

NOISE IMPACT ANALYSIS

Cingular Wireless
Site Number: SS-639-01
Site Name: Veterans of Foreign Wars
8440 Tavern Road
Alpine, California 91901

County of San Diego Major Use Permit
ZAP Number: P05-010

Prepared For

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1.0 EXECUTIVE SUMMARY

The proposed Cingular wireless telecommunications facility project, known as Veterans of Foreign Wars, consists of the construction of an unmanned telecommunications facility consisting of a 10-foot high by 12-foot wide by 28-foot long CMU block equipment shelter which will house equipment cabinets for wireless telecommunications. Also planned are 12 panel antennas mounted on a 50-foot high mono broadleaf. The project site is located at 844 Tavern Road, in Alpine, County of San Diego, California.

The purpose of this report is to assess noise impacts from on-site noise sources, and to determine if mitigation is necessary and feasible to reduce project related property line noise impacts to below 55 dBA, in compliance with the County of San Diego most restrictive nighttime property line noise limit.

Based on the project information available, calculations show that without mitigation, the unmanned operation of this facility will be in compliance with the County of San Diego nighttime property line noise limits.

Calculations show that the HVAC equipment noise impacts from the proposed Cingular facility will be as high as 34.7 dBA L_{EQ} at the western property line, at the worst-case location.

The worst-case combined property line noise impacts due to the existing equipment at this project site, not associated with the Cingular facility, are expected to exceed the County of San Diego nighttime property line noise limits.

2.0 INTRODUCTION

This acoustical analysis report is submitted to satisfy the County of San Diego requirement for a minor use permit. Its purpose is to assess noise impacts from on-site project related noise sources, and to determine if mitigation is necessary and feasible to reduce property line noise impacts to below 55 dBA, in compliance with the County of San Diego nighttime property line noise limit.

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.

The Community Noise Equivalent Level (CNEL) is a 24-hour average, where sound levels during evening hours of 7 p.m. to 10 p.m. have an added 5 dB weighting, and sound levels during nighttime hours of 10 p.m. to 7 a.m. have an added 10 dB weighting. This is similar to the Day-Night Sound Level (L_{DN}), which is a 24-hour average with 10 dB added weighting on the same nighttime hours but no added weighting on the evening hours. Sound levels expressed in CNEL are always based on A-weighted decibels. These data unit metrics are used to express noise levels for both measurement and municipal noise ordinances and regulations, for land use guidelines, and enforcement of noise ordinances. Further explanation can be provided upon request.

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 844 Tavern Road, in Alpine, County of San Diego, California. The Assessor's Parcel Number (APN) is 403-380-80-00. The overall property is irregular in shape with an overall site area of approximately 2.5 acres. The zoning designation for the subject parcel is C-37 for Heavy Commercial use. The zoning designations for the surrounding parcels are C-37 for Heavy Commercial use to the west, M-52 for Industrial use to the north, S-94 for Special Purpose use to the south, and Public Facilities use to the east.

The subject property is currently occupied by the Veterans of Foreign Wars building to the northwest of the proposed lease area. There are currently three existing wireless facilities on the site that are unrelated to the new Cingular project. These facilities are operated by Nextel, Sprint, and T-Mobile.

The lease area site is at the southern end of the subject property on what is currently an undeveloped area with a steep slope.

For a graphic representation of the site, please refer to the Thomas Guide 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 proposed project consists of the construction of an unmanned telecommunications facility consisting of a 10-foot high by 12-foot wide by 28-foot long CMU block equipment shelter with a 4-foot high CMU block parapet wall atop the shelter perimeter. The equipment shelter will house equipment cabinets for wireless telecommunications.

Also planned are 12 panel antennas mounted on a 50-foot high mono broadleaf. New electric and telco runs to the area of the equipment shelter are also planned. No new grading or landscaping is proposed.

The Cingular wireless equipment facility project proposes the installation of a redundant air conditioning system consisting of two Carrier 38QR060C condensers on the rooftop of the equipment shelter and a Carrier fancoil system housed within the shelter. It is expected that one of the two condensers will be operational 24 hours a day, 7 days a week.

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 County of San Diego Municipal Code, Section 36.404, entitled Sound Level Limits. Based on these noise regulations, the County of San Diego scoping letter, dated July 14, 2005, specifies the following property line noise limits for this project: 60 dBA from 7 a.m. to 10 p.m. and 55 dBA from 10 p.m. to 7 a.m. Planning for this project will be based on the more restrictive nighttime limit of 55 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

There are currently three existing wireless telecommunications facilities on the subject property. These facilities are operated by Nextel, Sprint, and T-Mobile.

3.1.1 Existing On-Site Noise Sources

Existing Nextel Wireless Facility

The existing Nextel wireless equipment facility consists of one type of significant noise source, which are exterior-mounted air conditioning units on the southwestern façade of a prefabricated equipment shelter. The equipment shelter is enclosed on the northwest and northeast sides by a 6-foot high CMU block wall, and on the southwest and southeast sides by a 6-foot high chain-link fence.

Two Sun HVAC units are currently installed at the Nextel facility. 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. Manufacturer's noise emission data or a noise level measurement of a single existing Sun HVAC unit were unavailable. To determine the expected equipment exterior noise levels for this analysis, it was necessary to measure the noise level of a single operational unit. A noise level measurement of a similar, existing Sun model AV60H-1 HVAC unit was made at 3419 East Vista Way, Vista, California at 10:30 a.m. on October 31, 2002. The measured noise level was 71.1 dBA L_{EQ} at 10 feet. This HVAC unit used for the noise measurement will be an appropriate worst-case model. The octave-band noise data for the HVAC unit noise measurement used in the new Cingular planning analysis is provided in Table 1.

Table 1. Measured Noise Level of a Single Operational Sun AV60H-1 HVAC Unit									
Octave Band Center Frequency (Hz)	63	125	250	500	1K	2K	4K	8K	L_{EQ}
Noise Level at 10 feet (dB)	77.4	71.8	71.6	69.5	65.9	61.2	55.4	48.7	71.1 dBA

The Nextel 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.

Existing Sprint Wireless Facility

The existing Sprint wireless equipment facility consists of one type of significant noise source, which is a Sprint Modcell unit/power supply cabinet combination (2-cabinet set). One of these cabinet sets is currently installed at the Sprint facility.

Manufacturer’s noise emission data for the Sprint Modcell cabinet set were unavailable. To determine the expected equipment exterior noise levels for this analysis, it was necessary to measure the noise level of a single operational unit. A noise level measurement of an existing Sprint Modcell cabinet set was made at an operational Sprint wireless installation at 1275 Quail Garden Drive, Encinitas, California, at 9:30 a.m. on January 21, 2005. The worst-case measured noise level was 68.9 dBA L_{EQ} at 3 feet.

Measurements were made at three locations in front of the cabinets, and three locations behind the cabinets. These six measurements were used to produce a composite worst case measurement presented in Table 2. This worst-case noise measurement is used in the new Cingular planning analysis. Due to a fence enclosure, all noise measurements were made at a distance of 3 feet.

Table 2. Measured Noise Level of an Sprint Modcell Cabinet Set									
Octave Band Center Frequency (Hz)	63	125	250	500	1K	2K	4K	8K	L_{EQ}
Front of Cabinet-45° to the Right	64.9	61.7	71.3	60.2	56.2	52.5	45.0	41.6	64.9 dBA
Front of Cabinet	67.5	59.7	65.7	64.5	56.9	52.9	46.5	42.0	64.4 dBA
Front of Cabinet-45° to the Left	68.9	61.6	66.4	63.8	56.6	53.9	46.3	42.5	64.2 dBA
Back of Cabinet -45° to the Right	64.3	64.5	66.0	68.6	56.9	54.2	46.7	42.6	67.0 dBA
Back of the Cabinet	64.6	67.0	64.0	66.5	61.8	56.7	48.8	44.5	66.9 dBA
Back of the Cabinet- 45° to the Left	63.0	66.1	69.1	63.3	58.6	56.6	46.5	42.0	65.6 dBA
Worst Case at 3 feet (dB)	68.9	67.0	71.3	68.6	61.8	56.7	48.8	44.5	68.9 dBA

Existing T-Mobile Wireless Facility

The existing T-Mobile wireless equipment facility consists of one type of significant noise source, which is an Ericsson RBS 2106 un-enclosed equipment cabinet. One of these cabinets is currently installed at the T-Mobile facility.

Manufacturer’s noise emission data for an Ericsson RBS 2106 cabinet were unavailable. To determine the expected equipment exterior noise levels for this analysis, it was necessary to measure the noise level of a single operational unit. A noise level measurement of a single existing RBS 2106 equipment cabinet was made at an operational Cingular wireless installation at 2190 Carmel Valley Road in Del Mar (City of San Diego), California, at 3:00 p.m. on April 8, 2004. The measured noise level was

53.2 dBA L_{EQ} at 5 feet. The octave-band noise data for the equipment cabinet noise measurement used in the new Cingular planning analysis is provided in Table 3.

Table 3. Measured Noise Level of a Single Operational Ericsson RBS 2106 Cabinet									
Octave Band Center Frequency (Hz)	63	125	250	500	1K	2K	4K	8K	L_{EQ}
Noise Level at 5 feet (dB)	64.4	61.2	55.3	47.0	45.9	42.2	44.0	34.6	53.2 dBA

3.1.2 Ambient Noise Monitoring

An on-site inspection was conducted at 1:00 p.m. on Wednesday, September 21, 2005. The weather conditions were as follows: a breeze from the northwest, low humidity, and temperatures in the mid-70's. A 5-minute ambient noise measurement of 52.5 dBA L_{EQ} was taken at a location at the northeast corner of the existing Nextel facility. The existing noise environment is primarily a result of wind, the existing wireless facilities, and distant traffic noise from Interstate 8. Some of the on-site mechanical equipment noise sources were in operation during the noise measurement. It is expected that all of the on-site equipment will normally be in operation 24 hours a day, 7 days a week.

