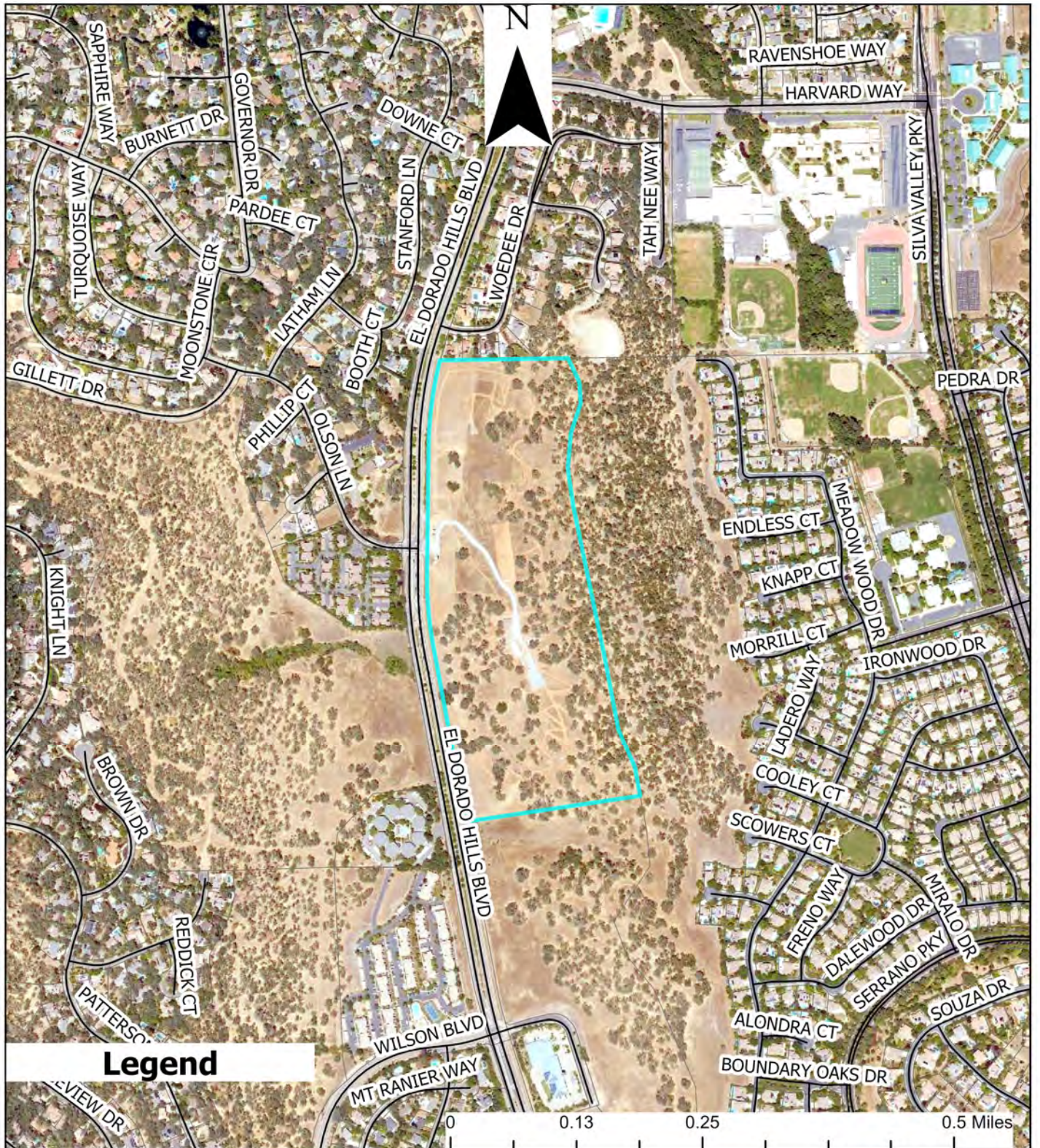


CUP23-0009 Bowman Telecommunications Facility  
Exhibit A: Location Map





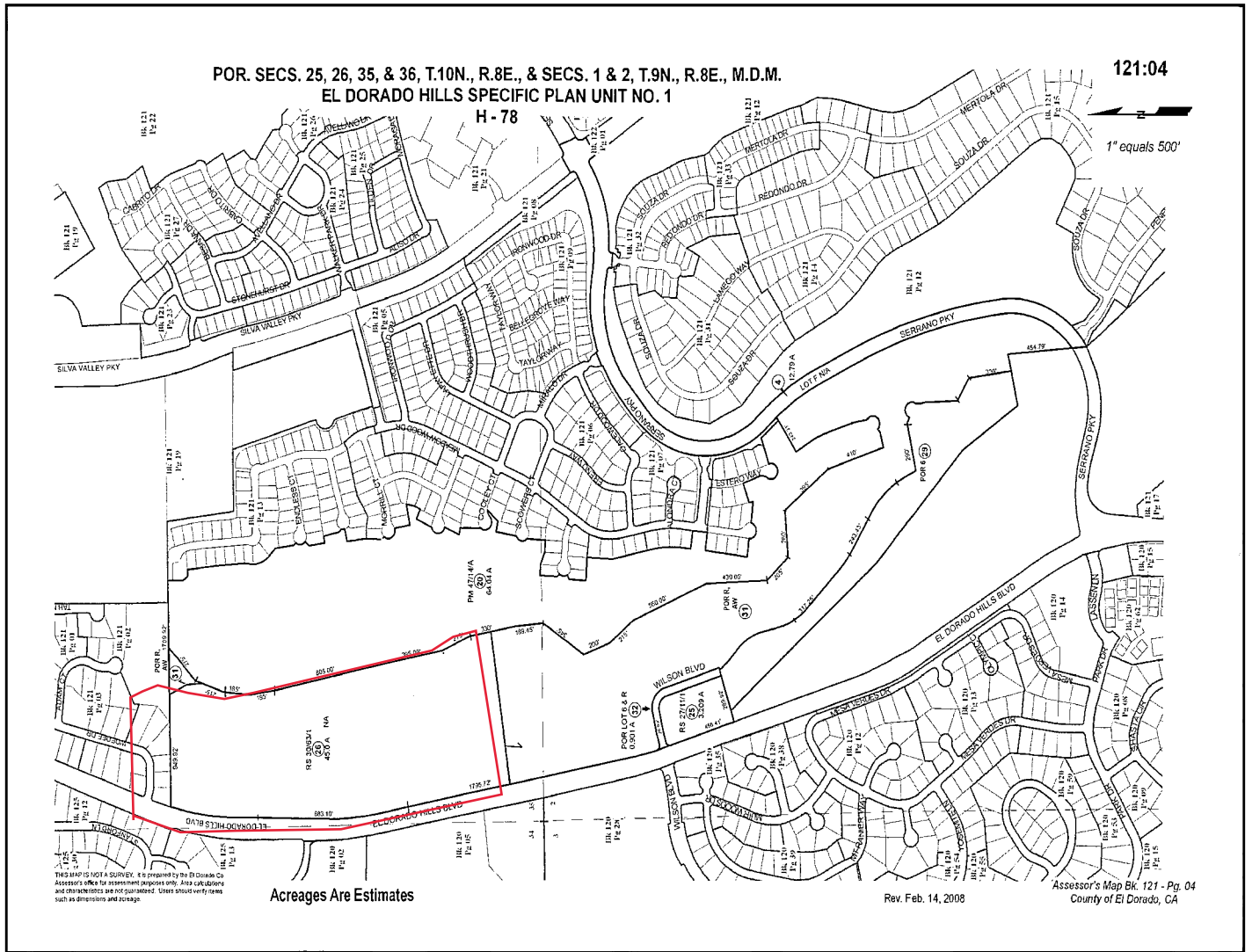
CUP23-0009 Bowman Telecommunications Facility  
 Exhibit B: Assessor's Parcel Plat



First American

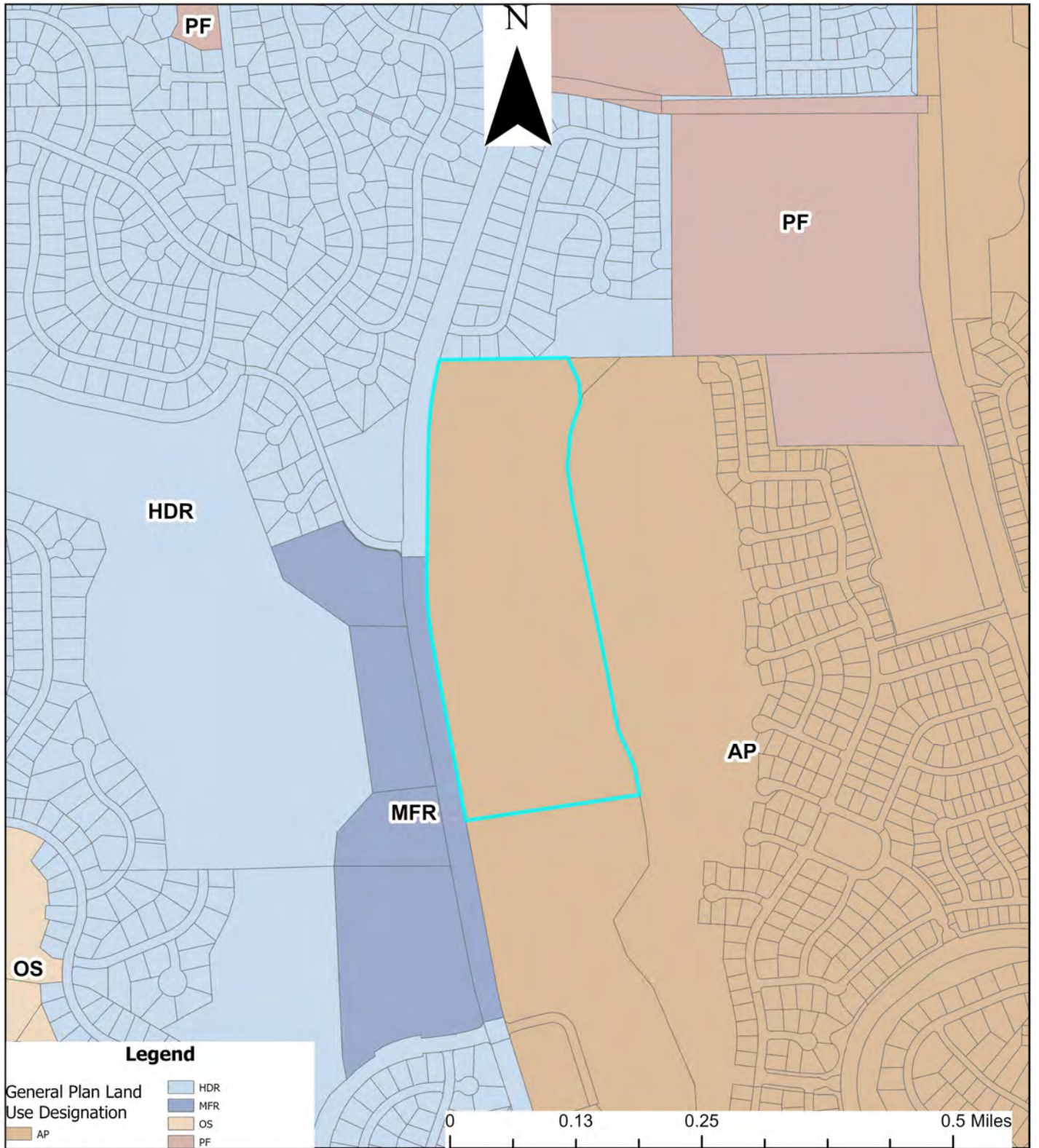
myFirstAm® Tax Map

3321 El Dorado Hills Blvd, El Dorado Hills, CA 95762



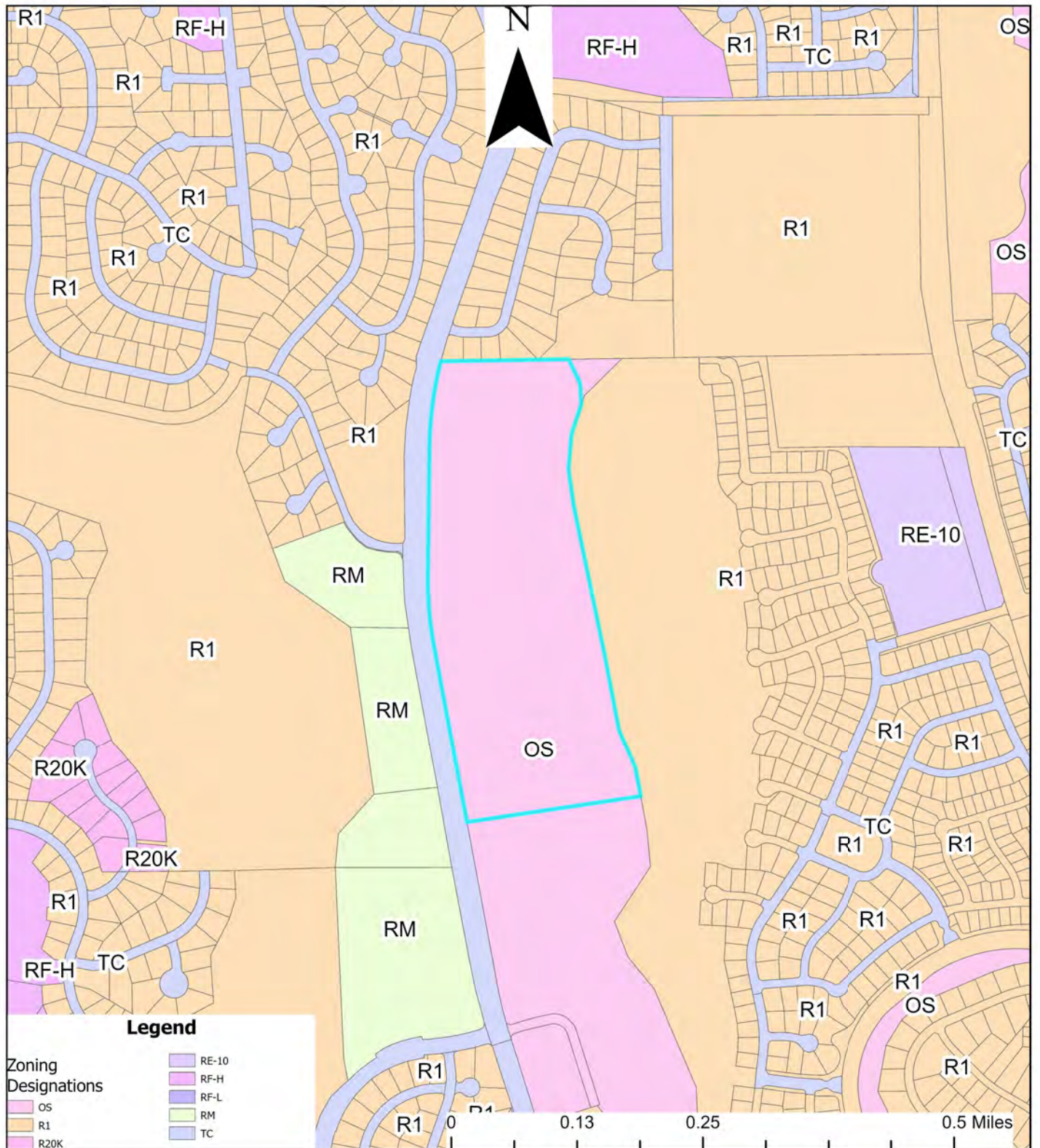


CUP23-0009 Bowman Telecommunications Facility  
Exhibit C: Land Use Designation Map





CUP23-0009 Bowman Telecommunications Facility  
Exhibit D: Zoning Designation Map





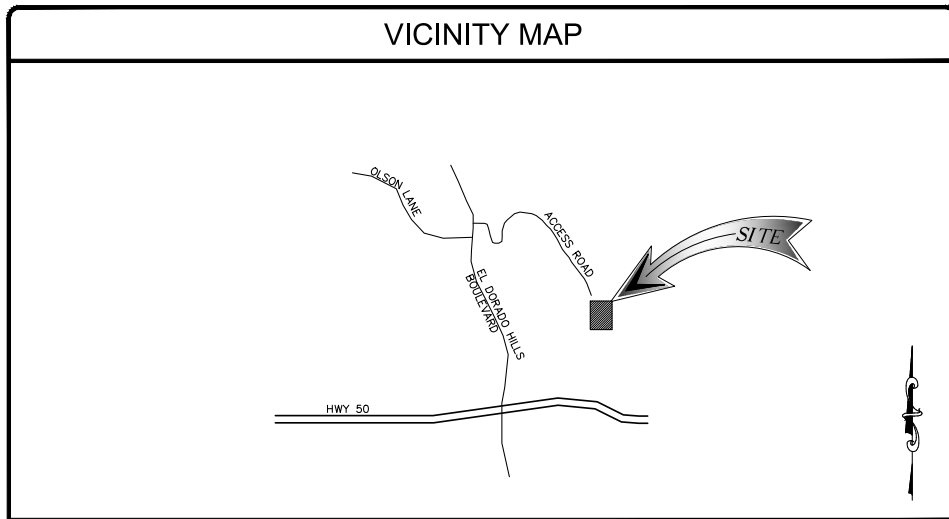


# CVL05830 - BOWMEN

**PACE ID: MRSFR099042;  
FA CODE: 15532194; USID: 323583**

3321 EL DORADO BLVD  
EL DORADO HILLS, CA 95762

SITE INFORMATION	
SITE ADDRESS:	3321 EL DORADO BLVD EL DORADO HILLS, CA 95762
LATITUDE (NAD 83):	N 38° 40' 23.91" N 38.67331°
LONGITUDE (NAD 83):	W 121° 04' 31.59" W 121.07544°
GROUND ELEVATION:	837' AMSL
JURISDICTION:	EL DORADO COUNTY
PROPERTY OWNER:	EL DORADO HILLS COMMUNITY SERVICE DISTRICT 1021 HARVARD WAY EL DORADO HILLS, CA 95762 (707) 472-6845 MHORNSTRA@EDHCS.D.ORG
ZONING:	OS
PARCEL/MAP NUMBER:	121-040-026-000
STRUCTURE TYPE:	FAUX WATER TANK
STRUCTURE HEIGHT:	110'-0" (AGL)
POWER SUPPLIER:	PG&E
TELCO SUPPLIER:	AT&T



DIRECTIONS	
DIRECTIONS FROM AT&T SAN RAMON OFFICE:	
1.	HEAD NORTH
2.	TURN RIGHT
3.	TURN RIGHT TOWARD EXECUTIVE PKWY
4.	TURN RIGHT ONTO EXECUTIVE PKWY
5.	TURN LEFT ONTO CAMINO RAMON
6.	USE THE LEFT 2 LANES TO TURN LEFT ONTO CROW CANYON RD
7.	USE THE RIGHT 2 LANES TO MERGE ONTO I-680 N VIA THE RAMP TO SACRAMENTO
8.	MERGE ONTO I-680 N
9.	USE THE LEFT 2 LANES TO TURN SLIGHTLY LEFT ONTO I-680
10.	KEEP RIGHT TO STAY ON I-680
11.	USE ANY LANE TO TAKE EXIT 71A TO MERGE ONTO CA-12 E/I-80 E TOWARD I-80 E/SACRAMENTO
12.	KEEP LEFT TO CONTINUE ON I-80BL E/US-50 E, FOLLOW SIGNS FOR SACRAMENTO/SOUTH LAKE TAHOE/CAPITAL CITY FREEWAY
13.	KEEP LEFT TO CONTINUE ON US-50 E
14.	TAKE EXIT 30B TOWARD EL DORADO HILLS BLVD
15.	MERGE ONTO LATROBE RD
16.	CONTINUE ONTO EL DORADO HILLS BLVD
17.	SITE IS ON THE RIGHT

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. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THE LATEST EDITIONS OF THE FOLLOWING CODES.	
•	2022 CALIFORNIA BUILDING CODE
•	2022 CALIFORNIA TITLE 24
•	2022 CALIFORNIA FIRE CODE
•	2022 CALIFORNIA ENERGY CODE
•	2022 CALIFORNIA MECHANICAL CODE
•	TIA/EIA-222-H OR LATEST EDITION

PROJECT TEAM	
APPLICANT:	AT&T MOBILITY 5001 EXECUTIVE PARKWAY SAN RAMON, CA 94583
PROJECT MANAGEMENT FIRM:	JACOBS 1737 NORTH FIRST STREET SUITE 350 SAN JOSE, CA 95112 CONTACT: TIM LENCIONI PHONE: (916) 437-9119 EMAIL: timothy.lencioni@jacobs.com
RF ENGINEER:	AT&T MOBILITY 5001 EXECUTIVE PARKWAY SAN RAMON, CA 94583 CONTACT: STEPHEN NELSON EMAIL: sn149s@att.com
CONSTRUCTION MANAGER:	EPIC WIRELESS 605 COOLIDGE DRIVE, SUITE 100 FOLSOM, CA 95630 CONTACT: ANDREW MEDINA EMAIL: andrew.medina@epicwireless.net PHONE: 530-574-4773
SITE ACQ/ZONING MANAGER:	EPIC WIRELESS 605 COOLIDGE DRIVE, SUITE 100 FOLSOM, CA 95630 CONTACT: JARED KEARSLEY EMAIL: jared.kearsley@51wireless.net PHONE: 209-966-4315
A/E FIRM:	CONNELL DESIGN GROUP INC 22431 ANTONIO PKWY SUITE B160-131 RANCHO SANTA MARGARITA CA 92688 CONTACT: DAN CONNELL PHONE: (949) 306-4644 EMAIL: dconnell@connelldesigngroup.com

DRAWING INDEX		
1	T-1	TITLE SHEET
2	T-2	GENERAL NOTES
3	T-3	TYPICAL SIGNAGE DETAILS
4	F-1	BATTERY INFORMATION
5	C-1	PLOT PLAN AND SITE TOPOGRAPHY
6	C-2	PLOT PLAN AND SITE TOPOGRAPHY
7	A-1	OVERALL SITE PLAN
8	A-1.1	SITE PLAN
9	A-2	ENLARGED SITE PLAN
10	A-3	EQUIPMENT, ANTENNA LAYOUTS AND ANTENNA SCHEDULE
11	A-4	ELEVATIONS
12	A-5	ELEVATIONS
13	D-1	DETAILS
14	D-2	DETAILS
15	D-3	DETAILS
16	D-4	DETAILS
17	D-5	GENERATOR DETAILS
18	E-1	ELECTRICAL SITE PLAN AND NOTES
19	E-2	SINGLE LINE, PANEL SCHEDULE & NOTES
20	E-3	PG&E POWER DESIGN AND DETAILS
21	G-1	GROUNDING PLANS AND DETAILS
22	G-2	GROUNDING DETAILS
23	S-1	PLAN, SECTION AND DETAILS
24	T-1	TITLE SHEET
25	N-1	NOTES & SPECIFICATIONS
26	S-1	ELEVATION VIEW
27	S-2	DETAILS
28	S-3	DETAILS
29	S-4	DETAILS
30	S-5	DETAILS
31	S-6	DETAILS
32	S-7	FOUNDATION

NUMBER SHEET INDEX:	32
DRAWING SCALE	
THESE DRAWINGS ARE SCALED TO FULL SIZE AT 24"X36" AND HALF SIZE AT 11"X17". CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE DESIGNER / ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR MATERIAL ORDERS OR BE RESPONSIBLE FOR THE SAME. CONTRACTOR SHALL USE BEST MANAGEMENT PRACTICE TO PREVENT STORM WATER POLLUTION DURING CONSTRUCTION.	

SCOPE OF WORK	
THIS PROJECT CONSISTS OF THE INSTALLATION OF A NEW AT&T WIRELESS ANTENNA FACILITY:	
SCOPE OF WORK:	
<b>EQUIPMENT AREA</b>	
•	INSTALL NEW WALK UP TO CABINET (WUC)
•	INSTALL (1) DIESEL GENERATOR (30KW AC) WITH 190 GALLON FUEL TANK
•	INSTALL (1) NEW GPS ANTENNA
•	INSTALL NEW UTILITY H-FRAME
•	INSTALL NEW (1) DC50 RAYCAP
•	INSTALL (11) RECTIFIERS
•	INSTALL (8) 190AH BATTERIES
•	INSTALL NEW LOAD CENTER
•	INSTALL NEW CIENNA AND HOFFMAN FOR FIBER
•	INSTALL NEW UNDERGROUND UTILITIES FROM SOURCES TO EQUIPMENT
•	INSTALL NEW PG&E PAD MOUNTED TRANSFORMER
•	INSTALL NEW DUAL METER PEDESTAL
•	INSTALL NEW STEP-UP AND STEP-DOWN TRANSFORMERS
•	INSTALL (3) NEW FIBER MANAGEMENT BOXES
•	INSTALL 110" TALL FAUX WATER TANK
•	INSTALL NEW 6" HIGH FENCE WITH BROWN SLATS AND 12" OF BARBED WIRE
<b>ANTENNA AREA</b>	
•	INSTALL (12) NEW PANEL ANTENNAS
•	INSTALL (12) NEW RRU'S
•	INSTALL (3) NEW DC-9 SURGE PROTECTORS
•	INSTALL (3) H-FRAME ANTENNA MOUNTS
LEASE AREA:	31'-0"x35'-0" = 1,085 SF
EQUIPMENT & ANTENNA AREA:	

CONSULTANT

605 COOLIDGE DRIVE, SUITE 100, FOLSOM, CA 95630

APPLICANT

A/E FIRM

22431 ANTONIO PKWY  
SUITE B160-131  
RANCHO SANTA MARGARITA CA 92688  
dconnell@connelldesigngroup.com  
949-306-4644

SITE INFORMATION

**CVL05830**  
**BOWMEN**  
3321 EL DORADO BLVD  
EL DORADO HILLS, CA 95762

REVISIONS			
REV	DATE	DESCRIPTION	BY
3	08/28/24	95% CD	DC
2	08/14/24	95% CD	DC
1	07/22/24	95% CD	DC
0	06/11/24	90% CD	LE

DESIGN RECORD

PROFESSIONAL STAMP

SHEET TITLE

**TITLE SHEET**

SHEET

**T-1**



CUP23-0009 Bowman Telecommunications Facility  
Exhibit E: Site Plan and Elevations

A.B.	ANCHOR BOLT	GRND.	GROUND
ABV.	ABOVE	HDR.	HEADER
ACCA	ANTENNA CABLE COVER ASSEMBLY	HGR.	HANGER
ADD'L	ADDITIONAL	HT.	HEIGHT
A.F.F.	ABOVE FINISHED FLOOR	ICGB.	ISOLATED COPPER GROUND BUS
A.F.G.	ABOVE FINISHED GRADE	IN.(*)	INCH(ES)
ALUM.	ALUMINUM	INT.	INTERIOR
ALT.	ALTERNATE	LB.(#)	POUND(S)
ANT.	ANTENNA	L.B.	LAG BOLTS
APPRX.	APPROXIMATE(LY)	L.F.	LINEAR FEET (FOOT)
ARCH.	ARCHITECT(URAL)	L.	LONG(ITU)DINAL
AWG.	AMERICAN WIRE GAUGE	MAS.	MASONRY
BLDG.	BUILDING	MAX.	MAXIMUM
BLK.	BLOCK	M.B.	MACHINE BOLT
BLKG.	BLOCKING	MECH.	MECHANICAL
BM.	BEAM	MFR.	MANUFACTURER
B.N.	BOUNDARY NAILING	MIN.	MINIMUM
BTW.	BARE TINNED COPPER WIRE	MISC.	MISCELLANEOUS
B.O.F.	BOTTOM OF FOOTING	MTL.	METAL
B/U	BACK-UP CABINET	(N)	NEW
CAB.	CABINET	NO.(#)	NUMBER
CANT.	CANTILEVER(ED)	N.T.S.	NOT TO SCALE
C.I.P.	CAST IN PLACE	O.C.	ON CENTER
CLG.	CEILING	OPNG.	OPENING
CLR.	CLEAR	P/C	PRECAST CONCRETE
COL.	COLUMN	PCS	PERSONAL COMMUNICATION SERVICES
CONC.	CONCRETE	PLY.	PLYWOOD
CONN.	CONNECTION(OR)	PPC	POWER PROTECTION CABINET
CONST.	CONSTRUCTION	PRC	PRIMARY RADIO CABINET
CONT.	CONTINUOUS	P.S.F.	POUNDS PER SQUARE FOOT
d	PENNY (NAILS)	P.S.I.	POUNDS PER SQUARE INCH
DBL	DOUBLE	P.T.	PRESSURE TREATED
DEPT.	DEPARTMENT	PWR.	POWER (CABINET)
D.F.	DOUGLAS FIR	QTY.	QUANTITY
DA.	DIAMETER	RAD.(R)	RADIUS
DIAG.	DIAGONAL	REF.	REFERENCE
DIM.	DIMENSION	REINF.	REINFORCEMENT(ING)
DWG.	DRAWING(S)	REQ'D.	REQUIRED
DWL.	DOWEL(S)	RGS.	RIGID GALVANIZED STEEL
EA.	EACH	SCH.	SCHEDULE
EL.	ELEVATION	SHT.	SHEET
ELEC.	ELECTRICAL	SIM.	SIMILAR
ELEV.	ELEVATOR	SPEC.	SPECIFICATION(S)
EMT.	ELECTRICAL METALLIC TUBING	SQ.	SQUARE
E.N.	EDGE NAIL	S.S.	STAINLESS STEEL
ENG.	ENGINEER	STD.	STANDARD
EQ.	EQUAL	STL.	STEEL
EXP.	EXPANSION	STRUC.	STRUCTURAL
EXST.(E)	(E)	TEMP.	TEMPORARY
EXT.	EXTERIOR	THK.	THICK(NESS)
FAB.	FABRICATION(OR)	T.N.	TOE NAIL
F.F.	FINISH FLOOR	T.O.A.	TOP OF ANTENNA
F.G.	FINISH GRADE	T.O.C.	TOP OF CURB
FIN.	FINISH(ED)	T.O.F.	TOP OF FOUNDATION
FLR.	FLOOR	T.O.P.	TOP OF PLATE (PARAPET)
FDN.	FOUNDATION	T.O.S.	TOP OF STEEL
F.O.C.	FACE OF CONCRETE	T.O.W.	TOP OF WALL
F.O.M.	FACE OF MASONRY	TYP.	TYPICAL
F.O.S.	FACE OF STUD	U.G.	UNDER GROUND
F.O.W.	FACE OF WALL	U.L.	UNDERWRITERS LABORATORY
F.S.	FINISH SURFACE	U.N.O.	UNLESS NOTED OTHERWISE
FT.(')	FOOT(FEET)	V.I.F.	VERIFY IN FIELD
FTG.	FOOTING	W	WIDE(WIDTH)
G.	GROWTH (CABINET)	W/	WITH
GA.	GAUGE	WD.	WOOD
G.	GALVANIZE(D)	W.P.	WEATHERPROOF
G.F.I.	GROUND FAULT CIRCUIT INTERRUPTER	WT.	WEIGHT
GLB.(GLU-LAM)	GLUE LAMINATED BEAM	CL	CENTERLINE
GPS	GLOBAL POSITIONING SYSTEM	R	PLATE

**ABBREVIATIONS** 3

	NEW ANTENNA		GROUT OR PLASTER
	EXISTING ANTENNA		EXISTING BRICK
	GROUND ROD		EXISTING MASONRY
	GROUND BUS BAR		CONCRETE
	MECHANICAL GRND. CONN.		EARTH
	CADWELD		GRAVEL
	GROUND ACCESS WELL		PLYWOOD
	ELECTRIC BOX		SAND
	TELEPHONE BOX		WOOD CONT.
	LIGHT POLE		WOOD BLOCKING
	SPOT ELEVATION		STEEL
	SET POINT		CENTERLINE
	REVISION		PROPERTY/LEASE LINE
	GRID REFERENCE		MATCH LINE
	DETAIL REFERENCE		WORK POINT
	ELEVATION REFERENCE		GROUND CONDUCTOR
	SECTION REFERENCE		TELEPHONE CONDUIT
			ELECTRICAL CONDUIT
			COAXIAL CABLE
			OVERHEAD SERVICE CONDUCTORS
			CHAIN LINK FENCING

**LEGEND** 4

1. THE LATEST EDITION OF THE AMERICAN INSTITUTE OF ARCHITECTS DOCUMENT A201 "GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION" ARE INCLUDED IN THESE SPECIFICATIONS AS IF COMPLETELY REPRODUCED HEREIN.

2. THIS FACILITY IS AN UNOCCUPIED PCS TELECOMMUNICATIONS SITE AND IS EXEMPT FROM DISABLED ACCESS REQUIREMENTS.

3. PRIOR TO THE SUBMISSION OF BIDS, THE CONTRACTORS PARTICIPATING SHALL VISIT THE JOB SITE AND FAMILIARIZE THEMSELVES WITH ALL CONDITIONS AFFECTING THE NEW PROJECT, WITH THE CONSTRUCTION AND CONTRACT DOCUMENTS, FIELD CONDITIONS, AND CONFIRM THAT THE PROJECT CAN BE ACCOMPLISHED AS SHOWN, PRIOR TO PROCEEDING WITH SUBMISSION OF BIDS & CONSTRUCTION. SHOULD ANY ERRORS, OMISSION, OR DISCREPANCIES BE FOUND, THE CONTRACTORS SHALL IMMEDIATELY NOTIFY PROJECT MANAGER, AND THE ARCHITECT IN WRITING. IN THE EVENT OF DISCREPANCIES, THE CONTRACTOR SHALL INCLUDE THE MORE COSTLY OR EXTENSIVE WORK IN THE BID, UNLESS SPECIFICALLY DIRECTED OTHERWISE. IF A DISCREPANCY EXISTS AND THE PROJECT MANAGER AND ARCHITECT ARE NOT NOTIFIED, THE GENERAL CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ALL COSTS INCURRED TO REPAIR OR CORRECT ALL PROBLEMS THAT RESULT.

4. DRAWINGS SHALL NOT BE SCALED. FIGURED DIMENSIONS HAVE PRECEDENCE OVER DRAWING SCALE AND DETAIL DRAWINGS HAVE PRECEDENCE OVER SMALL SCALE DRAWINGS. CONTRACTOR SHALL CHECK ACCURACY OF ALL DIMENSIONS IN THE FIELD. UNLESS SPECIFICALLY NOTED, DO NOT FABRICATE ANY MATERIALS, OR BEGIN ANY CONSTRUCTION UNTIL THE ACCURACY OF DRAWING DIMENSIONS HAS BEEN VERIFIED AGAINST ACTUAL FIELD DIMENSIONS.

5. CONTRACTOR SHALL NOTIFY THE PROJECT MANAGER AND THE ARCHITECT IF ANY DETAILS ARE CONSIDERED IMPRACTICAL, UNSUITABLE, UNSAFE, NOT WATERPROOF, OR NOT WITHIN CUSTOMARY TRADE PRACTICE. IF WORK IS PERFORMED, IT WILL BE ASSUMED THAT THERE IS NO OBJECTION TO ANY DETAIL. DETAILS ARE INTENDED TO SHOW THE END RESULT OF THE DESIGN. MINOR MODIFICATIONS MAY BE REQUIRED TO SUIT JOB CONDITIONS, AND SHALL BE INCLUDED AS PART OF THE WORK.

6. (E) ELEVATIONS AND LOCATIONS TO BE JOINED SHALL BE VERIFIED BY THE CONTRACTOR BEFORE CONSTRUCTION. IF THEY DIFFER FROM THOSE SHOWN ON THE PLANS, THE CONTRACTOR SHALL NOTIFY THE PROJECT MANAGER, AND THE ARCHITECT SO THAT MODIFICATIONS CAN BE MADE BEFORE PROCEEDING WITH THE WORK.

7. ALL SYMBOLS AND ABBREVIATIONS USED ON THE DRAWINGS ARE CONSIDERED CONSTRUCTION STANDARDS. IF THE CONTRACTOR HAS QUESTIONS REGARDING THEIR EXACT MEANING, THE PROJECT MANAGER, AND THE ARCHITECT SHALL BE NOTIFIED FOR CLARIFICATION BEFORE THE CONTRACTOR PROCEEDS WITH THE WORK.

8. THE CONTRACTOR SHALL OBTAIN AND PAY FOR PERMITS, LICENSES AND INSPECTIONS NECESSARY FOR PERFORMANCE OF THE WORK AND INCLUDE THOSE IN THE COST OF THE WORK TO AT&T.

9. THE CONTRACTOR SHALL SUPERVISE AND DIRECT ALL WORK, USING THE BEST SKILL AND ATTENTION. HE SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, PROCEDURES AND SEQUENCES, AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT, INCLUDING CONTACT AND COORDINATION WITH THE IMPLEMENTATION ENGINEER AND WITH THE LANDLORD'S AUTHORIZED REPRESENTATIVE'S

10. WORKMANSHIP THROUGHOUT SHALL BE OF THE BEST QUALITY OF THE TRADE INVOLVED, AND SHALL MEET OR EXCEED THE FOLLOWING MINIMUM REFERENCE STANDARDS FOR QUALITY AND PROFESSIONAL CONSTRUCTION PRACTICE:

NRCA - NATIONAL ROOFING CONTRACTORS ASSOCIATION  
O'HARE INTERNATIONAL CENTER  
10255 W. HIGGINS ROAD, SUITE 600 ROSEMONT, IL 60018

SMACTA - SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION  
4201 LAFAYETTE CENTER DRIVE CHATTILLY, VA 22021-1209

ITLP - INTERNATIONAL INSTITUTE FOR LATH AND PLASTER  
820 TRANSFER ROAD  
ST. PAUL, MN 55114-1406

AMA - ADHESIVE MANUFACTURERS ASSOCIATION  
401 NORTH MICHIGAN AVENUE, SUITE 2400  
CHICAGO, IL 60611

11. THE CONTRACTOR SHALL VERIFY, COORDINATE, AND PROVIDE ALL NECESSARY BLOCKING, BACKING, FRAMING, HANGERS OR OTHER SUPPORTS FOR ALL ITEMS REQUIRING THE SAME.

12. ALL WORK PERFORMED AND MATERIALS INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS AND ORDINANCES. CONTRACTORS SHALL GIVE ALL NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK. MECHANICAL AND ELECTRICAL SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS, LOCAL AND STATE JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS. CONTRACTORS SHALL COMPLY WITH STATE DEPARTMENT OF INDUSTRIAL REGULATIONS AND DIVISION OF INDUSTRIAL SAFETY (OSHA) REQUIREMENTS.

13. CONTRACTORS SHALL PROTECT THE OWNERS' PROPERTY FROM DAMAGE WHICH MAY OCCUR DURING CONSTRUCTION. ANY DAMAGE TO NEW AND (E) CONSTRUCTION, STRUCTURE, LANDSCAPING, CURBS, STAIRS, OR EQUIPMENT, ETC., SHALL BE IMMEDIATELY REPAIRED OR REPLACED TO THE SATISFACTION OF THE PROPERTY OWNER, OR HIS REPRESENTATIVE, AND AT&T REPRESENTATIVE, AT THE EXPENSE OF THE CONTRACTOR.

14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR, AND SHALL REPLACE OR REMEDY ANY FAULTY, IMPROPER, OR INFERIOR MATERIALS OR WORKMANSHIP, OR ANY DAMAGE WHICH SHALL APPEAR WITHIN ONE YEAR AFTER THE COMPLETION AND ACCEPTANCE OF THE WORK UNDER THIS CONTRACT BY AT&T.

15. ALL SITE WORK SHALL BE CAREFULLY COORDINATED BY GENERAL CONTRACTOR WITH LOCAL UTILITY COMPANY, TELEPHONE COMPANY, AND ANY OTHER UTILITY COMPANIES HAVING JURISDICTION OVER THIS LOCATION. IT SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO LOCATE ALL (E) UTILITIES, WHETHER SHOWN HEREIN OR NOT, AND TO PROTECT THEM FROM DAMAGE. THE CONTRACTORS SHALL BEAR ALL EXPENSES FOR REPAIR OR REPLACEMENT OF UTILITIES OR OTHER PROPERTY DAMAGED IN CONJUNCTION WITH THE EXECUTION OF WORK.

16. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COMPLETE SECURITY OF THE PROJECT SITE WHILE THE JOB IS IN PROGRESS AND UNTIL THE JOB IS COMPLETED AND ACCEPTED BY AT&T.

17. THE CONTRACTOR SHALL PROVIDE TEMPORARY WATER, POWER AND TOILET FACILITIES AS REQUIRED BY THE PROPERTY OWNER AND THE CITY OR GOVERNING AGENCY.

18. THE LATEST EDITION OF ALL PERMITTED AND APPROVED PLANS PERTAINING TO THIS PROJECT SHALL BE KEPT IN A PLAN BOX AND SHALL NOT BE USED BY WORKERS. ALL CONSTRUCTION SETS SHALL REFLECT THE SAME INFORMATION. THE CONTRACTOR SHALL ALSO MAINTAIN IN GOOD CONDITION, ONE COMPLETE SET OF PLANS WITH ALL REVISIONS, ADDENDA AND CHANGE ORDERS, ON THE PREMISES AT ALL TIMES. THESE ARE TO BE UNDER THE CARE OF THE JOB SUPERINTENDENT.

19. THE CONTRACTOR SHALL REMOVE ALL RUBBISH AND WASTE MATERIALS ON A DAILY BASIS, AND SHALL EXERCISE STRICT CONTROL OVER JOB CLEANING THROUGHOUT CONSTRUCTION, INCLUDING FINAL CLEANUP UPON COMPLETION OF WORK. ALL AREAS ARE TO BE LEFT IN A BROOM CLEAN CONDITION AT THE END OF EACH DAY. ALL MATERIALS COLLECTED DURING CLEANING OPERATIONS SHALL BE DISPOSED OF OFF-SITE BY THE GENERAL CONTRACTOR.

20. THE GENERAL CONTRACTOR MUST PERFORM WORK DURING PROPERTY OWNER'S PREFERRED HOURS TO AVOID DISRUPTION OF NORMAL ACTIVITY.

21. ALL EXPOSED METAL SHALL BE HOT-DIPPED GALVANIZED.

22. SEAL ALL PENETRATIONS THROUGH FIRE-RATED AREAS WITH U.L. LISTED OR FIRE MARSHALL APPROVED MATERIALS IF AND WHERE APPLICABLE TO THIS FACILITY AND PROJECT SITE.

23. PROVIDE A PORTABLE FIRE EXTINGUISHER WITH A RATING OF NOT LESS THAN 2-A OR 2-A, 10-BC WITHIN 75 FEET TRAVEL DISTANCE TO ALL PORTIONS OF THE PROJECT CONSTRUCTION AREA.

24. ELECTRICAL POWER SYSTEM SHALL BE GROUNDED PER NEC ARTICLES 250 AND 810.

25. ALL NEW OPENINGS IN THE EXTERIOR ENVELOPE OF CONDITIONED SPACES SUCH AS AT WALL AND ROOF PENETRATIONS SHALL BE CAULKED OR SEALED TO LIMIT INFILTRATION OF AIR AND MOISTURES.

26. U.N.O., CONTRACTOR SHALL PROVIDE CLOSE-OUT PACKAGE TO AT&T WHICH WILL INCLUDE:

A. BUILDING PERMITS/ELECTRICAL PERMITS  
B. FINAL INSPECTION CARD  
C. STAMPED BUILDING PERMIT PLANS  
D. GROUNDING TEST  
E. SNEEP TEST  
F. CONCRETE TEST  
G. SPECIAL INSPECTION REPORTS  
H. WARRANTIES, MANUAL, EQUIPMENT SPECIFICATIONS  
I. SUBCONTRACTOR CONTACT LIST  
J. RED LINED ASBUILTS  
K. CONSTRUCTION PROCESS PHOTOS  
L. SITE COMPLETION PHOTOS  
M. A WRITTEN REPORT ON ANTENNA SERIAL NUMBER FOR EACH SECTOR  
N. MANUFACTURER'S PERFORMANCE REPORT FOR EACH ANTENNA

CONTRACTOR SHALL REFER TO THEIR CURRENT CONTRACT FOR A COMPLETE LIST OF DELIVERABLES.

**GENERAL NOTES** 2

1. PLANS ARE INTENDED TO BE A DIAGRAMMATIC OUTLINE ONLY, UNLESS NOTED OTHERWISE. THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.

2. THE CONTRACTOR SHALL OBTAIN, IN WRITING, AUTHORIZATION TO PROCEED BEFORE STARTING WORK ON ANY ITEM NOT CLEARLY DEFINED OR IDENTIFIED BY THE CONTRACT DOCUMENTS.

3. CONTRACTOR SHALL CONTACT USA (UNDERGROUND SERVICE ALERT,) AT (800) 227-2600, FOR UTILITY LOCATIONS, 48 HRS BEFORE PROCEEDING WITH ANY EXCAVATION, SITE WORK OR CONSTRUCTION.

4. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY INDICATED OTHERWISE, OR WHERE LOCAL CODES OR REGULATIONS TAKE PRECEDENCE.

5. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CBC'S REQUIREMENTS REGARDING EARTHQUAKE RESISTANCE, FOR, BUT NOT LIMITED TO, PIPING, LIGHT FIXTURES, CEILING GRID, INTERIOR PARTITIONS, AND MECHANICAL EQUIPMENT. ALL WORK MUST COMPLY WITH LOCAL EARTHQUAKE CODES AND REGULATIONS.

6. REPRESENTATIONS OF TRUE NORTH, OTHER THAN THOSE FOUND ON THE PLOT OF SURVEY DRAWING, 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.

7. THE BUILDING DEPARTMENT ISSUING THE PERMITS SHALL BE NOTIFIED AT LEAST TWO WORKING DAYS PRIOR TO THE COMMENCEMENT OF WORK, OR AS OTHERWISE STIPULATED BY THE CODE ENFORCEMENT OFFICIAL HAVING JURISDICTION.

8. THE ARCHITECT/ENGINEER, CONNELL DESIGN GROUP LLC, AND REPRESENTATIVES OF THE OWNER, MUST BE NOTIFIED AT LEAST TWO FULL DAYS PRIOR TO COMMENCEMENT OF CONSTRUCTION.

9. DO NOT EXCAVATE OR DISTURB BEYOND THE PROPERTY LINES OR LEASE LINES, UNLESS OTHERWISE NOTED.

10. ALL EXISTING UTILITIES, FACILITIES, CONDITIONS, AND THEIR DIMENSIONS SHOWN ON PLANS HAVE BEEN PLOTTED FROM AVAILABLE RECORDS. THE ARCHITECT/ENGINEER AND THE OWNER ASSUME NO RESPONSIBILITY WHATSOEVER AS TO THE SUFFICIENCY OR ACCURACY OF THE INFORMATION SHOWN ON THE PLANS, OR THE MANNER OF THEIR REMOVAL OR ADJUSTMENT. CONTRACTORS SHALL BE RESPONSIBLE FOR DETERMINING EXACT LOCATION OF ALL EXISTING UTILITIES AND FACILITIES PRIOR TO START OF CONSTRUCTION. CONTRACTORS SHALL ALSO OBTAIN FROM EACH UTILITY COMPANY DETAILED INFORMATION RELATIVE TO WORKING SCHEDULES AND METHODS OF REMOVING OR ADJUSTING EXISTING UTILITIES.

11. CONTRACTOR SHALL VERIFY ALL EXISTING UTILITIES, BOTH HORIZONTALLY AND VERTICALLY, PRIOR TO START OF CONSTRUCTION. ANY DISCREPANCIES OR DOUBTS AS TO THE INTERPRETATION OF PLANS SHOULD BE IMMEDIATELY REPORTED TO THE ARCHITECT/ENGINEER FOR RESOLUTION AND INSTRUCTION, AND NO FURTHER WORK SHALL BE PERFORMED UNTIL THE DISCREPANCY IS CHECKED AND CORRECTED BY THE ARCHITECT/ENGINEER. FAILURE TO SECURE SUCH INSTRUCTION MEANS CONTRACTOR WILL HAVE WORKED AT HIS/HER OWN RISK AND EXPENSE.

12. ALL NEW AND EXISTING UTILITY STRUCTURES ON SITE AND IN AREAS TO BE DISTURBED BY CONSTRUCTION SHALL BE ADJUSTED TO FINISH ELEVATIONS PRIOR TO FINAL INSPECTION OF WORK.

13. ANY DRAIN AND/OR FIELD TILE ENCOUNTERED DURING CONSTRUCTION SHALL BE RETURNED TO ITS ORIGINAL CONDITION PRIOR TO COMPLETION OF WORK. SIZE, LOCATION AND TYPE OF ANY UNDERGROUND UTILITIES OR IMPROVEMENTS SHALL BE ACCURATELY NOTED AND PLACED ON "AS-BUILT" DRAWINGS BY GENERAL CONTRACTOR, AND ISSUED TO ARCHITECT/ENGINEER AT COMPLETION OF PROJECT.

14. ALL TEMPORARY EXCAVATIONS FOR THE INSTALLATION OF FOUNDATIONS, UTILITIES, ETC., SHALL BE PROPERLY LAID BACK OR BRACED IN ACCORDANCE WITH CORRECT OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) REQUIREMENTS.

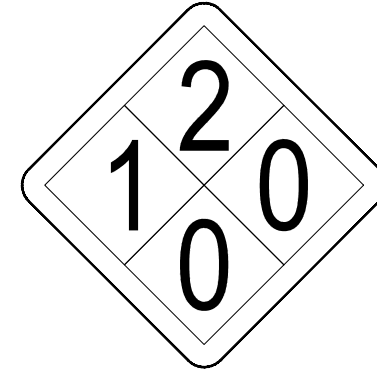
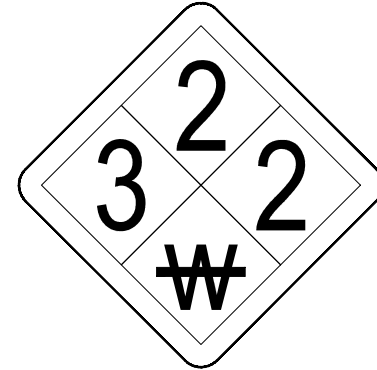
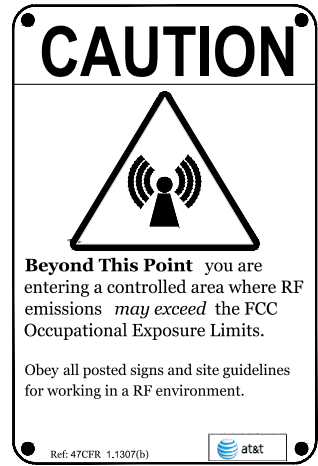
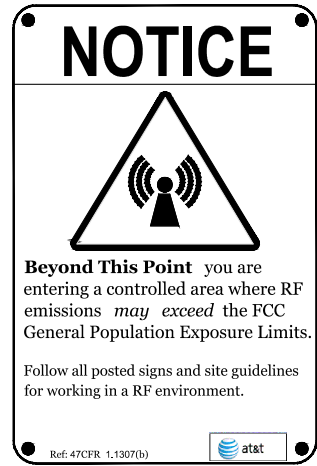
15. INCLUDE MISC. ITEMS PER AT&T SPECIFICATIONS.

