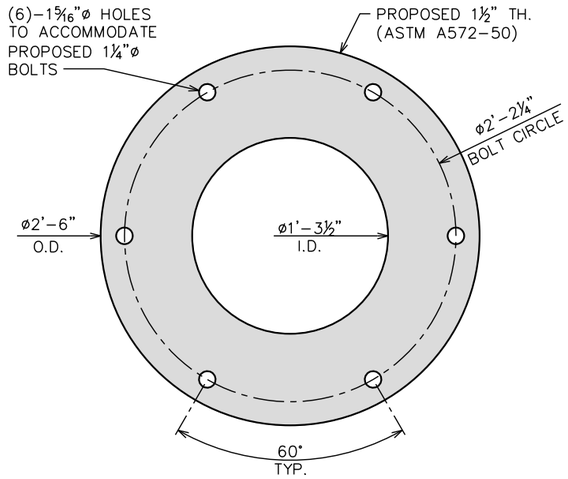
TOWER EXTENSION ASSEMBLY

SCALE: N.T.S.



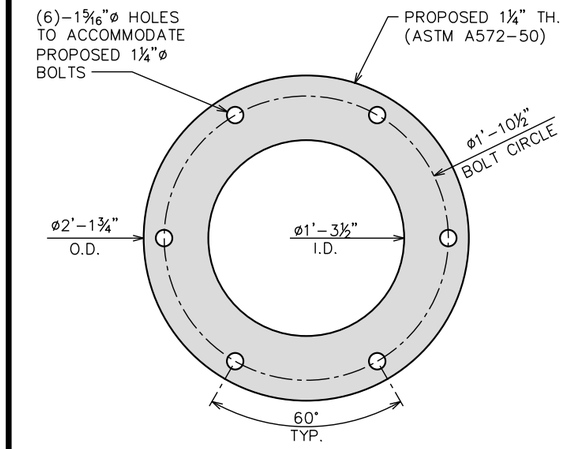
PROPOSED TOWER PIPE

SCALE: N.T.S.



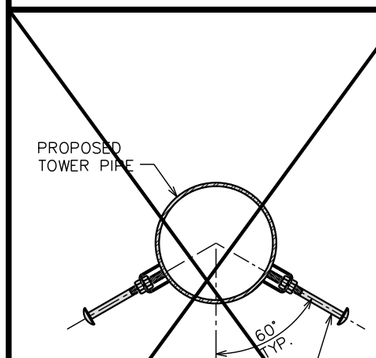
PROPOSED BOTTOM FLANGE PLATE

SCALE: N.T.S.



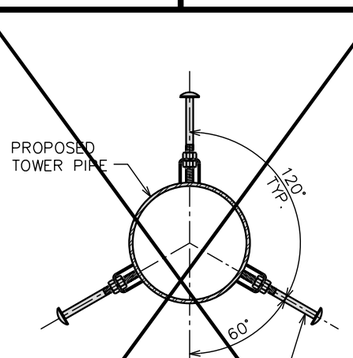
PROPOSED TOP FLANGE PLATE

SCALE: N.T.S.



SECTION

SCALE: N.T.S.



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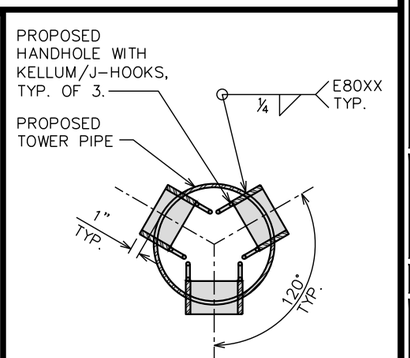


SECTION

SCALE: N.T.S.