3.2 Future Noise Environment

The future noise environment in the vicinity of the project site will be primarily a result of the same noise sources, as well as the proposed Cingular wireless facility.

3.2.1 Project Related Noise Sources

The proposed Cingular wireless equipment facility consists of one type of significant noise source, which are Carrier 38QR060C condensers. This project proposes the installation of two of these units on the rooftop of the equipment shelter. Only one of the condensers is expected to be operational at a time, never running simultaneously.

To determine the expected equipment exterior noise levels for this analysis, it was necessary to obtain the noise level of a single operational unit. Manufacturer's noise emission data were provided for this equipment. The octave-band noise data for the condenser unit used in the new Cingular planning analysis is provided in Table 4.

Table 4. Manufacturer's Noise Data for a Single Carrier 38QR060C Condenser								
Octave Band Center Frequency (Hz)	125	250	500	1K	2K	4K	8K	Sum
Sound Power Level (dBA)	62.5	67.5	71.0	68.0	67.0	63.5	54.5	75.3*

* The sound power levels published by the manufacturer are inconsistent. The logarithmic sum of the published octave-band sound power levels is 75.3 dBA, which does not agree with the published overall sound power level of 73.6 dBA. The published octave-band sound power levels were used in the analysis.

The Cingular wireless facility also incorporates fully enclosed equipment cabinets and a Carrier fancoil system housed within the CMU block shelter with a solid roof assembly and a CMU block parapet wall.

Noise impacts from these equipment cabinets and the fancoil system are not considered significant, and therefore are not included in the noise impact analysis.

For further details on the manufacturer's reported noise data refer to Appendix D: Manufacturer's Noise Emission Data.

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

Existing and proposed features at the project site that were included in the Cadna noise prediction model are listed in Table 5. These are considered to be the only on-site permanent features that will affect the noise propagation of the existing and proposed noise sources to the adjacent property lines.

Table 5. Summary of Site Features Included in Cadna Model	
Description	Height
Existing VFW Building	15 to 25 feet above grade
Existing CMU Wall at Nextel Facility	6 feet above grade
Existing Nextel Equipment Shelter	6 feet above grade
Existing CMU Wall at T-Mobile Facility	6 feet above grade
Existing Wooden Fence at Sprint Facility	5 feet above grade
Proposed Cingular Equipment Shelter	10 feet above grade
Proposed Cingular Equipment Shelter Parapet Wall	14 feet above grade
Topographic Contours	1750 to 1770 feet

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 proposed HVAC equipment were manually calculated as simple attenuation by distance based upon the manufacturer's sound power data shown in Table 4. 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, topography, and ground absorption, which the differences in modeled and calculated noise levels are attributed to. This data is summarized in Table 6.

Table 6. Calculated Noise Levels for Model Comparison						
Noise Source	Receiver	Location	Distance from Source (ft.)	Calculated Noise Level ¹ (dBA)	Cadna Model Noise Level ² (dBA)	Difference (dB)
Carrier 38QR060C Condensor (based upon manufacturer's data)	R1	Northern Property Line	288	25.4	11.8	13.6
	R2	Southern Property Line	49	40.7	29.8	10.9
	R3	Eastern Property Line	68	37.9	28.8	9.1
	R4	Eastern Property Line	154	30.8	20.2	10.6
	R5	Western Property Line	24	46.9	34.7	12.2
	R6	Southwestern Property Line	68	37.9	32.5	5.4
	R7	Western Property Line	294	25.2	12.4	12.8

¹ Calculated as attenuation by distance only, $L_p = L_w - 20\log(r) - 0.75$

² As predicted by Cadna model

4.2 Measurement Equipment

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

- Larson Davis Model 820, Type 1 Sound Level Meter, Serial #0316
- Larson Davis Model CA250, Type 1 Calibrator, Serial #2625

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, it is our conclusion that without mitigation, the unmanned operation of this facility will be in compliance with the County of San Diego nighttime property line noise limits. Calculations show that the HVAC equipment noise impacts from the proposed Cingular facility will be as high as 34.7 dBA L_{EQ} at the western property line, at the worst-case location.

There are no “noise control elements” that ensure compliance with the County of San Diego nighttime property line noise limits. However, the proposed 4-foot high CMU block parapet wall atop the equipment shelter perimeter does provide 5.7 dB of additional attenuation, beyond that provided by the shielding of the equipment shelter itself and ground absorption. The noise attenuation from the combined affect of these site features were incorporated into the analysis. At the western property line, this resulted in an overall attenuation of 12.2 dB beyond that due to distance.

The worst-case combined property line noise impacts due to the existing equipment at this project site, not associated with the Cingular facility, are expected to exceed the County of San Diego nighttime property line noise limits at the western property line. However, if the noise impacts created by this other equipment were mitigated to a worst-case level of 44.5 [54.9](#) dBA, the increase in overall noise impacts due to the addition of the Cingular facility and would be in compliance with the County of San Diego nighttime property line noise limit of 55 dBA.

The calculated combined noise levels at each property line at the worst-case locations are summarized in Table 7. The results of [the Cadna model](#) calculation are presented as well as those manually calculated as simple attenuation by distance, [which are in](#) parentheses.

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 7. Calculated Combined Wireless Facility Noise Impact Levels							
Receiver Location	Nextel (dBA L _{EQ})	Sprint (dBA L _{EQ})	T-Mobile (dBA L _{EQ})	Sum ¹ (dBA L _{EQ})	Cingular (dBA L _{EQ})	All ² (dBA L _{EQ})	Increase due to Cingular (dB)
R1, Northern Property Line	29.0 (42.5)	26.1 (35.0)	8.3 (20.7)	30.8 (43.2)	11.8 (25.4)	30.9 (43.3)	0.1 (0.1)
R2, Southern Property Line	41.7 (54.7)	13.1 (32.9)	15.8 (24.8)	41.7 (54.7)	29.8 (40.7)	42.0 (54.9)	0.3 (0.2)
R3, Eastern Property Line	46.4 (55.3)	20.8 (33.7)	14.5 (24.4)	46.4 (55.3)	28.8 (37.9)	46.5 (55.4)	0.1 (0.1)
R4, Eastern Property Line	34.5 (48.5)	28.9 (38.2)	17.4 (25.0)	35.7 (48.9)	20.2 (30.8)	35.8 (49.0)	0.1 (0.1)
R5, Western Property Line	58.4 (59.7)	23.7 (35.5)	21.5 (29.0)	58.4 (59.7)	34.7 (46.9)	58.4 (59.9)	0.0 (0.2)
R6, Southwestern Property Line	51.9 (53.9)	29.9 (37.2)	31.3 (32.6)	52.0 (54.0)	32.5 (37.9)	52.0 (54.1)	0.0 (0.1)
R7, Western Property Line	31.0 (41.7)	11.0 (31.1)	10.5 (20.1)	31.0 (42.1)	12.4 (25.2)	31.1 (42.2)	0.1 (0.1)

¹ Nextel, Sprint, and T-Mobile equipment combined noise level

² All equipment combined noise level

The noise impacts at the façade of the existing on-site VFW building due to the proposed Cingular facility are not expected to exceed 28.0 dBA L_{EQ} at the worst-case location. The combined noise impacts at the façade of the existing on-site VFW building due to the existing wireless facilities and proposed Cingular facility are not expected to exceed 4853.0 dBA L_{EQ} at the worst-case location.

6.0 MITIGATION

Mitigation is not required for the Cingular wireless telecommunications facility for compliance with the County of San Diego property line noise limits.

7.0 CONCLUSION

The proposed Cingular wireless telecommunications facility will be in compliance with all applicable County of San Diego property line noise limits.

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 Cingular wireless facility.

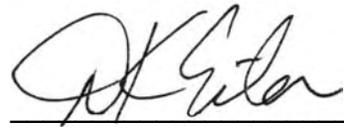
8.0 CERTIFICATION

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 Cingular wireless telecommunications facility, located at 844 Tavern Road, in Alpine, County of San Diego, California. This report was prepared by Justin Smith, Michael Burrill, Charles Terry, and Douglas Eilar.

