



*Providing Outstanding Service Since 1963*

**Board of Directors**

Janna Orkney, Chair  
Susan Pan, Vice Chair  
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November 25, 2019

Board of Directors  
Triunfo Water & Sanitation District  
Ventura County, California

**AT&T REQUEST FOR EQUIPMENT MODIFICATIONS AT THE KILBURN SITE**

The Triunfo Sanitation District (TSD) Board entered into a site lease agreement (TSD No. T93-14) with AT&T Wireless Services of California, LLC, on January 28, 1994, for placement of a cell tower facility at the Kilburn water reservoir site. The terms of the agreement included a provision that allows AT&T Wireless to make minor modifications to its equipment as part of ongoing routine operations and maintenance. AT&T Wireless has requested to replace and improve the antennas and certain components of the transmitting equipment to expand broadband connectivity and system capacity (upgrade to 5G). These changes involve no change of the physical dimensions of the antennas array pattern or the tower height and will not further impair the District's ability to operate its facilities at this site. AT&T Wireless requests a Letter of Authorization from TWSD (as the landlord) to present with their upgrade CUP request to the County of Ventura Planning Department as part of the permitting process for these modifications. Staff is recommending that the Board approve the General Manager to sign the Letter of Authorization and approve the requested modifications.

Please contact me at (805) 658-4621 or marknorris@vrsd.com if you have any questions.

**Recommendation**

It is recommended that the Board approve the General Manager to sign the Letter of Authorization and provide AT&T Wireless Services of California, LLC, with the approval to move this process forward to County Planning.

REVIEWED AND APPROVED

  
\_\_\_\_\_  
Mark Norris - General Manager

Attachments: LOA request with Proposed Plans



New AT&T  
12900 Park Plaza Drive  
Cerritos, CA 90703

T: 562-468-6164  
F: 562-403-1830  
www.att.com

October 9, 2019

Mark Norris  
Triunfo Water & Sanitation District  
1001 Partridge Drive STE 150  
Ventura, CA 93003

**REQUEST FOR CONSENT**

**RE: AT&T Mobility Site #: SBOV22**  
**Property Address: 4997 Kilburn Court Oak Park, CA 91377**

**LEASE BETWEEN THE NEW CINGULAR WIRELESS PCS, LLC, SUCCESSOR TO AB CELLULAR WIRELESS LLC, DOING BUSINESS AS AT&T MOBILITY (“THE NEW CINGULAR”) AND THE TRIUNFO WATER & SANITATION DISTRICT, HAVING A MAILING ADDRESS OF 1001 PARTRIDGE DRIVE STE 150 VENTURA, CA 93003. (“LANDLORD”)**

To Whom It May Concern:

This letter is to inform you that AT&T Mobility is in the process of performing necessary maintenance of its wireless communications facility at the above-referenced Property. The property’s APN is 685-0-010-175 & 685-0-207-535.

Consistent with the Lease Agreement, documented consent is hereby requested in order to proceed with the following maintenance, which is scheduled to begin in the next few months:

- Swap 3 existing antennas with 3 new antennas
- Replace existing Radome with a new Radome
- Installation of 9 new Radio Remote Units (RRU’s)
- Installation of 6 new single TMA
- Removal of 3 existing DUS-41 and installation of new 1-XMU on existing rack
- Installation of 3 new twin diplexers and 3 new twin triplexers at equipment area

Please note that this work may occur in two separate stages, depending on equipment availability at the time of the first stage of work. AT&T is forecasting construction 3/9 – 4/8 2020. Please indicate your consent by signing the enclosed “Confirmation of Consent”.

Bechtel Corporation is authorized by AT&T Mobility to perform the required work. If you have any questions or require additional information, please contact Jessica Grevin at Coastal Business Group. Thank you for your prompt response and attention to this matter. AT&T Mobility and Bechtel Corporation appreciate your assistance.

Sincerely,

Jessica Grevin  
LTE Project Manager  
949-336-1550  
jborders@coastalbusinessgroup.net



New AT&T  
12900 Park Plaza Drive  
Cerritos, CA 90703

T: 562-468-6164  
F: 562-403-1830  
www.att.com

**Confirmation of Consent**

To: AT&T Mobility  
c/o Coastal Business Group, Inc.  
24310 Moulton Pkwy Suite O#1009  
Laguna Hills, CA 92637  
Attn: Jessica Grevin

Via email to: jrborders@coastalbusinessgroup.net

RE: AT&T Mobility SITE NO: SBOV22 / North Ranch  
SITE ADDRESS: 4997 Kilburn Court Oak Park, CA 91377  
APN: 685-0-010-175 & 685-0-207-535

To Whom It May Concern: Consent is hereby granted for AT&T Mobility to proceed with the following: Swap 3 existing antennas with 3 new antennas, Replace existing Radome with a new Radome, Installation of 9 new Radio Remote Units (RRU's), Installation of 6 new single TMA. Removal of 3 existing DUS-41 and installation of new 1-XMU on existing rack, Installation of 3 new twin diplexers and 3 new twin triplexers at equipment area

**\*Please execute below, initial each page of the attached drawings, and return.**

**TRIUNFO WATER & SANITATION DISTRICT, HAVING A MAILING ADDRESS OF 1001 PARTRIDGE DRIVE STE 150 VENTURA, CA 93003.**

By: \_\_\_\_\_  
Authorized Signature

Name: \_\_\_\_\_  
Please print name

Title: \_\_\_\_\_

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

Phone: \_\_\_\_\_

Comments:  
\_\_\_\_\_  
\_\_\_\_\_



New AT&T  
12900 Park Plaza Drive  
Cerritos, CA 90703

T: 562-468-6164  
F: 562-403-1830  
www.att.com

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

**LANDLORD ACKNOWLEDGEMENT**

STATE OF CALIFORNIA )  
 )  
COUNTY OF \_\_\_\_\_ )

On \_\_\_\_\_ before me, \_\_\_\_\_,  
personally appeared \_\_\_\_\_,  
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature \_\_\_\_\_

Name \_\_\_\_\_

(typed or printed)

(Seal)



NORTH RANCH  
4997 KILBURN COURT  
OAK PARK, CA 91377  
SBOV22/LTE 5C (850)/6C (AWS-3)  
7C (700-B14)

SITE NO.: SBOV22  
PACE NO.: MRLOS038125  
PACE NO.: MRLOS040831  
PACE NO.: MRLOS040859  
PTN NO.: 3551A0AGV1  
PTN NO.: 3551A0BYL3  
PTN NO.: 3551A0BXS8  
FA LOCATION CODE: 10086936

APPLICANT:



1452 EDINGER AVE.  
TUSTIN, CA 92780

PREPARED BY:



3703 Long Beach Blvd | Suite 421 | 2nd Floor  
Long Beach, CA 90807  
(781) 273-2500 | www.ebiconsulting.com



ENGINEER STAMP/SIGNATURE

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SUBMITTALS

NO.	DATE	DESCRIPTION	BY
A	01/15/18	90% CONSTRUCTION	SH
B	02/22/18	REVISED PER COMMENTS	SM
0	06/19/18	100% FOR CONSTRUCTION	SH

EBI JOB NO:

8117000509

SITE INFO:

NORTH RANCH  
4997 KILBURN COURT  
OAK PARK, CA 91377  
SBOV22/LTE 5C (850)/6C  
(AWS-3) 7C (700-B14)

SHEET TITLE:

TITLE SHEET

DRAWN BY:

SH

CHECKED BY:

CS

DATE:

01/12/18

T-1

GENERAL NOTES

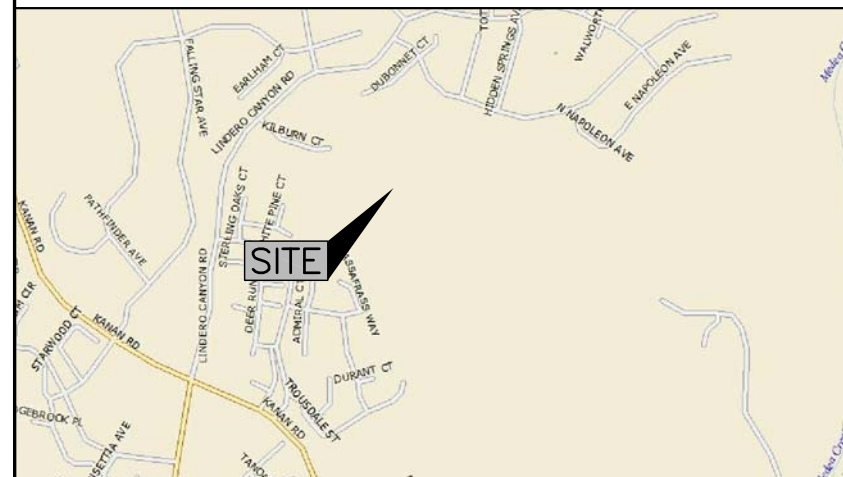
1. THE CONTRACTOR SHALL GIVE ALL NOTICES & COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS & LAWFUL ORDERS OF ANY PUBLIC AUTHORITY, MUNICIPAL & UTILITY COMPANY SPECIFICATIONS, & LOCAL & STATE JURISDICTIONAL CODES BEARING ON THE PERFORMANCE OF THE WORK. THE WORK PERFORMED ON THE PROJECT & THE MATERIALS INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, & ORDINANCES.
2. THE ARCHITECT/ENGINEER HAVE MADE EVERY EFFORT TO SET FORTH IN THE CONSTRUCTION & CONTRACT DOCUMENTS THE COMPLETE SCOPE OF WORK. THE CONTRACTOR BIDDING THE JOB IS NEVERTHELESS CAUTIONED THAT MINOR OMISSIONS OR ERRORS IN THE DRAWINGS & OR SPECIFICATIONS SHALL NOT EXCUSE SAID CONTRACTOR FROM COMPLETING THE PROJECT & IMPROVEMENTS IN ACCORDANCE WITH THE INTENT OF THESE DOCUMENTS.
3. THE CONTRACTOR OR BIDDER SHALL BEAR THE RESPONSIBILITY OF NOTIFYING (IN WRITING) THE PROJECT OWNER'S REPRESENTATIVE OF ANY CONFLICTS, ERRORS, OR OMISSIONS PRIOR TO THE SUBMISSION OF CONTRACTOR'S PROPOSAL OR PERFORMANCE OF WORK. IN THE EVENT OF DISCREPANCIES THE CONTRACTOR SHALL PRICE THE MORE COSTLY OR EXTENSIVE WORK, UNLESS DIRECTED IN WRITING OTHERWISE.
4. THE SCOPE OF WORK SHALL INCLUDE FURNISHING ALL MATERIALS, EQUIPMENT, LABOR & ALL OTHER MATERIALS & LABOR DEEMED NECESSARY TO COMPLETE THE WORK/PROJECT AS DESCRIBED HEREIN.
5. THE CONTRACTOR SHALL VISIT THE JOB SITE PRIOR TO THE SUBMISSION OF BIDS OR PERFORMING WORK TO FAMILIARIZE HIMSELF WITH THE FIELD CONDITIONS & TO VERIFY THAT THE PROJECT CAN BE CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
6. THE CONTRACTOR SHALL OBTAIN AUTHORIZATION FROM THE PROJECT OWNER'S REPRESENTATIVE TO PROCEED WITH CONSTRUCTION PRIOR TO STARTING WORK ON ANY ITEM NOT CLEARLY DEFINED BY THE CONSTRUCTION DRAWINGS / CONTRACT DOCUMENTS.
7. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT & MATERIALS ACCORDING TO THE MANUFACTURER'S / VENDOR'S SPECIFICATIONS UNLESS NOTED OTHERWISE OR WHERE LOCAL CODES OR ORDINANCES TAKE PRECEDENCE.
8. THE CONTRACTOR SHALL PROVIDE A FULL SET OF CONSTRUCTION DOCUMENTS AT THE SITE UPDATED WITH THE LATEST REVISIONS & ADDENDUMS OR CLARIFICATIONS AVAILABLE FOR THE USE BY ALL PERSONNEL INVOLVED WITH THE PROJECT.
9. THE CONTRACTOR SHALL SUPERVISE & DIRECT THE PROJECT DESCRIBED HEREIN. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES & PROCEDURES & FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL NECESSARY CONSTRUCTION CONTROL SURVEYS, ESTABLISHING & MAINTAINING ALL LINES & GRADES REQUIRED TO CONSTRUCT ALL IMPROVEMENTS AS SHOWN HEREIN.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS & INSPECTIONS WHICH MAY BE REQUIRED FOR THE WORK BY THE ARCHITECT/ENGINEER, THE STATE, COUNTY OR LOCAL GOVERNMENT AUTHORITY.
12. THE CONTRACTOR SHALL MAKE NECESSARY PROVISIONS TO PROTECT EXISTING IMPROVEMENTS, EASEMENTS, PAVING, CURBING, ETC. DURING CONSTRUCTION. UPON COMPLETION OF WORK, THE CONTRACTOR SHALL REPAIR ANY DAMAGE THAT MAY HAVE OCCURRED DUE TO CONSTRUCTION ON OR ABOUT THE PROPERTY.
13. THE CONTRACTOR SHALL KEEP THE GENERAL WORK AREA CLEAN & HAZARD FREE DURING CONSTRUCTION & DISPOSE OF ALL DIRT, DEBRIS, RUBBISH & REMOVE EQUIPMENT NOT SPECIFIED AS REMAINING ON THE PROPERTY. PREMISES SHALL BE LEFT IN CLEAN CONDITION & FREE FROM PAINT SPOTS, DUST, OR SMUDGES OF ANY NATURE.
14. THE CONTRACTOR SHALL COMPLY WITH ALL OSHA REQUIREMENTS AS THEY APPLY TO THIS PROJECT.
15. THE CONTRACTOR SHALL NOTIFY THE PROJECT OWNER'S REPRESENTATIVE WHERE A CONFLICT OCCURS ON ANY OF THE CONTRACT DOCUMENTS. THE CONTRACTOR IS NOT TO ORDER MATERIAL OR CONSTRUCT ANY PORTION OF THE WORK THAT IS IN CONFLICT UNTIL CONFLICT IS RESOLVED BY THE LESSEE/LICENSEE REPRESENTATIVE.
16. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS, PROPERTY LINES, ETC. ON THE JOB.
17. ALL UNDERGROUND UTILITY INFORMATION WAS DETERMINED FROM SURFACE INVESTIGATIONS & EXISTING PLANS OF RECORD. THE CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES IN THE FIELD PRIOR TO ANY SITE WORK. CALL THE FOLLOWING FOR ALL PRE-CONSTRUCTION NOTIFICATION 72-HOURS PRIOR TO ANY EXCAVATION ACTIVITY, CALL BEFORE YOU DIG (800) 227-2600 OR 811 WWW.USANORTH.ORG.
18. PER FCC MANDATE, ENHANCED EMERGENCY (E911) SERVICE IS REQUIRED TO MEET NATIONWIDE STANDARDS FOR WIRELESS COMMUNICATIONS SYSTEMS. PROJECT OWNER IMPLEMENTATION REQUIRES DEPLOYMENT OF EQUIPMENT & ANTENNAS GENERALLY DEPICTED ON THIS PLAN, ATTACHED TO OR MOUNTED IN CLOSE PROXIMITY TO THE BTS RADIO CABINET. THE PROJECT OWNER RESERVES THE RIGHT TO MAKE REASONABLE MODIFICATIONS TO E911 EQUIPMENT & LOCATION AS TECHNOLOGY EVOLVES TO MEET REQUIRED SPECIFICATIONS.
19. A STRUCTURAL ANALYSIS OF THE EXISTING STRUCTURE SHALL BE COMPLETED BY THE CARRIER DEMONSTRATING ADEQUATE CAPACITY FOR THE ADDITIONAL LOADS PRIOR TO CONSTRUCTION START.