PLANS PREPARED FOR:
PHOENIX TOWER INTERNATIONAL
999 YAMATO ROAD, SUITE 100
BOCA RATON, FL 33431
OFFICE: (503) 593-0282

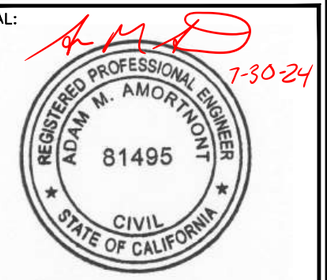
PROJECT INFORMATION:

PIONEER
SITE #: US-CA-1322

2470 PIONEER AVE A
FULLERTON, CA 92832
(ORANGE COUNTY)

PLANS PREPARED BY:
TOWER ENGINEERING PROFESSIONALS
326 TRYON ROAD
RALEIGH, NC 27603
OFFICE: (919) 661-6351
www.tepgroup.net

SEAL:



REV	DATE	ISSUED FOR:
0	07-30-24	MODIFICATION DRAWINGS

DRAWN BY: JLW | CHECKED BY: TLI

SHEET TITLE:

TOWER EXTENSION DETAILS II

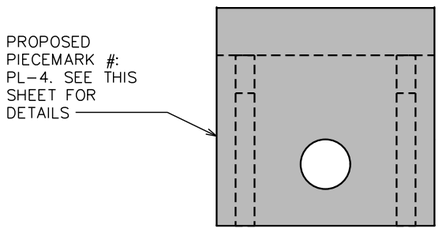
SHEET NUMBER: **S-14**

REVISION: **0**

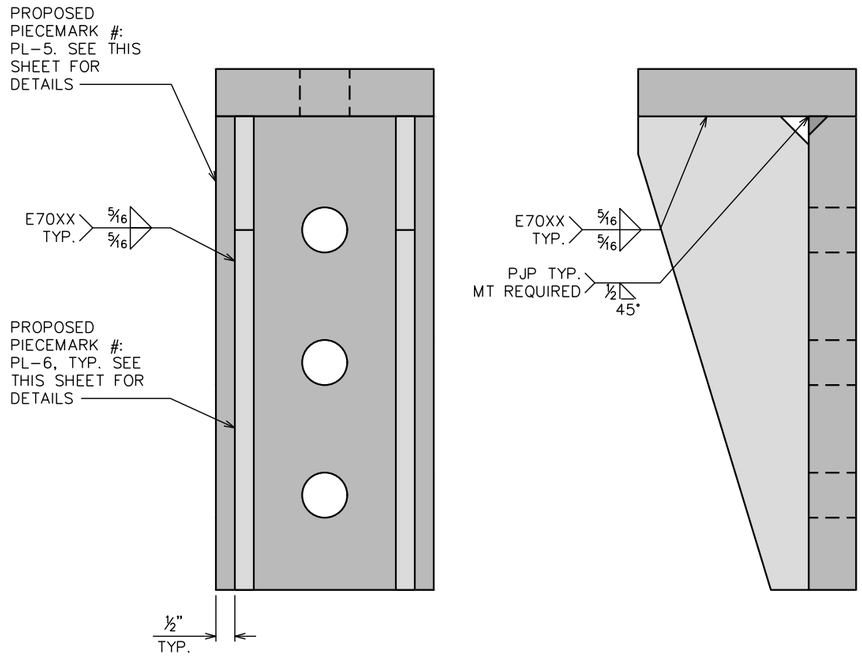
TEP#: 72879.980281

NOTE:

GAPS BETWEEN MONOPOLE SHAFT AND FLANGE BRACKET GREATER THAN 1/16" SHALL HAVE A SHIM PLATE. SHIMS GREATER THAN 1/4" IN THICKNESS SHALL BE WELDED TO THE FLANGE BRACKET.