EILAR ASSOCIATES



Justin Smith, Senior Acoustical Consultant

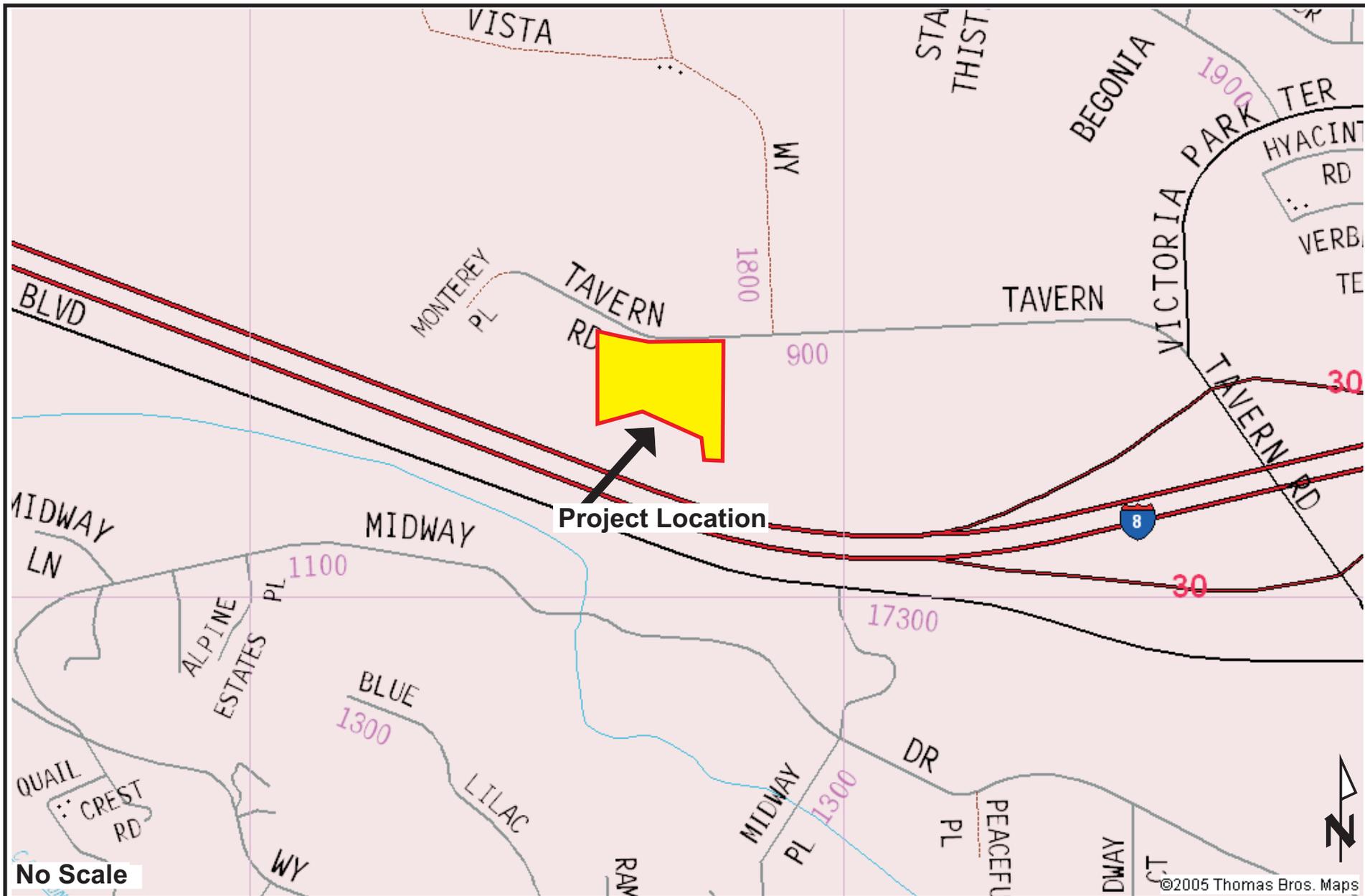


Douglas K. Eilar, Principal

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FIGURES



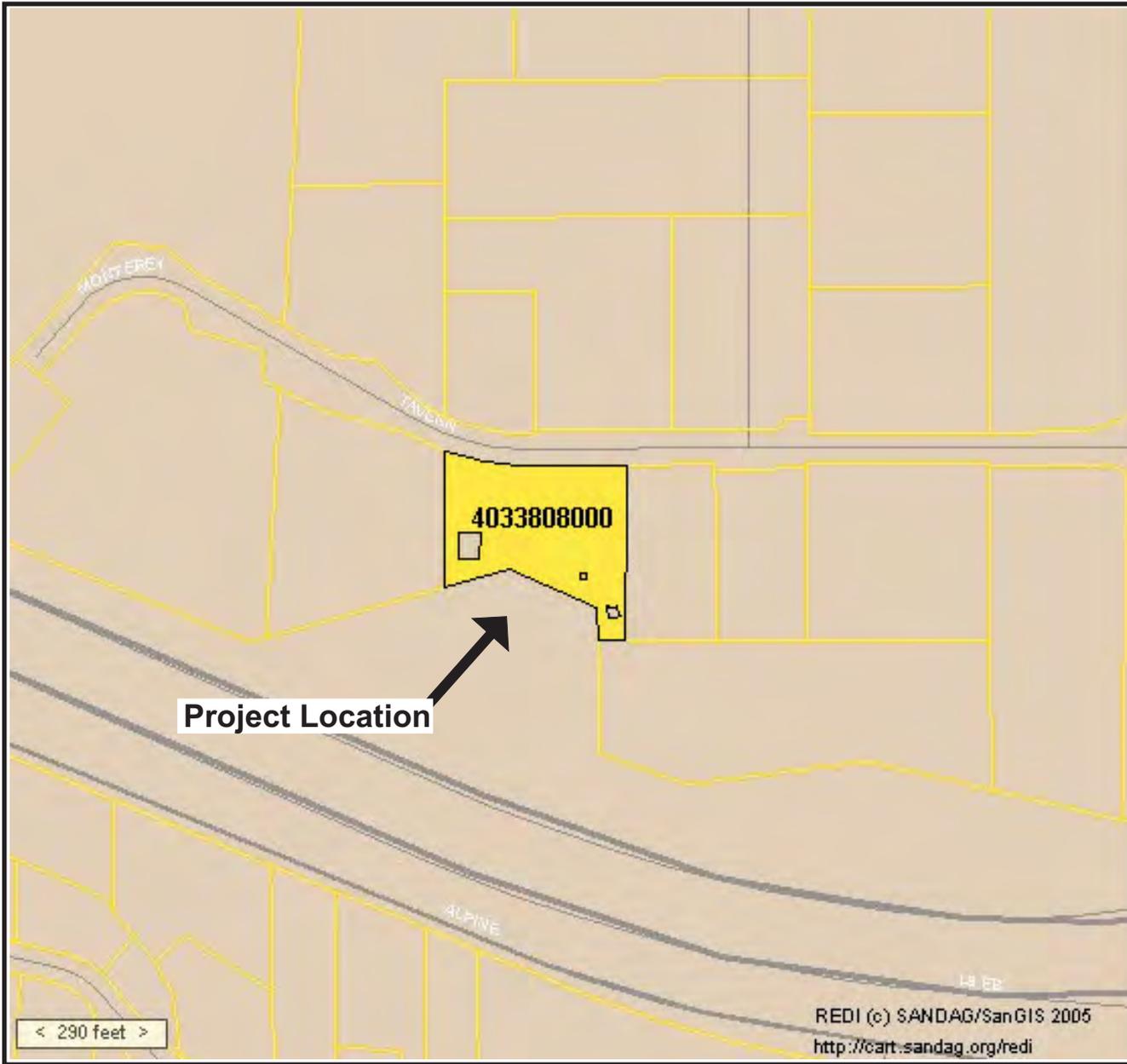
No Scale

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Thomas Guide Map
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Figure 1



LEGEND

Reference Layers

-  Parcels
-  Roads

APN: 403-380-80-00

Project Location

4033808000

< 290 feet >

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Assessor's Parcel Map
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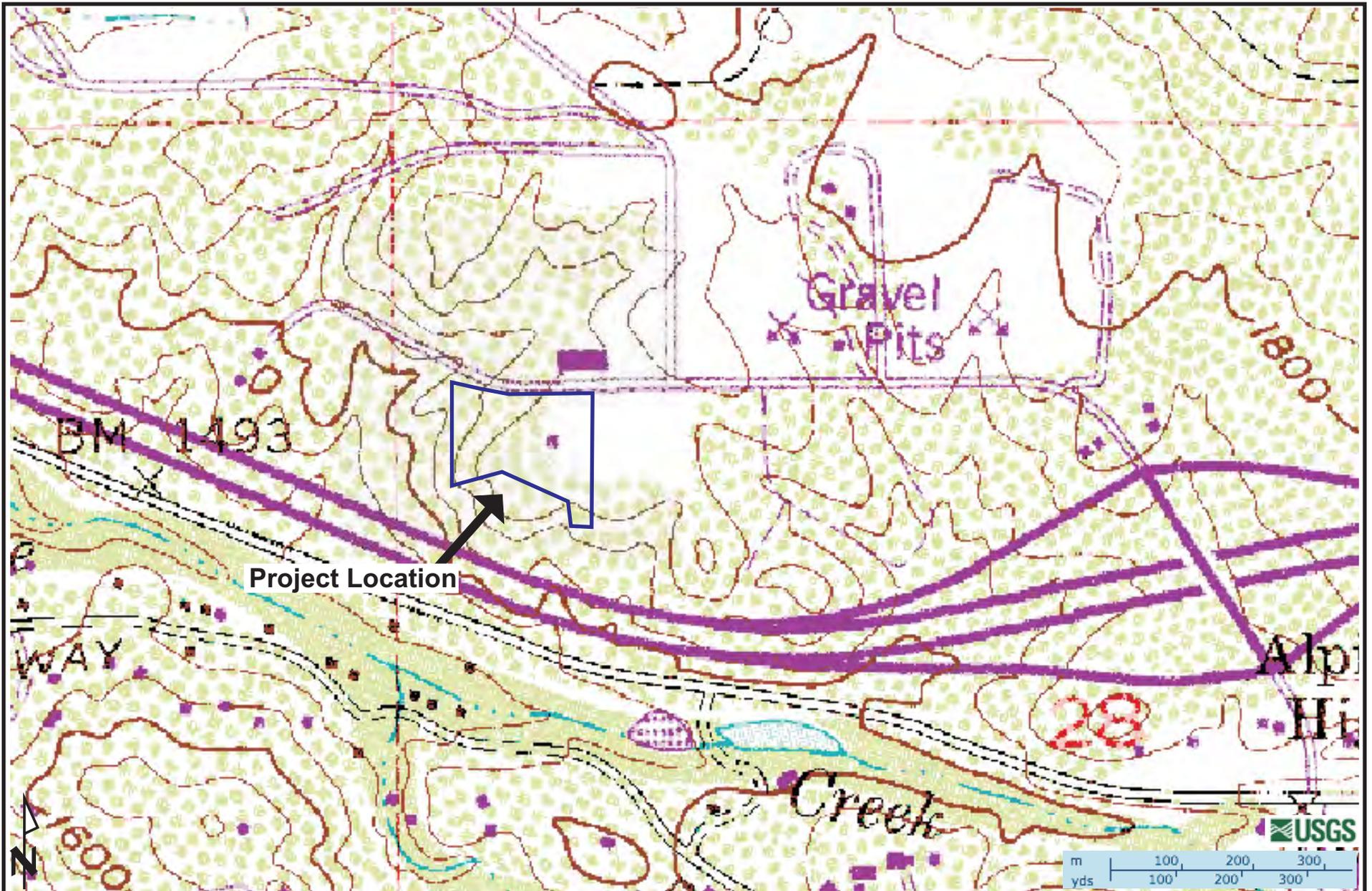
Figure 2



