

NOISE IMPACT ANALYSIS

Cricket Communications
Site Number: SAN-227-A
Site Name: Black Mountain Norte Tank
16893 Camino San Bernardo
San Diego, California 92127

County of San Diego Major Use Permit Case Number P 06-048

Prepared For

M&M Telecom, LLC
Attention: Doug Munson
6886 Mimosa Drive
Carlsbad, California 92011
Phone 619-602-5600

Applicant

Cricket Communications
Attention: Laura Van Eyck
6160 Cornerstone Court
San Diego, California 92121
Phone 858-882-9132

Property Owner

Olivenhain Water District
1966 Olivenhain Road
Encinitas, California 92024
Phone 760-788-2214

Prepared By

EILAR ASSOCIATES
Acoustical & Environmental Consulting
520 Encinitas Boulevard, Suite 206
Encinitas, California 92024
www.eilarassociates.com
Phone 760-753-1865
Fax 760-753-2597

Job # A60809N1

August 17, 2006

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P 06-048

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1.0 EXECUTIVE SUMMARY

The proposed Cricket wireless telecommunications facility, known as Black Mountain Norte Tank, consists of the construction of an unmanned telecommunications facility consisting of two Nortel CMO equipment cabinets and a single PPC equipment cabinet. The equipment cabinets are planned to be mounted on an exposed platform. The proposed lease area is located on the southern area of the project site. Also planned are three antennas mounted to an existing 35-foot high water tank. New electric and telco runs to the area of the equipment are also planned. The project site is located at 16893 Camino San Bernardo, in San Diego, County of San Diego, California.

The purpose of this report is to assess cumulative equipment noise impacts from the proposed Cricket facility in combination with two other existing on-site telecommunication equipment noise sources, and to determine if mitigation is necessary and feasible to reduce project related property line noise impacts to below 45 dBA, in compliance with the County of San Diego most restrictive nighttime property line noise limits.

Based on the project information available, calculations show that the combined noise impacts from the proposed Cricket equipment and the existing wireless facilities equipment, excluding the noise impacts from the existing emergency generator, will be as high as 52.2 dBA L_{EQ} at the worst-case property line location to the south, nearest the Cricket facility. The unmitigated noise impacts just from the proposed Cricket equipment will be as high as 39.9 dBA L_{EQ} at the worst-case nearest property line location to the south. Calculations show that the combined noise impacts from all the existing wireless facilities equipment, excluding the noise impacts from the existing emergency generator and the proposed Cricket facility, currently exceed the County of San Diego nighttime residential property line noise limits to the south and to the west.

Mitigation is required to reduce the proposed Cricket and existing wireless facilities equipment cumulative property line noise impacts to meet the 45 dBA nighttime residential noise limit along the southern property line. The noise levels at the eastern property line are expected to comply with the County of San Diego nighttime residential and commercial property line noise limits without any mitigation measures, due to distance and shielding created by the existing shelter and CMU storage enclosure.

It is assumed that the two existing and proposed Cricket facilities will each need to have noise impacts below 40 dBA at the southern and western property lines in order for the cumulative (existing and proposed) equipment impacts to comply with the County of San Diego nighttime property line noise limit. With the theoretical mitigation of the existing wireless facility equipment to below 40 dBA, the unmanned operation of the Cricket facility (as proposed and with no further mitigation) will be in compliance with the most restrictive County of San Diego 45 dBA nighttime property line noise limits, not including the noise impacts from the existing emergency generator.

Calculations based on the manufacturer's noise levels show the worst-case combined property line noise impacts due to the proposed Cricket facility and all existing wireless facilities equipment, including the existing Verizon emergency diesel generator not associated with the Cricket facility, is expected to exceed the County of San Diego residential nighttime property line noise limit of 45 dBA.

With the theoretical mitigation of the two existing wireless facilities equipment to below 40 dBA, the unmanned operation of the Cricket facility (as proposed and with no further mitigation) will be in compliance with the most restrictive County of San Diego 45 dBA residential nighttime property line noise limits, not including the noise impacts from the existing emergency generator.

As a result of this analysis, calculations show that mitigation shall be required for the existing telecommunications facilities. This report will document the overall cumulative noise impacts of existing and proposed on-site mechanical equipment, but will only focus on mitigation recommendations necessary for the proposed Cricket wireless facility to meet the County of San Diego noise code requirements.

2.0 INTRODUCTION

This acoustical analysis report is submitted to satisfy the County of San Diego requirement for the Cricket wireless facility major use permit. Its purpose is to assess cumulative equipment noise impacts from the proposed Cricket facility in combination with two other existing on-site telecommunication equipment noise sources, and to determine if mitigation is necessary and feasible to reduce project related property line noise impacts to below 45 dBA, in compliance with the County of San Diego most restrictive nighttime property line noise limits.

All noise level or sound level values presented herein are expressed in terms of decibels (dB), with A-weighting, abbreviated "dBA," to approximate the hearing sensitivity of humans. Time-averaged noise levels are expressed by the symbol " L_{EQ} " unless a different time period is specified, " L_{EQ} " is implied to mean a period of one hour. Some of the data may also be presented as octave-band-filtered and/or A-octave-band-filtered data, which are a series of sound spectra centered about each stated frequency, with half of the bandwidth above and half of the bandwidth below each stated frequency. This data is typically used for machinery noise analysis and barrier-effectiveness calculations.

Noise emission data is often supplied per the industry standard format of Sound Power, which is the total acoustic power radiated from a given sound source as related to a reference power level. Sound Power differs from Sound Pressure, which is the fluctuations in air pressure caused by the presence of sound waves, and is generally the format that describes noise levels as heard by the receiver.

Sound Pressure is the actual noise experienced by a human or registered by a sound level instrument. When Sound Pressure is used to describe a noise source it must specify the distance from the noise source to provide complete information. Sound Power, on the other hand, is a specialized analytical method to provide information without the distance requirement, but it may be used to calculate the sound pressure at any desired distance.

2.1 Project Location

The subject property is located at 16893 Camino San Bernardo, in San Diego, County of San Diego, California. The Assessor's Parcel Number (APN) is 678-242-05-00. The overall property is irregular in shape with an overall site area of approximately 2.2 acres. According to the County of San Diego scoping letter the zoning designation for the subject parcel is S-88 for Specific Planning Area and the neighboring land uses are zoned S-88 and S-80 for open space.

The subject property is currently occupied by an existing 35-foot high water tank, two existing wireless facilities operated by Verizon Wireless and by Sprint PCS, an 8-foot high CMU storage enclosure, and an 8-foot high storage shed. The proposed Cricket lease site area, which is currently undeveloped open space, is located on the southern area of the subject property, to the north of the existing Verizon Wireless site.

For a graphic representation of the site, please refer to the Vicinity Map, Assessor's Parcel Map, Satellite Aerial Photograph, Topographic Map, and Land Use Map provided as Figures 1 through 5, respectively.

2.2 Project Description

The overall proposed Cricket project facility shall consist of the construction of an unmanned telecommunications facility consisting of two Nortel CMO equipment cabinets and a single PPC equipment cabinet. The equipment cabinets are planned to be mounted on an exposed platform. The proposed lease area is located on the southern area of the project site. Also planned are three antennas mounted to an existing 35-foot high water tank. New electric and telco runs to the area of the equipment are also planned.

For additional project details, please refer to the project plans provided in Appendix A.

2.3 Applicable Noise Standards

The noise regulations applicable to this project are contained within the San Diego County Code, Section 36.404, entitled Sound Level Limits. Based on these noise regulations, the following residential property line noise limits apply for this project: 50 dBA from 7 a.m. to 10 p.m. and 45 dBA from 10 p.m. to 7 a.m. Planning for this project will be based on the more restrictive nighttime limits of 45 dBA.

Please refer to copies of the pertinent related sections from the County of San Diego scoping letter, which is provided as Appendix B, and pertinent sections of the County of San Diego Municipal Code provided as Appendix C.

3.0 ENVIRONMENTAL SETTING

3.1 Existing Noise Environment

3.1.1 Existing Noise Sources

The existing noise environment is primarily a result of vehicle traffic traveling on Camino Del Norte and from the two existing on-site wireless facilities operated by Verizon and an Sprint PCS.

Existing Verizon Wireless Facility Related Noise Sources

The existing on-site Verizon wireless facility consists of two types of noise sources, the two wall mounted Marvair ComPac II HVAC units and an emergency generator. While two HVAC units are installed on the exterior of the equipment shelter, only one is expected to be operational at a time, never running simultaneously. The existing Verizon facility is assumed to be operational 24 hours a day, 7 days a week.

To determine the expected HVAC equipment exterior noise impacts for this analysis, it was necessary to measure the noise level of a single operational unit. The manufacturer's data show the noise emission level for this unit as 73 dBA at 5-feet. A noise level measurement of a single existing Marvair ComPac II HVAC unit was made at an operational Verizon installation at Casa de las Campanas, 18655 West Bernardo Drive, in the City of San Diego, California, at 7:30 a.m. on November 24, 2003. The measured noise level was 74.9 dBA L_{EQ} at 5-feet. The measurement may have a small traffic noise contribution, as

it is slightly higher than the manufacturer's data; therefore, the measured noise level will be used for worst-case analysis and noise planning purposes. The octave-band noise data for the HVAC unit noise measurement used in the new Cricket planning analysis is provided in Table 1.

Table 1. Measured Noise Level of a Single Operational Marvair ComPac II HVAC Unit									
Octave Band Center Frequency (Hz)	63	125	250	500	1K	2K	4K	8K	L _{Eq}
Noise Level at 5-feet (dB)	79.9	77.5	75.5	70.5	70.6	66.8	59.6	55.2	74.9 dBA

The Verizon wireless facility also incorporates fully enclosed equipment cabinets housed within a pre-fabricated shelter. Noise impacts from these equipment cabinets are not considered significant, and therefore are not included in the noise impact analysis.

The existing on-site Verizon emergency generator is manufactured by Kohler, model number 40 with sound enclosure. Manufacturer's noise data for a Kohler 40 generator with sound enclosure was available and was used for this analysis as a worst-case scenario. The manufacturer's data consisted of single A-weighted measurement made on eight locations around generator at a distance of 23-feet. The highest noise level for the eight measurement locations is location 3, which is nearest radiator end of the generator. This measured noise level was used as a worst-case noise levels for the modeling of the Verizon facility and is provided in Table 2. For detail please refer to Appendix D: Manufacturer's Noise Data.

Table 2. Manufacturer's Measured Noise Data of a Single Operational Kohler 40 Generator With Sound Enclosure	
Measurement Location and Distance	dBA
Location 3 at 23-feet from Radiator End of Generator	74.0

Existing Sprint PCS Wireless Facility Related Noise Sources

The existing on-site Sprint PCS wireless facility consists of a two cabinet system. The existing electronic equipment cabinets are model number Modcell 3.0 manufactured by Lucent.

To determine the expected equipment exterior noise levels for this analysis, it was necessary to measure the noise level of a single operational unit. Noise measurements of a similar two cabinet system, one Modcell cabinet and one battery cabinet, was taken on Friday, January 21, 2005 at 9:30 a.m. at the Encinitas Golf Course (Sprint site SD34XC826-B) at 1275 Quail Garden Drive, Encinitas, California 92024. The equipment consists of a WNG24BC Battery Cabinet and Modular Cell 3.0 Primary Cabinet (per plans). The site was enclosed within an 8-foot high wood fence (not a noise enclosure). Temperatures at the time of the measurement were in the low 70's, with clear sunny skies and no measurable breeze.

Measurements were made at three locations in front of the cabinets, and three locations behind cabinets. The highest noise level in each octave band for the six measurement locations were used as worst-case noise levels for modeling the existing Sprint PCS facility and is provided in Table 3.

Octave Band Center Frequency (Hz)	63	125	250	500	1K	2K	4K	8K	L _{EQ}
Noise Level at 3-feet (dB)	68.9	67.0	71.3	68.6	61.8	56.7	48.8	44.5	68.9 dBA

3.1.2 Ambient Noise Monitoring

An on-site inspection was conducted at 9:30 a.m. on Wednesday August 16, 2006. The weather conditions were as follows: a slight breeze from the west, mild humidity, and temperatures in the mid-60's. A 5-minute ambient noise measurement of 53.0 dBA L_{EQ} was taken at a location near the Cricket lease area. The microphone position was approximately five feet above the existing grade.

3.2 Future Noise Environment

The future noise environment in the vicinity of the project site will be primarily a result of the same traffic and existing mechanical equipment noise sources, as well as the proposed installation of the Cricket wireless facility.

Proposed Cricket Wireless Facility Project Related Noise Sources

The proposed Cricket wireless equipment facility consists of two types of significant noise source, which are two Nortel CMO equipment cabinets and a single PPC cabinet.

To determine the expected equipment exterior noise levels for this analysis, it was necessary to measure the noise level of a single operational unit of both types.

A noise level measurement of a single existing Nortel CMO equipment cabinet was made at an operational Cricket installation at 5358 West Spruce Avenue in Fresno, California at 11:00 a.m. on Wednesday, December 21, 2005. The site is identified by Cricket as FAT 030. The measured noise level was 61.4 dBA L_{EQ} at 5-feet. The octave-band noise data for the Nortel CMO equipment cabinet noise measurement used in the new Cricket planning analysis is provided in Table 4.

Octave Band Center Frequency (Hz)	63	125	250	500	1K	2K	4K	8K	L _{EQ}
Noise Level at 5-feet (dB)	61.3	54.2	55.0	59.1	56.8	54.6	48.5	38.2	61.4 dBA

A noise level measurement of a single PPC cabinet was made at the Cricket warehouse located at 7010 Carroll Road in San Diego, California at 9:00 a.m. on Tuesday, May 30, 2006. The measured noise level was 61.8 dBA L_{EQ} at 3-feet. The octave-band noise data for the PPC cabinet noise measurement used in the new Cricket planning analysis is provided in Table 5.

Table 5. Measured Noise Level of a Single Operational PPC Cabinet									
Octave Band Center Frequency (Hz)	63	125	250	500	1K	2K	4K	8K	L _{EQ}
Noise Level at 3-feet (dB)	62.7	60.3	62.5	62.8	53.4	47.6	40.6	33.2	61.8 dBA

4.0 METHODOLOGY AND EQUIPMENT

4.1 Methodology

4.1.1 Cadna Noise Modeling Software

Modeling of the outdoor noise environment is accomplished using Cadna Ver. 3.5, which is a model-based computer program developed by DataKustik for predicting noise impacts in a wide variety of conditions. Cadna (Computer Aided Noise Abatement) assists in the calculation, presentation, assessment, and mitigation of noise exposure. It allows for the input of project information such as noise source data, barriers, structures, and topography to create a detailed CAD model and uses the most up-to-date calculation standards to predict outdoor noise impacts.

4.1.2 Summary of Site Specific Features Included in Cadna Model

Features at the project site that were included in the Cadna noise prediction model are listed in Table 6. These are considered to be the only on-site features that will affect the noise propagation of the proposed noise sources to the adjacent property lines.

Table 6. Summary of Site Features Included in Cadna Model	
Description	Height
Existing On-Site Water Tank	35-feet above grade
Existing Verizon Wireless Equipment Shelter	10.5-feet above grade
Existing Storage Shed	8-feet above grade
Existing CMU Storage Enclosure	8-feet above grade
Proposed CMO and PPC Equipment Cabinets ¹	5.8-feet above grade

¹The equipment cabinet noise sources are highly directional with the noise sources being the vents located on the front of both types of cabinet. The sides and back of the cabinets are solid sheet metal and are considered noise control elements within this analysis.

4.1.3 Calculated Noise Levels for Model Comparison

In order to validate the results of the Cadna noise prediction model, the noise impacts from the two proposed Nortel CMO equipment cabinets and single PPC cabinet were manually calculated as simple attenuation by distance. This was done for each of the property line receiver locations. These values

were compared to those predicted by Cadna. The Cadna model includes additional attenuation due to intervening structures and ground absorption, which the differences in modeled and calculated noise levels are attributed to. This data is summarized in Table 7.

Noise Source	Receiver	Location	Average Distance from Sources (ft.)	Calculated Noise Level ¹ (dBA)	Cadna Model Noise Level ² (dBA)	Difference (dB)
Two Nortel CMO and One PPC Outdoor Equipment Cabinets	R1	Southern Property Line	39.2	47.3	39.9	7.4 ³
	R2	Eastern Property Line	61.9	43.3	30.1	13.2 ⁴
	R3	Western Property Line	81.0	41.0	38.8	2.2

¹ Calculated as attenuation by distance only, $L_2 = L_1 - 20 \log(\frac{r_2}{r_1})$

² As predicted by Cadna model including all site features

³ Difference attributed to shielding created by PPC cabinet.

⁴ Difference attributed to shielding created by CMO cabinets and the existing 8-foot high storage shed.

4.2 Measurement Equipment

Some or all of the following equipment was used at the site to measure existing noise levels:

- Larson Davis Model 824, Type 1 Sound Level Meter, Serial #A0344
- Larson Davis Model CA150, Type 1 Calibrator, Serial #2139

The sound level meter was field-calibrated immediately prior to the noise measurement and checked afterwards, to ensure accuracy. All sound level measurements conducted and presented in this report, in accordance with the regulations, were made with sound level meters that conform to the American National Standards Institute specifications for sound level meters (ANSI S1.4-1983, R2001). All instruments are maintained with National Bureau of Standards traceable calibration, per the manufacturers' standards.

5.0 IMPACTS

Based on the project information available, calculations show that the combined noise impacts from the proposed Cricket equipment and the existing wireless facilities equipment, excluding the noise impacts from the existing emergency generator, will be as high as 52.2 dBA L_{EQ} at the worst-case nearest property line location to the south, nearest the Cricket facility. The unmitigated noise impacts just from the proposed Cricket equipment will be as high as 39.9 dBA L_{EQ} at the worst-case nearest property line location to the south.

Calculations show that the combined noise impacts from all the existing wireless facilities equipment, excluding the noise impacts from the existing emergency generator, currently exceed the County of San Diego nighttime residential property line noise limits to the south and to the west.

The calculated combined noise levels at each property line at the worst-case locations are summarized in Table 8, these noise levels do not include the impacts from the existing emergency generator. For details of the acoustical calculations, please refer to Appendix E: Cadna Analysis Data and Results. Please also refer to Figure 6: Site Plan Showing Noise Source Locations and Noise Impacts to Project Vicinity and Property Line Receiver Locations.

Table 8. Calculated Cumulative Wireless Facility Noise Impact Levels				
Receiver Location	Noise Impacts from Existing Verizon HVAC Equipment – Not Including Emergency Generator (dBA L _{EQ})	Noise Impacts from Existing Sprint PCS Facility (dBA L _{EQ})	Noise Impacts from Proposed Cricket Facility (dBA L _{EQ})	Sum ¹ (dBA L _{EQ})
R1, Southern Property Line	43.5	51.2	39.9	52.1
R2, Eastern Property Line	42.8	31.3	30.1	43.3
R3, Western Property Line	51.2	27.1	38.8	51.5

¹ All equipment combined noise level

Calculations show the worst-case combined property line noise impacts due to the proposed Cricket facility and the two existing wireless facilities equipment, including the existing Verizon emergency diesel generator located on this project site is expected to exceed the County of San Diego nighttime property line noise limit of 45 dBA at the all property lines. The calculated combined noise levels including the impacts from the emergency generator at each property line at the worst-case locations are summarized in Table 9.