TOP VIEW

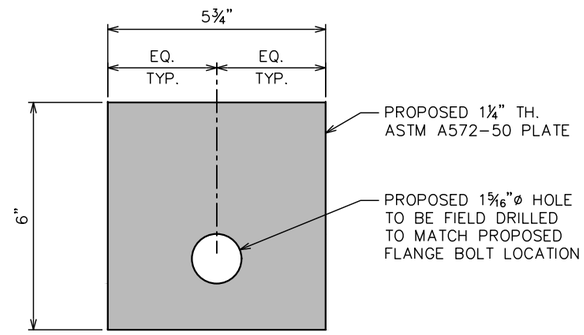


FRONT VIEW

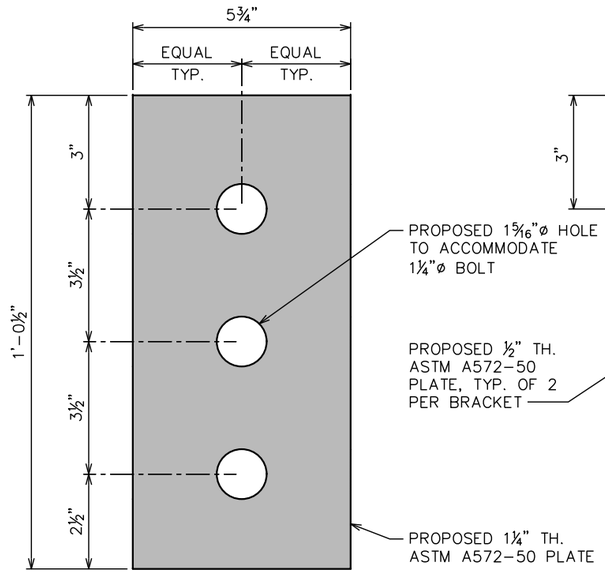
SIDE VIEW

BOLT-ON FLANGE BRACKET ASSEMBLY

SCALE: N.T.S.



PIECEMARK#: PL-4



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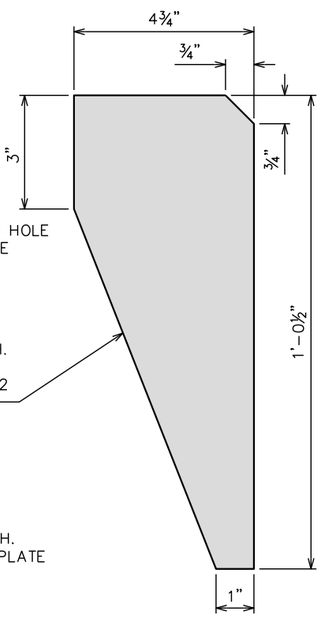


PIECEMARK#: PL-6

BOLT-ON FLANGE BRACKET DETAILS

SCALE: N.T.S.

PLANS PREPARED FOR:

PHOENIX TOWER INTERNATIONAL
999 YAMATO ROAD, SUITE 100
BOCA RATON, FL 33431
OFFICE: (503) 593-0282

PROJECT INFORMATION:

PIONEER
SITE #: US-CA-1322

2470 PIONEER AVE A
FULLERTON, CA 92832
(ORANGE COUNTY)

PLANS PREPARED BY:

TOWER ENGINEERING PROFESSIONALS
326 TRYON ROAD
RALEIGH, NC 27603
OFFICE: (919) 661-6351
www.tepgroup.net

SEAL:

July 30, 2024

REV	DATE	ISSUED FOR:
0	07-30-24	MODIFICATION DRAWINGS

DRAWN BY: JLW | CHECKED BY: TLI

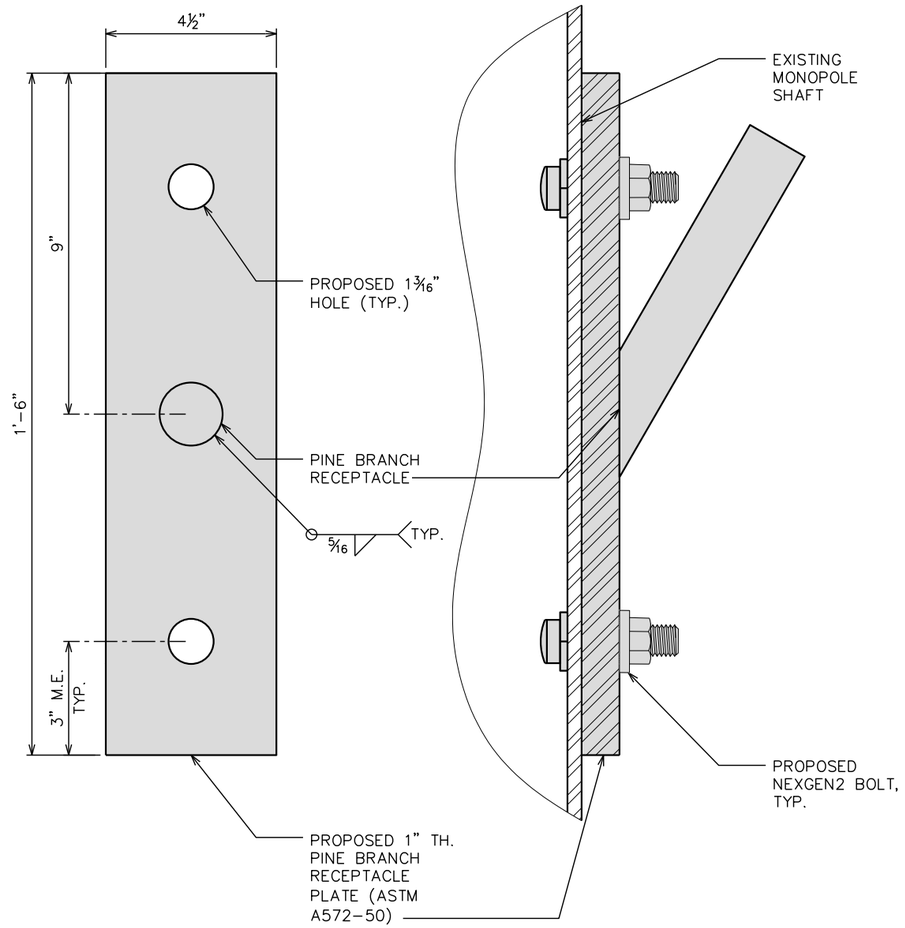
SHEET TITLE:

FLANGE BRACKET DETAILS

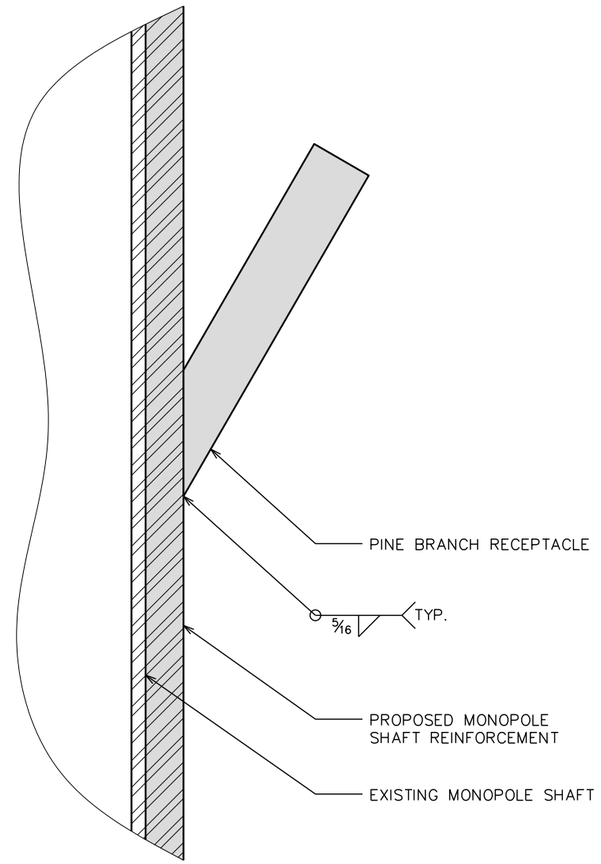
SHEET NUMBER: **S-15**

REVISION: **0**

TEP#: 72879.980281



OPTION A



OPTION B

BRANCH RECEPTACLE DETAILS

SCALE: N.T.S.