Eilar Associates
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Satellite Aerial Photograph
Job # A50904N1

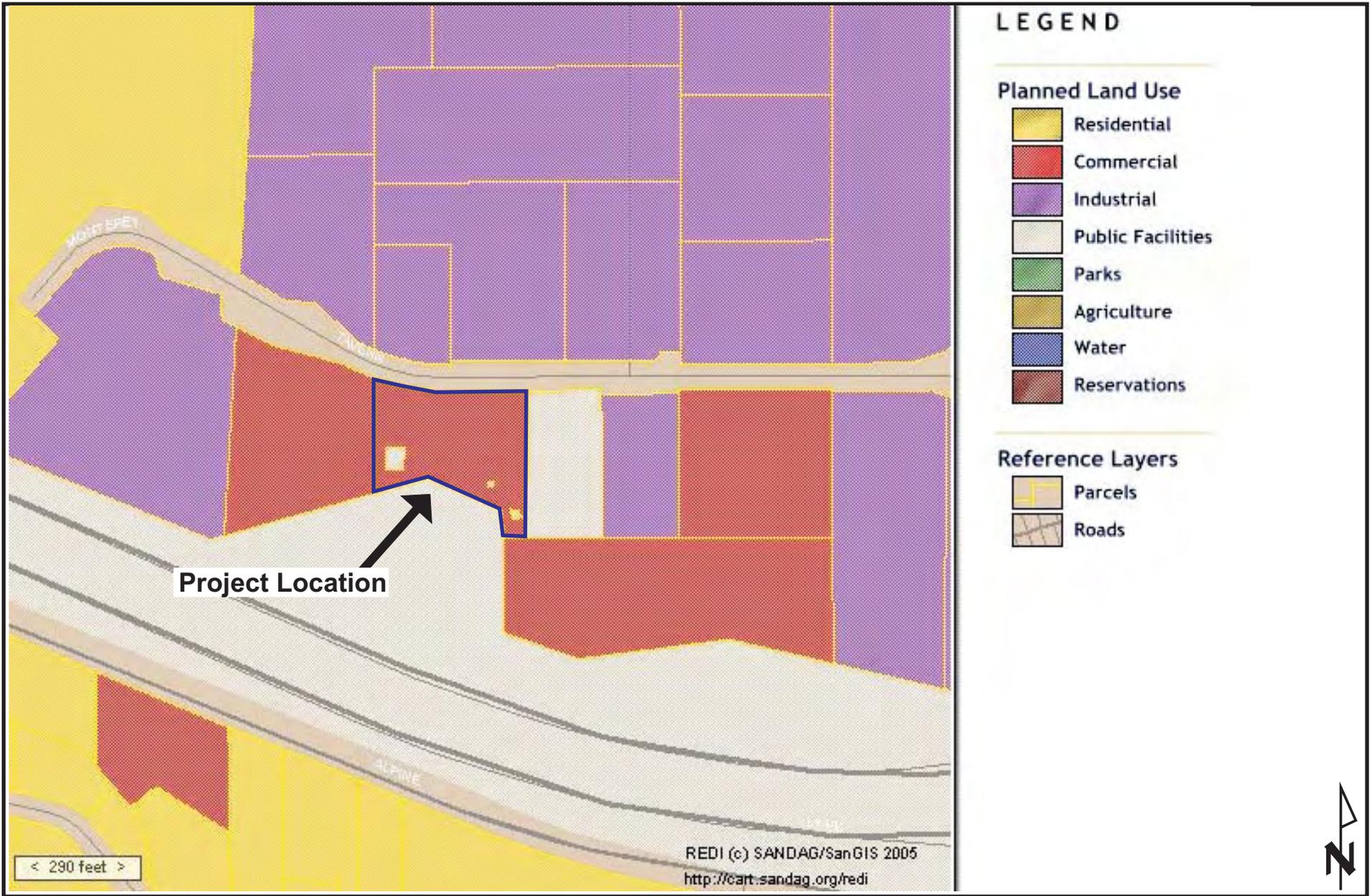
Figure 3



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Topographic Map
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Figure 4



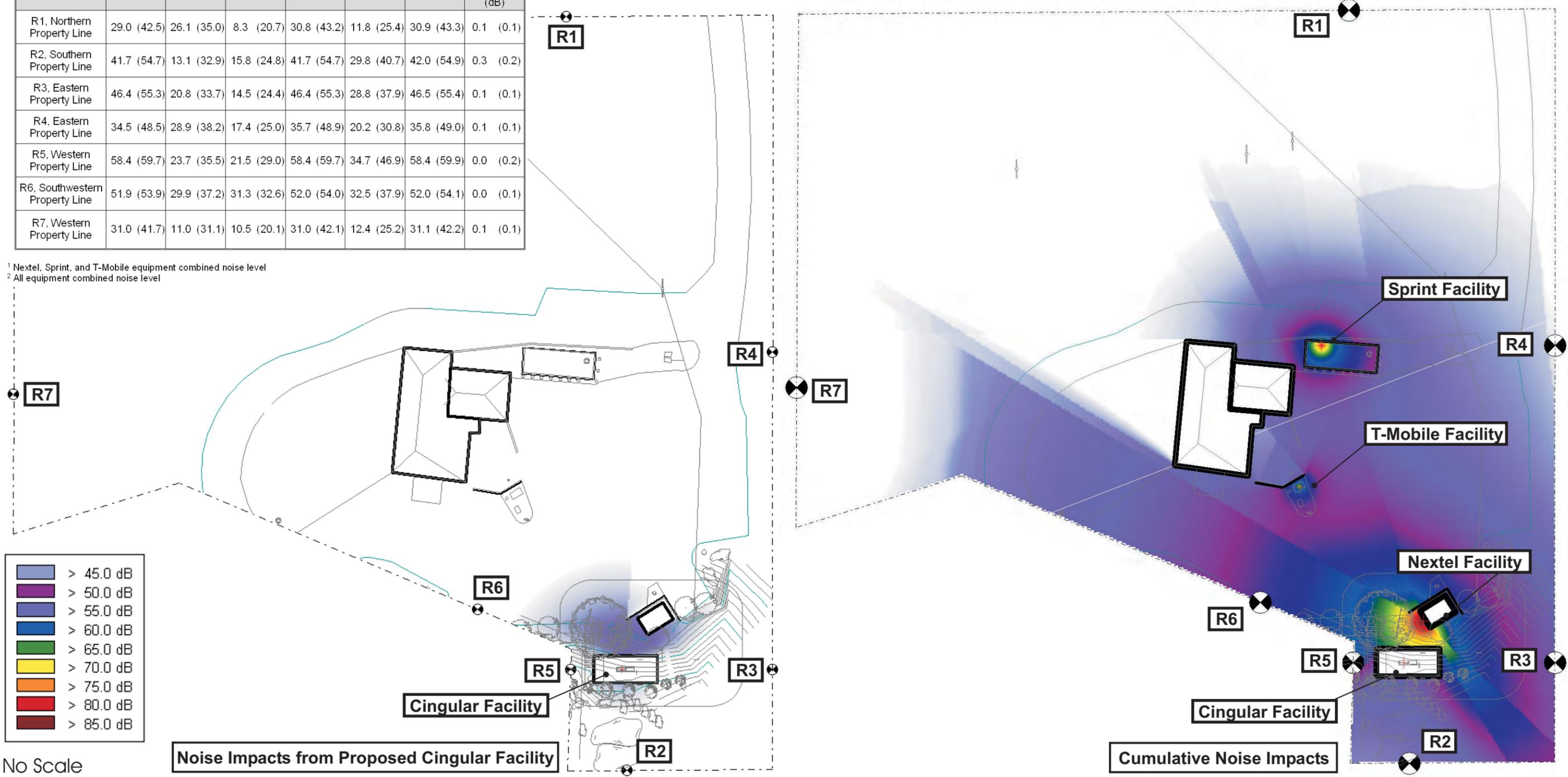
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Planned Land Use Map
 Job # A50904N1