16. FIRE SAFETY DURING CONSTRUCTION AND DEMOLITION SHALL COMPLY WITH CFC CH. 33

**GENERAL CONSTRUCTION NOTES** 1

CONSULTANT	 <b>WIRELESS GROUP LLC</b> <i>Connecting a Wireless World</i> 605 COOLIDGE DRIVE, SUITE 100, FOLSOM, CA 95630																								
APPLICANT																									
A/E FIRM	 22431 ANTONIO PKWY SUITE B160-131 RANCHO SANTA MARGARITA CA 92688 dconnell@connelldesigngroup.com 949-306-4644																								
SITE INFORMATION	<b>CVL05830</b> <b>BOWMEN</b> 3321 EL DORADO BLVD EL DORADO HILLS, CA 95762																								
DESIGN RECORD	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="4" style="text-align: center;">REVISIONS</th> </tr> <tr> <th style="width: 5%;">REV</th> <th style="width: 15%;">DATE</th> <th style="width: 60%;">DESCRIPTION</th> <th style="width: 20%;">BY</th> </tr> </thead> <tbody> <tr> <td>3</td> <td>08/28/24</td> <td>95% CD</td> <td>DC</td> </tr> <tr> <td>2</td> <td>08/14/24</td> <td>95% CD</td> <td>DC</td> </tr> <tr> <td>1</td> <td>07/22/24</td> <td>95% CD</td> <td>DC</td> </tr> <tr> <td>0</td> <td>06/11/24</td> <td>90% CD</td> <td>LE</td> </tr> </tbody> </table>	REVISIONS				REV	DATE	DESCRIPTION	BY	3	08/28/24	95% CD	DC	2	08/14/24	95% CD	DC	1	07/22/24	95% CD	DC	0	06/11/24	90% CD	LE
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SHEET TITLE	<div style="border: 1px solid black; width: 100%; height: 100%; display: flex; align-items: center; justify-content: center;"> <p style="font-size: 24px; margin: 0;">GENERAL NOTES</p> </div>																								
SHEET	<div style="border: 1px solid black; width: 100%; height: 100%; display: flex; align-items: center; justify-content: center;"> <p style="font-size: 36px; margin: 0;">T-2</p> </div>																								



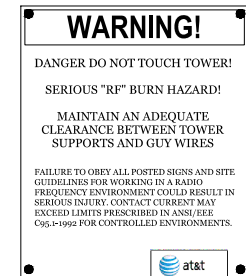


ALERTING SIGN AT COMPOUND GATE  
NO SCALE

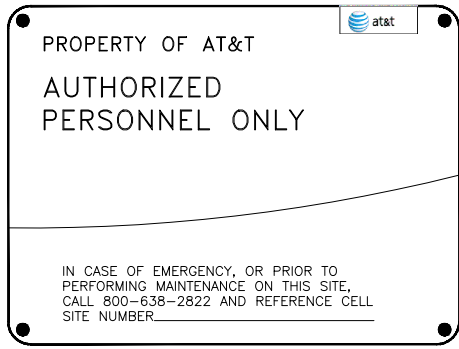
ALERTING SIGN AT DIESEL TANK  
NO SCALE

ALERTING SIGN ON SHELTER DOOR  
NO SCALE

ALERTING SIGNS  
NO SCALE



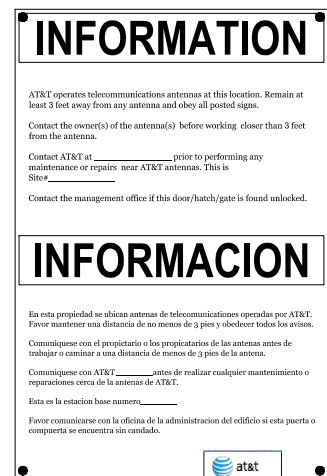
ALERTING SIGN  
NO SCALE



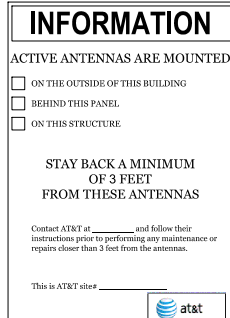
INFO SIGN #5  
NO SCALE



INFO SIGN #3  
NO SCALE



INFO SIGN #1  
NO SCALE



INFO SIGN #2  
NO SCALE

STAY BACK 3 FEET FROM ANTENNA

INFO SIGN #4  
NO SCALE

GENERAL SIGNAGE GUIDELINES

Structure Type	INFO SIGN #1	INFO SIGN #2	INFO SIGN #3	INFO SIGN #4	INFO SIGN #5	STRIPING	NOTICE SIGN	CAUTION SIGN
<b>Towers</b>								
Monopole/Monopine/Monopalm	entrance gates, shelter doors OR on the outdoor cabinets	climbing side of the Tower	On backside of Antennas	On the side of Antennas	On the shelter door or on one outdoor equipment cabinet			At the height of the first climbing step, min. 9ft above ground
SCE Towers / Towers with high voltage	entrance gates, shelter doors OR on the outdoor cabinets	climbing side of the Tower	On backside of Antennas	On the side of Antennas	On the shelter door or on one outdoor equipment cabinet			At the height of the first climbing step, min. 9ft above ground
Light Poles / Flag Poles	entrance gates, shelter doors OR on the outdoor cabinets	on the pole, no less than 3ft below the Antenna and no less than 9ft above ground	On backside of Antennas	On the side of Antennas	On the shelter door or on one outdoor equipment cabinet			
Utility Wood Poles (JPA)	entrance gates, shelter doors OR on the outdoor cabinets	on the pole, no less than 3ft below the Antenna and no less than 9ft above ground	On backside of Antennas	On the side of Antennas	On the shelter door or on one outdoor equipment cabinet		If GPmax value of MPE at antenna level is: 0-99%: Notice sign; over 99%: Caution sign at no less than 3ft below antenna and 9ft above ground	
Microcells mounted on non-JPA poles	entrance gates, shelter doors OR on the outdoor cabinets	on the pole, no less than 3ft below the Antenna and no less than 9ft above ground	On backside of Antennas	On the side of Antennas	On the shelter door or on one outdoor equipment cabinet		Notice or Caution sign at no less than 9ft above ground; only if the exposure exceeds 90% of the General Public exposure at 6ft above ground or at outside surface of adjacent buildings	
<b>Rooftops</b>								
At all access points to the roof	X							
On Antennas	X		X	X				
Concealed Antennas	X	X						
antennas mounted facing outside the building	X	X						
antennas on support structure	X	X						
Rooftop Graph								
Radiation area is within 3ft from antenna	X	adjacent to each antenna						either Notice or Caution sign (based on Roofview results) at antennas/barrier
Radiation area is beyond 3ft from antenna	X	adjacent to each antenna				diagonal, yellow striping as to Roofview graph		
<b>Church Steeples</b>	Access to steeple	adjacent to antennas if antennas are concealed	On backside of Antennas	On the side of Antennas	On the shelter door or On one outdoor equipment cabinet			Caution sign at the antennas
<b>Water Stations</b>	Access to ladder	adjacent to antennas if antennas are concealed	On backside of Antennas	On the side of Antennas	On the shelter door or On one outdoor equipment cabinet			Caution sign beside Info sign #1, min. 9ft above ground

Notes for Rooftop sites:  
 1. Either NOTICE or CAUTION signs need to be posted at each sector as close as possible to the outer edge of the striped off area or the outer antennas of the sector.  
 2. If Roofview shows: only blue = Notice Sign, blue and yellow = Caution Sign, only yellow = Caution Sign to be installed.  
 3. Should the required striping area interfere with any structures or equipment (A/C, vents, roof hatch, doors, other antennas, dishes, etc.), please notify AT&T to modify the striping area, prior to starting the work

SIGNAGE GUIDELINES CHART  
NO SCALE

CONSULTANT  
  
 Connecting a Wireless World  
 605 COOLIDGE DRIVE, SUITE 100, FOLSOM, CA 95630

APPLICANT

A/E FIRM  
  
 22431 ANTONIO PKWY SUITE B160-131 RANCHO SANTA MARGARITA CA 92688  
 dconnell@connelldesigngroup.com 949-306-4644

SITE INFORMATION  
**CVL05830**  
 BOWMEN  
 3321 EL DORADO BLVD  
 EL DORADO HILLS, CA 95762

DESIGN RECORD

REV	DATE	DESCRIPTION	BY
3	08/28/24	95% CD	DC
2	08/14/24	95% CD	DC
1	07/22/24	95% CD	DC
0	06/11/24	90% CD	LE

PROFESSIONAL STAMP

SHEET TITLE  
**TYPICAL SIGNAGE DETAILS**

SHEET  
**T-3**



CUP23-0009 Bowman Telecommunications Facility  
Exhibit E: Site Plan and Elevations

**PowerSafe SBS Front Terminal**  
Telecommunications NEBS® Certified

**Battery Range Summary**

The PowerSafe SBS® Front Terminal battery further extends the technical leadership of PowerSafe SBS battery product line: not only do PowerSafe SBS Front Terminal monoblocs retain the benefits typically associated with Thin Plate Pure Lead (TPPL) Technology such as long life, high energy density, superior shelf life, etc., they also deliver exceptional cyclic performance in both float and fast charge applications, even in the hottest and harshest operating environments.

Where conventional Valve Regulated Lead Acid (VRLA)/Absorbed Glass Mat (AGM) batteries struggle to cope with harsh conditions and frequent power outages, cutting edge (TPPL) technology makes PowerSafe 12V batteries the perfect solution for the challenging operating conditions of today's telecommunication networks.

PowerSafe SBS batteries are designed to high quality standards and a unique manufacturing methods means superior energy and power, high performance and proven reliability, there is no substitute to PowerSafe SBS Front Terminal batteries.

**Features and Benefits**

- Capacity range 31-190Ah
- 12V monobloc configurations
- Multiple string configurations available
- Two year shelf life
- SP4228 compliant
- Proven long service life
- High energy density and cycling capability

Form #: SDS 853027  
Revision: AC  
Supersedes: AF  
ECO #: 1002195

**Construction**

- Robust positive plates are designed to protect service life and enhance corrosion resistance
- Separators are low resistance microporous (AGM). The electrolyte is absorbed within the AGM, preventing acid spills in case of accidental damage
- Container and cover in flame retardant UL94-V0 material, highly resistant to shock and vibration
- Terminals are stainless steel front access with top access copper alloy front. Top and front access terminations provide maximum conductivity
- Self-regulating one way pressure relief valves prevents ingress of atmospheric oxygen

**Installation and Operation**

- Space efficient footprint
- VRLA design, reduces maintenance requirements
- Lifting handles for easy handling
- Greater than 10 year life expectancy in float service at 77°F (25°C)
- Increased active material surface area yields great cycling capability
- Operating temperature: -40°F (-40°C) to 122°F (50°C)  
Recommended temperature: 68°F (20°C) to 86°F (30°C)

**Standards**

- Meets criteria for "non-spillable" batteries
- Complies with "Recorder" SP-4228, Network Equipment Building System (NEBS™) Criteria Levels
- The management systems governing the manufacture of this product are ISO 9001:2008 and ISO 14001:2004 certified

**General Specifications**

Cell Type	Nominal Capacity (Ah)	10 hr rate at 25°C	8 hr rate at 25°C	6 hr rate at 25°C	Length mm	Width mm	Height mm	Unbranded kg
SBS B1F	31	31	11.9	303	98	97	6.9	10.9
SBS B10F	39	39	11.9	303	98	97	7.2	10.9
SBS B14F	62	62	11.9	303	98	97	10.4	20.4
SBS B18F	68	68	16.4	417	4.1	106	10.1	25.6
SBS B22F	100	100	15.8	385	4.3	109	11.3	29.7
SBS B28F	112	112	22.1	561	4.9	125	9.0	30.4
SBS B36F	145	145	17.9	456	6.8	173	9.4	39.9
SBS B45F	165	165	17.9	456	6.8	173	10.8	38.3
SBS B54F	170	170	22.1	561	4.9	125	11.1	38.5
SBS B62F	190	190	22.1	561	4.9	125	12.4	39.2

**Diagram Labels:** SBS B2F-B14F, SBS B11F, SBS 100F-112F, SBS 145F - 190F

Form #: SDS 853027  
Revision: AC  
Supersedes: AF  
ECO #: 1002195

**FIRE DEPARTMENT NOTES:**

- FIRE DEPARTMENT FINAL INSPECTION REQUIRED, SCHEDULE INSPECTION 2 DAYS IN ADVANCE.
- A CFC PERMIT TO OPERATE BATTERY SYSTEMS WITH STATIONARY LEAD-ACID BATTERIES IS NOT REQUIRED FOR THE QUANTITIES ON SITE.
- A CFC PERMIT MAY BE REQUIRED FOR THE HAZARDOUS MATERIALS ON SITE.
- A HAZARDOUS MATERIALS IDENTIFICATION SIGN IS REQUIRED FOR ALL ENTRANCES INTO BATTERY STORAGE AREAS. LETTERS MUST BE AT LEAST 1" IN HEIGHT AND IN A COLOR WHICH CONTRASTS TO THE BACKGROUND OF THE SIGN AND LIST THE FOLLOWING:
- AN APPROVED METHOD TO NEUTRALIZE SPILLED ELECTROLYTE SHALL BE PROVIDED IN THE BATTERY ROOM.
- BATTERIES SHALL BE PROVIDED WITH SAFETY VENTING CAPS.
- LOCATIONS AND CLASSIFICATIONS OF EXTINGUISHERS SHALL BE IN ACCORDANCE WITH THE CALIFORNIA FIRE CODE STANDARD 10-1 AND PLACEMENT IS SUBJECT TO APPROVAL OF THE FIRE INSPECTOR.
- STORAGE, DISPENSING OR USE OF ANY FLAMMABLE AND COMBUSTIBLE LIQUIDS, FLAMMABLE AND COMPRESSED GASES, AND OTHER HAZARDOUS MATERIALS SHALL COMPLY WITH CALIFORNIA FIRE CODE REGULATIONS.
- EXIST DOORS SHALL BE ABLE TO OPEN FROM THE INSIDE WITHOUT THE USE OF KEY OR ANY SPECIAL KNOWLEDGE OR EFFORT.
- ADDRESS NUMBERS SHALL BE A MINIMUM 6 INCHES HIGH AND PLAINLY VISIBLE FROM ROADWAY BUILDING IS ADDRESSED ON.

**BATTERY ELECTROLYTE CONTENT:**

NUMBER OF STRINGS: 2  
BATTERIES PER STRING: 4  
TOTAL BATTERIES: 8  
BATTERY WEIGHT: 132.3 LBS

**BATTERY OUTPUT:**

AMPERAGE X VOLTAGE / 1000  
295 X 12/1000 = 3.54KWH X 8 BATTERIES = 28.32  
TOTAL 42.48KWH ON SITE

LEAD (60% BY WT): 79.38 LBS  
ELECTROLYTE (20% BY WT): 26.46 LBS  
ELECTROLYTE VOLUME (L7 GAL/LB): 1.85 GAL  
TOTAL ELECTROLYTE: 14.82 GAL

**NOTES:**

- QUANTITIES LESS THAN 50 GAL. ARE EXEMPT FROM 2022 C.F.C. SECTION 1207.1.1 AND SHALL NOT REQUIRE PERMIT.
- ANY CHANGES OR ADDITIONS TO BACKUP BATTERIES MUST COMPLY WITH 2022 C.F.C. SECTION 1207.1.1
- POWER OUTPUT OF THE BATTERY SYSTEM LESS THAN 600KWH (2160 MEGAJOULES) ARE EXEMPT FROM 2022 CFC SECTION 1207.1.1 AND SHALL NOT REQUIRE PERMIT
- NOTE: ALL FIRE DEPT BATTERIES AND INSTALLATION SHALL COMPLY WITH 2022 CFC CHAPTER 1207

Form #: SDS 853027  
Revision: AC  
Supersedes: AF  
ECO #: 1002195

**SAFETY DATA SHEET**

**ENERGY STORAGE SYSTEMS**

**Chemical Family/Classification:** Sealed Lead Battery

**Manufacturer's Name/Address:** EnerSys Energy Products Inc. 3-61 Per Boulevard Bolton, Ontario L7E 4E3

**24-Hour Emergency Response Contact:** CHEMTREC DOMESTIC: 800-424-9300 CHEMTREC INTL: 703-527-8377

**HAZARD IDENTIFICATION**

HEALTH	ENVIRONMENTAL	PHYSICAL
Acute Toxicity (Oral/Dermal/Inhalation) Category 4 Skin Corrosion/Irritation Category 1A Eye Damage Category 1A Reproductive Category 1B Carcinogenicity (lead compounds) Category 1A Carcinogenicity (acid mist) Category 1A Specific Target Organ Toxicity (repeated exposure) Category 2	Aquatic Chronic 1 Aquatic Acute 1	Explosive Chemical, Division 1.3

**PRECAUTIONARY STATEMENTS**

Wash thoroughly after handling.  
Do not eat, drink or smoke when using this product.  
Wear protective gloves/protective clothing, eye protection/face protection.  
Avoid breathing dust/fume/gas/mist/vapors/spray.  
Use only outdoors or in a well-ventilated area.  
Avoid contact with internal acid.  
Contact with internal components may cause irritation or severe burns. Avoid contact with internal acid.  
Irritating to eyes, respiratory system, and skin.  
Obtain special instructions before use.  
Do not handle until all safety precautions have been read and understood.  
May cause harm to breast-fed children.  
Avoid contact during pregnancy/while nursing.  
Keep away from heat/sparks/open flames/hot surfaces. No smoking.  
Causes skin irritation, serious eye damage.

**COMPOSITION INFORMATION ON INGREDIENTS**

Component	CAS Number	Approximate % by Weight
Inorganic Lead Compound:		
Lead	7439-92-1	45 - 60
Lead Dioxide	1309-60-0	15 - 25
Tin	7440-31-5	0.1 - 0.2
Sulfuric Acid Electrolyte (Sulfuric Acid/Water)	7664-93-9	15 - 20
Case Material:		5 - 10
Polypropylene	9003-07-0	
Polystyrene	9003-53-6	
Styrene Acrylonitrile	9003-54-7	
Acrylonitrile Butadiene Styrene	9003-56-9	
Styrene Butadiene	9003-55-8	
Polyvinylchloride	9002-86-2	
Polycarbonate, Hard Rubber, Polyethylene	9002-88-4	
Polyethylene Oxide	20114-01-4	
Polycarbonate/Polyester Alloy		
Other:		1 - 2

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Use only outdoors or in a well-ventilated area.  
Avoid contact with internal acid.  
Contact with internal components may cause irritation or severe burns. Avoid contact with internal acid.  
Irritating to eyes, respiratory system, and skin.  
Obtain special instructions before use.  
Do not handle until all safety precautions have been read and understood.  
May cause harm to breast-fed children.  
Avoid contact during pregnancy/while nursing.  
Keep away from heat/sparks/open flames/hot surfaces. No smoking.  
Causes skin irritation, serious eye damage.

**COMPOSITION INFORMATION ON INGREDIENTS**

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Tin	7440-31-5	0.1 - 0.2
Sulfuric Acid Electrolyte (Sulfuric Acid/Water)	7664-93-9	15 - 20
Case Material:		5 - 10
Polypropylene	9003-07-0	
Polystyrene	9003-53-6	
Styrene Acrylonitrile	9003-54-7	
Acrylonitrile Butadiene Styrene	9003-56-9	
Styrene Butadiene	9003-55-8	
Polyvinylchloride	9002-86-2	
Polycarbonate, Hard Rubber, Polyethylene	9002-88-4	
Polyethylene Oxide	20114-01-4	
Polycarbonate/Polyester Alloy		
Other:		1 - 2

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Contact with internal components may cause irritation or severe burns. Avoid contact with internal acid.  
Irritating to eyes, respiratory system, and skin.  
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Case Material:		5 - 10
Polypropylene	9003-07-0	
Polystyrene	9003-53-6	
Styrene Acrylonitrile	9003-54-7	
Acrylonitrile Butadiene Styrene	9003-56-9	
Styrene Butadiene	9003-55-8	
Polyvinylchloride	9002-86-2	
Polycarbonate, Hard Rubber, Polyethylene	9002-88-4	
Polyethylene Oxide	20114-01-4	
Polycarbonate/Polyester Alloy		
Other:		1 - 2

Form #: SDS 853027  
Revision: AC  
Supersedes: AF  
ECO #: 1002195

**EPIC WIRELESS GROUP LLC**  
Connecting a Wireless World  
605 COOLIDGE DRIVE, SUITE 100, FOLSOM, CA 95630

**at&t**  
mobility corp.

**CDG**  
22431 ANTONIO PKWY  
SUITE B160-131  
RANCHO SANTA MARGARITA CA 92688  
dconnell@connelldesigngroup.com  
949-306-4644

**CVL05830**  
BOWMEN  
3321 EL DORADO BLVD  
EL DORADO HILLS, CA 95762

**REVISIONS**

REV	DATE	DESCRIPTION	BY
3	08/28/24	95% CD	DC
2	08/14/24	95% CD	DC
1	07/22/24	95% CD	DC
0	06/11/24	90% CD	LE

**BATTERY INFORMATION**

**F-1**

24-1704 D 8 of 11



CUP23-0009 Bowman Telecommunications Facility  
Exhibit E: Site Plan and Elevations

Lease Area Description

All that certain lease area being a portion of Lot "R" as is shown on that certain Subdivision Map Recorded in Book "H" of Maps at Page 78, Official Records of El Dorado County, being located in the City of El Dorado Hills, State of California, also being a portion of the Southwest quarter of Section 35, Township 10 North, Range 8 East M.D.B. & M. being more particularly described as follows:

Commencing at a found 3/4" capped iron pipe monument stamped RCE 20462, set at the Southerly terminus of that certain El Dorado Hills Boulevard right of way tangent labeled "N 00°42'24" E 683.10" as is shown the above referenced map from which a similar monument bears South 09°40'54" East 2177.15 feet; thence from said point of commencement South 44°34'39" East 860.13 feet to the true point of beginning; thence from said point of beginning South 29°33'49" East 35.00 feet; thence South 60°26'11" West 31.00 feet; thence North 29°33'49" West 35.00 feet; thence North 60°26'11" East 31.00 feet to the true point of beginning.

Together with a non-exclusive easement for access purposes fifteen feet in width the centerline of which is described as follows: beginning at a point which bears North 60°26'11" East 7.50 feet from the most Easterly corner of the above described lease area and running thence North 29°33'49" West 112.67 feet; thence North 22°47'39" West 121.62 feet; thence through a tangent curve to the left having a central radius of 100.00 feet and running through an arc distance of 16.69 feet; thence tangent to the last curve North 32°21'28" West 54.52 feet; thence through a tangent curve to the right having a central radius of 100.00 feet and running through an arc distance of 36.15 feet; thence tangent to the last curve North 11°38'40" West 53.15 feet; thence North 09°00'32" West 57.29 feet; thence North 04°51'05" West 57.32 feet; thence through a tangent curve to the left having a central radius of 100.00 feet and running through an arc distance of 62.23 feet; thence tangent to the last curve North 40°30'14" West 77.50 feet; thence through a tangent curve to the right having a central radius of 100.00 feet and running through an arc distance of 27.18 feet; thence tangent to the last curve North 24°55'43" West 123.02 feet; thence through a tangent curve to the left having a central radius of 100.00 feet and running through an arc distance of 34.07 feet; thence tangent to the last curve North 44°26'58" West 188.84 feet; thence through a tangent curve to the left having a central radius of 62.50 feet and running through an arc distance of 141.77 feet; thence tangent to the last curve South 05°35'23" West 37.98 feet; thence through a tangent curve to the right having a central radius of 20.44 feet and running through an arc distance of 64.21 feet; thence tangent to the last curve North 05°35'23" East 53.01 feet; thence North 02°14'08" West 29.44 feet; thence through a tangent curve to the left having a central radius of 30.00 feet and running through an arc distance of 45.60 feet; thence tangent to the last curve North 89°19'40" West 25.6 feet more or less to the public right of way.

Also together with an easement for utility purposes six feet in width the centerline of which is described as follows: beginning at a point which bears South 60°26'11" West 3.00 feet from the most Northerly corner of the above described lease area and running thence North 29°33'49" West 77.67 feet; thence through a tangent curve to the right having a central radius of 112.50 feet and running through an arc distance of 13.29 feet; thence tangent to the last curve North 22°47'39" West 121.62 feet; thence through a tangent curve to the left having a central radius of 87.50 feet and running through an arc distance of 14.61 feet; thence tangent to the last curve North 32°21'28" West 54.52 feet; thence through a tangent curve to the right having a central radius of 112.50 feet and running through an arc distance of 40.67 feet; thence tangent to the last curve North 11°38'40" West 53.43 feet; thence North 09°00'32" West 58.03 feet; thence North 04°51'05" West 63.78 feet; thence North 69°13'01" West 86.33 feet; thence North 78°23'47" West 385.67 feet more or less to the public right of way.

Geil Engineering  
Engineering \* Surveying \* Planning  
1226 High Street  
Auburn, California 95603-5015  
Phone: (530) 885-0426 \* Fax: (530) 823-1309

A.T. & T. Mobility

Project No./Name: CVL05830 / Bowman EDCSD

Project Site Location: 3321 El Dorado Hills Boulevard  
El Dorado Hills, CA 95762  
El Dorado County

Date of Observation: 09-08-22

Equipment/Procedure Used to Obtain Coordinates: Trimble Pathfinder  
Pro XL post processed with Pathfinder Office software.

Type of Antenna Mount: Proposed Faux Water Tank/Tower

Coordinates  
Latitude: N 38° 40' 23.87" (NAD83) N 38° 40' 24.22" (NAD27)  
Longitude: W 121° 04' 31.62" (NAD83) W 121° 04' 27.82" (NAD27)

ELEVATION of Ground at Structure (NAVD88) 836.5' AMSL

CERTIFICATION: I, the undersigned, do hereby certify elevation listed above is based on a field survey done under my supervision and that the accuracy of those elevations meet or exceed 1-A Standards as defined in the FAA ASAC information Sheet 91:003, and that they are true and accurate to the best of my knowledge and belief.

Kenneth D. Geil California RCE 14803

DATE OF SURVEY: 09-08-22

SURVEYED BY OR UNDER DIRECTION OF: KENNETH D. GEIL, R.C.E. 14803

LOCATED IN THE COUNTY OF EL DORADO, STATE OF CALIFORNIA

BEARINGS SHOWN ARE BASED UPON MONUMENTS FOUND AND RECORD INFORMATION. THIS IS NOT A BOUNDARY SURVEY.

ELEVATIONS SHOWN ON THIS PLAN ARE BASED UPON U.S.G.S. N.A.V.D. 88 DATUM, ABOVE MEAN SEA LEVEL.

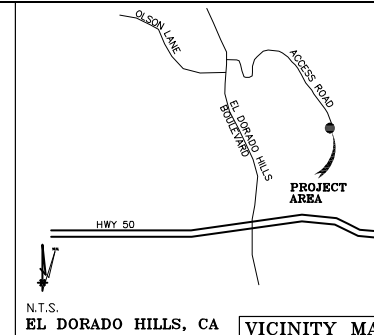
N.G.V.D. 1929 CORRECTION: SUBTRACT 2.62' FROM ELEVATIONS SHOWN.

CONTOUR INTERVAL: 1'

CONTRACTOR IS RESPONSIBLE TO VERIFY LEASE AREA PRIOR TO CONSTRUCTION.

ASSESSOR'S PARCEL NUMBER: 121-040-026-000

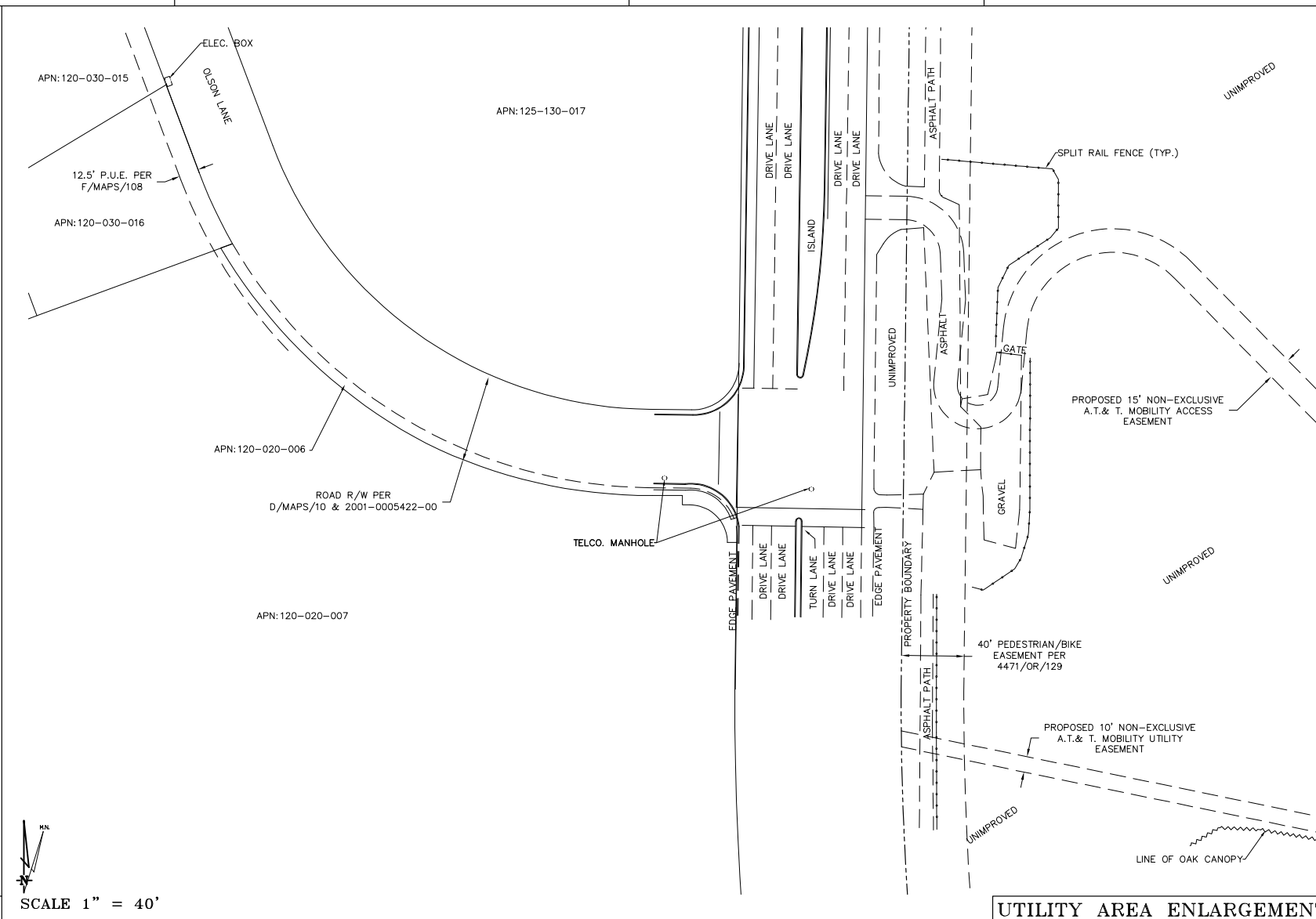
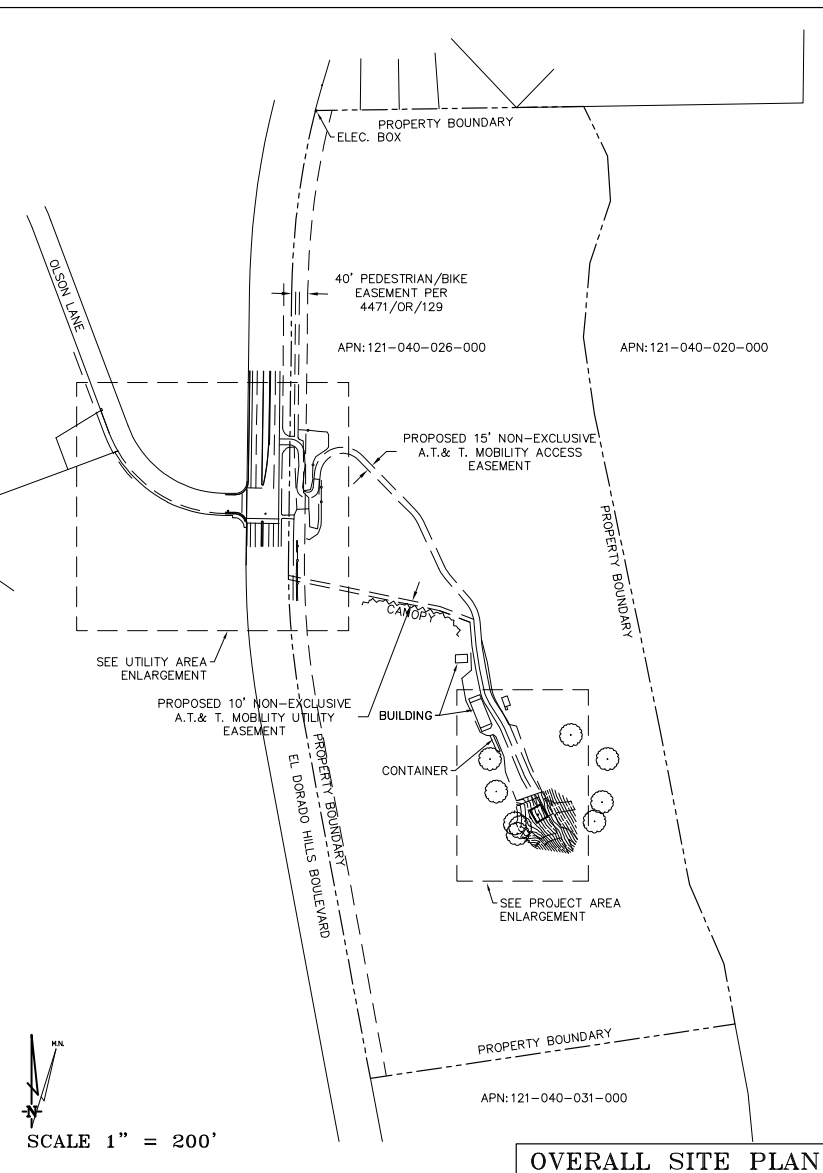
OWNER(S): EL DORADO HILLS COMMUNITY SERVICES DIST.  
1021 HARVARD WAY  
EL DORADO HILLS, CA 95762



N.T.S.  
EL DORADO HILLS, CA VICINITY MAP

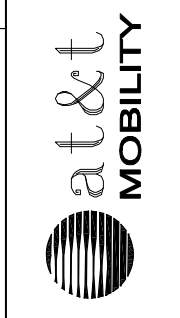
THESE DRAWINGS AND/OR THE ACCOMPANYING SPECIFICATION AS INSTRUMENTS OF SERVICE, ARE THE EXCLUSIVE PROPERTY OF GEIL ENGINEERING AND THEIR USE AND PUBLICATION SHALL BE RESTRICTED TO THE ORIGINAL SITE AND CARRIER FOR WHICH THEY ARE PREPARED. REUSE, REPRODUCTION OR PUBLICATION BY ANY METHOD, IN WHOLE OR IN PART, IS PROHIBITED EXCEPT BY WRITTEN PERMISSION FROM GEIL ENGINEERING TITLE TO THESE PLANS AND/OR SPECIFICATIONS SHALL REMAIN WITH GEIL ENGINEERING WITHOUT PREJUDICE AND VISUAL CONTACT WITH THEM SHALL CONSTITUTE PRIMA FACIE EVIDENCE OF ACCEPTANCE OF THESE RESTRICTIONS.

BOUNDARY SHOWN IS BASED ON MONUMENTATION FOUND AND RECORD INFORMATION. THIS IS NOT A BOUNDARY SURVEY. THIS IS A SPECIALIZED TOPOGRAPHIC MAP WITH PROPERTY LINES AND EASEMENTS BEING A GRAPHIC DEPICTION BASED ON INFORMATION GATHERED FROM VARIOUS SOURCES OF RECORD AND AVAILABLE MONUMENTATION FOUND DURING THE FIELD SURVEY. NO EASEMENTS WERE RESEARCHED OR PLOTTED. PROPERTY LINES AND LINES OF TITLE WERE NOT INVESTIGATED NOR SURVEYED. NO PROPERTY MONUMENTS WERE SET.



DEPT. APPROVED DATE	
ARC	
RE	
RF	
INT	
EE/IN	
OPS	
EE/OUT	

Surveyor  
GEIL ENGINEERING  
ENGINEERING \* SURVEYING \* PLANNING  
1226 HIGH STREET  
AUBURN, CALIFORNIA 95603  
PHONE: (530) 885-0426  
FAX: (530) 823-1309



CVL05830  
BOWMAN EDCSD  
3321 EL DORADO HILLS  
BOULEVARD  
EL DORADO HILLS, CA 95762  
PLOT PLAN AND  
SITE TOPOGRAPHY

REVISIONS	DATE	DESCRIPTION
REV	09-08-22	DRAWING SUBMITTAL
REV	11-18-22	EASEMENT MOD.
REV	03-16-23	LEASE AREA MOD.
REV		
REV		

Sheet  
C-1



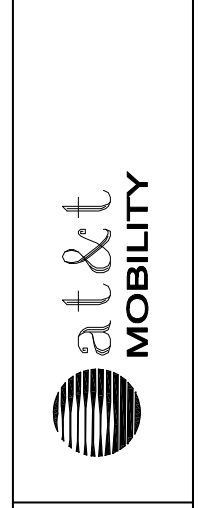
CUP23-0009 Bowman Telecommunications Facility  
Exhibit E: Site Plan and Elevations

THESE DRAWINGS AND/OR THE ACCOMPANYING SPECIFICATION AS INSTRUMENTS OF SERVICE, ARE THE EXCLUSIVE PROPERTY OF GEIL ENGINEERING AND THEIR USE AND PUBLICATION SHALL BE RESTRICTED TO THE ORIGINAL SITE AND CARRIER FOR WHICH THEY ARE PREPARED. REUSE, REPRODUCTION OR PUBLICATION BY ANY METHOD, IN WHOLE OR IN PART, IS PROHIBITED EXCEPT BY WRITTEN PERMISSION FROM GEIL ENGINEERING TITLE TO THESE PLANS AND/OR SPECIFICATIONS SHALL REMAIN WITH GEIL ENGINEERING WITHOUT PREJUDICE, AND VISUAL CONTACT WITH THEM SHALL CONSTITUTE PRIMA FACIE EVIDENCE OF ACCEPTANCE OF THESE RESTRICTIONS.

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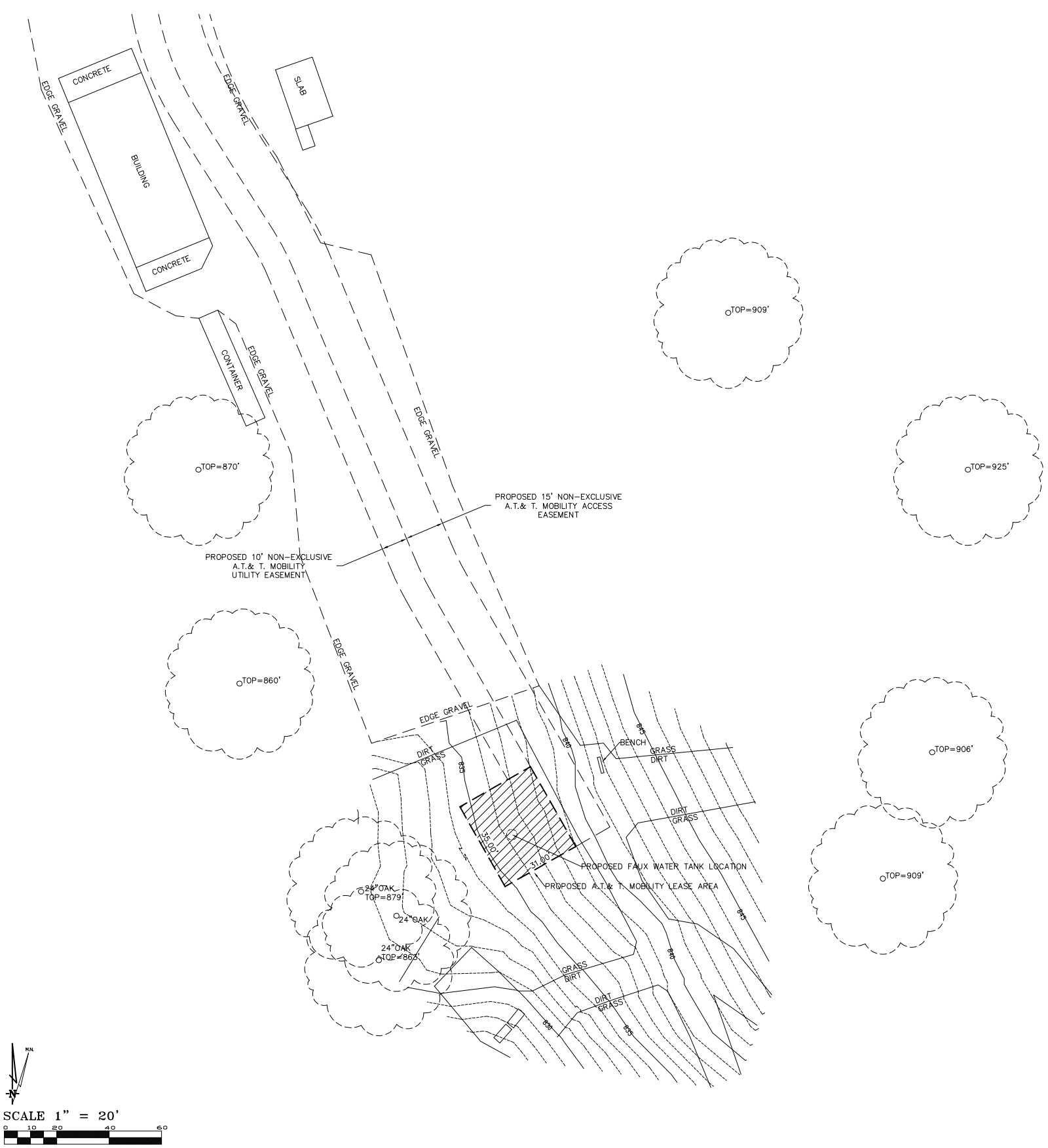
DEPT	APPROVED DATE	
	ARC	DATE
RE		
INT		
EE\IN		
OPS		
EE\OUT		

Surveyor  
**GEIL ENGINEERING**  
 ENGINEERING • SURVEYING • PLANNING  
 14000 JEFFERSON BLVD #400  
 AMSTERDAM, CA 94508  
 Phone: (925) 885-0450  
 Fax: (925) 885-1000



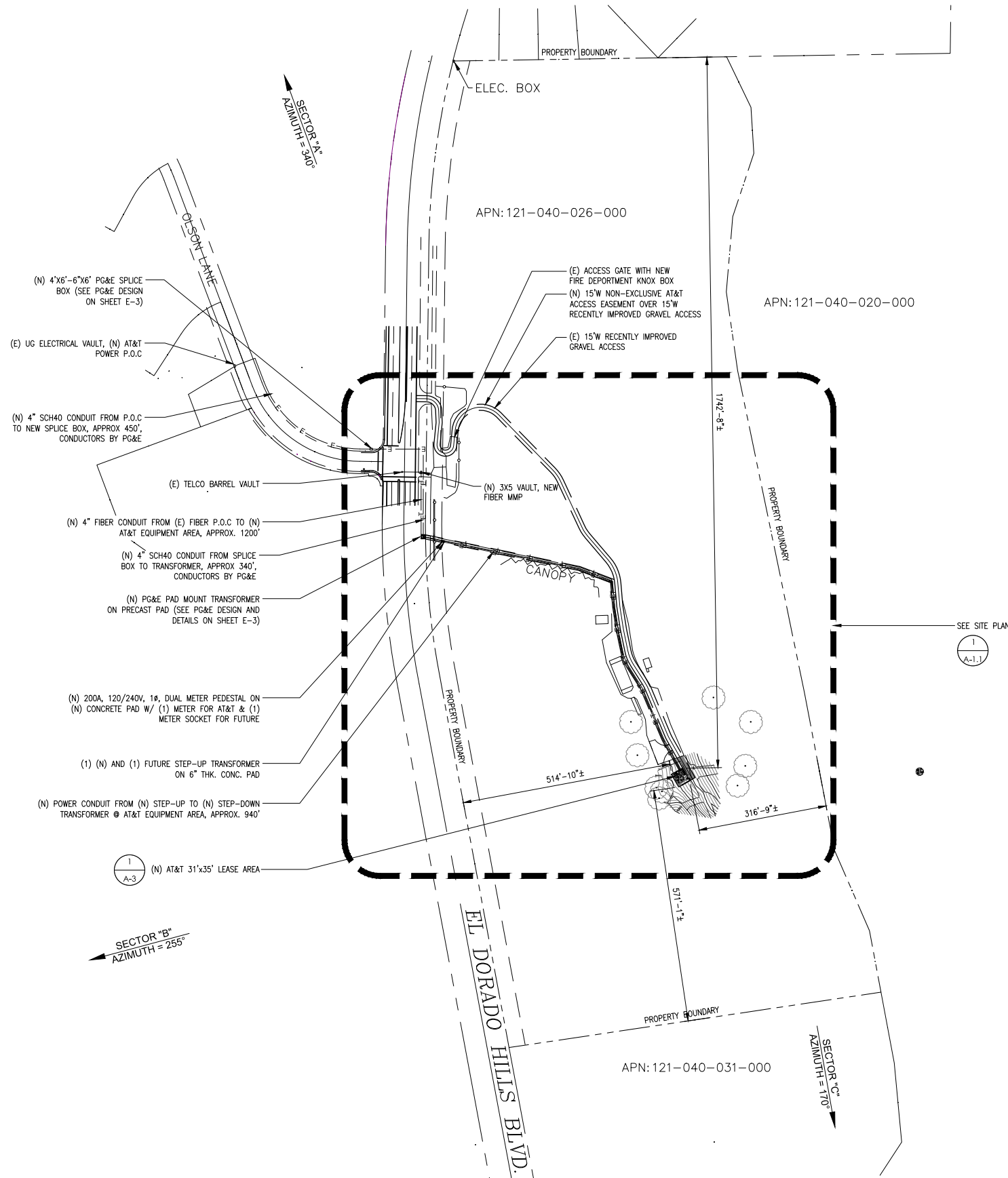
CVL05830  
 BOWMAN EDCSD  
 3321 EL DORADO HILLS  
 BOULEVARD  
 EL DORADO HILLS, CA 95762  
 PLOT PLAN AND  
 SITE TOPOGRAPHY

Sheet  
**C-2**



PROJECT AREA ENLARGEMENT

CUP23-0009 Bowman Telecommunications Facility  
Exhibit E: Site Plan and Elevations



CONSULTANT

WIRELESS GROUP LLC  
Connecting a Wireless World  
605 COOLIDGE DRIVE, SUITE 100, FOLSOM, CA 95630

APPLICANT

at&t  
mobility corp.