Know what's below.  
Call before you dig.  
(800) 227-2600 or 811  
WWW.USANORTH.ORG

48 HOURS PRIOR TO DIGGING, CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES TO LOCATE ALL UNDERGROUND UTILITIES.

VICINITY MAP



SCOPE OF WORK

AT&T PROPOSES THE MODIFICATION OF AN EXISTING UNMANNED WIRELESS TELECOMMUNICATIONS FACILITY:

AT ANTENNAS (3 SECTOR SITE):

1. REMOVE (3) EXISTING ANTENNAS AT ALPHA, BETA & GAMMA SECTOR POSITION 1 (TYP. OF 1 PER SECTOR, TOTAL OF 3).
2. INSTALL (3) NEW ANTENNAS AT ALPHA, BETA & GAMMA SECTOR POSITION 1(TYP. OF 1 PER SECTOR TOTAL OF 3).
3. INSTALL RETS AS NEEDED.

AT EQUIPMENT CABINETS:

4. REMOVE (6) EXISTING TMA AT BASE OF SLIMLINE MONOPOLE (TYP. OF 2 PER SECTOR, TOTAL OF 6).
5. REMOVE (1) DUS41 WITHIN EXISTING 19" EQUIPMENT RACK.
6. REMOVE (1) EXISTING RXAINT RACK.
7. REMOVE (1) 2206 CABINET.
8. INSTALL (6) TMAS AT BASE OF SLIMLINE MONOPOLE (TYP. OF 2 PER SECTOR, TOTAL OF 6).
9. INSTALL (1) BASE BAND 5216 AND (1) XMU. FINAL BASEBAND COUNT: 1X5216 & 2X XMU.
10. INSTALL (3) RRUS-B66 MOUNTED ON PROPOSED PIPE (TYP. OF 1 PER SECTOR, TOTAL OF 3).
11. INSTALL (3) RRUS-B5 MOUNTED ON PROPOSED PIPE (TYP. OF 1 PER SECTOR, TOTAL OF 3).
12. INSTALL (3) RRUS-B14 MOUNTED ON PROPOSED PIPE (TYP. OF 1 PER SECTOR, TOTAL OF 3).
13. INSTALL (3) TRIPLEXERS MOUNTED TO EXISTING O/H CABLE LADDER (TYP. OF 1 PER SECTOR, TOTAL OF 3).
14. INSTALL (3) DIPLEXERS MOUNTED TO EXISTING O/H CABLE LADDER (TYP. OF 1 PER SECTOR, TOTAL OF 3).
15. CONFIGURE RETS AS NEEDED.
16. UTILIZE (E) SURGE SUPPRESSION.
17. INSTALL (2) NEW DC-DC CONVERTERS WITHIN (E) RACK.

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 LOCAL CODES:

- 2016 CALIFORNIA ADMINISTRATIVE CODE
- 2016 CALIFORNIA ENERGY CODE (CEC)
- 2016 CALIFORNIA BUILDING CODE (CBC)
- 2016 CALIFORNIA ELECTRIC CODE (CEC)
- 2016 CALIFORNIA MECHANICAL CODE (CMC)
- 2016 CALIFORNIA PLUMBING CODE (CPC)
- 2016 CALIFORNIA FIRE CODE
- ANSI/EIA-TIA-222-G
- APPLICABLE LOCAL & STATE LAWS AND REGULATIONS

THIS FACILITY IS UNMANNED & NOT FOR HUMAN HABITATION: DISABLED ACCESS & REQS. ARE NOT REQUIRED.


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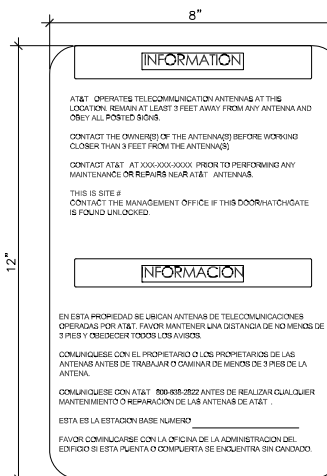
PROJECT INFORMATION

SITE NAME: NORTH RANCH  
SITE NUMBER: SBOV22/LTE 5C (850)/6C (AWS-3) 7C (700-B14)  
SITE ADDRESS: 4997 KILBURN COURT  
OAK PARK, CA 91377  
LATITUDE: 34° 11' 22.59" N (NAD 83)  
LONGITUDE: 118° 46' 49.09" W (NAD 83)  
GROUND ELEVATION: 1,404± AMSL  
PROPERTY OWNER: TRIUNFO SANITATION DISTRICT  
346 NEW KANAN ROAD, SUITE 203  
OAK PARK, CA 91301  
CONTACT: TOM HUGHES  
PHONE: 88.879.8321  
PARCEL ID: 685-0-010-175 & 685-0-207-535  
JURISDICTION: COUNTY OF VENTURA  
ZONING DISTRICT: N/A  
CONSTRUCTION TYPE: U-2  
OCCUPANCY TYPE: U (UNMANNED)  
POWER COMPANY: PG&E  
TELEPHONE COMPANY: AT&T  
APPLICANT: AT&T MATTHEW YOON - (562) 412-9826  
1452 EDINGER AVE., TUSTIN, CA 92780  
SITE ACQUISITION: JACQUELINE ZIRBES 818-859-4119  
3703 LONG BEACH BOULEVARD, SUITE 421, 2ND FLOOR  
LONG BEACH, CA 90807





This Site Operated by:  
**AT&T**  
 5001 EXECUTIVE PARKWAY  
 SAN RAMON, CA 94583  
 IN CASE OF FIRE AND THE NEED FOR SHUTDOWN  
 TO DEACTIVATE ANTENNAS CALL THE  
 FOLLOWING NUMBER:  
 For 24 Hour Emergency Contact and Access Please Call:  
 (800)832-6662  
 Reference Site#: \_\_\_\_\_  
 Site Address: \_\_\_\_\_



**INFORMATION**

AT&T OPERATES TELECOMMUNICATION ANTENNAS AT THIS LOCATION. PLEASE STAY AWAY FROM ANY ANTENNA AND ONLY ALL POSTED SIGNS.

CONTACT THE OWNER(S) OF THE ANTENNA(S) BEFORE WORKING CLOSER THAN 3 FEET FROM THE ANTENNA(S).

CONTACT AT&T AT 800-832-6662 PRIOR TO PERFORMING ANY MAINTENANCE OR REPAIRS NEAR AT&T ANTENNAS.

THIS IS SITE # \_\_\_\_\_

CONTACT THE MANAGEMENT OFFICE IF THIS DOOR/HATCH/GATE IS FOUND UNLOCKED.

**INFORMACION**

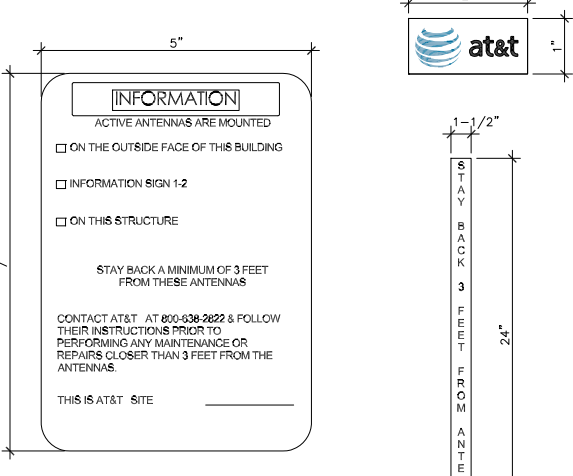
EN ESTA PROPIEDAD SE UBICAN ANTENAS DE TELECOMUNICACIONES OPERADAS POR AT&T. FAVOR MANTENER UNA DISTANCIA DE NO MENOS DE 3 PIES Y OBEDECER TODOS LOS AVISOS.

COMUNIQUESE CON EL PROPIETARIO O LOS PROPIETARIOS DE LAS ANTENAS ANTES DE TRABAJAR O CUIDAR DE MENOS DE 3 PIES DE LA ANTENA.

COMUNIQUESE CON AT&T 800-832-6662 ANTES DE REALIZAR CUALQUIER MANTENIMIENTO O REPARACION DE LAS ANTENAS DE AT&T.

ESTA ES LA ESTACION BASE NUMERO \_\_\_\_\_

FAVOR COMUNICARSE CON LA OFICINA DE LA ADMINISTRACION DEL EDIFICIO SI ESTA PUERTA O COMPUERTA SE ENCUENTRA SIN CERRADA.



**INFORMATION**

ACTIVE ANTENNAS ARE MOUNTED

ON THE OUTSIDE FACE OF THIS BUILDING

INFORMATION SIGN 1-2

ON THIS STRUCTURE

STAY BACK A MINIMUM OF 3 FEET FROM THESE ANTENNAS

CONTACT AT&T AT 800-832-6662 & FOLLOW THEIR INSTRUCTIONS PRIOR TO PERFORMING ANY MAINTENANCE OR REPAIRS CLOSER THAN 3 FEET FROM THE ANTENNAS.

THIS IS AT&T SITE # \_\_\_\_\_


**INFORMATION SIGN 1-4**

STAY BACK 3 FEET FROM ANTENNA

**SIGNAGE AND STRIPING INFORMATION**

- THE FOLLOWING INFORMATION IS A GUIDELINE w/ RESPECT TO PREVAILING STANDARDS LIMITING HUMAN EXPOSURE TO RADIO FREQUENCY ENERGY AND SHOULD BE USED AS SUCH. IF THE SITE'S EMF REPORT OR ANY LOCAL, STATE OR FEDERAL GUIDELINES OR REGULATIONS SHOULD BE IN CONFLICT w/ ANY PART OF THESE NOTES OR PLANS, THE MORE RESTRICTIVE GUIDELINE OR REGULATION SHALL BE FOLLOWED AND OVERRIDE THE LESSER.
- THE PUBLIC LIMIT OF RF EXPOSURE ALLOWED BY AT&T'S 1mWcm<sup>2</sup> AND THE OCCUPATIONAL LIMIT OF RF EXPOSURE ALLOWED BY AT&T'S 5mWcm<sup>2</sup>
- IF THE BOTTOM OF THE ANTENNA IS MOUNTED (8) EIGHT FEET ABOVE THE GROUND OR WORKING PLATFORM LINE OF THE PERSONAL COMMUNICATION SYSTEM (PCS) AND DOES NOT EXCEED THE PUBLIC LIMIT OF RF EXPOSURE LIMIT THEN NO STRIPING OR BARRICADES SHOULD BE NEEDED.
- IF THE PUBLIC LIMIT OF RF EXPOSURE ON THE SITE IS EXCEEDED AND THE AREA IS PUBLICLY ACCESSIBLE (e.g. ROOF ACCESS DOOR THAT CANNOT BE LOCKED, OR FIRE EGRESS) THEN BOTH BARRICADES AND STRIPING SHALL BE PLACED AROUND THE ANTENNAS. THE EXACT EXTENT OF THE BARRICADES AND STRIPING SHALL BE DETERMINED BY THE EMF REPORT FOR THE SITE DONE BEFORE OR SHORTLY AFTER COMPLETION OF SITE CONSTRUCTION. USE THE PLANS AS A GUIDELINE FOR PLACEMENT OF SUCH BARRICADES AND STRIPING.
- IF THE PUBLIC LIMIT OF RF EXPOSURE ON THE SITE IS EXCEEDED AND THE AREA IS PUBLICLY ACCESSIBLE (e.g. ROOF ACCESS DOOR THAT CANNOT BE LOCKED, OR FIRE EGRESS) THEN BOTH BARRICADES AND STRIPING SHALL BE PLACED AROUND THE ANTENNAS. THE EXACT EXTENT OF THE BARRICADES AND STRIPING SHALL BE DETERMINED BY THE EMF REPORT FOR THE SITE DONE BEFORE OR SHORTLY AFTER COMPLETION OF SITE CONSTRUCTION. USE THE PLANS AS A GUIDELINE FOR PLACEMENT OF SUCH BARRICADES AND STRIPING. ALL TRANSMIT ANTENNAS REQUIRE A THREE LANGUAGE WARNING SIGN WRITTEN IN ENGLISH, SPANISH, AND CHINESE. THIS SIGN SHALL BE PROVIDED TO THE CONTRACTOR Y THE AT&T CONSTRUCTION PROJECT MANAGER AT THE TIME OF CONSTRUCTION. THE LARGER SIGN SHALL BE PLACED IN PLAIN SIGHT AT ALL ROOF ACCESS LOCATIONS AND ON ALL BARRICADES. THE SMALLER SIGN SHALL BE PLACED ON THE ANTENNA ENCLOSURES IN A MANNER THAT IS EASILY SEEN BY ANY PERSON ON THE ROOF. WARNING SIGNS SHALL COMPLY w/ ANSI C95.2 COLOR, SYMBOL, AND CONTENT CONVENTIONS. ALL SIGNS SHALL HAVE AT&T'S NAME AND THE COMPANY CONTACT INFORMATION (e.g. TELEPHONE NUMBER) TO ARRANGE FOR ACCESS TO THE RESTRICTED AREAS. THIS TELEPHONE NUMBER SHALL BE PROVIDED TO THE CONTRACTOR BY THE AT&T CONSTRUCTION PROJECT MANAGER AT THE TIME OF CONSTRUCTION.
- PHOTOS OF ALL STRIPING, BARRICADES & SIGNAGE SHALL BE PART OF THE CONTRACTORS CLOSE OUT PACKAGE & SHALL BE TURNED INTO THE AT&T CONSTRUCTION PROJECT MANAGER AT THE END OF CONSTRUCTION. STRIPING SHALL BE DONE w/ FADE RESISTANT YELLOW SAFETY PAINT IN A CROSS-HATCH PATTERN AS DETAILED BY THE CONSTRUCTION DRAWINGS. ALL BARRICADES SHALL BE MADE OF AN RF FRIENDLY MATERIAL SO AS NOT TO BLOCK OR INTERFERE w/ THE OPERATION OF THE ANTENNAS. BARRICADES SHALL BE PAINTED w/ FADE RESTRANT YELLOW SAFETY PAINT. THE CONTRACTOR SHALL PROVIDE ALL RF FRIENDLY BARRICADES NEEDED, & SHALL PROVIDE THE AT&T CONSTRUCTION PROJECT MANAGER w/ A DETAILED SHOP DRAWING OF EACH BARRICADE. UPON CONSTRUCTION COMPLETION.

APPLICANT:



1452 EDINGER AVE.  
 TUSTIN, CA 92780

PREPARED BY:



3703 Long Beach Blvd | Suite 421 | 2nd Floor  
 Long Beach, CA 90807  
 (781) 273-2500 | www.ebiconsulting.com



1 FENCED COMPOUND SIGNAGE



'A' INFORMATION SIGN 1-1

'B' INFORMATION SIGN 1-2

'D' INFORMATION SIGN 1-4

FRONT OF THE SIGN.

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

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

SIGN 2 MUST BE A NON METALLIC LABEL w/ AN ADHESIVE BACKING, THE LABEL SHALL BE MADE USING VINYL OR SIMILAR WEATHERPROOF MATERIAL. THE LABEL SHALL BE APPROXIMATELY 5X7 INCHES w/ A WHITE BACKGROUND AND BLACK LETTERING. THE GREEN BAND SHALL BE 1.375 INCH IN HEIGHT & THE LETTERING SHALL BE BLACK w/ 0.75 INCH HIGH LETTERS. THE TEXT LETTERING SHALL BE BLACK w/ 1/4 INCH HIGH LETTERS. UV PROTECTION SHALL BE PLACED OVER THE FRONT OF THE LABEL.