Figure 5

Calculated Combined Wireless Facility Noise Impact Levels							
Receiver Location	Nextel (dBA L _{EQ})	Sprint (dBA L _{EQ})	T-Mobile (dBA L _{EQ})	Sum ¹ (dBA L _{EQ})	Cingular (dBA L _{EQ})	All ² (dBA L _{EQ})	Increase due to Cingular (dB)
R1, Northern Property Line	29.0 (42.5)	26.1 (35.0)	8.3 (20.7)	30.8 (43.2)	11.8 (25.4)	30.9 (43.3)	0.1 (0.1)
R2, Southern Property Line	41.7 (54.7)	13.1 (32.9)	15.8 (24.8)	41.7 (54.7)	29.8 (40.7)	42.0 (54.9)	0.3 (0.2)
R3, Eastern Property Line	46.4 (55.3)	20.8 (33.7)	14.5 (24.4)	46.4 (55.3)	28.8 (37.9)	46.5 (55.4)	0.1 (0.1)
R4, Eastern Property Line	34.5 (48.5)	28.9 (38.2)	17.4 (25.0)	35.7 (48.9)	20.2 (30.8)	35.8 (49.0)	0.1 (0.1)
R5, Western Property Line	58.4 (59.7)	23.7 (35.5)	21.5 (29.0)	58.4 (59.7)	34.7 (46.9)	58.4 (59.9)	0.0 (0.2)
R6, Southwestern Property Line	51.9 (53.9)	29.9 (37.2)	31.3 (32.6)	52.0 (54.0)	32.5 (37.9)	52.0 (54.1)	0.0 (0.1)
R7, Western Property Line	31.0 (41.7)	11.0 (31.1)	10.5 (20.1)	31.0 (42.1)	12.4 (25.2)	31.1 (42.2)	0.1 (0.1)

¹ Nextel, Sprint, and T-Mobile equipment combined noise level
² All equipment combined noise level



No Scale

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

Site Plan Showing Noise Impacts to Project Vicinity
 and Property Line Receiver Locations
 Job # A50904N3

Figure 6

APPENDIX A

Site Plans for Cingular Wireless Telecommunications Facility



SS-639-01 VETERANS OF FOREIGN WARS

844 TAVERN ROAD
ALPINE, CA 91901



DI DONATO ASSOCIATES
ARCHITECTURE + GRAPHICS
3039 FIRST AVENUE, SUITE 100, SAN DIEGO, CA 92103
619.298.4210 • 619.298.4250 FAX • DDMAIL@AOL.COM

PROJECT NAME

cingular
WIRELESS
SS-639-01
VETERANS OF FOREIGN WARS
844 TAVERN ROAD, ALPINE, CA 91901

ISSUES REVISIONS

DATE	BY	ISSUE DESCRIPTION
03-14-05	BAK	ISSUE FOR REVIEW
03-21-05	BAK	FINALS FOR SUBMITTAL
09-01-05	CVS	REVISED FOR LANDSCAPE PLAN

SHEET INFORMATION

DI DONATO ASSOCIATES
ARCHITECTURE + GRAPHICS

T01
TITLE PAGE

SS-639-01

0501.14
PLOT SCALE 1:1 (24x36" D SIZE)

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DRIVING DIRECTIONS FROM CINGULAR WIRELESS OFFICE:

- TAKE 805 SOUTH FROM SORRENTO VALLEY ROAD
- EXIT CA-52 EAST
- EXIT I-15 SOUTH
- EXIT I-8 EAST
- EXIT AT TAVERN RD. AND TURN LEFT
- CONTINUE ON TAVERN RD. TO WHERE SITE IS LOCATED

PROJECT APPLICANT:
CINGULAR WIRELESS
6160 CORNERSTONE CT.
SAN DIEGO, CA 92121

PROPERTY OWNER:
BERT FULLER POST NO. 9578
844 TAVERN RD.
ALPINE, CA 91901

CONSTRUCTION MANAGER:
ROBERT MEDINA
PLANCOM INC.
302 STATE PLACE
ESCONDIDO, CA 92029
760.815.6669 PHONE

ARCHITECT:
DI DONATO ASSOCIATES
3939 FIRST AVE. SUITE 100
SAN DIEGO, CA 92103
619.298.4210 PHONE
619.298.4250 FAX
ddmail@aol.com

PROJECT DESCRIPTION:

THE PROJECT CONSISTS OF THE INSTALLATION AND OPERATION OF (12) TWELVE ANTENNAS AND ASSOCIATED EQUIPMENT CABINETS FOR CINGULAR WIRELESS TELECOMMUNICATIONS NETWORK.

A TOTAL OF (12) TWELVE ANTENNAS ARE TO BE MOUNTED ON A PROPOSED 50' HIGH MONO BROADLEAF. THE EQUIPMENT CABINETS, AT GROUND LEVEL, ARE TO BE LOCATED INSIDE A PROPOSED 12'X28' EQUIPMENT SHELTER.

THE FACILITY WILL ENHANCE THE GENERAL HEALTH, SAFETY, AND WELFARE OF THE COUNTY AND SURROUNDING CITIES BY PROVIDING MORE RELIABLE CELLULAR COMMUNICATION AT THIS LOCATION.

T01 TITLE SHEET

- Z01 SITE PLAN
- Z02 AREA PLAN
- Z03 ELEVATIONS
- Z04 ELEVATIONS
- Z05 DETAILS

PLANNING REPRESENTATIVE:
TED MARIONCELLI
PLANCOM INC.
302 STATE PLACE
ESCONDIDO, CA 92029
760.807.1850 PHONE

SITE ACQUISITION MANAGER:
JAY THOMAS
PLANCOM INC.
4420 ROSEWOOD DR.
PLEASANTON, CA 94588
924.413.8448 PHONE

R.F. ENGINEERING REPRESENTATIVE:
WILLY AZZOO
CINGULAR WIRELESS
6160 CORNERSTONE CT.
SAN DIEGO, CA 92121
858.642.9445 PHONE

SITE ADDRESS:
844 TAVERN ROAD
ALPINE, CA 91901

JURISDICTION:
COUNTY OF SAN DIEGO

ASSESSORS PARCEL NUMBER:
403-380-80-00

CURRENT USE:
LODGE

LATITUDE:
32-50-28.0

EXISTING OCCUPANCY:
B

LONGITUDE:
116-47-15.0

PROPOSED OCCUPANCY:
S-2 AT EQUIPMENT SHELTER

TOTAL SITE AREA:
86,179 SQF.

WATER/SEWAGE:
N/A

EXISTING FLOOR AREA:
NOT APPLICABLE

UTILITIES:
ELECTRICAL: SDGE
TELEPHONE: SBC

PROPOSED PROJECT AREA:
APPROX. 780 SQF.

FIRE DEPT.: COUNTY OF SAN DIEGO

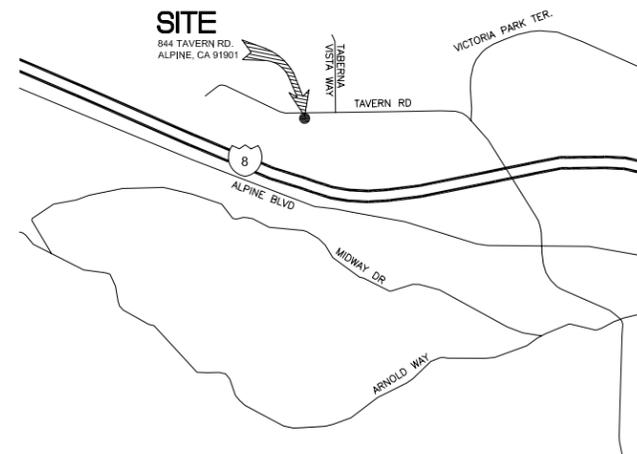
EXISTING TYPE OF CONSTRUCTION:
TYPE 5N

EXISTING ZONING:
SD 6

ALL WORK SHALL COMPLY WITH THE FOLLOW APPLICABLE CODES:

- CALIFORNIA BUILDING CODE, 2001 EDITION
- CALIFORNIA PLUMBING CODE, 2001 EDITION
- CALIFORNIA MECHANICAL CODE, 2001 EDITION
- CALIFORNIA ELECTRICAL CODE, 2001 EDITION
- CALIFORNIA FIRE CODE, 2001 EDITION

IN THE EVENT OF CONFLICT, THE MOST RESTRICTIVE CODE SHALL PREVAIL



THOMAS BROTHER'S MAP #1233-J5

VICINITY MAP

A PORTION OF THE SOUTHWEST QUARTER, OF THE NORTHWEST QUARTER, OF THE NORTHWEST QUARTER, OF THE NORTHWEST QUARTER OF SECTION 28, TOWNSHIP 15 SOUTH, RANGE 2 EAST, SAN BERNARDINO MERIDIAN, COUNTY OF SAN DIEGO, STATE OF CALIFORNIA ACCORDING TO THE OFFICIAL PLAT THEREOF.