A/E FIRM

CDG  
22431 ANTONIO PKWY  
SUITE B160-131  
RANCHO SANTA MARGARITA CA 92688  
dconnell@connelldesigngroup.com  
949-306-4644

SITE INFORMATION

**CVL05830**  
BOWMEN  
3321 EL DORADO BLVD  
EL DORADO HILLS, CA 95762

DESIGN RECORD

REV	DATE	DESCRIPTION	BY
3	08/28/24	95% CD	DC
2	08/14/24	95% CD	DC
1	07/22/24	95% CD	DC
0	06/11/24	90% CD	LE

PROFESSIONAL STAMP

SHEET TITLE

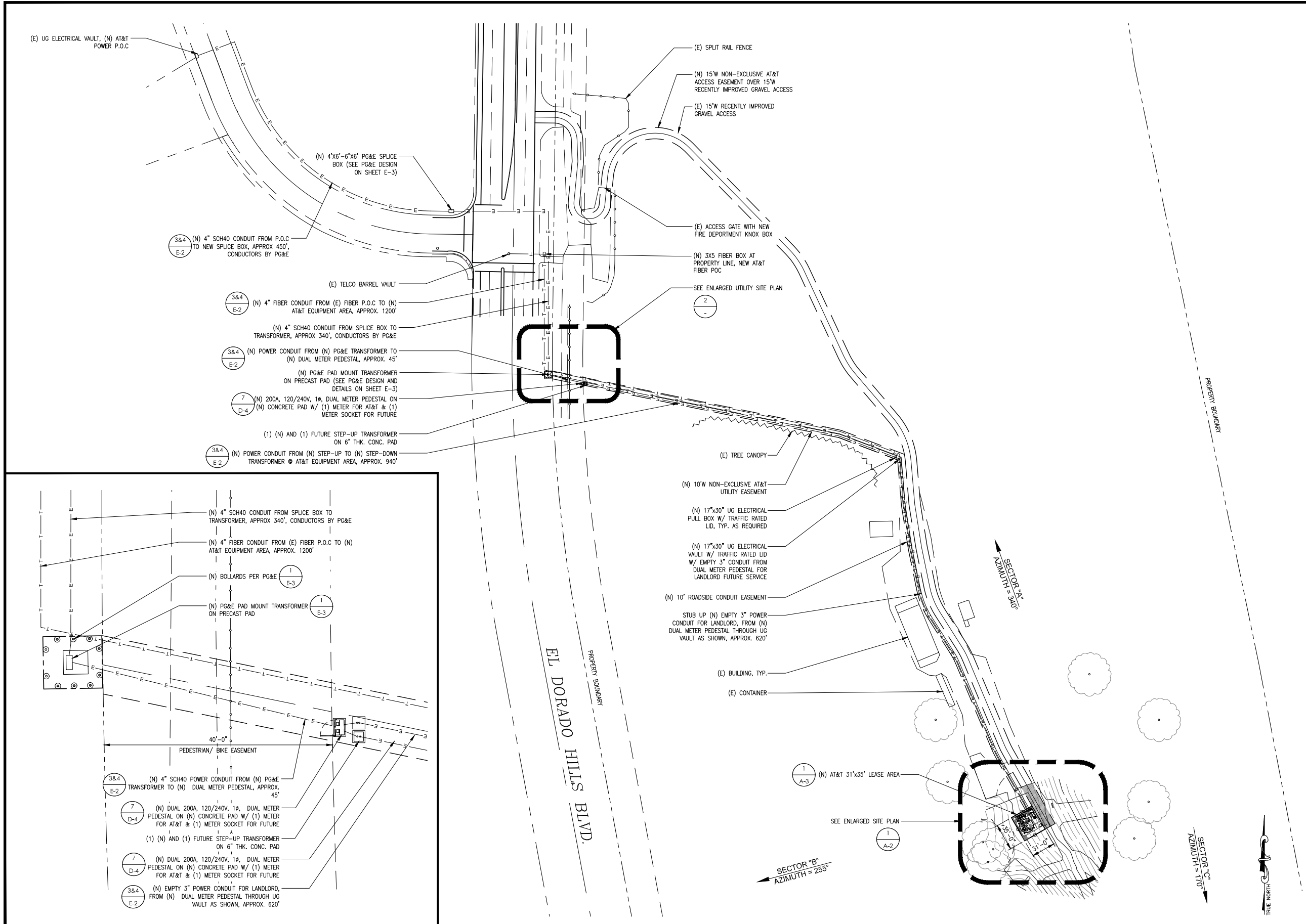
OVERALL SITE PLAN

SHEET

A-1



CUP23-0009 Bowman Telecommunications Facility  
Exhibit E: Site Plan and Elevations



CONSULTANT

WIRELESS GROUP LLC  
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1	07/22/24	95% CD	DC
0	06/11/24	90% CD	LE

PROFESSIONAL STAMP

SHEET TITLE

**SITE PLAN**

SHEET

**A-1 .1**

ENLARGED UTILITY SITE PLAN

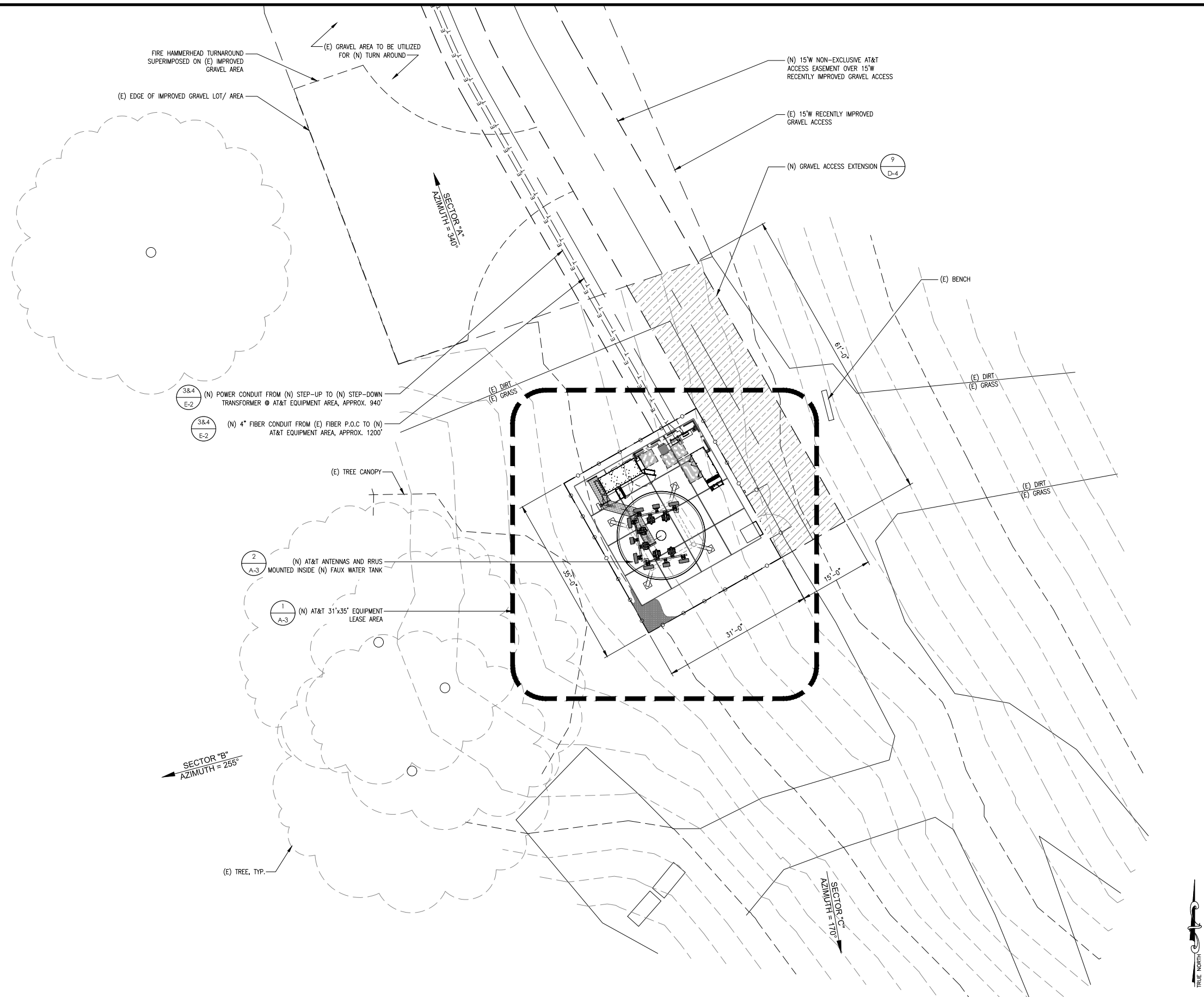
SCALE: 1/8"=1'-0"

2 SITE PLAN

SCALE: 1"=60'-0"

1

CUP23-0009 Bowman Telecommunications Facility  
Exhibit E: Site Plan and Elevations



CONSULTANT

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SITE INFORMATION

**CVL05830**  
BOWMEN  
3321 EL DORADO BLVD  
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DESIGN RECORD

REVISIONS			
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3	08/28/24	95% CD	DC
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1	07/22/24	95% CD	DC
0	06/11/24	90% CD	LE

PROFESSIONAL STAMP

SHEET TITLE

**ENLARGED SITE PLAN**

SHEET

**A-2**

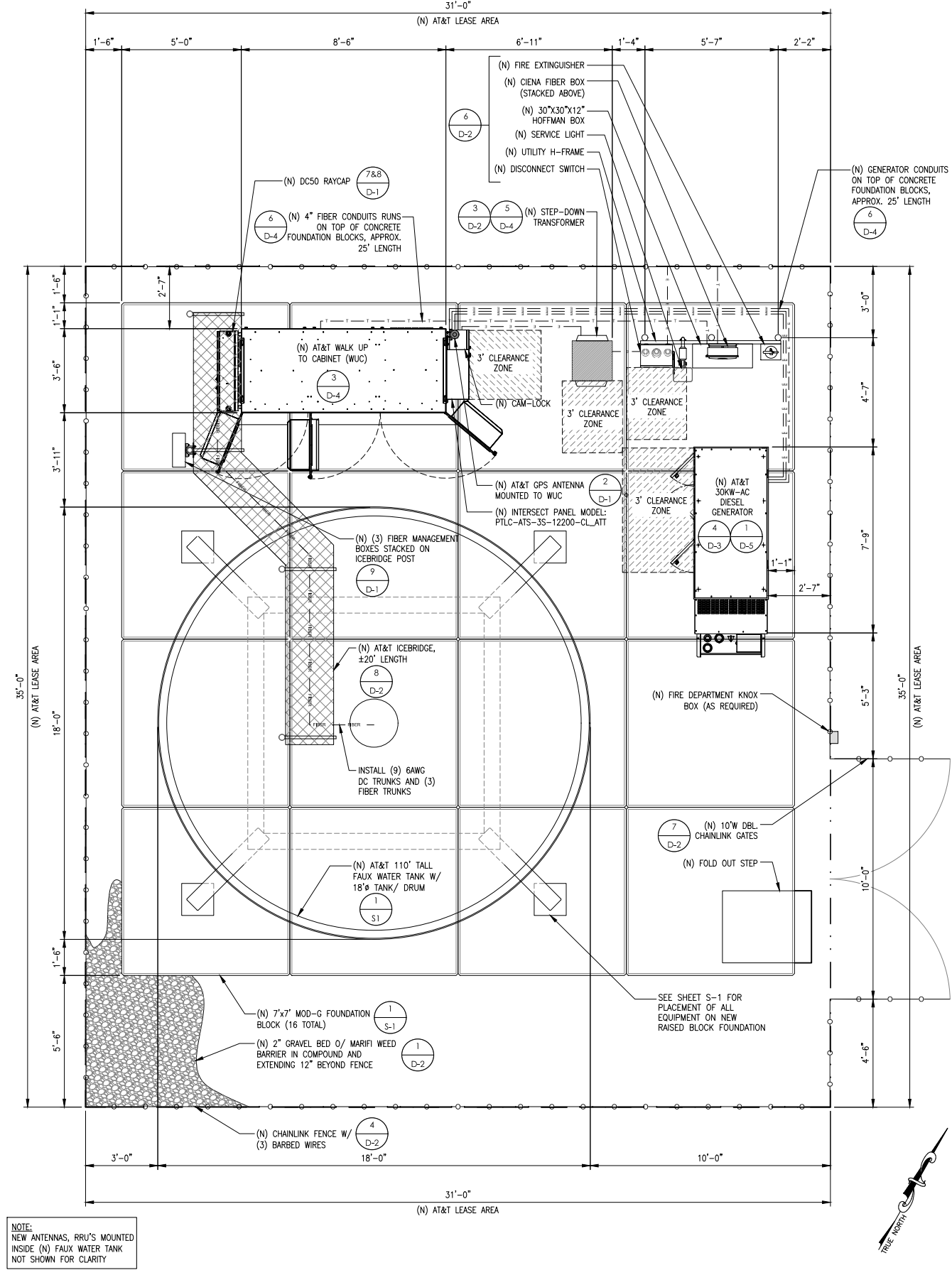


RF SCHEDULE

SECTOR	ANTENNA MODEL NO.	AZIMUTH	CENTERLINE	RRU	DC TRUNK SIZE	DC TRUNK DISTANCE	DC JUMPER TYPE	DC JUMPER DISTANCE	RECTIFIER COUNT (-48V)	CONVERTER COUNT (-58V)
ALPHA	A1	350°	106'-0"	(1) 4490 B5/B12 - 65 LBS (1) 4415 B2/B25 - 46 LBS	6AWG	130'	6AWG	15'	12	0
	A2	350°	107'-10"	(1) INTEGRATED WITHIN AIR6419 B77D (1) INTEGRATED WITHIN AIR6419 B77G						
	A3	350°	104'-2"	(1) 4478 B14 - 59.9 LBS (1) 4890 B25/B66 - 46 LBS						
BETA	B1	260°	106'-0"	(1) 4490 B5/B12 - 65 LBS (1) 4415 B2/B25 - 46 LBS	6AWG	130'	6AWG	15'	12	0
	B2	260°	107'-10"	(1) INTEGRATED WITHIN AIR6419 B77D (1) INTEGRATED WITHIN AIR6419 B77G						
	B3	260°	106'-0"	(1) 4478 B14 - 59.9 LBS (1) 4890 B25/B66 - 46 LBS						
GAMMA	C1	170°	106'-0"	(1) 4490 B5/B12 - 65 LBS (1) 4415 B2/B25 - 46 LBS	6AWG	130'	6AWG	15'	12	0
	C2	170°	107'-10"	(1) INTEGRATED WITHIN AIR6419 B77D (1) INTEGRATED WITHIN AIR6419 B77G						
	C3	170°	106'-0"	(1) 4478 B14 - 59.9 LBS (1) 4890 B25/B66 - 46 LBS						

RFDS DATE 06/28/2024  
RFDS REV. 3.00

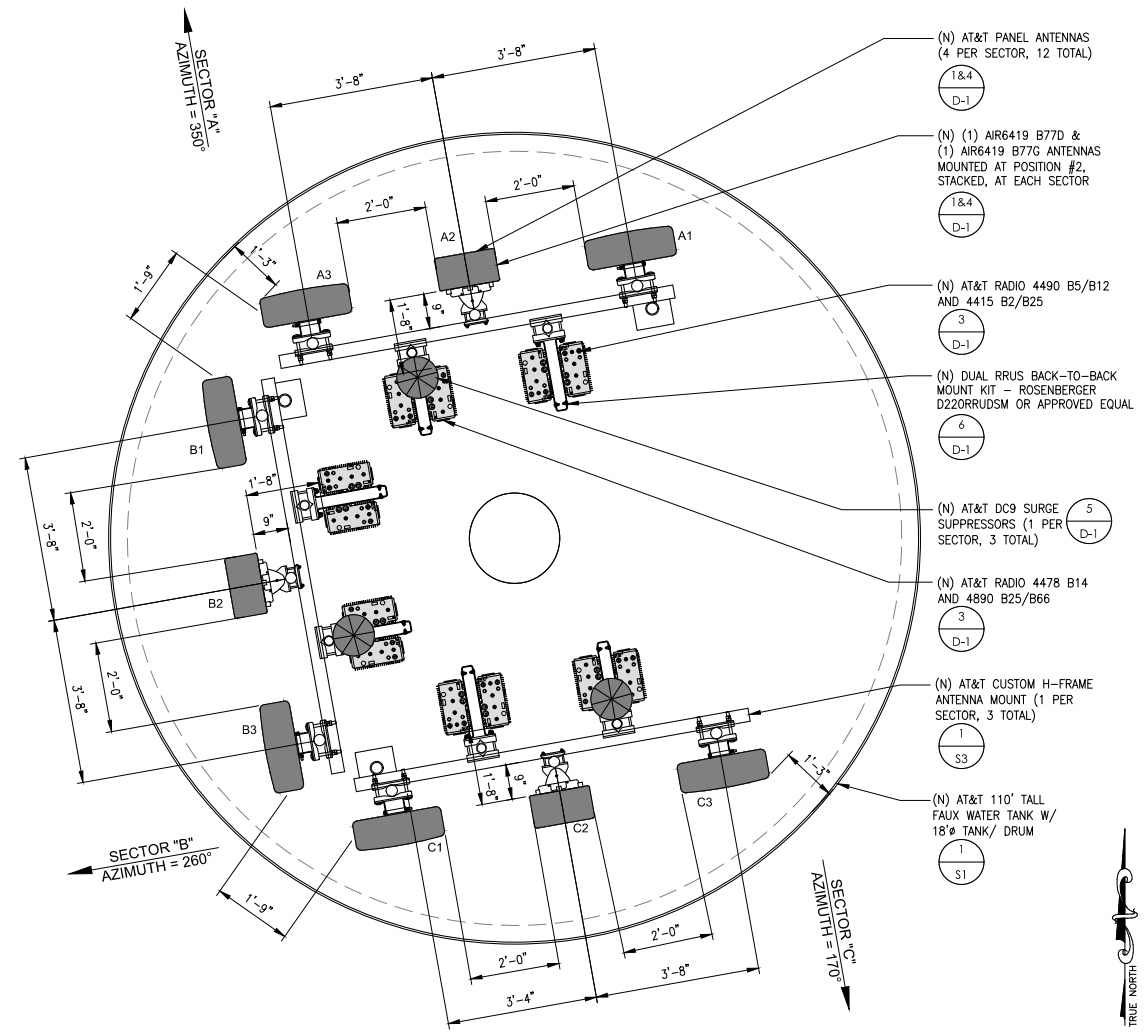
NOTE:  
1. ANTENNA POSITION ARE LEFT TO RIGHT FROM FRONT OF ANTENNA.  
2. EQUIPMENT IS PRELIMINARY AND SUBJECT TO CHANGE



NOTE:  
NEW ANTENNAS, RRU'S MOUNTED INSIDE (N) FAUX WATER TANK NOT SHOWN FOR CLARITY

EQUIPMENT LAYOUT

ANTENNA RF SCHEDULE



ANTENNA LAYOUT

**EPIC WIRELESS GROUP LLC**  
Connecting a Wireless World  
605 COOLIDGE DRIVE, SUITE 100, FOLSOM, CA 95630

**at&t**  
mobility corp.

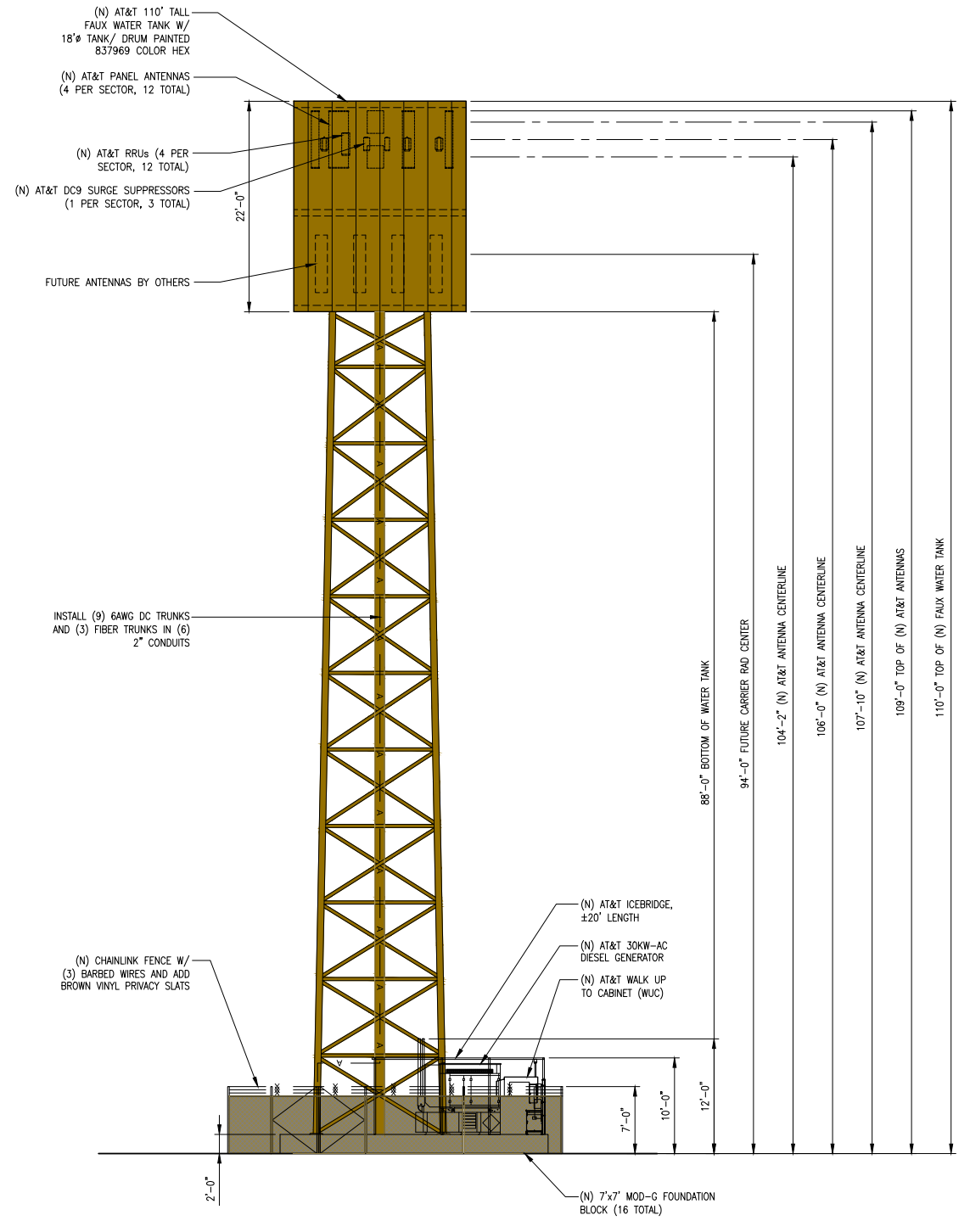
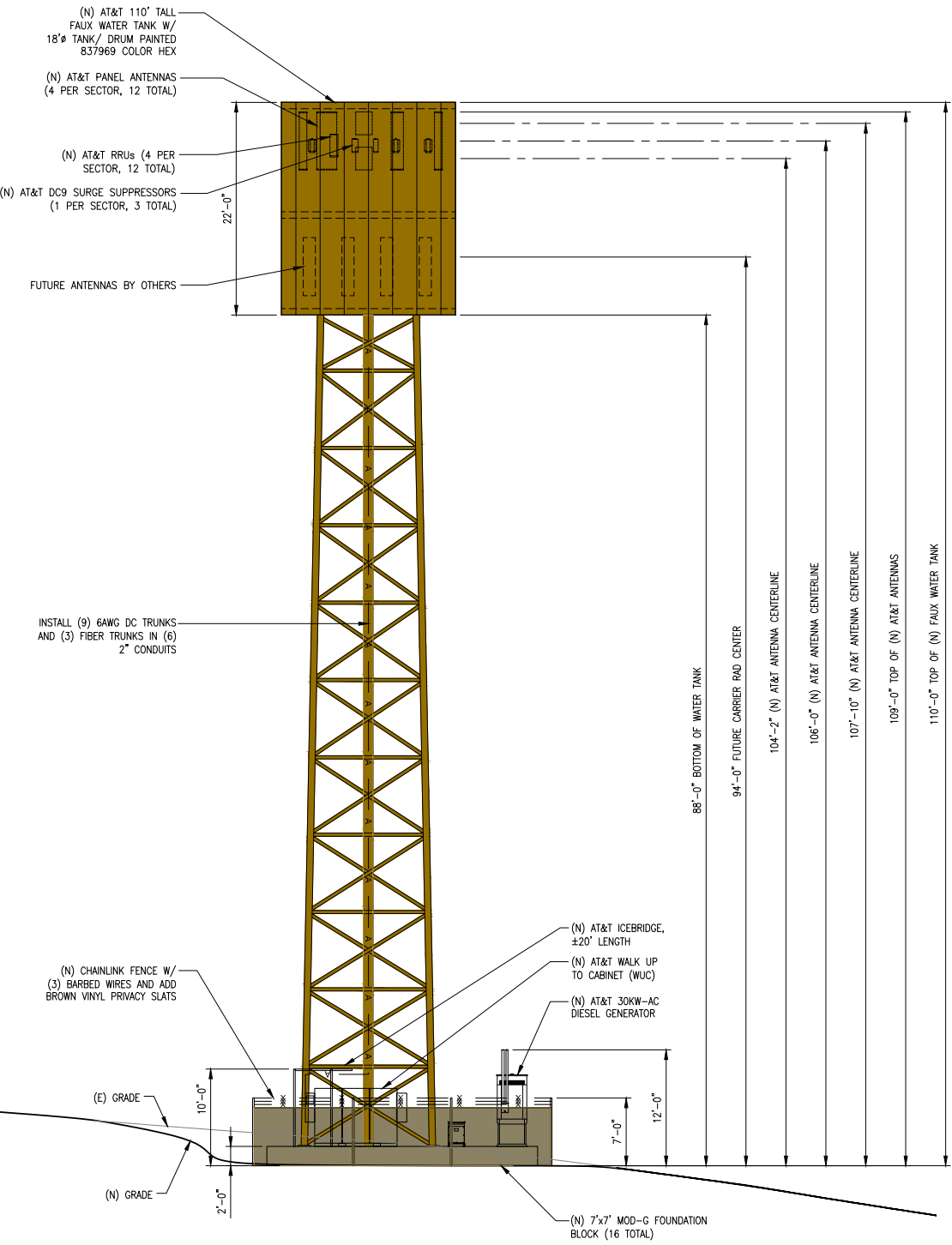
**CDG**  
22431 ANTONIO PKWY  
SUITE B160-131  
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dconnell@connelldesigngroup.com  
949-306-4644

**CVL05830**  
BOWMEN  
3321 EL DORADO BLVD  
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1	07/22/24	95% CD	DC
0	06/11/24	90% CD	LE

**EQUIPMENT, ANTENNA LAYOUTS AND ANTENNA SCHEDULE**

**A-3**



CONSULTANT

WIRELESS GROUP LLC  
Connecting a Wireless World  
605 COOLIDGE DRIVE, SUITE 100, FOLSOM, CA 95630

APPLICANT

at&t  
mobility corp.

A/E FIRM

CDG  
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dconnell@connelldesigngroup.com 949-306-4644

SITE INFORMATION

**CVL05830**  
BOWMEN  
3321 EL DORADO BLVD  
EL DORADO HILLS, CA 95762

DESIGN RECORD

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0	06/11/24	90% CD	LE

PROFESSIONAL STAMP

SHEET TITLE

**ELEVATIONS**

SHEET

**A-4**

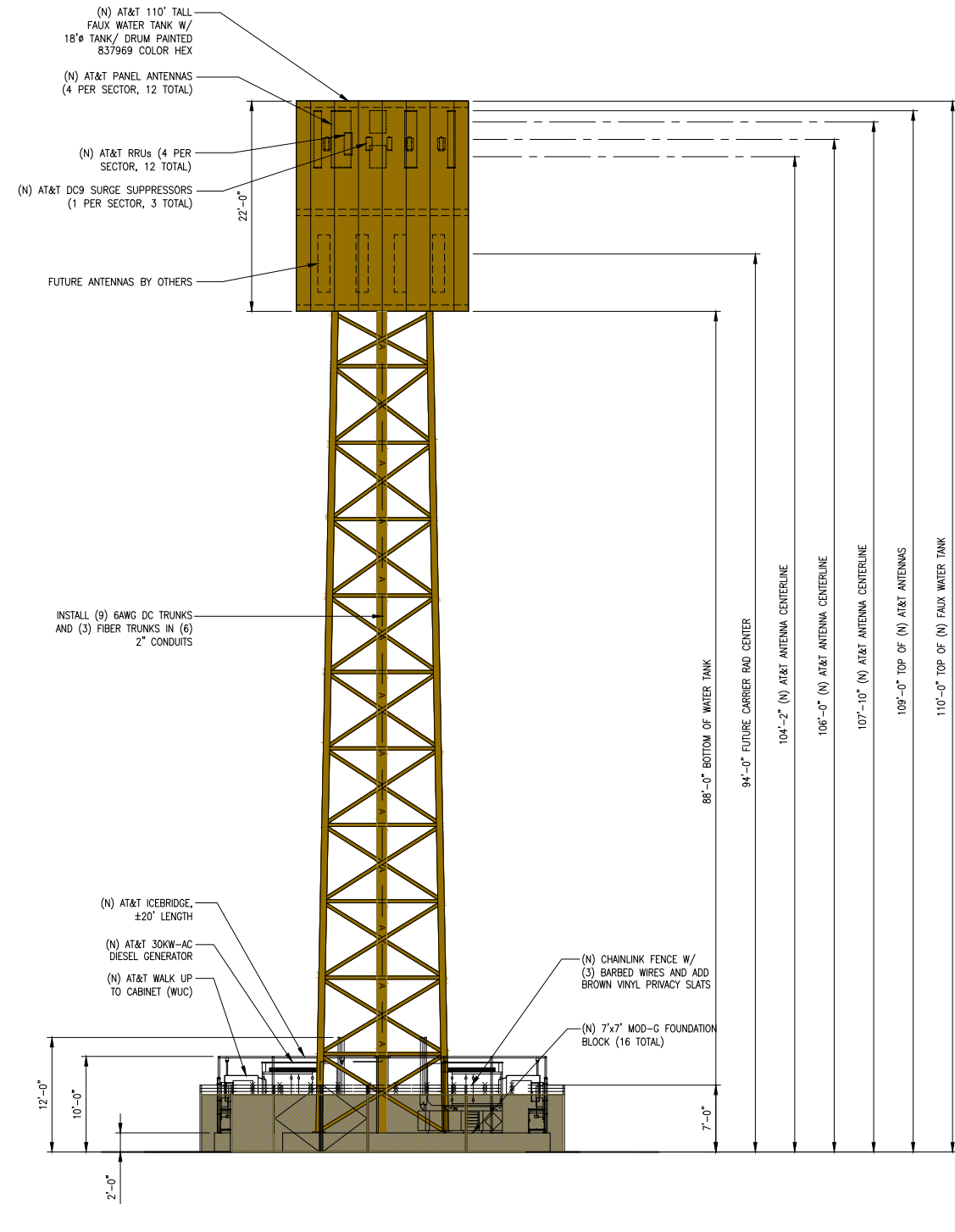
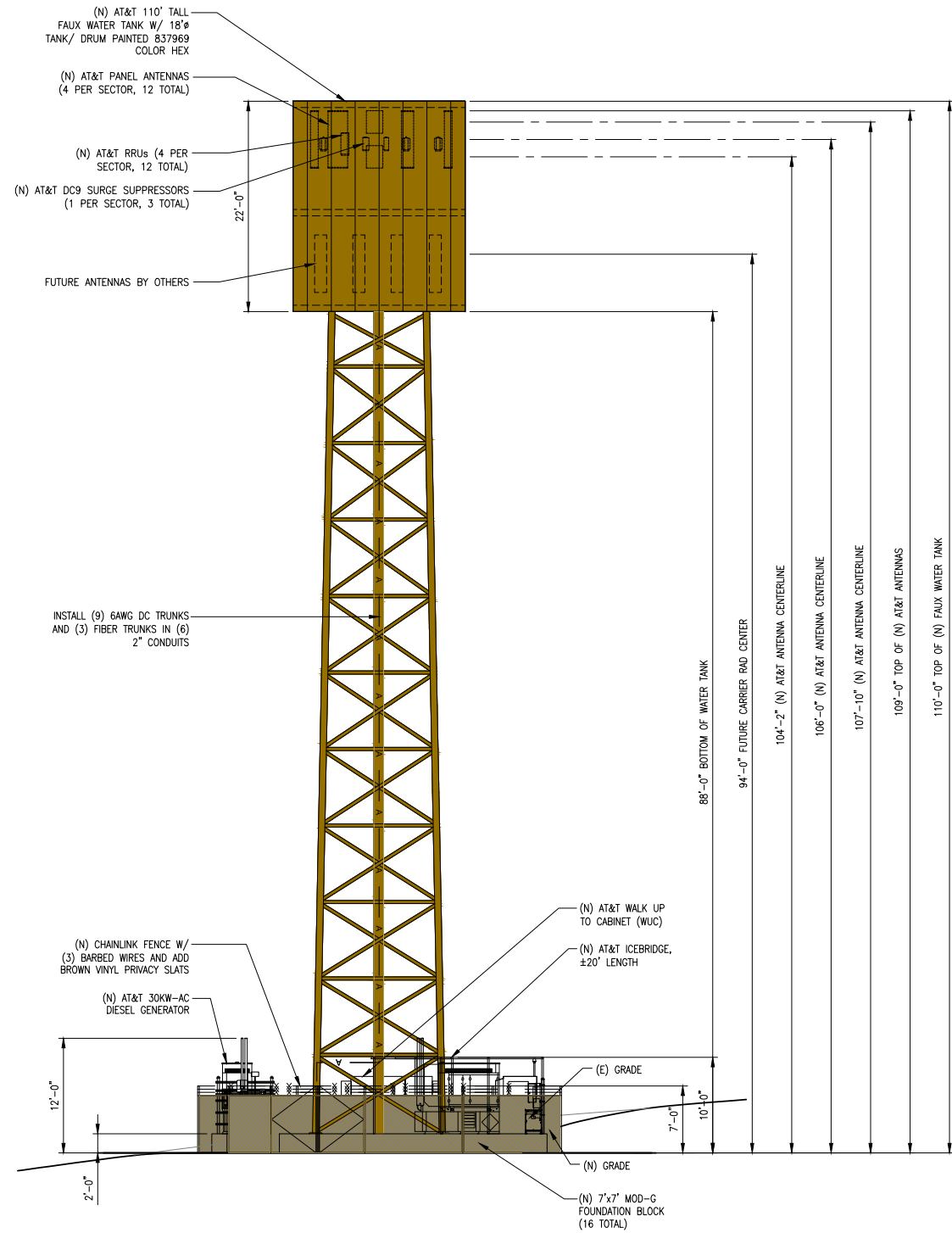
NEW SOUTH ELEVATION

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

NEW EAST ELEVATION

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





CONSULTANT

WIRELESS GROUP LLC  
Connecting a Wireless World  
605 COOLIDGE DRIVE, SUITE 100, FOLSOM, CA 95630

APPLICANT

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mobility corp.

A/E FIRM

CDG  
22431 ANTONIO PKWY  
SUITE B160-131  
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dconnell@connelldesigngroup.com  
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SITE INFORMATION

CVL05830  
BOWMEN  
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EL DORADO HILLS, CA 95762

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REV	DATE	DESCRIPTION	BY
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2	08/14/24	95% CD	DC
1	07/22/24	95% CD	DC
0	06/11/24	90% CD	LE

PROFESSIONAL STAMP

SHEET TITLE

ELEVATIONS

SHEET


A-5

NEW NORTH ELEVATION

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

NEW WEST ELEVATION

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



**DC50-48-60-96-50F BASE OVP CABINET WITH THE FOLLOWING FEATURES**

**POWER COMPARTMENT:**

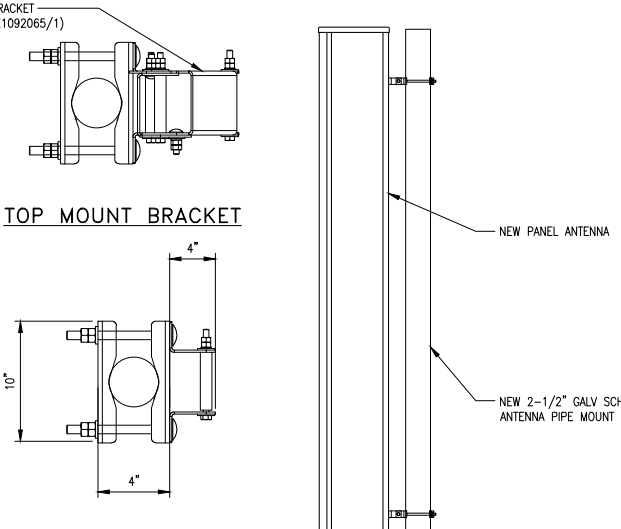
- STRIKESORB OVP PROTECTION ON EACH SUPPLY TO RETURN AND RETURN TO GROUND MODE.
- NEWSTRIKESORB25-V1-FV-SQ MODULE USED TO SAVE SPACE
- CLASS 1 SPD PER IEC 61643-11
- 7.5 KA 10/350
- SOKA 8/20
- MEETS AT&T SPEC
- SPACE FOR (50) AM STYLE BREAKERS WITH BULLET STYLE PLUGS
- UP TO 400A INPUT PER EACH 25-CIRCUIT DISTRIBUTION BANK (X2)
- LARGE GROUND BAR FOR DC TRUNKS
- (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:**

- 96 DUPLEX LC BULKHEAD WITH FIBER MANAGEMENT
- (2) 2.5" CONDUIT FITTINGS FOR FIBER INPUT FROM WIC/WUC
- (8) FIBER DIVIDER HEAD MOUNTING BRACKETS
- GLANDS FOR UP TO 6 FIBER TRUNKS TO TOWER/ROOFTOP

ATT Item Number: CEQ.54898

NEW MOUNT BRACKET (PART NO. SXK1092065/1)



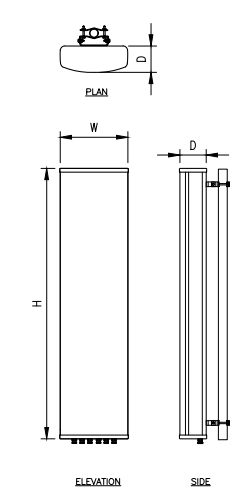
**TOP MOUNT BRACKET**

**BOTTOM MOUNT BRACKET**

NEW PANEL ANTENNA

NEW 2-1/2" GALV SCH40 ANTENNA PIPE MOUNT

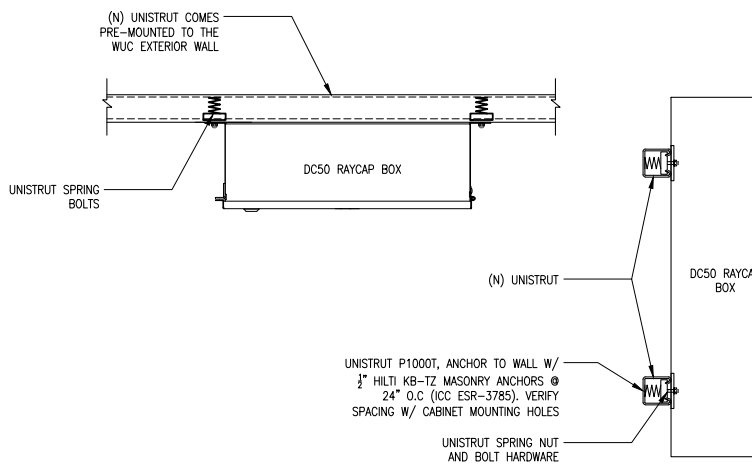
ANTENNA	HEIGHT (H)	WIDTH (W)	DEPTH (D)	WEIGHT W/O BRACKET
TPA45R-BU6B	72"	23.8"	8.4"	84.4 LBS
AIR6419 B77D	28.3"	16.1"	7.2"	132.4 LBS
AIR6419 B77G	28.3"	16.1"	7.2"	132.4 LBS



**DC50 RAYCAP DETAIL** NOT TO SCALE **7**

**ANTENNA MOUNT DETAIL** NOT TO SCALE **4**

**ANTENNA DETAILS** NOT TO SCALE **1**



(N) UNISTRUT COMES PRE-MOUNTED TO THE WUC EXTERIOR WALL

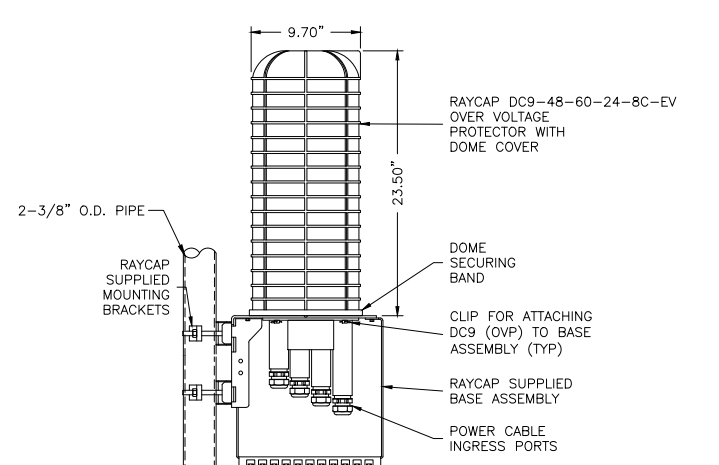
UNISTRUT SPRING BOLTS

DC50 RAYCAP BOX

(N) UNISTRUT

UNISTRUT P1000T, ANCHOR TO WALL W/ 1/2" HILTI KB-TZ MASONRY ANCHORS @ 24" O.C. (ICC ESR-3785). VERIFY SPACING W/ CABINET MOUNTING HOLES

UNISTRUT SPRING NUT AND BOLT HARDWARE



RAYCAP DC9-48-60-24-8C-EV OVER VOLTAGE PROTECTOR WITH DOME COVER

2-3/8" O.D. PIPE

RAYCAP SUPPLIED MOUNTING BRACKETS

9.70"

23.50"

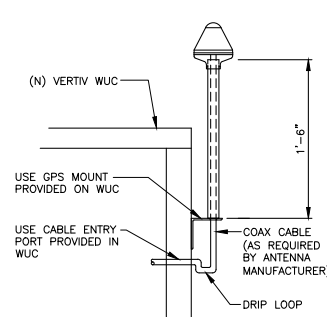
CLIP FOR ATTACHING DC9 (OVP) TO BASE ASSEMBLY (TYP)

RAYCAP SUPPLIED BASE ASSEMBLY

POWER CABLE INGRESS PORTS

CABLE TIE BAR

DOMES SECURING BAND



(N) VERTIV WUC

USE GPS MOUNT PROVIDED ON WUC

USE CABLE ENTRY PORT PROVIDED IN WUC

COAX CABLE (AS REQUIRED BY ANTENNA MANUFACTURER)

DRIP LOOP

1'-6"

**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.

**DC50 RAYCAP MOUNTING DETAIL** NOT TO SCALE **8**

**RAYCAP DC-9 DETAIL** NOT TO SCALE **5**

**GPS ANTENNA DETAIL** NOT TO SCALE **2**

**Data Sheet**

**Rosenberger**  
Rosenberger Site Solutions, LLC

Exterior Excess Fiber Cable Enclosure **FB-19-ABOX-4**



**DESCRIPTION**

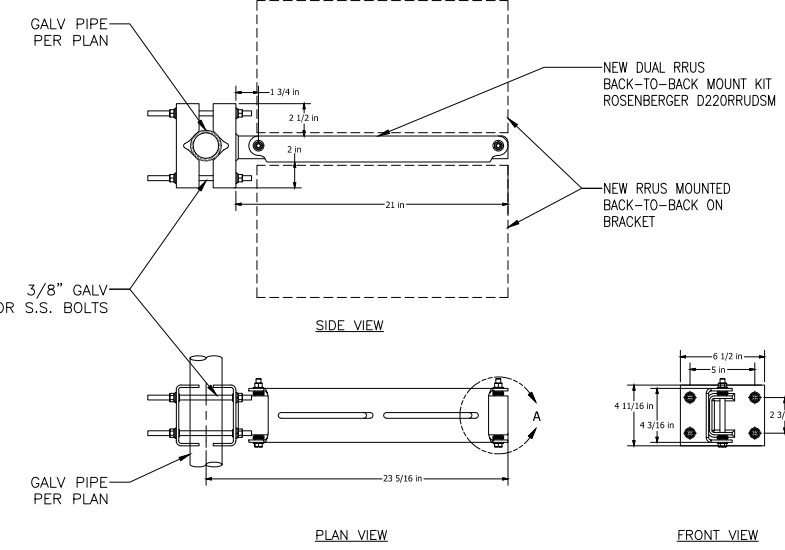
The RBS exterior excess fiber cable enclosure is designed for outdoor on-site storage of excess fiber cables when pre-connected 55or trunk cables are utilized. It is typically used in roof top applications to store excess fiber jumper cables. This aluminum enclosure can be wall, H-bracket or pipe mounted.

**SPECIFICATIONS**

- Size - 17" x 17" x 6.5" deep (plus mounting)
- Material - Aluminum, non-painted
- Protection - Weather protective
- Capacity - 60 meters of 10 mm Fiber trunk or 300 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" OD
- Weight - 12 lbs

Corporate Headquarters: Rosenberger Technologies GmbH & Co. KG  
P.O. Box 1065 D-48524 Wessling Germany  
Tel: +49 4854 18-0

Rosenberger Site Solutions, LLC  
102 Dupont Drive, Lake Charles, LA 70606  
Ph: +1 800 546 2500 Fax: 337 508 0200  
rsllc@rsllc.com www.rsllc.com Page 1 of 1



GALV PIPE PER PLAN

1 3/4 in

2 1/2 in

2 in

21 in

NEW DUAL RRUS BACK-TO-BACK MOUNT KIT ROSENBERGER D220RRUDSM

NEW RRUS MOUNTED BACK-TO-BACK ON BRACKET

3/8" GALV OR S.S. BOLTS

GALV PIPE PER PLAN

23 5/16 in

6 1/2 in

5 in

4 11/16 in

4 3/16 in

2 3/4 in

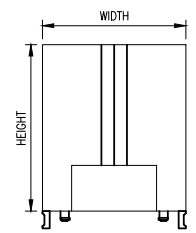
**PLAN VIEW**

**FRONT VIEW**

**SIZE AND WEIGHT TABLE**

RRH	WIDTH	DEPTH	HEIGHT W/O CABLE MANAGEMENT COVER	WEIGHT W/O BRACKET
RRUS 4449	13.19"	9.44"	17.9"	71 LBS
RRUS 4415	13.4"	5.9"	16.5"	46 LBS
RRUS 4478	13.4"	7.7"	16.5"	59.9 LBS
RRUS 8843	13.2"	10.9"	14.9"	72 LBS

**NOTE:** DIMENSIONS DO NOT INCLUDE MOUNTING BRACKET AND SOLAR SHIELD.



**FIBER MANAGEMENT BOX** NOT TO SCALE **9**

**ROSENBERGER D220RRUDSM MOUNT DETAIL** NOT TO SCALE **6**

**RRU DETAILS** NOT TO SCALE **3**

**EPIC**  
WIRELESS GROUP LLC  
Connecting a Wireless World  
605 COOLIDGE DRIVE, SUITE 100, FOLSOM, CA 95630

**at&t**  
mobility corp.

**CDG**  
22431 ANTONIO PKWY  
SUITE B160-131  
RANCHO SANTA MARGARITA CA 92688  
dconnell@connelldesigngroup.com  
949-306-4644

**CVL05830**  
BOWMEN  
3321 EL DORADO BLVD  
EL DORADO HILLS, CA 95762

**REVISIONS**

REV	DATE	DESCRIPTION	BY
3	08/28/24	95% CD	DC
2	08/14/24	95% CD	DC
1	07/22/24	95% CD	DC
0	06/11/24	90% CD	LE

**PROFESSIONAL STAMP**

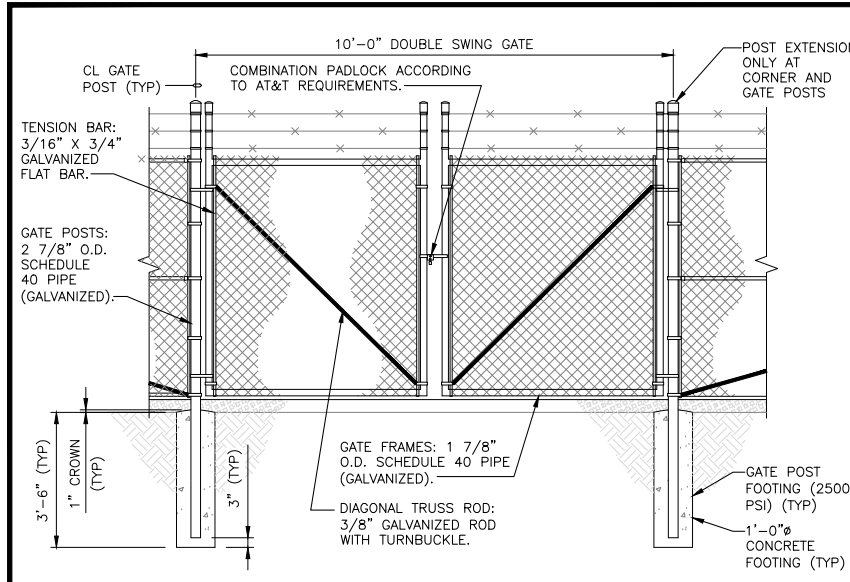
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**DETAILS**