PLANS PREPARED FOR:
PHOENIX TOWER INTERNATIONAL
999 YAMATO ROAD, SUITE 100
BOCA RATON, FL 33431
OFFICE: (503) 593-0282

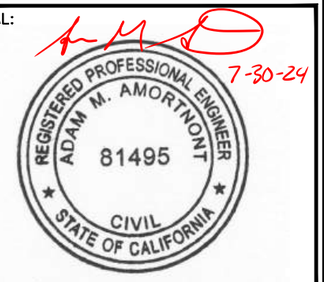
PROJECT INFORMATION:

PIONEER
SITE #: US-CA-1322

2470 PIONEER AVE A
FULLERTON, CA 92832
(ORANGE COUNTY)

PLANS PREPARED BY:
TOWER ENGINEERING PROFESSIONALS
326 TRYON ROAD
RALEIGH, NC 27603
OFFICE: (919) 661-6351
www.tepgroup.net

SEAL:



REV	DATE	ISSUED FOR:
0	07-30-24	MODIFICATION DRAWINGS

DRAWN BY: JLW | CHECKED BY: TLI

SHEET TITLE:
REPLACEMENT BRANCH RECEPTACLE

SHEET NUMBER: **S-16**

REVISION: **0**

TEP#: 72879.980281

5401 S. CANADA PLACE
TUCSON, AZ 85706
PH: (520) 663-1330

PIONEER

SITE #: US-CA-1322

REBRANCHING OF EXISTING 60'-0" MONOPINE

CELL TREES, INC. Job:

24-523

LOCATION:

2470 PIONEER AVE
FULLERTON, CA 92832
ORANGE COUNTY

DRAWING INDEX

PHOENIX TOWER INTERNATIONAL

JOB #: 24-523

VECTOR ENGINEERS
1635 N. Greenfield Rd., Suite 112
Mesa, AZ 85205
(480) 648-3514
www.vectorse.com

DATE: 7/16/24	DESIGNED: DGC	DRAFTER: DGC

REVISIONS

REV	DATE	DESCRIPTION
1	7/23/24	MOUNT DEPICTION

TITLE SHEET

PIONEER
SITE #: US-CA-1322
REBRANCHING OF EXISTING 60'-0" MONOPINE
2470 PIONEER AVE
FULLERTON, CA 92832
ORANGE COUNTY

REGISTERED PROFESSIONAL ENGINEER
MICHAEL EYRING HARRIS
C82920
STATE OF CALIFORNIA
07/25/2024

A1212-1042-241

MP-1 REV 1

JOB NO.: A1212-1042-241

PROJECT: Pioneer

Branch Layout

Eff. Area Factor:	0.82
C_A Factor:	0.6
Bott. Branch Elev. [ft]:	13
Top of Steel Elev. [ft]:	60

Branch Layout Along Pole:

Branch Length [ft]	Qty	Elevation		Branch Wt. [lbs]	Total Wt. [lbs]	Wind Area		
		Start [ft]	Stop [ft]			Gross [ft²]	Eff. [ft²]	C_AA_E [ft²]
10	19	51.7	60.0	42	798	177.8	145.5	87.3
10	19	43.5	51.7	42	798	177.8	145.5	87.3
10	19	35.2	43.5	42	798	177.8	145.5	87.3
10	18	27.4	35.2	42	756	168.4	137.8	82.7
12	17	20.0	27.4	154	2618	188.7	154.4	92.6
12	16	13.0	20.0	154	2464	177.6	145.3	87.2
				Total (lbs):	8232			

Antenna Branches:

Branch Length [ft]	Qty	Elev. [ft]	Weight	C_AA_E [ft²]
2	48	58	480	43.9
4	6	58	138	11.0
4	6	54	138	11.0

Top Crown:

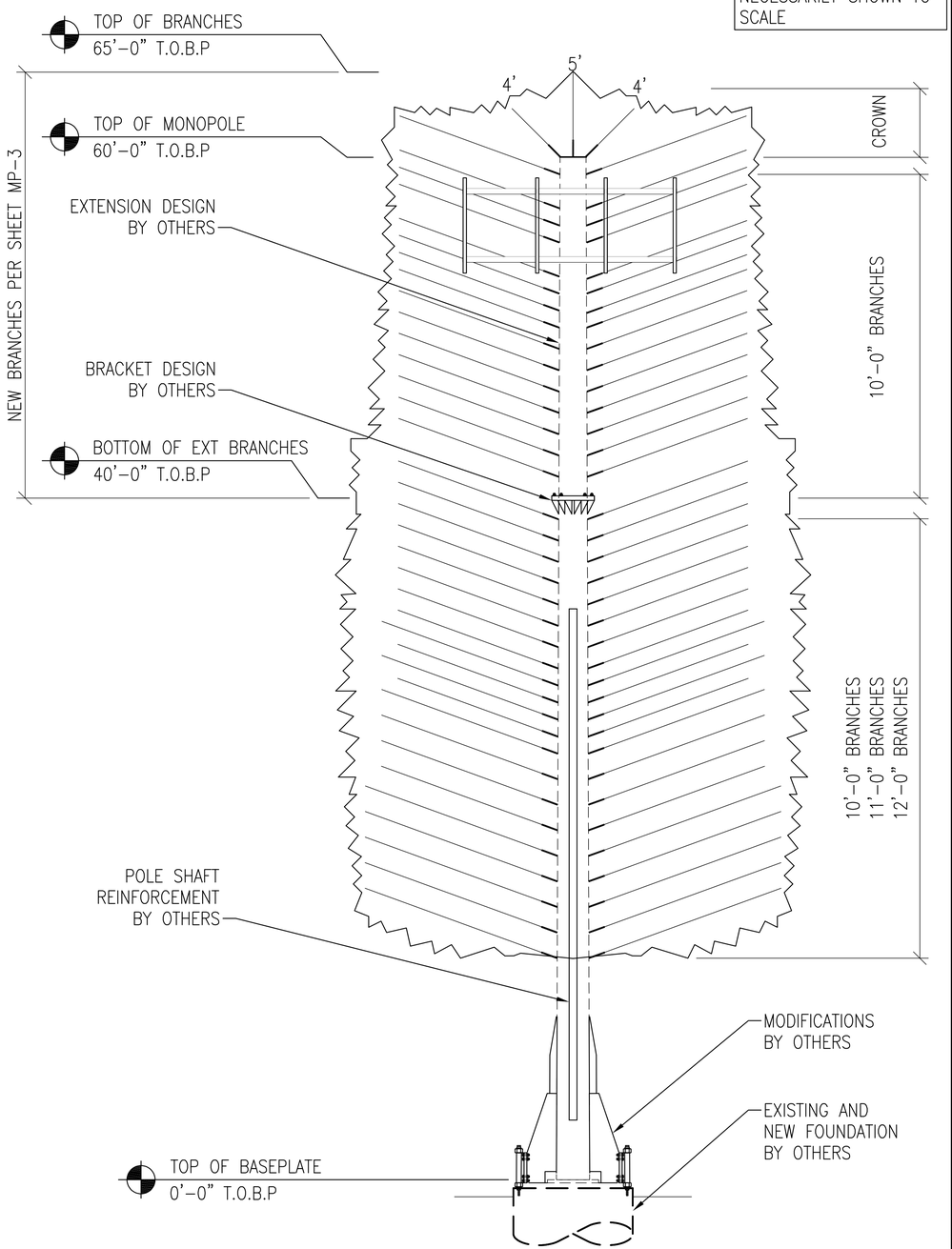
Branch Length [ft]	Qty	Weight	Total Wt.	Total C_AA_E
5	1	24	93	19.28
4	3	69		

BRANCH EPA VALUES (2)

N.T.S.