1

CONTACTS

#	TYPE OF INSPECTION	DESIGN STRENGTH

2

PROJECT INFORMATION

FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. WIRELESS TELECOMMUNICATIONS MECHANICAL EQUIPMENT ROOMS ARE EXEMPT FROM REQUIREMENTS TO PROVIDE BUILDING UPGRADES FOR DISABLED ACCESS PER THE FOLLOWING:

- CBC SECTION 1105B-BUILDING ACCESSIBILITY
- CAL ACS ACCESSIBILITY STANDARDS INTERPRETIVE MANUAL

3

SHEET INDEX

CONSTRUCTION MANAGER	
SITE ACQUISITION MANAGER	
R.F. ENGINEERING REPRESENTATIVE	
PLANNING REPRESENTATIVE	

4

LEGAL DESCRIPTION

5

SPECIAL INSPECTIONS

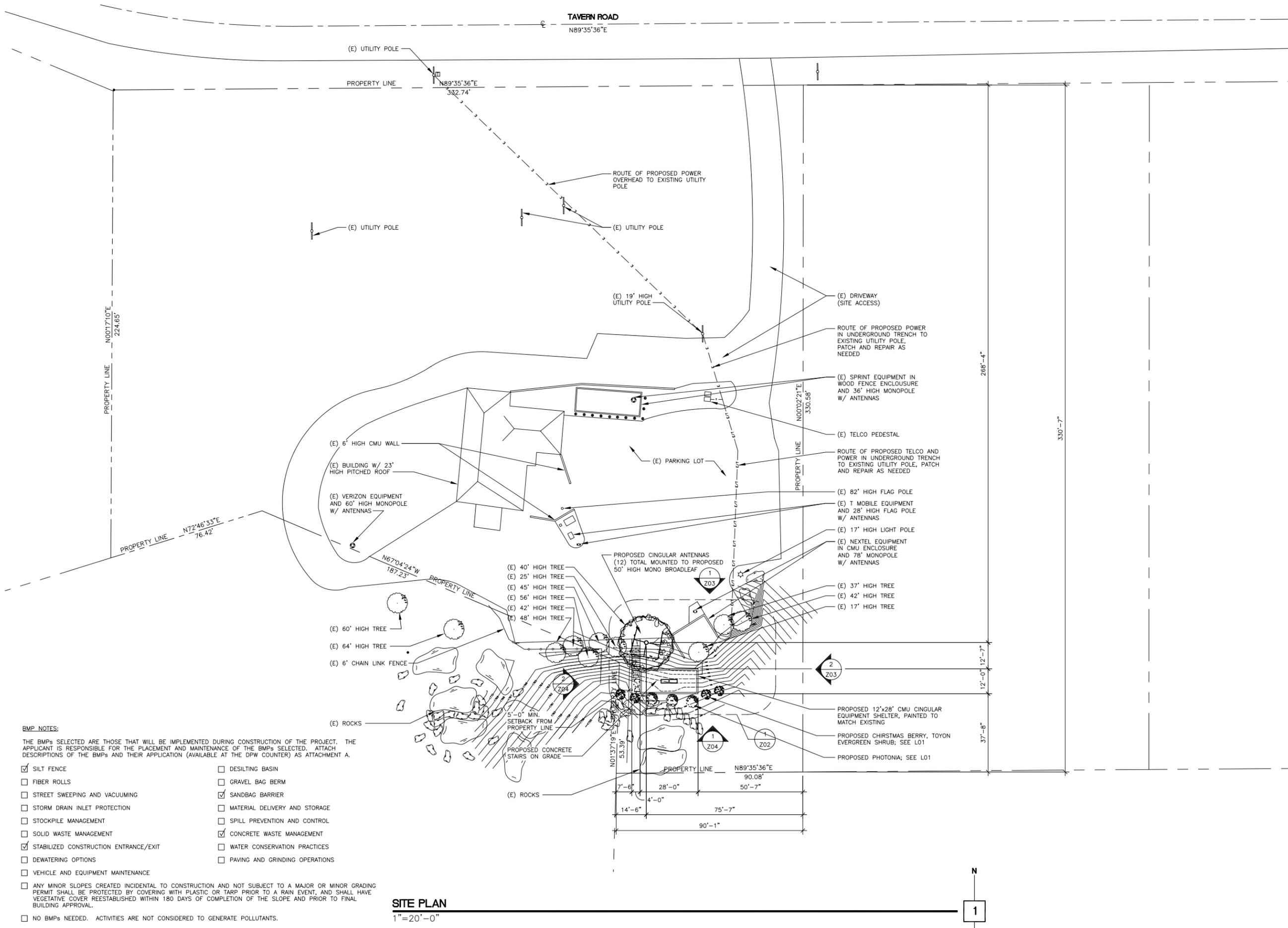
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ADA COMPLIANCE

7

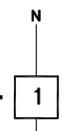
APPROVALS

8



- BMP NOTES:**
 THE BMPs SELECTED ARE THOSE THAT WILL BE IMPLEMENTED DURING CONSTRUCTION OF THE PROJECT. THE APPLICANT IS RESPONSIBLE FOR THE PLACEMENT AND MAINTENANCE OF THE BMPs SELECTED. ATTACH DESCRIPTIONS OF THE BMPs AND THEIR APPLICATION (AVAILABLE AT THE DPW COUNTER) AS ATTACHMENT A.
- | | |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|
| <input checked="" type="checkbox"/> SILT FENCE | <input type="checkbox"/> DESILTING BASIN |
| <input type="checkbox"/> FIBER ROLLS | <input type="checkbox"/> GRAVEL BAG BERM |
| <input type="checkbox"/> STREET SWEEPING AND VACUUMING | <input checked="" type="checkbox"/> SANDBAG BARRIER |
| <input type="checkbox"/> STORM DRAIN INLET PROTECTION | <input type="checkbox"/> MATERIAL DELIVERY AND STORAGE |
| <input type="checkbox"/> STOCKPILE MANAGEMENT | <input type="checkbox"/> SPILL PREVENTION AND CONTROL |
| <input type="checkbox"/> SOLID WASTE MANAGEMENT | <input checked="" type="checkbox"/> CONCRETE WASTE MANAGEMENT |
| <input checked="" type="checkbox"/> STABILIZED CONSTRUCTION ENTRANCE/EXIT | <input type="checkbox"/> WATER CONSERVATION PRACTICES |
| <input type="checkbox"/> DEWATERING OPTIONS | <input type="checkbox"/> PAVING AND GRINDING OPERATIONS |
| <input type="checkbox"/> VEHICLE AND EQUIPMENT MAINTENANCE | |
| <input type="checkbox"/> ANY MINOR SLOPES CREATED INCIDENTAL TO CONSTRUCTION AND NOT SUBJECT TO A MAJOR OR MINOR GRADING PERMIT SHALL BE PROTECTED BY COVERING WITH PLASTIC OR TARP PRIOR TO A RAIN EVENT, AND SHALL HAVE VEGETATIVE COVER REESTABLISHED WITHIN 180 DAYS OF COMPLETION OF THE SLOPE AND PRIOR TO FINAL BUILDING APPROVAL. | |
| <input type="checkbox"/> NO BMPs NEEDED. ACTIVITIES ARE NOT CONSIDERED TO GENERATE POLLUTANTS. | |

SITE PLAN
 1"=20'-0"



DI DONATO ASSOCIATES
 ARCHITECTURE + GRAPHICS
 3839 FIRST AVENUE - SUITE 100 - SAN DIEGO - CA 92103
 619.296.4210 - 619.296.4250 FAX - DDAMAIL@GOL.COM

PROJECT NAME

cingular wireless
 SS-638-01
VETERANS OF FOREIGN WARS
 844 TAVERN ROAD, ALPINE, CA 91901

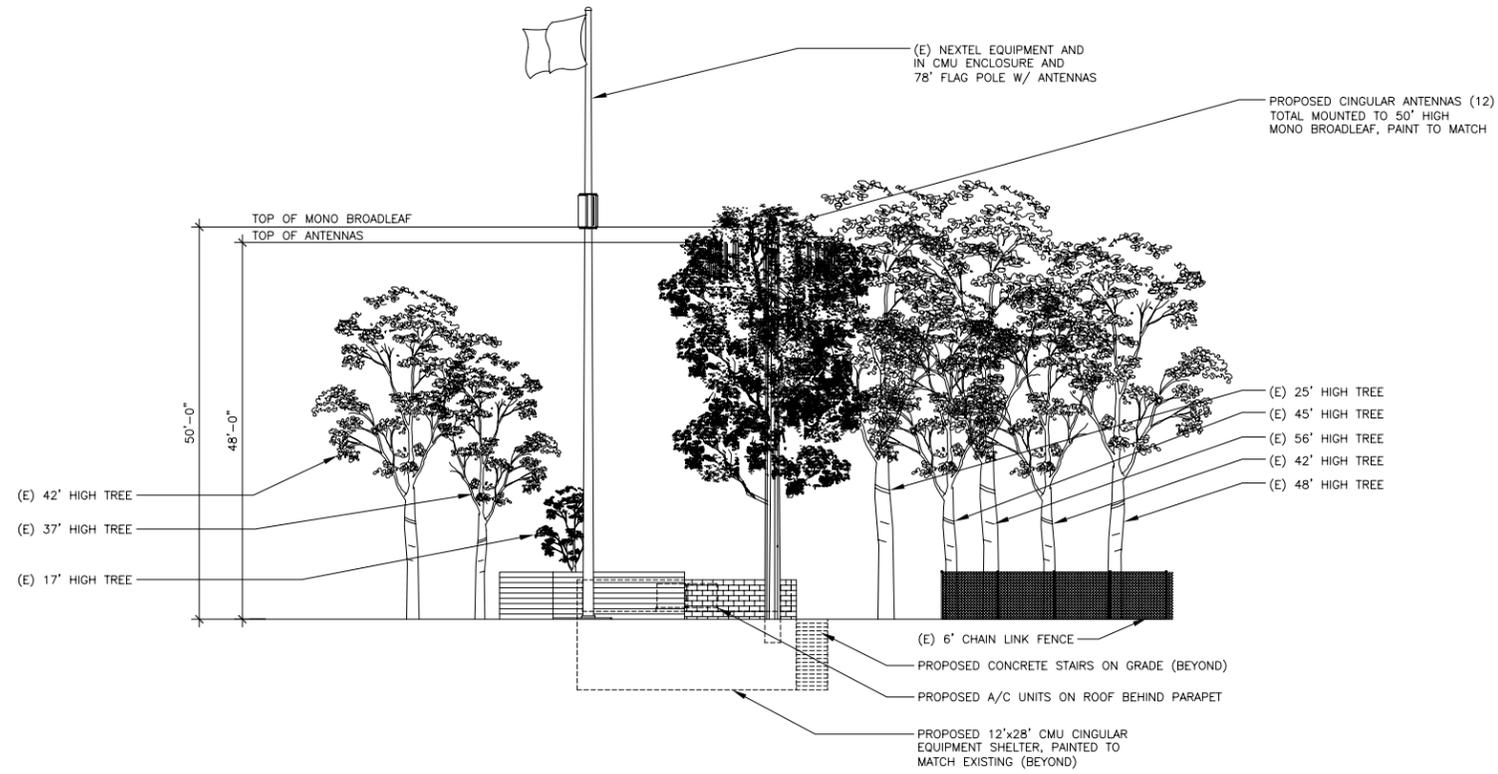
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SHEET INFORMATION