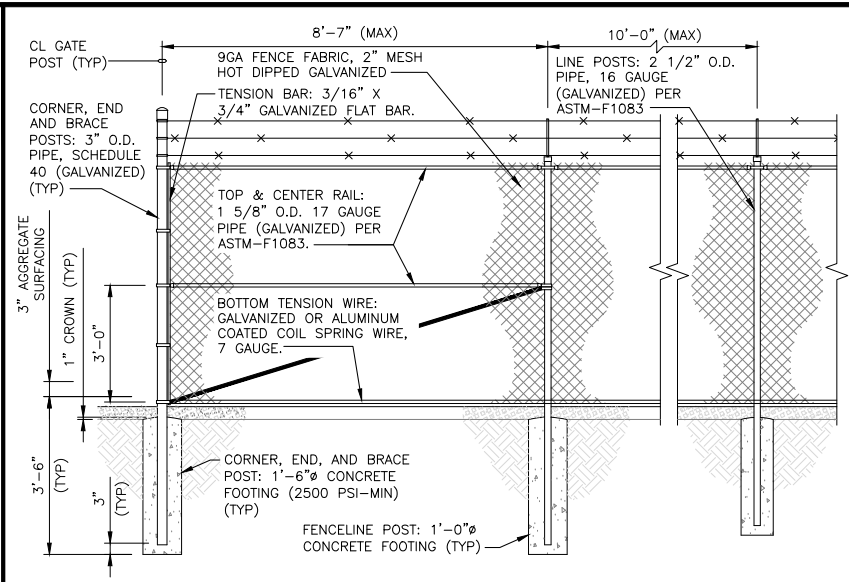
**SHEET**

**D-1**

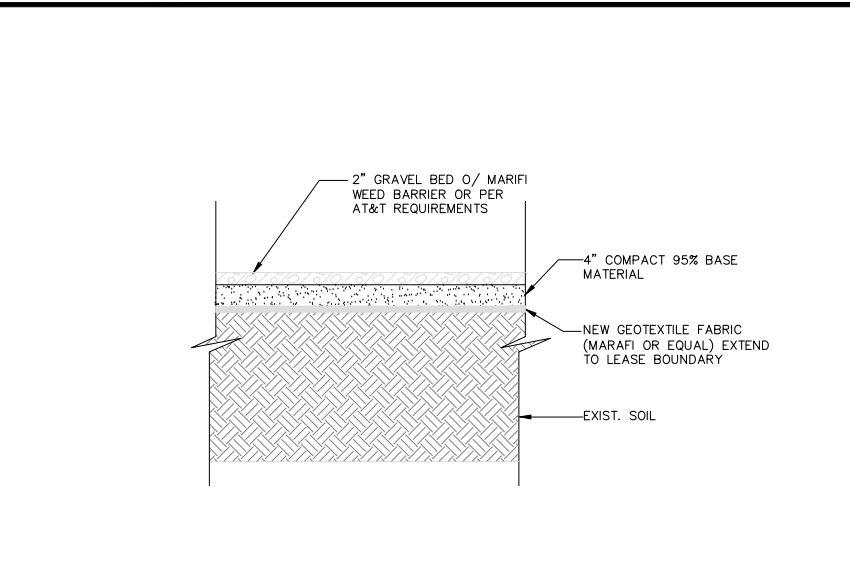




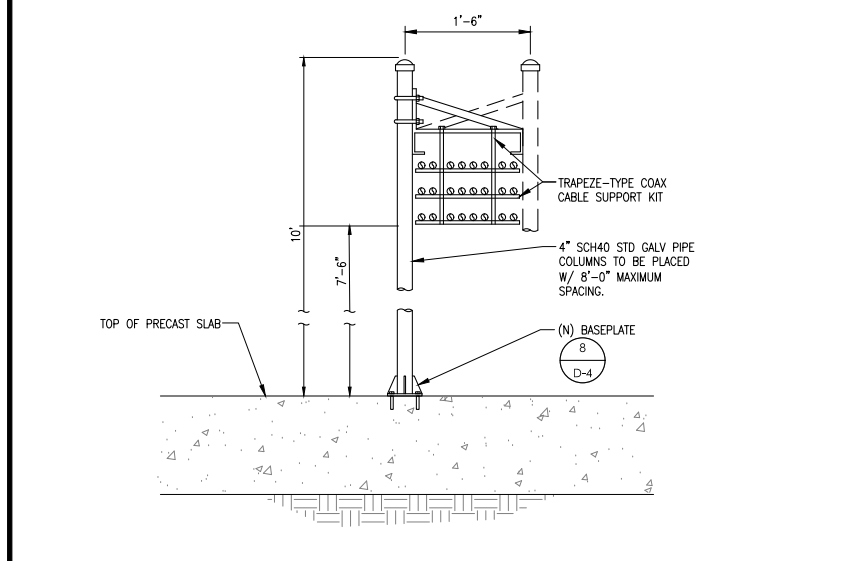
**CHAINLINK GATE** NOT TO SCALE 7



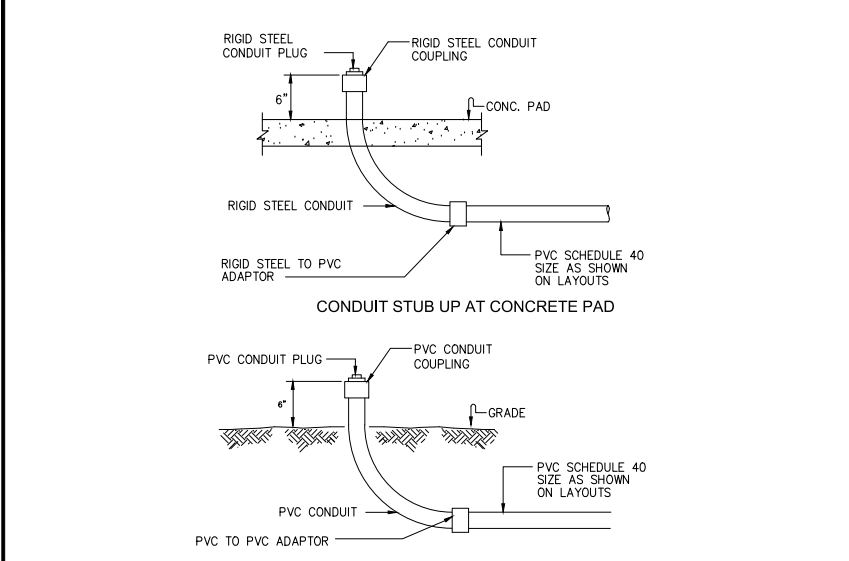
**CHAINLINK FENCE** NOT TO SCALE 4



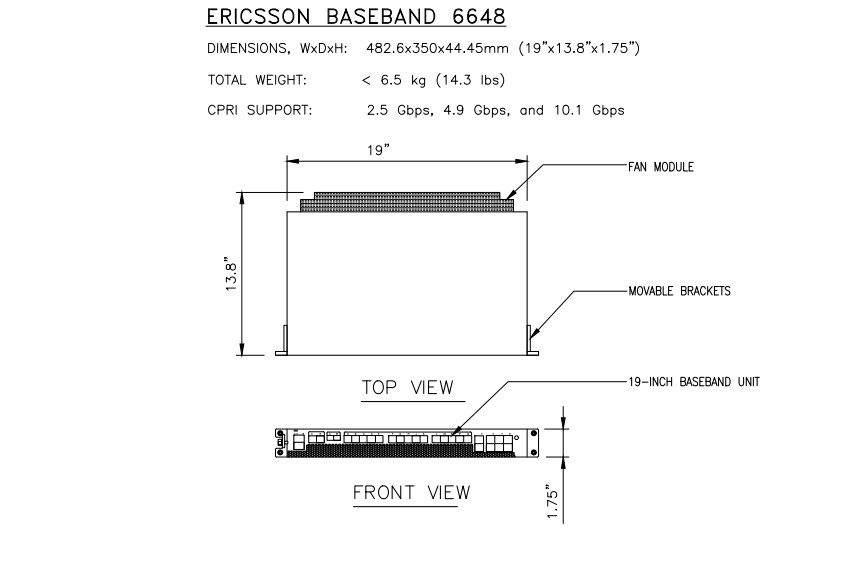
**GRAVEL FILL DETAIL** NOT TO SCALE 1



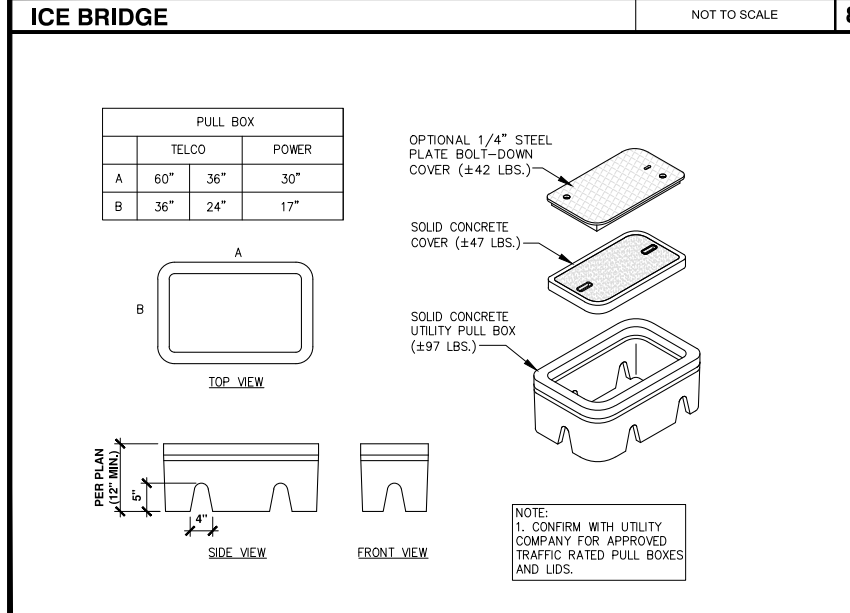
**ICE BRIDGE** NOT TO SCALE 8



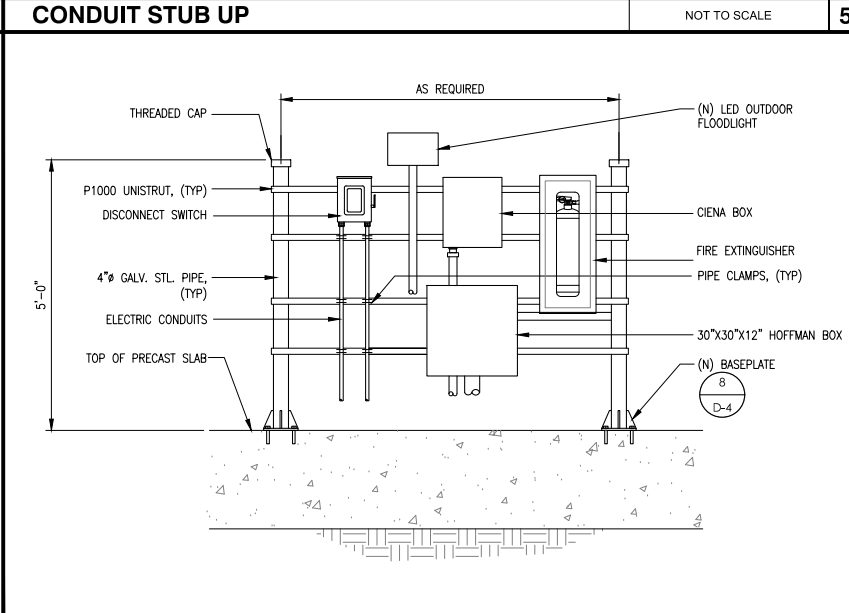
**CONDUIT STUB UP** NOT TO SCALE 5



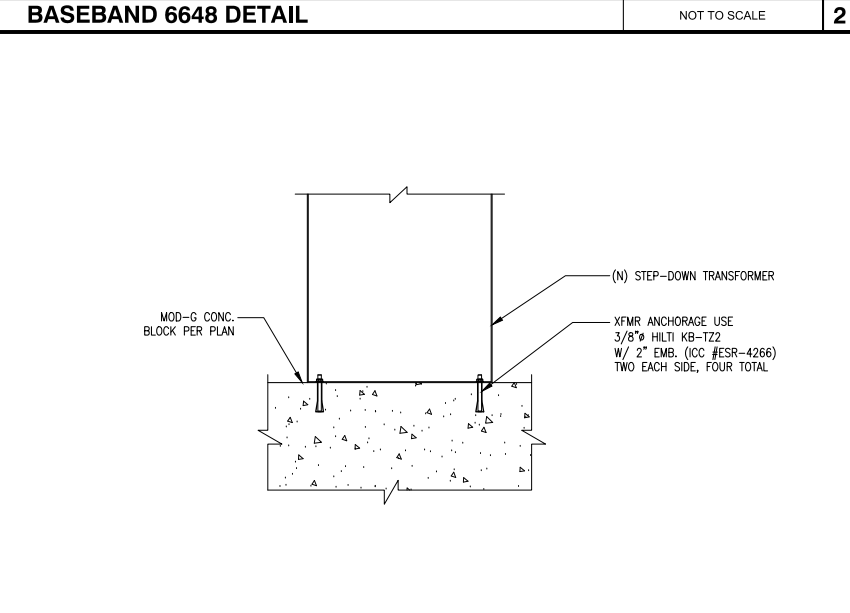
**BASEBAND 6648 DETAIL** NOT TO SCALE 2



**PULL BOX DETAIL** NOT TO SCALE 9



**UTILITY H-FRAME DETAIL** NOT TO SCALE 6



**TRANSFORMER MOUNTING DETAIL** NOT TO SCALE 3

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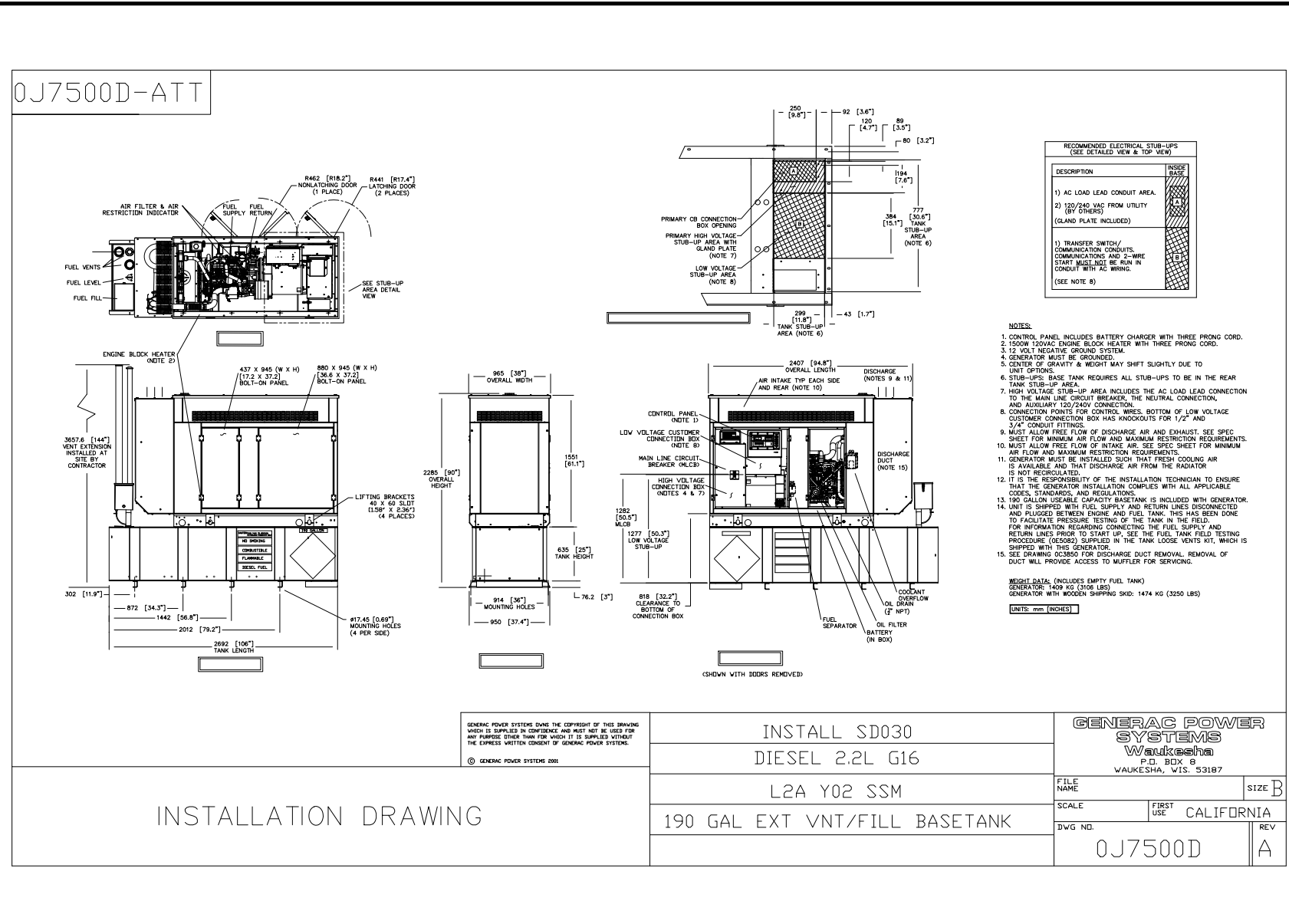
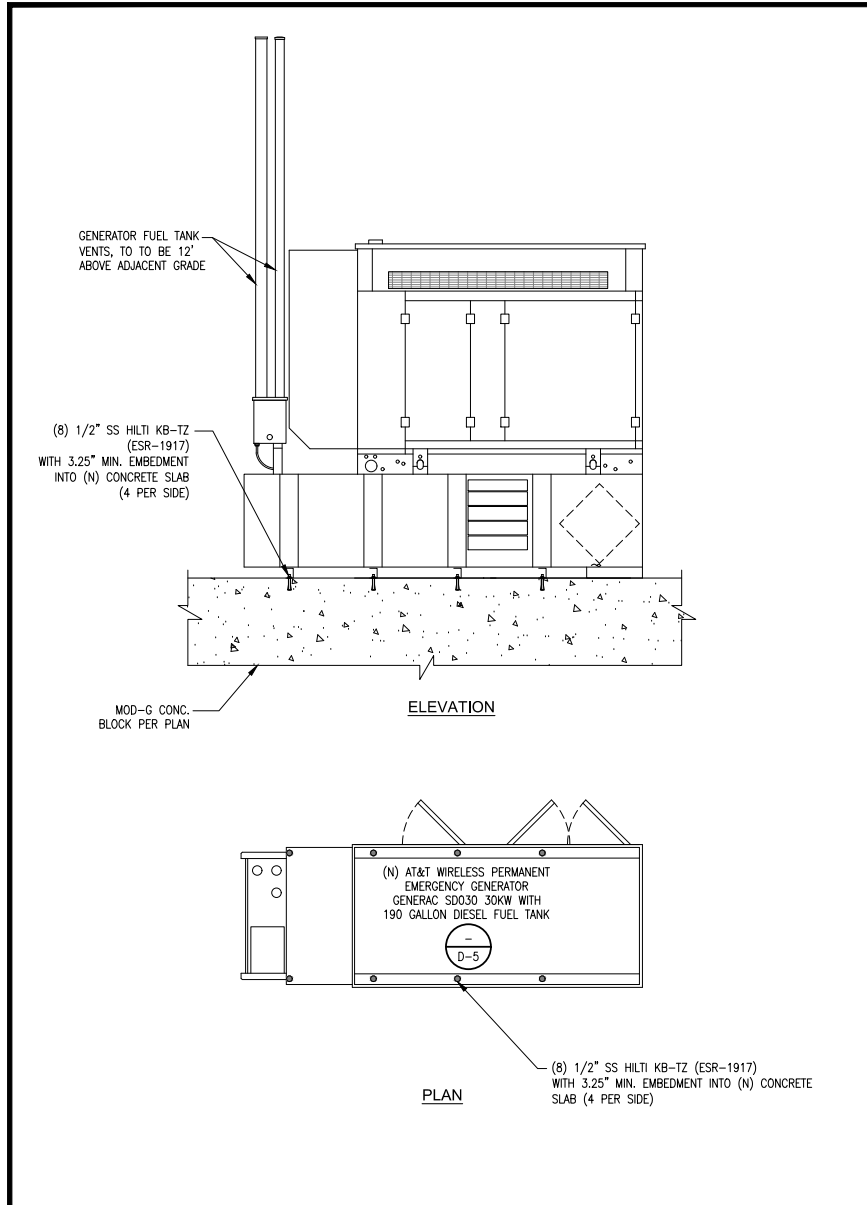
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3	08/28/24	95% CD	DC
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0	06/11/24	90% CD	LE

PROFESSIONAL STAMP

SHEET TITLE  
**DETAILS**

SHEET  
**D-2**



CONSULTANT

605 COOLIDGE DRIVE, SUITE 100, FOLSOM, CA 95630

APPLICANT

A/E FIRM

22431 ANTONIO PKWY SUITE B160-131 RANCHO SANTA MARGARITA CA 92688 dconnell@connelldesigngroup.com 949-306-4644

SITE INFORMATION

CVL05830  
BOWMEN  
3321 EL DORADO BLVD  
EL DORADO HILLS, CA 95762

DESIGN RECORD

REV	DATE	DESCRIPTION	BY
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2	08/14/24	95% CD	DC
1	07/22/24	95% CD	DC
0	06/11/24	90% CD	LE

GENERATOR DETAIL NOT TO SCALE 4

NOT USED NOT TO SCALE 5

GENERATOR FUEL TANK BASE NOT TO SCALE 1

NOT USED NOT TO SCALE 3

NOT USED NOT TO SCALE 2

PROFESSIONAL STAMP

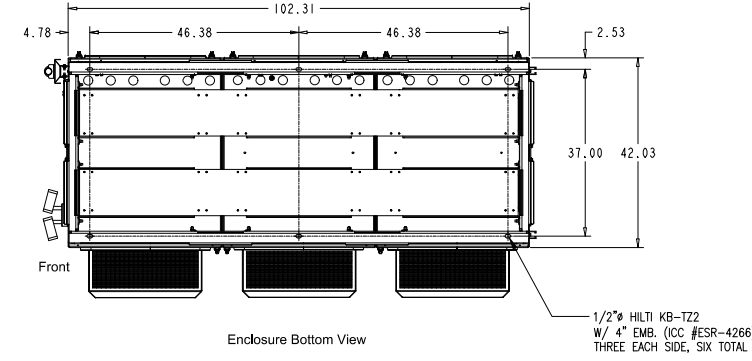
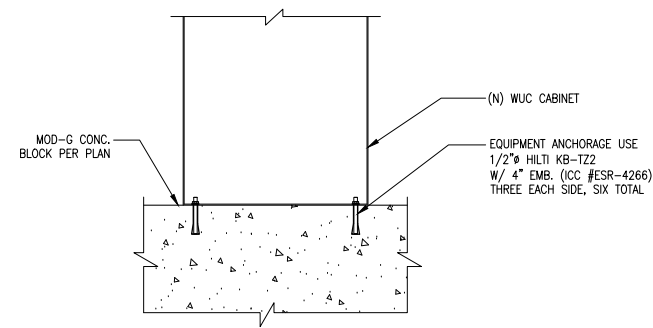
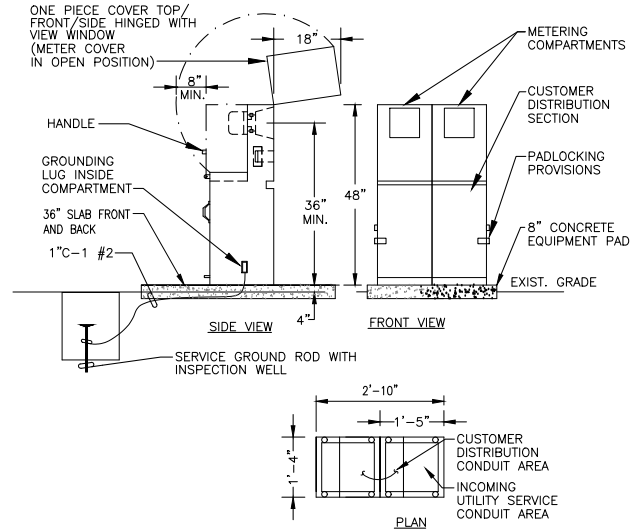
SHEET TITLE

DETAILS

SHEET

D-3



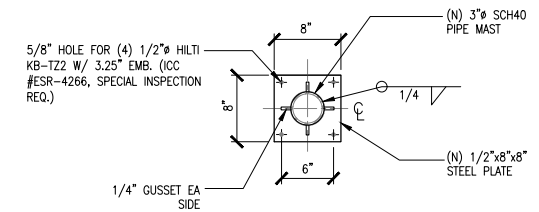


DUAL METER PEDESTAL

NOT TO SCALE 7

WUC MOUNTING DETAIL

NOT TO SCALE 4



UNIT: LARSON DRY TYPE TRANSFORMER  
MODEL: MT-ISX-3P-6000-45VA-4800-N3R  
HEIGHT: 25.5 INCHES  
DEPTH: 24.39 INCHES  
LENGTH: 19.37  
WEIGHT: 465 LBS  
SPECS: 1 PHASE, KVA 45, PRIMARY VOLTAGE 600, SECONDARY VOLTAGE 480V

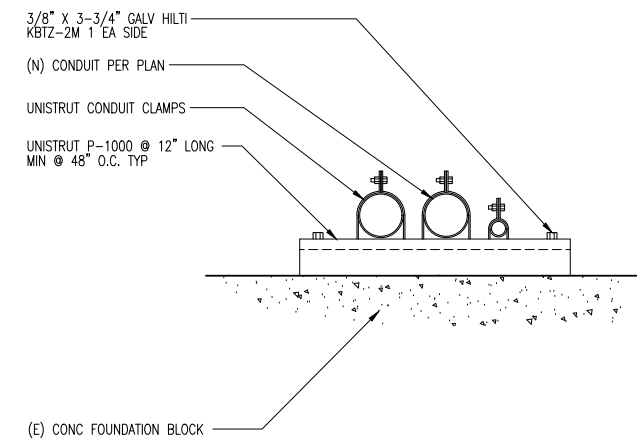
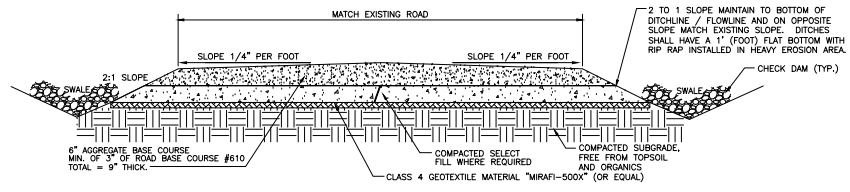


BASEPLATE DETAIL

NOT TO SCALE 8

TRANSFORMER DETAIL

NOT TO SCALE 5

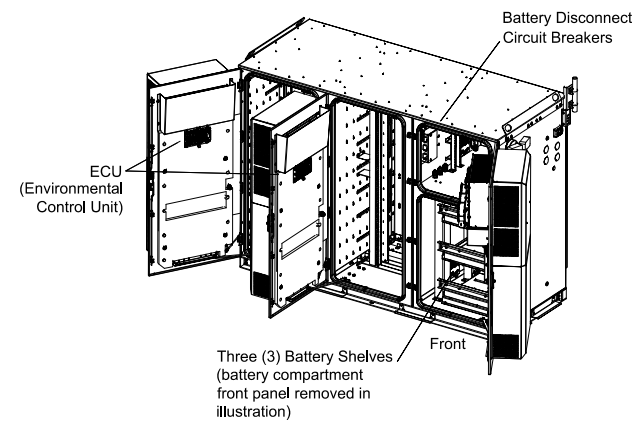
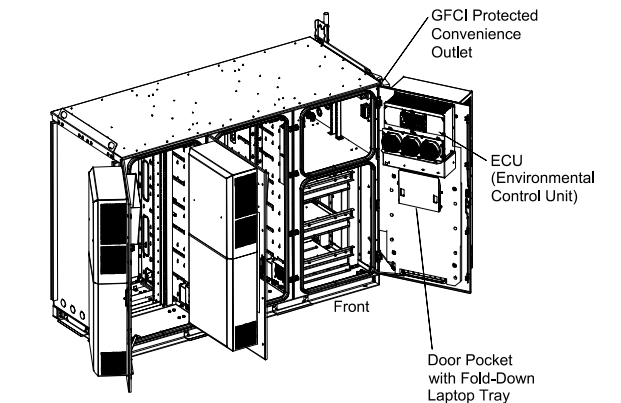


GRAVEL ROAD SECTION

NOT TO SCALE 9

CONDUIT AT CONCRETE FOUNDATION

NOT TO SCALE 6



WUC CABINET DETAIL

NOT TO SCALE 3

CONSULTANT  
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SHEET TITLE  
**DETAILS**

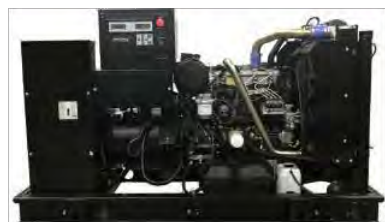
SHEET  
**D-4**

**SD030 | 2.2L | 30 kW**  
INDUSTRIAL DIESEL GENERATOR SET  
EPA Certified Stationary Emergency



**Standby Power Rating**  
30 kW, 38 kVA, 60 Hz

**Prime Power Rating\***  
27 kW, 34 kVA, 60 Hz



**Codes and Standards**

Not all codes and standards apply to all configurations. Contact factory for details.

- UL2200, UL6200, UL1236, UL489, UL142
- CSA C22.2, ULC S601
- BS5514 and DIN 6271
- SAE J1349
- NFPA 37, 70, 99, 110
- NEC700, 701, 702, 708
- ISO 3046, 7637, 8528, 9001
- NEMA ICS10, MG1, 260, ICS6, AB1
- ANSI C62.41

**Powering Ahead**

For over 60 years, Generac has provided innovative design and superior manufacturing.

Generac ensures superior quality by designing and manufacturing most of its generator components, including alternators, enclosures and base tanks, control systems and communications software.

Generac gensets utilize a wide variety of options, configurations and arrangements, allowing us to meet the standby power needs of practically every application.

Generac searched globally to ensure the most reliable engines power our generators. We choose only engines that have already been proven in heavy-duty industrial applications under adverse conditions.

Generac is committed to ensuring our customers' service support continues after their generator purchase.

**SD030 | 2.2L | 30 kW**  
INDUSTRIAL DIESEL GENERATOR SET  
EPA Certified Stationary Emergency



**STANDARD FEATURES**

**ENGINE SYSTEM**

- Oil Drain Extension
- Air Cleaner
- Level 1 Fan and Belt Guards (Open Set Only)
- Stainless Steel Flexible Exhaust Connection
- Factory Filled Oil and Coolant
- Radiator Duct Adapter (Open Set Only)
- Critical Silencer (Enclosed Unit Only)
- Engine Coolant Heater

**FUEL SYSTEM**

- Fuel Lockoff Solenoid
- Primary Fuel Filter

**COOLING SYSTEM**

- Closed Coolant Recovery System
- UV/Cure Resistant Hoses
- Factory-Installed Radiator
- Radiator Drain Extension
- 50/50 Ethylene Glycol Antifreeze

**ELECTRICAL SYSTEM**

- Battery Charging Alternator
- Battery Cables
- Battery Tray
- Rubber-Booted Engine Electrical Connections
- Solenoid Activated Starter Motor

**ALTERNATOR SYSTEM**

- UL2200 GEProtect™
- Class H Insulation Material
- 2/3 Rich
- Skewed Stator
- Brushless Excitation
- Sealed Bearing
- Rotor Dynamically Spin Balanced
- Amorfuser Winding (3-Phase Only)
- Full Load Capacity Alternator
- Protective Thermal Switch

**GENERATOR SET**

- Internal Genset Vibration Isolation
- Separation of Circuits - High/Low Voltage
- Separation of Circuits - Multiple Breakers
- Wrapped Exhaust Piping
- Standard Factory Testing
- 2 Year Limited Warranty (Standby Rated Units)
- 1 Year Limited Warranty (Prime Rated Units)
- Silencer Mounted in the Discharge Hood (Enclosed Unit Only)

**ENCLOSURE (If Selected)**

- Rust-Proof Fasteners with Nylon Washers to Protect Finish
- High Performance Sound-Absorbing Material (Sound Attenuation Enclosures)
- Gasketed Doors
- Upward Facing Discharge Hoods (Radiator and Exhaust)
- Stainless Steel LFR Oil Door Hinges
- Stainless Steel Lockable Handles
- RhinoCoat™ - Textured Polyester Powder Coat Paint

**FUEL TANKS (If Selected)**

- UL 142/ULC S601
- Double Wall
- Normal and Emergency Vents
- Stopped Top
- Stopped Bottom
- Factory Pressure Tested
- Rupture Basin Alarm
- Fuel Valve
- Check Valve in Supply and Return Lines
- RhinoCoat™ - Textured Polyester Powder Coat Paint
- Stainless Steel Hardware

**CONTROL SYSTEM**



**Digital H Control Panel-Dual 4x20 Display**

- Programmable Crank Limiter
- 7-Day Programmable Exerciser
- Special Applications Programmable Logic Controller
- RS-232/485 Communications
- All Phase Sensing Digital Voltage Regulator
- 2-Wire Start Capability
- Date/Time Fault History (Event Log)
- Inaudible Governor Control
- Waterproof/Sealed Connectors
- Audible Alarms and Shutdowns
- Not in Auto (Flashing Light)

**Auto/Off/Manual Switch**

- E-Stop (Red Mushroom-Type)
- NFPA110 Level I and II (Programmable)
- Customizable Alarms, Warnings, and Events
- Motus™ Protocol
- Predictive Maintenance Algorithm
- Password Parameter Adjustment Protection
- Single Point Ground
- 16 Channel Remote Trending
- 0.2 msec High Speed Remote Trending
- Alarm Information Automatically Annunciated on the Display

**Full System Status Display**

- Power Output (kW)
- Power Factor
- kW Hours, Total, and Last Run
- Real/Reactive/Apparent Power
- All Phase AC Voltage
- All Phase Currents
- Oil Pressure
- Coolant Temperature
- Coolant Level
- Engine Speed
- Battery Voltage
- Frequency

**Alarms and Warnings**

- Oil Pressure
- Coolant Temperature
- Coolant Level
- Engine Overtemp
- Battery Voltage
- Alarms and Warnings Time and Date Stamped
- Snap Shots of Key Operation Parameters During Alarms and Warnings
- Alarms and Warnings Spelled Out (No Alarm Codes)

**SD030 | 2.2L | 30 kW**  
INDUSTRIAL DIESEL GENERATOR SET  
EPA Certified Stationary Emergency



**CONFIGURABLE OPTIONS**

**ENGINE SYSTEM**

- Oil Heater
- Critical Silencer (Open Set Only)
- Radiator Stone Guard
- Level 1 Fan and Belt Guards (Enclosed Units Only)

**FUEL SYSTEM**

- NPT Flexible Fuel Line

**ELECTRICAL SYSTEM**

- 10A UL Listed Battery Charger
- Battery Warmer

**ALTERNATOR SYSTEM**

- Alternator Uploading
- Anti-Condensation Heater
- Tropical Coating
- Permanent Magnet Excitation

**GENERATOR SET**

- Extended Factory Testing
- 8 Position Load Center
- Pad Vibration Isolation

**ENGINEERED OPTIONS**

**ENGINE SYSTEM**

- Coolant Heater Isolation Ball Valves
- Fluid Containment Pan

**CONTROL SYSTEM**

- Spare Inputs (x4) / Outputs (x4)
- Battery Disconnect Switch

**CIRCUIT BREAKER OPTIONS**

- Main Line Circuit Breaker
- 2nd Main Line Circuit Breaker
- Short Trip and Auxiliary Contact
- Electronic Trip Breaker

**ENCLOSURE**

- Weather Protected Enclosure
- Level 1 Sound Attenuation
- Level 2 Sound Attenuation with Motorized Dampers
- Steel Enclosure
- Aluminum Enclosure
- Up to 200 MPH Wind Load Rating (Contact Factory for Availability)
- AC/DC Enclosure Lighting Kit
- Door Open Alarm Switch
- Enclosure Heater
- Damper Alarm Contacts

**WARRANTY (Standby Gensets Only)**

- 2 Year Extended Limited Warranty
- 5 Year Limited Warranty
- 5 Year Extended Limited Warranty
- 7 Year Extended Limited Warranty
- 10 Year Extended Limited Warranty

**CONTROL SYSTEM**

- NFPA 110 Compliant 21-Light Remote Annunciator
- Remote Relay Assembly (8 or 16)
- Oil Temperature Indication and Alarm
- Remote E-Stop (Break Glass-Type, Surface Mount)
- Remote E-Stop (Red Mushroom-Type, Flush Mount)
- Remote E-Stop (Red Mushroom-Type, Flush Mount)
- 100 dB Alarm Horn
- Ground Fault Annunciation
- 120V GFCI and 240V Outlets
- Remote Communication - Modem
- 10A Engine Run Relay

**FUEL TANKS (Size On Last Page)**

- 8 in (203.2 mm) Fill Extension
- 13 in (330.2 mm) Fill Extension
- 19 in (482.6 mm) Fill Extension
- Overflow Protection Valve
- 5 Gallon Spill Box Return Hose
- 5 Gallon Spill Box
- Tank Risers
- Fuel Level Switch and Alarm
- 12 Vent System
- Fire Rated Stainless Steel Fuel Hose

**SD030 | 2.2L | 30 kW**  
INDUSTRIAL DIESEL GENERATOR SET  
EPA Certified Stationary Emergency



**APPLICATION AND ENGINEERING DATA**

**ENGINE SPECIFICATIONS**

General		Cooling System	
Make	Perkins	Cooling System Type	Closed Recovery
EPA Emissions Compliance	Stationary Emergency	Water Pump Type	Pre-Labeled, Self Sealing
EPA Emissions Reference	See Emission Data Sheet	Fan Type	Pusher
Cylinder #	4	Fan Speed - RPM	1,850
Type	In-Line	Fan Diameter - in (mm)	18 (457)
Displacement - in <sup>3</sup> (L)	135 (2.22)	Fuel System	
Stroke - in (mm)	3.3 (84)	Fuel Type	Ultra Low Sulfur Diesel Fuel #2
Stroke - in (mm)	3.3 (84)	Fuel Specifications	ASTM
Compression Ratio	23.3:1	Fuel Filtering (Microns)	5
Intake Air Method	Turbocharged	Fuel Injection Pump	Distribution Injection Pump
Cylinder Head	Cast Iron	Fuel Pump Type	Engine Driven Gear
Platen Type	Aluminum	Injector Type	Mechanical
Crankshaft Type	Forged Steel	Fuel Supply Line - in (mm)	0.31 (7.9) ID
Engine Governing		Fuel Return Line - in (mm)	0.2 (4.8) ID
Governor	Electronic Isochronous	Engine Electrical System	
Frequency Regulation (Steady State)	±0.5%	System Voltage	12 VDC
Lubrication System		Battery Charger Alternator	Standard
Oil Pump Type	Gear	Battery Size	Star Battery Index 01619705BY
Oil Filter Type	Fab-Flow	Battery Voltage	12 VDC
Oil Change Capacity - qt (L)	11.2 (10.6)	Ground Polarity	Negative

**ALTERNATOR SPECIFICATIONS**

Standard Model		Standard Excitation		Synchronous Brushless	
Part No.	K0035124Y21	Bearings	Single Sealed		
Field Type	Revolving	Coupling	Direct via Flexible Disc		
Insulation Class - Rotor	H	Lead Capacity - Standby	100%		
Insulation Class - Stator	H	Prototype Short Circuit Test	Yes		
Total Harmonic Distortion	<5% (3-Phase Only)	Voltage Regulator Type	Digital		
Telephone Interference Factor (TIF)	<50	Number of Sensed Phases	All		
		Regulation Accuracy (Steady State)	±0.25%		

**SD030 | 2.2L | 30 kW**  
INDUSTRIAL DIESEL GENERATOR SET  
EPA Certified Stationary Emergency



**OPERATING DATA**

**POWER RATINGS**

		Standby	
Single-Phase 120/240 VAC @0.9pf	30 kW	Amps: 125	
Three-Phase 120/208 VAC @0.9pf	30 kW	Amps: 104	
Three-Phase 120/240 VAC @0.9pf	30 kW	Amps: 97	
Three-Phase 277/480 VAC @0.9pf	30 kW	Amps: 45	
Three-Phase 347/600 VAC @0.9pf	30 kW	Amps: 39	

**MOTOR STARTING CAPABILITIES (kVA)**

		skVA vs. Voltage Dip	
120/240 VAC 1Ø	30%	277/480 VAC 3Ø	30%
A005004W21	20	K0035124Y21	61
A005004W21	24	K0035124Y21	76
A005004W21	31	K0035124Y21	98
A005004W21	37	K0035124Y21	125

**FUEL CONSUMPTION RATES\***

Fuel Pump LFR - ft (m)		Diesel - gph (Lph)	
3 (1)	25%	1.0 (3.7)	
	50%	1.4 (5.2)	
	75%	2.0 (7.5)	
	100%	2.8 (10.5)	
Total Fuel Pump Flow (Combustion + Return) - gph (Lph)		* Fuel supply restriction must accommodate test consumption rates at 100% load.	
16.8 (63)			

**COOLING**

		Standby	
Coolant Flow	gpm (Lpm)	14.9 (56.2)	
Coolant System Capacity	gal (L)	2.5 (9.5)	
Heat Rejection to Coolant	BTU/hr (kW)	128,639 (136)	
Inlet Air	cfm (m <sup>3</sup> /hr)	2,800 (4,757)	
Maximum Operating Ambient Temperature	°F (°C)	122 (50)	
Maximum Operating Ambient Temperature (Before Derate)		See Bulletin No. 01982803SD	
Maximum Additional Radiator Backpressure	in H <sub>2</sub> O (kPa)	0.5 (0.12)	

**COMBUSTION AIR REQUIREMENTS**

		Standby	
Flow at Rated Power - cfm (m <sup>3</sup> /min)		68 (2.5)	

**ENGINE**

Standby		Exhaust	
Rated Engine Speed	RPM	1,800	Exhaust Flow (Rated Output)
Horsepower at Rated kW**	hp	46	cfm (m <sup>3</sup> /min)
Piston Speed	ft/min (m/min)	1,181 (360)	Max. Allowable Backpressure (Post Turbocharger)
BMEP	psi (kPa)	159 (1,095)	inHg (kPa)
			Exhaust Temperature (Rated Output)
			°F (°C)

\*\* Refer to "Emissions Data Sheet" for maximum bHP for EPA and SOGMD permitting purposes.

Derate - Operational characteristics consider maximum ambient conditions. Derate factors may apply under atypical site conditions.

Please contact a Generac Power Systems Industrial Dealer for additional details. All performance ratings in accordance with ISO3046, BS5514, ISO8528, and DNR8271 standards.

Standby - See Bulletin 0187503SD

Prime - See Bulletin 01875103SD

**SD030 | 2.2L | 30 kW**  
INDUSTRIAL DIESEL GENERATOR SET  
EPA Certified Stationary Emergency



**DIMENSIONS AND WEIGHTS\***

OPEN SET		L x W x H - in (mm)		Weight - lbs (kg)	
Run Time - Hours	Usable Capacity - Gall (L)			Enclosure Only	
No Tank	76.0 (1,920) x 37.4 (950) x 44.8 (1,138)	1,456 - 1,641 (661 - 745)			
19	54 (204)	76.0 (1,920) x 37.4 (950) x 57.8 (1,468)	1,836 - 2,121 (830 - 963)		
47	132 (500)	76.0 (1,920) x 37.4 (950) x 69.8 (1,773)	2,166 - 2,351 (983 - 1,067)		
67	190 (719)	76.0 (1,920) x 37.4 (950) x 79.3 (2,014)	2,380 - 2,565 (1,081 - 1,165)		
75	211 (799)	76.0 (1,920) x 37.4 (950) x 81.8 (2,078)	2,375 - 2,560 (1,078 - 1,162)		
107	300 (1,136)	92.9 (2,360) x 37.4 (950) x 85.3 (2,167)	2,438 - 2,623 (1,106 - 1,190)		

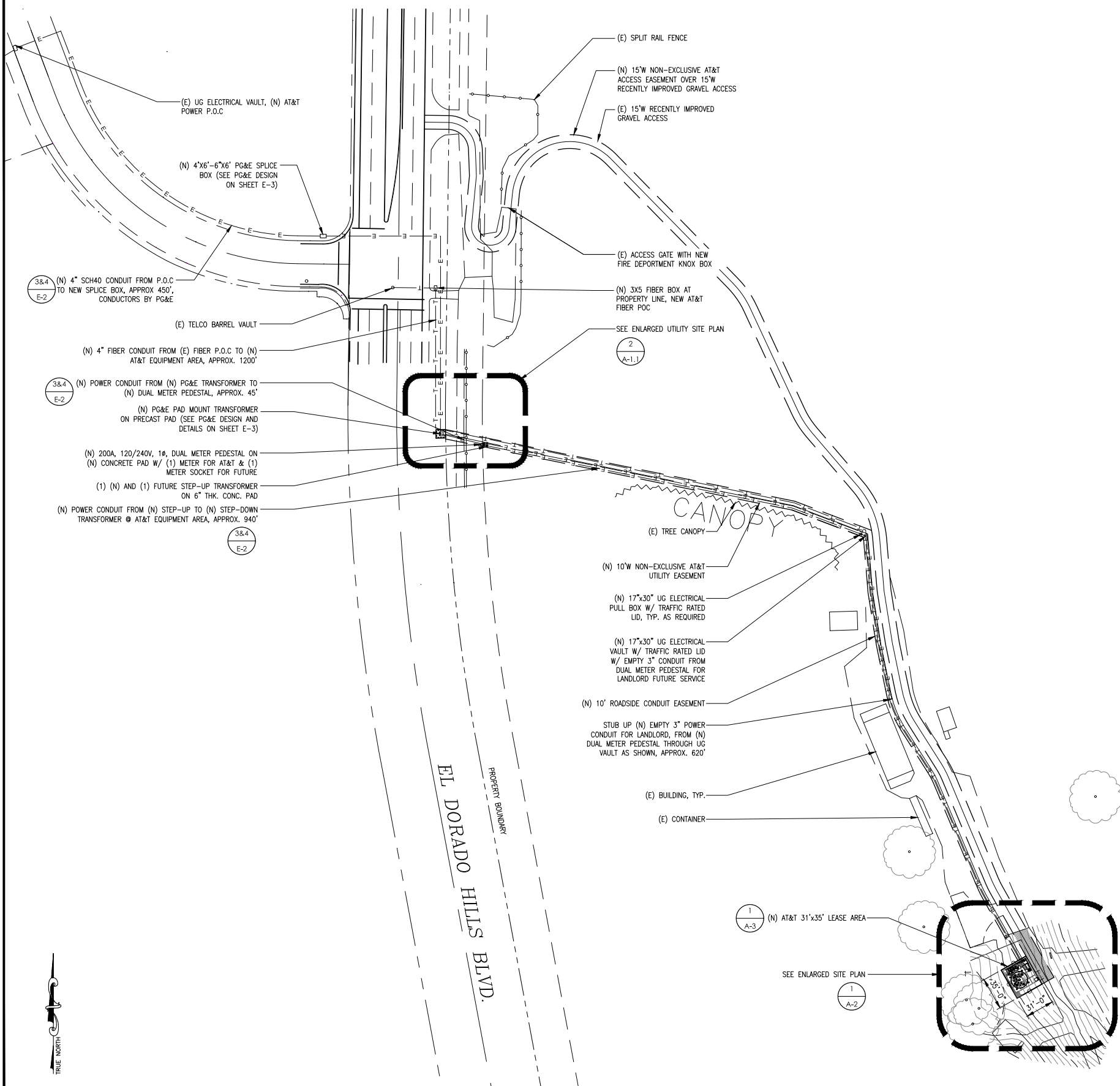
WEATHER PROTECTED ENCLOSURE		L x W x H - in (mm)		Weight - lbs (kg)	
Run Time - Hours	Usable Capacity - Gall (L)			Enclosure Only	
No Tank	94.8 (2,409) x 38.0 (965) x 49.5 (1,259)			Steel	Aluminum
19	54 (204)	94.8 (2,409) x 38.0 (965) x 62.5 (1,588)			
47	132 (500)	105.0 (2,692) x 38.0 (965) x 84.0 (2,134)	372 (169)	241 (109)	
67	190 (719)	94.8 (2,409) x 38.0 (965) x 84.0 (2,134)			
75	211 (799)	76.0 (1,920) x 38.0 (965) x 86.5 (2,198)			
107	300 (1,136)	92.9 (2,360) x 38.0 (965) x 90.0 (2,287)			

LEVEL 1 SOUND ATTENUATED ENCLOSURE		L x W x H - in (mm)		Weight - lbs (kg)	
Run Time - Hours	Usable Capacity - Gall (L)			Enclosure Only	
No Tank	112.5 (2,857) x 38.0 (965) x 48.5 (1,238)			Steel	Aluminum
19	54 (204)	112.5 (2,857) x 38.0 (965) x 62.5 (1,588)			
47	132 (5				



**ELECTRICAL NOTES**

1. SUBMITTAL OF BID INDICATES THAT THE CONTRACTOR IS COGNIZANT OF ALL JOB SITE CONDITIONS AND WORK TO BE PERFORMED UNDER THIS CONTRACT.
2. CONTRACTOR SHALL PERFORM ALL VERIFICATIONS, OBSERVATION TESTS, AND EXAMINATION WORK PRIOR TO ORDERING OF ANY EQUIPMENT AND THE ACTUAL CONSTRUCTION. CONTRACTOR SHALL ISSUE A WRITTEN NOTICE OF ALL FINDINGS TO THE PROJECT MANAGER LISTING ALL MALFUNCTIONS, FAULTY EQUIPMENT AND DISCREPANCIES.
3. VERIFY HEIGHTS WITH PROJECT MANAGER PRIOR TO INSTALLATION.
4. THESE PLANS ARE DIAGRAMMATIC ONLY, FOLLOW AS CLOSELY AS POSSIBLE.
5. CONTRACTOR SHALL COORDINATE ALL WORK BETWEEN TRADES AND ALL OTHER SCHEDULING AND PROVISIONARY CIRCUMSTANCES SURROUNDING THE PROJECT.
6. CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS, INSURANCE, EQUIPMENT, INSTALLATION CONSTRUCTION TOOLS, TRANSPORTATION, ETC., FOR COMPLETE AND FUNCTIONALLY OPERATING SYSTEMS ENERGIZED AND READY FOR USE THROUGHOUT AS INDICATED ON DRAWINGS, AS SPECIFIED HEREIN AND/OR AS OTHERWISE REQUIRED.
7. ALL MATERIALS AND EQUIPMENT SHALL BE NEW AND IN PERFECT CONDITION WHEN INSTALLED AND SHALL BE OF THE BEST GRADE AND OF THE SAME MANUFACTURER THROUGHOUT FOR EACH CLASS OR GROUP OF EQUIPMENT. ELECTRICAL MATERIALS SHALL BE LISTED AND APPROVED BY UNDERWRITER'S LABORATORIES AND SHALL BEAR THE INSPECTION LABEL "J" WHERE SUBJECT TO SUCH APPROVAL. MATERIALS SHALL MEET WITH APPROVAL OF ALL GOVERNING BODIES HAVING JURISDICTION OVER THE CONSTRUCTION. MATERIALS SHALL BE MANUFACTURED IN ACCORDANCE WITH ALL CURRENT APPLICABLE STANDARDS ESTABLISHED BY ANSI, NEMA AND NBFU. ALL MATERIALS AND EQUIPMENT SHALL BE APPROVED FOR THEIR INTENDED USE AND LOCATION.
8. ALL WORK SHALL COMPLY WITH ALL APPLICABLE GOVERNING STATE, COUNTY AND CITY CODES AND OSHA, NFPA, NEC & ASHRAE REQUIREMENTS.
9. ENTIRE JOB SHALL BE GUARANTEED FOR A PERIOD OF ONE (1) YEAR AFTER THE DATE OF JOB ACCEPTANCE. ALL WORK, MATERIAL AND EQUIPMENT FOUND TO BE FAULTY DURING THAT PERIOD SHALL BE CORRECTED AT ONCE, UPON WRITTEN NOTIFICATION, AT THE EXPENSE OF THE CONTRACTOR.
10. PROPERLY SEAL ALL PENETRATIONS. PROVIDE UL LISTED FIRE-STOPS WHERE PENETRATIONS ARE MADE THROUGH FIRE-RATED ASSEMBLIES. WATER-TIGHT USING SILICONE SEALANT.
11. DELIVER ALL BROCHURES, OPERATING MANUALS, CATALOGS AND SHOP DRAWINGS TO THE PROJECT MANAGER AT JOB COMPLETION. PROVIDE MAINTENANCE MANUALS FOR MECHANICAL EQUIPMENT. AFFIX MAINTENANCE LABELS TO MECHANICAL EQUIPMENT.
12. ALL CONDUCTORS SHALL BE COPPER. MINIMUM CONDUCTOR SIZE SHALL BE #12 AWG., UNLESS OTHERWISE NOTED. CONDUCTORS SHALL BE TYPE THHW, RATED IN ACCORDANCE WITH NEC 110-14(C).
13. ALL CIRCUIT BREAKERS, FUSES AND ELECTRICAL EQUIPMENT SHALL HAVE AN INTERRUPTING RATING NOT LESS THE MAXIMUM INTERRUPTING CURRENT TO WHICH THEY MAY BE SUBJECTED.
14. THE ENTIRE ELECTRICAL INSTALLATION SHALL BE GROUNDED IN ACCORDANCE WITH THE CALIFORNIA ELECTRICAL CODE; ARTICLES 250 & 810 AND THE UTILITY COMPANY STANDARDS.
15. CONDUIT:
  - A. RIGID CONDUIT SHALL BE U.L. LABEL GALVANIZED ZINC COATED WITH ZINC INTERIOR AND SHALL BE USED WHEN INSTALLED IN OR UNDER CONCRETE SLABS, IN CONTACT WITH THE EARTH, UNDER PUBLIC ROADWAYS, IN MASONRY WALLS OR EXPOSED ON BUILDING EXTERIOR. RIGID CONDUIT IN CONTACT WITH EARTH SHALL BE 1/2 LAPPED WRAPPED WITH HUNTS WRAP PROCESS NO. 3.
  - B. ELECTRICAL METALLIC TUBING SHALL HAVE U.L. LABEL, FITTINGS SHALL BE GLAND RING COMPRESSION TYPE. EMT SHALL BE USED ONLY FOR INTERIOR RUNS.
  - C. LIQUID-TIGHT FLEXIBLE METAL CONDUIT SHALL BE U.L. LISTED AND SHALL BE USED AT FINAL CONNECTIONS TO MECHANICAL EQUIPMENT & RECTIFIERS AND WHERE PERMITTED BY CODE. ALL CONDUIT IN EXCESS OF SIX FEET IN LENGTH SHALL CONTAIN A FULL-SIZE GROUND CONDUCTOR.
  - D. CONDUIT RUNS SHALL BE SURFACE MOUNTED ON CEILINGS OR WALLS UNLESS NOTED OTHERWISE. ALL CONDUIT SHALL RUN PARALLEL OR PERPENDICULAR TO WALLS, FLOOR, CEILING, OR BEAMS. VERIFY EXACT ROUTING OF ALL EXPOSED CONDUIT WITH THE PROJECT MANAGER PRIOR TO INSTALLING.
  - E. PVC CONDUIT MAY BE PROVIDED ONLY WHERE SHOWN, OR IN UNDERGROUND INSTALLATIONS. PROVIDE UV-RESISTANT CONDUIT WHERE EXPOSED TO THE ATMOSPHERE. PROVIDE GROUND CONDUCTOR IN ALL PVC RUNS; EXCEPT WHERE PERMITTED BY CODE TO OMIT.
17. ALL ELECTRICAL EQUIPMENT SHALL BE LABELED WITH PERMANENT ENGRAVED PLASTIC LABELS. BACKGROUND SHALL BE BLACK WITH WHITE LETTERS; EXCEPT AS REQUIRED BY CODE TO FOLLOW A DIFFERENT SCHEME.
18. UPON COMPLETION OF WORK, CONDUCT CONTINUITY, SHORT CIRCUIT, AND FALL OF POTENTIAL GROUNDING TESTS FOR APPROVAL. SUBMIT TEST REPORTS TO PROJECT MANAGER. GROUNDING SYSTEM RESISTANCE SHALL NOT EXCEED 5 OHMS. IF THE RESISTANCE VALUE IS EXCEEDED, NOTIFY THE PROJECT MANAGER FOR FURTHER INSTRUCTION ON METHODS FOR REDUCING THE RESISTANCE VALUE.
19. CLEAN PREMISES OF ALL DEBRIS RESULTING FROM WORK AND LEAVE WORK IN A COMPLETE AND UNDAMAGED CONDITION. LEGALLY DISPOSE OF ALL REMOVED, UNUSED AND EXCESS MATERIAL GENERATED BY THE WORK OF THIS CONTRACT. DELIVER ITEMS INDICATED ON THE DRAWINGS TO THE OWNER IN GOOD CONDITION. OBTAIN SIGNED RECEIPT UPON DELIVERY.
20. COORDINATE WITH UTILITY COMPANY FOR CONNECTION OF TEMPORARY AND PERMANENT POWER TO THE SITE. THE TEMPORARY POWER AND ALL HOOKUP COSTS SHALL BE PAID BY THE CONTRACTOR.
21. VERIFY ALL EXISTING CIRCUITRY PRIOR TO REMOVAL AND NEW WORK. MAINTAIN POWER TO ALL OTHER AREAS & CIRCUITS NOT SCHEDULED FOR REMOVAL.
22. RED LINED AS-BUILT PLANS SHALL BE PROVIDED TO THE CONSTRUCTION MANAGER.