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

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

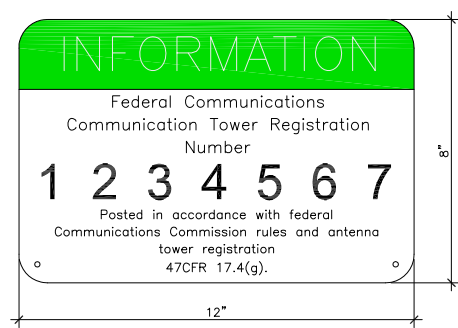
\*SIGN 1-4: SIDE OF ANTENNAS, SEE DETAIL 1D & 3, THIS SHEET

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

2 SPACE NOTE USED



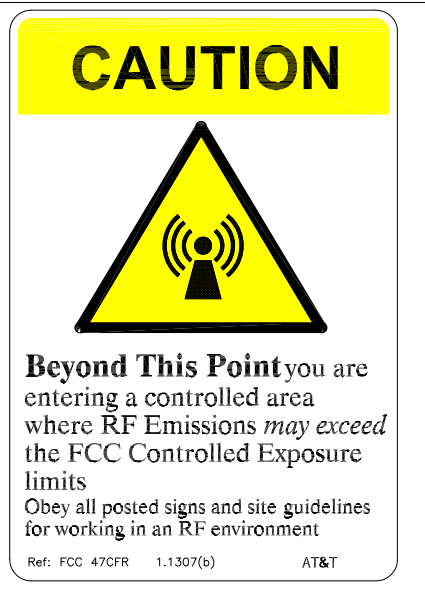
3 FENCED COMPOUND SIGNAGE



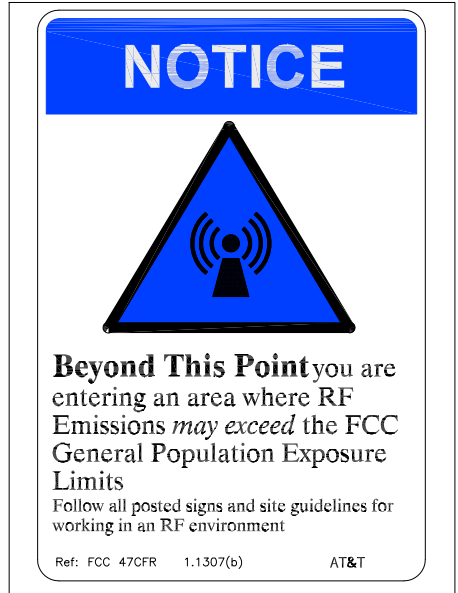
4 INFORMATION SIGNAGE

NOTE:

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



5 GENERAL NOTES



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0	06/19/18	100% FOR CONSTRUCTION	SH

EBI JOB NO:  
 8117000509

SITE INFO:  
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 (AWS-3) 7C (700-B14)

SHEET TITLE:  
 SIGNAGE INFORMATION

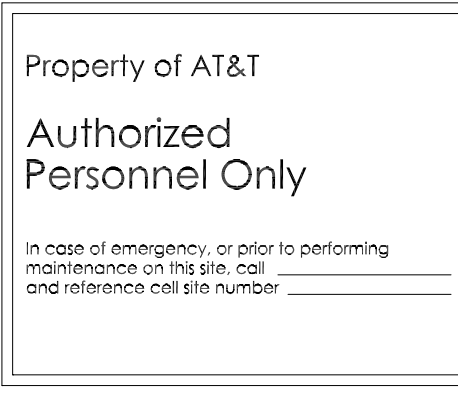
DRAWN BY: SH  
 CHECKED BY: CS  
 DATE: 01/12/18

SHEET NO:  
**G-1**

8 GATE SIGNAGE

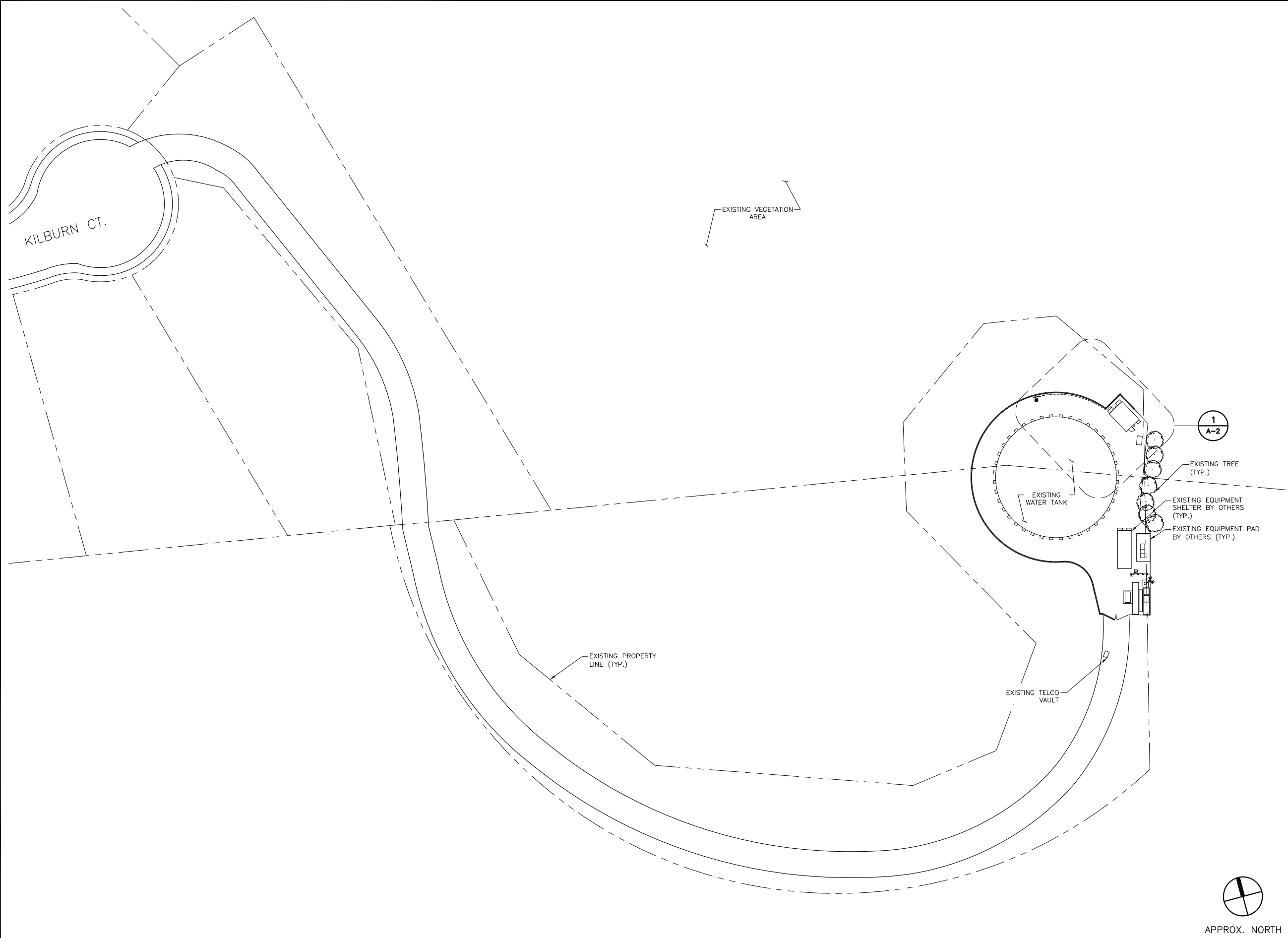



9 SHELTER/CABINET DOOR



10 CAUTION & WARNING SIGN

11 NOTICE SIGN



APPLICANT:  
  
 1452 EDINGER AVE.  
 TUSTIN, CA 92780

PREPARED BY:  
  
 environmental | engineering | due diligence  
 3703 Long Beach Blvd | Suite 421 | 2nd Floor  
 Long Beach, CA 90807  
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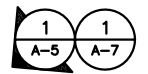
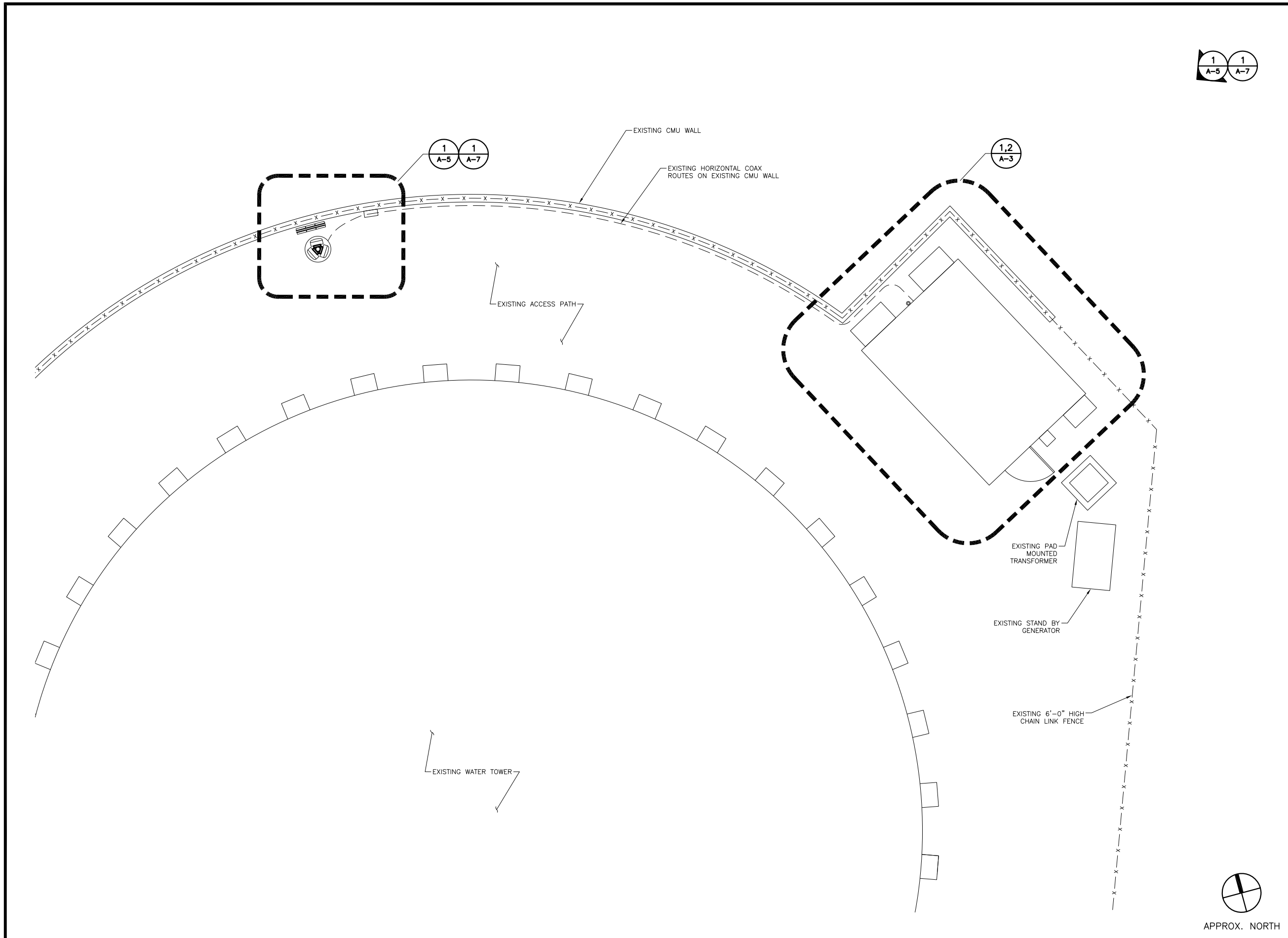
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**4997 KILBURN COURT**  
**OAK PARK, CA 91377**  
**SBOV22/LTE 5C (850)/6C**  
**(AWS-3) 7C (700-B14)**

SHEET TITLE:  
**OVERALL SITE PLAN**

DRAWN BY: SH	SHEET NO: <b>A-1</b>
CHECKED BY: CS	
DATE: 01/12/18	


1 OVERALL SITE PLAN

11x17 SCALE: 1" = 60'-0"  
 22x34 SCALE: 1" = 30'-0"



APPROX. NORTH

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SHEET TITLE:  
**ENLARGED SITE PLAN**

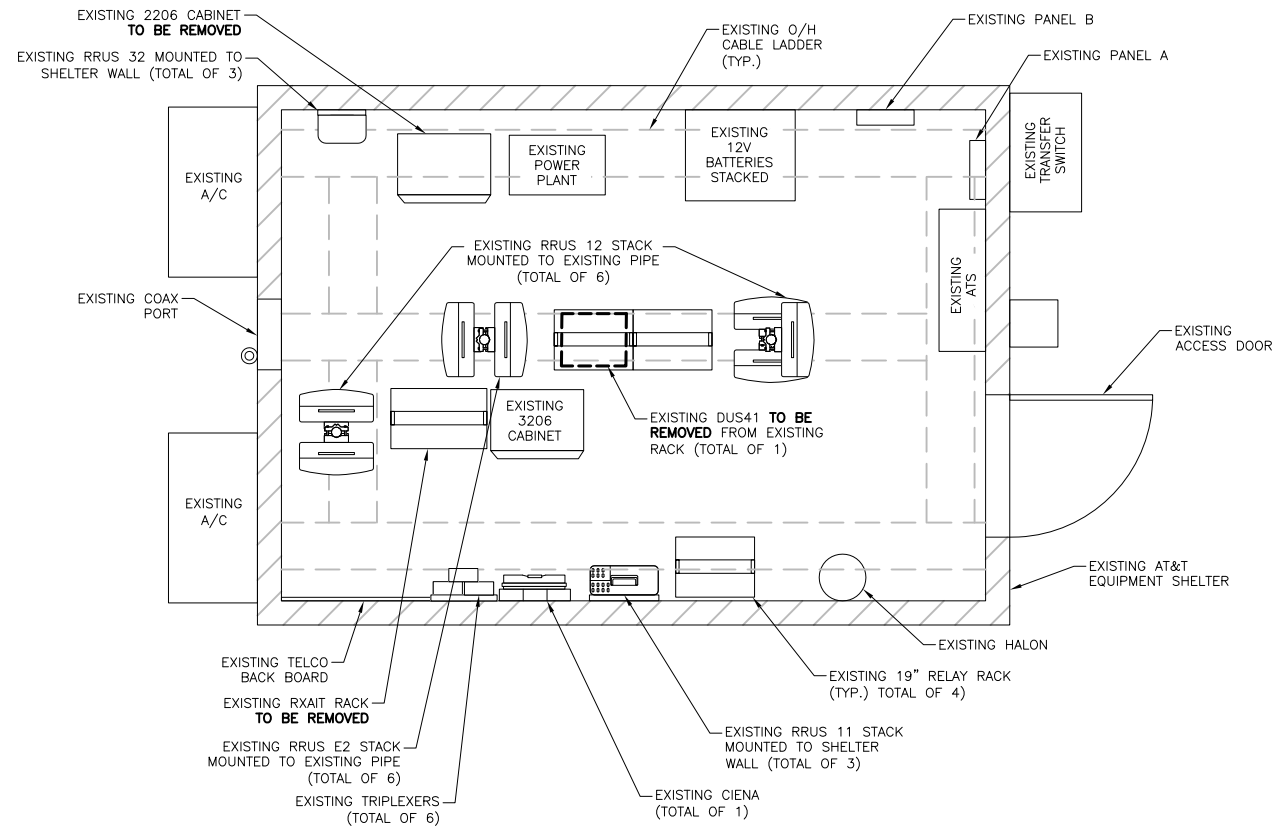
DRAWN BY:  
SH  
CHECKED BY:  
CS  
DATE:  
01/12/18