DI DONATO ASSOCIATES
 ARCHITECTURE + GRAPHICS
Z01
 SITE PLAN

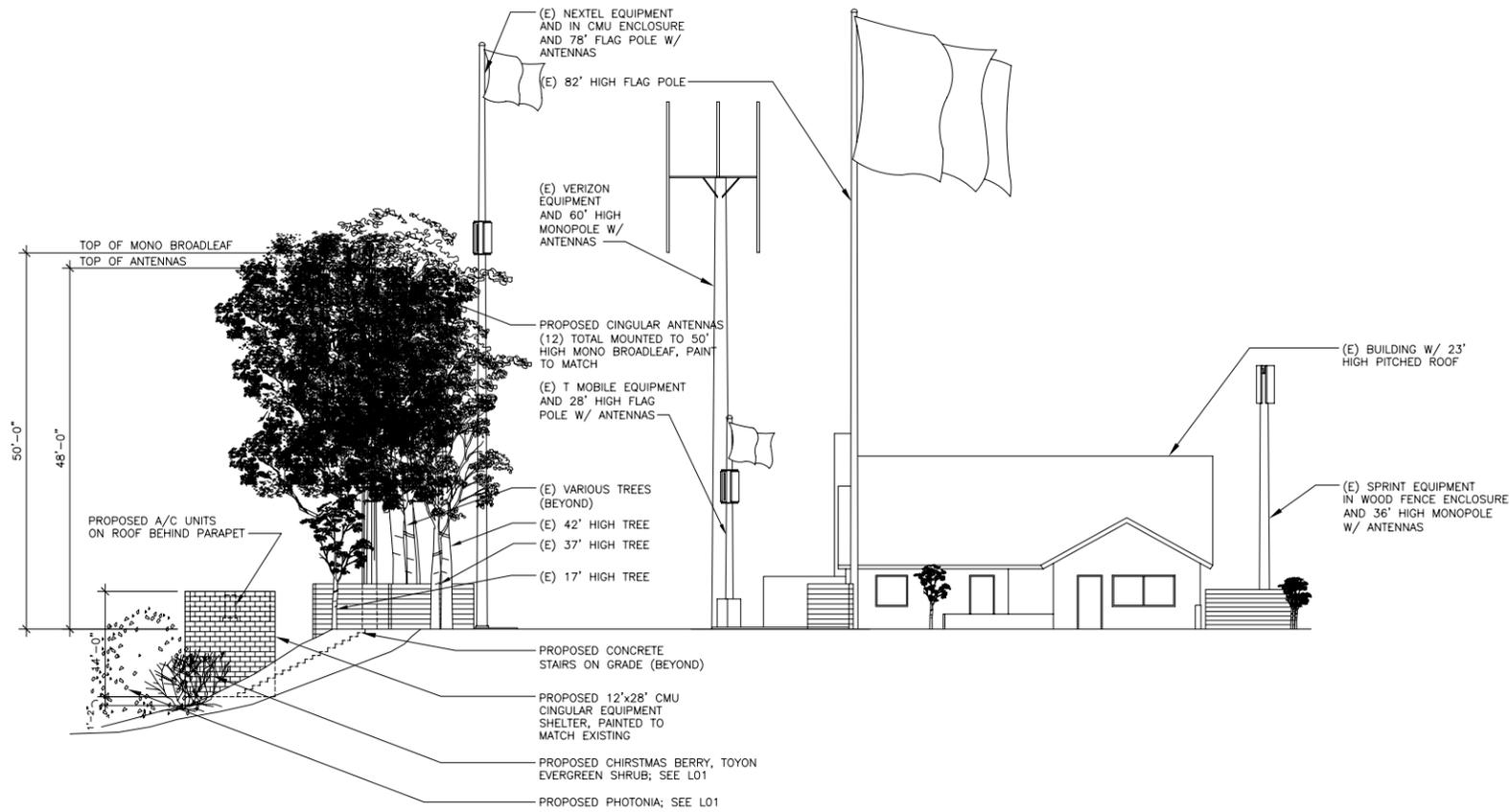
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NORTH ELEVATION

3/32" = 1'-0"

1



EAST ELEVATION

3/32" = 1'-0"

2



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619.298.4210 • 619.298.4250 FAX • DDMAIL@DAD.COM

PROJECT NAME

cingular wireless
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844 TAVERN ROAD, ALPINE, CA 91901

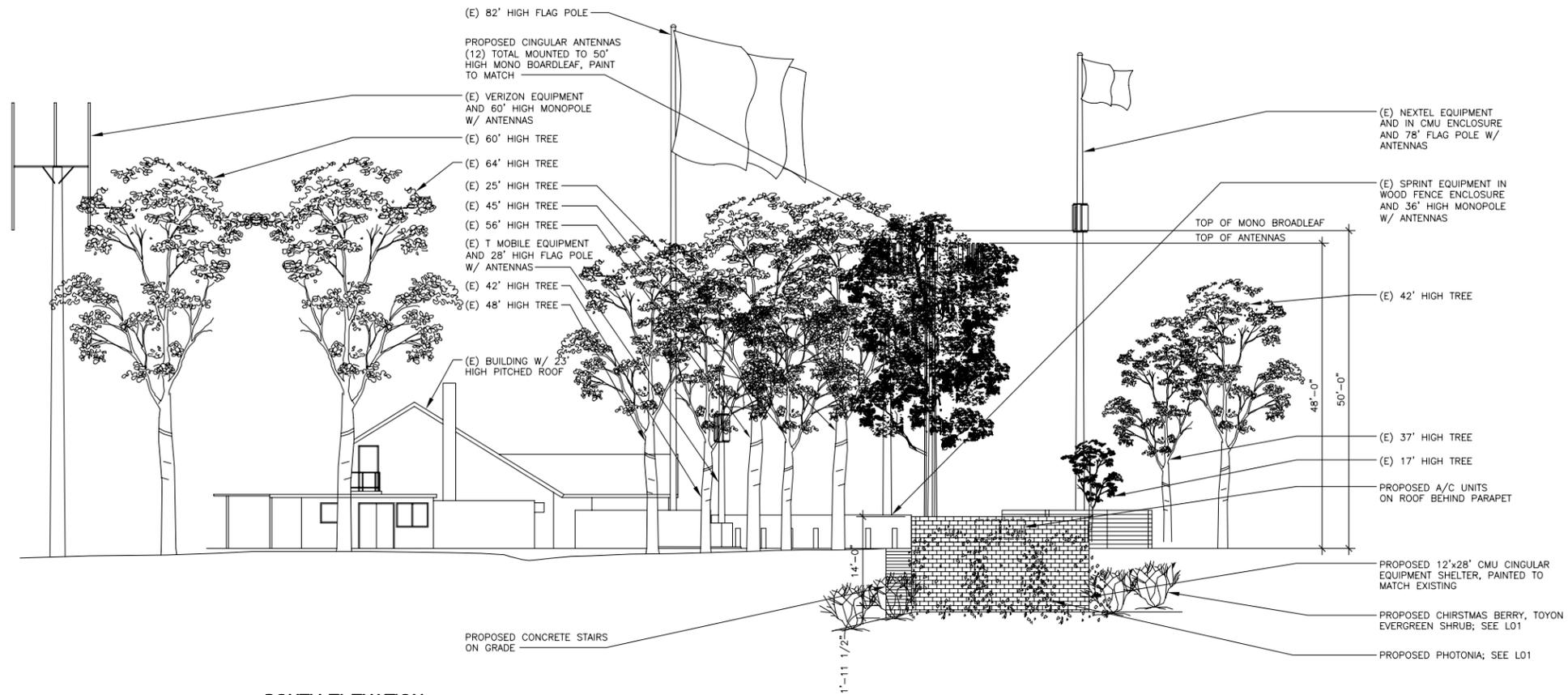
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Z03
ELEVATIONS

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SOUTH ELEVATION
3/32" = 1'-0"

1



WEST ELEVATION
3/32" = 1'-0"

2



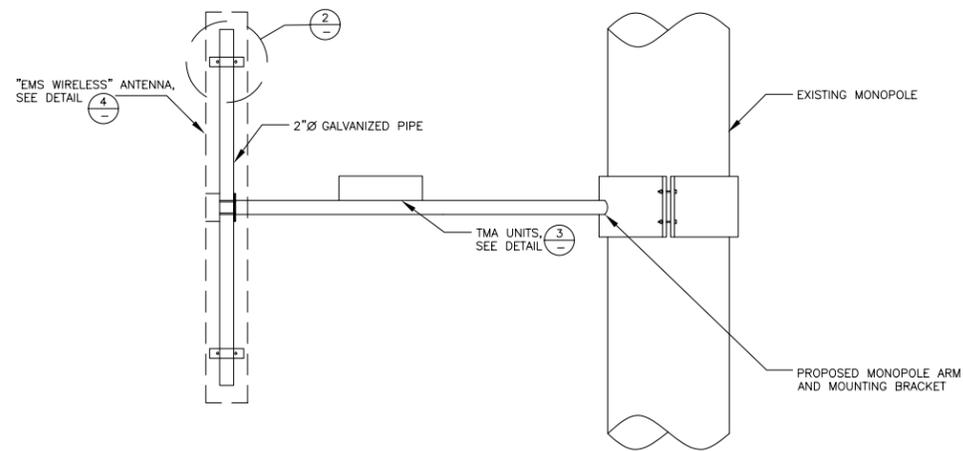
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619.294.4210 • 619.294.4250 FAX • DDMAIL@AUG.COM

cingular wireless
SS-639-01
VETERANS OF FOREIGN WARS
844 TAVERN ROAD, ALPINE, CA 91901