Table 9. Calculated Cumulative Wireless Facility Noise Impact Levels Including Existing Emergency Generator					
Receiver Location	Noise Impacts from Verizon HVAC Equipment (dBA L _{EQ})	Noise Impacts from Existing Verizon Emergency Generator (dBA L _{EQ})	Noise Impacts from Existing Sprint PCS Facility (dBA L _{EQ})	Noise Impacts from Proposed Cricket Facility (dBA L _{EQ})	Sum ¹ (dBA L _{EQ})
R1, Southern Property Line	43.5	70.5	51.2	39.9	70.6
R2, Eastern Property Line	42.8	51.5	31.3	30.1	52.1
R3, Western Property Line	51.2	65.5	27.1	38.8	65.7

¹ All equipment combined noise level

6.0 MITIGATION

Mitigation is required to reduce the proposed Cricket and existing wireless facilities equipment cumulative property line noise impacts to meet the 45 dBA nighttime noise limit along the southern property line. The noise levels at the eastern property line are expected to comply with the County of San Diego nighttime residential and commercial property line noise limits without any mitigation measures, due to distance and shielding created by the existing shelter and CMU storage enclosure.

It is assumed that the two existing and proposed Cricket facilities will each need to have noise impacts below 40 dBA at the southern and western property lines in order for the cumulative (existing and proposed) equipment impacts to comply with the County of San Diego nighttime property line noise limit. With the theoretical mitigation of the existing wireless facility equipment to below 40 dBA, the unmanned operation of the Cricket facility (as proposed and with no further mitigation) will be in compliance with the most restrictive County of San Diego 45 dBA nighttime property line noise limits, not including the noise impacts from the existing emergency generator.

7.0 CONCLUSION

With the theoretical mitigation of the two existing wireless facilities equipment to below 40 dBA, the unmanned operation of the Cricket facility (as proposed and with no further mitigation) will be in compliance with the most restrictive County of San Diego 45 dBA nighttime property line noise limits, not including noise impacts from the existing emergency generator.

This analysis is based upon a current worst case scenario of anticipated, typical equipment for this type of wireless facility. Substitution of equipment with higher noise emission levels may invalidate the recommendations of this study.

These conclusions and recommendations are based on the most up-to-date, project-related information available. However, noise characteristics of mechanical equipment may vary for specific installations. Verification of compliance with County of San Diego noise regulations can be provided, if desired, by conducting a noise survey consisting of sound level measurements at or close to the nearest impacted locations in each direction, after the project is built and in operation.

This is best accomplished in the late night or very early morning hours while the equipment is in full operation and other ambient noise sources are minimized. If any sound attenuation is found to be necessary, it can be specified at that time. We do not expect that any additional sound attenuation will be necessary within the scope of this project, specifically for the proposed Cricket wireless facility.

8.0 CERTIFICATION

This report is based on the related project information received and measured noise levels, and represents a true and factual analysis of the acoustical impact issues associated with the proposed Cricket wireless telecommunications facility, located 16893 Camino San Bernardo, in San Diego, County of San Diego, California. This report was prepared by Ian Brewe, Michael Burrill, and Douglas Eilar.

EILAR ASSOCIATES



Ian Brewe, Acoustical Consultant



Douglas K. Eilar, Principal

9.0 REFERENCES

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FIGURES

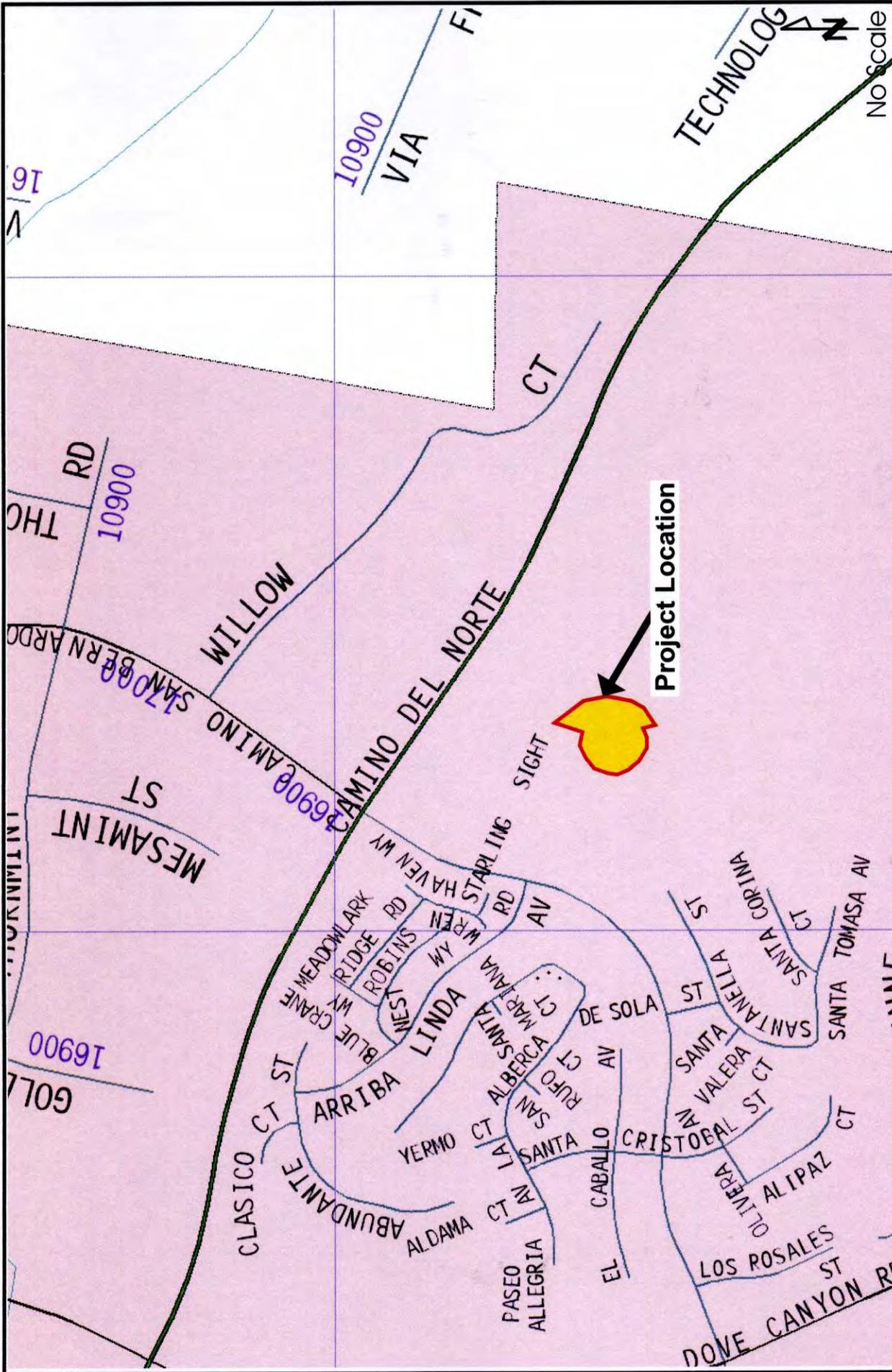
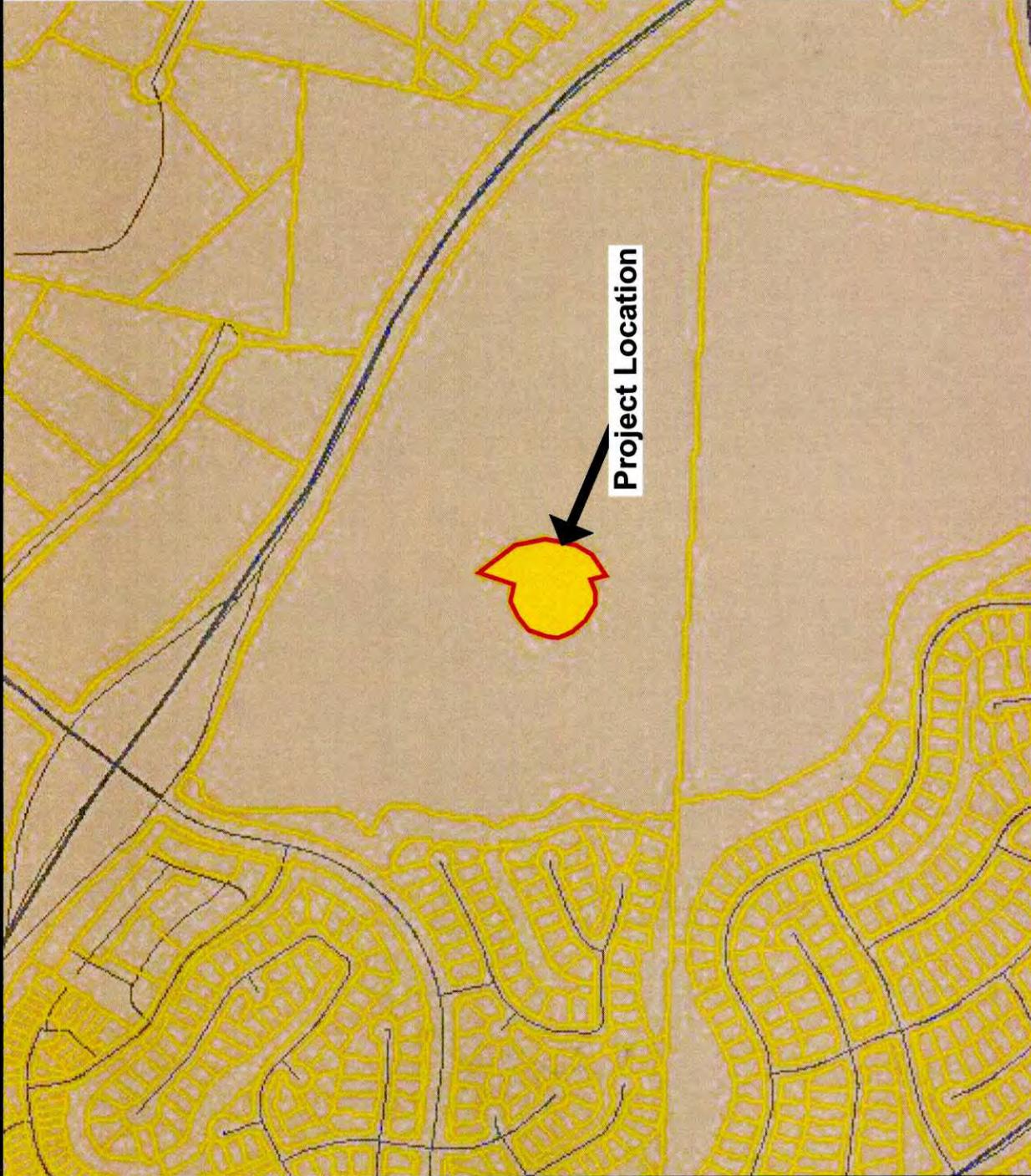


Figure 1

Vicinity Map
Job # A60809N1

Eilar Associates
539 Encinitas Boulevard, Suite 206
Encinitas, California 92024
760-753-1865



LEGEND

Reference Layers

- Parcels
- Roads

APN: 678-242-05-00

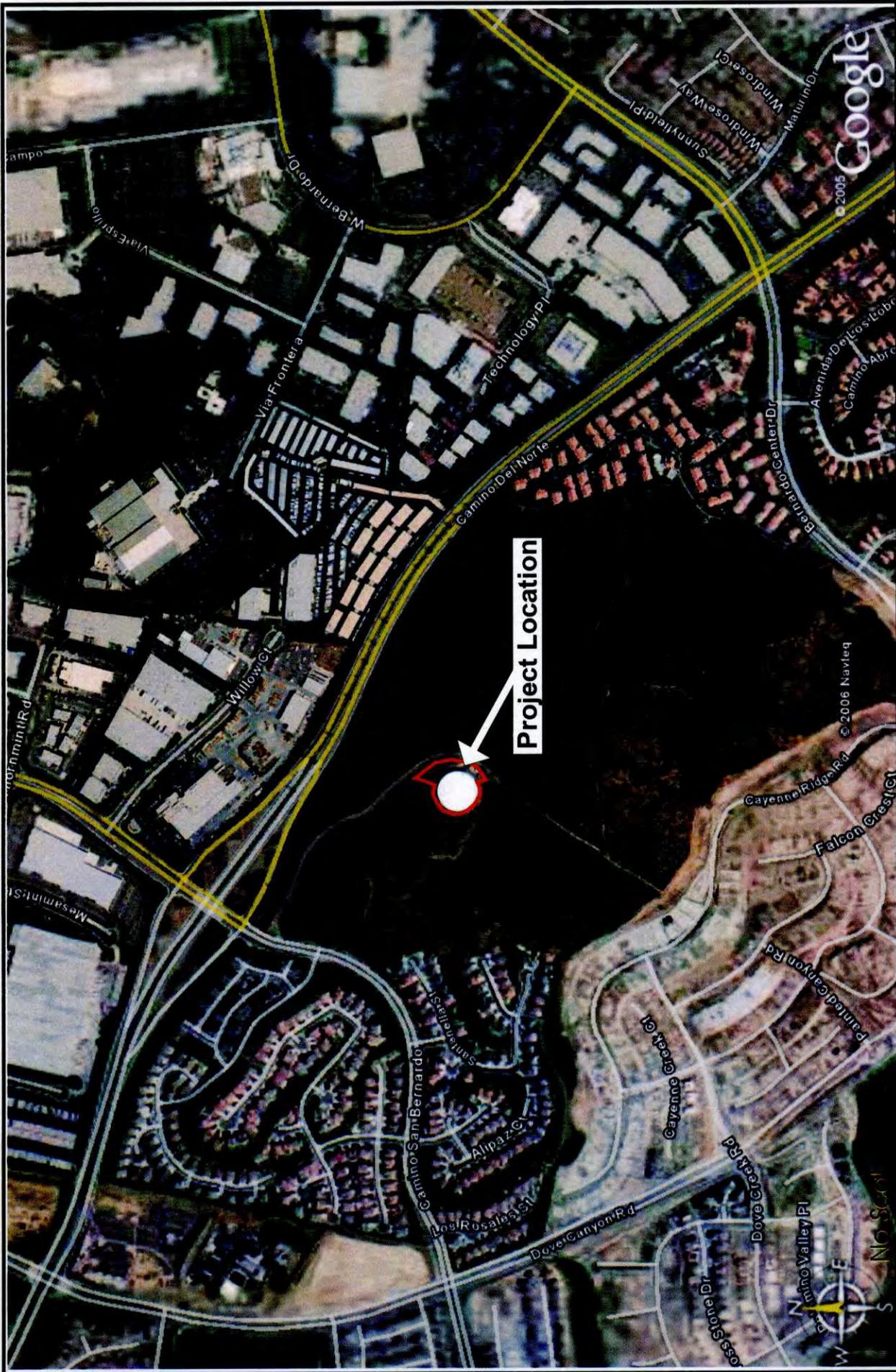


No Scale

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539 Encinitas Boulevard, Suite 206
Encinitas, California 92024
760-753-1865

Assessor's Parcel Map
Job # A60809N1

Figure 2

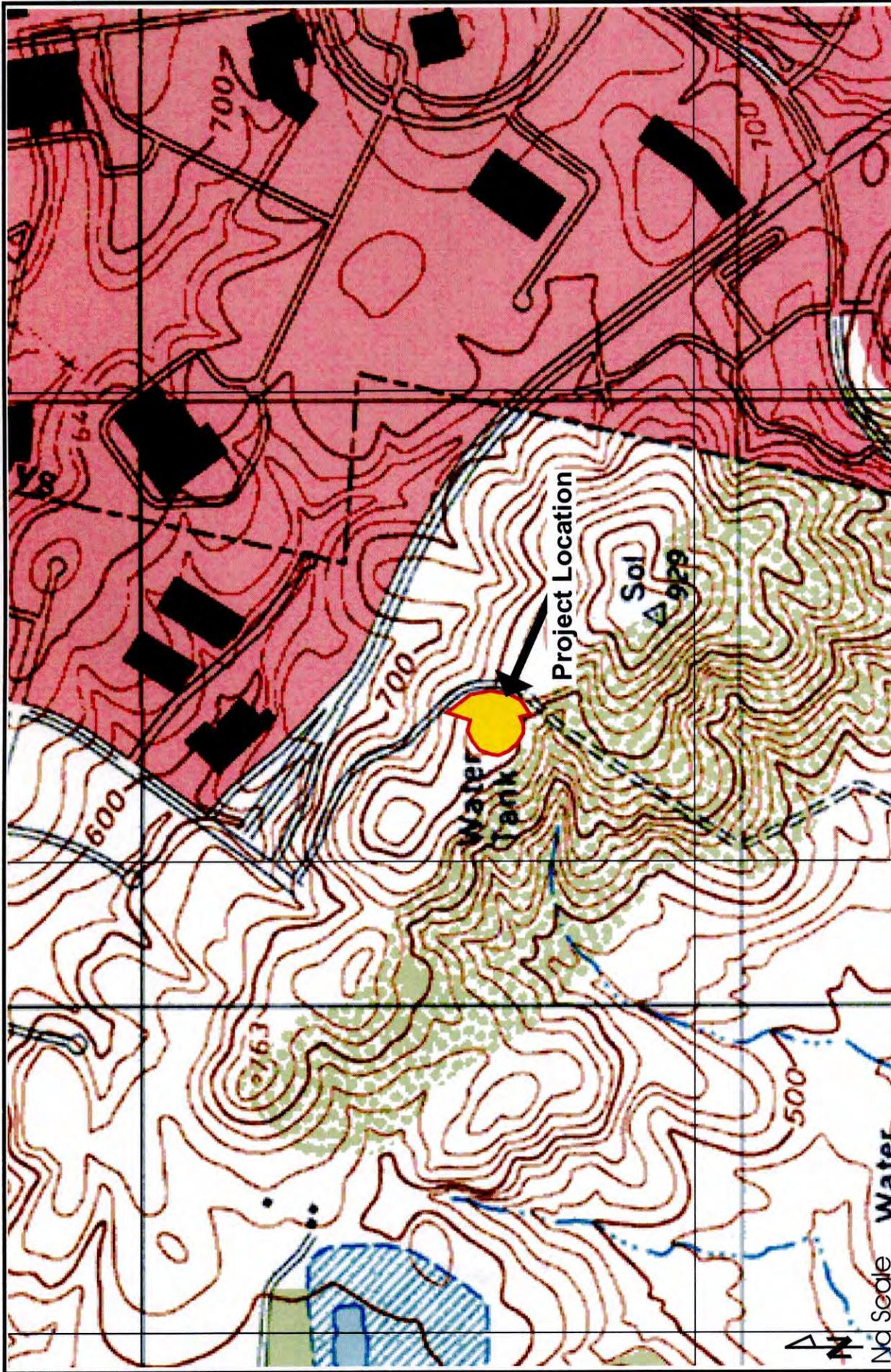


Project Location

Eilar Associates
539 Encinitas Boulevard, Suite 206
Encinitas, California 92024
760-753-1865

Satellite Aerial Photograph
Job # A60809N1

Figure 3



Eilar Associates
539 Encinitas Boulevard, Suite 206
Encinitas, California 92024
760-753-1865