SHEET NO:  
**A-2**

1 ENLARGED SITE PLAN

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





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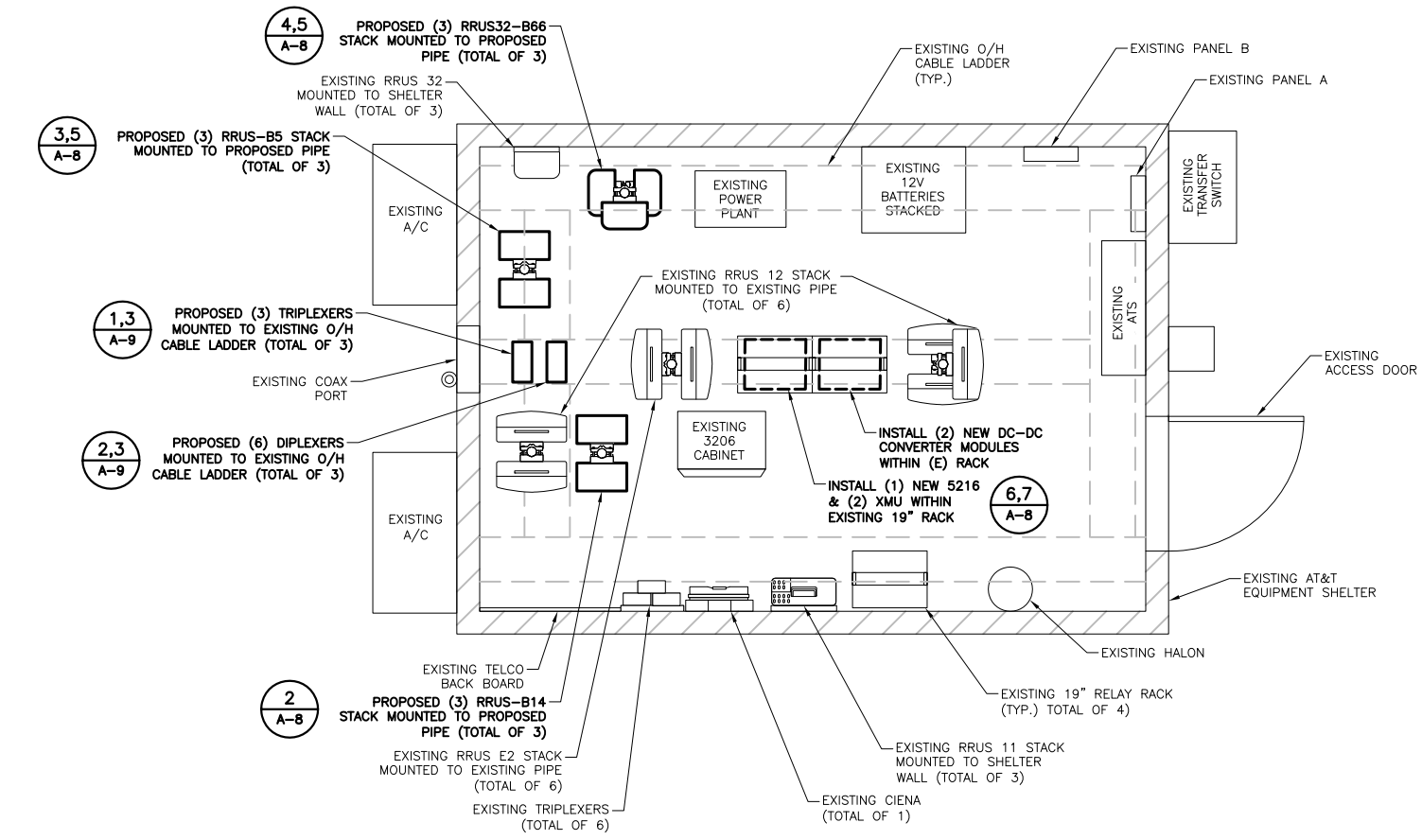
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1 EXISTING EQUIPMENT PLAN

11x17 SCALE: 1/4" = 1'-0"  
 22x34 SCALE: 1/2" = 1'-0"

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2 PROPOSED EQUIPMENT PLAN

11x17 SCALE: 1/4" = 1'-0"  
 22x34 SCALE: 1/2" = 1'-0"

SUBMITTALS

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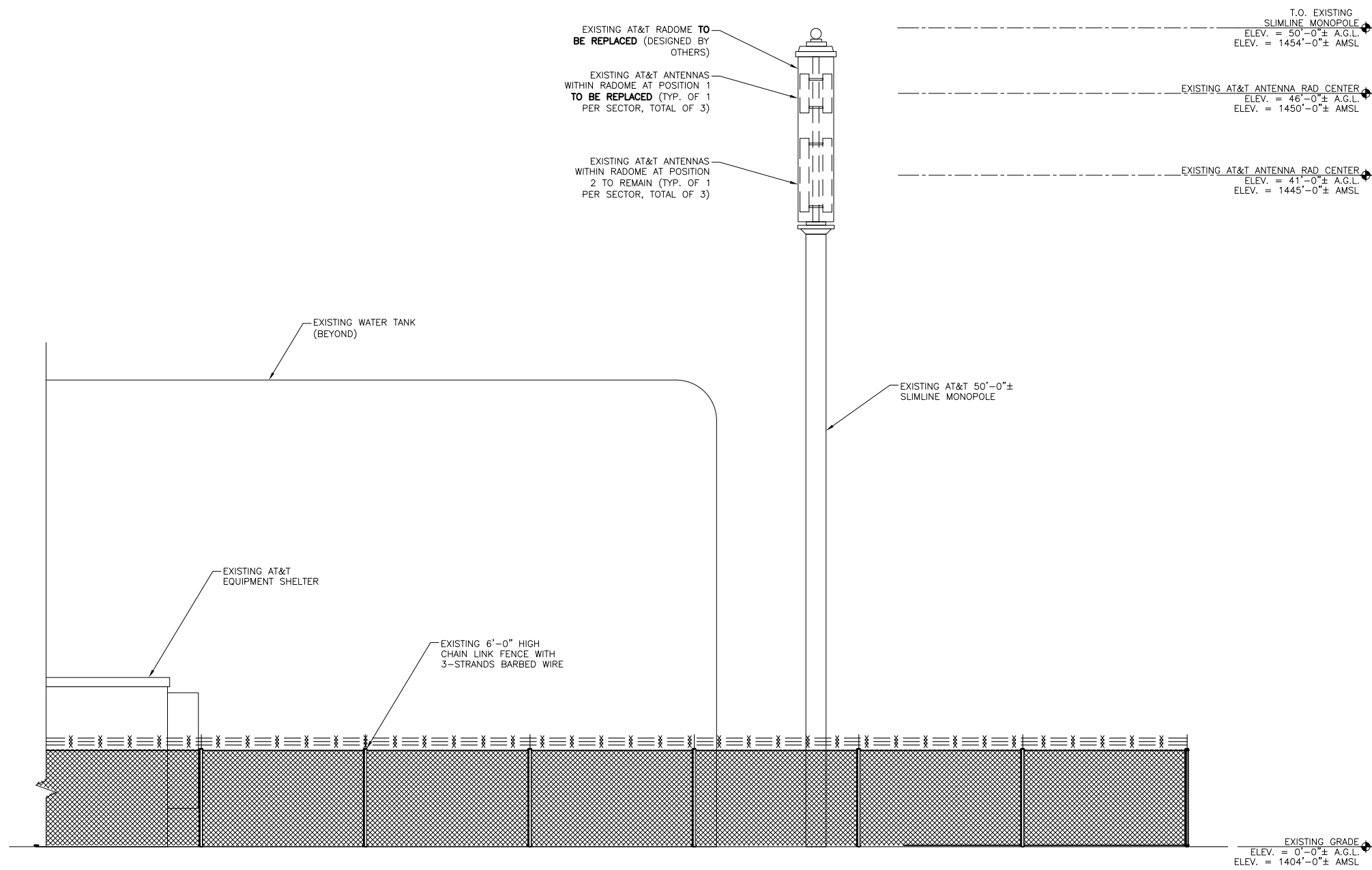
EBI JOB NO:  
**8117000509**  
 SITE INFO:  
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**OAK PARK, CA 91377**  
**SBOV22/LTE 5C (850)/6C**  
**(AWS-3) 7C (700-B14)**

SHEET TITLE:  
**EXISTING & PROPOSED EQUIPMENT PLANS**

DRAWN BY: SH  
 CHECKED BY: CS  
 DATE: 01/12/18  
 SHEET NO:  
**A-3**

NOTES:

1. DESIGN BASED ON RFDS DATED 11/09/2017. CONTRACTOR TO REQUEST CURRENT RFDS PRIOR TO CONSTRUCTION.
2. ALL PROPOSED EQUIPMENT TO BE INSTALLED IN ACCORDANCE WITH CORRESPONDING STRUCTURAL ANALYSIS, EQUIPMENT MANUFACTURER'S RECOMMENDATIONS AND FINAL AT&T RF DATA SHEET.
3. EXISTING & PROPOSED EQUIPMENT TO BE PAINTED TO MATCH EXISTING.
- 4.



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OAK PARK, CA 91377  
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(AWS-3) 7C (700-B14)**

SHEET TITLE:  
**EXISTING ELEVATION**

DRAWN BY: SH	SHEET NO: <b>A-4</b>
CHECKED BY: CS	
DATE: 01/12/18	

1 EXISTING NORTHEAST ELEVATION

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

- NOTES:**
- DESIGN BASED ON RFDS DATED 11/09/2017. CONTRACTOR TO REQUEST CURRENT RFDS PRIOR TO CONSTRUCTION.
  - ALL PROPOSED EQUIPMENT TO BE INSTALLED IN ACCORDANCE WITH CORRESPONDING STRUCTURAL ANALYSIS, EQUIPMENT MANUFACTURER'S RECOMMENDATIONS AND FINAL AT&T RF DATA SHEET.
  - EXISTING & PROPOSED EQUIPMENT TO BE PAINTED TO MATCH EXISTING.

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0	06/19/18	100% FOR CONSTRUCTION	SH

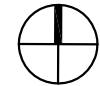
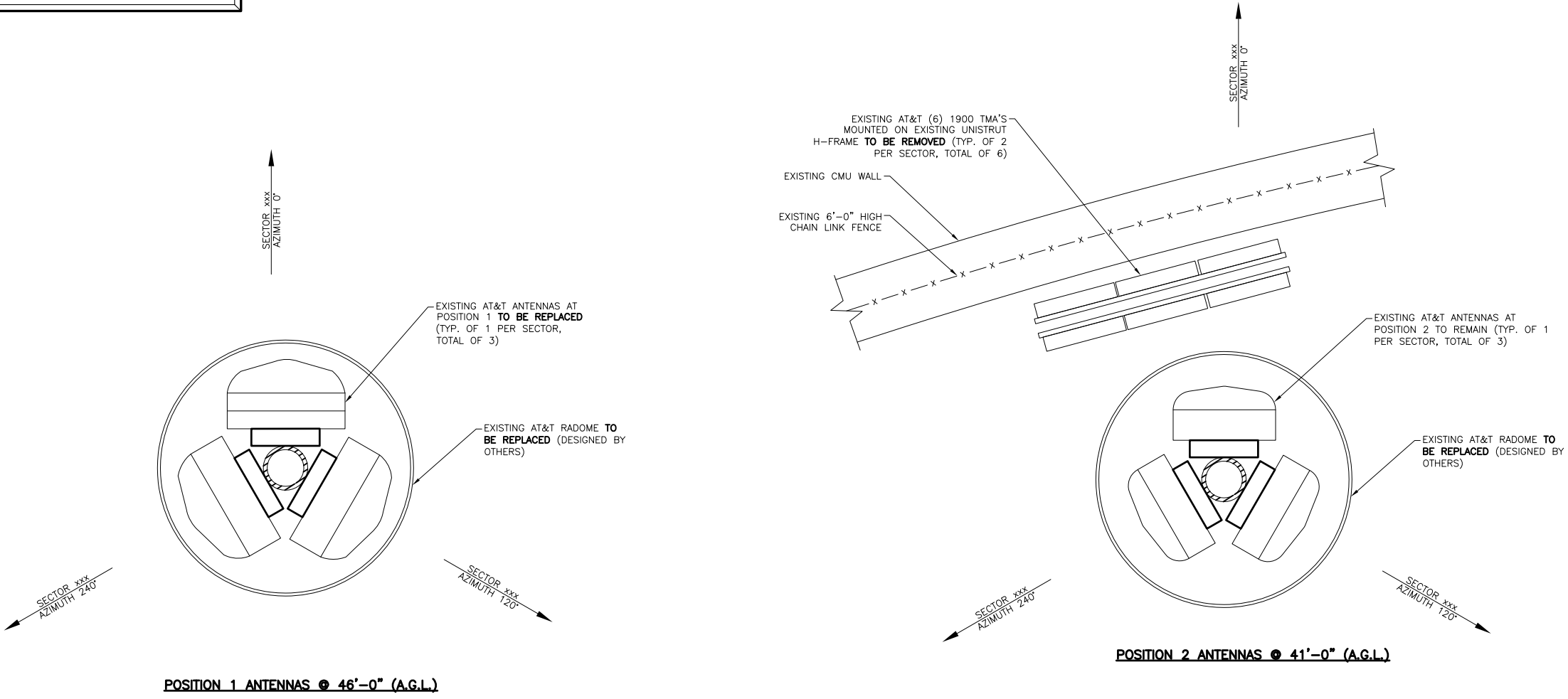
EBI JOB NO:  
**8117000509**

SITE INFO:  
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4997 KILBURN COURT  
OAK PARK, CA 91377  
SBOV22/LTE 5C (850)/6C  
(AWS-3) 7C (700-B14)**

SHEET TITLE:  
**EXISTING ANTENNA ORIENTATION PLAN**

DRAWN BY: SH  
CHECKED BY: CS  
DATE: 01/12/18

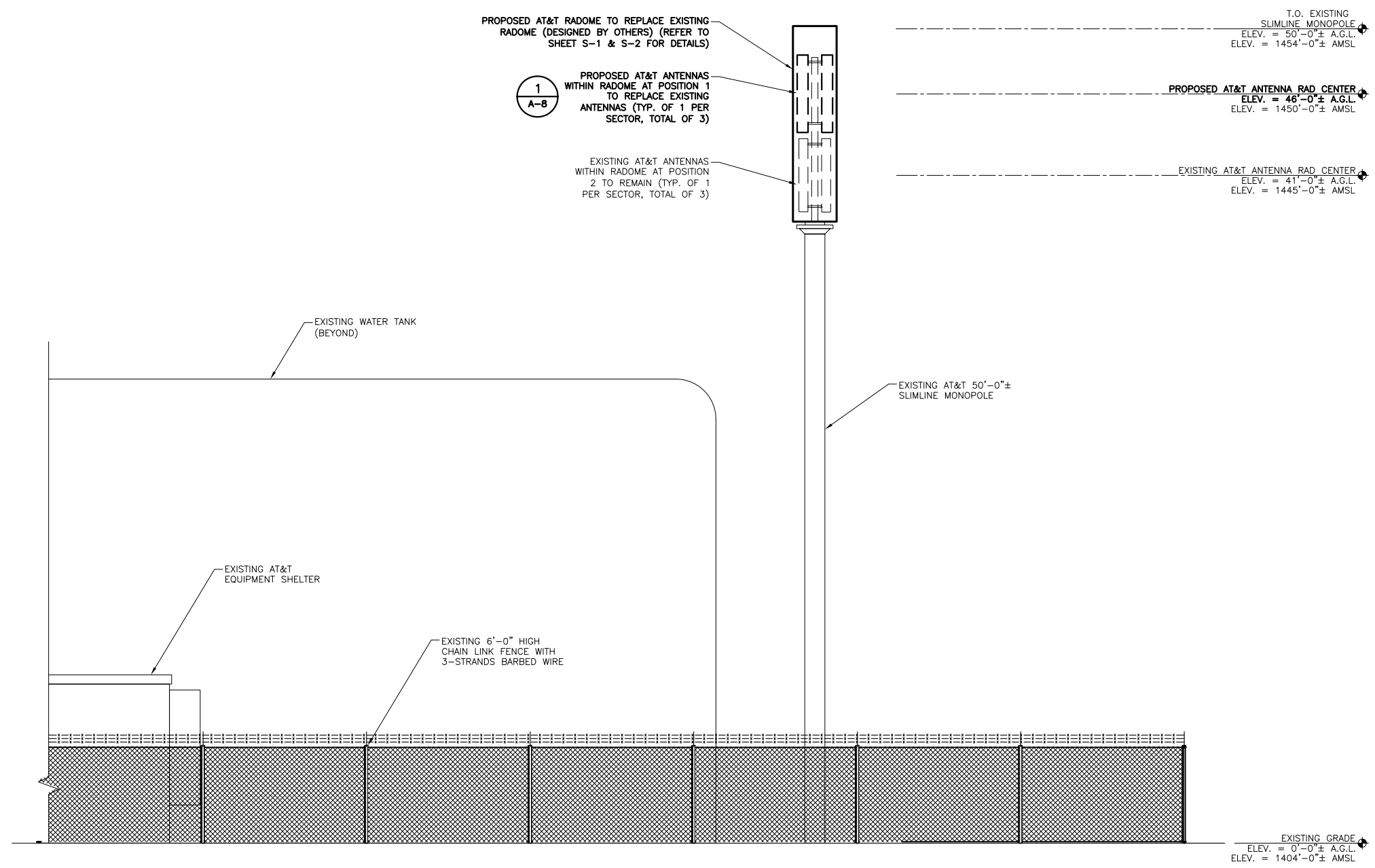
SHEET NO:  
**A-5**



APPROX. NORTH

NOTES:

1. DESIGN BASED ON RFDS DATED 11/09/2017. CONTRACTOR TO REQUEST CURRENT RFDS PRIOR TO CONSTRUCTION.
2. ALL PROPOSED EQUIPMENT TO BE INSTALLED IN ACCORDANCE WITH CORRESPONDING STRUCTURAL ANALYSIS, EQUIPMENT MANUFACTURER'S RECOMMENDATIONS AND FINAL AT&T RF DATA SHEET.
3. EXISTING & PROPOSED EQUIPMENT TO BE PAINTED TO MATCH EXISTING.
- 4.