CONSULTANT

WIRELESS GROUP LLC  
Connecting a Wireless World  
605 COOLIDGE DRIVE, SUITE 100, FOLSOM, CA 95630

APPLICANT

at&t  
mobility corp.

A/E FIRM

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22431 ANTONIO PKWY  
SUITE B160-131  
RANCHO SANTA MARGARITA CA 92688  
dconnell@connelldesigngroup.com  
949-306-4644

SITE INFORMATION

CVL05830  
BOWMEN  
3321 EL DORADO BLVD  
EL DORADO HILLS, CA 95762

DESIGN RECORD

REV	DATE	DESCRIPTION	BY
3	08/28/24	95% CD	DC
2	08/14/24	95% CD	DC
1	07/22/24	95% CD	DC
0	06/11/24	90% CD	LE

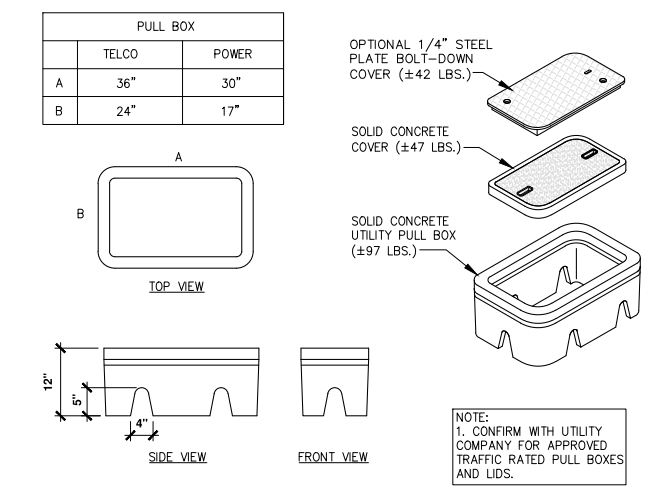
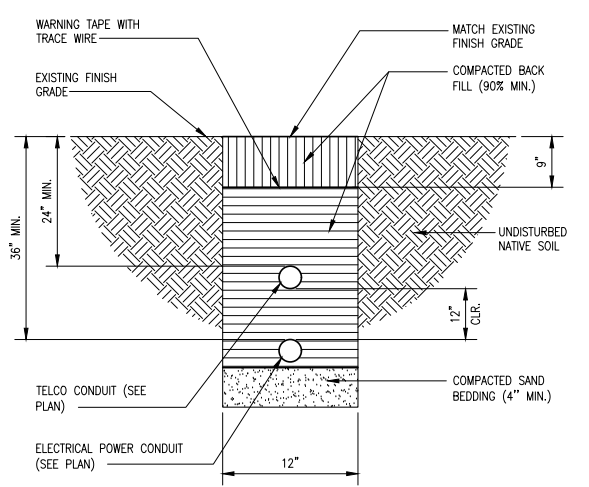
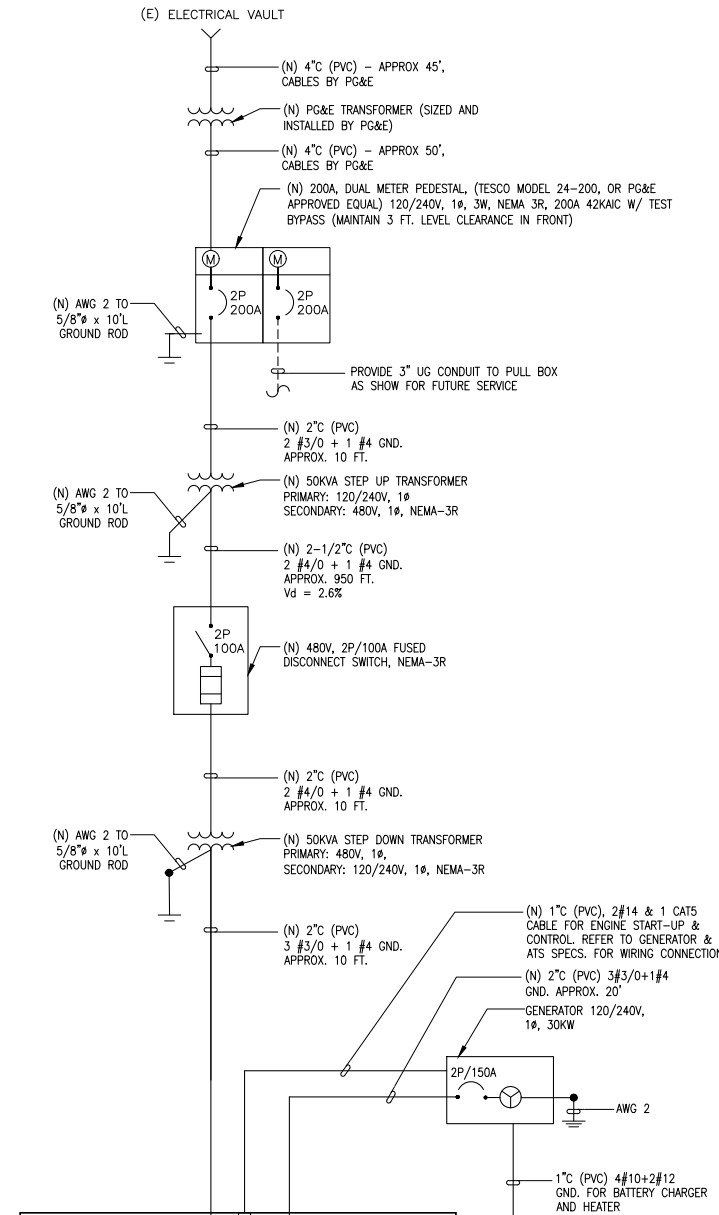
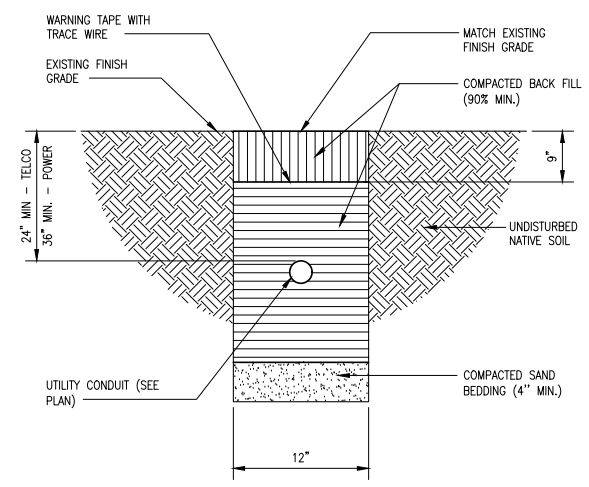
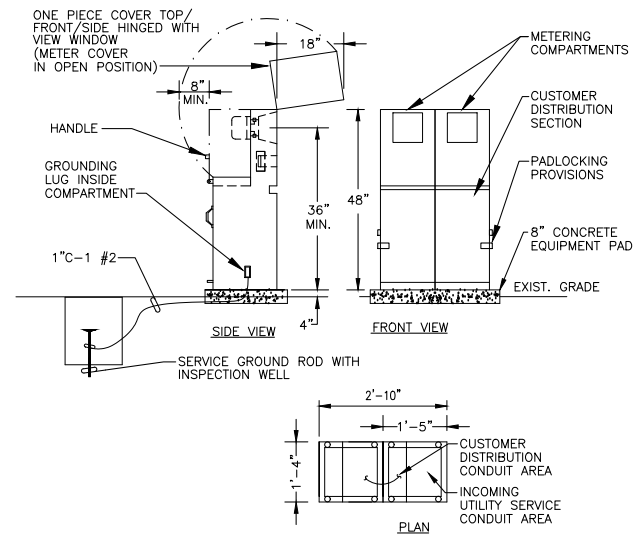
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SHEET TITLE

ELECTRICAL SITE PLAN AND NOTES

SHEET

E-1



DUAL METER PEDESTAL

NO SCALE 6

TRENCH DETAIL

4

PANEL 'A' SCHEDULE											
120/240V, 1 PHASE, 3W 200A BUS, 42 KMAC						INTERSECT # AA-G-1220042-3R-CL-L 200A MAIN BKR (COMMERCIAL PWR) 42 KAIC SERIES RATED UL LISTED SERVICE ENTRANCE EQUIPMENT					
MAIN BREAKER RATING (A):				SYSTEM VOLTAGE (V):							
DESCRIPTION	VA	chc	BKR	POSN	L1	L2	POSN	BKR	chc	VA	DESCRIPTION
RECTIFIER #1/2	2100	C	30	1	2300	2	20	C	200	200	LIGHTING
RECTIFIER #3/4	2100	C	30	3	2580	4	20	C	200	200	G.F.C.I. (W.P.)
RECTIFIER #5/6	2100	C	30	5	2700	6	20	C	480	600	GEN BAT CHARGER
RECTIFIER #7/8	2100	C	30	7	2100	8	20	C	600	600	GENERATOR HEATER
RECTIFIER #9/10	2100	C	30	9	2100	10					
RECTIFIER #11/12	2100	C	30	11	2100	12					
RECTIFIER #13/14	2100	C	30	13	2100	14					
RECTIFIER #15/16	2100	C	30	15	2100	16					
SPACE				17	2100	18					
SPACE				19	2100	20					
SPACE				21	2100	22					
SPACE				23	2100	24					
SPACE				25	2100	26					
SPACE				27	2100	28					
SPACE				29	2100	30					
SPACE				31	2100	32					
SPACE				33	0	34					
SPACE				35	0	36					
SPACE				37	0	38					
SPACE				39	0	40					
SPACE				41	0	42	30	C	-	-	SURGE ARRESTOR
PHASE TOTALS (VA):				17480	17600						
CURRENT PER PHASE (A):				72.8	73.3	Amperes/phase cannot exceed main breaker rating					
PANEL TOTAL (VA):				35080				Legend: c = continuous, nc = non-continuous			
PANEL CAPACITY (kVA):				48.0							
PANEL LOADING (100% non-cont. load) (kVA):				0							
PANEL LOADING (125% continuous load) (kVA):				43.85							
PANEL LOADING (TOTAL) (kVA):				43.85							
SPARE CAPACITY (kVA):				4.15							

PANEL SCHEDULE

NO SCALE 5

PULL BOX DETAIL

NO SCALE 3

SINGLE LINE DIAGRAM

NO SCALE 1

**EPIC**  
WIRELESS GROUP LLC  
Connecting a Wireless World  
605 COOLIDGE DRIVE, SUITE 100, FOLSOM, CA 95630

**at&t**  
mobility corp.

**CDG**  
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**CVL05830**  
BOWMEN  
3321 EL DORADO BLVD  
EL DORADO HILLS, CA 95762

REVISIONS			
REV	DATE	DESCRIPTION	BY
3	08/28/24	95% CD	DC
2	08/14/24	95% CD	DC
1	07/22/24	95% CD	DC
0	06/11/24	90% CD	LE

PROFESSIONAL STAMP


SHEET TITLE  
**SINGLE LINE, PANEL SCHEDULE & NOTES**

SHEET  
**E-2**



CUP23-0009 Bowman Telecommunications Facility  
Exhibit E: Site Plan and Elevations

**Tesco CONTROLS, INC. MODEL 24-200**  
TESCOFLEX™ DUAL METER SERVICE UTILITY PEDESTAL



Features:

- Built to UL 508A standards
- Right Hand or Left hand hinge
- May be rated at 100 amp or 200 amp
- Small, low profile and attractive with no exposed fasteners
- Self contained
- Meets IULSIC Requirements (Electric Utility Service Equipment Requirements Committee)
- Built to UL 508A Standards

Specifications:

- No exposed fasteners
- Hand-poured galvanized aluminum or stainless steel
- Double #4-welded construction
- UL approved copper cable busbar and control wiring
- Chain breakers cabinet cable-cut type
- Custom colors available
- Additional sections may be added to house more components
- Additional options for vandalism protection available

Component Options:

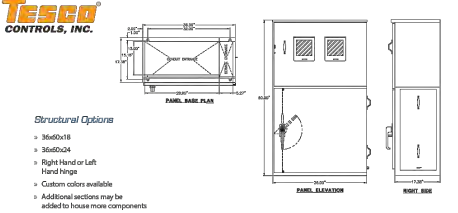
- Breakers
- Time clocks
- Time delay
- Motor controls
- Fans
- Heaters
- Thermostats
- Terminal blocks
- Flasher controls
- Receivers
- Generator receptacles
- Transformers
- Transfer switches

Applications:

- Airport Beacon Systems
- Address/Field/Outdoor Lighting
- CATV termination
- Cellular
- Raising Beacon Controls
- Landscape Irrigation
- Parking Lot Lighting
- Residential Applications
- Sign Lighting
- Street Lighting
- Storm Water Lift Stations
- Traffic Control Lighting & Control
- Traffic Signals
- Waste Water Lift Stations
- Water Pumping Plants

Tesco Controls, Inc. Corporate Office | 8440 Florin Road, Sacramento, CA 95828 | 916.395.6800 | www.TescoControls.com

**Tesco CONTROLS, INC. MODEL 24-200**  
TESCOFLEX™ DUAL METER SERVICE UTILITY PEDESTAL



Structural Options:

- 36x60x18
- 36x60x24
- Right Hand or Left Hand Hinge
- Custom colors available
- Additional sections may be added to house more components
- Additional options for vandalism protection available

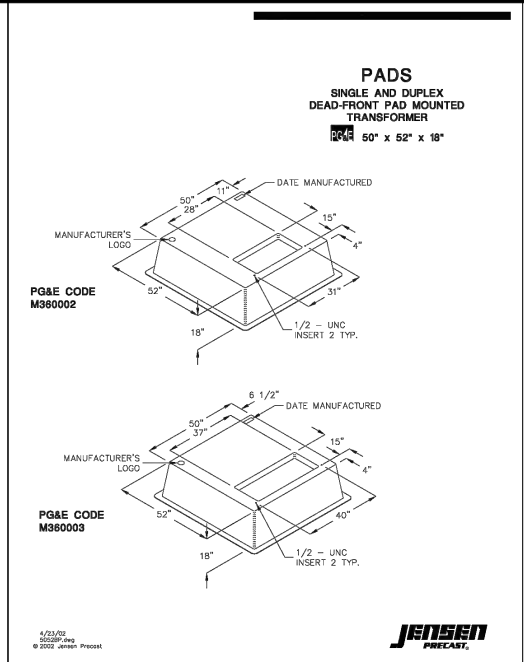
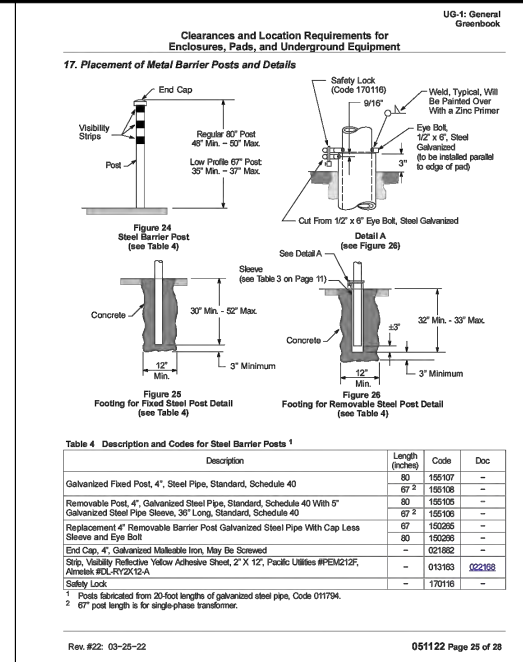
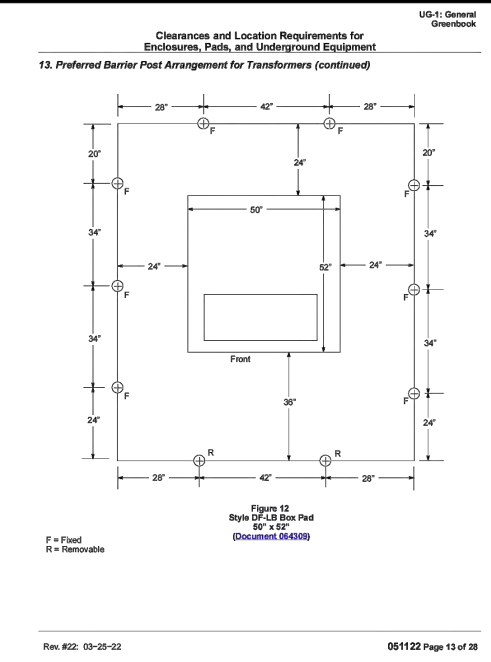
Specifications:

- Main breakers shall be 1, 2 or 3 pole
- May be rated 120-volt up to 480-volt
- Single or three phase
- May be rated at 100 amp or 200 amp
- Continuous welded seams
- Fully formed side-hinged outer door for flush fit with top drip lip & closed air recapture flange compressed gaskets
- Separate pull section
- Service enclosure interior is fabricated from cold rolled steel & powder coated white
- Full length deadfront with stainless steel hinge and lock turn latch & knurled knobs
- Deadfront hinged on same side as the front door and opens up to 120 degrees
- Completely pre-wired in the factory
- Wiring will be to NEMA 3B standards showing external connections & external equipment

Customer options are available. Contact Tesco Controls, Inc. for more information:  
916-991-6800 | sales@tescocontrols.com | www.tescocontrols.com | 8440 Florin Road, Sacramento, CA 95828

24-200 TESCOFLEX™ DUAL METER SERVICE UTILITY PEDESTAL

Enclosure Catalog Number	Enclosure Size W x H x D (inches)	1988 Revision
24-200-01	36 x 60 x 18	01/02
24-200-02	36 x 60 x 24	01/02
24-200-03	36 x 60 x 30	01/02



CONSULTANT

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SITE INFORMATION

**CVL05830**  
BOWMEN  
3321 EL DORADO BLVD  
EL DORADO HILLS, CA 95762

DESIGN RECORD

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PROFESSIONAL STAMP

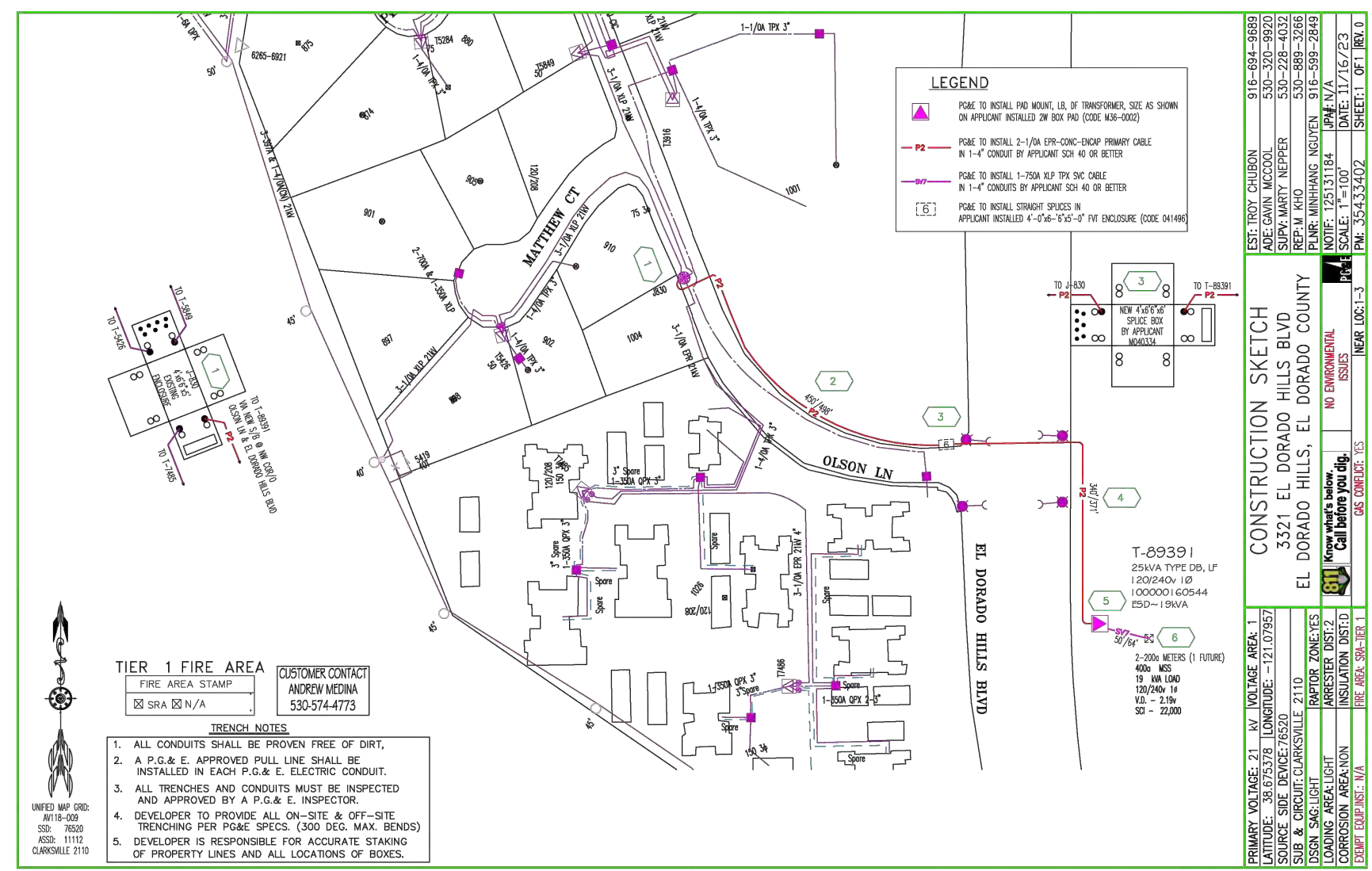
DESIGN BY OTHERS, FOR REFERENCE ONLY

SHEET TITLE

PG&E POWER DESIGN AND DETAILS

SHEET

E-3



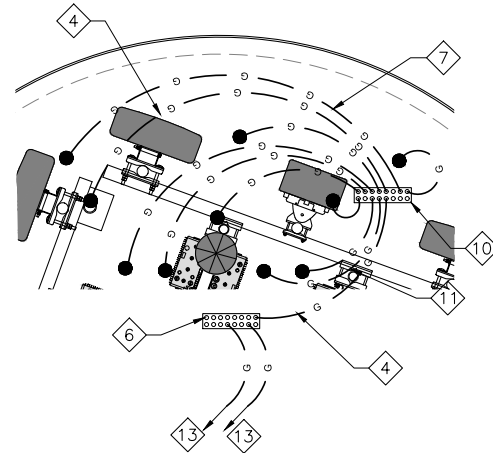
**GROUNDING LEGEND**

- EXOTHERMIC WELD CONNECTION
- COMPRESSION FITTING CONNECTION
- 5/8"x10" COPPER-CLAD STEEL GROUND ROD
- ⊙ 5/8"x10" COPPER-CLAD STEEL GROUND ROD WITH INSPECTION WELL
- PROPOSED GROUND WIRING
- - - EXISTING GROUND WIRING
- ▨ TINNED COPPER GROUND BAR 1/4"x4"x12" OR 1/4"x4"x20"
- CGB COLLECTOR GROUND BAR
- MGB MAIN GROUND BAR

- NOTES:
1. PLAN DRAWINGS SHOWN HEREIN ARE DIAGRAMMATIC AND DOES NOT NECESSARILY DEPICT THE EXACT EQUIPMENT QUANTITIES, LOCATION, LAYOUT AND CONFIGURATION. REFER TO ARCHITECTURAL PLANS FOR EXACT EQUIPMENT LOCATION, LAYOUT AND CONFIGURATION.
  2. PLAN DRAWINGS SHOWN HEREIN DO SHOW THE NECESSARILY DEPICT ELECTRICAL REQUIREMENTS OF INDIVIDUAL EQUIPMENT AND DEVICES SUCH AS THE EQUIPMENT GROUNDING REQUIREMENTS, POWER REQUIREMENTS AND TELCO RACEWAY REQUIREMENTS.
  3. REFER TO ARCHITECTURAL PLANS FOR THE LOCATION OF POWER AND TELCO POINT OF CONNECTIONS, THE DISTANCE OF THE RUN AND THE SUGGESTED CONDUIT ROUTING. FIELD VERIFY EXISTING CONDITIONS SPECIFICALLY FOR CONDUIT ROUTING PRIOR TO BID.

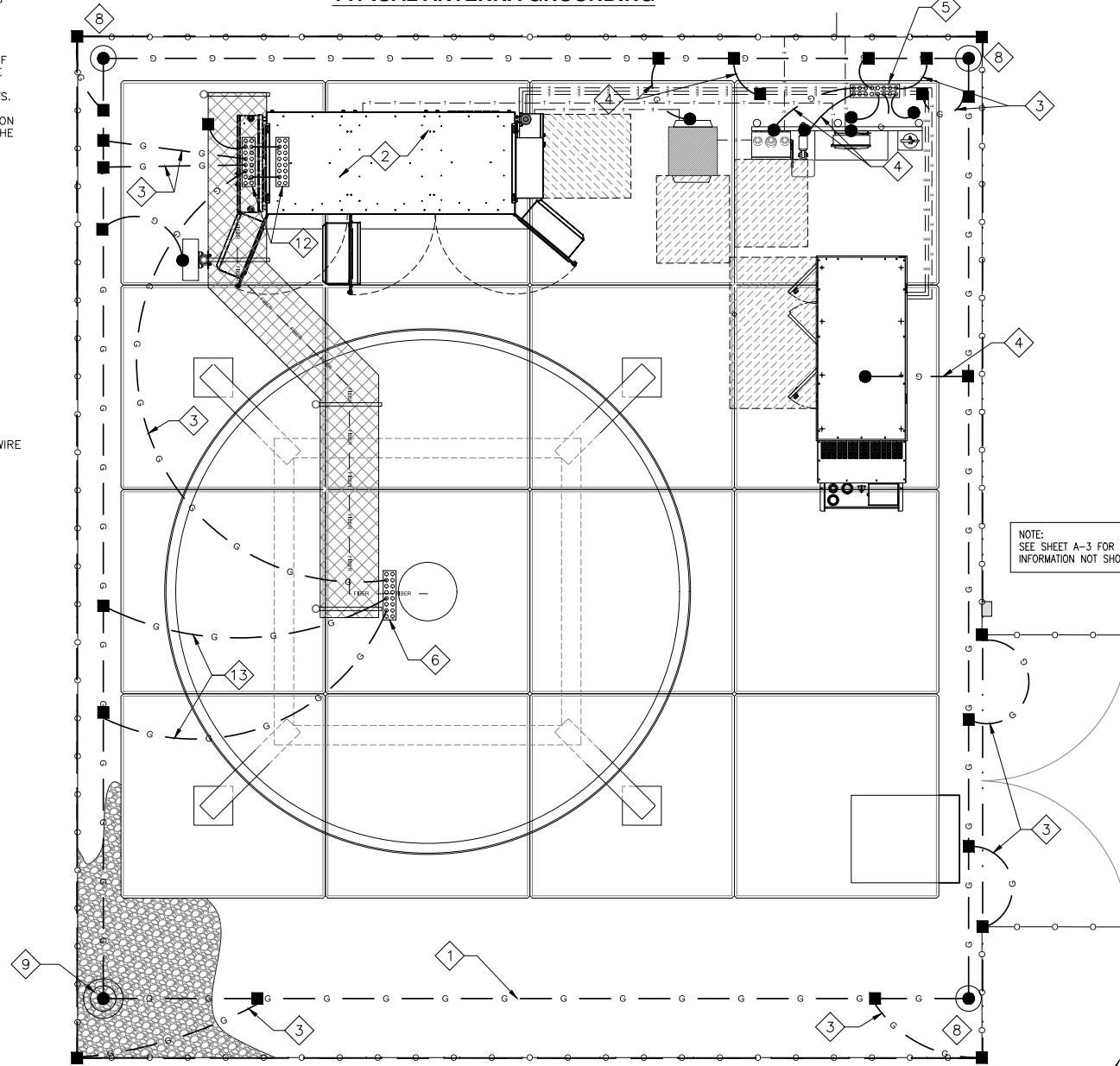
**KEYNOTES**

- ① (N) GROUND RING AWG 2 BARE COPPER GROUND WIRE BURIED 30" BELOW GRADE
- ② WUC WITH PRE-INSTALLED GROUNDING SYSTEM, REFER TO MFGR'S SPECS
- ③ (N) AWG 2 INSULATED COPPER GROUND TO GROUND RING
- ④ (N) AWG 2 INSULATED COPPER GROUND WIRE
- ⑤ GROUND BAR AT UTILITY H-FRAME
- ⑥ (N) ANTENNA GROUND BAR AT TOP & BOTTOM OF FAUX WATER TANK
- ⑦ (N) AWG 6 INSULATED COPPER GROUND FROM ANTENNA GROUND KIT
- ⑧ (N) GROUND ROD  $\frac{2}{-}$
- ⑨ (N) GROUND TEST WELL  $\frac{3}{-}$
- ⑩ ANTENNA GROUND BUS BAR AT EACH SECTOR
- ⑪ (N) AWG 2 INSULATED COPPER GROUND FROM RRU, SURGE SUPPRESSOR
- ⑫ (N) GROUND BAR INSIDE AND OUTSIDE OF W.U.C
- ⑬ (N) AWG 2 INSULATED COPPER GROUND TO GROUND BAR OUTSIDE OF WUC



NOTES:  
1. GROUNDING SHOWN IS FOR ONE SECTOR ONLY, ALL SECTORS SHALL BE GROUNDED.  
2. SEE SHEET A-3 FOR ADDITIONAL INFORMATION NOT SHOWN HERE

**TYPICAL ANTENNA GROUNDING**

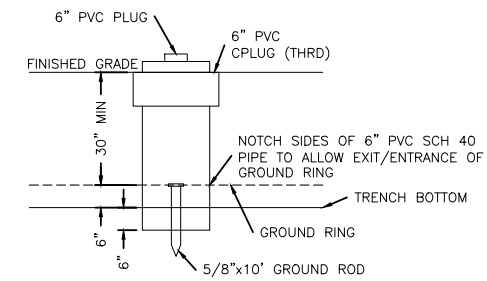


**EQUIPMENT GROUNDING**

NOTE:  
SEE SHEET A-3 FOR ADDITIONAL INFORMATION NOT SHOWN HERE

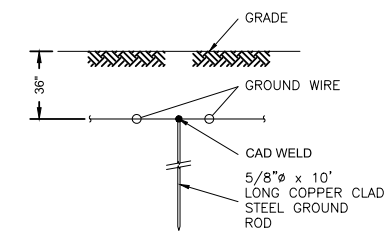
NOT USED

1



INSPECTION WELL DETAIL

2



CONSULTANT



APPLICANT



A/E FIRM



SITE INFORMATION

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**BOWMEN**  
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REV	DATE	DESCRIPTION	BY
3	08/28/24	95% CD	DC
2	08/14/24	95% CD	DC
1	07/22/24	95% CD	DC
0	06/11/24	90% CD	LE

PROFESSIONAL STAMP



SHEET TITLE

**GROUNDING PLANS AND DETAILS**

SHEET

**G-1**

GROUNDING PLAN

4

GROUND ROD DETAIL

3

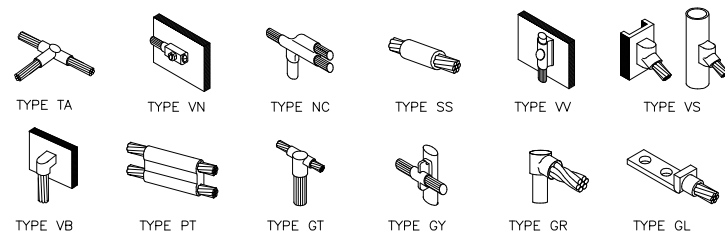


**GROUNDING NOTES:**

- GROUNDING SHALL COMPLY WITH ARTICLE 250 OF THE CALIFORNIA ELECTRICAL CODE.
- ALL GROUNDING DEVICES SHALL BE U.L. APPROVED OR LISTED FOR THEIR INTENDED USE.
- ALL WIRES SHALL BE AWG THHN/THWN COPPER UNLESS NOTED OTHERWISE.
- GROUNDING CONNECTIONS TO GROUND RODS, GROUND RING WIRE, TOWER BASE AND FENCE POSTS SHALL BE EXOTHERMIC ("CADWELDS") UNLESS NOTED OTHERWISE. CLEAN SURFACES TO SHINY METAL. WHERE GROUND WIRES ARE CADWELDED TO GALVANIZED SURFACES, SPRAY CADWELD WITH GALVANIZING PAINT.
- GROUNDING CONNECTIONS TO GROUND BARS ARE TO BE TWO-HOLE BRASS MECHANICAL CONNECTORS WITH STAINLESS STEEL HARDWARE (INCLUDING SCREW SET) CLEAN GROUND BAR TO SHINY METAL. AFTER MECHANICAL CONNECTION, TREAT WITH PROTECTIVE ANTIOXIDANT COATING.
- GROUND COAXIAL CABLE SHIELDS AT BOTH ENDS WITH MANUFACTURER'S GROUNDING KITS.
- ROUTE GROUNDING CONDUCTORS THE SHORTEST AND STRAIGHTEST PATH POSSIBLE. BEND GROUNDING LEADS WITH A MINIMUM 12" RADIUS.
- INSTALL #2 AWG GREEN-INSULATED STRANDED WIRE FOR ABOVE GRADE GROUNDING AND #2 BARE TINNED COPPER WIRE FOR BELOW GRADE GROUNDING UNLESS OTHERWISE NOTED.
- REFER TO GROUNDING PLAN FOR GROUND BAR LOCATIONS. GROUNDING CONNECTIONS SHALL BE EXOTHERMIC TYPE ("CADWELDS") TO ANTENNA MOUNTS AND GROUND RING. REMAINING GROUNDING CONNECTIONS SHALL BE COMPRESSION FITTINGS. CONNECTIONS TO GROUND BARS SHALL BE MADE WITH TWO-HOLE LUGS.
- THE GROUND ELECTRODE SYSTEM SHALL CONSIST OF DRIVEN GROUND RODS POSITION ACCORDING TO GROUNDING PLAN. THE GROUND RODS SHALL BE 5/8"x10'-0" COPPER CLAD STEEL INTERCONNECTED WITH #2 BARE TINNED COPPER WIRE BURIED 36" BELOW GRADE. BURY GROUND RODS A MAXIMUM OF 15' APART, AND A MINIMUM OF 8' APART.
- IF ROCK IS ENCOUNTERED GROUND RODS SHALL BE PLACED AT AN OBLIQUE ANGLE NOT TO EXCEED 45°.
- EXOTHERMIC WELDS SHALL BE MADE IN ACCORDANCE WITH ERICO PRODUCTS BULLETIN A-AT.
- CONSTRUCTION OF GROUND RING AND CONNECTIONS TO EXISTING GROUND RING SYSTEM SHALL BE DOCUMENTED WITH PHOTOGRAPHS PRIOR TO BACKFILLING SITE. PROVIDE PHOTOS TO THE VERIZON WIRELESS CONSTRUCTION MANAGER.
- ALL GROUND LEADS EXCEPT THOSE TO THE EQUIPMENT ARE TO BE #2 BARE TINNED COPPER WIRE. ALL EXTERIOR GROUND BARS TINNED COPPER.
- PRIOR TO INSTALLING LUGS ON GROUND WIRES, APPLY THOMAS & BETTS KOPR-SHIELD (TM OF JET LUBE INC.). PRIOR TO BOLTING GROUND WIRE LUGS TO GROUND BARS, APPLY KOPR-SHIELD OR EQUAL.
- ENGAGE AN INDEPENDENT ELECTRICAL TESTING FIRM TO TEST AND VERIFY THAT IMPEDANCE DOES NOT EXCEED FIVE OHMS TO GROUND BY MEANS OF "FALL OF POTENTIAL TEST". TEST SHALL BE WITNESSED BY A AT&T REPRESENTATIVE, AND RECORDED ON THE "GROUND RESISTANCE TEST" FORM.
- WHERE BARE COPPER GROUND WIRES ARE ROUTED FROM ANY CONNECTION ABOVE GRADE TO GROUND RING, INSTALL WIRE IN 3/4" PVC SLEEVE, FROM 1' BELOW GRADE AND SEAL TOP WITH SILICONE MATERIAL.
- PREPARE ALL BONDING SURFACES FOR GROUNDING CONNECTIONS BY REMOVING ALL PAINT AND CORROSION DOWN TO SHINY METAL. FOLLOWING CONNECTION, APPLY APPROPRIATE ANTI-OXIDIZATION PAINT.
- ANY SITE WHERE THE EQUIPMENT (BTS, CABLE BRIDGE, PPC, GENERATOR, ETC.) IS LOCATED WITHIN 6 FEET OF METAL FENCING, THE GROUND RING SHALL BE BONDED TO THE NEAREST FENCE POST USING (3) RUNS OF #2 BARE TINNED COPPER WIRE.

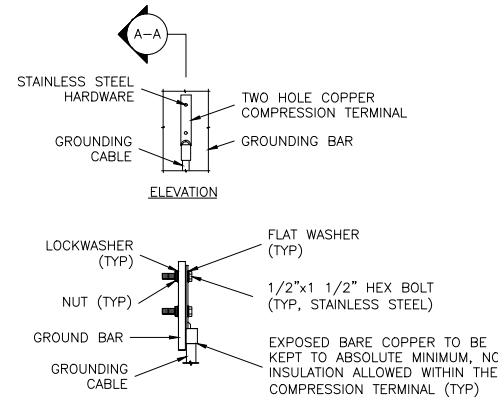
**NOTES**

7



**CADWELD GROUNDING CONNECTION DETAILS**

8



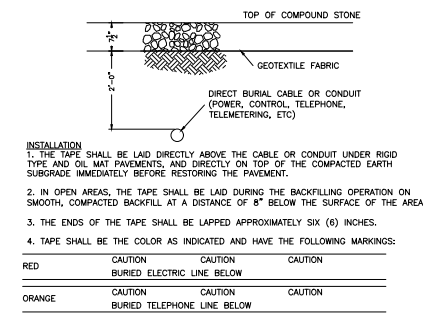
- NOTE:**
- "DOUBLING UP" OR "STACKING" OF CONNECTIONS IS NOT PERMITTED.
  - OXIDE INHIBITING COMPOUND TO BE USED AT ALL LOCATIONS.

**GROUND BAR CONNECTION**

4

**GROUNDING CONDUCTOR TO GROUNDING BAR**

1



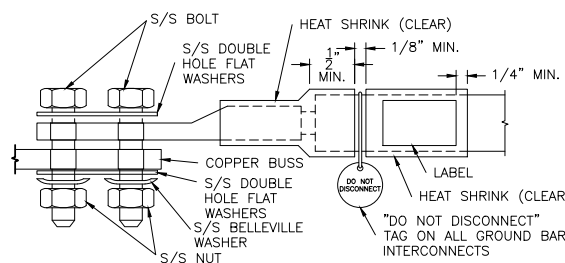
- INSTALLATION**
- THE TAPE SHALL BE LAID DIRECTLY ABOVE THE CABLE OR CONDUIT UNDER RIGID TYPE AND OIL MAT PAVEMENTS, AND DIRECTLY ON TOP OF THE COMPACTED EARTH SUBGRADE IMMEDIATELY BEFORE RESTORING THE PAVEMENT.
  - IN OPEN AREAS, THE TAPE SHALL BE LAID DURING THE BACKFILLING OPERATION ON SMOOTH, COMPACTED BACKFILL AT A DISTANCE OF 8" BELOW THE SURFACE OF THE AREA.
  - THE ENDS OF THE TAPE SHALL BE LAPPED APPROXIMATELY SIX (6) INCHES.
  - TAPE SHALL BE THE COLOR AS INDICATED AND HAVE THE FOLLOWING MARKINGS:
- |        |                                    |                                     |                                     |
|--------|------------------------------------|-------------------------------------|-------------------------------------|
| RED    | CAUTION BURIED ELECTRIC LINE BELOW | CAUTION BURIED TELEPHONE LINE BELOW | CAUTION BURIED TELEPHONE LINE BELOW |
| ORANGE | CAUTION BURIED ELECTRIC LINE BELOW | CAUTION BURIED TELEPHONE LINE BELOW | CAUTION BURIED TELEPHONE LINE BELOW |

**STANDARD MARKER TAPE DETAIL**

5

**GPS GROUNDING**

2



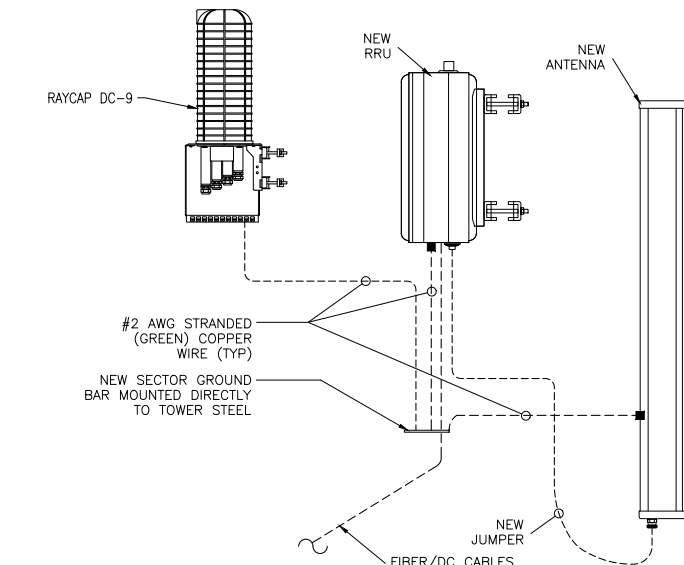
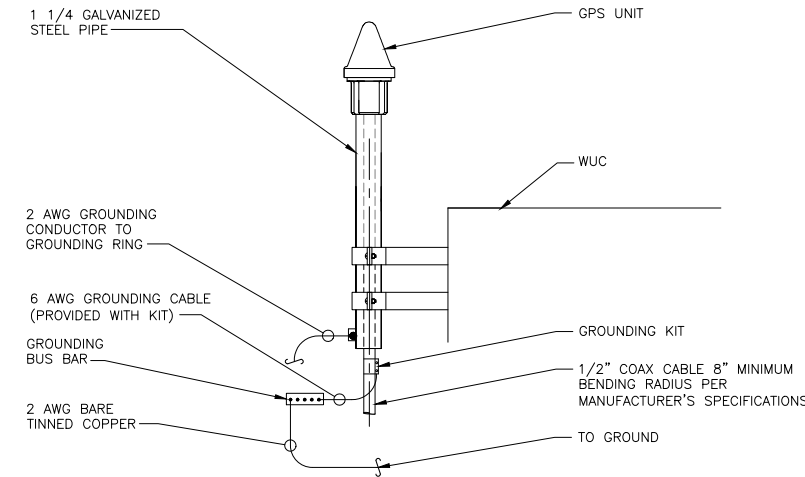
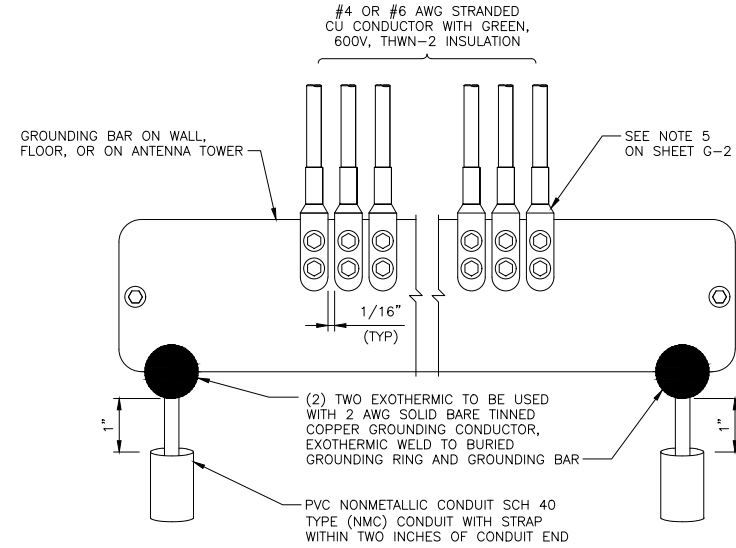
- NOTES:**
- ALL HARDWARE 18-8 STAINLESS STEEL INCLUDING BELLEVILLES. COAT ALL SURFACES WITH ANTI-OXIDATION COMPOUND BEFORE MATING.
  - FOR GROUND BOND TO STEEL ONLY: INSERT A DRAGON TOOTH WASHER BETWEEN LUG AND STEEL, COAT ALL SURFACES WITH ANTI-OXIDATION COMPOUND.
  - COAT ALL BARRELS WITH ANTI-OXIDATION COMPOUND BEFORE CRIMPING.