Topographic Map
Job # A60809N1

Figure 4

LEGEND

Planned Land Use

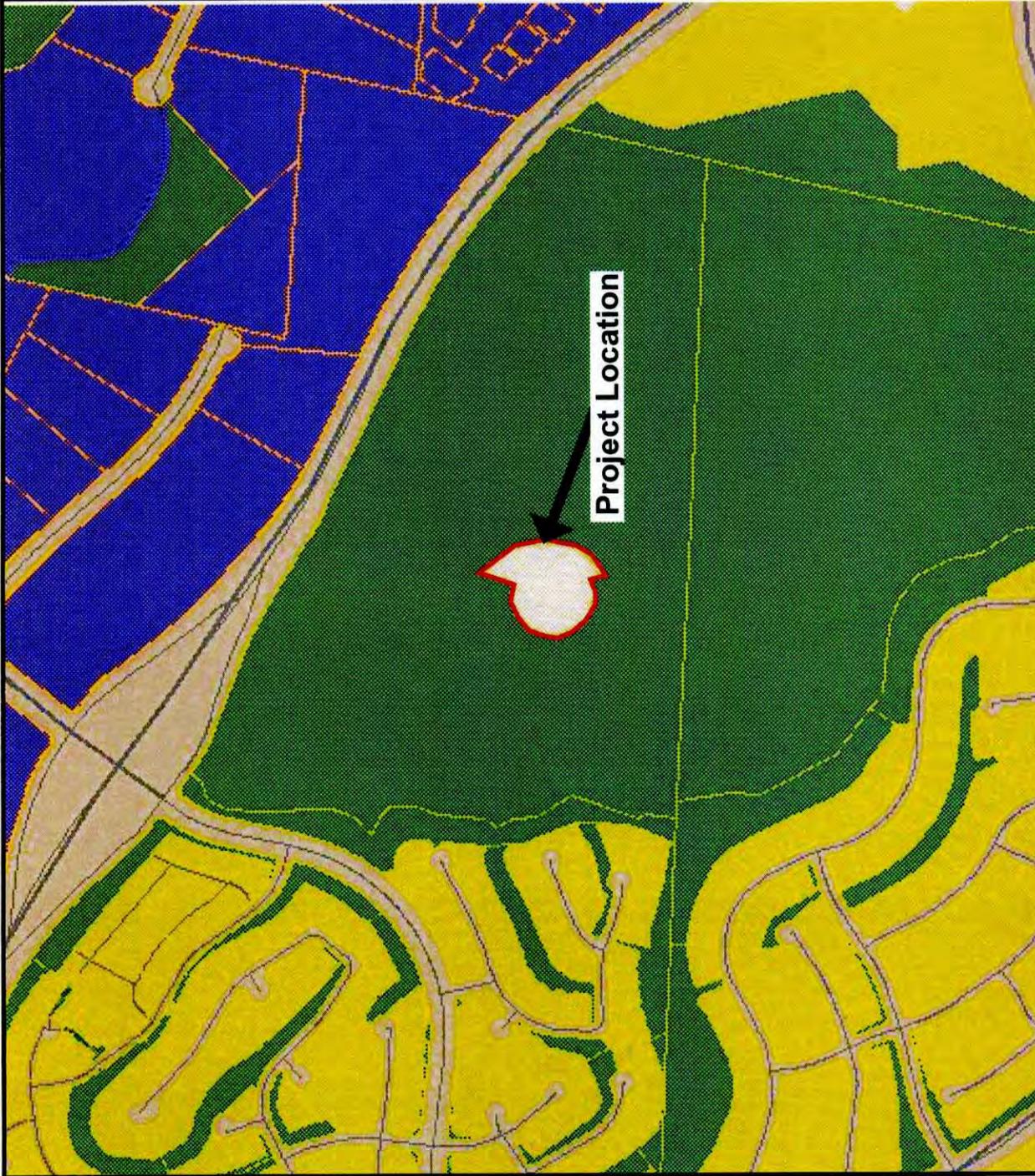
- Residential
- Commercial
- Industrial
- Public Facilities
- Parks
- Agriculture
- Water
- Reservations

Reference Layers

- Parcels
- Roads



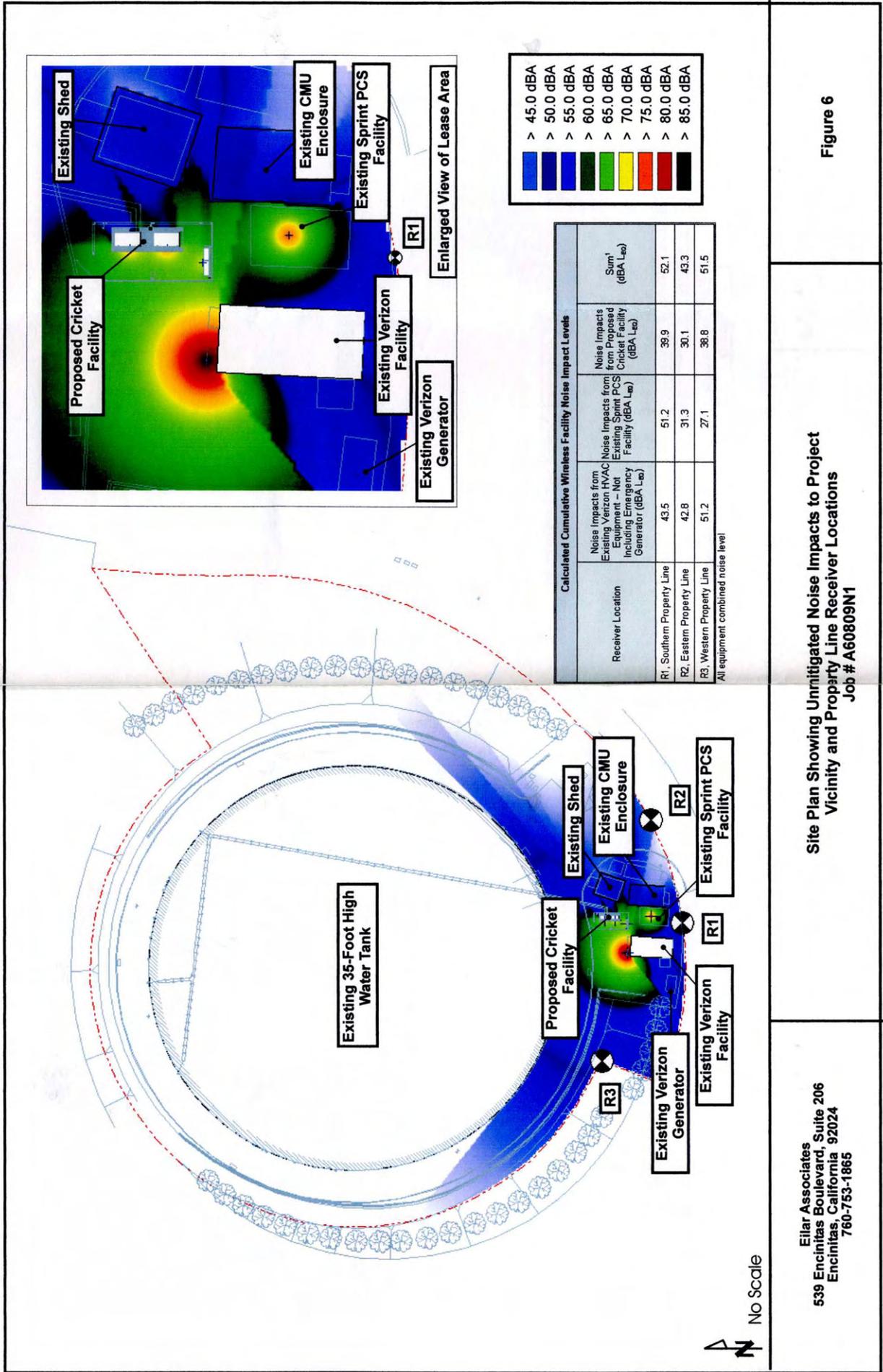
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Planned Land Use Map
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Figure 5



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 539 Encinitas Boulevard, Suite 206
 Encinitas, California 92024
 760-753-1865

Site Plan Showing Unmitigated Noise Impacts to Project Vicinity and Property Line Receiver Locations
 Job # A60809N1

Figure 6

No Scale

APPENDIX A

Site Plans for Cricket Wireless Telecommunications Facility

cricket

communications inc.

SAN-227-A BLACK MOUNTAIN NORTE TANK 16893 CAMINO SAN BERNARDO SAN DIEGO, CA 92127



11300 SORRENTO VALLEY RD. SUITE 230
SAN DIEGO, CA 92121
Office (858) 552-9398
Fax (858) 552-0184

REVISIONS

NO	DATE	DESCRIPTION
1	01/09/06	100% ZONING
0	12/02/05	90% ZONING

THE INFORMATION CONTAINED IN THIS SET OF DOCUMENTS IS PROPRIETARY BY NATURE. ANY USE OR DISCLOSURE OTHER THAN THAT WHICH RELATES TO CLIENT NAME IS STRICTLY PROHIBITED.

PROJECT TEAM	VICINITY MAP	PROJECT SUMMARY	SHEET INDEX	REV.																															
<p>PLANNING M & M TELECOM LLC CONTACT: DOUG MUNSON TELEPHONE: (760) 390-7727</p> <p>SITE ACQUISITION M & M TELECOM LLC CONTACT: FELICIA PHILLIPS TELEPHONE: (714) 791-6643</p> <p>ARCHITECTURE & ENGINEERING ALCOA WIRELESS SERVICES 11300 SORRENTO VALLEY ROAD, SUITE 230 SAN DIEGO, CA. 92121 CONTACT: WILL TATE TELEPHONE: (619) 846-8302 FACSIMILE: (858) 552-0184</p>		<p>APPLICANT/LESSEE CRICKET COMMUNICATIONS INC. 6160 CORNERSTONE COURT, SUITE 150 SAN DIEGO, CA. 92121 CONTACT: LAURA VAN EYCK TELEPHONE: (858) 882-9732</p> <p>PROPERTY OWNER OLIVENHAIN WATER DISTRICT CONTACT: GEORGE BRIEST 1966 OLIVENHAIN RD. ENCINITAS, CA. 92004 TELEPHONE: (760) 753-6466</p> <p>PROPERTY INFORMATION SITE NAME: BLACK MOUNTAIN NORTE TANK SITE NUMBER: SAN-227-A SITE ADDRESS: 16893 CAMINO SAN BERNARDO</p> <p>GEODETTIC COORDINATES NAD83 LAT. 33.01002999 LONG. -117.10204300</p> <p>LEGAL DESCRIPTION PLEASE REFER TO SURVEY FOR COMPLETE LEGAL DESCRIPTION</p> <p>ASSESSOR'S PARCEL NO. 678-242-05</p> <p>HANDICAP REQUIREMENTS FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION, HANDICAPPED ACCESS AND REQUIREMENTS NOT REQUIRED, IN ACCORDANCE WITH CALIFORNIA STATE ADMINISTRATIVE CODE, PART 2, TITLE 24, SECTION 11058.3.42, EXCEPTION 1.</p> <p>CODE COMPLIANCE</p> <p>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 CONSTRUCTED TO PERMIT WORK NOT TO CONFORMING TO THESE CODES.</p> <table border="0"> <tr> <td>1. CALIFORNIA BUILDING CODE CBC-2001</td> <td>5. CALIFORNIA ELECTRICAL CODE CEC-2001</td> </tr> <tr> <td>2. CALIFORNIA ADMINISTRATIVE CODE (INCL. TITLES 24 & 25) 2001</td> <td>6. CALIFORNIA MECHANICAL CODE CMC-2001</td> </tr> <tr> <td>3. ANSI/EIA-222-F LIFE SAFETY CODE</td> <td>7. CALIFORNIA PLUMBING CODE CPC-2001</td> </tr> <tr> <td>4. NFPA-101-1997</td> <td>8. LOCAL BUILDING CODE(S)</td> </tr> <tr> <td></td> <td>9. CITY AND/OR COUNTY ORDINANCES</td> </tr> </table>	1. CALIFORNIA BUILDING CODE CBC-2001	5. CALIFORNIA ELECTRICAL CODE CEC-2001	2. CALIFORNIA ADMINISTRATIVE CODE (INCL. TITLES 24 & 25) 2001	6. CALIFORNIA MECHANICAL CODE CMC-2001	3. ANSI/EIA-222-F LIFE SAFETY CODE	7. CALIFORNIA PLUMBING CODE CPC-2001	4. NFPA-101-1997	8. LOCAL BUILDING CODE(S)		9. CITY AND/OR COUNTY ORDINANCES	<table border="1"> <tr> <td>T-1</td> <td>TITLE SHEET, PROJECT INFORMATION</td> <td>1</td> </tr> <tr> <td>LS-1</td> <td>SURVEY</td> <td>1</td> </tr> <tr> <td>A-1</td> <td>SITE PLAN</td> <td>1</td> </tr> <tr> <td>A-2</td> <td>ENLARGED EQUIPMENT AREA</td> <td>1</td> </tr> <tr> <td>A-3</td> <td>WEST & NORTH ELEVATIONS</td> <td>1</td> </tr> <tr> <td>A-4</td> <td>SOUTH & EAST ELEVATIONS</td> <td>1</td> </tr> <tr> <td>A-5</td> <td>EQUIPMENT ELEVATIONS, & ANTENNA LAYOUT</td> <td>1</td> </tr> </table>	T-1	TITLE SHEET, PROJECT INFORMATION	1	LS-1	SURVEY	1	A-1	SITE PLAN	1	A-2	ENLARGED EQUIPMENT AREA	1	A-3	WEST & NORTH ELEVATIONS	1	A-4	SOUTH & EAST ELEVATIONS	1	A-5	EQUIPMENT ELEVATIONS, & ANTENNA LAYOUT	1	
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PROJECT No.
SITE NAME: BLACK MOUNTAIN NORTE TANK
SITE NUMBER: SAN-227-A
SITE ADDRESS: 16893 CAMINO SAN BERNARDO SAN DIEGO, CA 92127
DESIGN TYPE: RAWLAND
DRAWING TITLE: ZONING

cricket
communications inc.

SCALE: AS NOTED	DRAWN BY: N. ZABALA
DATE: 12/02/05	CHECKED BY: M. MONTELLO
REVISED: 01/09/06	SHEET 1 OF 7
DRAWING No.	REVISION No.
T-1	1

ZONING DRAWINGS - NOT FOR CONSTRUCTION

NOTE: THE ORIGINAL SIZE OF THIS PLAN IS 24" X 36". SCALE RATIO IS NOT VALID FOR REDUCED OR ENLARGED SHEET SIZES.

REVISIONS

NO	DATE	DESCRIPTION
1	01/09/06	100% ZONING
0	12/02/05	90% ZONING

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SITE ADDRESS:
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 SAN BERNARDO
 SAN DIEGO, CA 92127**

DESIGN TYPE:
RAWLAND

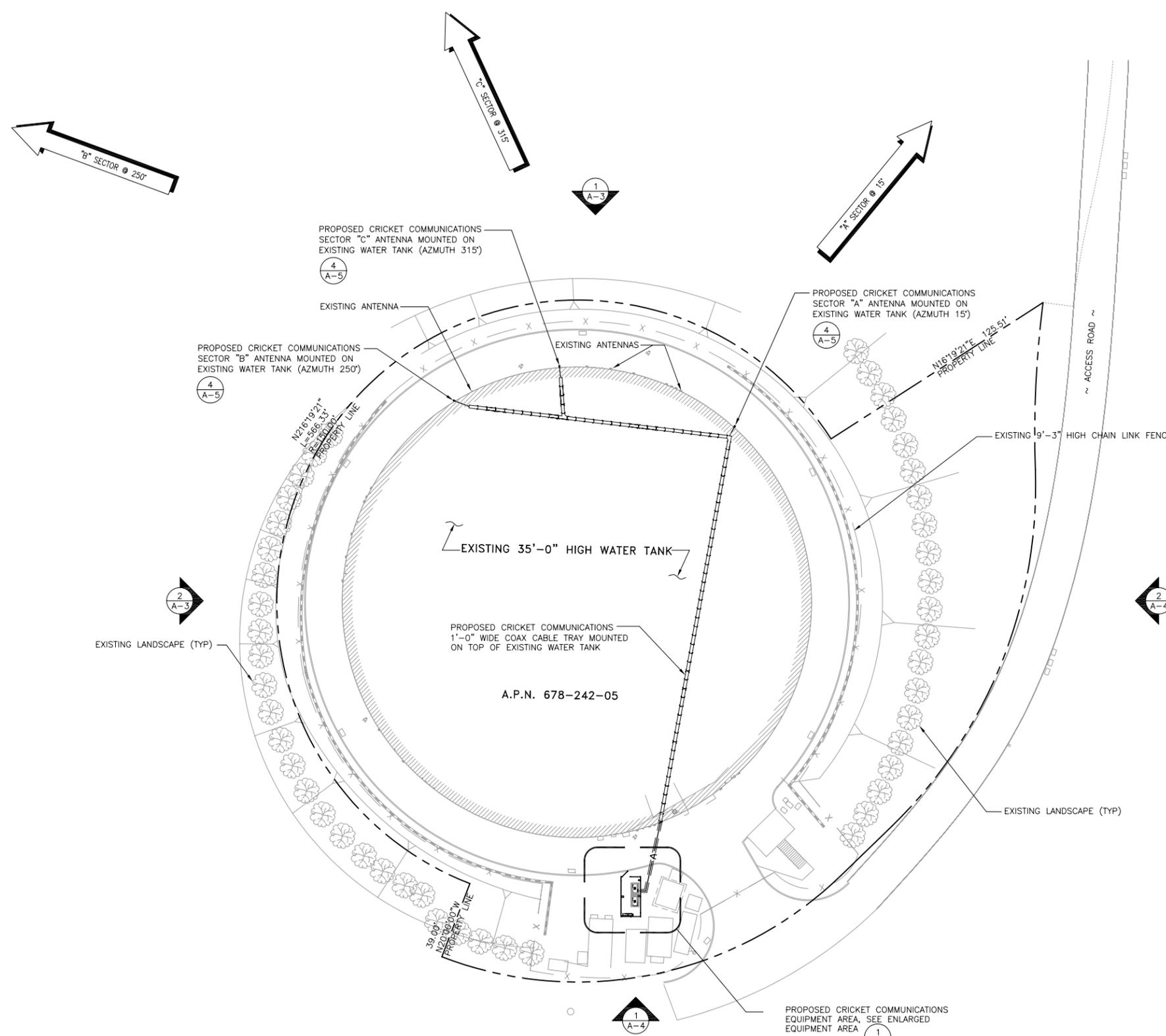
DRAWING TITLE:
ZONING



SCALE: AS NOTED	DRAWN BY: N. ZABALA
DATE: 12/02/05	CHECKED BY: M. MONTELLO
REVISED: 01/09/06	SHEET 3 OF 7

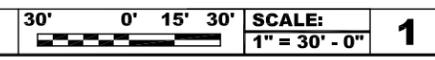
DRAWING No. REVISION No.

A-1 1



NOTE: THE ORIGINAL SIZE OF THIS PLAN IS 24" X 36". SCALE RATIO IS NOT VALID FOR REDUCED OR ENLARGED SHEET SIZES.