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(AWS-3) 7C (700-B14)**

SHEET TITLE:  
**PROPOSED ELEVATION**

DRAWN BY: SH  
CHECKED BY: CS  
DATE: 01/12/18  
SHEET NO:  
**A-6**


1 PROPOSED NORTHEAST ELEVATION

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



- NOTES:
- DESIGN BASED ON RFDS DATED 11/09/2017. CONTRACTOR TO REQUEST CURRENT RFDS PRIOR TO CONSTRUCTION.
  - ALL PROPOSED EQUIPMENT TO BE INSTALLED IN ACCORDANCE WITH CORRESPONDING STRUCTURAL ANALYSIS, EQUIPMENT MANUFACTURER'S RECOMMENDATIONS AND FINAL AT&T RF DATA SHEET.
  - EXISTING & PROPOSED EQUIPMENT TO BE PAINTED TO MATCH EXISTING.
  -

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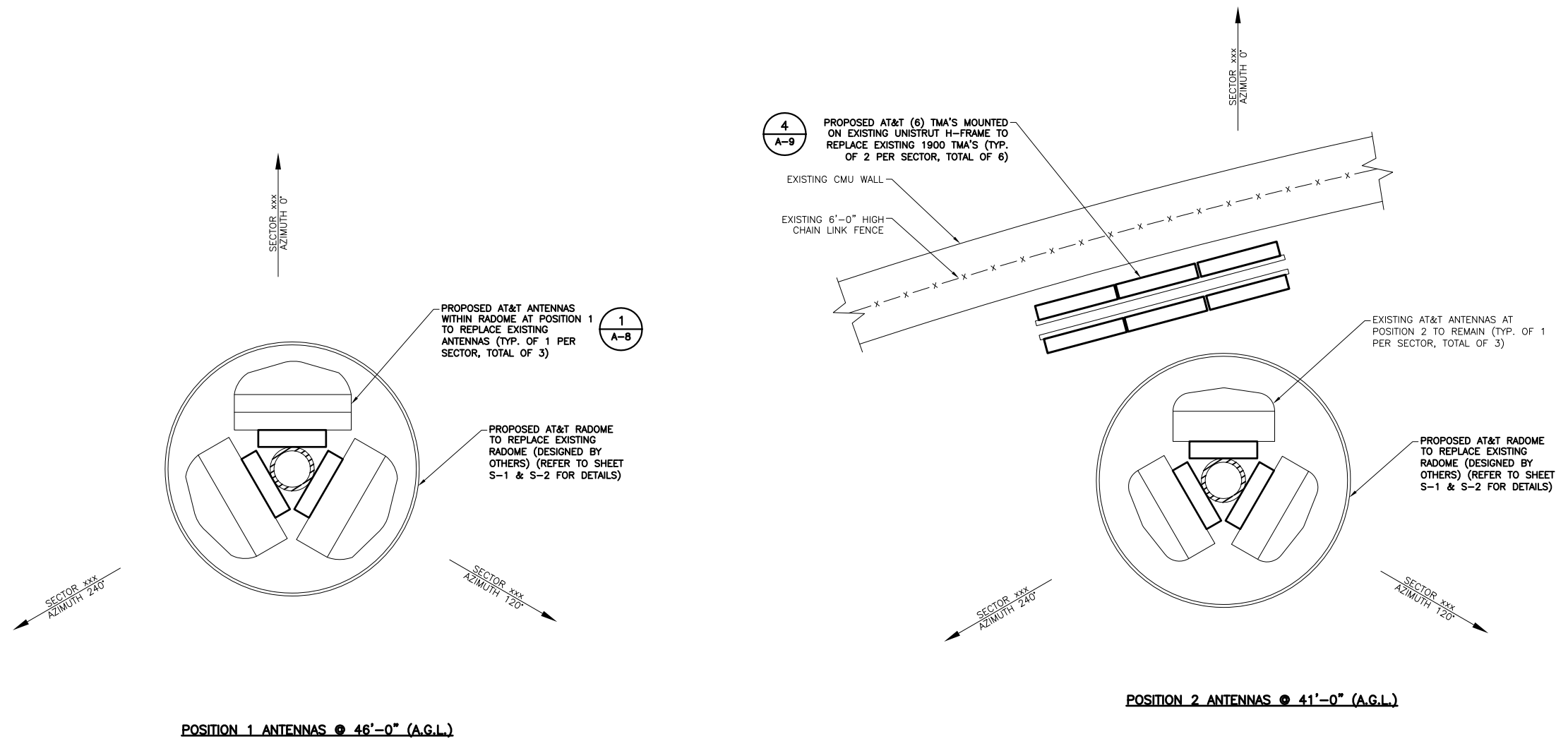
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(AWS-3) 7C (700-B14)**

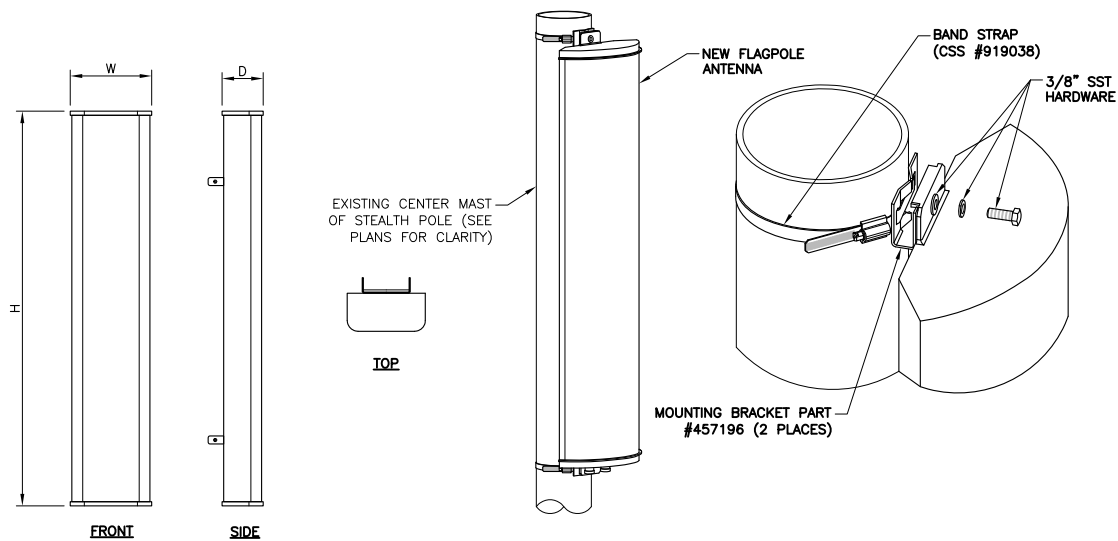
SHEET TITLE:  
**PROPOSED ANTENNA  
ORIENTATION PLAN**

DRAWN BY: SH  
CHECKED BY: CS  
DATE: 01/12/18

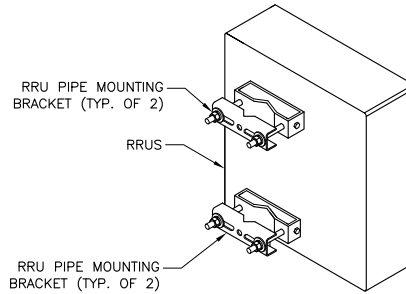
SHEET NO:  
**A-7**



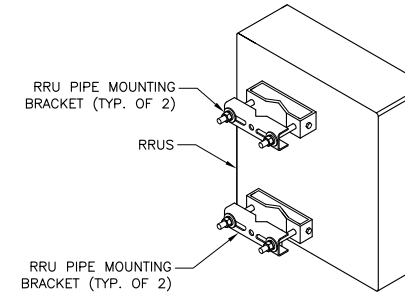
11x17 SCALE: 3/4" = 1'-0"  
22x34 SCALE: 1/2" = 1'-0"



MANUFACTURER	MODEL NUMBER	DIMENSIONS (H x W x D)	WEIGHT
QUINTEL	QS4658-7	57" x 13.8" x 8.1"	17.7 LBS.



**ERICSSON RRUS-B14 4478**  
 -DIMENSIONS (HxWxD): 15"x13.2"x7.4"  
 -WEIGHT: 60 LBS



**ERICSSON RRUS-B5 4478**  
 -DIMENSIONS (HxWxD): 15"x13.2"x7.4"  
 -WEIGHT: 60 LBS

**1 ANTENNA SPECIFICATION AND ATTACHMENT DETAIL**

N.T.S.

**2 RRU SPECIFICATION AND ATTACHMENT DETAIL**

N.T.S.

**3 RRU SPECIFICATION AND ATTACHMENT DETAIL**

N.T.S.

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**SBOV22/LTE 5C (850)/6C**  
**(AWS-3) 7C (700-B14)**

SHEET TITLE:  
**EQUIPMENT SPECS. & DETAILS**

DRAWN BY:  
SH

CHECKED BY:  
CS

DATE:  
01/12/18

SHEET NO:

**A-8**

**4 RRU SPECIFICATION AND ATTACHMENT DETAIL**

N.T.S.

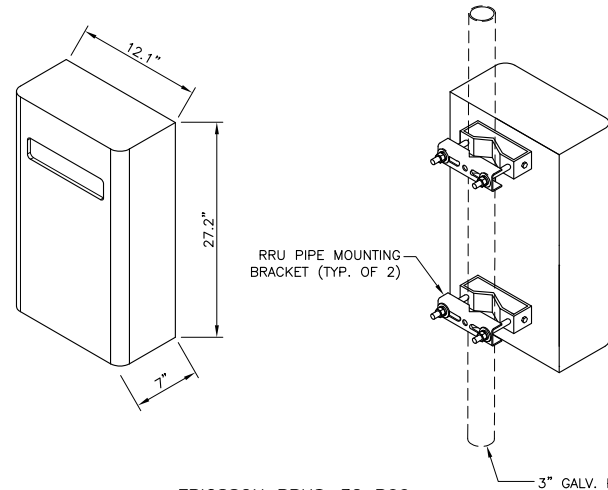
**5 RRU POST & BASE PLATE DETAIL**

N.T.S.

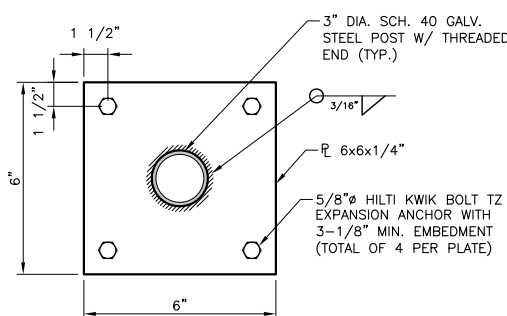
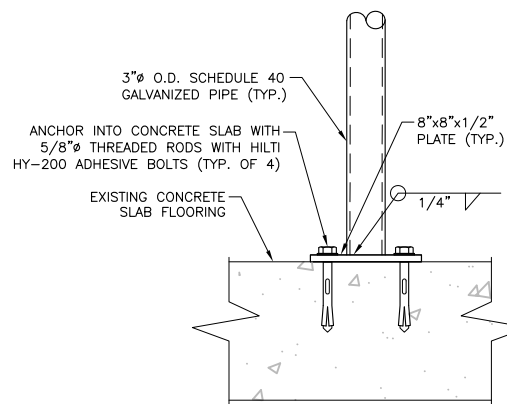
**7 XMU SPECIFICATION**

N.T.S.

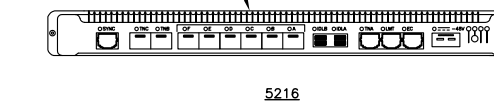
**NOTE:**  
RRU CAN ONLY BE PAINTED ON SOLAR SHIELD.



**ERICSSON RRUS-32 B66**  
 -DIMENSIONS (HxWxD):  
 23.1"x11.5"x6.4" (WITHOUT SOLAR SHIELD)  
 27.2"x12.1"x7.0" (WITH SOLAR SHIELD)  
 -WEIGHT: 53 LBS



INSTALL (1) 5216 INSIDE 19" RACK OR EQUIPMENT OUTDOOR CABINET

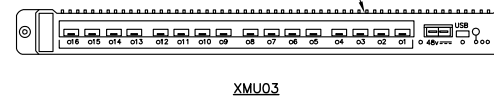


- 48 DC MAINS
- FOOTPRINT: 1.22"H X 13.78"W X 11.02"D
- 8.8 LBS. UNIT WEIGHT AND 19" RACK MOUNTABLE

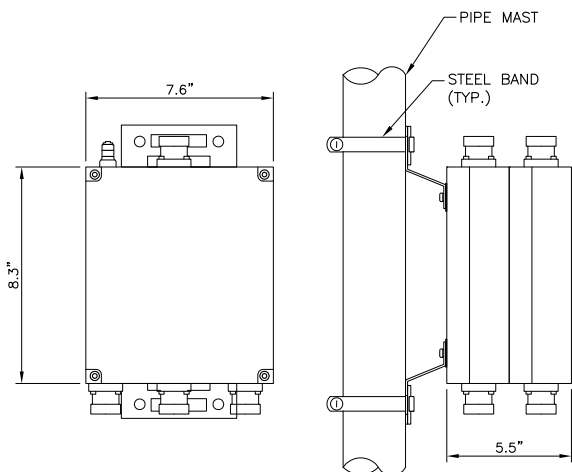
**6 5216 SPECIFICATION**

N.T.S.

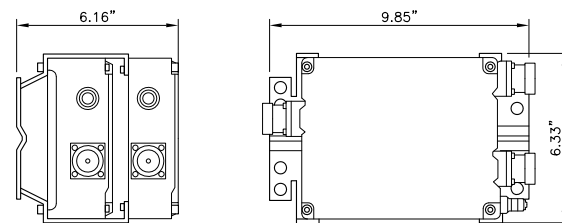
INSTALL (1) XMU03 INSIDE 19" RACK OR EQUIPMENT OUTDOOR CABINET



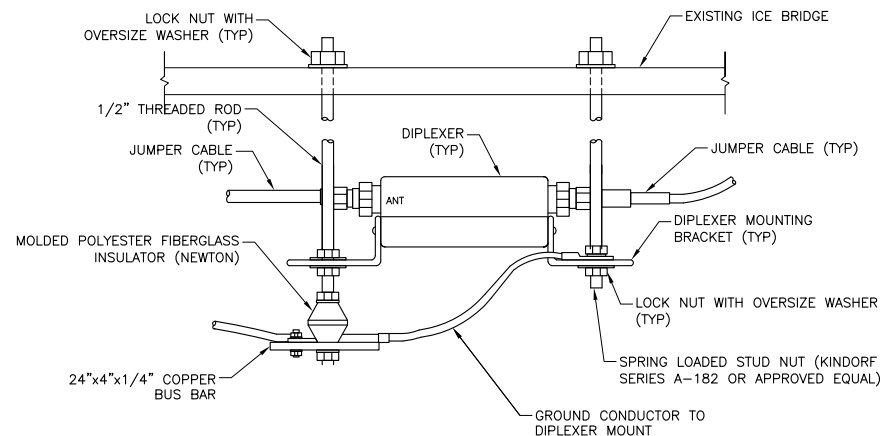
- 48 DC MAINS (TWO WIRE)
- FOOTPRINT: 1.22"H X 13.77"W X 11.10"D
- 5 LBS. 1.1 OZ. UNIT WEIGHT AND 19" RACK MOUNTABLE
- 48V VDC (1 X 15 - 20 AMP BREAKER) - DC CABLE SIZE 4 MM2



COMMSCOPE: CBC71921-DF-2X  
 DxHxW: 5.5"x8.3"x7.6"  
 WEIGHT WITHOUT MOUNTING  
 HARDWARE: 15.4 LB



COMMSCOPE: CBC78-DF-2X  
 DxHxW: 7.9"x5.9"x5.7"  
 WEIGHT WITHOUT MOUNTING HARDWARE: 13.9 LB



1 TRIPLEXER SPECIFICATION & DETAIL

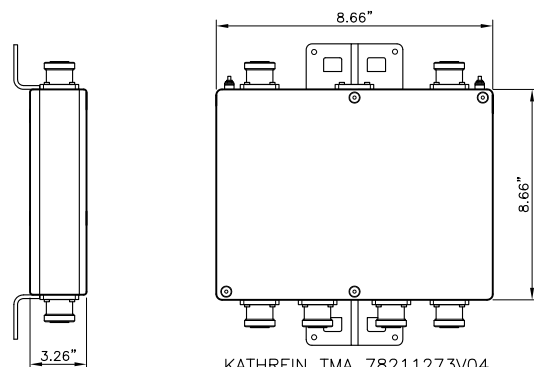
N.T.S.