**GENERAL LUG DETAIL**

6

**ANTENNA/RADIO/DC-9 & CABLE GROUNDING**

3



CONSULTANT



APPLICANT



A/E FIRM



SITE INFORMATION

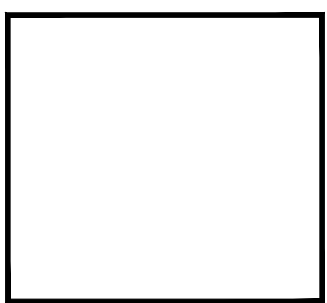
**CVL05830**  
**BOWMEN**  
3321 EL DORADO BLVD  
EL DORADO HILLS, CA 95762

DESIGN RECORD

**REVISIONS**

REV	DATE	DESCRIPTION	BY
3	08/28/24	95% CD	DC
2	08/14/24	95% CD	DC
1	07/22/24	95% CD	DC
0	06/11/24	90% CD	LE

PROFESSIONAL STAMP



SHEET TITLE

**GROUNDING NOTES AND DETAILS**

SHEET

**G-2**



GENERAL STRUCTURAL NOTES

GENERAL:

- THESE NOTES ARE GENERAL REQUIREMENTS. UNLESS SHOWN OR NOTED ON THE DRAWINGS, THE FOLLOWING NOTES SHALL APPLY TO THE MATERIALS LISTED ON HEREINAFTER USE ON THIS PROJECT.
- IF MATERIALS, QUANTITIES, STRENGTHS OR SIZES INDICATED ON THE DRAWINGS ARE NOT IN AGREEMENT WITH THESE NOTES, THE CONTRACTOR SHALL CONTACT THE STRUCTURAL ENGINEER OF RECORD.
- THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS, DIMENSIONS AND ELEVATIONS PRIOR TO STARTING CONSTRUCTION. THE STRUCTURAL ENGINEER OF RECORD SHALL BE NOTIFIED OF ANY DISCREPANCIES OR INCONSISTENCIES BETWEEN THE CONTRACT DOCUMENTS AND THE ACTUAL FIELD CONDITIONS.
- IF THE SUBJECT PRECAST POST-TENSIONED FOUNDATION SYSTEM IS INSTALLED NEAR AN EXISTING STRUCTURE, THE EXISTING STRUCTURE SHALL BE REVIEWED BY A REGISTERED PROFESSIONAL ENGINEER TO DETERMINE THE IMPACT THE NEW FOUNDATION, IF ANY, HAS ON THE EXISTING STRUCTURE PRIOR TO THE START OF CONSTRUCTION.
- WHEN WORKING NEAR AN EXISTING AND/OR NEW STRUCTURE, THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION SO AS NOT TO UNDERMINE, DISTURB, DAMAGE OR, IN ANY WAY, CAUSE UNDESIRABLE MOVEMENT, CRACKING, AND/OR SETTLEMENT OF THE ADJACENT STRUCTURE.
- THESE DRAWINGS DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES.
- ALL MATERIALS FURNISHED ON THIS PROJECT SHALL BE NEW AND OF GOOD QUALITY, FREE OF DEFECTS AND DEFICIENCIES, AND IN CONFORMANCE WITH THESE DOCUMENTS. SUBSTITUTIONS MUST BE SUBMITTED, APPROVED AND AUTHORIZED PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL FURNISH EVIDENCE AS TO THE KIND AND QUALITY OF MATERIALS BEING SUBSTITUTED.

GOVERNING CODES AND STANDARDS:

- CBC CALIFORNIA BUILDING CODE, 2022 EDITION
- IBC INTERNATIONAL BUILDING CODE, 2021 EDITION
- ASCE 7 MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES, 2016 EDITION
- ACI 318 BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE, 2019 EDITION
- ACI SP-66 ACI DETAILING MANUAL, 2004 EDITION

DESIGN LOADS:

- THE PRECAST POST TENSIONED FOUNDATION SYSTEM HAS BEEN DESIGNED ACCORDING TO ACI 318 IN ACCORDANCE WITH THE CBC. THE FOUNDATION SYSTEM HAS BEEN DESIGNED TO SUPPORT THE FOLLOWING SERVICE LOADS:

CENTER MAST:

DOWNWARD:	20.9 KIPS
SHEAR:	0.97 KIPS

TOWER:

OVERTURNING MOMENT:	1723 KIP-FT
BASE SHEAR:	22.5 KIPS
AXIAL LOAD:	44.7 KIPS

MAX LEG COMP:

MAX LEG TENSION:	85.9 KIPS
MAX LEG SHEAR:	-77.7 KIPS

MAX LEG TENSION:

MAX LEG TENSION:	85.9 KIPS
MAX LEG SHEAR:	-77.7 KIPS

- THE SUBJECT MOD-G PRECAST POST-TENSION FOUNDATION SYSTEM HAS BEEN ANALYZED FOR THE LOADING AS INDICATED HEREIN AND SHALL NOT BE MODIFIED, ALTERED OR REINFORCED WITHOUT NOTIFYING MOD G SYSTEMS. ALL MODIFICATIONS, ALTERATIONS AND REINFORCEMENTS TO THE SUBJECT FOUNDATION SYSTEM SHALL BE REVIEWED BY A QUALIFIED STRUCTURAL ENGINEER PRIOR TO CONSTRUCTION OF THE SUBJECT CHANGES.
- SHOULD THE APPEARANCE, CONDITION, MOUNTED EQUIPMENT OR SITE CONDITIONS OF THE SUBJECT FOUNDATION SYSTEM BE DIFFERENT THAN INDICATED HEREIN, MOD G SYSTEMS OR O'DONNELL & NACCARATO, INC. SHALL BE CONTACTED TO REVIEW THIS INFORMATION AND DETERMINE THE EFFECT, IF ANY, THIS NEW INFORMATION HAS ON THE SUBJECT FOUNDATION SYSTEM.

FOUNDATIONS:

- THE PRECAST FOUNDATION SYSTEM WAS DESIGNED USING PRESUMPTIVE LOAD-BEARING VALUES IN ACCORDANCE WITH CBC SECTION 1806. THIS PRECAST FOUNDATION SYSTEM SHALL BEAR ON ENGINEERED FILL MEETING OR EXCEEDING AN ALLOWABLE SOIL BEARING CAPACITY OF 1,500 PSF AND A COEFFICIENT OF FRICTION OF 0.25. (NO GEOTECHNICAL REPORT PROVIDED.)
- PRIOR TO PLACING THE PRECAST FOUNDATION, THE CONTRACTOR SHALL REMOVE EXISTING VEGETATION, DEBRIS, BURIED STRUCTURES, IF PRESENT. ALL DELETERIOUS MATERIAL SHALL BE DISCARDED OFF-SITE. (NO GEOTECHNICAL REPORT PROVIDED.)
- ENGINEERED FILL SHALL BE UNIFORMLY MOISTURED CONDITIONED TO ABOVE THE OPTIMUM MOISTURE CONTENT, PLACED IN HORIZONTAL LIFTS 6 TO 8-INCHES IN LOOSE THICKNESS AND COMPACTED TO A MINIMUM OF 90% OF THE MAXIMUM DRY DENSITY AS ESTABLISHED BY ASTM D-1557. (NO GEOTECHNICAL REPORT PROVIDED.)
- A MINIMUM 2% GRADE SHALL BE PROVIDED WITHIN 10-FEET ALONG THE PERIMETER OF THE FOUNDATION SYSTEM TO ALLOW SURFACE WATER TO DRAIN AWAY.
- THE ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCIES OR INCONSISTENCIES.
- IF THE PRECAST POST-TENSIONED FOUNDATION IS INSTALLED NEAR AN EXISTING STRUCTURE, THE EXISTING STRUCTURE SHOULD BE REVIEWED BY A REGISTERED PROFESSIONAL ENGINEER TO DETERMINE THE IMPACT THE NEW FOUNDATION, IF ANY, HAS ON THE EXISTING STRUCTURE PRIOR TO THE START OF CONSTRUCTION.
- WHEN WORKING NEAR AN EXISTING AND/OR NEW STRUCTURE, THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION SO AS NOT TO UNDERMINE, DISTURB, DAMAGE OR, IN ANY WAY, CAUSE UNDESIRABLE MOVEMENT, CRACKING, AND/OR SETTLEMENT OF THE ADJACENT STRUCTURE.

PRECAST CONCRETE:

- CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH AT 28-DAYS OF 5,000 PSI UNLESS NOTED OTHERWISE.
- CONCRETE SHALL BE AIR ENTRAINED (6% ± 1.5%) WITH A MAXIMUM WATER/CEMENT RATIO OF 0.45.
- BONDED STEEL REINFORCEMENT SHALL BE NEW DOMESTIC DEFORMED BILLET STEEL CONFORMING TO ASTM A615 GRADE 60. BONDED STEEL REINFORCEMENT TO BE WELDED SHALL CONFORM TO ASTM A706 GRADE 60.
- CONCRETE WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE ACI 318.
- ALL CONCRETE REINFORCING DETAILS SHALL CONFORM TO THE ACI DETAILING MANUAL, SP-66, UNLESS DETAILED OTHERWISE ON THE STRUCTURAL DRAWINGS.
- BONDED STEEL REINFORCEMENT SHALL MAINTAIN A MINIMUM CLEAR COVER OF 1 1/2" UNLESS NOTED OTHERWISE.
- THE CONTRACTOR SHALL INSTALL IN THE CONCRETE JOINT BETWEEN ALL VERTICAL SURFACES OF THE INDIVIDUAL BLOCKS A 1/4" THK. SPONGE RUBBER EXPANSION JOINT MATERIAL CONFORMING TO ASTM D1752, TYPE I, SUCH AS SEALTIGHT SPOONING RUBBER BY W.R. MEADOWS OR APPROVED EQUIVALENT.
- JOINT SEALANT MEETING THE REQUIREMENTS OF ASTM C920, SUCH AS SIKAFLEX-1a BY SIKA OR APPROVED EQUIVALENT, SHALL BE APPLIED ALONG THE TOP OF THE ENTIRE LENGTHS OF ALL CHAMFERED JOINTS BETWEEN ADJOINING BLOCKS.

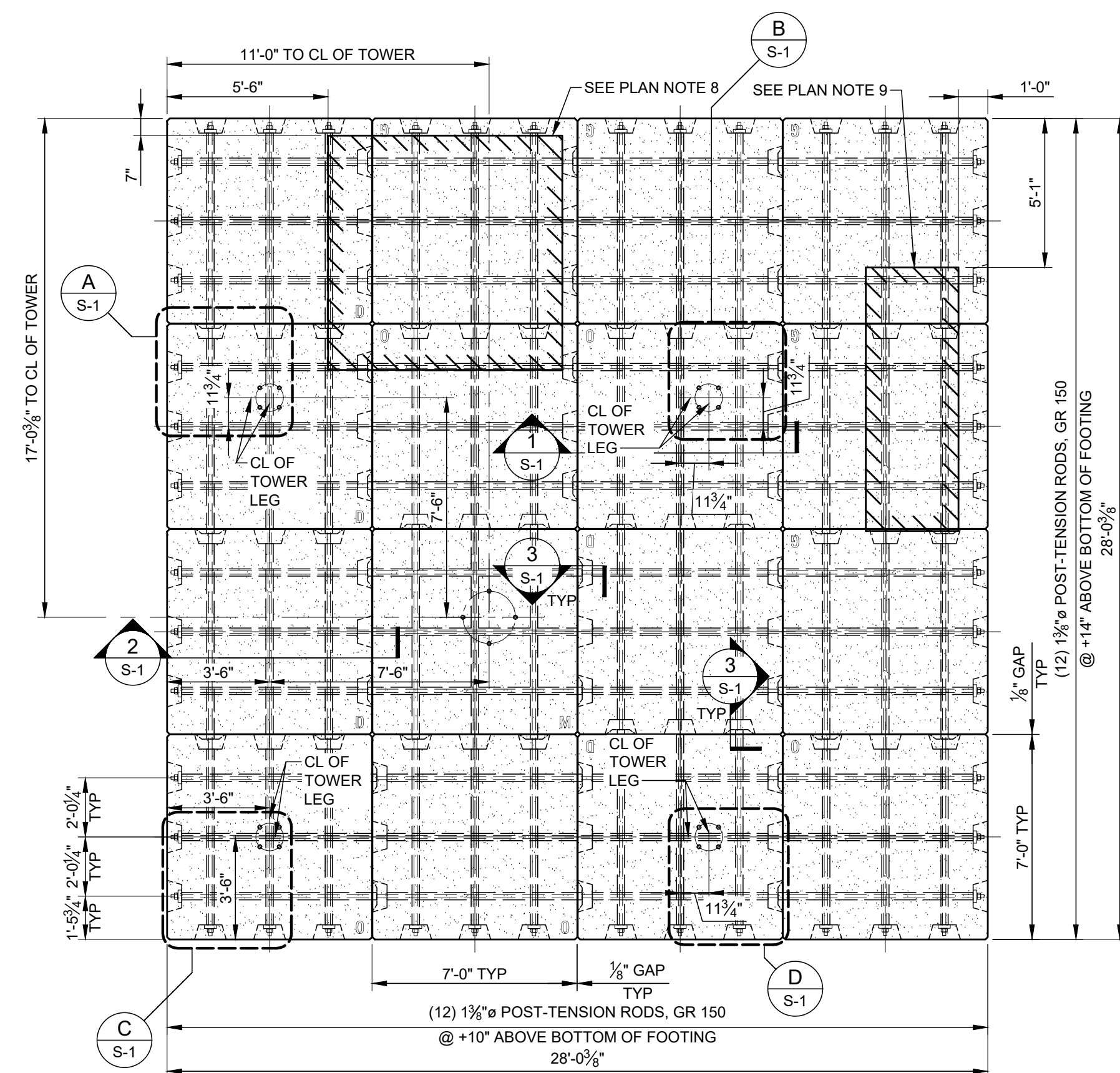
POST TENSIONED STEEL:

- INDIVIDUAL PRECAST CONCRETE BLOCKS SHALL BE JOINED TOGETHER USING UNBONDED STEEL RODS. POST-TENSIONED STEEL SHALL COMPRISE OF 1 3/8" Ø RODS GRADE 150 ALL-THREAD BARS BY WILLIAMS FORM ENGINEERING CORPORATION OR APPROVED EQUIVALENT MEETING OR EXCEEDING THE SPECIFICATIONS OF ASTM A722.
- POST-TENSION RODS SHALL HAVE A CORROSION-RESISTANT PROTECTIVE GALVANIZED/METALIZED COATING. GALVANIZED/METALIZED COATING FOR POST-TENSION RODS INCLUDING CONNECTION HARDWARE SHALL CONFORM TO ASTM SPECIFICATION A153 AND A123, RESPECTIVELY.
- PROTECTIVE COATING THAT HAS BECOME SCRATCHED OR DAMAGED DUE TO CONTRACTORS EFFORTS SHALL BE REPAIRED PER THE MANUFACTURERS SPECIFICATIONS. IN ABSENCE OF DIRECTION FROM MANUFACTURER, GALVANIZED/METALIZED COATINGS SHALL BE REPAIRED UTILIZING A COLD GALVANIZING COMPOUND CONFORMING TO ASTM A780.
- CONTRACTOR SHALL TENSION POST-TENSION RODS TO 186 KIPS TO ACCOUNT FOR ALL LOSSES DUE TO SHRINKAGE, CREEP, FRICTION AND TENDON RELAXATION FOR THE SPECIFIED STRESSING LENGTHS IN AN EFFORT TO MAINTAIN A MINIMUM FINAL EFFECTIVE POST TENSIONING FORCE OF 165.9 KIPS AS INDICATED IN THE STRUCTURAL CALCULATIONS.
- MAXIMUM TEMPORARY FORCE IN POST-TENSION RODS SHALL NOT EXCEED 80% OF THE ULTIMATE STRENGTH OF THE RODS. CONTRACTOR SHALL LOCK-OFF POST-TENSION ROD STRESSES NO GREATER THAN 70% OF THE ULTIMATE STRENGTH OF THE POST-TENSION RODS. THE NET TENSION FORCE APPLIED TO EACH POST-TENSION ROD SHALL BE 165.9 KIPS AFTER ALL LOSSES ARE CONSIDERED.
- THE POST-TENSION MANUFACTURER/SUPPLIER SHALL BASE THEIR ELONGATION CALCULATIONS ON THE MODULUS OF ELASTICITY AS INDICATED IN THE MILL CERTIFICATES FOR THE POST-TENSION RODS BEING SUPPLIED ON THE PROJECT.
- THE RESULTS OF TEST CYLINDER BREAKS SHALL INDICATE THAT THE CONCRETE COMPRESSIVE STRENGTH OF THE PRECAST CONCRETE BLOCKS HAS MET OR EXCEEDED 5,000 PSI PRIOR TO TENSIONING THE POST-TENSION RODS.
- POST-TENSION FORCES SHALL BE DETERMINED BY CHECKING THE PRESSURE ON THE HYDRAULIC JACKS. THE CONTRACTOR SHALL KEEP RECORDS OF ALL JACKING FORCES AND ELONGATION MEASUREMENTS AND SUBMIT THEM TO CT CONSULTANTS FOR REVIEW.
- IF REQUIRED, THE TAILS OF THE POST-TENSION RODS SHALL BE CUT WITH A MINIMUM OF 1/2" OF THE POST-TENSION ROD PROTRUDING BEYOND THE NUT USING ONE OF THE FOLLOWING METHODS:
  - ABRASIVE WHEEL
  - PORTABLE BAND SAW

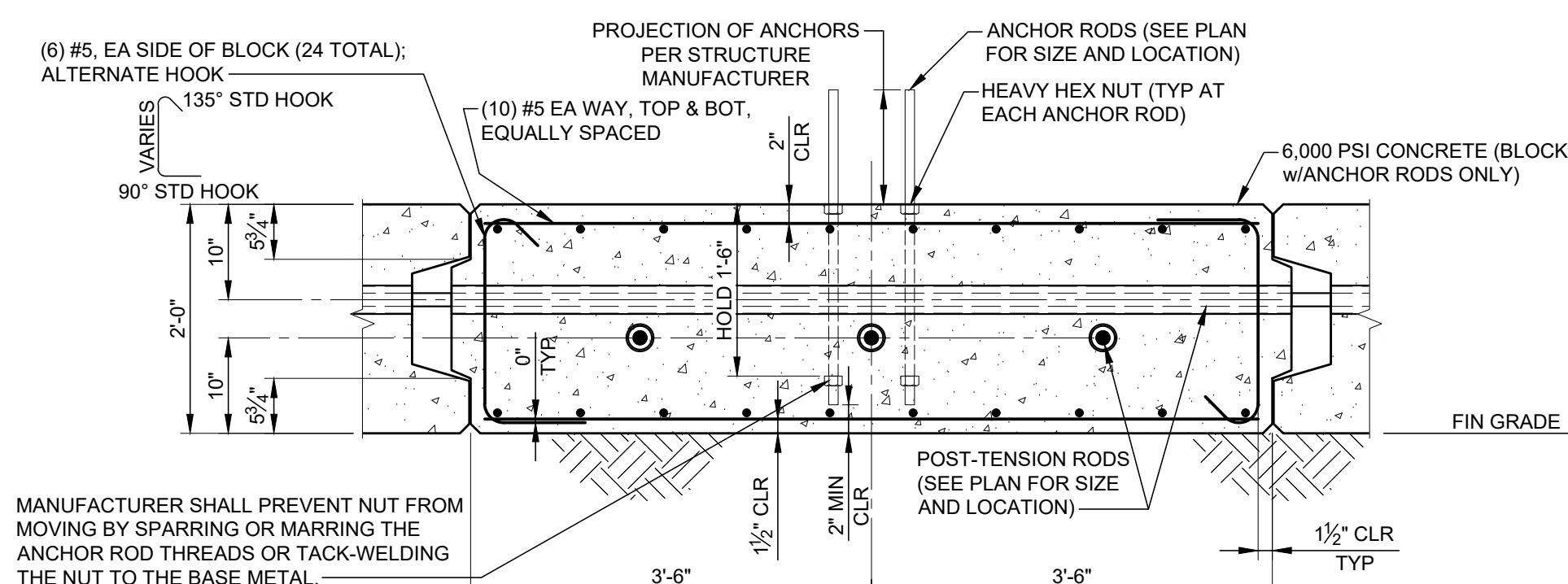
SPECIAL INSPECTIONS:

PER CBC SECTION 1705, SPECIAL INSPECTIONS ARE REQUIRED FOR THE FOLLOWING ITEMS:

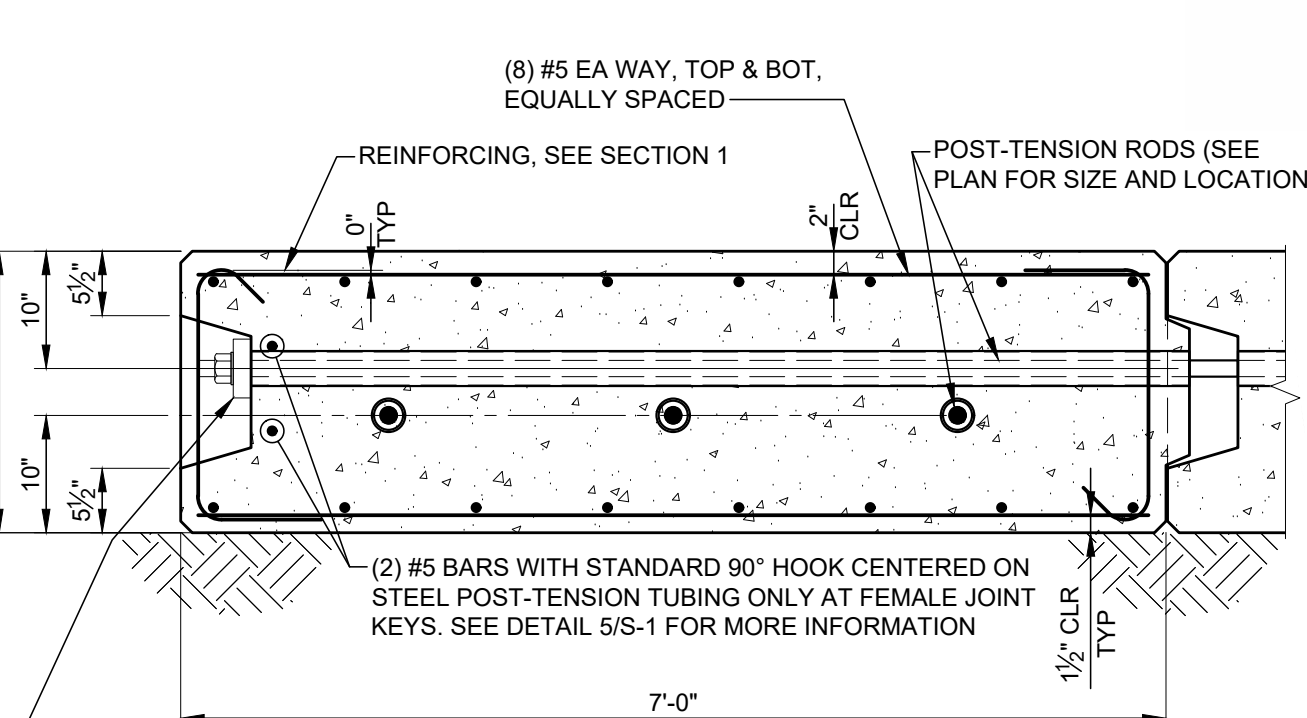
- CONCRETE:
  - INSPECT REINFORCEMENT STEEL, INCLUDING POST-TENSION RODS, AND VERIFY PLACEMENT. (PERIODIC)
  - REINFORCING BAR WELDING:
    - VERIFY WELDABILITY OF REINFORCING BARS OTHER THAN ASTM A706. (PERIODIC)
    - INSPECT SINGLE-PASS FILLET WELDS, MAXIMUM 5/16" (PERIODIC)
    - INSPECT ALL OTHER WELDS. (CONTINUOUS)
  - INSPECT ANCHORS CAST IN CONCRETE. (PERIODIC)
  - INSPECT ANCHORS POST-INSTALLED IN HARDENED CONCRETE MEMBERS:
    - ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS. (CONTINUOUS)
    - MECHANICAL ANCHORS AND ADHESIVE ANCHORS NOT DEFINED IN 1.4.1. (CONTINUOUS)
  - VERIFY USE OF REQUIRED CONCRETE MIX. (PERIODIC)
  - PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE. (CONTINUOUS)
  - INSPECT CONCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES. (CONTINUOUS)
  - VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES. (PERIODIC)
  - INSPECT POST-TENSIONED CONCRETE FOR APPLICATION OF POST-TENSION FORCES. (CONTINUOUS)
  - INSPECT ERECTION OF PRECAST CONCRETE MEMBERS. (PERIODIC)
  - VERIFY IN-SITU CONCRETE STRENGTH, PRIOR TO STRESSING OF RODS IN POST-TENSIONED CONCRETE. (PERIODIC)
  - INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED. (PERIODIC)
  - INSPECT POST-TENSION RODS AND IDENTIFY DAMAGE TO PROTECTIVE COATING DURING TRANSPORTATION, HANDLING & INSTALLATION.
  - SPECIAL INSPECTIONS ARE NOT REQUIRED FOR WORK DONE ON THE PREMISES OF AN APPROVED FABRICATOR.
- GEOTECHNICAL:
  - VERIFY MATERIALS BELOW SHALLOW FOOTINGS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY. (PERIODIC)
  - VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL. (PERIODIC)
  - PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS. (PERIODIC)
  - VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL. (CONTINUOUS)
  - PRIOR TO PLACEMENT OF CONTROLLED FILL, OBSERVE SUBGRADE AND VERIFY THAT THE SITE HAS BEEN PROPERLY PREPARED. (PERIODIC)
- DUTIES AND RESPONSIBILITIES OF THE SPECIAL INSPECTOR:
  - THE SPECIAL INSPECTOR SHALL OBSERVE THAT THE WORK ASSIGNED TO BE REVIEWED IN CONJUNCTION WITH THE APPROVED CONSTRUCTION DOCUMENTS.
  - THE SPECIAL INSPECTOR SHALL KEEP RECORDS OF SPECIAL INSPECTIONS AND TESTS. THE SPECIAL INSPECTOR SHALL SUBMIT REPORTS OF SPECIAL INSPECTIONS AND TESTS TO THE BUILDING OFFICIAL, AND TO THE REGISTERED DESIGN PROFESSIONAL IN CHARGE. REPORTS SHALL INDICATE THAT THE WORK BEING INSPECTED OR TESTED WAS OR WAS NOT COMPLETED IN CONFORMANCE TO THE APPROVED CONSTRUCTION DOCUMENTS.
  - DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION. IF THE DISCREPANCIES ARE NOT CORRECTED, THE DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE BUILDING OFFICIAL AND TO THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE PRIOR TO THE COMPLETION OF THAT PHASE OF THE WORK.
  - A FINAL REPORT DOCUMENTING REQUIRED SPECIAL INSPECTIONS AND TESTS, AND CORRECTION OF ANY DISCREPANCIES NOTED IN THE INSPECTIONS OR TESTS, SHALL BE SUBMITTED AT A POINT IN TIME AGREED UPON PRIOR TO THE START OF WORK BY THE OWNER OR THE OWNER'S AUTHORIZED AGENT TO THE BUILDING OFFICIAL.



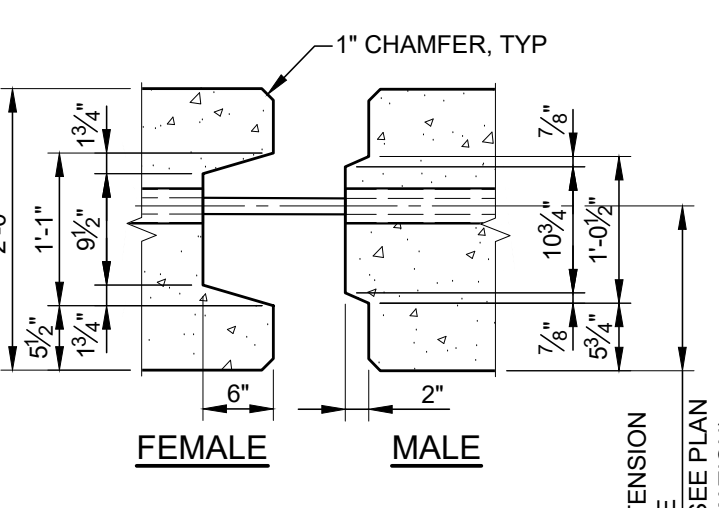
PRECAST FOUNDATION PLAN  
 SCALE: 1/4" = 1'-0"



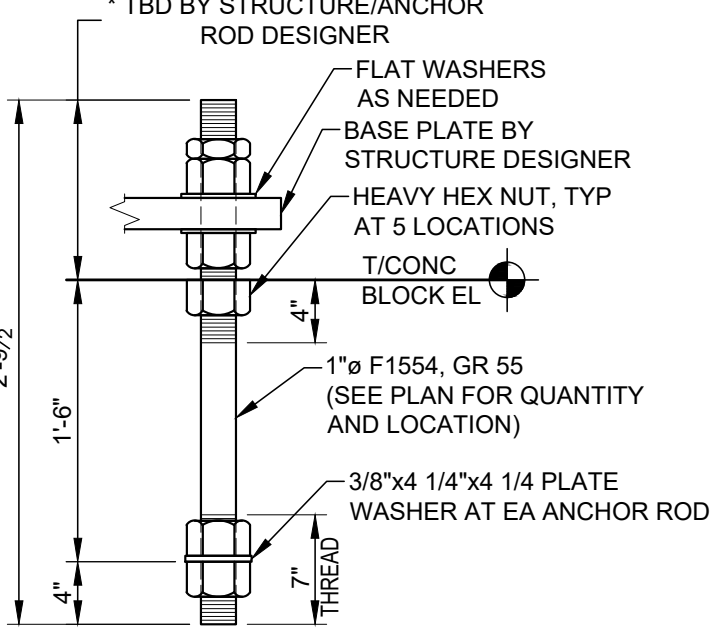
1 SECTION  
 S-1 SCALE: 3/4" = 1'-0"



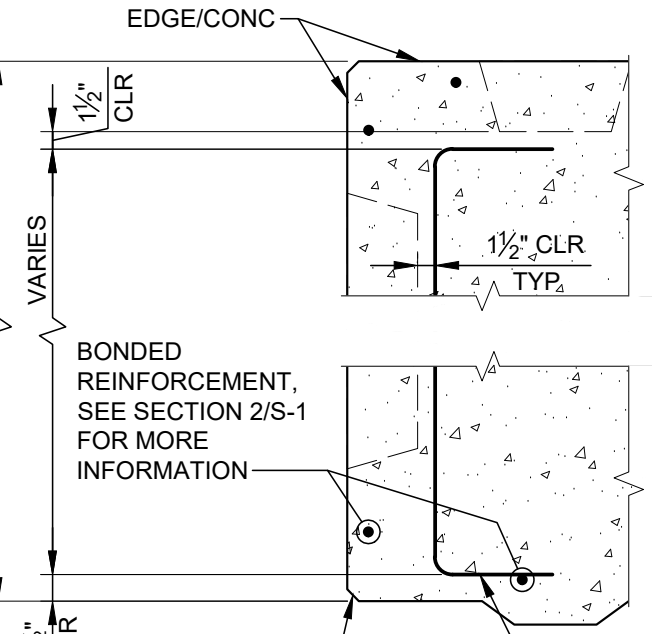
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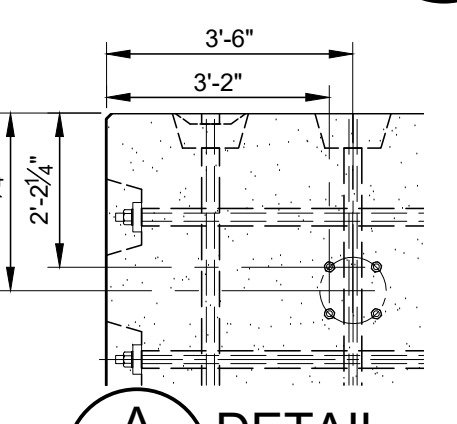
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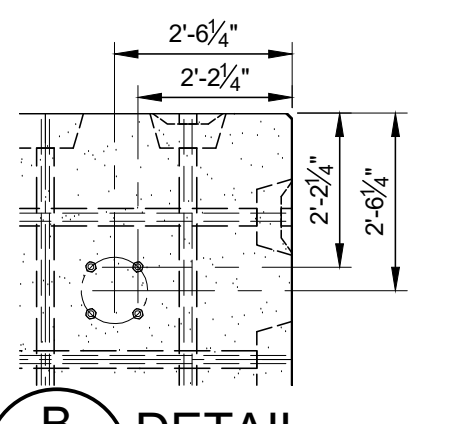
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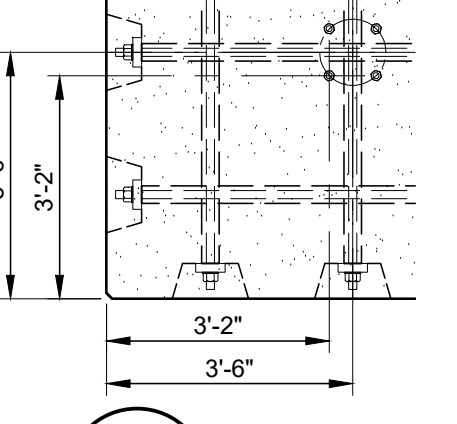
5 DETAIL  
 S-1 SCALE: 3/4" = 1'-0"



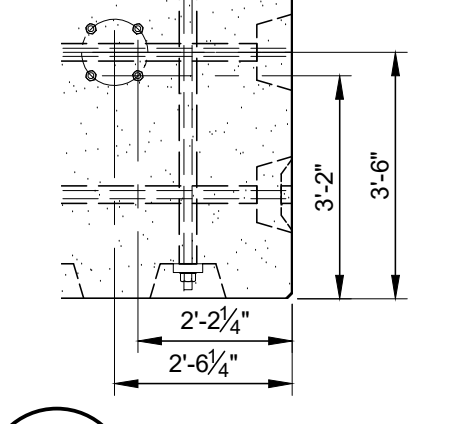
A DETAIL  
 S-1 SCALE: 3/8" = 1'-0"



B DETAIL  
 S-1 SCALE: 3/8" = 1'-0"



C DETAIL  
 S-1 SCALE: 3/8" = 1'-0"



D DETAIL  
 S-1 SCALE: 3/8" = 1'-0"

PRECAST FOUNDATION PLAN NOTES:

- POST-TENSION RODS, PLATES, ANCHOR RODS AND HEAVY HEX NUTS SHALL BE SUPPLIED WITH A CORROSION-RESISTANT PROTECTIVE COATING IN ACCORDANCE WITH POST-TENSIONED STEEL GENERAL NOTE #2.
- POST TENSION RODS SHALL BE TENSIONED AND LOCKED-OFF IN CONFORMANCE WITH POST-TENSIONED STEEL GENERAL NOTE #5.
- SPACING OF BONDED REINFORCEMENT MAY BE ADJUSTED MINIMALLY TO ALLEVIATE CONFLICTS WITH ANCHOR RODS, STEEL TUBING AND LIFT HOOKS. SPACING OF BONDED REINFORCEMENT SHALL NOT EXCEED 8 3/4" ± 1" ON CENTER.
- THE EXISTING PRECAST POST-TENSION FOUNDATION SYSTEM SHALL BE REVIEWED BY O'DONNELL & NACCARATO, INC. PRIOR TO MODIFYING OR ADDING ANY NEW EQUIPMENT TO IT.
- (4) ANCHOR RODS PER TOWER LEG (16 TOTAL) SHALL BE ON A 11 5/16" BOLT CIRCLE AS SHOWN. COORDINATE LAY TOWER MANUFACTURER (SEE DETAIL 4/S-1 FOR MORE INFO)
- ADDITIONAL BONDED REINFORCEMENT SHALL BE ADDED ANCHOR ROD BY THE PRECAST MANUFACTURER AS INDICATED DETAIL 1/S-1 FOR MORE INFORMATION)
- CONTRACTOR SHALL FIELD LOCATE THE BONDED REINFORCING AND POST-TENSION RODS PRIOR TO INSTALLING THE ANCHOR RODS IN AN EFFORT TO PREVENT CUTTING OR DAMAGING THE REINFORCEMENT STEEL AND POST-TENSION RODS.
- 8'-0" x 8'-0" EQUIPMENT SHELTER BY CONTRACTOR. (MAX. TOTAL WEIGHT = 25,000 LBS) ANCHORAGE OF THE SHELTER TO THE PRECAST FOUNDATION SYSTEM IS BY 1" EQUIPMENT SHELTER MANUFACTURER, UNLESS NOTED OTHERWISE.
- 9'-0" x 3'-2" GENERATOR BY CONTRACTOR. (MAX. TOTAL WEIGHT = 8,200 LBS) ANCHORAGE OF THE GENERATOR TO THE PRECAST FOUNDATION SYSTEM IS BY THE GENERATOR MANUFACTURER, UNLESS NOTED OTHERWISE.
- (4) ANCHOR RODS AT CENTER MAST SHALL BE INSTALLED ON BOLT CIRCLE AS SHOWN. COORDINATE LAYOUT WITH TOWER MANUFACTURER. (SEE DETAIL 4/S-1 FOR MORE INFORMATION)

THIS PRECAST POST-TENS FOUNDATION SYSTEM HAS BEEN DESIGNED ACCORDING TO THE

**O'DONNELL & NACCARATO**  
 STRUCTURAL ENGINEERS  
 701 MARKET STREET  
 SUITE 6000  
 PHILADELPHIA, PENNSYLVANIA 19106-2524  
 TELEPHONE: (215) 925-3788  
 FAX: (215) 627-1051  
 Project No.

**MOD G SYSTEMS**  
 MODULAR GENERATION SYSTEMS LLC  
 PO BOX 3095 NAPA, CA 94558  
 PH 925-300-5451 www.mod-g.com

ENGINEER OF RECORD  
**PLATINUM**  
 Engineering Solutions, Inc.  
 Commercial - Industrial - Residential - Towers

19548 N. HWY 41  
 Modera, CA 95368-9469  
 Tel: (539) 439-0500  
 Fax: (539) 433-4333  
 www.PlatinumEngineering.com

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IN THE EVENT OF UNAUTHORIZED REUSE OF THESE PLANS BY A THIRD PARTY, THE THIRD PARTY SHALL HOLD PLATINUM ENGINEERING SOLUTIONS, INC. HARMLESS AND SHALL BEAR THE FINANCIAL RESPONSIBILITY OF PLATINUM ENGINEERING SOLUTIONS, INC. COSTS.

STAMP  
  
 02/13/2024

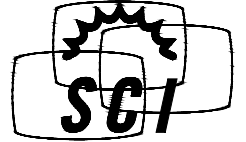
Revisions		
No.	Date	Description

Project  
**AT&T**  
 BOWMAN SITE  
 SITE No: CVL05830  
 3321 EL DORADO BLVD  
 EL DORADO HILLS, CA 95762

Designed:	BWS	Checked:	2/8/2024	Sheet
Drawn:	KAC	Date:	2/8/2024	S-1
Scale:	As Noted	Project:	4983.0005.00	1 of 1

PATENT PENDING





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DATE: 12/18/23    DESIGNED: KJG    DRAFTER: KJG

REVISIONS		
REV	DATE	DESCRIPTION

# BOWMAN

## 110' TALL X Ø18' RFTRANSPARENT WATER TANK

LOCATION:

3321 EL DORADO HILLS BOULEVARD  
EL DORADO HILLS, CA 95762  
EL DORADO COUNTY  
SITE #: CVL05830

### DRAWING INDEX

- T1 TITLE SHEET
- N1 NOTES & SPECIFICATIONS
- S1 ELEVATION VIEW
- S2-S6 DETAILS
- S7 FOUNDATION

### AT&T

TITLE SHEET

BOWMAN  
SITE #: CVL05830  
110' TALL X Ø18' RFTRANSPARENT WATER TANK  
3321 EL DORADO HILLS BOULEVARD  
EL DORADO HILLS, CA 95762  
EL DORADO COUNTY



12/19/2023

U1085.2147.232

T1	REV
0	0

## GENERAL DESIGN NOTES

### DESIGN NOTES AND MATERIAL REQUIREMENTS:

- THE DESIGN CRITERIA FOR THIS STRUCTURE IS AS FOLLOWS:
  - STANDARDS AND DESIGN CODES:
    - BUILDING CODE: CALIFORNIA BUILDING CODE, 2022 EDITION (2021 IBC)
    - INDUSTRY STANDARD: ASCE 7-16
    - STEEL MANUAL: AISC-LRFD, 15th EDITION
    - CONCRETE CODE: ACI 318-19
    - WELDING CODE: AWS D1.1, LATEST EDITION
  - DESIGN LOADS:
    - WIND:
      - WIND SPEED = 94 MPH (3-SEC GUST) PER THE ASCE 7-16 STANDARD
      - RISK CATEGORY: II
      - EXPOSURE: C
      - ELEVATION: 830 FT
    - ICE:
      - NONE PER THE ASCE 7-16 STANDARD
    - SEISMIC:
      - IMPORTANCE FACTOR: 1.00
      - RISK CATEGORY: II
      - MAPPED SPECTRAL RESPONSE ACCELERATIONS:
        - $S_s = 0.406g$ ,  $S_1 = 0.208g$
      - SITE CLASS: D
      - SPECTRAL RESPONSE COEFFICIENTS:
        - $S_{DS} = 0.399g$ ,  $S_{D1} = 0.303g$
      - SEISMIC DESIGN CATEGORY: D
      - BASIC SEISMIC-FORCE-RESISTING-TOWER:
        - TELECOMMUNICATION TOWER: STEEL POLE
      - SEISMIC BASE SHEAR, V: 10.0 K
      - SEISMIC RESPONSE COEFFICIENT, C<sub>s</sub>: 0.266
      - RESPONSE MODIFICATION FACTOR, R: 1.5
      - ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE
- GENERAL STRUCTURAL NOTES:
  - ALL MATERIALS SHALL CONFORM TO THE FOLLOWING STANDARDS, UNO:
    - STEEL WIDE FLANGE: ASTM A992
    - SHAPES/PLATES: ASTM A36 UNO
    - ANGLES: ASTM A572 GR 50 OR A529 GR 50
    - CHANNELS: ASTM A572 GR 50 OR A529 GR 50
    - PIPES: ASTM A53 GR B, A500 GR B, A106 GR B, OR API 5LX MIN PIPE STRENGTH F<sub>y</sub> = 35 ksi
    - PORTS: ASTM A36
    - STEEL RECT TUBE: ASTM A500 GRB (46 KSI)
    - ANCHOR BOLTS: ASTM F1554 GR 55
    - BOLTS: ASTM F3125 GR A325
    - THREADED ROD: ASTM A36 MIN
    - HEAVY HEX NUTS: ASTM A563 GR C OR DH OR EQUIVALENT
    - HARDENED WASHERS: ASTM F436 OR EQUIVALENT
  - FRP SHAPES & FASTENERS: STRONGWELL EXTREN SERIES 500/525
  - ALL WELDING SHALL BE PERFORMED IN ACCORDANCE WITH THE SPECIFICATIONS AND PROCEDURES OF THE AMERICAN WELDING SOCIETY (AWS) BY CERTIFIED WELDERS PER AWS D1.1. WELDS SHALL BE PERFORMED WITH MINIMUM E70XX LOW-HYDROGEN ELECTRODE EXCEPT WHERE HIGHER STRENGTH ELECTRODE IS REQUIRED BY AWS D1.1.
  - ALL STRUCTURAL STEEL MEMBERS AND BOLT ASSEMBLIES SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A123 OR F2329.
  - ALL STRUCTURAL BOLTS SHALL BE TIGHTENED PER AN APPROVED PRETENSIONING METHOD AS DEFINED BY AISC. FOR EASE OF INSPECTION, THE "TURN-OF-NUT" METHOD AS DEFINED BY AISC WITH MATCH-MARKING TECHNIQUES IS RECOMMENDED.
  - ALL BOLT HOLES SHALL BE STANDARD SIZE PER TABLE J3.3 OF AISC UNO WASHERS ARE REQUIRED FOR ANY CONNECTION THAT HAS LARGER THAN STANDARD SIZED BOLT HOLES.
  - BOLT SPACING & EDGE DISTANCE SHALL BE AS FOLLOWS UNO:
 

BOLT Ø (IN.)	MIN EDGE DISTANCE (IN.)	MIN BOLT SPACING (IN.)
1/2	1	1 1/2
5/8	1 1/4	2
3/4	1 1/2	2 1/4

## FRP NOTES

- FRP STRUCTURAL SHAPES SHALL BE STRONGWELL EXTREN SERIES 500/525 MANUFACTURED USING THE PULTRUSION PROCESS.
- ALL FIELD CUT OR DRILLED EDGES OF FRP STRUCTURAL MEMBERS TO BE COATED BY OTHERS WITH RESIN OR ACRYLIC SEALER COMPATIBLE WITH THE RESIN MATRIX USED IN THE STRUCTURAL SHAPE.
- IF PREFABRICATED MEMBERS DO NOT ASSEMBLE PER PLAN, CONTACT SCI BEFORE CUTTING OR ALTERING FABRICATED MEMBERS.
- FRP STRUCTURAL MEMBERS SHALL BE FABRICATED AND ASSEMBLED AS INDICATED ON THE DRAWINGS.
- THE CONTRACTOR SHALL PROTECT THE FRP STRUCTURAL MEMBERS FROM ABUSE TO PREVENT BREAKAGE, NICKS, GOUGES, ETC. DURING FABRICATION, HANDLING, AND INSTALLATION.
- FRP BOLTS SHOULD BE TIGHTENED 1/2 TURN PAST SNUG AND LOCKED WITH EPOXY.
- ALL FRP MEMBERS TO BE FIELD-CUT BY OTHERS.
- FRP OR STEEL BOLTS THROUGH FRP MEMBERS SHALL MEET THE FOLLOWING SPACING AND EDGE DISTANCE REQUIREMENTS, MEASURED FROM BOLT CENTERS:
  - MIN BOLT SPACING = 4 TIMES BOLT DIA.
  - MIN EDGE DIST = 3 TIMES BOLT DIA. IN DIRECTION OF PULTRUSION
  - MIN EDGE DIST = 2 TIMES BOLT DIA. PERPENDICULAR TO DIRECTION OF PULTRUSION

## SPECIAL INSPECTIONS, TESTING & STRUCTURAL OBSERVATION

- STEEL FABRICATION SHALL BE DONE ON THE PREMISES OF A FABRICATOR REGISTERED AND APPROVED AS REQUIRED BY THE BUILDING OFFICIAL TO PERFORM SUCH WORK WITHOUT SPECIAL INSPECTION. ALTERNATIVELY, SPECIAL INSPECTION OF MATERIALS, WELDING, AND FABRICATION PROCEDURES SHALL BE REQUIRED FOR FABRICATION BY AN UNAPPROVED FABRICATOR.
- NO FIELD WELDING SHALL BE PERMITTED
- NONDESTRUCTIVE TESTING IS REQUIRED FOR CJP GROOVE WELDS IN MATERIAL 5/16" THICK OR GREATER.
- THE FOLLOWING SPECIAL INSPECTIONS SHALL BE REQUIRED PER CHAPTER 17 OF THE BUILDING CODE:
  - SPECIAL INSPECTION OF HIGH-STRENGTH BOLTING (WHEN APPLICABLE):
    - PERIODIC SPECIAL INSPECTION IF BOLTS ARE PRETENSIONED WITH MATCH-MARKING TECHNIQUES
    - CONTINUOUS SPECIAL INSPECTION OF ALL OTHER HIGH-STRENGTH BOLTING
- SPECIAL INSPECTION IS NOT REQUIRED FOR WORK OF A MINOR NATURE OR AS WARRANTED BY CONDITIONS IN THE JURISDICTION AS APPROVED BY THE BUILDING OFFICIAL. THUS, SPECIAL INSPECTION ITEMS ABOVE MAY BE WAIVED AS DEEMED APPROPRIATE BY THE BUILDING OFFICIAL.
- NO STRUCTURAL OBSERVATION IS REQUIRED UNLESS NOTED IN CHAPTER 17 OF THE BUILDING CODE OR BY THE JURISDICTION.

## DISCLAIMERS

- ALL STRUCTURAL COMPONENTS TO BE CONNECTED TOGETHER SHALL BE COMPLETELY FIT UP ON THE GROUND OR OTHERWISE VERIFIED FOR COMPATIBILITY PRIOR TO LIFTING ANY COMPONENT INTO PLACE. REPAIRS REQUIRED DUE TO FIT-UP OR CONNECTION COMPATIBILITY PROBLEMS AFTER PARTIAL ERECTION ARE THE FINANCIAL RESPONSIBILITY OF THE CONTRACTOR.
- SOME TELECOMMUNICATION STRUCTURES ARE SUSCEPTIBLE TO WIND-INDUCED OSCILLATIONS. OSCILLATIONS MAY OCCUR AT LOW OR MODERATE WIND SPEEDS AND MAY CAUSE STRUCTURAL DAMAGE. TIA PROVIDES NO PRACTICAL ANALYTICAL METHOD TO PREDICT AND PREVENT WIND-INDUCED STRUCTURAL OSCILLATIONS. VECTOR STRUCTURAL ENGINEERING RECOMMENDS FREQUENT MONITORING TO IDENTIFY WIND-INDUCED OSCILLATION AND REGULAR CONDITION ASSESSMENTS TO IDENTIFY FATIGUE CRACKING, LOOSE OR MISSING BOLTS, AND ANY OTHER STRUCTURAL DEFECTS. ANY OSCILLATION OR DEFECTS OBSERVED SHALL BE IMMEDIATELY REPORTED TO VECTOR STRUCTURAL ENGINEERING FOR FURTHER EVALUATION AND POSSIBLE REPAIRS OR MODIFICATIONS WHICH MAY BE REQUIRED AT THE OWNER'S EXPENSE.