SITE PLAN



REVISIONS

NO	DATE	DESCRIPTION
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DRAWING TITLE:
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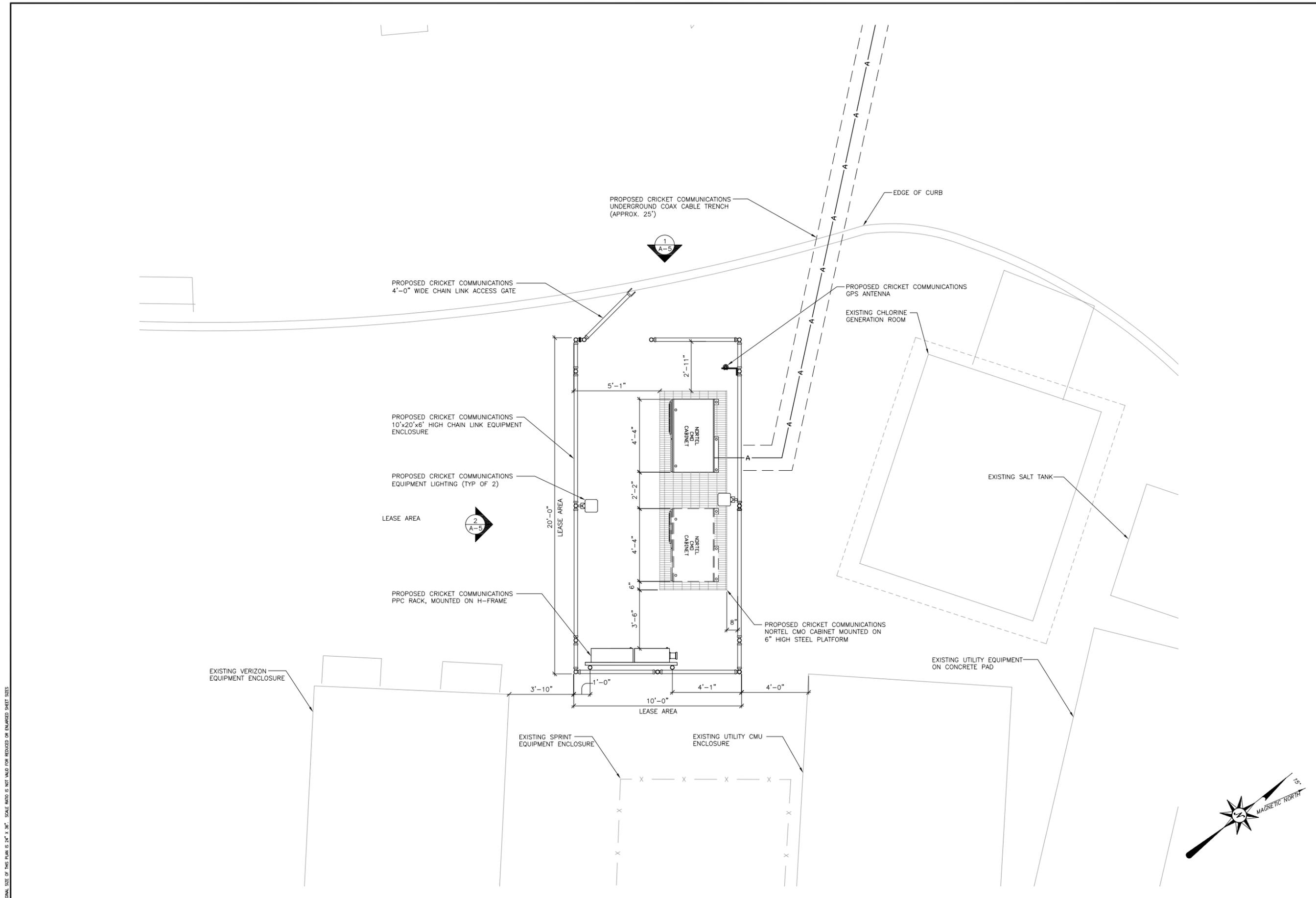


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DATE: 12/02/05	CHECKED BY: M. MONTELLO
REVISED: 01/09/06	SHEET 4 OF 7

DRAWING No. REVISION No.

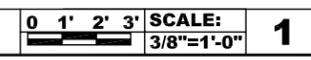
A-2

1



NOTE: THE ORIGINAL SIZE OF THIS PLAN IS 24" X 36". SCALE RATIO IS NOT VALID FOR REDUCED OR ENLARGED SHEET SIZES

ENLARGED EQUIPMENT AREA



REVISIONS

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 SAN DIEGO, CA 92127**

DESIGN TYPE:
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DRAWING TITLE:
ZONING

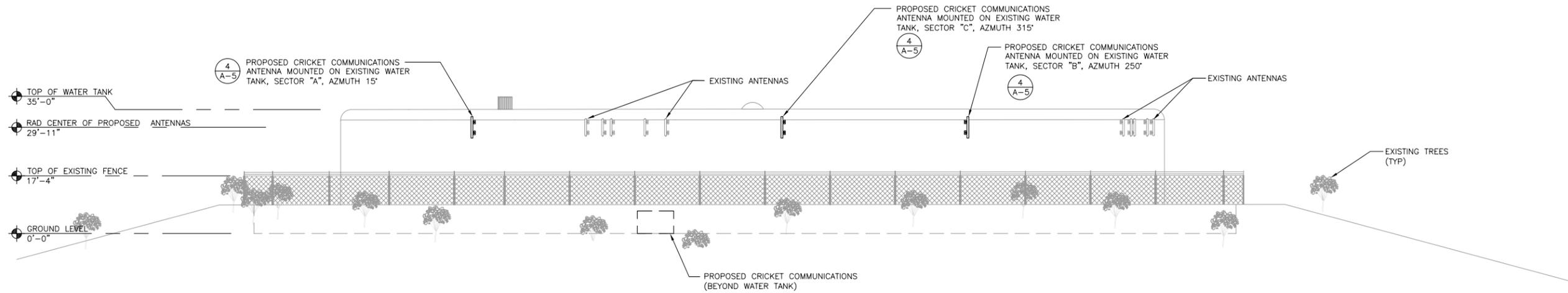


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DATE: 12/02/05	CHECKED BY: M. MONTELLA
REVISED: 01/09/06	SHEET 5 OF 7

DRAWING No. REVISION No.

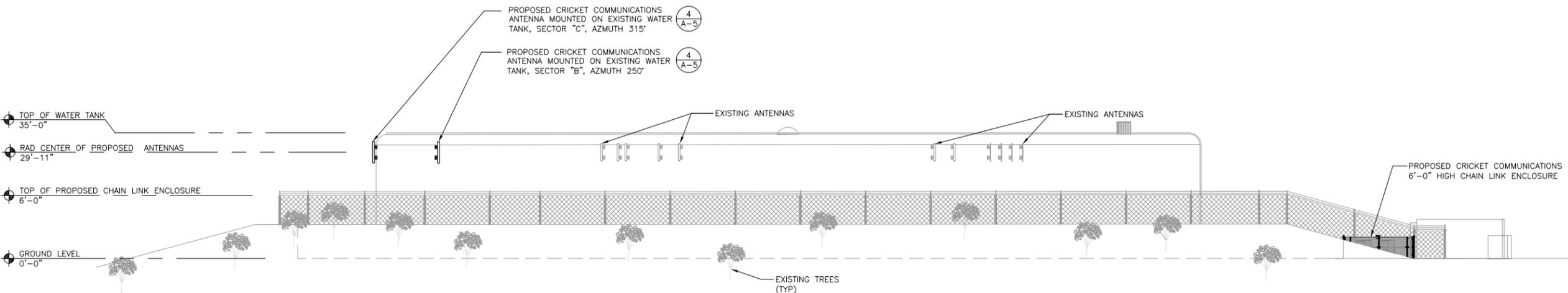
A-3

1



NORTH ELEVATION

0 4' 8' 16' SCALE: 1/16"=1'-0" **1**



WEST ELEVATION

0 4' 8' 16' SCALE: 1/16"=1'-0" **2**

NOTE: THE ORIGINAL SIZE OF THIS PLAN IS 24" X 36". SCALE RATIO IS NOT VALID FOR REDUCED OR ENLARGED SHEET SIZES.

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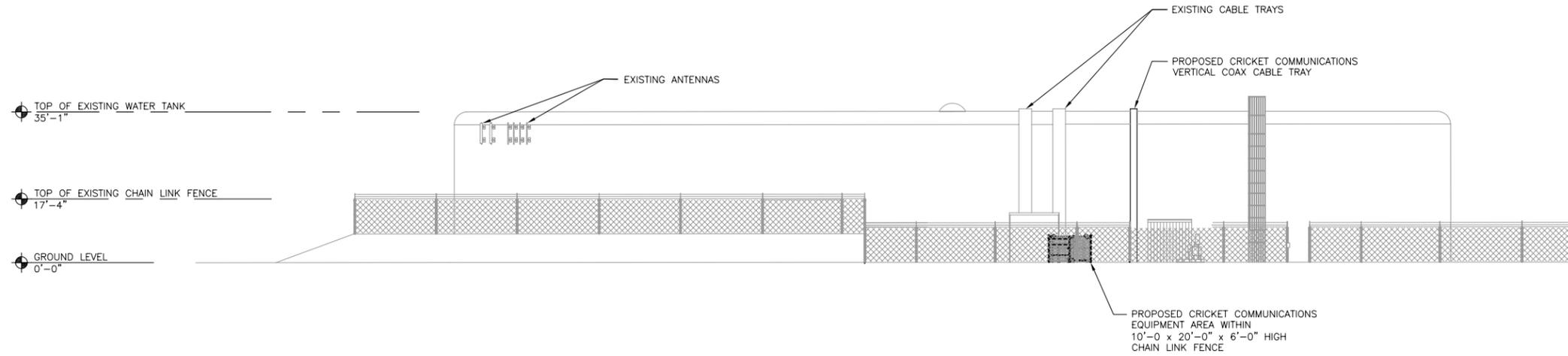


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REVISED: 01/09/06	SHEET 6 OF 7

DRAWING No. REVISION No.

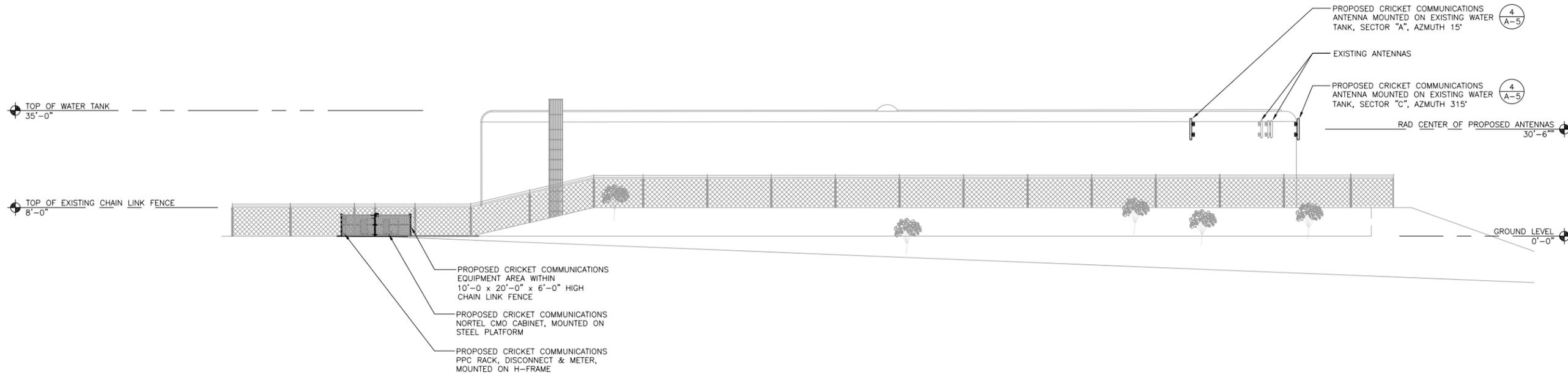
A-4

1



SOUTH ELEVATION

0 4' 8' 16' SCALE: 1/16"=1'-0" **1**



EAST ELEVATION

0 4' 8' 16' SCALE: 1/16"=1'-0" **2**

NOTE: THE ORIGINAL SIZE OF THIS PLAN IS 24" X 36". SCALE RATIO IS NOT VALID FOR REDUCED OR ENLARGED SHEET SIZES.

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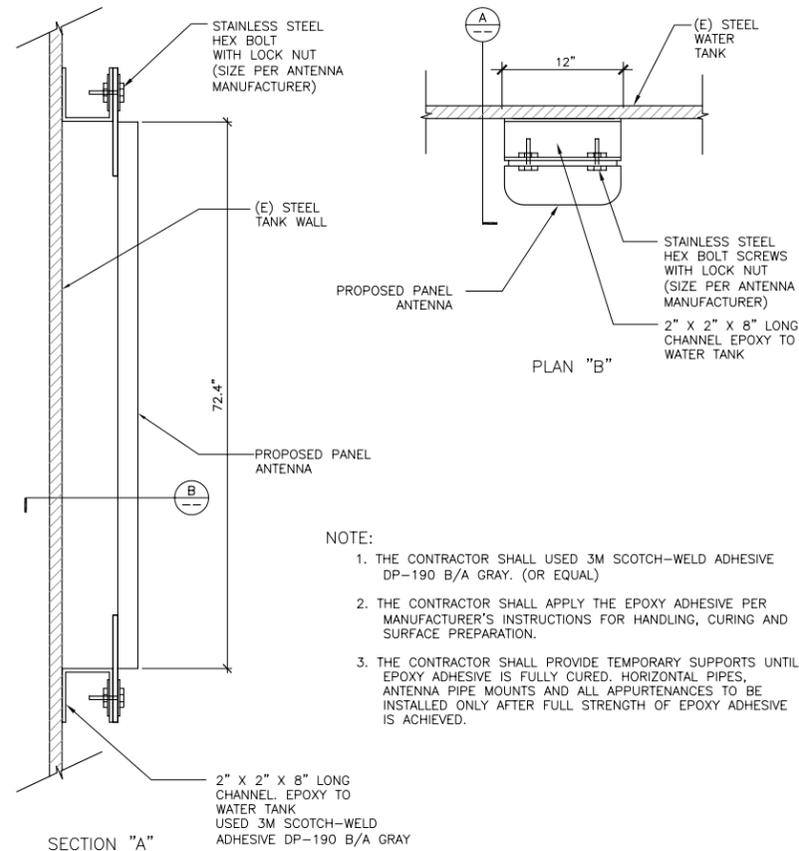
cricket communications inc.

SCALE: AS NOTED
DATE: 12/02/05
REVISED: 01/09/06
DRAWING No.

DRAWN BY: N. ZABALA
CHECKED BY: M. MONTELLLO
SHEET 7 OF 7
REVISION No.

A-5

1



ANTENNA MOUNT DETAIL

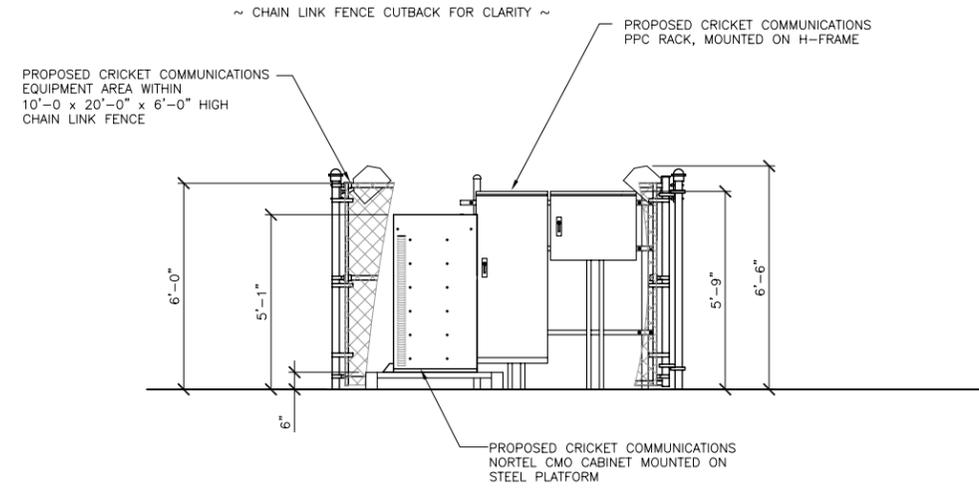
SCALE
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4

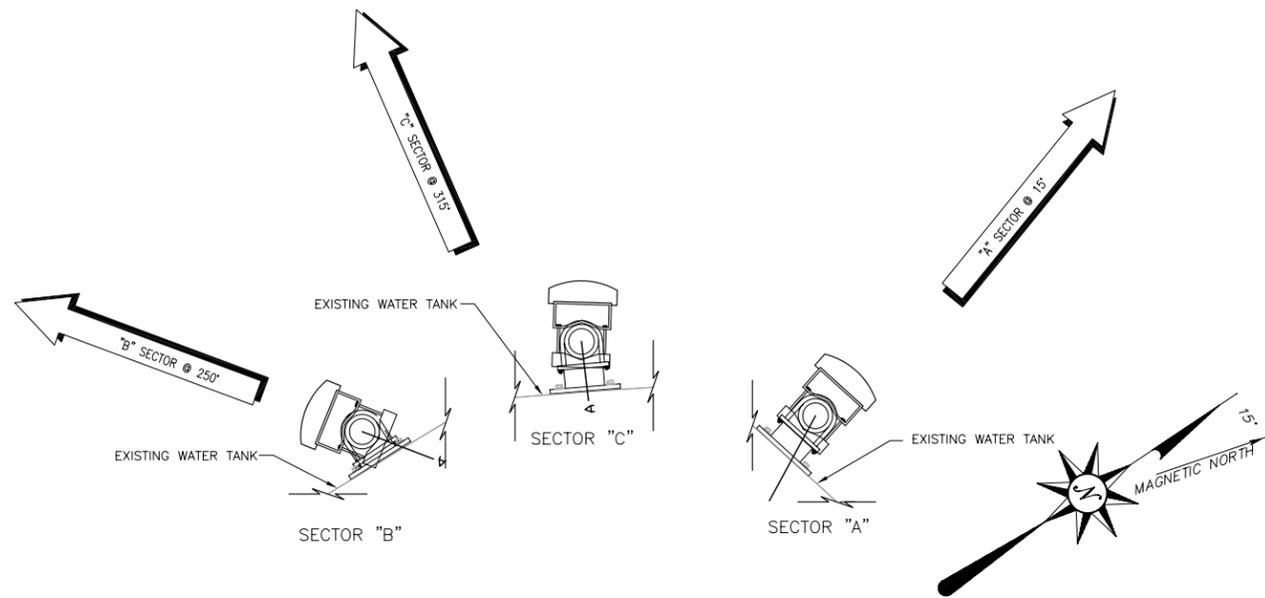
NORTH EQUIPMENT ENCLOSURE ELEVATION

SCALE
N.T.S.