2 DIPLEXER SPECIFICATION & DETAIL

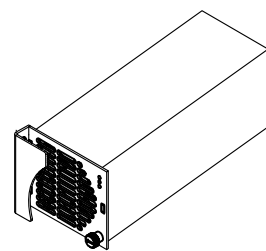
N.T.S.

3 TRIPLEXER & DIPLEXER ATTACHMENT DETAIL

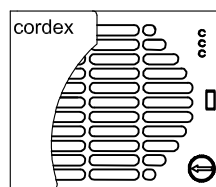
N.T.S.



KATHREIN TMA 78211273V04  
 HEIGHT: 8.66 IN  
 WIDTH: 8.66 IN  
 DEPTH: 3.26 IN.  
 SINGLE UNIT WEIGHT: 16.09 LBS.



ISOMETRIC VIEW



FRONT VIEW

**EQUIPMENT SPECIFICATIONS  
 DC-DC CONVERTER**

MFG: ALPHA TECHNOLOGIES  
 MODEL: CXDF 24-48/2KW  
 HEIGHT: 3.30 IN  
 WIDTH: 3.94 IN  
 DEPTH: 9.25 IN  
 WEIGHT: 6.20 LBS

**NOTE:**  
 1. USE MANUFACTURER SUPPLIED  
 MOUNTING HARDWARE.

4 TMA SPECIFICATION & DETAIL

N.T.S.

5 DC-DC CONVERTER DETAIL

N.T.S.

6 SPACE NOT USED

APPLICANT:



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 OAK PARK, CA 91377  
 SBOV22/LTE 5C (850)/6C  
 (AWS-3) 7C (700-B14)

SHEET TITLE:

**EQUIPMENT SPECS.  
 & DETAILS**

DRAWN BY:

SH

CHECKED BY:

CS

DATE:

01/12/18

SHEET NO:

**A-9**

EXISTING RF DATA FOR SECTOR A

REPLACE ANTENNA	ANTENNA POSITION	ANTENNA MODEL	ANTENNA VENDOR	ANTENNA SIZE (HxWxD)	ANTENNA AZIMUTHS	ANTENNA RAD CENTER (FEET)	TMA/LNA (MODEL/QTY)	RRU - 700 BAND (MODEL/QTY)	RRU - 850 BAND (MODEL/QTY)	RRU - 1900 BAND (MODEL/QTY)	RRU - AWS BAND (MODEL/QTY)	RRU - WCS BAND (MODEL/QTY)	RRU - ANY BAND (MODEL/QTY)
YES	1	P6T2BF-V1	FILTRONICS	27.6"x13.8"x8.1"	A 0°	46	DTMABP7819VG12A/78211273V04 (2)	RRUS-E2 (1)	NONE	RRUS-12 (2)	NONE	NONE	NONE
NO	2	ET-X-UW-70-13-70-17-IR-AT	KMW	53.8"12"6.3"	A 0°	41	TMA23-11A (1)	RRUS-11 (1)	NONE	NONE	NONE	RRUS-32 (1)	NONE

EXISTING RF DATA FOR SECTOR B

REPLACE ANTENNA	ANTENNA POSITION	ANTENNA MODEL	ANTENNA VENDOR	ANTENNA SIZE (HxWxD)	ANTENNA AZIMUTHS	ANTENNA RAD CENTER (FEET)	TMA/LNA (MODEL/QTY)	RRU - 700 BAND (MODEL/QTY)	RRU - 850 BAND (MODEL/QTY)	RRU - 1900 BAND (MODEL/QTY)	RRU - AWS BAND (MODEL/QTY)	RRU - WCS BAND (MODEL/QTY)	RRU - ANY BAND (MODEL/QTY)
YES	1	P6T2BF-V1	FILTRONICS	27.6"x13.8"x8.1"	B 240°	46	DTMABP7819VG12A/78211273V04 (2)	RRUS-E2 (1)	NONE	RRUS-12 (2)	NONE	NONE	RRUS -B14 4478 (1)
NO	2	ET-X-UW-70-13-70-17-IR-AT	KMW	53.8"12"6.3"	B 240°	41	TMA23-11A (1)	RRUS-11 (1)	NONE	NONE	NONE	RRUS-32 (1)	NONE

EXISTING RF DATA FOR SECTOR C

REPLACE ANTENNA	ANTENNA POSITION	ANTENNA MODEL	ANTENNA VENDOR	ANTENNA SIZE (HxWxD)	ANTENNA AZIMUTHS	ANTENNA RAD CENTER (FEET)	TMA/LNA (MODEL/QTY)	RRU - 700 BAND (MODEL/QTY)	RRU - 850 BAND (MODEL/QTY)	RRU - 1900 BAND (MODEL/QTY)	RRU - AWS BAND (MODEL/QTY)	RRU - WCS BAND (MODEL/QTY)	RRU - ANY BAND (MODEL/QTY)
YES	1	P6T2BF-V1	FILTRONICS	27.6"x13.8"x8.1"	C 120°	46	DTMABP7819VG12A/78211273V04 (2)	RRUS-E2 (1)	NONE	RRUS-12 (2)	NONE	NONE	RRUS -B14 4478 (1)
NO	2	ET-X-UW-70-13-70-17-IR-AT	KMW	53.8"12"6.3"	C 120°	41	TMA23-11A (1)	RRUS-11 (1)	NONE	NONE	NONE	RRUS-32 (1)	NONE

**NOTE:**  
JUMPERS NOT TO EXCEED 10 FEET WITHOUT RAN APPROVAL.

APPLICANT:



1452 EDINGER AVE.  
TUSTIN, CA 92780

PREPARED BY:

**EBI Consulting**  
environmental | engineering | due diligence  
3703 Long Beach Blvd | Suite 421 | 2nd Floor  
Long Beach, CA 90807  
(781) 273-2500 | www.ebiconsulting.com



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1 EXISTING RF DATA

SUBMITTALS

NO.	DATE	DESCRIPTION	BY
A	01/15/18	90% CONSTRUCTION	SH
B	02/22/18	REVISED PER COMMENTS	SM
0	06/19/18	100% FOR CONSTRUCTION	SH

EBI JOB NO:  
**8117000509**

SITE INFO:  
**NORTH RANCH  
4997 KILBURN COURT  
OAK PARK, CA 91377  
SBOV22/LTE 5C (850)/6C  
(AWS-3) 7C (700-B14)**

SHEET TITLE:  
**EXISTING RF DATA**

DRAWN BY: SH

CHECKED BY: CS

DATE: 01/12/18

SHEET NO:  
**A-10**

2 SPACE NOT USED



PROPOSED RF DATA FOR SECTOR A

REPLACE ANTENNA	ANTENNA POSITION	ANTENNA MODEL	ANTENNA VENDOR	ANTENNA SIZE (HxWxD)	ANTENNA AZIMUTHS	ANTENNA RAD CENTER (FEET)	TMA/LNA (MODEL/QTY)	RRU - 700 BAND (MODEL/QTY)	RRU - 850 BAND (MODEL/QTY)	RRU - 1900 BAND (MODEL/QTY)	RRU - AWS BAND (MODEL/QTY)	RRU - WCS BAND (MODEL/QTY)	RRU - ANY BAND (MODEL/QTY)
YES	1	QS4658-7	QUINTEL	57"x13.8"x8.1"	A 0°	46	DTMABP7819VG12A/78211273V04 (2)	RRUS-E2 (1)	NONE	RRUS-12 (2)	RRUS-32 B66 (1)	NONE	RRUS -B14 4478 (1)
NO	2	ET-X-UW-70-13-70-17-IR-AT	KMW	53.8"12"6.3"	A 0°	41	TMA23-11A (1)	RRUS-11 (1)	RRUS -B5 4478 (1)	NONE	NONE	RRUS-32 (1)	NONE

PROPOSED RF DATA FOR SECTOR B

REPLACE ANTENNA	ANTENNA POSITION	ANTENNA MODEL	ANTENNA VENDOR	ANTENNA SIZE (HxWxD)	ANTENNA AZIMUTHS	ANTENNA RAD CENTER (FEET)	TMA/LNA (MODEL/QTY)	RRU - 700 BAND (MODEL/QTY)	RRU - 850 BAND (MODEL/QTY)	RRU - 1900 BAND (MODEL/QTY)	RRU - AWS BAND (MODEL/QTY)	RRU - WCS BAND (MODEL/QTY)	RRU - ANY BAND (MODEL/QTY)
YES	1	QS4658-7	QUINTEL	57"x13.8"x8.1"	B 240°	46	DTMABP7819VG12A/78211273V04 (2)	RRUS-E2 (1)	NONE	RRUS-12 (2)	RRUS-32 B66 (1)	NONE	RRUS -B14 4478 (1)
NO	2	ET-X-UW-70-13-70-17-IR-AT	KMW	53.8"12"6.3"	B 240°	41	TMA23-11A (1)	RRUS-11 (1)	RRUS -B5 4478 (1)	NONE	NONE	RRUS-32 (1)	NONE

PROPOSED RF DATA FOR SECTOR C

REPLACE ANTENNA	ANTENNA POSITION	ANTENNA MODEL	ANTENNA VENDOR	ANTENNA SIZE (HxWxD)	ANTENNA AZIMUTHS	ANTENNA RAD CENTER (FEET)	TMA/LNA (MODEL/QTY)	RRU - 700 BAND (MODEL/QTY)	RRU - 850 BAND (MODEL/QTY)	RRU - 1900 BAND (MODEL/QTY)	RRU - AWS BAND (MODEL/QTY)	RRU - WCS BAND (MODEL/QTY)	RRU - ANY BAND (MODEL/QTY)
YES	1	QS4658-7	QUINTEL	57"x13.8"x8.1"	C 120°	46	DTMABP7819VG12A/78211273V04 (2)	RRUS-E2 (1)	NONE	RRUS-12 (2)	RRUS-32 B66 (1)	NONE	RRUS -B14 4478 (1)
NO	2	ET-X-UW-70-13-70-17-IR-AT	KMW	53.8"12"6.3"	C 120°	41	TMA23-11A (1)	RRUS-11 (1)	RRUS -B5 4478 (1)	NONE	NONE	RRUS-32 (1)	NONE

NOTE:  
JUMPERS NOT TO EXCEED 10 FEET WITHOUT RAN APPROVAL.

1 PROPOSED RF DATA

APPLICANT:



1452 EDINGER AVE.  
TUSTIN, CA 92780

PREPARED BY:

**EBC Consulting**  
environmental | engineering | due diligence  
3703 Long Beach Blvd | Suite 421 | 2nd Floor  
Long Beach, CA 90807  
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SUBMITTALS

NO.	DATE	DESCRIPTION	BY
A	01/15/18	90% CONSTRUCTION	SH
B	02/22/18	REVISED PER COMMENTS	SM
0	06/19/18	100% FOR CONSTRUCTION	SH

EBC JOB NO:  
**8117000509**

SITE INFO:  
**NORTH RANCH  
4997 KILBURN COURT  
OAK PARK, CA 91377  
SBOV22/LTE 5C (850)/6C  
(AWS-3) 7C (700-B14)**

SHEET TITLE:  
**PROPOSED RF DATA &  
ANTENNA LAYOUT  
DIAGRAMS**

DRAWN BY:  
SH

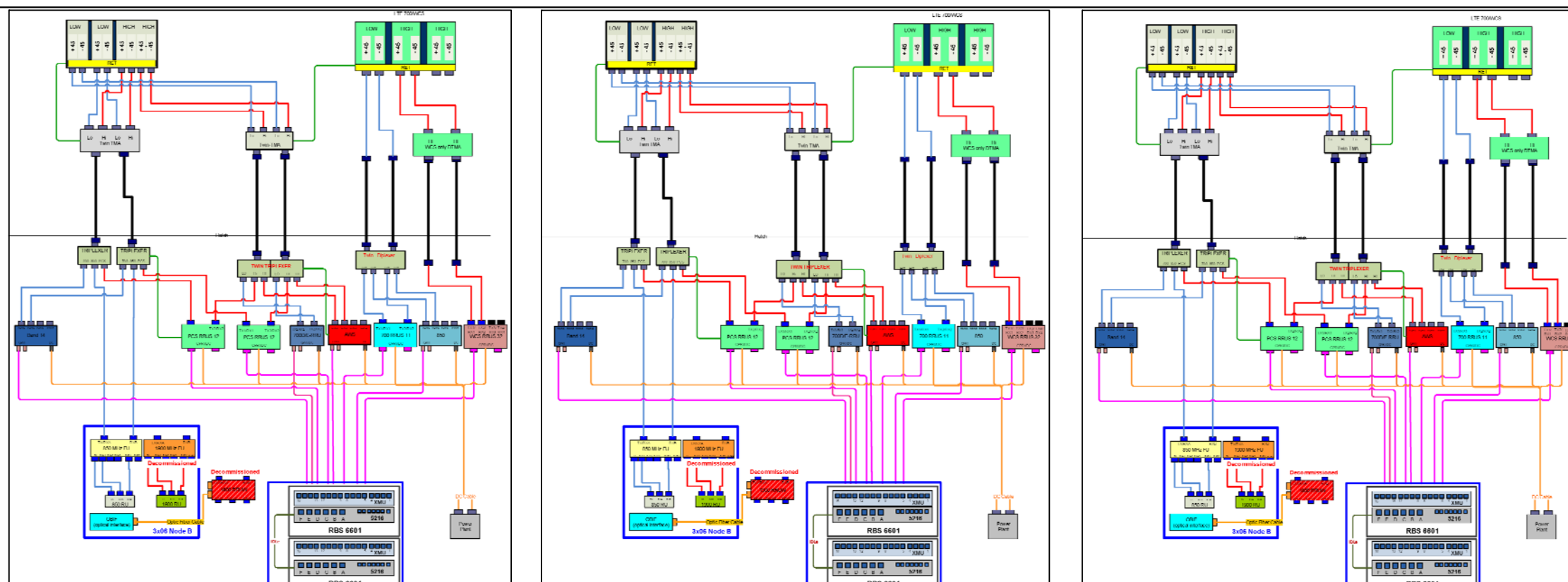
CHECKED BY:  
CS

DATE:  
01/12/18

**A-11**

ITEM # 12

2 ANTENNA LAYOUT DIAGRAM



**NOTES TO CONTRACTOR**

1. ALL DRAWINGS SHALL BE READ IN CONJUNCTION WITH ARCHITECTURAL AND ENGINEERING DRAWINGS AND SPECIFICATIONS.
2. THE LOCATION OF EQUIPMENT, CONDUIT AND DEVICES SHOWN ON THE PLANS ARE DIAGRAMMATIC. EXACT LOCATION AND ROUTING SHALL BE DETERMINED BY THE CONTRACTOR IN THE FIELD PRIOR TO INSTALLATION.
3. ELECTRICAL CHARACTERISTICS OF ALL EQUIPMENT (NEW AND EXISTING) SHALL BE FIELD VERIFIED WITH THE OWNER'S REPRESENTATIVE AND EQUIPMENT SUPPLIER PRIOR TO ROUGH-IN OF CONDUITS. ALL EQUIPMENT SHALL BE PROPERLY CONNECTED ACCORDING TO THE NAMEPLATE DATA FURNISHED ON THE EQUIPMENT (THE DESIGN OF THESE PLANS ARE BASED UPON BEST AVAILABLE INFORMATION AT THE TIME OF DESIGN DRAWINGS). LOCATION OF OUTLETS, BOXES, ETC. AND THE TYPE OF CONNECTION (PLUG OR DIRECT), SHALL BE CONFIRMED WITH THE OWNER'S REPRESENTATIVE PRIOR TO ROUGH-IN.
4. ELECTRICAL EQUIPMENT SHALL BE FIRMLY SECURED TO THE SURFACE ON WHICH IT IS MOUNTED.
5. COMMUNICATION EQUIPMENT AND RACEWAYS SHALL COMPLY WITH REQUIREMENTS OF NEC CHAPTER 8 AND ARTICLE 480 WHERE APPLICABLE.