## DESIGN REACTIONS

- OVERALL REACTIONS**
- AXIAL = 44.7 K (1.2D + 1.0W + 0.5L)
  - SHEAR = 22.5 K (0.9D + 1.0W)
  - OVERTURNING MOMENT = 1,723 K (1.2D + 1.0W + 0.5L)

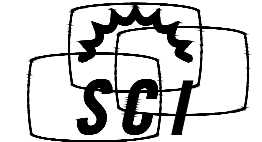
- PER LEG REACTIONS**
- DOWFORCE = 85.9 K (1.2D + 1.0W + 0.5L)
  - UPLIFT = 77.7 K (0.9D + 1.0W)
  - SHEAR = 12.9 K (0.9D + 1.0W)

- CETNER MAST REACTIONS**
- DOWFORCE = 20.9 K (1.2D + 1.0W + 0.5L)
  - SHEAR = 0.77 K (0.9D + 1.0W)

## GENERAL NOTES

- CONTRACTOR SHALL FIELD VERIFY SITE OR LAYOUT RESTRICTIONS, SITE CONDITIONS, DIMENSIONS, AND ELEVATIONS BEFORE START OF CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF SCI, INC. PRIOR TO BEGINNING PROJECT. ALL WORK SHALL BE PERFORMED USING ACCEPTED CONSTRUCTION PRACTICES. CONTRACTOR TO VERIFY MATERIALS PROVIDED BY SCI PRIOR TO INSTALLATION.
- ALL ENGINEERING PLANS, DRAWINGS, DESIGNS, CALCULATIONS AND SPECIFICATIONS (COLLECTIVELY, "PLANS") ARE DESIGNED TO THE PROPRIETARY MANUFACTURING SPECIFICATIONS OF SOLAR COMMUNICATIONS INTERNATIONAL, INC. ("SCI") INTENDED AND AUTHORIZED SOLELY FOR USE WITH PRODUCT PRODUCED BY SCI. UNAUTHORIZED USE IS STRICTLY PROHIBITED. CUSTOMER AGREES TO DEFEND, INDEMNIFY AND HOLD SCI HARMLESS FROM AND AGAINST ANY AND ALL DEMANDS, CLAIMS, SUITS, PROCEEDINGS, LOSSES, LIABILITIES, DAMAGES, FEES, COSTS AND EXPENSES (INCLUDING, WITHOUT LIMITATION, REASONABLE ATTORNEYS' FEES AND COSTS) ARISING FROM OR RELATING TO ANY UNAUTHORIZED USE OF SCI'S PLANS BY CUSTOMER.
- NO FIELD MODIFICATIONS MAY BE MADE TO RFRTRANSPARENT PANELS WITHOUT THE EXPRESS WRITTEN CONSENT FROM THE ENGINEER OF RECORD. SCI, INC. AND ENGINEER OF RECORD ASSUME NO RESPONSIBILITY FOR THE STRUCTURE IF ALTERATIONS AND/OR ADDITIONS ARE MADE TO THE DESIGN AS SHOWN IN THESE DRAWINGS.
- THE CONTRACTOR AND ALL SUBCONTRACTORS SHALL COMPLY WITH ALL LOCAL CODES, REGULATIONS, AND ORDINANCES AS WELL AS STATE DEPARTMENT OF INDUSTRIAL REGULATIONS AND DIVISION OF INDUSTRIAL SAFETY (OSHA) REQUIREMENTS.
- THE CONTRACTOR SHALL SUPERVISE AND DIRECT ALL WORK TO THE BEST OF HIS/HER ABILITY AND SKILL. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, PROCEDURES, AND SEQUENCES, AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.
- THE CONTRACTOR SHALL VERIFY, COORDINATE, AND PROVIDE ALL NECESSARY BLOCKING, BACKING, FRAMING, HANGERS, OR OTHER SUPPORTS FOR ALL ITEMS REQUIRING SAME, WHETHER SHOWN OR NOT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TEMPORARY BRACING, SHORING, FORMWORK, ETC., AND SHALL CONFORM TO ALL NATIONAL, STATE, AND LOCAL ORDINANCES AND CODES, IN ORDER TO SAFELY EXECUTE ALL STAGES OF WORK TO COMPLETE THIS PROJECT.
- IT IS THE INTENT OF THESE DRAWINGS TO SHOW THE COMPLETED INSTALLATION OF THE STRUCTURE SHOWN.
- CONTRACTOR ASSUMES RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING THE SAFETY OF ALL PERSONS AND PROPERTY IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES. THIS REQUIREMENT APPLIES CONTINUOUSLY, AND IS NOT LIMITED TO NORMAL WORKING HOURS.
- CONTRACTOR TO HOLD ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE ALL EXISTING UTILITIES, SHOWN OR NOT SHOWN. THE CONTRACTOR IS FINANCIALLY RESPONSIBLE FOR REPAIR OR REPLACEMENT OF UTILITIES OR OTHER PROPERTY DAMAGED IN CONJUNCTION WITH THE EXECUTION OF WORK ON THIS PROJECT.
- WEATHER PROOFING AND/OR FLASHING TO BE PROVIDED BY CONTRACTOR AS REQUIRED.

CUP23-0009 Bowman Telecommunications Facility  
Exhibit E: Site Plan and Elevations



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DATE: 12/18/23 DESIGNED: KJG DRAFTER: KJG

REVISIONS		
REV	DATE	DESCRIPTION

AT&T

NOTES & SPECIFICATIONS

**BOWMAN**  
SITE #: CVL05830  
110' TALL X Ø18' RFRTRANSPARENT WATER TANK  
3321 EL DORADO HILLS BOULEVARD  
EL DORADO HILLS, CA 95762  
EL DORADO COUNTY



12/19/2023

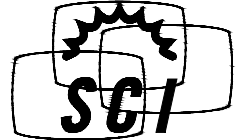
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ENCLOSED APPURTENANCES:  
 ANTENNA LOADING @ TOP RAD CENTER:  
 MAX WEIGHT = 2600 lb

ANTENNA CL @ FUTURE RAD CENTER:  
 LOADING SAME AS TOP RAD CENTER



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ELEVATION VIEW

**BOWMAN**  
 SITE #: CVL05830  
 110' TALL X Ø18' RFRTRANSPARENT WATER TANK  
 3321 EL DORADO HILLS BOULEVARD  
 EL DORADO HILLS, CA 95762  
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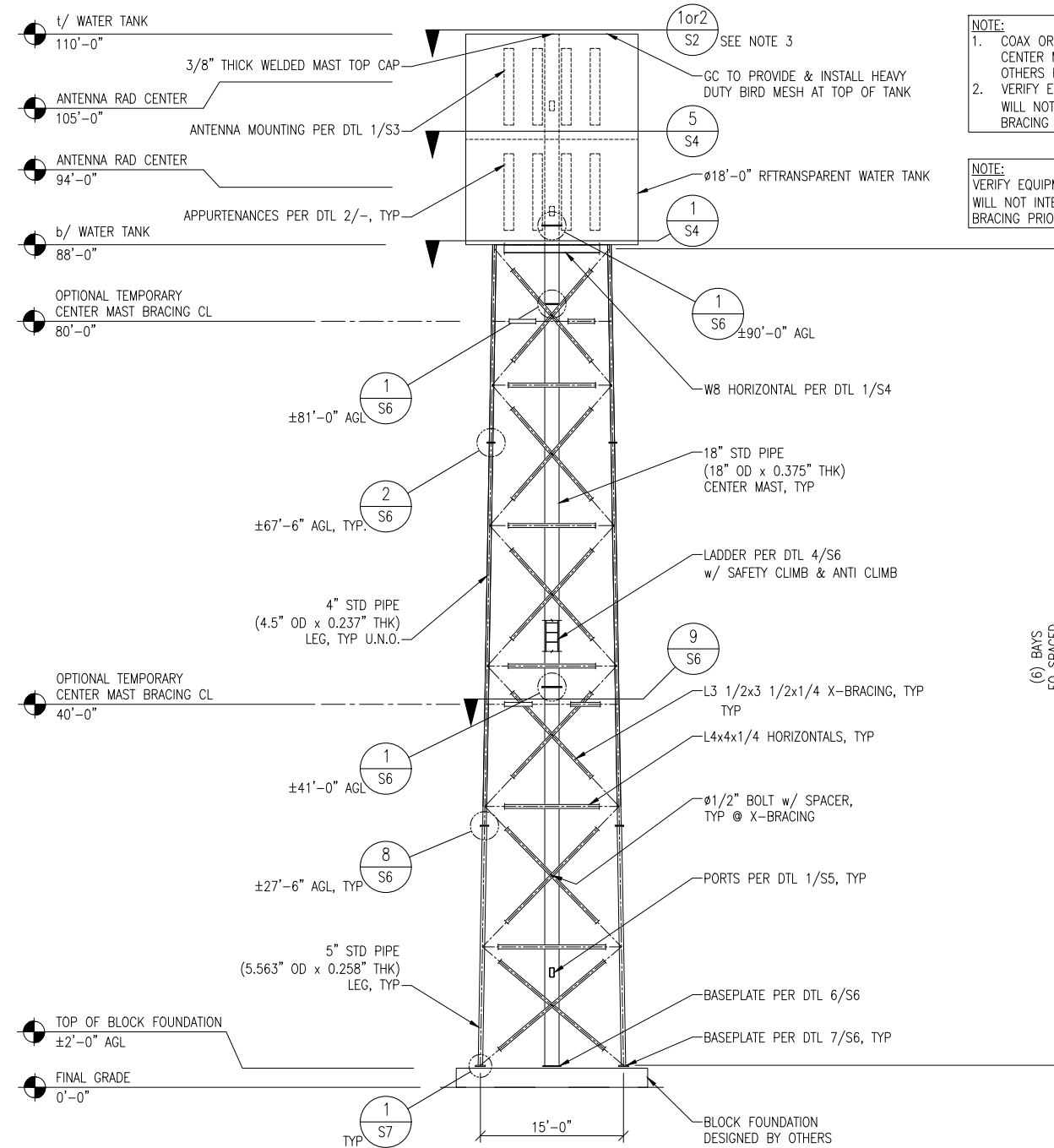


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NOTE:  
 1. COAX OR FIBER CABLE FIT WITHIN CENTER MAST TO BE VERIFIED BY OTHERS PRIOR TO FABRICATION.  
 2. VERIFY EQUIPMENT BELOW TOWER WILL NOT INTERFERE w/ TOWER BRACING PRIOR TO FABRICATION.

NOTE:  
 VERIFY EQUIPMENT BELOW TOWER WILL NOT INTERFERE w/ TOWER BRACING PRIOR TO FABRICATION

APPURTENANCES

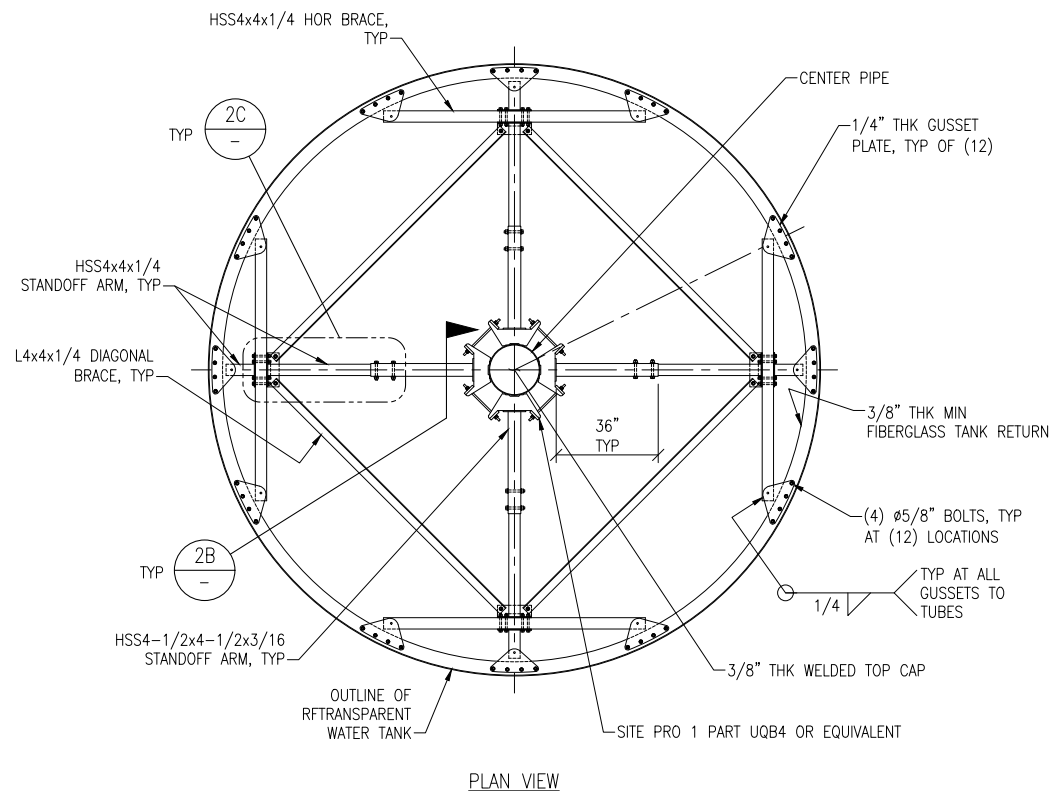
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ELEVATION

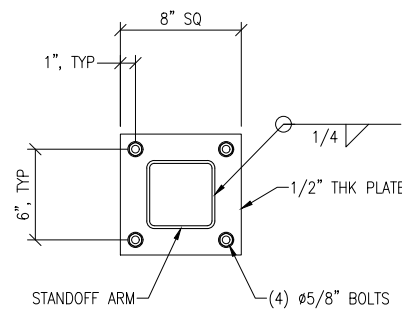
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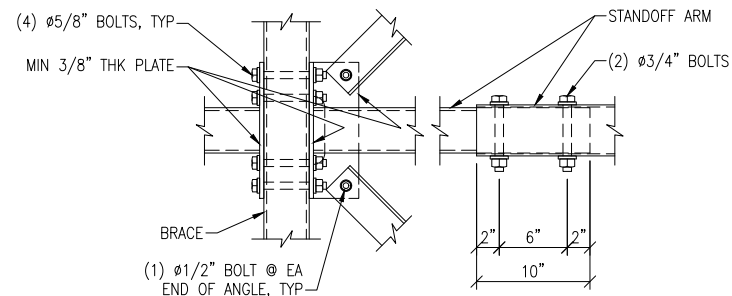
- NOTES:
- FRAMING NOT DESIGNED TO SUPPORT LIVE LOAD.
  - COORDINATE MEMBER PLACEMENT w/ ANTENNA PLACEMENT.
  - STEEL TANK SUPPORT TO BE USED WHEN TIP OF ANTENNA IS MORE THAN 2'-0" (VERTICAL) AWAY FROM STEEL, OTHERWISE USE FRP TANK SUPPORT PER DTL 1/-.



PLAN VIEW



DETAIL 2B



DETAIL 2C

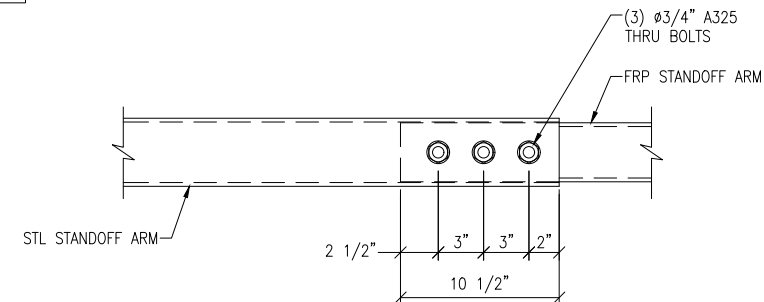
**STEEL TANK SUPPORT**

NTS

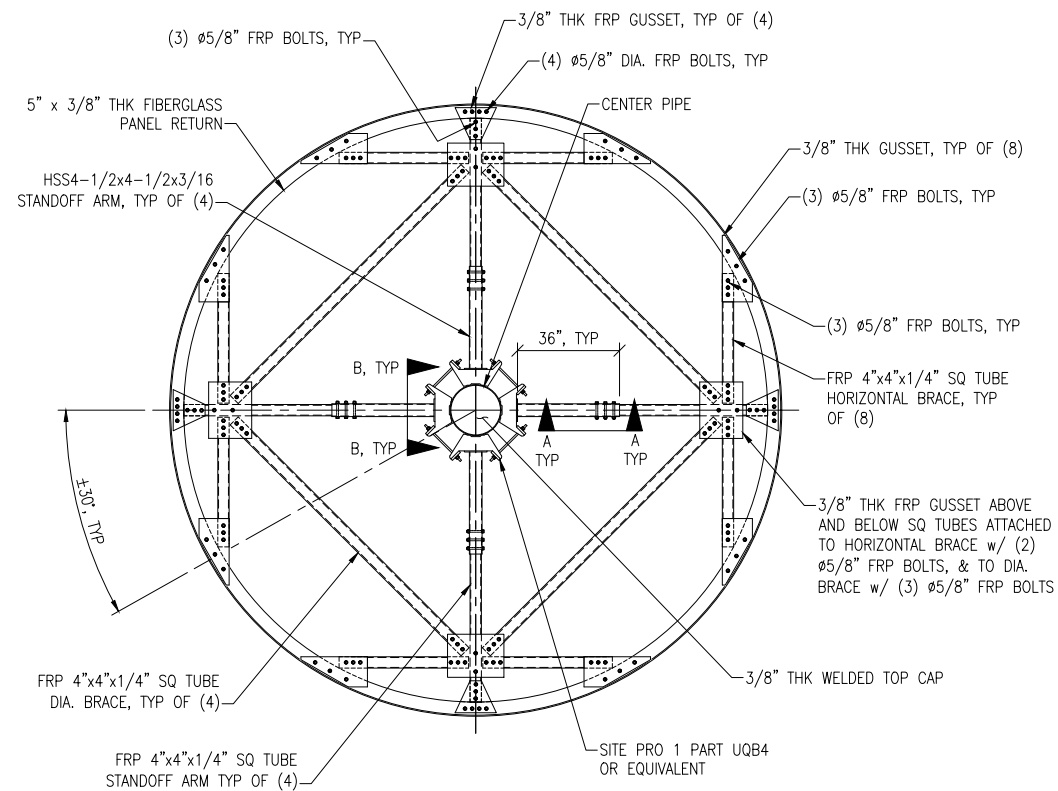
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- NOTES:
- FRAMING NOT DESIGNED TO SUPPORT LIVE LOAD.
  - COORDINATE MEMBER PLACEMENT w/ ANTENNA PLACEMENT.
  - FRP TANK SUPPORT TO BE USED WHEN TIP OF ANTENNA IS LESS THAN 2'-0" (VERTICAL) AWAY FROM FRP, OTHERWISE USE STL TANK SUPPORT PER DTL 2/-.
  - FRP BOLTS RELATING TO THIS DETAIL, TO HAVE A MIN 2 1/2" EDGE DISTANCE & BOLT SPACING.

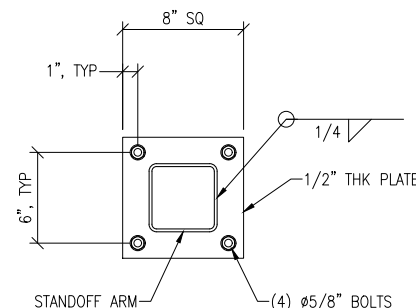
CUP23-0009 Bowman Telecommunications Facility  
Exhibit E: Site Plan and Elevations



SECTION A-A



PLAN VIEW

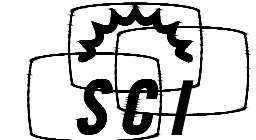


SECTION B-B

**FRP TANK SUPPORT**

NTS

1



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DETAILS

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EL DORADO HILLS, CA 95762  
EL DORADO COUNTY

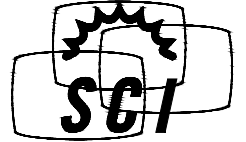


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DATE: 12/18/23 DESIGNED: KJG DRAFTER: KJG

REVISIONS		
REV	DATE	DESCRIPTION

AT&T

DETAILS

BOWMAN

SITE #: CVL05830  
110' TALL X Ø18' RFRTRANSPARENT WATER TANK  
3321 EL DORADO HILLS BOULEVARD  
EL DORADO HILLS, CA 95762  
EL DORADO COUNTY

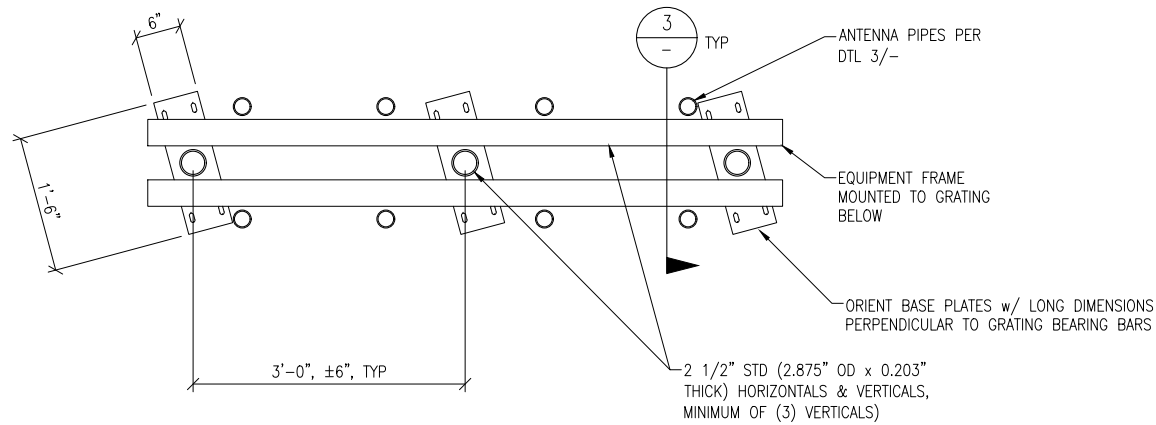


12/19/2023

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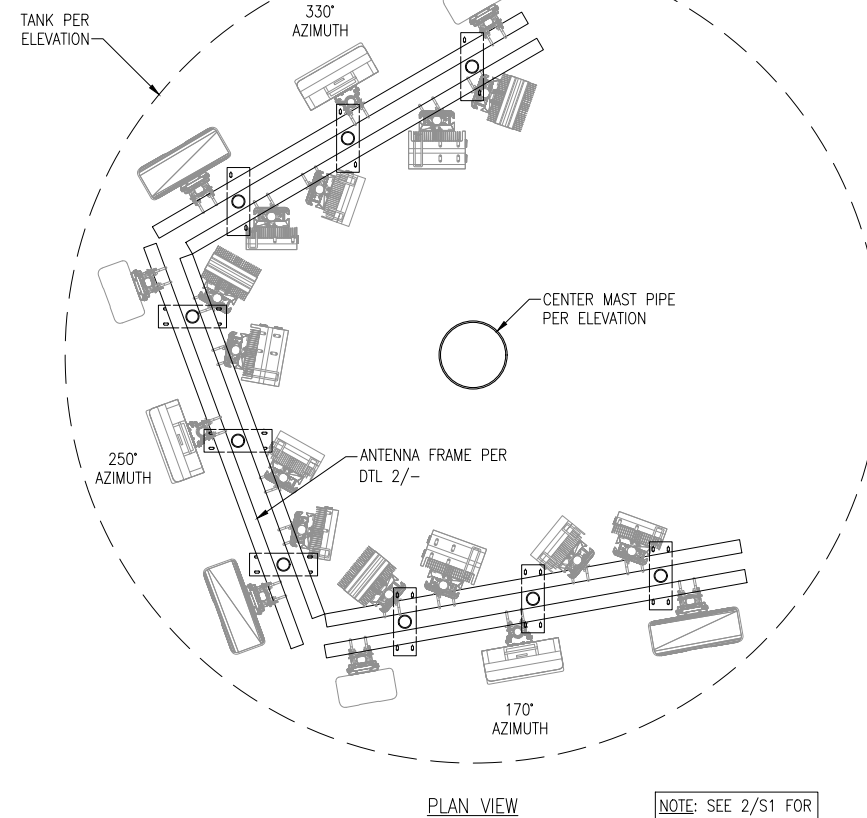
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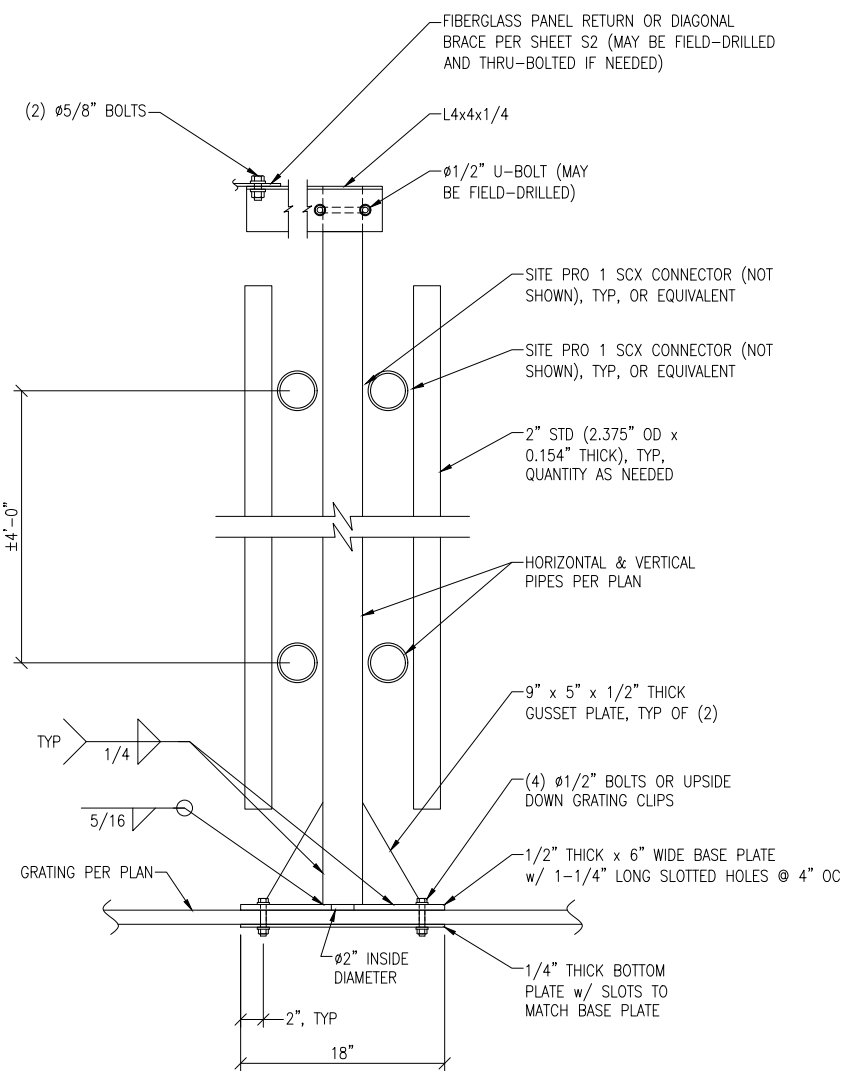
PLAN VIEW

NOTE: SEE 2/S1 FOR CARRIER LOADING NOT SHOWN

NTS

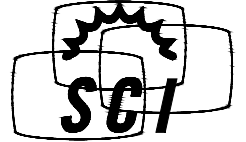
1

- NOTES:
- APPURTENANCES NOT SHOWN - SEE CDs FOR APPURTENANCE MODELS, AZIMUTHS, LOCATIONS, ETC.
  - WHERE FEASIBLE, MOUNTING PIPES MAY BE OMITTED AND RRUS AND/OR SURGE SUPPRESSORS MAY BE ATTACHED DIRECTLY TO HORIZONTAL PIPES.
  - LOAD FRAME AS EVENLY AND SYMMETRICALLY AS POSSIBLE TO EVENLY DISTRIBUTE LOAD TO PLATFORM.
  - VERIFY COMPATIBILITY OF DESIGN SHOWN w/ SPECIFIC EQUIPMENT ON CDs PRIOR TO FABRICATION.



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REVISIONS		
REV	DATE	DESCRIPTION

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DETAILS

**BOWMAN**  
SITE #: CVL05830  
110' TALL X Ø18' RFTRANSPARENT WATER TANK  
3321 EL DORADO HILLS BOULEVARD  
EL DORADO HILLS, CA 95762  
EL DORADO COUNTY

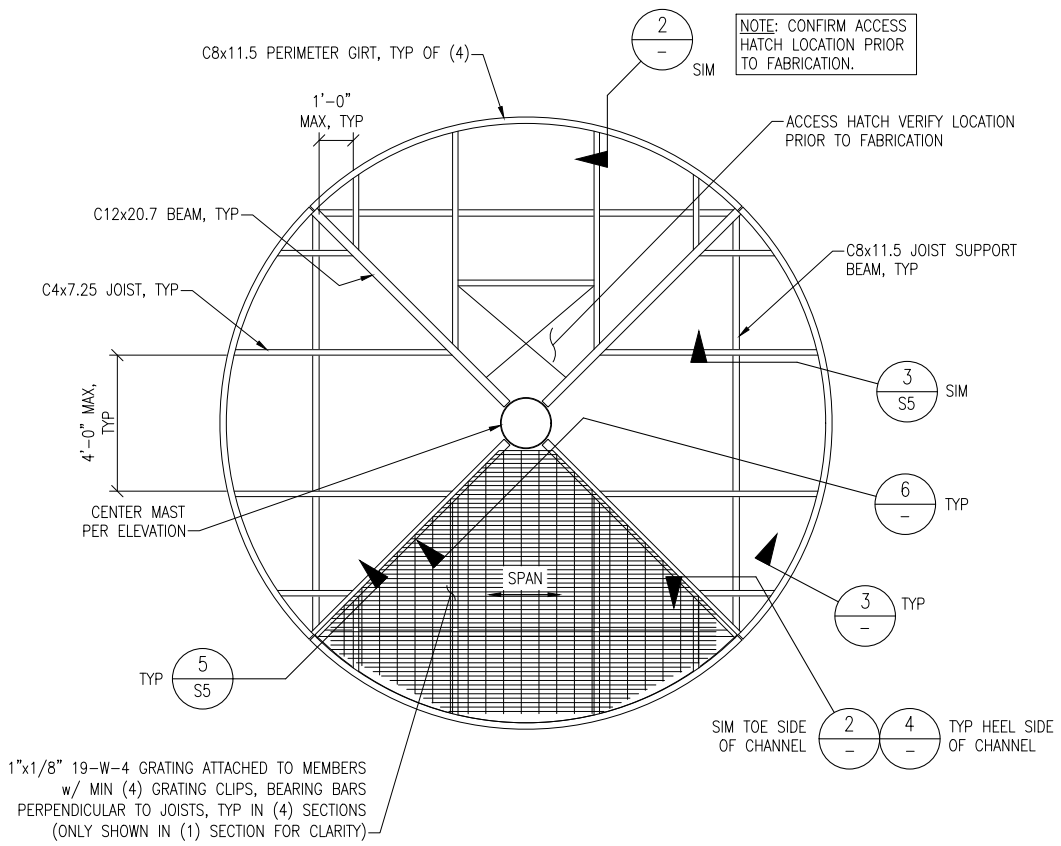


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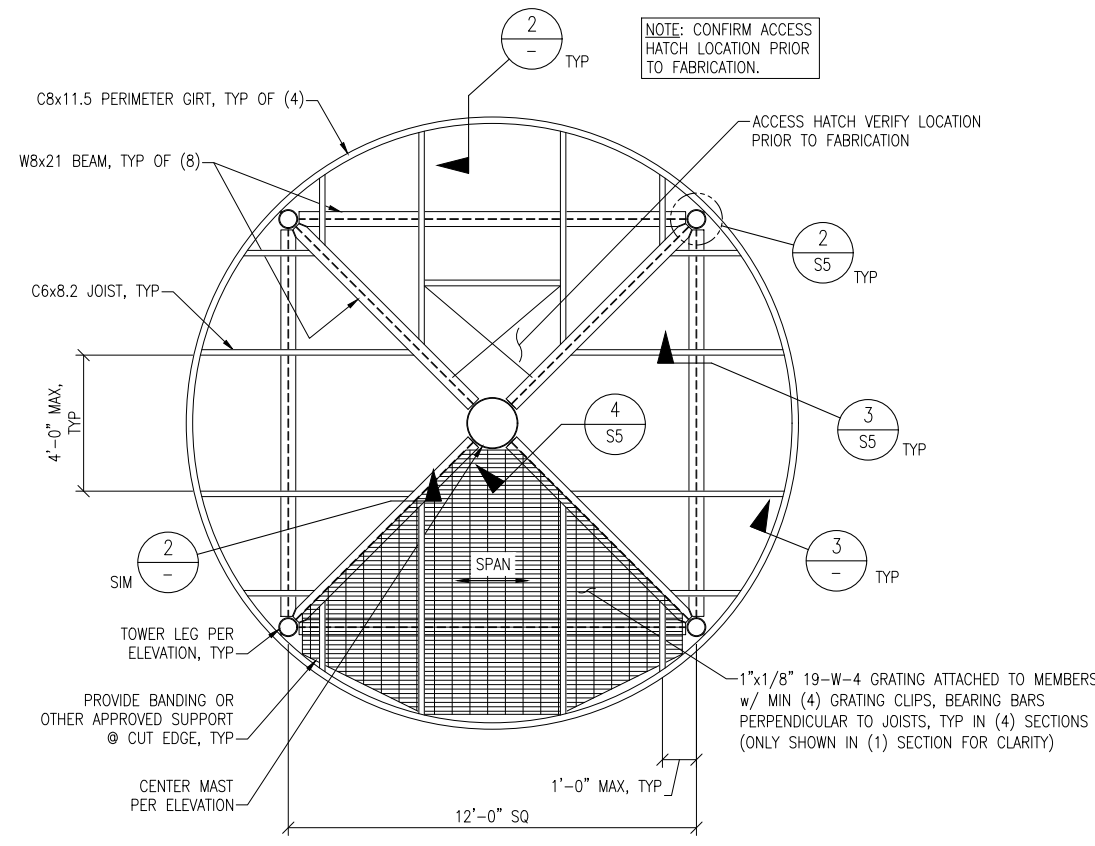
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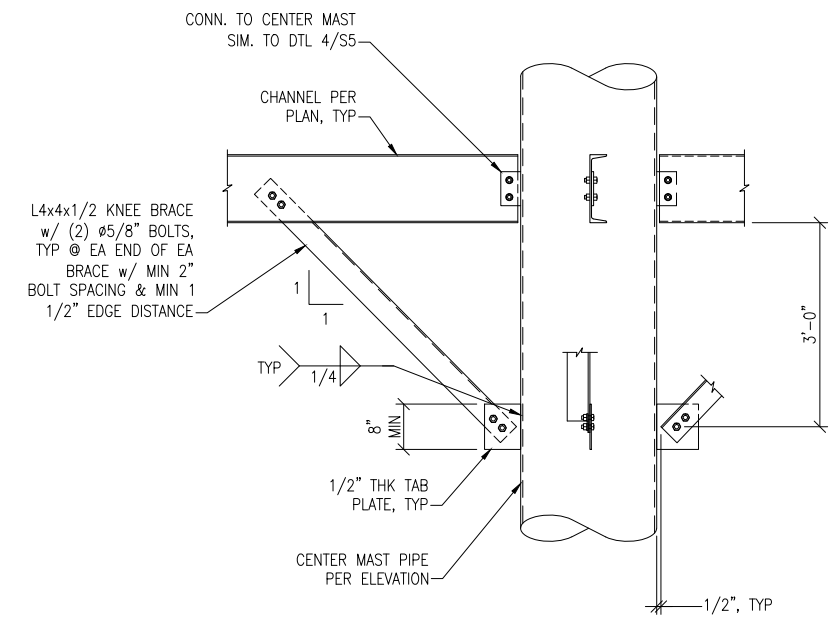
**MID PLATFORM PLAN VIEW**

5



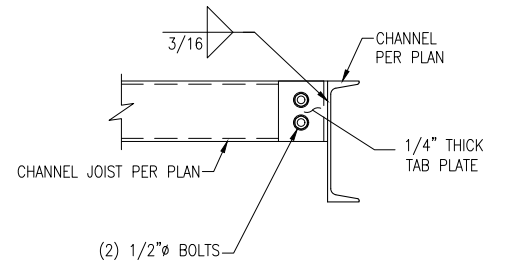
**PLATFORM SUPPORT PLAN VIEW**

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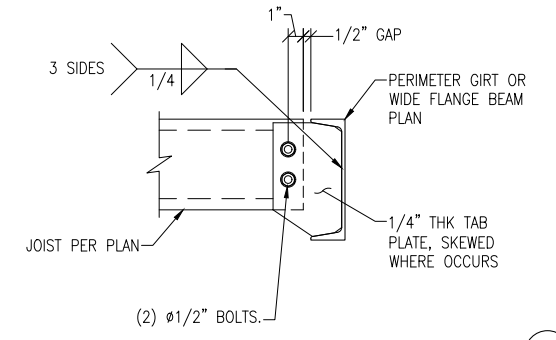


**KICKER**

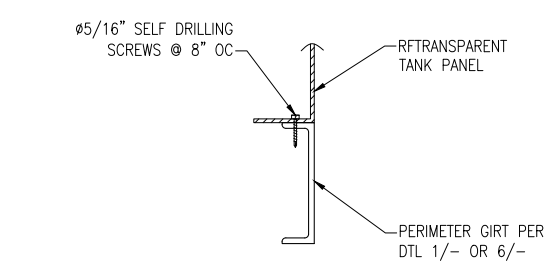
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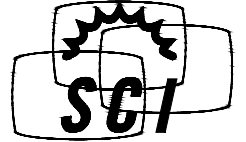


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3





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REVISIONS

REV	DATE	DESCRIPTION

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DETAILS

**BOWMAN**  
SITE #: CVL05830  
110' TALL X Ø18' RFRTRANSPARENT WATER TANK  
3321 EL DORADO HILLS BOULEVARD  
EL DORADO HILLS, CA 95762  
EL DORADO COUNTY

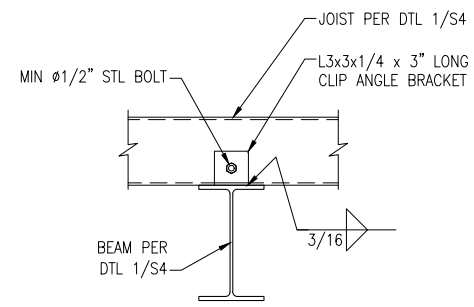
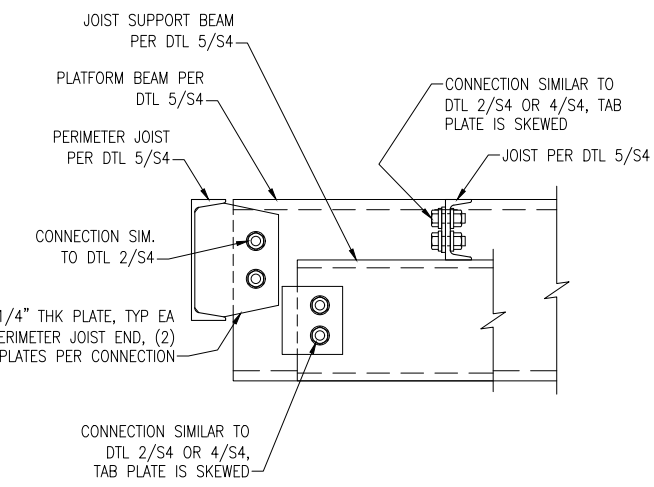
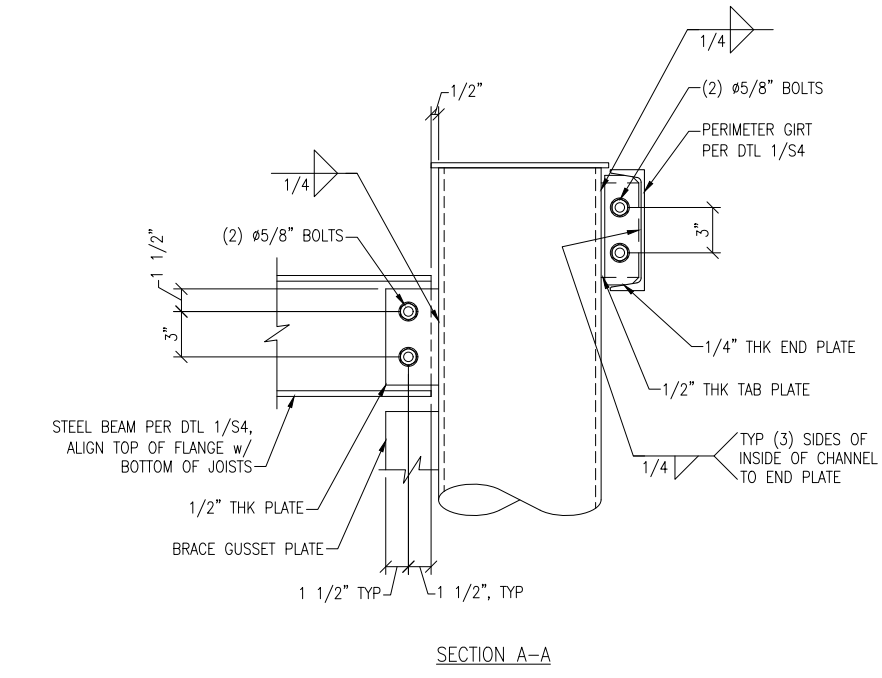
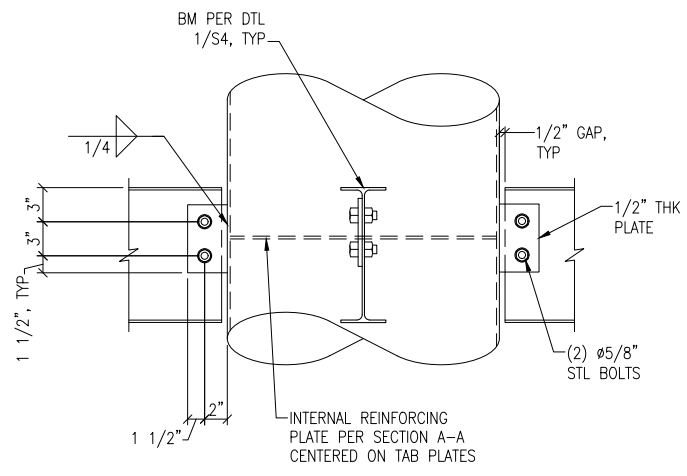
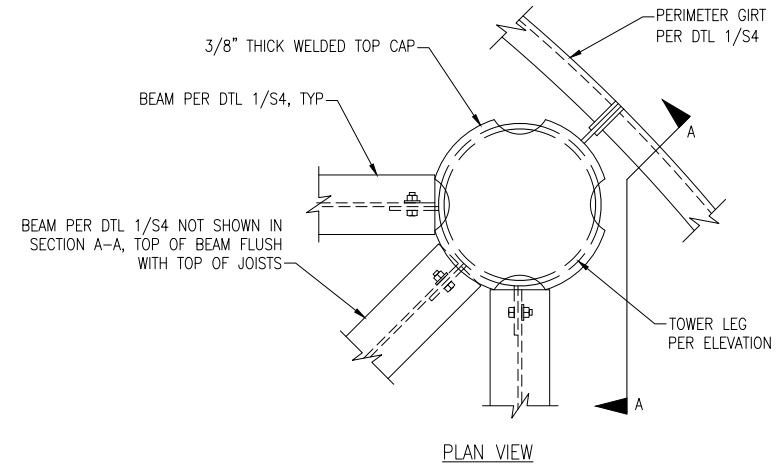
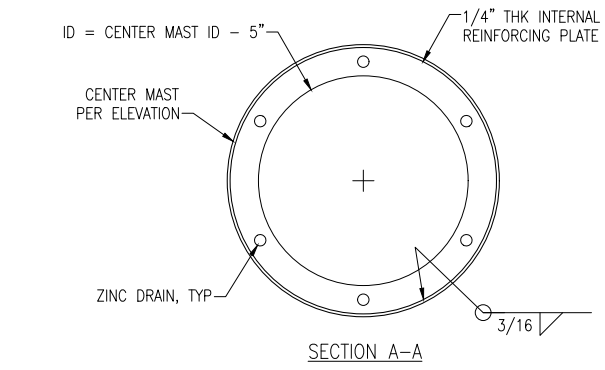


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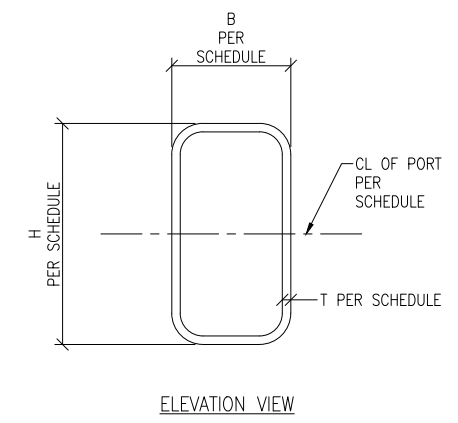
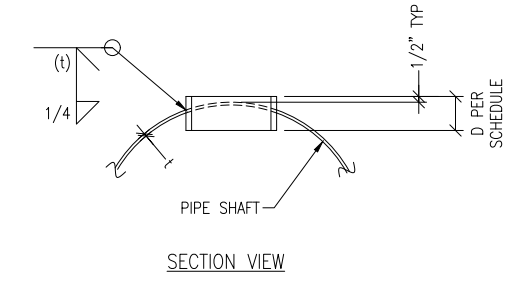
NTS

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**PORT SCHEDULE**

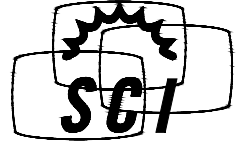
CL ELEV.	PORT SIZE (B x H)	D	T	QTY	AZIMUTH(S)
102'-6"	6"x12"	3"	3/4"	3	120° SEPARATION
91'-6"	6"x12"	3"	3/4"	3	120° SEPARATION
12'-0"	12"x25"	4"	1/2"	2	180° SEPARATION

NOTES:  
1. VERIFY PORT SIZES & LOCATIONS PRIOR TO FABRICATION.  
2. SEE SCHEDULE FOR PORT QUANTITY & AZIMUTHS.  
3. SEE ELEVATION FOR POLE SHAFT THICKNESS, t.