1



ANTENNA & CABLE SCHEDULE									
	AZIMUTH	HEIGHT AGL	ANTENNA MFG & MODEL NO.	ANTENNA TYPE	PERMITTED # OF ANTENNA	FEEDER TYPE	FEEDER LENGTH	# OF FEEDER(S)	# OF TMA(S) PER SECTOR
SECTOR A	15°	29'-11"	CSA-PCSX065-18-00	TBD	1	7/8"	TBD	TBD	TBD
SECTOR B	250°	29'-11"	CSA-PCSX065-18-00	TBD	1	7/8"	TBD	TBD	TBD
SECTOR C	315°	29'-11"	CSA-PCSX065-18-00	TBD	1	7/8"	TBD	TBD	TBD



ANTENNA LAYOUT DETAIL

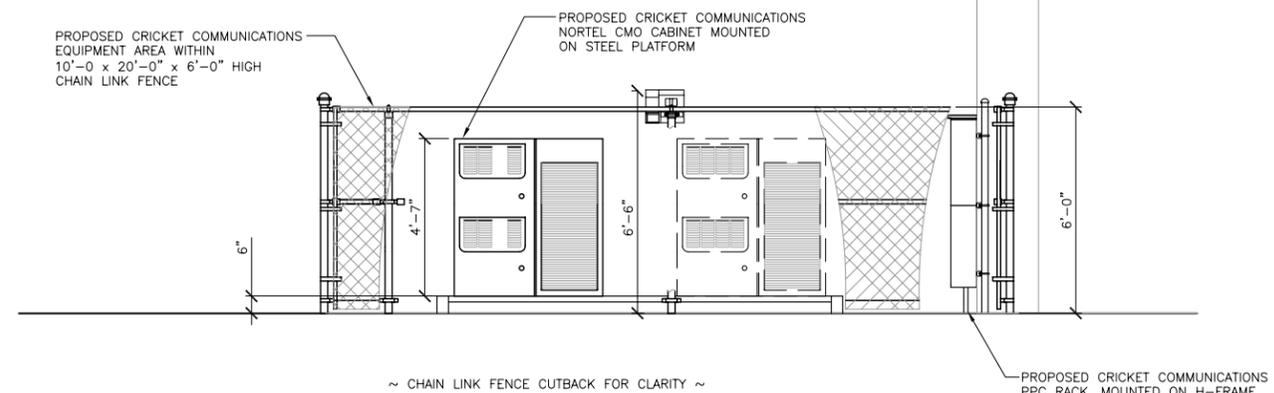
SCALE
N.T.S.

3

WEST EQUIPMENT ENCLOSURE ELEVATION

SCALE
N.T.S.

2



APPENDIX B

**Pertinent Sections of the County of San Diego Scoping Letter,
Dated June 27, 2006**

GARY L. PRYOR
DIRECTOR



County of San Diego

DEPARTMENT OF PLANNING AND LAND USE

5201 RUFFIN ROAD, SUITE B, SAN DIEGO, CALIFORNIA 92123-1666
INFORMATION (858) 694-2960
TOLL FREE (800) 411-0017

SAN MARCOS OFFICE
138 VIA VERA CRUZ - SUITE 201
SAN MARCOS, CA 92069-2620
TEL: 441-4100

EL CAJON OFFICE
200 EAST MAIN ST. - SIXTH FLOOR
EL CAJON, CA 92020-3912
(619) 441-4030

June 27, 2006

Mark Phillips
Cricket Communications
P.O. Box 55
Poway, CA 92074

CASE NUMBER: P 06-048; PROJECT NAME: CRICKET COMMUNICATIONS-
BLACK MOUNTAIN NORTE TANK TELECOMMUNICATIONS FACILITY
PROJECT ADDRESS: 16893 CAMINO SAN BERNARDO, SAN DIEGO, CA
92127

APN 678-242-05

Dear Mr. Phillips:

The Department of Planning and Land Use (DPLU) has reviewed your application for a Major Use Permit and is providing you with the attached package of information as a guide for further processing your application. This package consists of:

- Determination of Completeness pursuant to Section 65943 of the Government Code;
- Determination of Completeness pursuant to the California Environmental Quality Act (CEQA);
- A MATRIX which summarizes all the information we are requesting;
- Attachments which are detailed and provide you with very specific information on our request(s);
- Preliminary conditions from the Department of Public Works;
- An Environmental Cost Estimate; and,
- Estimated Processing Schedule

PROJECT DESCRIPTION

The proposed project is a Major Use Permit to allow the installation of a three sector (one antenna per sector) array onto an existing water tank owned by the Olivenhain Municipal Water District. The water tank is thirty-five feet tall and the radio and power equipment will be connected to the antennas via a conduit which

will leave the equipment enclosure. The property is zoned S88 (Specific Planning Area) which permits Wireless Telecommunication Facilities under the Tier 4 Classification with an approved Major Use Permit pursuant to Section 6985a of the Zoning Ordinance. The San Diego County General Plan designates the site as (21) Specific Planning Area.

DETERMINATION OF COMPLETENESS PURSUANT TO SECTION 65943 OF THE GOVERNMENT CODE

DPLU has reviewed your application and has determined that it is complete pursuant to Section 65943 of the Government Code.

DETERMINATION OF COMPLETENESS PURSUANT TO THE CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

The Department of Planning and Land Use staff has completed the review of your Application for Environmental Initial Study (AEIS) for the subject project and believe your project to be exempt from further environmental analysis pursuant to Section 15301 of the CEQA. This exemption is for facilities that are proposed to be attached to an existing structure or facility and are negligibly visible from the exterior of the structure or are stealthed. However, staff cannot complete the necessary documentation to finalize the exemption until a revised Minor Stormwater Management Plan, and revised Visual Analysis are deemed adequate. Until such conformance is demonstrated your application will be considered "incomplete" as defined by CEQA.

PROJECT ISSUE RESOLUTION PROCESS: If you have disagreements with the requirements within this letter you should contact the project staff to resolve those issues. Upon discussion with project staff, you may have these issues referred to the Project Issue Resolution process to provide you with an opportunity to quickly and inexpensively have issues considered by senior County management. Issues considered under this procedure can include disagreements with staff interpretations of codes or ordinances, requests for additional information or studies, or disagreements regarding project related processing requirements.

Please contact me to learn more about this process, the limitations, or to request an application form.

ESTIMATED PROCESSING SCHEDULE: An estimated processing schedule is attached. Several assumptions were required to supply a schedule at this time and are listed at the bottom of the estimated schedule. If these assumptions prove to be incorrect, the schedule will be adjusted. The schedule also makes assumptions regarding County staff workload, submittal turnaround times by the applicant, and the number of iterations of submittals required for the applicant to obtain an adequate document. These assumptions are based on staff's experience with this type of case. If reports are determined to be acceptable with

less than three reviews or the applicant turnaround times shortened, the "standard" schedule can be reduced by as much as 50 percent in some cases.

SUBMITTAL REQUIREMENTS: Unless other agreements have been made with County staff, you must submit all of the following items concurrently and by the submittal date listed below in order to make adequate progress and to minimize the time and costs in the processing of your application. The submittal must be made to the DPLU Zoning Counter at 5201 Ruffin Road, Suite B, San Diego, CA 92123-1666 and must include the following items:

- a. **A COPY OF THIS LETTER.** The requested information will not be accepted unless accompanied by this letter.
- b. In addition to the documents requested below, electronic versions of these documents / studies can be e-mailed directly to the Project Manager at emery.mccaffery@sdcounty.ca.gov. This will enable staff to make editorial strikeout / underline changes to electronic documents, ultimately saving time in the process.
- c. The following information and/or document(s) with the requested number of copies as specified:

INFORMATION/DOCUMENT	NO. OF COPIES	LEAD REVIEW DEPT./SECTION
Revised Visual Analysis	3	Emery McCaffery (3)
Revised Minor Stormwater Management Plan	2	Emery McCaffery (2)
Noise Study	3	Emery McCaffery (1), Emmet Aquino (1)

- d. Deposits:

AGENCY	ACCO NUMBER	DEPOSIT AMOUNT
DPLU-Planning	06-0061185	\$1,200
DPLU-Environmental	06-0061185	\$2,850
TOTAL ADDITIONAL DEPOSITS	06-0061185	\$4,050

The above is an estimate of the additional deposits required to process the application through hearing/decision.

Be aware that Section 362 of Article XX of the San Diego County Administrative Code, Schedule B, 5 states that:

June 27, 2006

The Director of Planning and Land Use may discontinue permit processing and/or recommend denial of the said project based on non-payment of the estimated deposit.

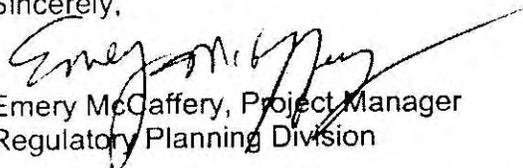
Several assumptions were required to supply the DPLU-Environmental cost estimate at this time in the process. If these assumptions prove to be incorrect, your cost estimate will be adjusted. These assumptions are listed at the bottom of the attached environmental cost estimate.

Should your application be approved, there will be additional processing costs in the future (e.g., Final Map processing costs, park fees, drainage fees, building permit fees). The above estimate includes only the costs to get your present application(s) to hearing/decision and does not include these additional processing costs.

SUBMITTAL DUE DATE: In order to maintain adequate progress in the processing of your project, the DPLU requires that the revisions/information/deposits requested in this letter be submitted by **October 25, 2006**. An extension of this date may be granted at the discretion of the Director of Planning and Land Use. To request an extension, submit a written request, signed and dated by the project applicant. The request must include the proposed new submittal date and a brief reasoning for the extension request. If the revised document(s) are not received, or an approved extension request is not granted by the Director by the above date, the Department may make a recommendation for denial of your project to the appropriate decision-making authority based upon inadequate progress pursuant to California Environmental Quality Act (CEQA) Guidelines Section 15109.

If you have any questions regarding this letter or other aspects of your project, please contact me at (858) 694-3704.

Sincerely,


Emery McCaffery, Project Manager
Regulatory Planning Division

cc: George Briest, Olivenhain Municipal Water District, 1966 Olivenhain Road,
Encinitas, CA 92004
Michael Montello, Alcoa Wireless Services, 11300 Sorrento Valley Road,
Suite 230, San Diego, CA 92121
Mario Orso, CalTrans, M.S. 65
Lee Shick, Project Manager, Department of Public Works, M.S. 0336
Department of Parks and Recreation, M.S. 029
Cathy Cibit, Planning Manager, Department of Planning and Land Use,
M.S. 0650

SCOPING LETTER MATRIX

Attachment	Item
A	Visual Analysis
B	Revised Minor SWMP
C	Noise Study
D	Department of Public Works Conditions
E	Rancho Santa Fe Fire Protection District Comments
F	Department of Transportation Comments
G	Estimated Processing Schedule
H	DPLU-Environmental Cost Estimate

ATTACHMENT C Noise Study

Project Specific Information:

Preliminary acoustical estimates and the proximity of the proposed equipment cabinets to the nearest property line indicate that without site-specific noise mitigation measures, this project may generate noise levels that exceed the applicable limits of the County noise regulations. For this reason, staff requires a site-specific noise study by a County-certified acoustical consultant to evaluate any on-site exterior noise generators to be used on the project site such as air conditioners and to demonstrate they comply with the property line sound level limits of the County Noise Ordinance (Section 36.404). Please refer to the Ordinance discussion for additional details (See below).

Noise Ordinance:

A preliminary review of the project information provided by the AEIS indicates that there is insufficient information to determine whether permanent equipment and operations on-site will exceed sound level limits of the San Diego County Noise Ordinance (Section 36-404). The County Noise Ordinance does not permit noise levels that impact adjoining properties or exceed County Noise Standards. The project site as well as adjacent land uses are zoned **S88** (Specific Planning Area) and **S80** (Open Space) which allow a one-hour average sound level of 50 decibels (dBA) from 7 a.m. to 10 p.m. and 45 decibels (dBA) from 10 p.m. to 7 a.m. In order for the Department to make a determination on the project's conformance with County noise standards, the applicant must demonstrate that the hourly average sound levels do not exceed either threshold at the property line, as the most stringent Ordinance condition for the project.

To determine conformance to the County Noise Ordinance, a noise study is required and it is essential that this component of this analysis include the following information:

- (1). Manufacturers Spec Sheet for all noise producing equipment on-site that identifies the ARI standard and/or decibel (dBA) per range. It is important to note that all noise producing sources must be included.
- (2). Additional plot plans that identifies the site location of all noise sources in relation to property lines. It is essential to address all potential noise sources on-site and to include a discussion related to openings within all surrounding walls or fences, such as driveways, fencing and gates.
- (3). Hours of operation and activity level at each hour.

General information: A noise analysis is needed to determine whether or not noise levels exceed San Diego County standards. Noise analysis shall occur when the project is adjacent to heavily traveled roads, railroad tracks, airports, or

heavy industrial operations. Noise analysis may also be required for a project that generate high levels of noise either through activities directly associated with the proposal or major increases in traffic generated by the proposal (direct and cumulative impacts).

If the noise impacts are associated with traffic movements, airports, or other transportation activities, a noise analysis shall utilize field measurements and projected transportation noise levels to determine the potential for impacts to present and future residents of the project. The noise analysis must conform to the Noise Element of the San Diego County General Plan.

If the noise impacts are associated with activities on the site, such as rock crushing or some other proposed activity, the noise analysis shall include estimates of noise generation potential from the site utilizing measurements from similar activities that are already in existence. The noise analysis must conform to the San Diego County Noise Ordinance.

The Noise Study must consider the combined noise of the existing telecommunications facilities onsite and the subject project for noise compliance.

APPENDIX C

**San Diego County Code,
Section 36.404, Sound Level Limits**

Section 36.404

- [Home](#)
[Citations](#)
[File a Complaint](#)
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SECTION 36.404 SOUND LEVEL LIMITS

Unless a variance has been applied for and granted pursuant to this chapter, it shall be unlawful for any person to cause or allow the creation of any noise to the extent that the one-hour average sound level, at any point on or beyond the boundaries of the property on which the sound is produced, exceeds the applicable limits set forth below except that construction noise level limits shall be governed by Section 36.410.

<u>ZONE</u>	<u>TIME</u>	<u>APPLICABLE LIMIT ONE-HOUR AVERAGE SOUND LEVEL (DECIBELS)</u>
R-S, R-D, R-R, R-MH, A-70, A-72, S-80, S-81, S-87, S-88, S-90, S-92, R-V, AND R-U. Use regulations with a density of less than 11 dwelling unit per acre.	7 a.m. to 10 p.m.	50
	10 p.m. to 7 a.m.	45
R-RO, R-C, R-M, C-30, S-86, R-V AND R-U Use regulations with a density of 11 or more dwelling units per acre.	7 a.m. to 10 p.m.	55
	10 p.m. to 7 a.m.	50
S-94 and all other commercial zones	7 a.m. to 10 p.m.	60
	10 p.m. to 7 a.m.	55
M-50, M-52, M-54	Anytime	70
S-82, M-58, and all other industrial zones	Anytime	75

If the measured ambient level exceeds the applicable limit noted above, the allowable one-hour average sound level shall be the ambient noise level. The ambient noise level shall be measured when the alleged noise violation source is not operating.

The sound level limit at a location on a boundary between two (2) zoning districts is the arithmetic mean of the respective limits for the two districts provided however, that the one-hour average sound level limit applicable to extractive industries including but not limited to borrow pits and mines, shall be 75 decibels at the property line regardless of the zone where the extractive industry is actually located.

Fixed-location public utility distribution or transmission facilities located on or adjacent to a property line shall be subject to the noise level limits of this section, measured at or beyond six (6) feet from the boundary of the easement upon which the equipment is located. (Amended by Ord. No. 7094 (N.S.) Effective 3-25-86.)

APPENDIX D

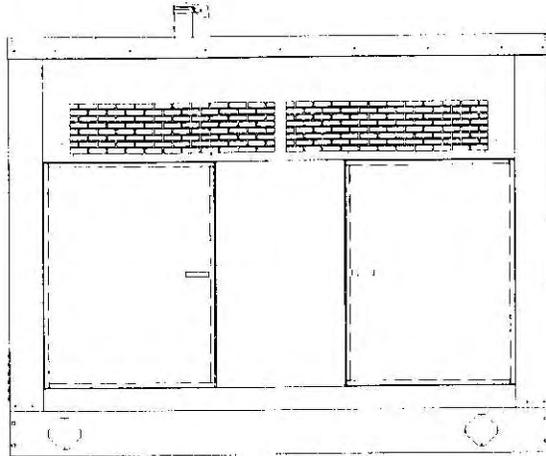
Manufacturer's Noise Data

GENERATOR ACCESSORIES

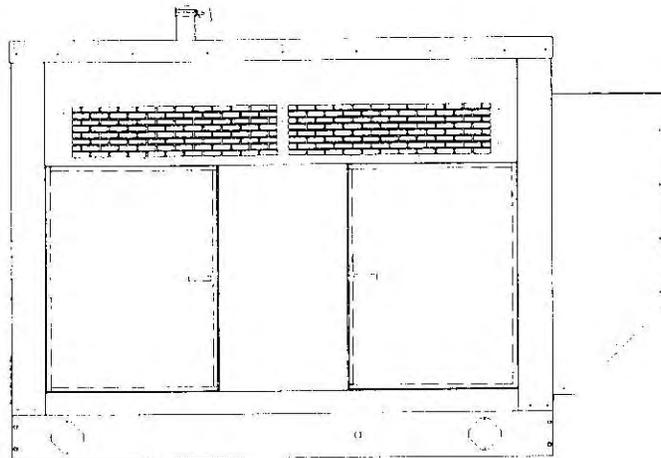
KOHLER POWER SYSTEMS

Weather and Sound Enclosures

9001
KOHLER
POWER SYSTEMS
NATIONALLY REGISTERED



Weather Enclosure



Sound Enclosure

Applicable to the following:

20ROZJB

20-230REOZJB

Kohler® enclosures protect stationary generator sets from the elements, animal intrusion, and unwanted entry.

Weather Enclosure Standard Features

- Enclosed insulated critical silencer with tailpipe and rain cap
- Skid-mounted, fully corrosion-resistant material construction with hinged and removable doors
- Fade-, scratch-, and corrosion-resistant Kohler® cream beige and black finish
- Lockable, flush-mounted door latches
- Louvers and baffles for air inlet to prevent rain and snow entry
- Pitched enclosure roof to prevent water accumulation

Sound Enclosure Standard Features

- Includes all of the weather enclosure features
- Vertical outlet hoods with 90° angles to redirect air and reduce noise
- Acoustic insulation meeting UL94 HF1 flame-resistance standards

Weather and Sound Enclosure Data

Type of doors	Hinged/removable
Latches	Lockable
Silencer	Insulated/critical
Generator set temperature and altitude derate with an enclosure and enclosed silencer	See the generator set specification sheet

Ratings and Performance

For generator set ratings and performance, refer to the respective generator set's specification sheet.

Enclosure and Generator Set Testing

Kohler Co. prototype-tests the generator set inside the enclosure for performance.