NOTE: IT IS THE RESPONSIBILITY OF OTHERS TO DETERMINE THE ADEQUACY OF THE POLE & FOUNDATION TO SUPPORT THE PROPOSED BRANCH & EQUIPMENT LOADING.

NOTE: ANTENNAS ARE SHOWN FOR ILLUSTRATIVE PURPOSES & ARE NOT NECESSARILY SHOWN TO SCALE



ELEVATIONS (1)

N.T.S.

PHOENIX TOWER INTERNATIONAL

CELL TREES, INC.

JOB #: 24-523

VECTOR ENGINEERS
1635 N. Greenfield Rd., Suite 112
Mesa, AZ 85205
(480) 648-3514
www.vectorse.com

DATE: 7/16/24	DESIGNED: DGC	DRAFTER: DGC

REVISIONS

REV	DATE	DESCRIPTION
1	7/23/24	MOUNT DEPICTION

ELEVATION VIEW & EPA VALUES

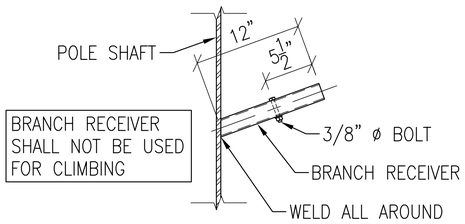
PIONEER
SITE #: US-CA-1322
REBRANCHING OF EXISTING 60'-0" MONOPINE
2470 PIONEER AVE
FULLERTON, CA 92832
ORANGE COUNTY

REGISTERED PROFESSIONAL ENGINEER
MICHAEL EYRING HUBBARD
C82920
STATE OF CALIFORNIA
07/25/2024

A1212-1042-241

MP-2 REV 1

A WEEP HOLE OR OTHER MEANS OF PREVENTING WATER BUILD UP SHALL BE PROVIDED FOR BRANCH RECEIVERS

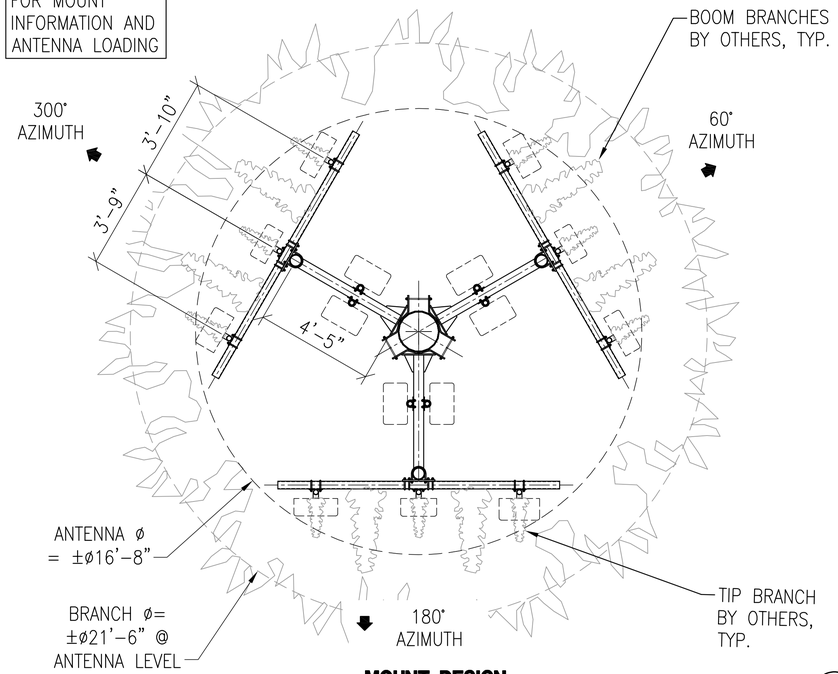


BRANCH RECEIVERS ARE BY CELL TREES AND SHOWN FOR REFERENCE ONLY. COMPONENTS ARE NOT REVIEWED BY VECTOR.