NTS

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REVISIONS		
REV	DATE	DESCRIPTION

AT&T

DETAILS

**BOWMAN**  
SITE #: CVL05830  
110' TALL X Ø18' RFRTRANSPARENT WATER TANK  
3321 EL DORADO HILLS BOULEVARD  
EL DORADO HILLS, CA 95762  
EL DORADO COUNTY

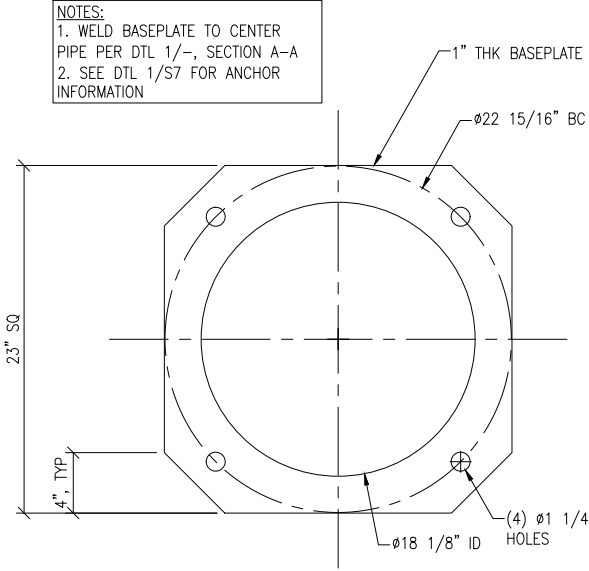


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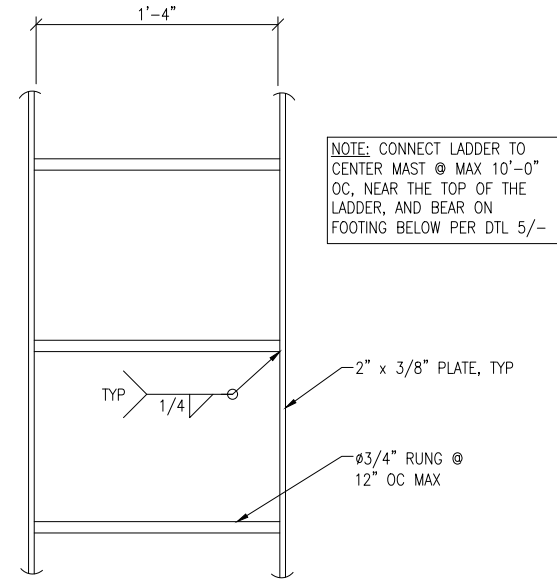
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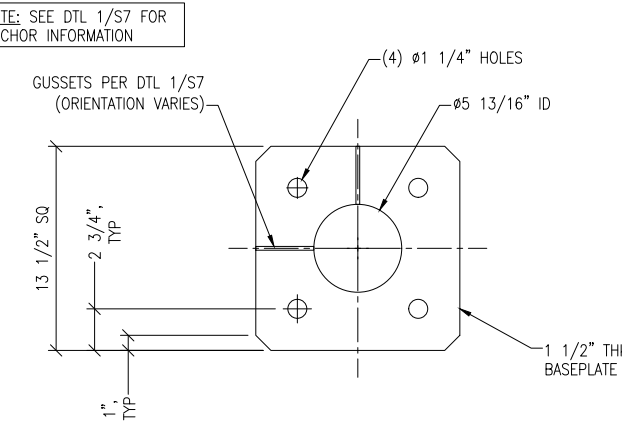
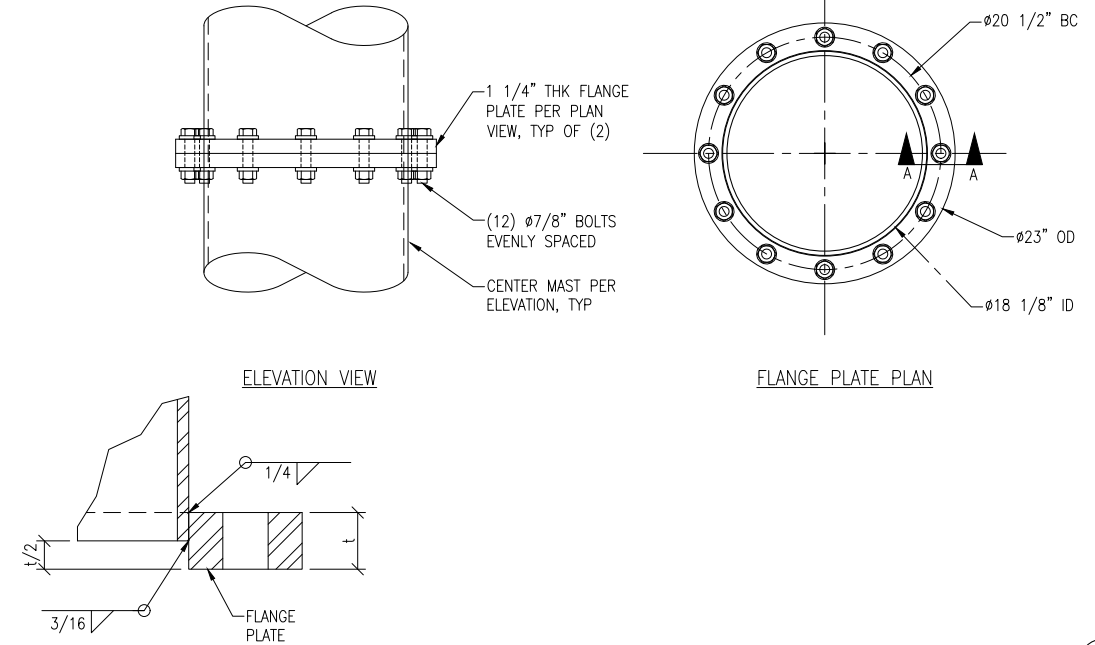
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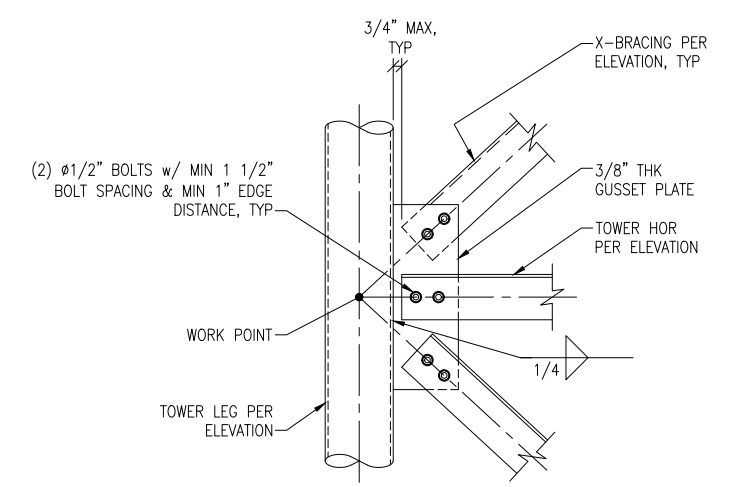
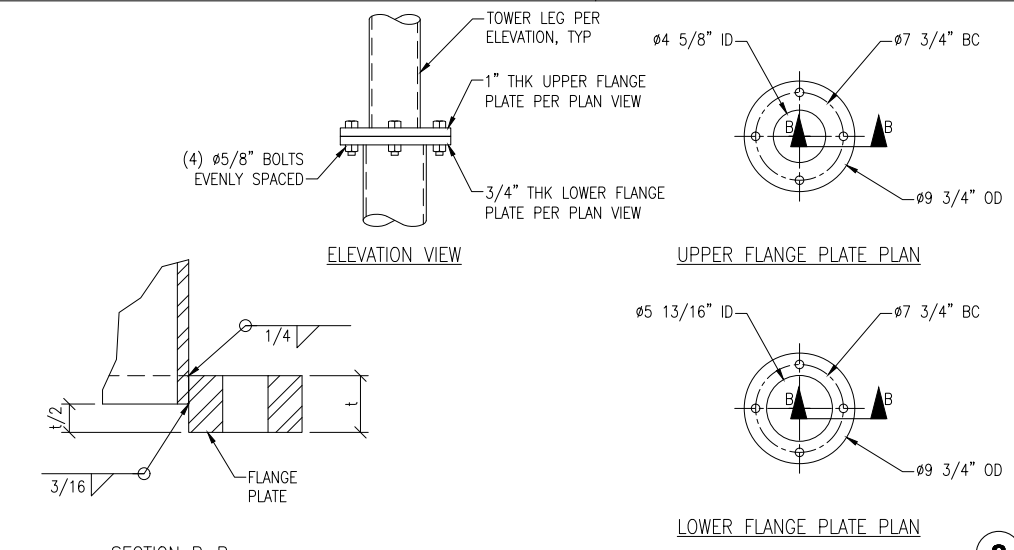
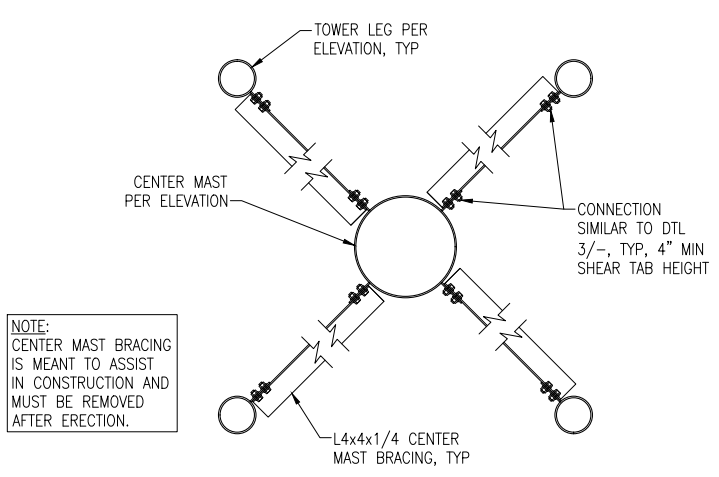
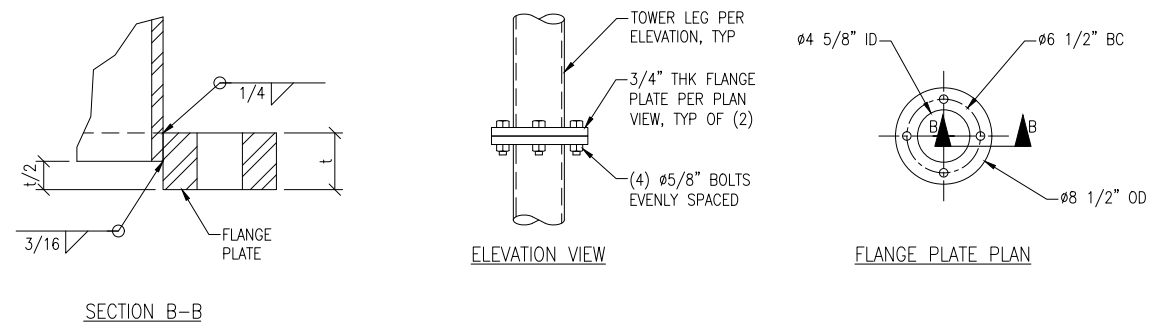
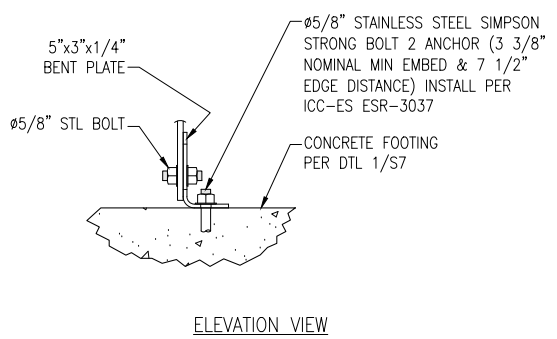
NOTES:  
1. WELD BASEPLATE TO CENTER PIPE PER DTL 1/-, SECTION A-A  
2. SEE DTL 1/S7 FOR ANCHOR INFORMATION

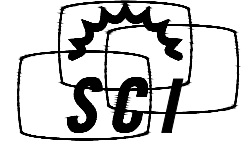


NOTE: CONNECT LADDER TO CENTER MAST @ MAX 10'-0" OC, NEAR THE TOP OF THE LADDER, AND BEAR ON FOOTING BELOW PER DTL 5/-



NOTE: WELD BASEPLATE TO TOWER LEGS PER DTL 2/-, SECTION B-B  
NOTE: INCREASE ID HOLE SIZE TO ACCOUNT FOR SLOPE OF TOWER LEG





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REVISIONS		
REV	DATE	DESCRIPTION

AT&T

FOUNDATION

BOWMAN

SITE #: CVL05830  
110' TALL X Ø18' RFRTRANSPARENT WATER TANK  
3321 EL DORADO HILLS BOULEVARD  
EL DORADO HILLS, CA 95762  
EL DORADO COUNTY

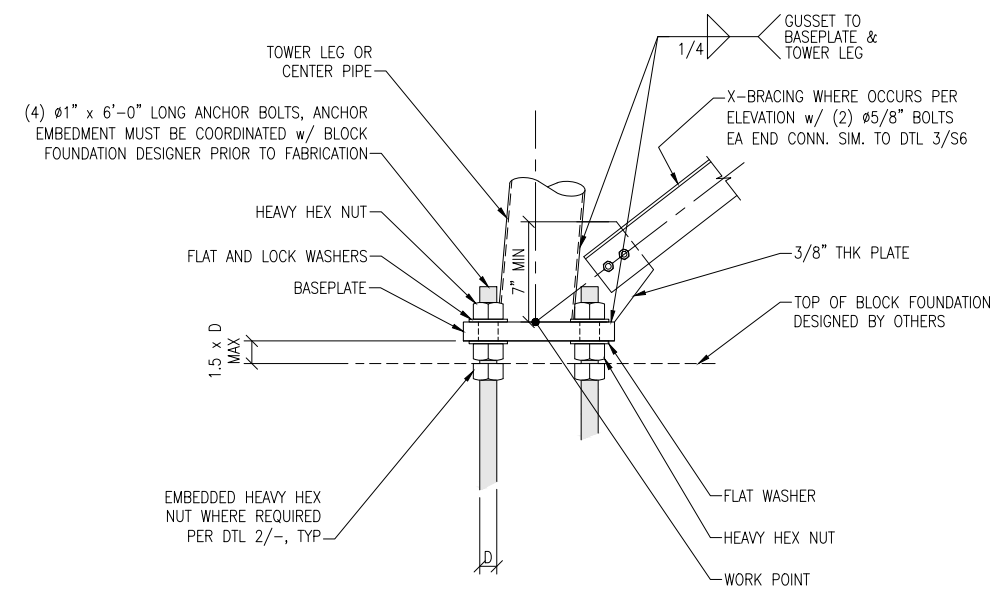


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**BASEPLATE / ANCHORAGE DETAIL**

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CUP23-0009 Bowman Telecommunications Facility  
Exhibit F: Project Description and Alternative Site Analysis



on Behalf of

**PROJECT SUPPORT STATEMENT**

**AT&T PROJECT NAME: FirstNet**

**DEVELOPMENT APPLICATION FOR AT&T SITE "Bowman & El Dorado Hills CSD"**

**AT&T SITE NUMBER: CVL05830**

**AUTHORIZED AGENT:**

**51 WIRELESS GROUP, LLC.**

**ZONING MANAGER:**

**JARED KEARSLEY; 209-968-4315; Jared.Kearsley@51wireless.net**

**PROPERTY OWNER: El Dorado Hills Community Service District**

**(916) 643-4372**

**APN: 121-040-026**

**3321 El Dorado Hills Blvd, El Dorado Hills, CA 95762**

- 
- **PROJECT'S BACKGROUND AND OBJECTIVES**
  - **SEARCH RING'S DESCRIPTION AND OBJECTIVES**
  - **POTENTIAL CO-LOCATIONS**
  - **ALTERNATIVE SITE ANALYSIS**
  - **SUBJECT PARCEL AND SITE DETAILS AND SUPPORTING DOCUMENTS**
  - **OPERATIONAL STATEMENT**
  - **FIRE SUPPRESSION SYSTEM**

CUP23-0009 Bowman Telecommunications Facility  
Exhibit F: Project Description and Alternative Site Analysis



on Behalf of

**FirstNet Project Background and objectives:**

AT&T is proposing an unmanned Wireless Telecommunication Facility (WTF) on APN 121-040-026-000 in the unincorporated area of El Dorado Hills, CA located in El Dorado County in order to provide FirstNet services in the coverage area and to service a significant gap in LTE coverage for AT&T's customers in El Dorado Hills, CA. This proposed facility will vastly improve 4G, 5G, LTE services within this portion of El Dorado County and El Dorado Hills, CA. Additionally, this tower will provide valuable FirstNet services which include, but are not limited to: a designated spectrum (Band 14) at which provides subscribed first responder agencies more enhanced and secure communications not only within the city limits but also interjurisdictional as well.

AT&T has chosen the least intrusive viable site location that will fill this significant gap in coverage and bring vital FirstNet services to this part of El Dorado Hills and El Dorado County, CA. Four (4) other candidates/locations were investigated before selecting the CSD/Bowman property as AT&T's primary preferred candidate.

An initial desktop analysis was conducted examining a few parcels within the search ring provided to us by AT&T's engineering division, the Water Tank property, Fire Station (Verizon Site), and St. Stephen's Lutheran Church (T-Mobile Site). These options appeared to be the obvious option from the far, however, after much due diligence the locations became infeasible. After researching the sites, a few issues arose at which will be discussed in the Alternative Site Analysis.

After AT&T discovered that the three properties weren't viable, they began looking at other areas within the Search Ring for a new tower site.

CUP23-0009 Bowman Telecommunications Facility  
Exhibit F: Project Description and Alternative Site Analysis



on Behalf of

**Search Ring's Description and Objectives:**



AT&T Mobility is proposing to build and maintain an unmanned wireless telecommunication facility consisting of a 31' x 35' (approx. 1,085 square foot) enclosed compound [lease area]. The compound will include an 110' Faux Water Tank Tower, one equipment shelter, and one 30KW standby Diesel Generator with a 190-gallon belly tank. This facility will be located at 3321 El Dorado Hills Blvd within El Dorado County's jurisdiction on a 45-acre OS zoned property.

AT&T's objective for the Bowman CSD site is to fill a significant mobility coverage gap in the service area as well as provide FirstNet services for First Responders. The site's elevation is approximately 840' feet while the surrounding communities is rolling hills. After running a coverage simulation at the site location, AT&T is anticipating a drastic improvement to their network and for their customers.

The site location is the least intrusive option in the area given its existing OS usage and not near dwellings. The Faux Water Tank design will provide architectural features that is ideal for this area of El Dorado Hills. The fenced compound will screen all ground equipment from the public right-of-way and nearby parcels.



CUP23-0009 Bowman Telecommunications Facility  
Exhibit F: Project Description and Alternative Site Analysis



on Behalf of

**Potential Co-locations:**



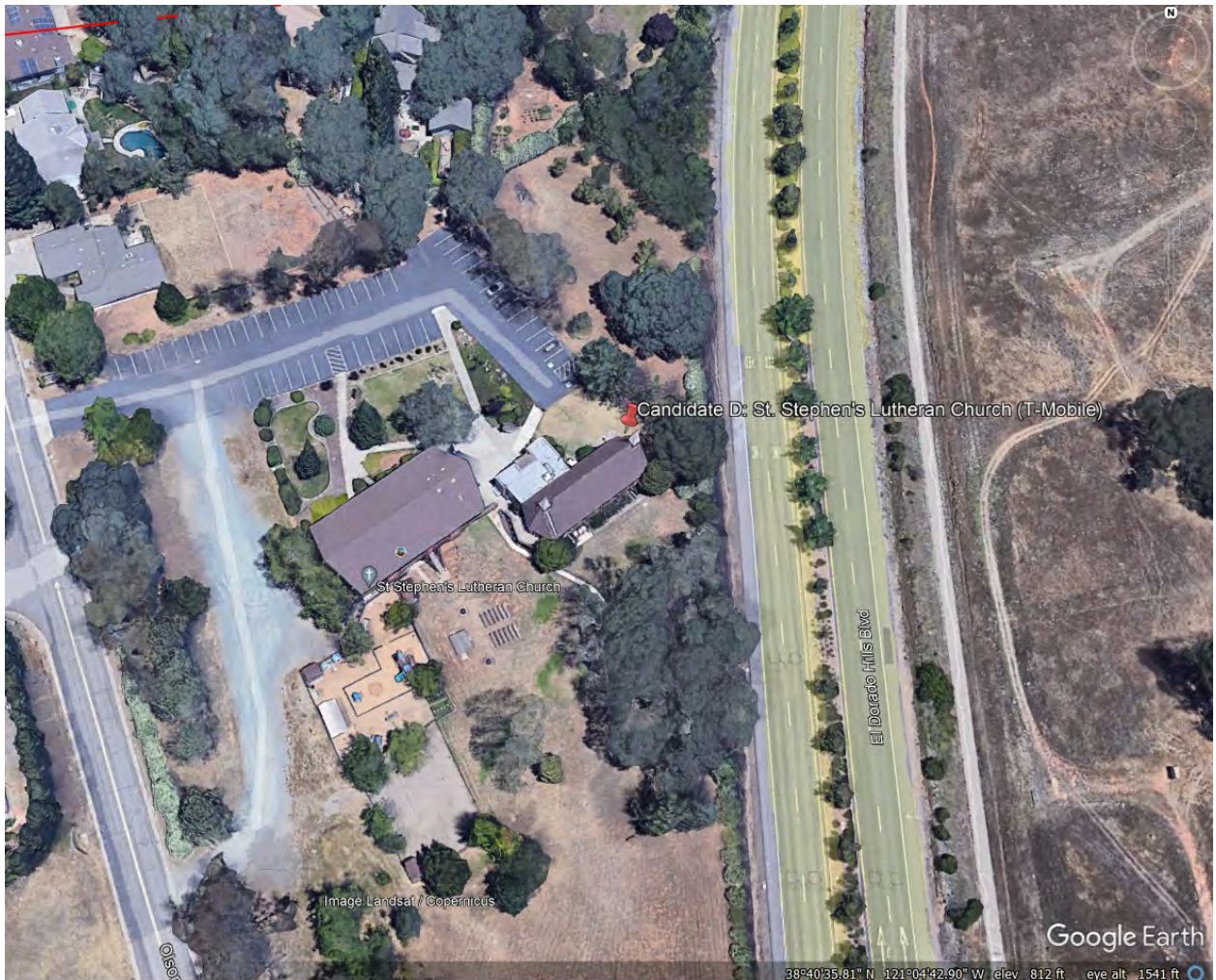
There are (2) potential Co-location opportunities in the near vicinity of the provided Search Ring that our firm investigated; however, as described above the Fire Station is not a viable option for an AT&T Collocation. The Fire Department turned down the idea of AT&T installing their equipment on the Fire Station Property and would no longer entertain the idea.



CUP23-0009 Bowman Telecommunications Facility  
Exhibit F: Project Description and Alternative Site Analysis



on Behalf of



The Second Collocation that was investigated was the St. Stephen's Lutheran Church where T-Mobile has a stealthed facility. After further research, there is no additional space within the T-Mobile Stealthed Facility. T-Mobile is in the process of proposing a 52' tall bell tower at which would provide a 30' antennae centerline. The tower is located at 790 feet AMSL and the Bowman AT&T Tower is located at 837 feet AMSL with a difference of 47' in elevation. Provided AT&T's proposed structure is 110' with a 106' antennae centerline, which centerline is 76' higher than the bell tower's centerline, the total loss in height is 123 feet in elevation at T-Mobile's bell tower. For these reasons, T-Mobile's proposed bell tower is not a viable option to close AT&T's significant gap in coverage.



CUP23-0009 Bowman Telecommunications Facility  
Exhibit F: Project Description and Alternative Site Analysis



on Behalf of

**Alternative Site Analysis:**



Above is a map showing the Search Ring (Yellow Pin), Proposed Site (Bowman CSD) (Green Pin) and the alternative sites that were considered for placement of the telecommunications facility (Red Pins). Each non-collocation Alternative Sites are further discussed below:



CUP23-0009 Bowman Telecommunications Facility  
Exhibit F: Project Description and Alternative Site Analysis



on Behalf of

**El Dorado Irrigation District:**

**3340 Patterson Way, El Dorado Hills, CA 95762**

**Latitude/Longitude: 38.670990, -121.086371 (NAD83)**

**Proposal – Raw Land Build on Water Tank or Free-Standing Tower**



**Considerations:**

We worked with the Water District on a conceptual design idea, however, after further internal discussion with the District's management, the District rejected the idea of leasing space, either on the tank or on the ground, for a WTF. They expressed some historical concern from the nearby community and did not want to increase the level of concern by leasing space to AT&T for a WTF. This location was ideal from coverage standpoint, however, without lease rights AT&T cannot consider this property as a viable option. Additionally, the tower would have been placed near dwellings at which could have caused potential concerns.



CUP23-0009 Bowman Telecommunications Facility  
Exhibit F: Project Description and Alternative Site Analysis



on Behalf of

**Pacific States Development, Inc.:**

**Patterson Way, El Dorado Hills, CA 95762**

**Latitude/Longitude: 38.670579, -121.085561 (NAD83)**

**Proposal – Raw Land Build for New Tower**



**Considerations:**

Candidate B was disqualified after speaking to the property owner about leasing space to AT&T for a new tower installation. The property owner expressed concern and stated that they once had an approved CUP for an AT&T WTF, however, the CC&R's restricted the use of the property and could not legally install said WTF. For this reason, this candidate was deemed disqualified.



CUP23-0009 Bowman Telecommunications Facility  
Exhibit F: Project Description and Alternative Site Analysis



on Behalf of

**Actual View of the Proposed Location:**

**Bowman / El Dorado Hills CSD:**

**3321 El Dorado Hills Blvd, El Dorado Hills, CA 95762**

**Latitude/Longitude: 38.67331, -121.07544 (NAD83)**

**Proposal – Raw Land Build for New Faux Water Tank Tower**



**Considerations:**

Candidate Bowman/CSD is on the east side of AT&T's Search Ring. The area is a cleared-out area where they don't use the property for archery. Utilities are located on the street and will be trenched up to the site. A Faux Water Tank design has been chosen to fit in with the area and provide a historical feel. The Antennae equipment will be fully concealed from the public's view. This property was the least intrusive location, and the least intrusive design is proposed in order to fill AT&T's significant gap in coverage.

CUP23-0009 Bowman Telecommunications Facility  
Exhibit F: Project Description and Alternative Site Analysis



on Behalf of

**Operation Statement:**

This project is an AT&T Mobility unmanned Telecommunication Wireless Facility. It will consist of the following:

THIS PROJECT CONSISTS OF THE INSTALLATION OF A NEW AT&T WIRELESS ANTENNA FACILITY:  
SCOPE OF WORK:

EQUIPMENT AREA

- INSTALL NEW WALK UP TO CABINET (WUC)
- INSTALL (1) DIESEL GENERATOR (30KW AC) WITH 190 GALLON FUEL TANK
- INSTALL (1) NEW GPS ANTENNA
- INSTALL NEW UTILITY H-FRAME
- INSTALL NEW (1) DC50 RAYCAP
- INSTALL (11) RECTIFIERS
- INSTALL (8) 190AH BATTERIES
- INSTALL NEW LOAD CENTER
- INSTALL NEW CIENNA AND HOFFMAN FOR FIBER
- INSTALL NEW UNDERGROUND UTILITIES FROM SOURCES TO EQUIPMENT
- INSTALL NEW PG&E PAD MOUNTED TRANSFORMER
- INSTALL NEW DUAL METER PEDESTAL
- INSTALL NEW STEP-UP AND STEP-DOWN TRANSFORMERS
- INSTALL (3) NEW FIBER MANAGEMENT BOXES
- INSTALL 110' TALL FAUX WATER TANK
- INSTALL NEW 6' HIGH FENCE WITH BROWN SLATS AND 12" OF BARBED WIRE

ANTENNA AREA

- INSTALL (12) NEW PANEL ANTENNAS
- INSTALL (12) NEW RRUS
- INSTALL (3) NEW DC-9 SURGE PROTECTORS
- INSTALL (3) H-FRAME ANTENNA MOUNTS

LEASE AREA:

EQUIPMENT & ANTENNA AREA:

31'-0"x35'-0" = 1,085 SF

The facility will operate 24 hours a day 7 days a week. Maintenance workers will visit the site approximately once a month. A 15-foot-wide access route exists directly from El Dorado Hills Blvd which is also used for Bowman's Access. There will be minimal noise from the standby generator, turning on once a week for 15 minutes for routine maintenance purposes limited to Monday through Friday between 8:00am and 5:00pm and during emergency power outages.

**The tower will be built to provide co-location opportunities for future carriers or public safety entities.**

**Fire Suppression System:**

A 15-foot-wide access route exists directly from El Dorado Hills Blvd. A Fire Department Knox Box will be located at the Facility's access gate and the Property's access gate. Additionally, a 2A:20BC Rated Fire Extinguisher in a weather resistant cabinet will be mounted on the exterior wall of the proposed shelter. A hammerhead turnaround will be installed at the site.



CUP23-0009 Bowman Telecommunications Facility  
Exhibit F: Project Description and Alternative Site Analysis



on Behalf of

**Conclusion:**

Candidate Bowman/CSD, APN 121-040-026, meets and exceeds the AT&T's coverage and capacity objectives for this area of El Dorado Hills and El Dorado County, CA while also providing El Dorado County and the area of El Dorado Hills with the Nation's first ever FirstNet services for our first responders. The Faux Water Tank design has been chosen to fit in with the historical nature of the area. Overall, this site location is the least impactful and least visually intrusive location within the Search Ring that fills AT&T's gap in coverage and capacity.

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*Jared Kearsley*

**Jared Kearsley**  
**51 Wireless, LLC.**  
**4930 Pacific Street**  
**Rocklin, CA 95677**  
**209-968-4315**  
[Jared.Kearsley@51wireless.net](mailto:Jared.Kearsley@51wireless.net)





CUP23-0009 Bowman Telecommunications Facility  
Exhibit G: Photo Simulations

Version Date: July 15, 2023

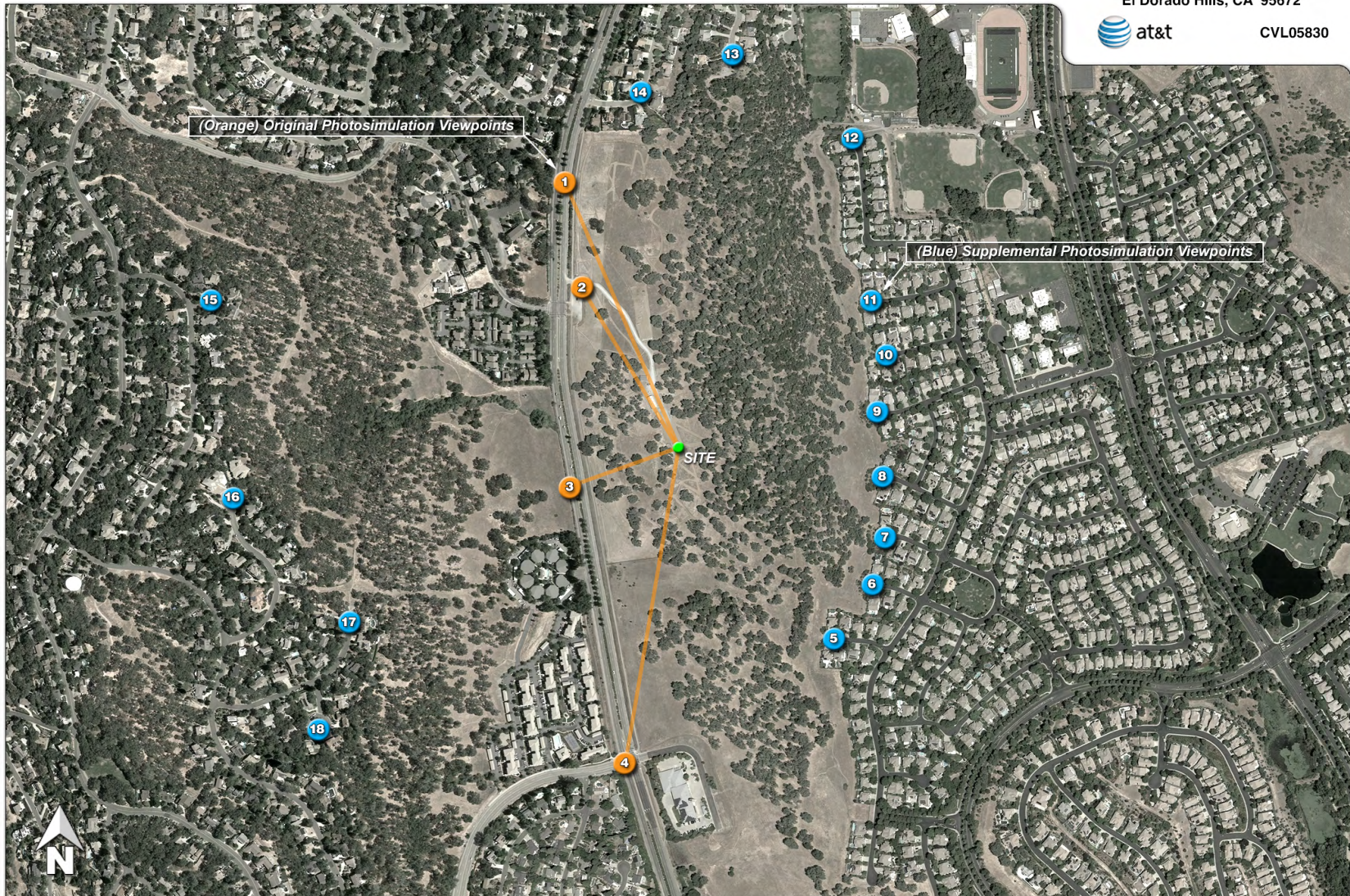
Aerial photograph showing the supplemental viewpoints for the photosimulations.

**Bowman**

3321 El Dorado Hills Blvd  
El Dorado Hills, CA 95672



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CUP23-0009 Bowman Telecommunications Facility  
Exhibit G: Photo Simulations

Version Date: May 3, 2024



Photosimulation of the view looking southeast from El Dorado Hills Blvd.

**Bowman**

3321 El Dorado Hills Blvd  
El Dorado Hills, CA 95672



CVL05830





CUP23-0009 Bowman Telecommunications Facility  
Exhibit G: Photo Simulations

Version Date: May 3, 2024

Photosimulation of the view looking southeast, up the hill, from the access gate and parking area for the Archery Range.





CUP23-0009 Bowman Telecommunications Facility  
Exhibit G: Photo Simulations

Version Date: May 3, 2024



Photosimulation of the view looking east from the nearest point along El Dorado Hills Blvd.

**Bowman**  
3321 El Dorado Hills Blvd  
El Dorado Hills, CA 95672

at&t CVL05830





CUP23-0009 Bowman Telecommunications Facility  
Exhibit G: Photo Simulations

Version Date: May 3, 2024



**Existing**

Photosimulation of the view looking north from Wilson Blvd at El Dorado Hills Blvd, across from the fire station.

**Bowman**

3321 El Dorado Hills Blvd  
El Dorado Hills, CA 95672



at&t

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**Proposed**



CUP23-0009 Bowman Telecommunications Facility  
Exhibit G: Photo Simulations

Version Date: July 18, 2023

Supplemental photosimulation by special request looking northwest from Van Cortlandt Ct.

**Bowman**

3321 El Dorado Hills Blvd  
El Dorado Hills, CA 95672



CVL05830

5

*This is the general direction of the proposed faux water tank,  
not visible from this area because the ridge blocks the view.*



**Existing and Proposed (no visible change)**



CUP23-0009 Bowman Telecommunications Facility  
Exhibit G: Photo Simulations

Version Date: July 18, 2023

Supplemental photosimulation by special request looking northwest from Scowers Ct.

**Bowman**

3321 El Dorado Hills Blvd  
El Dorado Hills, CA 95672



CVL05830

6

*This is the general direction of the proposed faux water tank,  
not visible from this area because the ridge blocks the view.*



**Existing and Proposed (no visible change)**



CUP23-0009 Bowman Telecommunications Facility  
Exhibit G: Photo Simulations

Version Date: July 18, 2023

**Bowman**

3321 El Dorado Hills Blvd  
El Dorado Hills, CA 95672



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Supplemental photosimulation by special request looking northwest from Cooley Ct.





CUP23-0009 Bowman Telecommunications Facility  
Exhibit G: Photo Simulations

Version Date: July 18, 2023

Supplemental photosimulation by special request looking west from Macpheadris Ct.

**Bowman**

3321 El Dorado Hills Blvd  
El Dorado Hills, CA 95672



CVL05830

8

*This is the general direction of the proposed faux water tank,  
not visible from this area because the ridge blocks the view.*



**Existing and Proposed (no visible change)**



CUP23-0009 Bowman Telecommunications Facility  
Exhibit G: Photo Simulations

Version Date: July 18, 2023

Supplemental photosimulation by special request looking west from Morrill Ct.

**Bowman**

3321 El Dorado Hills Blvd  
El Dorado Hills, CA 95672



CVL05830

9

*This is the general direction of the proposed faux water tank,  
not visible from this area because the ridge blocks the view.*



**Existing and Proposed (no visible change)**



CUP23-0009 Bowman Telecommunications Facility  
Exhibit G: Photo Simulations

Version Date: July 18, 2023

Supplemental photosimulation by special request looking west from Knapp Ct.

**Bowman**

3321 El Dorado Hills Blvd  
El Dorado Hills, CA 95672



CVL05830

10

*This is the general direction of the proposed faux water tank,  
not visible from this area because the ridge blocks the view.*



**Existing and Proposed (no visible change)**



CUP23-0009 Bowman Telecommunications Facility  
Exhibit G: Photo Simulations

Version Date: July 18, 2023

Supplemental photosimulation by special request looking southwest from Endless Ct.

**Bowman**

3321 El Dorado Hills Blvd  
El Dorado Hills, CA 95672



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**Existing and Proposed (no visible change)**



CUP23-0009 Bowman Telecommunications Facility  
Exhibit G: Photo Simulations

Version Date: July 18, 2023

Supplemental photosimulation by special request looking southwest from Meadow Wood Dr.

**Bowman**

3321 El Dorado Hills Blvd  
El Dorado Hills, CA 95672



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12

*This is the general direction of the proposed faux water tank,  
not visible from this area because the ridge blocks the view.*



**Existing and Proposed (no visible change)**



CUP23-0009 Bowman Telecommunications Facility  
Exhibit G: Photo Simulations

Version Date: July 18, 2023

**Bowman**

3321 El Dorado Hills Blvd  
El Dorado Hills, CA 95672



CVL05830

Supplemental photosimulation by special request looking south from Adam Ct.

13

*This is the general direction of the proposed faux water tank,  
not visible from this area because the ridge blocks the view.*



**Existing and Proposed (no visible change)**



CUP23-0009 Bowman Telecommunications Facility  
Exhibit G: Photo Simulations

Version Date: July 18, 2023

Supplemental photosimulation by special request looking south from Woedee Dr.

**Bowman**

3321 El Dorado Hills Blvd  
El Dorado Hills, CA 95672



CVL05830

14

*This is the general direction of the proposed faux water tank,  
not visible because homes and trees block the public views.*



**Existing and Proposed (no visible change)**



CUP23-0009 Bowman Telecommunications Facility  
Exhibit G: Photo Simulations

Version Date: July 18, 2023

Supplemental photosimulation by special request looking east-southeast from Knights Ct.

**Bowman**

3321 El Dorado Hills Blvd  
El Dorado Hills, CA 95672



CVL05830

15

*This is the general direction of the proposed faux water tank, not visible because homes and trees block the public views.*



**Existing and Proposed (no visible change)**



CUP23-0009 Bowman Telecommunications Facility  
Exhibit G: Photo Simulations

Version Date: July 18, 2023

Supplemental photosimulation by special request looking east from the end of Brown Dr.

**Bowman**

3321 El Dorado Hills Blvd  
El Dorado Hills, CA 95672



CVL05830

16

*This is the general direction of the proposed faux water tank,  
not visible because trees and shrubs block the public views.*



**Existing and Proposed (no visible change)**



CUP23-0009 Bowman Telecommunications Facility  
Exhibit G: Photo Simulations

Version Date: July 18, 2023

Supplemental photosimulation by special request looking northeast from the end of Reddick Way.

**Bowman**

3321 El Dorado Hills Blvd  
El Dorado Hills, CA 95672



CVL05830

17

*This is the general direction of the proposed faux water tank,  
not visible because homes and trees block the public views.*



**Existing and Proposed (no visible change)**



CUP23-0009 Bowman Telecommunications Facility  
Exhibit G: Photo Simulations

Version Date: July 18, 2023

Supplemental photosimulation by special request looking northeast from Reddick Ct.

**Bowman**

3321 El Dorado Hills Blvd  
El Dorado Hills, CA 95672



CVL05830

18

*This is the general direction of the proposed faux water tank,  
not visible because homes and trees block the public views.*



**Existing and Proposed (no visible change)**





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## Radio Frequency Emissions Compliance Report For AT&T Mobility

<b>Site Name:</b>	<b>Bowman</b>	<b>Site Structure Type:</b>	<b>Faux Water Tank</b>
<b>Address:</b>	<b>3321 El Dorado Hills Boulevard</b>	<b>Latitude:</b>	<b>38.673491</b>
	<b>El Dorado Hills, CA 95762</b>	<b>Longitude:</b>	<b>-121.075341</b>
<b>Report Date:</b>	<b>July 8, 2024</b>	<b>Project:</b>	<b>New Build</b>

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### Compliance Statement

Based on information provided by AT&T Mobility and predictive modeling, the Bowman installation proposed by AT&T Mobility will be compliant with Radiofrequency Radiation Exposure Limits of 47 C.F.R. §§ 1.1307(b)(3) and 1.1310. RF alerting signage at the base of the Faux Water Tank and restricting access to authorized climbers that have completed RF safety training is required for Occupational environment compliance. The proposed operation will not expose members of the General Public to hazardous levels of RF energy at ground level or in adjacent buildings.

### Certification

I, David C. Cotton, Jr., am the reviewer and approver of this report and am fully aware of and familiar with the Rules and Regulations of both the Federal Communications Commissions (FCC) and the Occupational Safety and Health Administration (OSHA) with regard to Human Exposure to Radio Frequency Radiation, specifically in accordance with FCC's OET Bulletin 65. I have reviewed this Radio Frequency Exposure Assessment report and believe it to be both true and accurate to the best of my knowledge.



David Charles Cotton, Jr.  
Registered Professional Engineer (Electrical)  
State of California, 18838

### General Summary

The compliance framework is derived from the Federal Communications Commission (FCC) Rules and Regulations for preventing human exposure in excess of the applicable Maximum Permissible Exposure ("MPE") limits. At any location at this site, the power density resulting from each transmitter may be expressed as a percentage of the frequency-specific limits and added to determine if 100% of the exposure limit has been exceeded. The FCC Rules define two tiers of permissible exposure differentiated by the situation in which the exposure takes place and/or the status of the individuals who are subject to exposure. General Population / Uncontrolled exposure limits apply to those situations in which persons may not be aware of the presence of electromagnetic energy, where exposure is not employment-related, or where persons cannot exercise control over their exposure. Occupational / Controlled exposure limits apply to situations in which persons are exposed as a consequence of their employment, have been made fully aware of the potential for exposure, and can exercise control over their exposure. Based on the criteria for these classifications, the FCC General Population limit is considered to be a level that is safe for continuous exposure time. The FCC General Population limit is 5 times more restrictive than the Occupational limits.

In situations where the predicted MPE exceeds the General Population threshold in an accessible area as a result of emissions from multiple transmitters, FCC licensees that contribute greater than 5% of the aggregate MPE share responsibility for mitigation.

CUP23-0009 Bowman Telecommunications Facility  
Exhibit H: Radio Frequency Report

Bowman - New Build 05.02.2024

Table 1: FCC Limits

Frequency (MHz)	Limits for General Population/ Uncontrolled Exposure		Limits for Occupational/ Controlled Exposure	
	Power Density (mW/cm <sup>2</sup> )	Averaging Time (minutes)	Power Density (mW/cm <sup>2</sup> )	Averaging Time (minutes)
30-300	0.2	30	1	6
300-1500	f/1500	30	f/300	6
1500-100,000	1.0	30	5.0	6

f=Frequency (MHz)

Based on the computational guidelines set forth in FCC OET Bulletin 65, Waterford Consultants, LLC has developed software to predict the overall Maximum Permissible Exposure possible at any location given the spatial orientation and operating parameters of multiple RF sources. The power density in the Far Field of an RF source is specified by OET-65 Equation 5 as follows:

$$S = \frac{EIRP}{4 \cdot \pi \cdot R^2} \text{ (mW/cm}^2\text{)}$$

where EIRP is the Effective Radiated Power relative to an isotropic antenna and R is the distance between the antenna and point of study. Additionally, consideration is given to the manufacturers' horizontal and vertical antenna patterns as well as radiation reflection. At any location, the predicted power density in the Far Field is the spatial average of points within a 0 to 6-foot vertical profile that a person would occupy. Near field power density is based on OET-65 Equation 20 stated as

$$S = \left( \frac{180}{\theta_{BW}} \right) \cdot \frac{100 \cdot P_{in}}{\pi \cdot R \cdot h} \text{ (mW/cm}^2\text{)}$$

where P<sub>in</sub> is the power input to the antenna, θ<sub>BW</sub> is the horizontal pattern beamwidth and h is the aperture length.

Some antennas employ beamforming technology where RF energy allocated to each customer device is dynamically directed toward their location. This analysis includes a statistical factor reducing the actual power of the antenna system to 32% of maximum theoretical power to account for spatial distribution of users, network utilization, time division duplexing, and scheduling time. AT&T recommends the use of this factor based on a combination of guidance from its antenna system manufacturers, supporting international industry standards, industry publications, and its extensive experience.



CUP23-0009 Bowman Telecommunications Facility  
Exhibit H: Radio Frequency Report

Bowman - New Build 05.02.2024

**Analysis**

AT&T Mobility proposes the following installation at this location:

- INSTALL (9) PROPOSED AT&T ANTENNAS, (6) FUTURE AT&T ANTENNAS & (12) RRUS

The antennas will be mounted on a 110-foot faux water tank with centerlines 103, 105, & 106.83 feet above ground level. Proposed antenna operating parameters are listed in Appendix A. Other appurtenances such as GPS antennas, RRUs and hybrid cable below the antennas are not sources of RF emissions. No other antennas are known to be operating in the vicinity of this site.



Figure 1: Antenna Locations

Power density decreases significantly with distance from any antenna. The panel-type antennas to be employed at this site are highly directional by design and the orientation in azimuth and mounting elevation, as documented, serves to reduce the potential to exceed MPE limits at any location other than directly in front

CUP23-0009 Bowman Telecommunications Facility  
Exhibit H: Radio Frequency Report

Bowman - New Build 05.02.2024

of the antennas. For accessible areas at ground level, the maximum predicted power density level resulting from all AT&T Mobility operations is 7.70% of the FCC General Population limits. Incident at adjacent buildings depicted in Figure 1, the maximum predicted power density level resulting from all AT&T Mobility operations is 6.9125% of the FCC General Population limits. The proposed operation will not expose members of the General Public to hazardous levels of RF energy at ground level or in adjacent buildings.

Waterford Consultants, LLC recommends posting RF alerting signage with contact information (Caution 2) at the base of the Faux Water Tank to inform authorized climbers of potential conditions near the antennas. These recommendations are depicted in Figure 2.

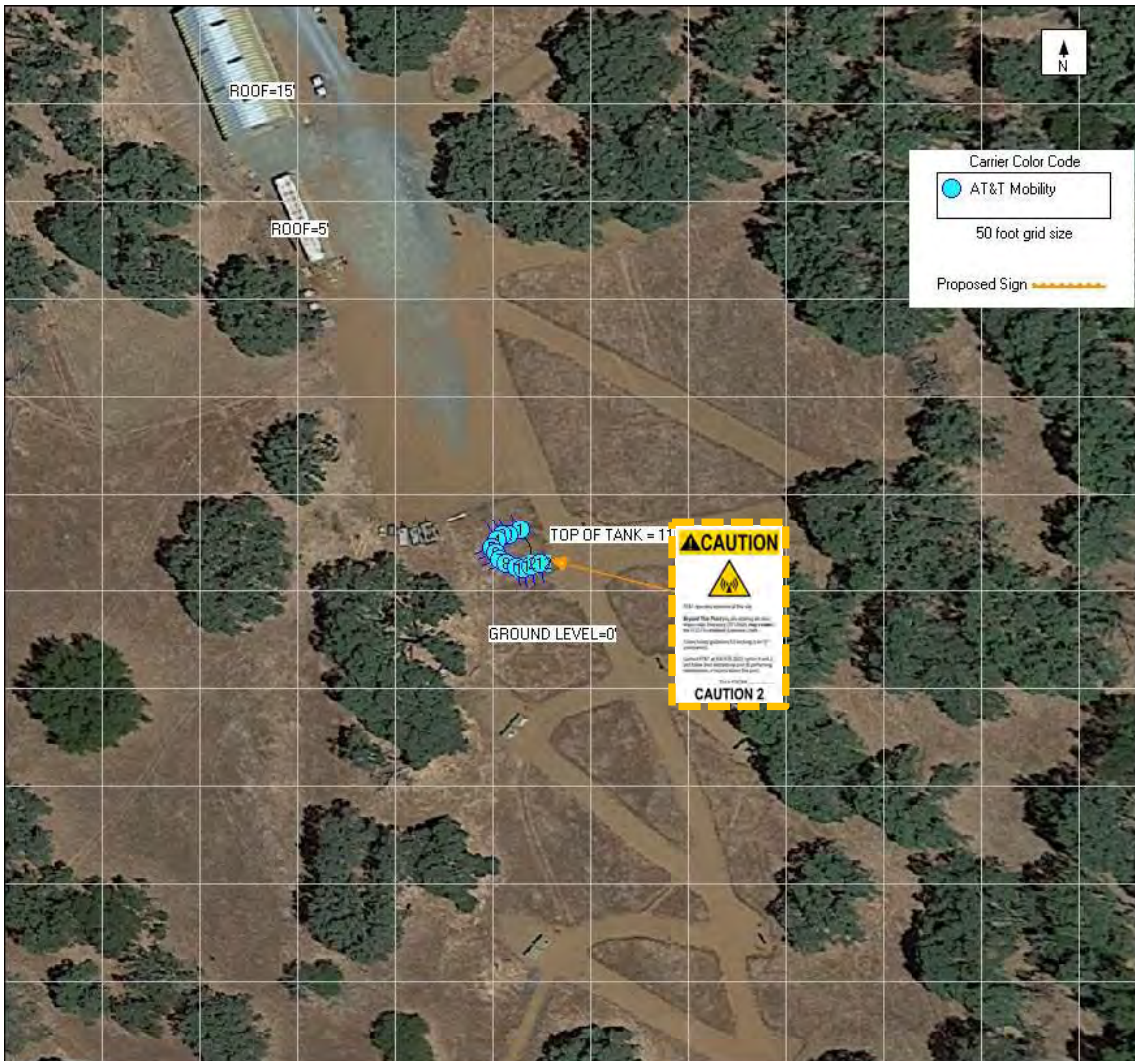


Figure 2: Mitigation Recommendations  
Caution 2 sign required on the base of the Faux Water Tank at the access location



CUP23-0009 Bowman Telecommunications Facility  
Exhibit H: Radio Frequency Report

Bowman - New Build 05.02.2024

**Appendix A: Operating Parameters Considered in this Analysis**

Antenna #:	Carrier:	Manufacturer	Pattern:	Band (MHz):	Mech Az (deg):	Mech DT (deg):	H BW (deg):	Length (ft):	TPO (W):	Channels:	Loss (dB):	Gain (dBi):	ERP (W):	EIRP (W):	Rad Center (ft):
1	AT&T	CCI	TPA45R-KU8A 02DT	700	330	0	51	8.2	40	4	0	12.95	3156	5177	105
1	AT&T	CCI	TPA45R-KU8A 02DT	850	330	0	46	8.2	40	4	0	13.45	3541	5809	105
1	AT&T	CCI	TPA45R-KU8A 02DT	1900	330	0	46	8.2	40	4	0	14.75	4777	7836	105
1	AT&T	CCI	TPA45R-KU8A 02DT	2100	330	0	44	8.2	40	4	0	15.05	5118	8397	105
2	AT&T	Ericsson	SON_AIR6419 TB 05.17.22 3500 AT&T	3500	330	0	13	2.4	54.2	1	0	23.45	11995	19679	103
3	AT&T	Ericsson	SON_AIR6449 NR TB 05.17.22 3700 AT&T	3700	330	0	11.7	2.8	108.4	1	0	23.45	23999	39372	106.83
4	AT&T	COMMSCOPE	NNHH-45C-R4 02DT	700	330	0	44	8	40	4	0	13.52	3598	5904	105
4	AT&T	COMMSCOPE	NNHH-45C-R4 02DT	1900	330	0	48	8	40	4	0	16.84	7729	12680	105
5	AT&T	CCI	TPA45R-KU8A 02DT	700	250	0	51	8.2	40	4	0	12.95	3156	5177	105
5	AT&T	CCI	TPA45R-KU8A 02DT	850	250	0	46	8.2	40	4	0	13.45	3541	5809	105
5	AT&T	CCI	TPA45R-KU8A 02DT	1900	250	0	46	8.2	40	4	0	14.75	4777	7836	105
5	AT&T	CCI	TPA45R-KU8A 02DT	2100	250	0	44	8.2	40	4	0	15.05	5118	8397	105
6	AT&T	Ericsson	SON_AIR6419 TB 05.17.22 3500 AT&T	3500	250	0	13	2.4	54.2	1	0	23.45	11995	19679	103
7	AT&T	Ericsson	SON_AIR6449 NR TB 05.17.22 3700 AT&T	3700	250	0	11.7	2.8	108.4	1	0	23.45	23990	39358	106.83
8	AT&T	COMMSCOPE	NNHH-45C-R4 02DT	700	250	0	44	8	40	4	0	13.52	3598	5904	105
8	AT&T	COMMSCOPE	NNHH-45C-R4 02DT	1900	250	0	48	8	40	4	0	16.84	7729	12680	105
9	AT&T	CCI	TPA45R-KU8A 02DT	700	170	0	51	8.2	40	4	0	12.95	3156	5177	105
9	AT&T	CCI	TPA45R-KU8A 02DT	850	170	0	46	8.2	40	4	0	13.45	3541	5809	105
9	AT&T	CCI	TPA45R-KU8A 02DT	1900	170	0	46	8.2	40	4	0	14.75	4777	7836	105
9	AT&T	CCI	TPA45R-KU8A 02DT	2100	170	0	44	8.2	40	4	0	15.05	5118	8397	105
10	AT&T	Ericsson	SON_AIR6419 TB 05.17.22 3500 AT&T	3500	170	0	13	2.4	54.2	1	0	23.45	11995	19679	103
11	AT&T	Ericsson	SON_AIR6449 NR TB 05.17.22 3700 AT&T	3700	170	0	11.7	2.8	108.4	1	0	23.45	23990	39358	106.83
12	AT&T	COMMSCOPE	NNHH-45C-R4 02DT	700	170	0	44	8	40	4	0	13.52	3598	5904	105
12	AT&T	COMMSCOPE	NNHH-45C-R4 02DT	1900	170	0	48	8	40	4	0	16.84	7729	12680	105

Notes: Table depicts recommended operating parameters for AT&T Mobility proposed operations.