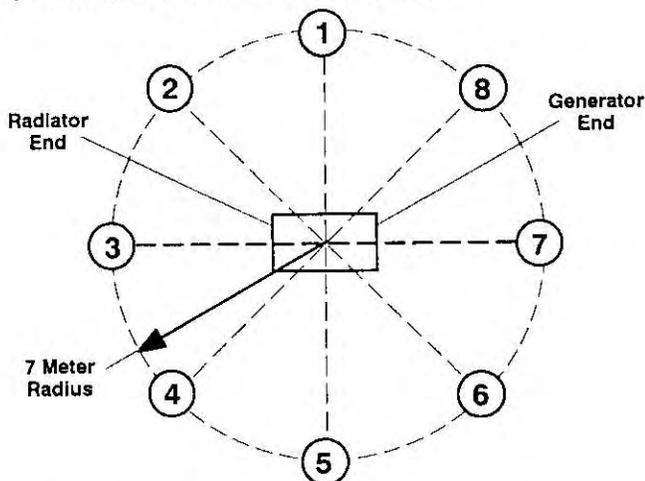
Sound Enclosure Data

Sound Data for Generator Sets Operating Inside a Sound Enclosure

Measurement Positions and Distances for Data

Microphone Positions: (1-8) as shown
 Microphone Distance: 7 m (23 ft.) (from center of enclosure)
 Microphone Height: 1 m (3.28 ft.)
 Data Measured in: dB(A), sound pressure (Re: 20 μ Pa)

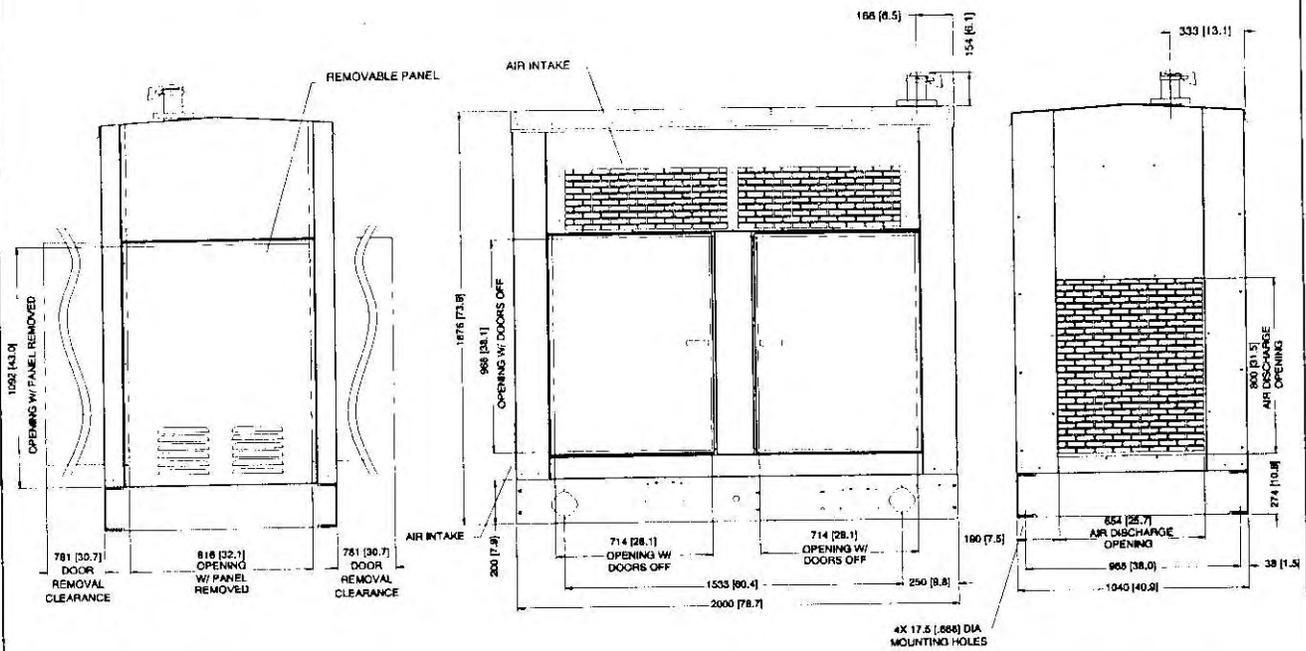
Note: Measurements taken with the generator set operating at full load.



Sound Data in dB(A)

Models	Hz	Microphone Positions							
		1	2	3	4	5	6	7	8
20ROZJB	60*	77	75	79	77	77	77	79	77
	50*	72	73	74	74	73	75	76	74
20REOZJB	60	69	71	74	73	70	71	73	71
	50	67	69	70	69	68	70	71	69
30REOZJB	60	69	71	74	73	70	71	73	71
	50	67	69	70	69	68	70	71	69
40REOZJB	60	69	71	74	73	70	71	73	71
	50	67	69	70	69	68	70	71	69
50REOZJB	60	74	73	75	75	73	73	73	72
	50	73	71	72	72	71	72	72	71
60REOZJB	60	75	74	76	76	75	74	74	74
	50	74	71	72	72	71	72	72	72
80REOZJB	60	73	75	75	75	74	75	77	74
	50	71	71	71	71	72	72	72	72
100REOZJB	60	73	74	75	75	73	72	74	73
	50	72	72	73	73	72	70	71	71
125REOZJB	60	73	75	76	76	74	73	74	73
	50	73	73	74	74	73	71	71	72
150REOZJB	60	74	75	76	74	74	75	73	76
	50	71	71	73	72	72	73	73	73
180REOZJB	60	76	76	76	78	76	76	76	76
	50	72	72	74	74	72	73	73	73
200REOZJB	60	75	75	75	77	74	75	75	76
	50	71	71	71	71	71	72	72	72
230REOZJB	60	76	75	76	77	75	75	75	76
	50	73	73	71	72	72	73	72	72

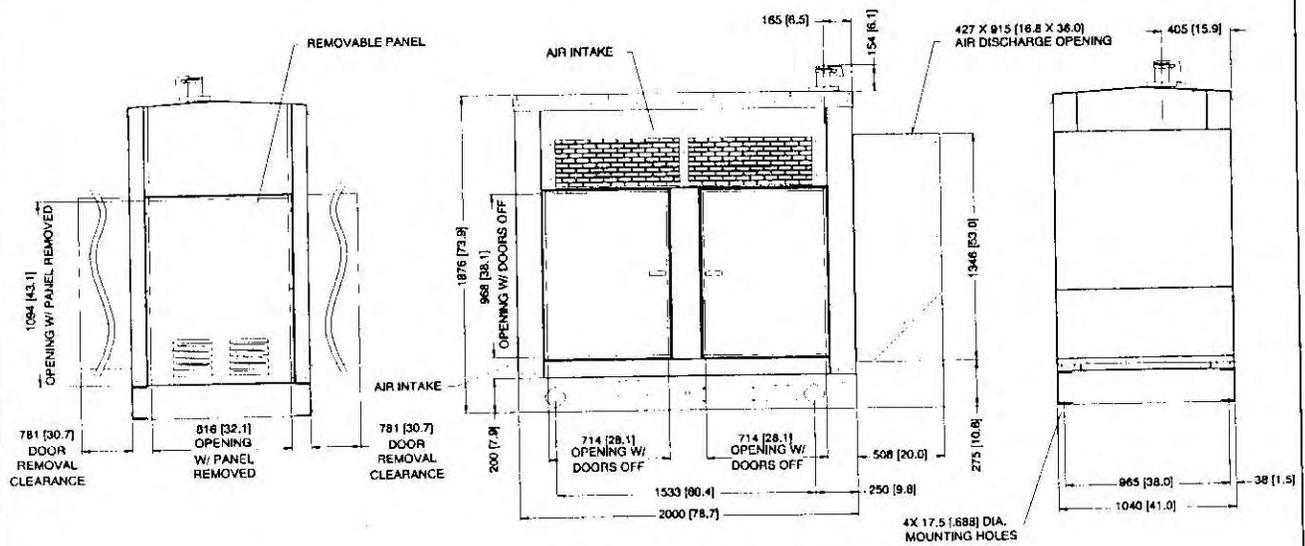
* Estimated values



Dimensions in [] are inch equivalents.

20ROZJB and 20-40REOZJB Weather Enclosure

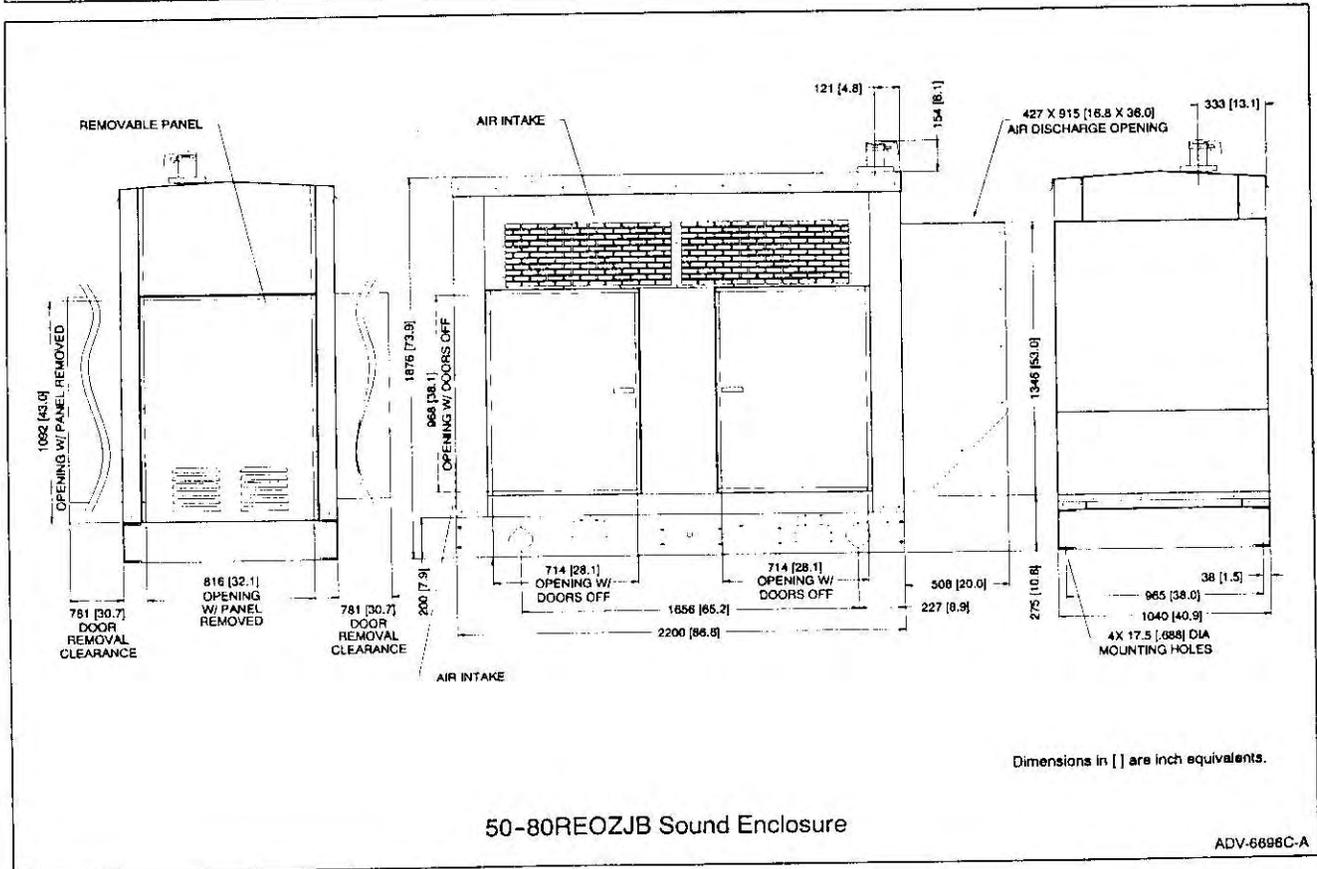
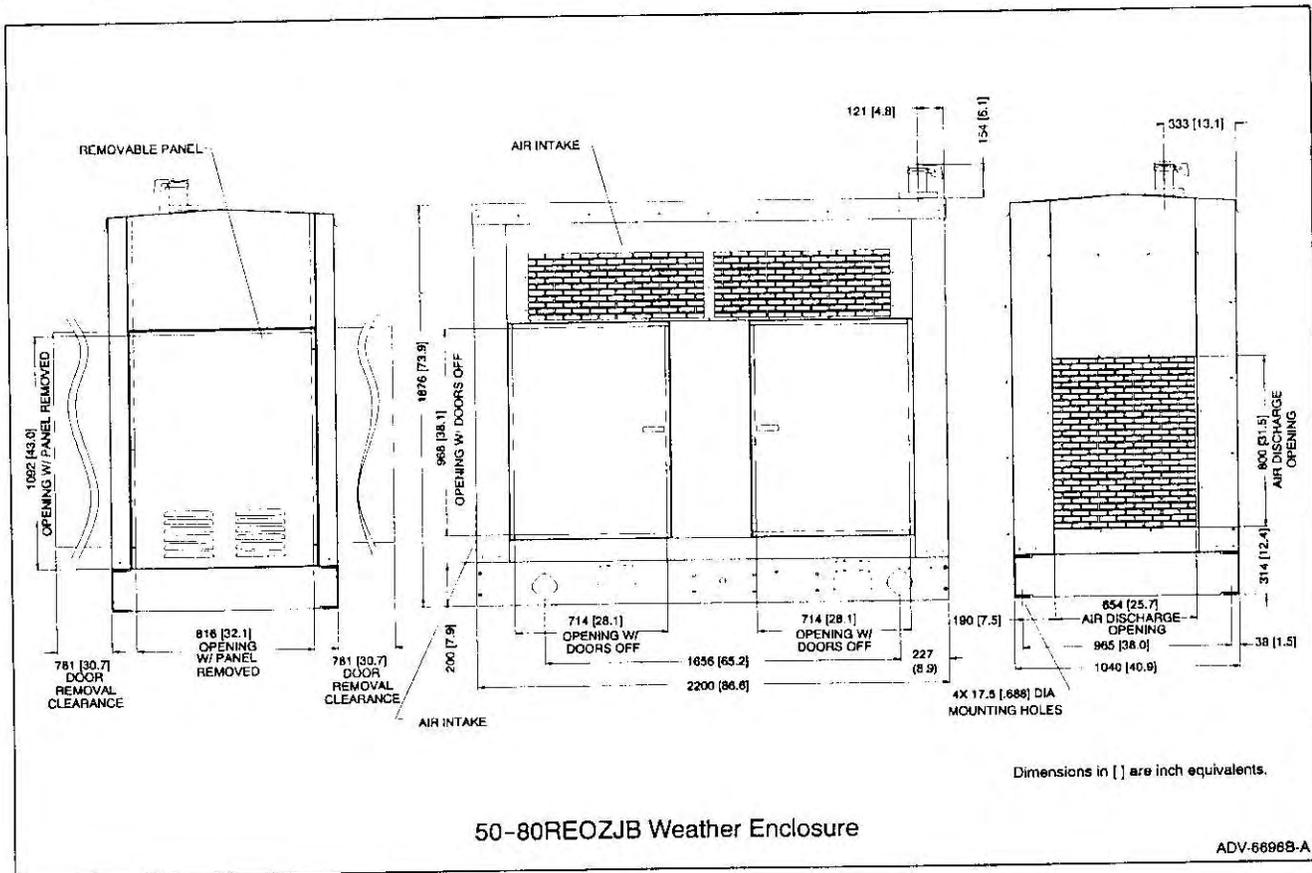
ADV-6657B-B

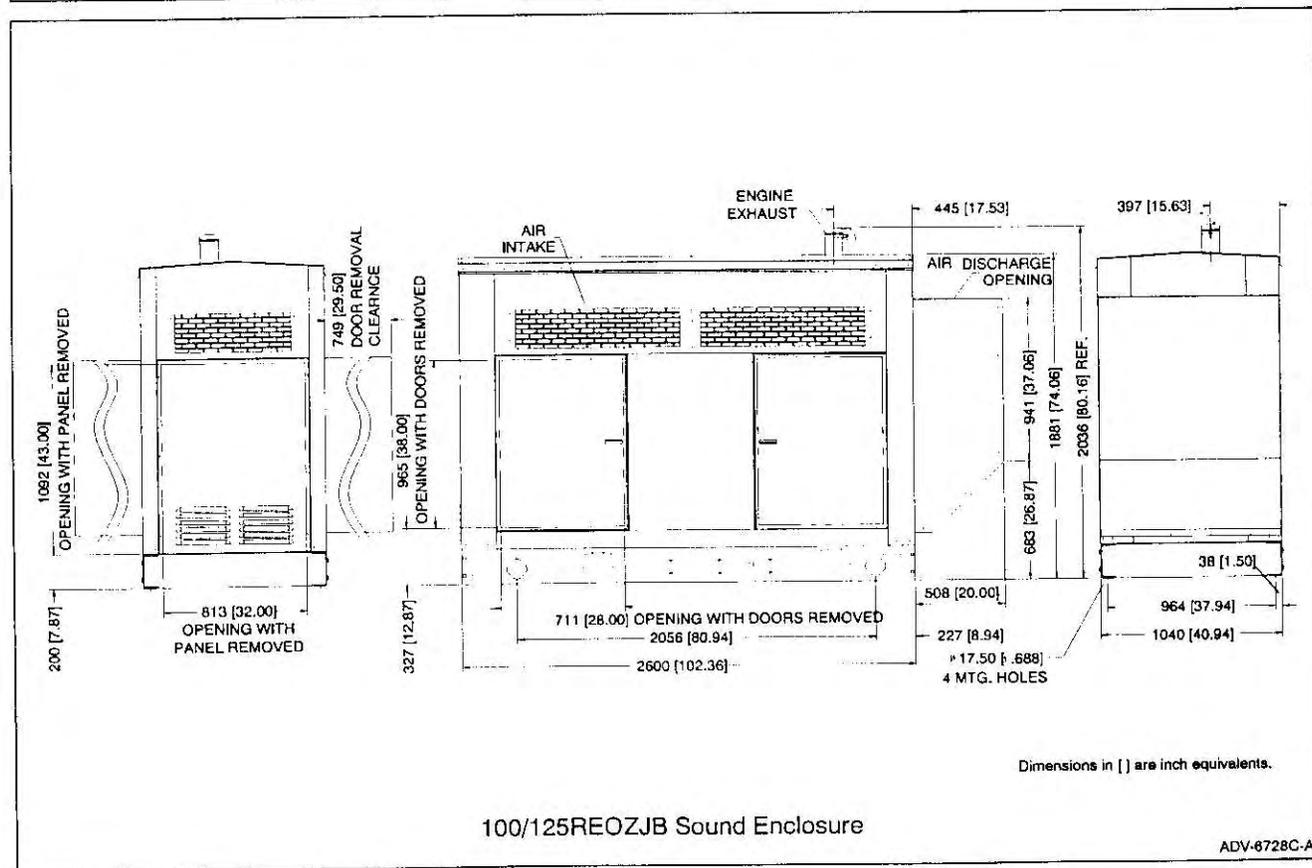
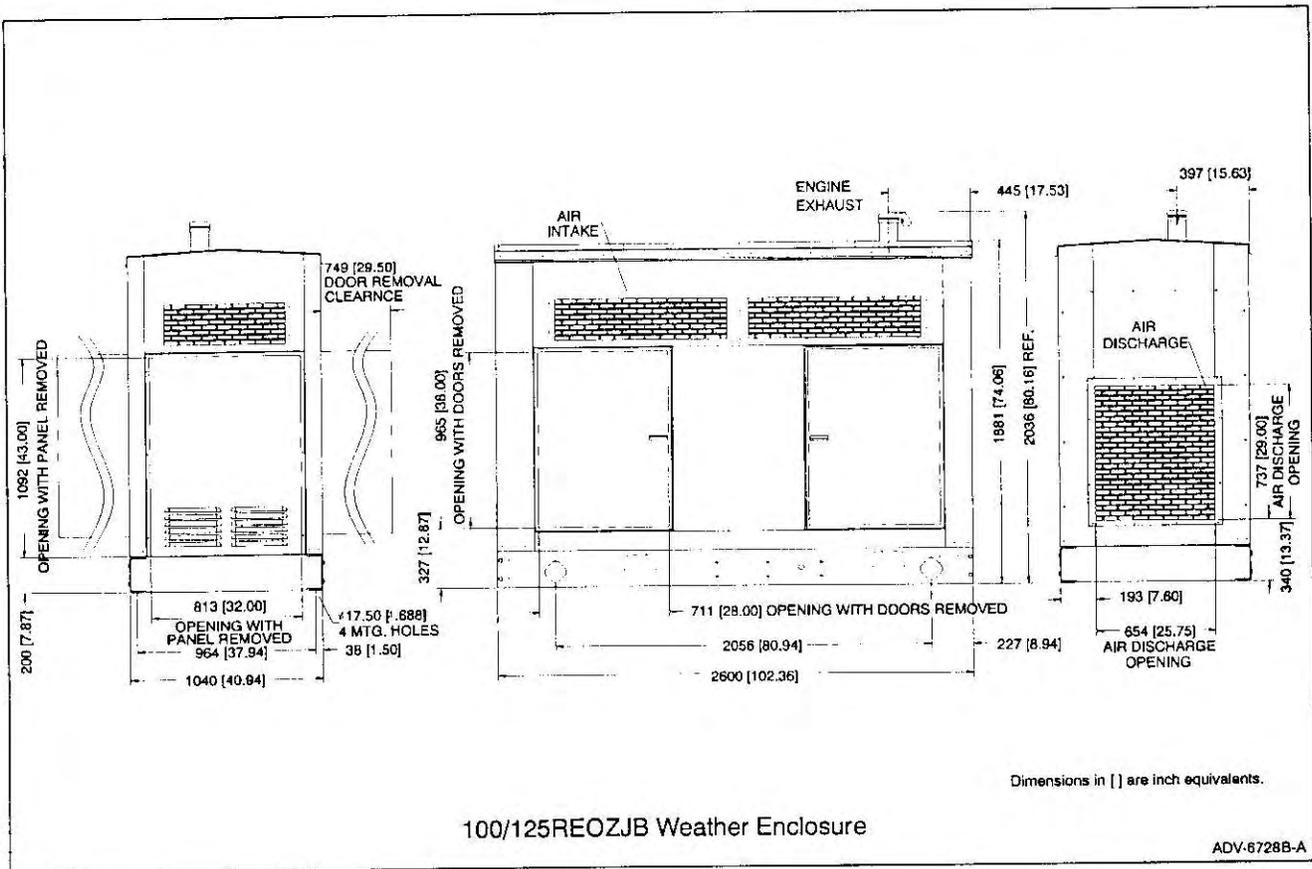