BRANCH RECEIVER 2

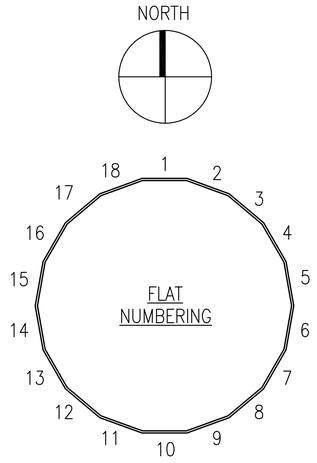
N.T.S.

NOTE: SEE CDs FOR MOUNT INFORMATION AND ANTENNA LOADING



MOUNT DESIGN 3

N.T.S.



T = BRANCH TIPS
BB = BOOM BRANCH
X = VACANT RECEIVER
2 = 2'-0" BRANCH
3 = 3'-0" BRANCH
4 = 4'-0" BRANCH
5 = 5'-0" BRANCH
6 = 6'-0" BRANCH
7 = 7'-0" BRANCH
8 = 8'-0" BRANCH
9 = 9'-0" BRANCH
10 = 10'-0" BRANCH
11 = 11'-0" BRANCH
12 = 12'-0" BRANCH
TOTAL BRANCH COUNT = 124
AVERAGE = 2.64 BRANCHES PER FOOT

BRANCH LAYOUT

Flat	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Deg	0	20	40	60	80	100	120	140	160	180	200	220	240	260	280	300	320	340

Elevation	Deg																		
60.00	90									5									
60.00	30				4						4						4		
59.00	30		10					10						10					
58.00	15		BB			BB			BB			BB			BB			BB	
57.00	15				10					10						10			
56.00	15					10						10							10
55.00	15			10					10						10				
54.00	15		BB			BB			BB			BB			BB			BB	
53.00	15	10					10						10						
52.00	15				10						10						10		
51.00	15		10					10						10					
50.00	15				10					10						10			
48.75	15					10						10							10
47.50	15			10					10						10				
46.25	15	10					10						10						
45.00	15				10						10						10		
43.75	15		10					10						10					
42.50	15				10					10						10			
41.25	15					10						10							10
40.00	15																		
38.75	15			10					10						10				
37.50	15	10					10						10						
36.25	15				10						10						10		
35.00	15		10					10						10					
33.75	15				10					10						10			
32.50	15					10						10							10
31.25	15			10					10						10				
30.00	15	10					10						10						
29.00	15				11						11						11		
28.00	15		10					10						10					
27.00	15				11					11						11			
26.00	15					10						10							10
25.00	15			11					11						11				
23.50	15	11					11						11						
22.00	15				11						11						11		
20.50	15		11					11						11					
19.00	15				12					12						12			
17.50	15					12						12							12
16.00	15			12					12						12				
14.50	15	12					12						12						
13.00	15				12						12						12		

BRANCH LAYOUT 1

N.T.S.

PHOENIX TOWER INTERNATIONAL

CELL TREES, INC.

JOB #: 24-523

VECTOR ENGINEERS
1635 N. Greenfield Rd., Suite 112
Mesa, AZ 85205
(480) 648-3514
www.vectorse.com

DATE: 7/16/24 | DESIGNED: DGC | DRAFTER: DGC

REVISIONS

REV	DATE	DESCRIPTION
1	7/23/24	MOUNT DEPICTION

BRANCH LAYOUT & RECEIVER

PIONEER
SITE #: US-CA-1322
REBRANCHING OF EXISTING 60'-0" MONOPINE
2470 PIONEER AVE
FULLERTON, CA 92832
ORANGE COUNTY

REGISTERED PROFESSIONAL ENGINEER MICHAEL EYRING GIBBONS C82920 STATE OF CALIFORNIA

07/25/2024

A1212-1042-241

MP-3 REV 1