**ELECTRICAL SPECIFICATIONS**

**SECTION 16010 – GENERAL PROVISIONS**

- A. THIS CONTRACTOR SHALL GUARANTY FULLY ALL WORKMANSHIP, MATERIAL, EQUIPMENT, SYSTEMS, ETC., PROVIDED BY HIM FOR A PERIOD OF ONE YEAR AFTER SUBSTANTIAL COMPLETION OF THE PROJECT. ALL EQUIPMENT SHALL BE PROVIDED IN NEW CONDITION AND BE COVERED BY A FULL MANUFACTURER'S WARRANTY OF NOT LESS THAN THREE YEARS.
- B. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST EDITIONS OF THE APPLICABLE STATE, NATIONAL AND LOCAL ORDINANCES, BUILDING CODES AND THE NATIONAL ELECTRIC CODE, AND THE TERMS AND THE CONDITIONS OF THE AUTHORITIES HAVING LAWFUL JURISDICTION PERTAINING TO THE WORK REQUIRED. ALL MODIFICATIONS REQUIRED BY THESE CODES, RULES, REGULATIONS, AND AUTHORITIES SHALL BE MADE BY THE CONTRACTOR WITHOUT ADDITIONAL CHARGE TO THE OWNER.
- C. ALL MATERIALS, APPLIANCES, EQUIPMENT, OR DEVICES SHALL BE NEW AND SHALL BE SPECIFICATION GRADE AND LISTED, LABELED AND CERTIFIED BY UNDERWRITER'S LABORATORIES INC. FOR THE USE, ALL OUTDOOR ELECTRICAL ENCLOSURES SHALL BE WEATHERPROOF AND BE NEMA 250, TYPE 3R RATED, OR BETTER.

**SECTION 16075 – ELECTRICAL IDENTIFICATION**

- A. PROVIDE AND INSTALL WARNING, CAUTION AND INSTRUCTION SIGNS WHERE REQUIRED TO COMPLY WITH N.E.C AND OSHA REGULATIONS AND WHERE NEEDED TO ENSURE SAFE OPERATION AND MAINTENANCE OF ELECTRICAL SYSTEMS AND OF ITEMS TO WHICH THEY CONNECT. ALL LABELS SHALL BE SUITABLE FOR EXTERIOR USE WHEN INSTALLED OUTDOORS.
- B. ALL ELECTRICAL EQUIPMENT SHALL BE MARKED AND LABELED FOR IDENTIFICATION PURPOSES WITH PHENOLIC NAMEPLATES SIZED IN RELATION TO THE APPARATUS AND ATTACHED ON THE EXTERIOR SURFACES INDICATING THE EQUIPMENT DESIGNATION, OPERATING VOLTAGE AND THE SOURCE SUPPLYING THE EQUIPMENT. ENGRAVED LABEL SHALL BE PROVIDED ON METER SOCKET ENCLOSURE.
- C. ALL CABLES OR CONDUCTORS SHALL BE IDENTIFIED WITH CIRCUIT IDENTIFICATION MARKERS IN EACH PULL BOX. J-BOXES, EQUIPMENT BOXES AND CABINETS WITH APPROVED PLASTIC TAGS OR APPROVED EQUAL.
- D. ALL DIRECT BURIED CONDUITS SHALL BE PROVIDED WITH 6" WIDE 5 MIL THICK ALUMINIZED PLASTIC WARNING TAPE IDENTIFYING CONTENTS. TAPE COLORS SHALL BE ORANGE FOR TELEPHONE AND RED FOR ELECTRIC.
- E. ALL LABELS AND PANEL DIRECTORIES SHALL BE TYPEWRITTEN, NOT HAND WRITTEN.
- F. INSTALL LABEL ON EACH ACCESSIBLE SIDE OF ENERGIZED EQUIPMENT TO READ: MAINTAIN 30"(MIN)W X 36"D X 78"H CLEAR WORKING SPACE.

**SECTION 16110 – RACEWAYS, BOXES AND FITTINGS**

- A. INSTALL ALL CONDUIT AS REQUIRED FOR THIS CONTRACT PER NEC BY TYPE AND USE, UNLESS NOTED OTHERWISE WITHIN THIS SPECIFICATION.
- B. EXERCISE PARTICULAR CARE IN ROUTING AND GROUPING EXPOSED CONDUIT

TO PRESENT NEAT AND WORKMANLIKE APPEARANCE WITH ALL LINES RUNNING PARALLEL WITH OR PERPENDICULAR TO SITE LINES AND EQUIPMENT.

- C. CUT ALL CONDUITS WITH AN APPROVED CUTTING MACHINE AND REAM AFTER THREADING TO REMOVE ALL BURRS.
- D. WHERE SIZE IS NOT SPECIFIED ON DRAWINGS, THE CONTRACTOR SHALL SIZE CONDUIT, JUNCTION BOX AND/OR PULL BOXES PER N.E.C BASED ON WIRING REQUIREMENT. THE CONTRACTOR SHALL PROVIDE PULL BOXES AND JUNCTION BOXES WHERE SHOWN ON THE DRAWINGS OR NOT SHOWN, AND AS REQUIRED BY N.E.C TO LIMITED BENDS IN CONDUITS TO AN EQUIVALENT OF (4) 90-DEGREE BENDS.
- E. INSTALL FACTORY ELBOWS ON 2" AND ABOVE CONDUIT. FIELD BENDS AND OFFSETS SHALL BE MADE WITH AN APPROVED BENDING MACHINE. USE CONDUIT BODIES ASSEMBLY TO FACILITATE PULLING OF CONDUCTORS OR TO MAKE CHANGES IN CONDUIT DIRECTION TO AVOID CONFLICT IN CONFINED SPACE.
- F. BURIED ELECTRICAL DUCTS SHALL USE SCHEDULE 40 RIGID PVC PLASTIC CONDUIT WITH WATERTIGHT JOINTS (SCHEDULE 80 WHERE EXPOSED TO VEHICULAR TRAFFIC). ALL UNDERGROUND/BURIED 90° ELLS SHALL BE RIGID TYPE FITTINGS. ALL PVC CONDUITS BURIED LESS THAN 18" BELOW GRADE SHALL BE SCHEDULE 80.
- G. DRY INTERIOR LOCATIONS SHALL BE ELECTRICAL METALLIC TUBING (EMT) UNLESS NOTED OTHERWISE WITH STEEL COMPRESSION TYPE FITTINGS. THE USE OF SET SCREW FITTING IS NOT PERMITTED – NO EXCEPTION.
- H. PROVIDE INSULATED BUSHINGS TO PREVENT ABRASION OF WIRES AND DOUBLE LOCKNUTS ON CONDUITS ENTERING OR LEAVING JUNCTION BOXES, PULL BOXES, ELECTRICAL DEVICES AND EQUIPMENT CABINETS. EQUIP ALL RGS CONDUIT WITH GROUND BUSHINGS AND GROUND IT TO THE COMMON GROUNDING ELECTRODE SYSTEM.
- I. AVOID CONDENSATION POCKETS IN INSTALLATIONS. KEEP CONDUIT, FITTINGS AND BOXES FREE FROM FOREIGN MATTER BEFORE, DURING AND AFTER INSTALLATION.
- J. ALL CONDUITS, INCLUDING THOSE WITH NEW CABLES INSTALLED, SHALL HAVE A NYLON PULL ROPE INSTALLED TO FACILITATE FUTURE PULL.
- K. THE MINIMUM SIZE OF CONDUIT SHALL BE 3/4" UNLESS NOTED OTHERWISE.

**SECTION 16120 – CONDUCTORS**

- A. ALL POWER WIRE SHALL BE TYPE THHN/THWN INSULATED SINGLE COPPER CONDUCTOR, RATED AT 600 VOLTS 90°C TO COMPLY WITH UL & NEMA WC 70. MINIMUM WIRE SIZE FOR CURRENTS UP TO 20 AMPERE SHALL BE #12 AWG. USE STRANDED COPPER WIRE FOR ALL APPLICATIONS. USE OF ALUMINUM CONDUCTORS WILL NOT BE PERMITTED.
- B. USE MANUFACTURER-APPROVED PULLING COMPOUND OR LUBRICANT WHERE NECESSARY; COMPOUND USED MUST NOT DETERIORATE CONDUCTOR OR INSULATION. DO NOT EXCEED MANUFACTURER'S RECOMMENDED MAXIMUM PULLING TENSIONS AND SIDEWALL PRESSURE VALUES.
- C. USE PULLING MEANS; INCLUDING FISH TAPE, CABLE, ROPE, AND BASKET-WEAVE WIRE/CABLE GRIPS THAT WILL NOT DAMAGE CABLES OR RACEWAY.
- D. CONDUCTOR LENGTHS SHALL BE CONTINUOUS FROM TERMINATION TO TERMINATION WITHOUT SPLICES AS MUCH AS POSSIBLE. SPLICES, JOINTS AND CONNECTIONS IN CABLE SHALL BE MADE ONLY IN PULL BOXES, JUNCTION BOXES OR MANHOLES. CABLE SHALL BE LOOPED IN ALL JUNCTION BOXES AND PULL BOXES, AND RACKED IN MANHOLES.
- E. TIGHTEN ELECTRICAL CONNECTORS AND TERMINALS ACCORDING TO MANUFACTURER'S PUBLISHED TORQUE-TIGHTENING VALUES. IF MANUFACTURER'S TORQUE VALUES ARE NOT INDICATED, USE THOSE SPECIFIED IN UL 486A AND UL 486B.
- F. CONNECTORS AND LUGS FOR COPPER CONDUCTORS #8 AND SMALLER: 3M SCOTCHLOK SERIES 61 SNAP SPADE, OR ACCEPTABLE EQUAL OR T & B STA-KON COMPRESSION OR INDENT TYPE CONNECTORS WITH INTEGRAL OR SEPARATE INSULATING CAPS. FOR COPPER CONDUCTORS LARGER THAN #8: SOLDERLESS, INDENT, HEX SCREW OR BOLT TYPE PRESSURE CONNECTORS,

PROPERLY TAPED OR INSULATED.

- G. PROVIDE ADEQUATE LENGTH OF CONDUCTORS WITHIN ELECTRICAL ENCLOSURES AND TRAIN THE CONDUCTORS TO TERMINATION POINTS WITH NO EXCESS. MAKE TERMINATIONS SO THERE IS NO BARE CONDUCTOR AT THE TERMINAL.
- H. COLOR CODE, PHASE, NEUTRAL, AND GROUND CONDUCTORS COLOR-CODED IN ACCORDANCE WITH NEC. IDENTIFY ALL CONDUCTORS OF THE SAME PHASE CONDUCTOR TO THE SAME COLOR CODE. SUGGESTED COLOR CODING FOR 120/208V, SHOULD BE BLACK, RED, BLUE, WHITE, AND 277/480V, SHOULD BE BROWN, ORANGE, YELLOW, GRAY WITH GREEN FOR ALL EQUIPMENT GROUND CONDUCTORS.
- I. EACH CONDUIT OR RACEWAY THAT HAS A PHASE CONDUCTOR SHALL ALSO CONTAIN A GREEN INSULATED GROUNDING CONDUCTOR SIZED PER N.E.C, UNLESS OTHERWISE INDICATED.  
  
AFTER THE ELECTRICAL EQUIPMENT AND THE WIRING IS INSTALLED, BUT BEFORE ELECTRICAL CONNECTIONS TO EQUIPMENT, TEST PHASE-TO-PHASE AND PHASE-TO-GROUND INSULATION ON SERVICE ENTRANCE AND FEEDERS TO ENSURE THAT THEY HAVE THE PROPER INSULATION AND ARE FREE OF GROUND FAULT. SYSTEMS RATED ABOVE 250 VOLTS SHALL BE TESTED WITH A 1000 VOLT MEGGER. CIRCUITS RATED AT OR BELOW 250 VOLTS SHALL BE TESTED WITH A 500 VOLT MEGGER.
- J. CORRECT MALFUNCTIONING CONDUCTORS AND CABLES, WHERE POSSIBLE, AND RETEST TO DEMONSTRATE COMPLIANCE; OTHERWISE, REMOVE AND REPLACE WITH NEW UNITS AND RETEST AS SPECIFIED. PER NEC770.3(A), THE REQUIREMENTS OF 300.21 FOR ELECTRICAL INSTALLATIONS SHALL ALSO APPLY TO INSTALLATIONS OF OPTICAL FIBER CABLES AND RACEWAYS. THE ACCESSIBLE PORTION OF ABANDONED OPTICAL FIBER CABLES SHALL BE REMOVED.

**SECTION 16410 – ENCLOSED SWITCHES AND CIRCUIT BREAKERS**

- A. MOLDED-CASE CIRCUIT BREAKER TO COMPLY WITH NEMA AB 1, WITH INTERRUPTING CAPACITY TO MEET RATING TO MATCH EXISTING OR AS REQUIRED FOR AVAILABLE FAULT CURRENTS. DO NOT USE SERIES RATING FOR NEW EQUIPMENT. IF EXISTING SERIES RATED EQUIPMENT IS SPECIFIED FOR USE IN THIS PROJECT, THEN PROVIDE 'CAUTION' MARKING ON THE EXISTING EQUIPMENT ENCLOSURE THAT ARE SERIES RATED AS DESCRIBED IN NEC 110-22.
- B. PROVIDE MOLDED CASE, SNAP-IN TYPE, THERMAL MAGNETIC TRIP, SINGLE, TWO OR THREE POLE BRANCH CIRCUIT BREAKERS AS SHOWN ON DRAWINGS. MULTIPLE POLE BREAKERS SHALL BE SINGLE HANDLE, COMMON TRIP AND MADE BY EQUIPMENT MANUFACTURER.
- C. PROVIDE ENCLOSURE TO COMPLY WITH NEMA AB 1 AND NEMA KS 1 TO MEET ENVIRONMENTAL CONDITIONS OF INSTALLED LOCATION. OUTDOOR LOCATIONS SHALL BE NEMA 250, TYPE 3R.
- D. VERIFY EXISTENCE OF NEC 110.26 REQUIRED CLEAR WORKING SPACE AT THE FRONT OF ELECTRICAL EQUIPMENT PRIOR TO INSTALLATION.