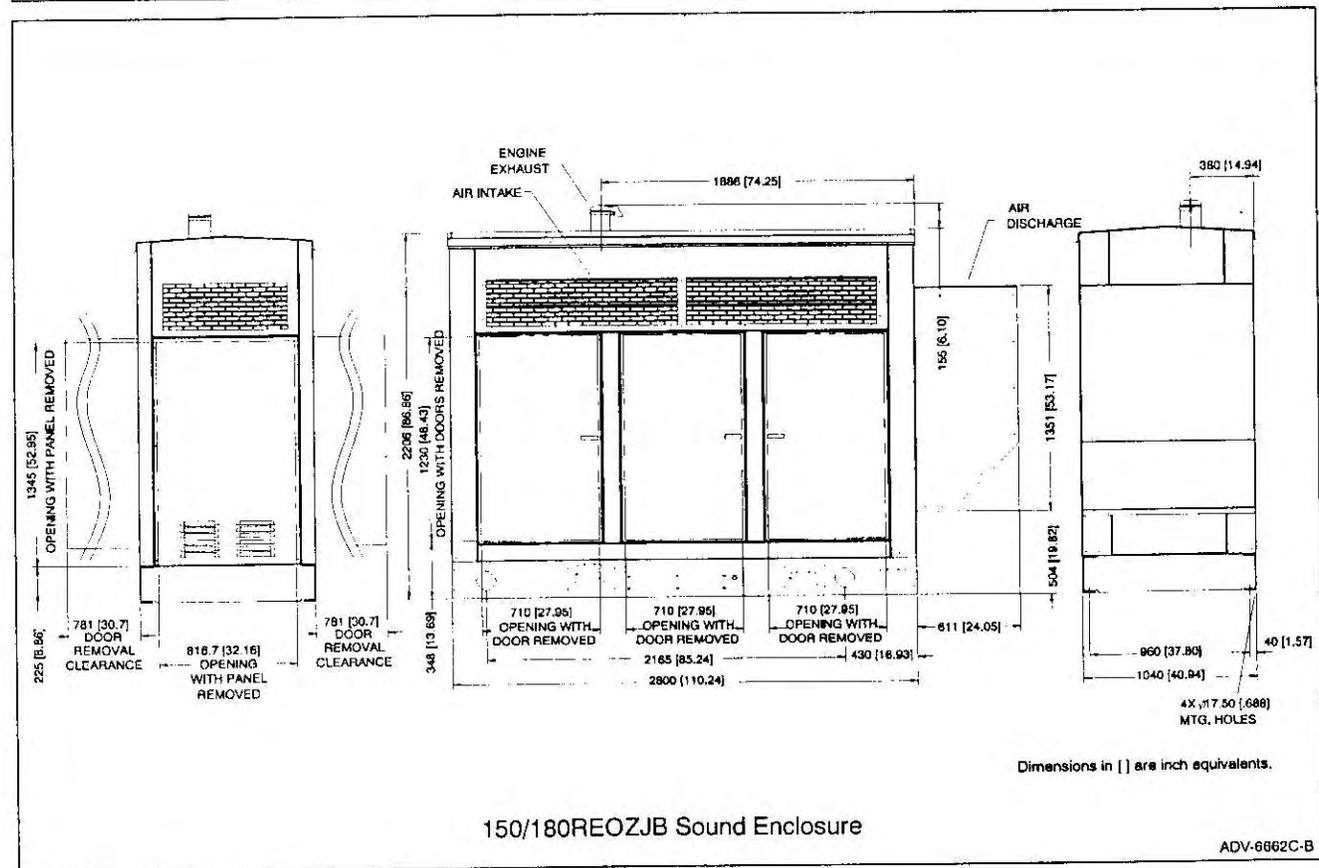
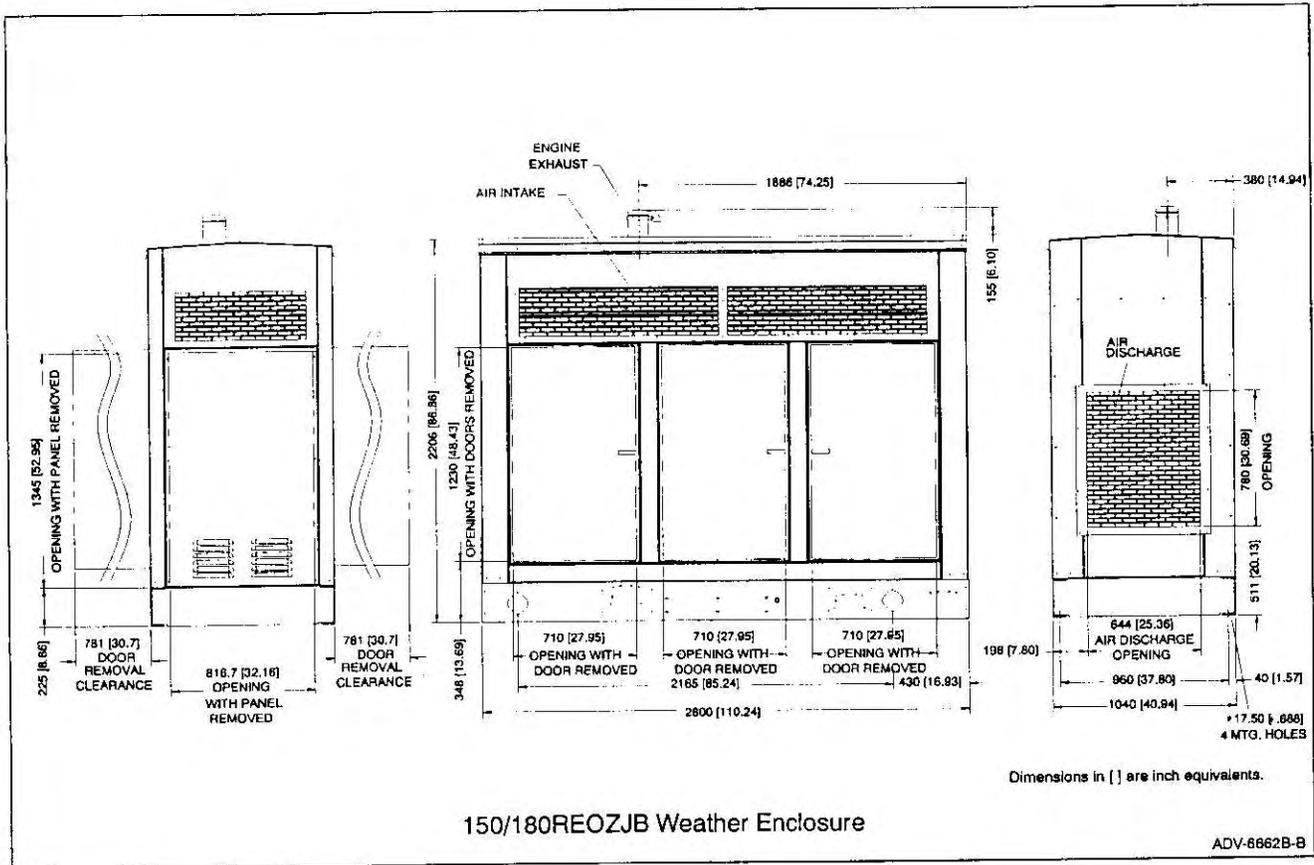
Dimensions in [] are inch equivalents.

20ROZJB and 20-40REOZJB Sound Enclosure

ADV-6657C-B







Weather Enclosure Weight

Model	Alternator	Steel Construction Enclosure	
		Generator Set (Wet) with Enclosure, kg (lb.)	Weather Enclosure Only, kg (lb.)
20 kW	4P4, 4Q4	962 (2120)	281 (620)
30 kW	4Q4	962 (2120)	281 (620)
30 kW	4P5	977 (2155)	281 (620)
40 kW	4P7, 4P8, 4Q10	1039 (2290)	281 (620)
50 kW	4P8	1258 (2773)	308 (680)
50 kW	4Q10	1301 (2868)	308 (680)
60 kW	4P10	1301 (2868)	308 (680)
60 kW	4S7, 4V7	1363 (3006)	308 (680)
80 kW	4S7	1363 (3006)	308 (680)
80 kW	4S9, 4V9	1433 (3160)	308 (680)
100 kW	4S9	1569 (3460)	363 (800)
100 kW	4V11	1678 (3700)	363 (800)
125 kW	4S11	1678 (3700)	363 (800)
125 kW	4S13	1701 (3750)	363 (800)
150 kW	4S13	1846 (4070)	417 (920)
150 kW	4S15	1914 (4220)	417 (920)
180 kW	4S15	2277 (5020)	417 (920)
200 kW	4UA9	2513 (5540)	454 (1000)
230 kW	4UA10, 4UA13	2703 (5960)	454 (1000)

Sound Enclosure Weight

Model	Alternator	Steel Construction Enclosure	
		Generator Set (Wet) with Enclosure, kg (lb.)	Sound Enclosure, Only, kg (lb.)
20 kW	4P4, 4Q4	1016 (2240)	336 (740)
30 kW	4Q4	1016 (2240)	336 (740)
30 kW	4P5	1032 (2275)	336 (740)
40 kW	4P7, 4P8, 4Q10	1093 (2410)	336 (740)
50 kW	4P8	1317 (2903)	367 (810)
50 kW	4Q10	1360 (2998)	367 (810)
60 kW	4P10	1360 (2998)	367 (810)
60 kW	4S7, 4V7	1422 (3136)	367 (810)
80 kW	4S7	1422 (3136)	367 (810)
80 kW	4S9, 4V9	1492 (3290)	367 (810)
100 kW	4S9	1674 (3690)	467 (1030)
100 kW	4V11	1783 (3930)	467 (1030)
125 kW	4S11	1783 (3930)	467 (1030)
125 kW	4S13	1805 (3980)	467 (1030)
150 kW	4S13	1996 (4400)	567 (1250)
150 kW	4S15	2064 (4550)	567 (1250)
180 kW	4S15	2427 (5350)	567 (1250)
200 kW	4UA9	2712 (5980)	653 (1440)
230 kW	4UA10, 4UA13	2903 (6400)	653 (1440)

DISTRIBUTED BY:

Availability is subject to change without notice. Kohler Co. reserves the right to change the design or specifications without notice and without any obligation or liability whatsoever. Contact your local Kohler® generator set distributor for availability.

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APPENDIX E

Cadna Analysis Data and Results

Noise Sources

Name	M.	ID	Result. PWL		Lw / Li		Direct.	Height	Coordinates			
			Day (dBA)	Night (dBA)	Type	Value			X (m)	Y (m)	Z (m)	
Cricket CMO			76.1	76.1	Lw	L1	(none)	1.00	r	178.69	104.29	1.00
Cricket CMO			76.1	76.1	Lw	L1	(none)	1.00	r	178.67	102.38	1.00
Cricket CMO			71.9	71.9	Lw	ppc	(none)	1.00	r	177.91	100.55	1.00
Kohler Gen			101.9	101.9	Lw	kohler40	(none)	1.83	r	166.97	92.75	1.83
Verizon AC			89.8	89.8	Lw	IB02	(none)	1.00	r	172.83	100.34	1.00
Sprint Equipment			79.1	79.1	Lw	mod4	(none)	1.00	r	179.32	96.19	1.00

Unmitigated Partial Noise Impacts

Source		Partial Level Day		
Name	M. ID	South	East	West
Cricket CMO		35.3	25.8	35.3
Cricket CMO		37.2	24.4	35.2
Cricket CMO		30.8	25.6	29.3
Kohler Gen		70.5	51.5	65.5
Verizon AC		43.5	42.8	51.2
Sprint Equipment		51.2	31.3	27.1

Unmitigated Cumulative Noise Impacts

Name: M. ID	Level Lr		Limit Value		Land Use			Height (m)	Coordinates		
	Day (dBA)	Night (dBA)	Day (dBA)	Night (dBA)	Type	Auto	Noise Type		X (m)	Y (m)	Z (m)
South	70.6	70.6	0.0	0.0		x	Total	1.52	176.87	90.58	1.52
East	52.1	52.1	0.0	0.0		x	Total	1.52	196.20	96.26	1.52
West	65.7	65.7	0.0	0.0		x	Total	1.52	153.89	104.76	1.52

Cadna/A-Berechnung
 Version 3.5.115 (32 Bit)
 Datei: \\Whitney\active\files\Jobs 2006\A60809N1-M&M\telecom- Cricket Comm- Black My Norte Tank SAN227A-Munson-San Diego-MBA60809N1 CadnaTemp.cna
 Start: 16.08.06 13:34:46
 Berechnungsparameter:

General
 Country International
 Max. Error (dB) 0
 Max. Search Radius (m) 2000
 Min. Dist Src to Rcvr 0
 Partition 0.5
 Raster Factor 1000
 Max. Length of Section (m) 1
 Min. Length of Section (m) 0
 Min. Length of Section (%) 0
 Proj. Line Sources On
 Proj. Area Sources On
 Ref. Time 960
 Reference Time Day (min) 480
 Reference Time Night (min) 0
 Daytime Penalty (dB) 0
 Recr. Time Penalty (dB) 0
 Night-time Penalty (dB) 0
 DTM
 Standard Height (m) 0
 Model of Terrain Triangulation
 Reflection
 max. Order of Reflection 0
 Search Radius Src/Rcvr 100.00 100.00
 Max. Distance Source - Rcvr 1000.00 1000.00
 Min. Distance Rcvr - Reflector 1.00 1.00
 Min. Distance Source - Reflector 0.1
 Industrial (ISO 9613)
 Lateral Diffraction some Obj
 Obst. within Area Src do not shield On
 Excl. Ground Alt. over Barrier
 Screening Dz with limit 3.0 20.0 0.0
 Barrier Coefficients C1,2,3
 Temperature (°C) 20
 rel. Humidity (%) 20
 Ground Absorption G 1
 Wind Speed for Dir. (m/s) 3
 Roads (RLS-90)
 Strictly acc. to RLS-90
 Railways (Schall 03)
 Strictly acc. to Schall 03 / Schall-Transrapid
 Aircraft (AzB)
 Strictly acc. to AzB

Receiver: South
 ID: 176.87
 X: 90.58
 Y: 1.52
 Z: 0
 Ground:

ISO	Bezeichnung	ID	X	Y	Z	Ground	RefHOrd	LxT	LxN	L/A	Dist.	Hm	Freq	Adiv	KOb	Agr	Abar	z	Aatm	AfOf	Ahous	CmetN	CmetD	RL	LtoIN	LtoT	LtoN	
	Kohler Gen		166.97	92.75	1.83	0	0	101.9	101.9	1	10.14	1.68	1000	31.12	0	0.16	0	0	0.07	0	0	0	0	0	0	0	70.54	70.54
	Venzon AC		172.83	100.34	1	0	0	-24.9	-24.9	1	10.58	2.85	32	31.49	0	-3	4.46	2.06	0	0	0	0	0	0	0	-57.83	-57.83	
	Venzon AC		172.83	100.34	1	0	0	68.2	68.2	1	10.58	2.85	63	31.49	0	-3	6.4	2.06	0	0	0	0	0	0	0	33.32	33.32	

ISO	Bezeichnung	X	Y	Z	Ground	RefID	LxT	LxN	LxA	Dist.	hm	Freq	Activ	K0b	Agri	Abar	Z	Aaim	Atol	Ahaus	Cmet	CmetN	Dc	RL	LhoT	LhoN		
Verizon AC		172.83	100.34	1	0	0	75.9	75.9	1	10.58	285	125	31.49	0	0.22	7.96	2.06	0.01	0	0	0	0	0	0	0	36.23	36.23	
Verizon AC		172.83	100.34	1	0	0	83.4	83.4	1	10.58	285	250	31.49	0	2.83	10.01	2.06	0.01	0	0	0	0	0	0	0	0	39.07	39.07
Verizon AC		172.83	100.34	1	0	0	81.8	81.8	1	10.58	285	500	31.49	0	2.61	13.46	2.06	0.03	0	0	0	0	0	0	0	0	34.23	34.23
Verizon AC		172.83	100.34	1	0	0	85.1	85.1	1	10.58	285	1000	31.49	0	0.51	17.12	2.06	0.07	0	0	0	0	0	0	0	0	35.93	35.93
Verizon AC		172.83	100.34	1	0	0	82.5	82.5	1	10.58	285	2000	31.49	0	0	19.51	2.06	0.23	0	0	0	0	0	0	0	0	31.29	31.29
Verizon AC		172.83	100.34	1	0	0	75.1	75.1	1	10.58	285	4000	31.49	0	0	21.42	2.06	0.78	0	0	0	0	0	0	0	0	21.42	21.42
Verizon AC		172.83	100.34	1	0	0	68.6	68.6	1	10.58	285	8000	31.49	0	0	22.85	2.06	2.28	0	0	0	0	0	0	0	0	12	12
Sprint Equipment		179.32	96.19	1	0	0	-29.1	-29.1	1	6.14	126	32	26.77	0	-3	0	0	0	0	0	0	0	0	0	0	0	-52.9	-52.9
Sprint Equipment		179.32	96.19	1	0	0	53	53	1	6.14	126	63	26.77	0	-3	0	0	0	0	0	0	0	0	0	0	0	29.2	29.2
Sprint Equipment		179.32	96.19	1	0	0	61.2	61.2	1	6.14	126	125	26.77	0	0.13	0	0	0	0	0	0	0	0	0	0	0	34.26	34.26
Sprint Equipment		179.32	96.19	1	0	0	73	73	1	6.14	126	250	26.77	0	1.71	0	0	0.01	0	0	0	0	0	0	0	0	44.48	44.48
Sprint Equipment		179.32	96.19	1	0	0	75.7	75.7	1	6.14	126	500	26.77	0	1.58	0	0	0.02	0	0	0	0	0	0	0	0	47.31	47.31
Sprint Equipment		179.32	96.19	1	0	0	72.1	72.1	1	6.14	126	1000	26.77	0	0.31	0	0	0.04	0	0	0	0	0	0	0	0	44.95	44.95
Sprint Equipment		179.32	96.19	1	0	0	68.2	68.2	1	6.14	126	2000	26.77	0	0	0	0	0.13	0	0	0	0	0	0	0	0	41.27	41.27
Sprint Equipment		179.32	96.19	1	0	0	60.1	60.1	1	6.14	126	4000	26.77	0	0	0	0	0.46	0	0	0	0	0	0	0	0	32.85	32.85
Sprint Equipment		179.32	96.19	1	0	0	53.7	53.7	1	6.14	126	8000	26.77	0	0	0	0	1.32	0	0	0	0	0	0	0	0	25.58	25.58
Cricket CMO		178.67	102.38	1	0	0	-24.8	-24.8	1	11.95	1.6	32	32.54	0	-3	1.27	0.14	0	0	0	0	0	0	0	0	0	-55.58	-55.58
Cricket CMO		178.67	102.38	1	0	0	49.7	49.7	1	11.95	1.6	63	32.54	0	-3	1.66	0.14	0	0	0	0	0	0	0	0	0	18.52	18.52
Cricket CMO		178.67	102.38	1	0	0	52.7	52.7	1	11.95	1.6	125	32.54	0	0.25	1.37	0.14	0.01	0	0	0	0	0	0	0	0	18.56	18.56
Cricket CMO		178.67	102.38	1	0	0	61	61	1	11.95	1.6	250	32.54	0	3.15	1.03	0.14	0.02	0	0	0	0	0	0	0	0	24.28	24.28
Cricket CMO		178.67	102.38	1	0	0	70.5	70.5	1	11.95	1.6	500	32.54	0	2.9	2.54	0.14	0.03	0	0	0	0	0	0	0	0	32.51	32.51
Cricket CMO		178.67	102.38	1	0	0	71.4	71.4	1	11.95	1.6	1000	32.54	0	0.56	5.36	0.14	0.08	0	0	0	0	0	0	0	0	32.88	32.88
Cricket CMO		178.67	102.38	1	0	0	70.4	70.4	1	11.95	1.6	2000	32.54	0	0	7.8	0.14	0.26	0	0	0	0	0	0	0	0	29.83	29.83
Cricket CMO		178.67	102.38	1	0	0	64.1	64.1	1	11.95	1.6	4000	32.54	0	0	10.5	0.14	0.89	0	0	0	0	0	0	0	0	20.2	20.2
Cricket CMO		178.69	104.29	1	0	0	-24.8	-24.8	1	13.84	1.57	32	33.82	0	-3	2.28	0.07	0	0	0	0	0	0	0	0	0	3.07	3.07
Cricket CMO		178.69	104.29	1	0	0	49.7	49.7	1	13.84	1.57	63	33.82	0	-3	2.92	0.07	0	0	0	0	0	0	0	0	0	-57.87	-57.87
Cricket CMO		178.69	104.29	1	0	0	52.7	52.7	1	13.84	1.57	125	33.82	0	0.28	2.3	0.07	0.01	0	0	0	0	0	0	0	0	15.98	15.98
Cricket CMO		178.69	104.29	1	0	0	61	61	1	13.84	1.57	250	33.82	0	3.59	1.05	0.07	0.02	0	0	0	0	0	0	0	0	16.31	16.31
Cricket CMO		178.69	104.29	1	0	0	70.5	70.5	1	13.84	1.57	500	33.82	0	3.31	2.4	0.07	0.04	0	0	0	0	0	0	0	0	22.55	22.55
Cricket CMO		178.69	104.29	1	0	0	71.4	71.4	1	13.84	1.57	1000	33.82	0	0.84	5.97	0.07	0.09	0	0	0	0	0	0	0	0	30.9	30.9
Cricket CMO		178.69	104.29	1	0	0	64.1	64.1	1	13.84	1.57	2000	33.82	0	0	8.65	0.07	0.3	0	0	0	0	0	0	0	0	27.66	27.66
Cricket CMO		178.69	104.29	1	0	0	51.7	51.7	1	13.84	1.57	4000	33.82	0	0	11.58	0.07	1.03	0	0	0	0	0	0	0	0	17.7	17.7
Cricket CMO		177.91	100.55	1	0	0	22.7	22.7	1	10.04	1.64	32	31.04	0	-3	2.42	0.71	0	0	0	0	0	0	0	0	0	-0.26	-0.26
Cricket CMO		177.91	100.55	1	0	0	46.7	46.7	1	10.04	1.64	63	31.04	0	-3	3.59	0.71	0	0	0	0	0	0	0	0	0	-7.78	-7.78
Cricket CMO		177.91	100.55	1	0	0	54.4	54.4	1	10.04	1.64	125	31.04	0	0.21	4.37	0.71	0.01	0	0	0	0	0	0	0	0	15.04	15.04
Cricket CMO		177.91	100.55	1	0	0	64.1	64.1	1	10.04	1.64	250	31.04	0	2.7	5.46	0.71	0.01	0	0	0	0	0	0	0	0	18.75	18.75
Cricket CMO		177.91	100.55	1	0	0	69.8	69.8	1	10.04	1.64	500	31.04	0	2.49	8.07	0.71	0.03	0	0	0	0	0	0	0	0	24.86	24.86
Cricket CMO		177.91	100.55	1	0	0	63.6	63.6	1	10.04	1.64	1000	31.04	0	0.48	11.65	0.71	0.07	0	0	0	0	0	0	0	0	28.16	28.16
Cricket CMO		177.91	100.55	1	0	0	59	59	1	10.04	1.64	2000	31.04	0	0	14.76	0.71	0.22	0	0	0	0	0	0	0	0	20.34	20.34
Cricket CMO		177.91	100.55	1	0	0	51.8	51.8	1	10.04	1.64	4000	31.04	0	0	17.92	0.71	0.74	0	0	0	0	0	0	0	0	12.96	12.96
Cricket CMO		177.91	100.55	1	0	0	42.3	42.3	1	10.04	1.64	8000	31.04	0	0	20.46	0.71	2.16	0	0	0	0	0	0	0	0	-11.39	-11.39

Limit Value 0 0
Level D/N: 70.6063 70.6063

Receiver: East

ID: 196.2
X: 96.26
Y: 1.52
Z: 0
Ground: 0

ISO	Bezeichnung	X	Y	Z	Ground	RefID	LxT	LxN	LxA	Dist.	hm	Freq	Activ	K0b	Agri	Abar	Z	Aaim	Atol	Ahaus	Cmet	CmetN	Dc	RL	LhoT	LhoN		
Kohler Gen		166.97	92.75	1.83	0	0	101.9	101.9	1	29.44	2.49	1000	40.38	0	0.39	9.43	0.25	0.19	0	0	0	0	0	0	0	0	51.5	51.5
Verizon AC		172.83	100.34	1	0	0	-24.9	-24.9	1	23.73	1.96	32	38.51	0	-3	3.02	0.15	0	0	0	0	0	0	0	0	0	-63.41	-63.41
Verizon AC		172.83	100.34	1	0	0	68.2	68.2	1	23.73	1.96	63	38.51	0	-3	3.63	0.15	0.01	0	0	0	0	0	0	0	0	29.07	29.07
Verizon AC		172.83	100.34	1	0	0	75.9	75.9	1	23.73	1.96	125	38.51	0	0.45	2.98	0.15	0.02	0	0	0	0	0	0	0	0	33.97	33.97
Verizon AC		172.83	100.34	1	0	0	83.4	83.4	1	23.73	1.96	250	38.51	0	5.61	0.82	0.15	0.03	0	0	0	0	0	0	0	0	38.45	38.45
Verizon AC		172.83	100.34	1	0	0	81.8	81.8	1	23.73	1.96	500	38.51	0	5.17	3.47	0.15	0.06	0	0	0	0	0	0	0	0	34.61	34.61

ISO	Bezeichnung	ID	X	Y	Z	Ground	RefOrd	LxT	LxN	LxA	Dist.	hm	Freq	Adiv	K0b	Agv	Abar	z	Aadm	AloI	AhouS	CmetN	Dc	RL	LletT	LicIN	
Verizon AC			172.83	100.34	1	0	0	85.1	85.1	1	23.73	1.96	1000	38.51	0	0	1	9.06	0.15	0.16	0	0	0	0	0	36.39	36.39
Verizon AC			172.83	100.34	1	0	0	82.5	82.5	1	23.73	1.96	2000	38.51	0	0	0	12.41	0.15	0.51	0	0	0	0	0	31.08	31.08
Verizon AC			172.83	100.34	1	0	0	75.1	75.1	1	23.73	1.96	4000	38.51	0	0	0	15.32	0.15	1.76	0	0	0	0	0	19.53	19.53
Verizon AC			172.83	100.34	1	0	0	68.6	68.6	1	23.73	1.96	8000	38.51	0	0	0	18.25	0.15	5.1	0	0	0	0	0	6.75	6.75
Sprint Equipment			179.32	96.19	1	0	0	-29.1	-29.1	1	16.89	2.06	32	35.55	0	-3	-3	3.69	0.56	0	0	0	0	0	0	-65.37	-65.37
Sprint Equipment			179.32	96.19	1	0	0	53	53	1	16.89	2.06	63	35.55	0	0	0	3.52	0.56	0	0	0	0	0	0	15.17	15.17
Sprint Equipment			179.32	96.19	1	0	0	61.2	61.2	1	16.89	2.06	125	35.55	0	0	0	5.71	0.56	0.01	0	0	0	0	0	19.56	19.56
Sprint Equipment			179.32	96.19	1	0	0	73	73	1	16.89	2.06	250	35.55	0	0	0	4.25	0.56	0.02	0	0	0	0	0	27.57	27.57
Sprint Equipment			179.32	96.19	1	0	0	75.7	75.7	1	16.89	2.06	500	35.55	0	0	0	3.92	0.56	0.04	0	0	0	0	0	27	27
Sprint Equipment			179.32	96.19	1	0	0	72.1	72.1	1	16.89	2.06	1000	35.55	0	0	0	14.68	0.56	0.11	0	0	0	0	0	20.97	20.97
Sprint Equipment			179.32	96.19	1	0	0	68.2	68.2	1	16.89	2.06	2000	35.55	0	0	0	18.29	0.56	0.36	0	0	0	0	0	13.97	13.97
Sprint Equipment			179.32	96.19	1	0	0	60.1	60.1	1	16.89	2.06	4000	35.55	0	0	0	21.04	0.56	1.25	0	0	0	0	0	-8.09	-8.09
Sprint Equipment			179.32	96.19	1	0	0	53.7	53.7	1	16.89	2.06	8000	35.55	0	0	0	22.57	0.56	3.63	0	0	0	0	0	-63.59	-63.59
CrickeT CMO			178.67	102.38	1	0	0	-24.8	-24.8	1	18.58	1.64	32	36.38	0	-3	-3	5.44	0.68	0	0	0	0	0	0	9.08	9.08
CrickeT CMO			178.67	102.38	1	0	0	49.7	49.7	1	18.58	1.64	63	36.38	0	0	0	7.27	0.68	0	0	0	0	0	0	8.74	8.74
CrickeT CMO			178.67	102.38	1	0	0	52.7	52.7	1	18.58	1.64	125	36.38	0	0	0	3.36	0.68	0.01	0	0	0	0	0	13.99	13.99
CrickeT CMO			178.67	102.38	1	0	0	61	61	1	18.58	1.64	250	36.38	0	0	0	4.61	0.68	0.03	0	0	0	0	0	20.87	20.87
CrickeT CMO			178.67	102.38	1	0	0	70.5	70.5	1	18.58	1.64	500	36.38	0	0	0	4.24	0.68	0.05	0	0	0	0	0	19.1	19.1
CrickeT CMO			178.67	102.38	1	0	0	71.4	71.4	1	18.58	1.64	1000	36.38	0	0	0	8.82	0.68	0.12	0	0	0	0	0	14.29	14.29
CrickeT CMO			178.67	102.38	1	0	0	70.4	70.4	1	18.58	1.64	2000	36.38	0	0	0	19.36	0.68	0.4	0	0	0	0	0	3.31	3.31
CrickeT CMO			178.67	102.38	1	0	0	64.1	64.1	1	18.58	1.64	4000	36.38	0	0	0	23.07	0.68	1.38	0	0	0	0	0	-12.57	-12.57
CrickeT CMO			178.69	104.29	1	0	0	51.7	51.7	1	18.58	1.64	8000	36.38	0	0	0	23.93	0.68	4	0	0	0	0	0	-61.4	-61.4
CrickeT CMO			178.69	104.29	1	0	0	-24.8	-24.8	1	19.27	2.1	32	36.7	0	-3	-3	2.93	0.8	0	0	0	0	0	0	11.94	11.94
CrickeT CMO			178.69	104.29	1	0	0	49.7	49.7	1	19.27	2.1	63	36.7	0	0	0	4.09	0.8	0.01	0	0	0	0	0	10.84	10.84
CrickeT CMO			178.69	104.29	1	0	0	52.7	52.7	1	19.27	2.1	125	36.7	0	0	0	3.38	0.8	0.01	0	0	0	0	0	14.07	14.07
CrickeT CMO			178.69	104.29	1	0	0	61	61	1	19.27	2.1	250	36.7	0	0	0	4.75	0.8	0.03	0	0	0	0	0	20.73	20.73
CrickeT CMO			178.69	104.29	1	0	0	70.5	70.5	1	19.27	2.1	500	36.7	0	0	0	4.37	0.8	0.05	0	0	0	0	0	21.34	21.34
CrickeT CMO			178.69	104.29	1	0	0	71.4	71.4	1	19.27	2.1	1000	36.7	0	0	0	8.85	0.8	0.13	0	0	0	0	0	17.96	17.96
CrickeT CMO			178.69	104.29	1	0	0	70.4	70.4	1	19.27	2.1	2000	36.7	0	0	0	15.36	0.8	0.41	0	0	0	0	0	8.13	8.13
CrickeT CMO			178.69	104.29	1	0	0	64.1	64.1	1	19.27	2.1	4000	36.7	0	0	0	17.88	0.8	1.43	0	0	0	0	0	-9.18	-9.18
CrickeT CMO			178.69	104.29	1	0	0	51.7	51.7	1	19.27	2.1	8000	36.7	0	0	0	20.07	0.8	4.15	0	0	0	0	0	-13.71	-13.71
CrickeT CMO			177.91	100.55	1	0	0	22.7	22.7	1	18.79	2.09	32	36.48	0	-3	-3	2.9	0.73	0	0	0	0	0	0	9.55	9.55
CrickeT CMO			177.91	100.55	1	0	0	46.7	46.7	1	18.79	2.09	63	36.48	0	0	0	3.64	0.73	0	0	0	0	0	0	13.7	13.7
CrickeT CMO			177.91	100.55	1	0	0	54.4	54.4	1	18.79	2.09	125	36.48	0	0	0	3.82	0.73	0.01	0	0	0	0	0	18.87	18.87
CrickeT CMO			177.91	100.55	1	0	0	64.1	64.1	1	18.79	2.09	250	36.48	0	0	0	4.65	0.73	0.03	0	0	0	0	0	22.69	22.69
CrickeT CMO			177.91	100.55	1	0	0	69.8	69.8	1	18.79	2.09	500	36.48	0	0	0	4.28	0.73	0.05	0	0	0	0	0	17.37	17.37
CrickeT CMO			177.91	100.55	1	0	0	63.6	63.6	1	18.79	2.09	1000	36.48	0	0	0	8.83	0.73	0.12	0	0	0	0	0	11.02	11.02
CrickeT CMO			177.91	100.55	1	0	0	59	59	1	18.79	2.09	2000	36.48	0	0	0	11.07	0.73	0.4	0	0	0	0	0	0.4	0.4
CrickeT CMO			177.91	100.55	1	0	0	51.8	51.8	1	18.79	2.09	4000	36.48	0	0	0	13.5	0.73	1.39	0	0	0	0	0	45.32	45.32
CrickeT CMO			177.91	100.55	1	0	0	42.3	42.3	1	18.79	2.09	8000	36.48	0	0	0	15.98	0.73	4.04	0	0	0	0	0	36.89	36.89

Limit: Value 0
Level/D/N: 52.1126 52.1126

Receiver: West

ID:
X: 153.89
Y: 104.76
Z: 1.52
Ground: 0

ISO	Bezeichnung	ID	X	Y	Z	Ground	RefOrd	LxT	LxN	LxA	Dist.	hm	Freq	Adiv	K0b	Agv	Abar	z	Aadm	AloI	AhouS	CmetN	Dc	RL	LletT	LicIN	
Kohler Gen			166.97	92.75	1.83	0	0	101.9	101.9	1	17.76	1.68	1000	35.99	0	0.26	0	0	0.12	0	0	0	0	0	0	65.53	65.53
Verizon AC			172.83	100.34	1	0	0	-24.9	-24.9	1	19.45	1.26	32	36.78	0	-3	-3	0	0	0	0	0	0	0	0	-58.67	-58.67
Verizon AC			172.83	100.34	1	0	0	68.2	68.2	1	19.45	1.26	63	36.78	0	-3	-3	0	0	0.01	0	0	0	0	0	34.43	34.43
Verizon AC			172.83	100.34	1	0	0	75.9	75.9	1	19.45	1.26	125	36.78	0	0	0	0	0.01	0	0	0	0	0	0	38.74	38.74
Verizon AC			172.83	100.34	1	0	0	83.4	83.4	1	19.45	1.26	250	36.78	0	0	0	0	0.03	0	0	0	0	0	0	41.82	41.82
Verizon AC			172.83	100.34	1	0	0	81.8	81.8	1	19.45	1.26	500	36.78	0	0	0	0	0.05	0	0	0	0	0	0	40.58	40.58
Verizon AC			172.83	100.34	1	0	0	85.1	85.1	1	19.45	1.26	1000	36.78	0	0	0	0	0.42	0	0	0	0	0	0	47.35	47.35
Verizon AC			172.83	100.34	1	0	0	82.5	82.5	1	19.45	1.26	2000	36.78	0	0	0	0	0.42	0	0	0	0	0	0	45.32	45.32
Verizon AC			172.83	100.34	1	0	0	75.1	75.1	1	19.45	1.26	4000	36.78	0	0	0	0	1.44	0	0	0	0	0	0	36.89	36.89