APPLICANT:



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TUSTIN, CA 92780

PREPARED BY:



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**SUBMITTALS**

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B	02/22/18	REVISED PER COMMENTS	SM
0	06/19/18	100% FOR CONSTRUCTION	SH

EBI JOB NO:  
**8117000509**

SITE INFO:  
**NORTH RANCH  
4997 KILBURN COURT  
OAK PARK, CA 91377  
SBOV22/LTE 5C (850)/6C  
(AWS-3) 7C (700-B14)**

SHEET TITLE:  
**ELECTRICAL NOTES & SPECIFICATIONS**

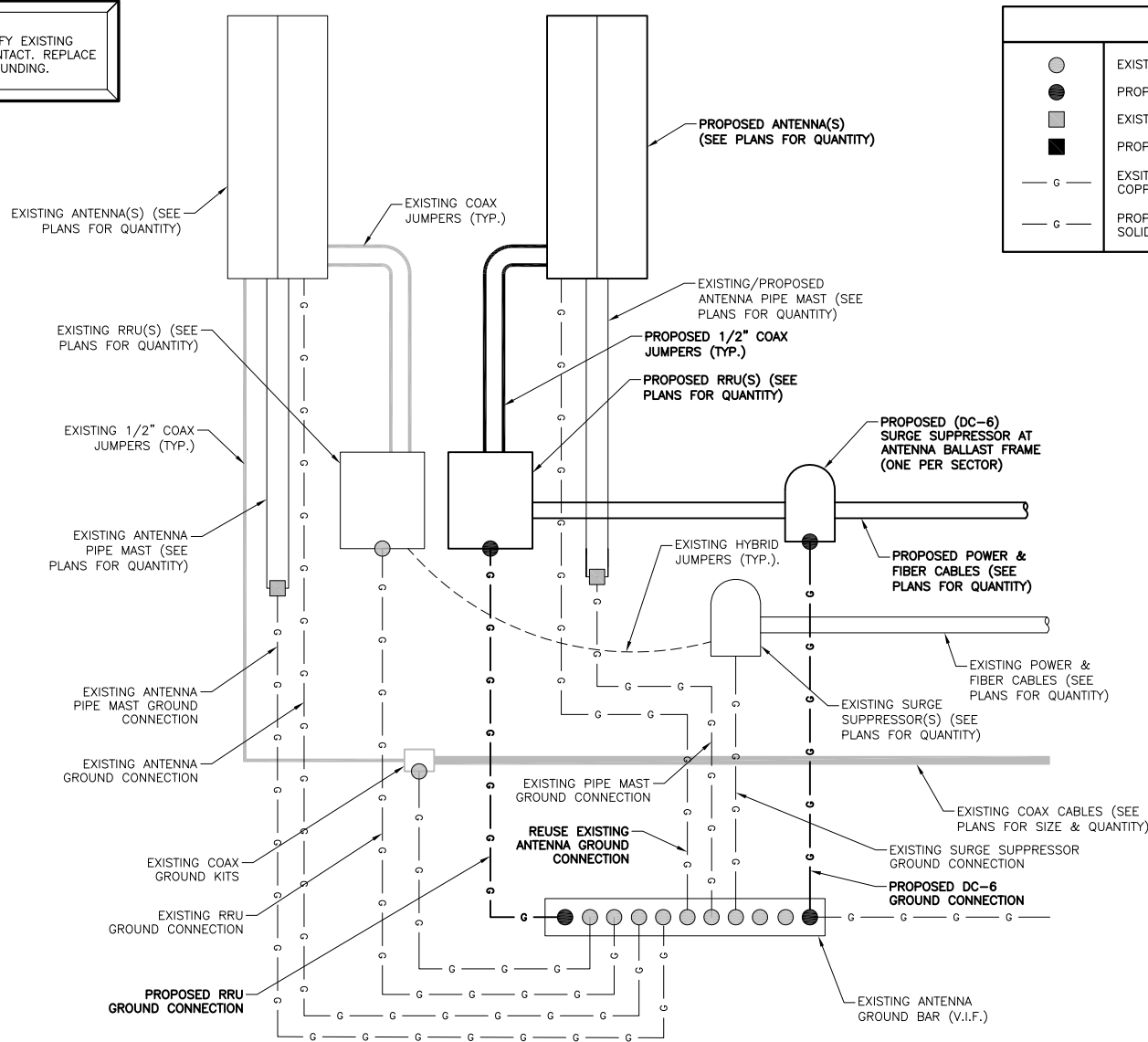
DRAWN BY: SH SHEET NO:

CHECKED BY: CS

DATE: 01/12/18


**E-1**

CONTRACTOR TO VERIFY EXISTING GROUNDING SYSTEM IS INTACT. REPLACE ANY MISSING GROUNDING.



LEGEND	
○	EXISTING MECHANICAL BOND
●	PROPOSED MECHANICAL BOND
◻	EXISTING CADWELD
◼	PROPOSED CADWELD
— G —	EXISTING #2AWG BARE TINNED SOLID COPPER CONDUCTOR
— G —	PROPOSED #2AWG BARE TINNED SOLID COPPER CONDUCTOR

- GROUNDING NOTES:**
- A. PROVIDE #2AWG GROUNDING CONDUCTOR, U.O.N.
  - B. DO NOT INSTALL GROUND KIT AT BEND. DIRECT GROUND WIRE DOWN TO ANTENNA BUSSBAR.
  - C. PROVIDE GROUNDING ELECTRODES IN QUANTITY, TYPE AND SIZE AS INDICATED ON SITE GROUNDING PLAN.
  - D. CONTRACTOR SHALL USE THE EXISTING GROUND BARS ALREADY INSTALLED ON TOWER & EQUIPMENT UNLESS OTHERWISE NOTED.
  - E. GROUND NEW EQUIPMENT & HYBRID CABLES PER MANUFACTURERS SPECIFICATIONS
  - F. PROVIDE GROUND CONNECTIONS FOR ALL METALLIC STRUCTURES, ENCLOSURES, RACEWAYS AND OTHER CONDUCTIVE ITEMS ASSOCIATED WITH THE INSTALLATION OF CARRIER'S EQUIPMENT.
  - G. NOT ALL EXISTING GROUNDED ELEMENTS SHOWN FOR CLARITY.

APPLICANT:  
  
 1452 EDINGER AVE.  
 TUSTIN, CA 92780

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 environmental | engineering | due diligence  
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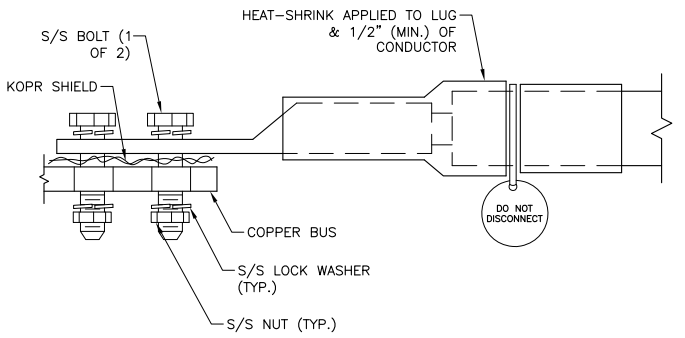
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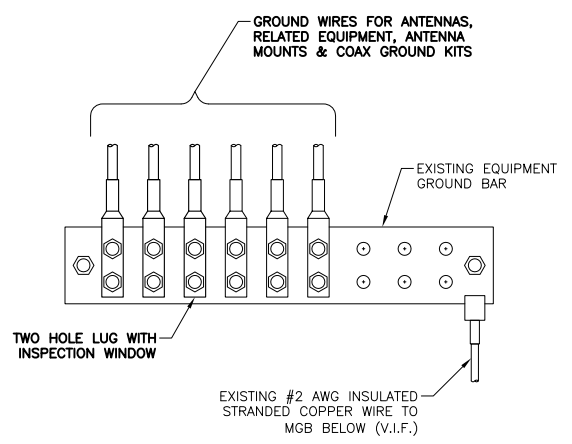
SUBMITTALS			
NO.	DATE	DESCRIPTION	BY
A	01/15/18	90% CONSTRUCTION	SH
B	02/22/18	REVISED PER COMMENTS	SM
0	06/19/18	100% FOR CONSTRUCTION	SH

1 GROUNDING SCHEMATIC

- NOTES:**
- ALL HARDWARE 18-8 STAINLESS STEEL INCLUDING BELLEVILLES. COAT ALL SURFACES WITH KOPR-SHEILD BEFORE MATING.
  - FOR GROUND, BOND TO STEEL ONLY; INSERT A LOCK WASHER BETWEEN LUG & STEEL. COAT ALL SURFACES WITH KOPR-SHEILD.
  - ALL HARDWARE TO BE 3/8" DIAMETER.



2 GROUND LUG DETAIL



3 ANTENNA GROUND BAR (AGB) DETAIL

4 SPACE NOT USED

EBI JOB NO:  
**8117000509**

SITE INFO:  
**NORTH RANCH**  
**4997 KILBURN COURT**  
**OAK PARK, CA 91377**  
**SBOV22/LTE 5C (850)/6C**  
**(AWS-3) 7C (700-B14)**

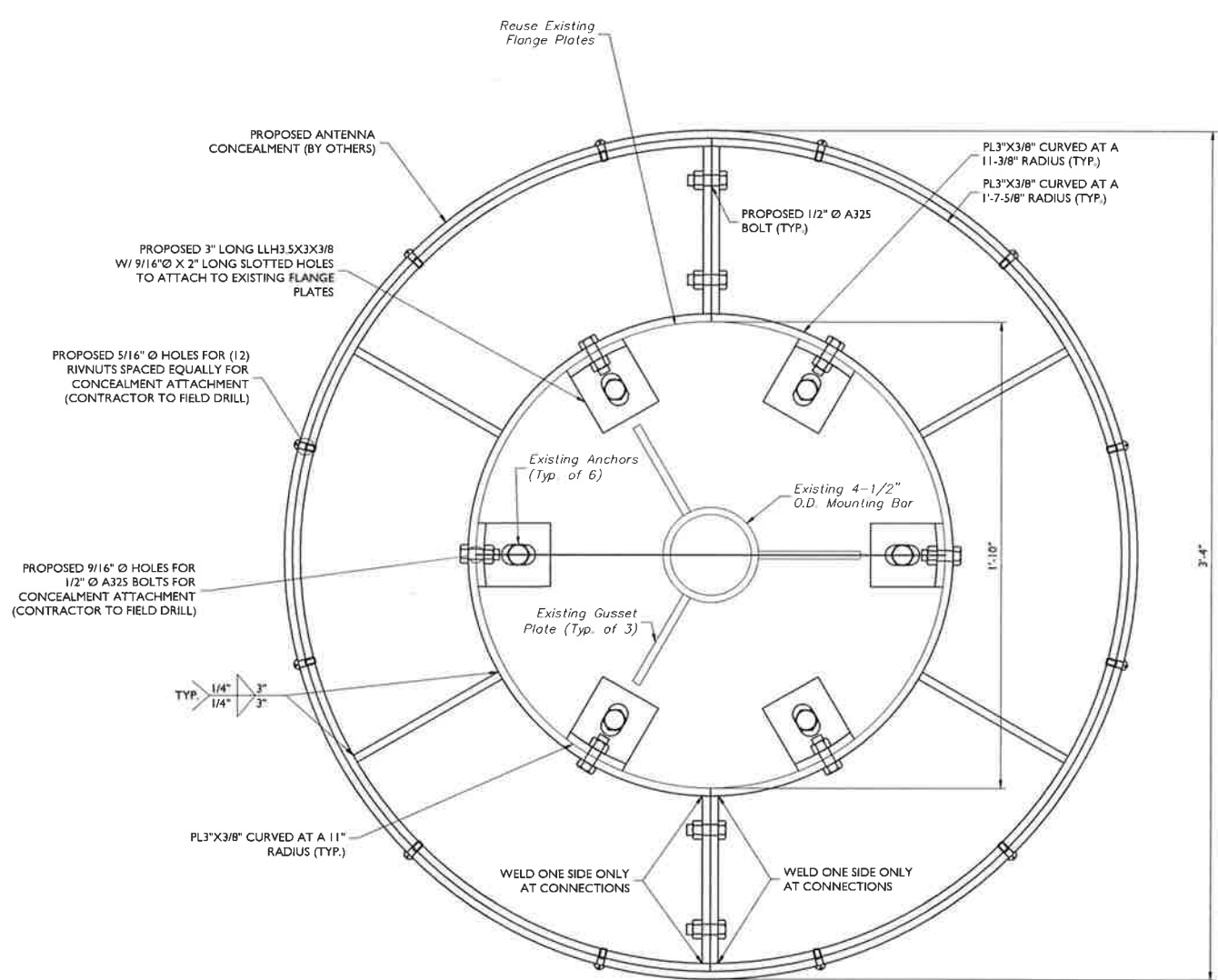
SHEET TITLE:  
**GROUNDING SCHEMATIC, DETAILS AND NOTES**

DRAWN BY: SH  
 CHECKED BY: CS  
 DATE: 01/12/18

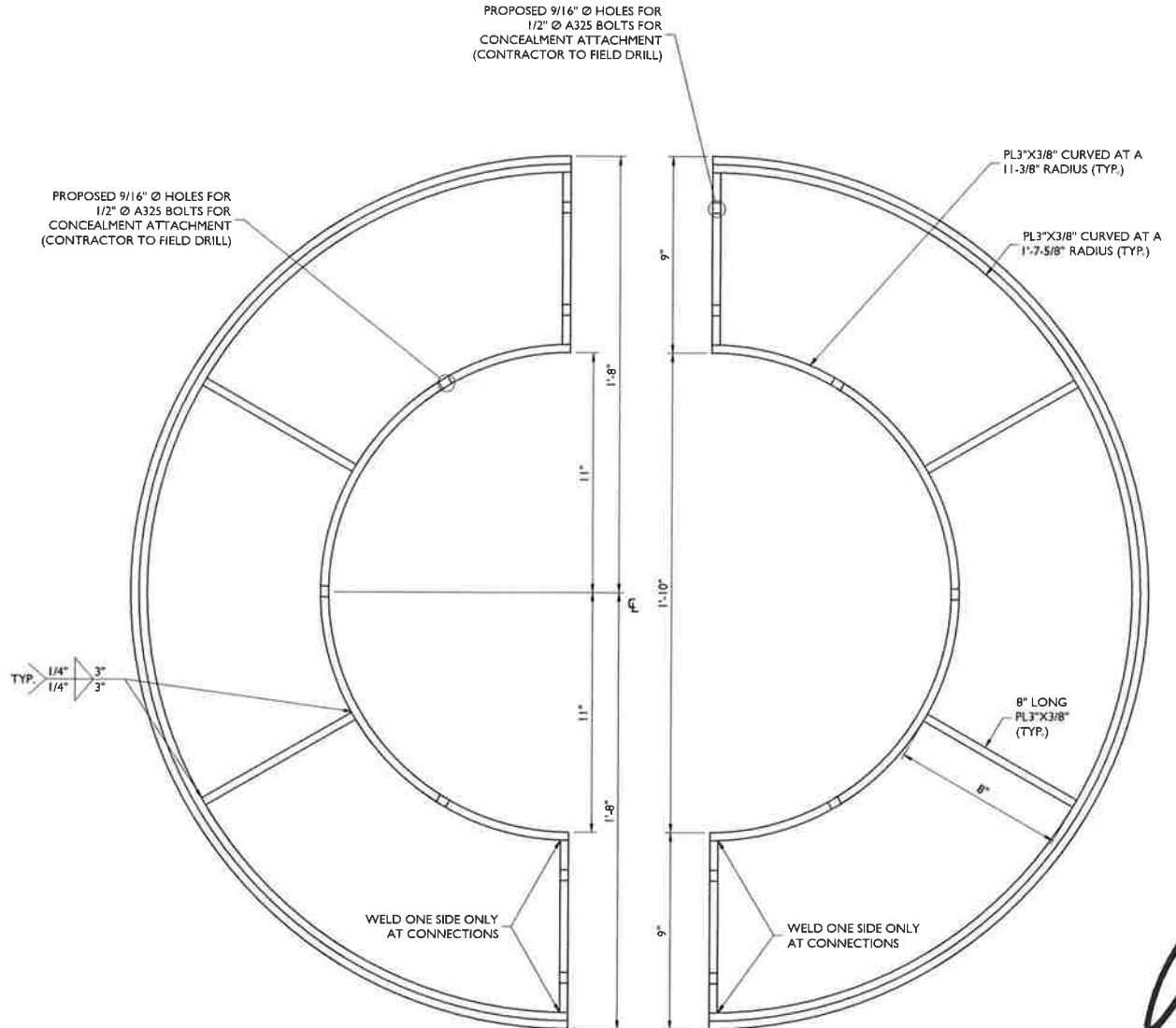
SHEET NO:  
**E-2**



NOTE:  
EXISTING FLANGE PLATE DIAMETER IS ASSUMED TO BE 1'-10"Ø. GENERAL CONTRACTOR NEEDS TO VERIFY THIS INFORMATION AND NOTIFY MASER CONSULTING, P.A. WITH ANY DIFFERENT FOR A DESIGN REVISION.



SHROUD CONNECTION DETAIL (TOP AND BOTTOM)  
NOT TO SCALE



SHROUD MOUNTING DETAIL  
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ANDREW B. FETHERSTON  
CALIFORNIA REGISTERED PROFESSIONAL ENGINEER - LICENSE NUMBER: CB2887  
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SHEET TITLE:  
STRUCTURAL DETAILS-I

SHEET NUMBER:  
S-1





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