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DI DONATO ASSOCIATES
ARCHITECTURE + GRAPHICS
Z04
ELEVATIONS

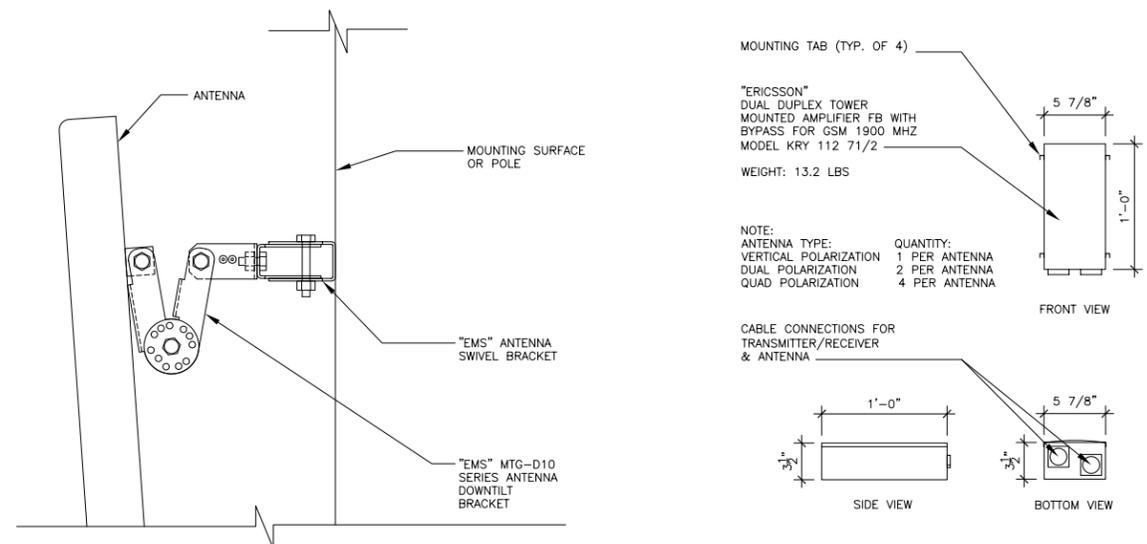
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TYPICAL ANTENNA MOUNT

1" = 1'-0"

1



ANTENNA MOUNT

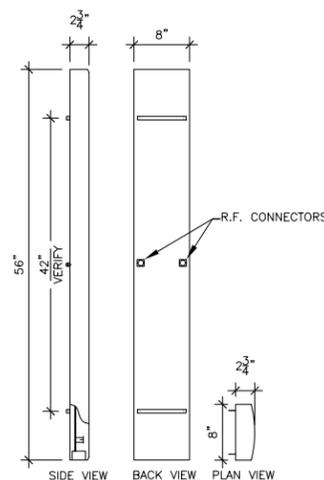
3" = 1'-0"

2

TMA UNIT

1 1/2" = 1'-0"

3



WEIGHT: 18 LBS. (8.2KG)
MODEL RR90-17-XX

"EMS" ANTENNA DETAIL

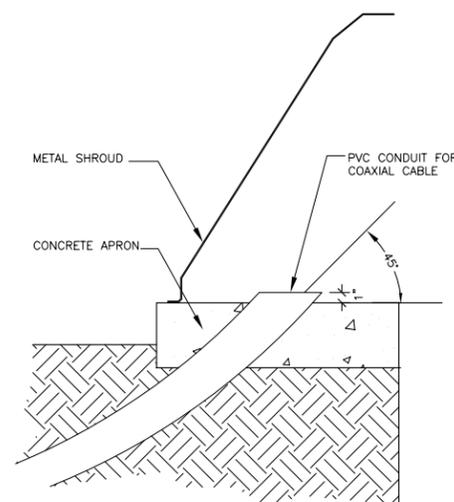
1" = 1'-0"

4

COAXIAL CONDUIT

1 1/2" = 1'-0"

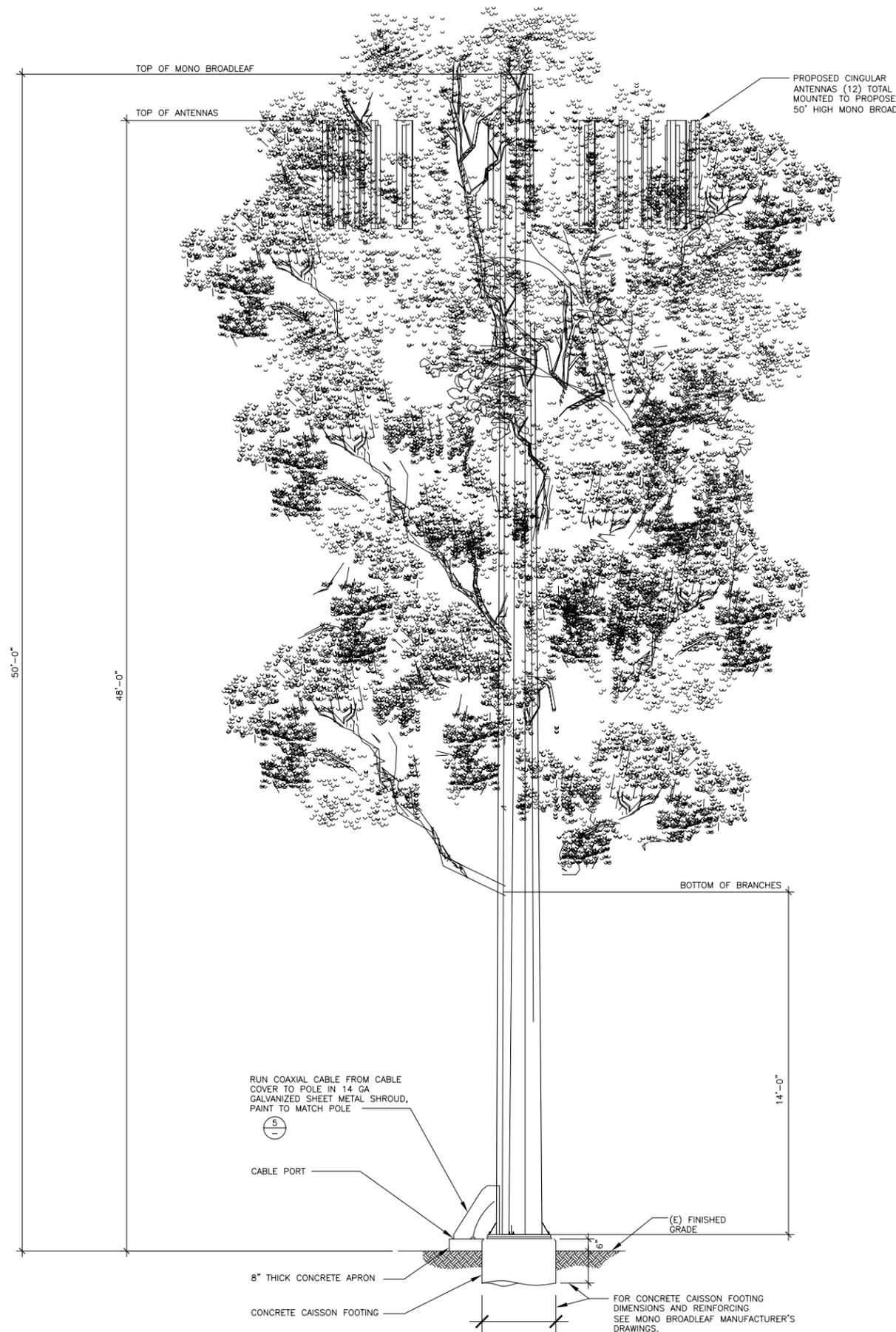
5



MONO BROADLEAF DETAIL

3/8" = 1'-0"

6



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ARCHITECTURE + GRAPHICS
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619.298.4210 • 619.298.4250 FAX • DDMAIL@GMAIL.COM

PROJECT NAME

cingular
SS-639-01
VETERANS OF FOREIGN WARS
844 TAVERN ROAD, ALPINE, CA 91901

ISSUES REVISIONS

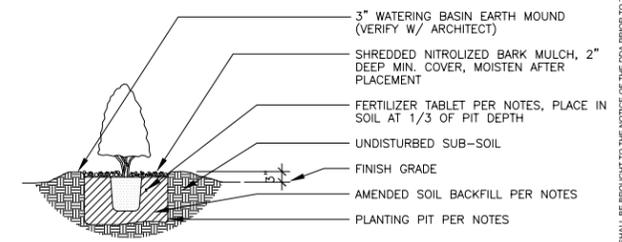
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SHEET INFORMATION

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ARCHITECTURE + GRAPHICS
Z05
ANTENNA DETAILS

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NOTE:
PRIOR TO PLANTING, FILL HOLE WITH WATER AND ALLOW TO PERCOLATE COMPLETELY INTO SUB-SOIL. DO NOT ASSIST OR DISTURB PERCOLATION RATE.

5 GALLON CONTAINER PLANTING

NTS 3

Symbol	Botanical name	Common name	Size	Qty	%	Mature height/spread	Form/function
	PHOTINIA FRASERII	PHOTINIA	24" BOX	3	NA	15' tall 10' wide	SCREEN
	HETEROMELES ARBUTIFOLIA	CHRISTMAS BERRY, TOYON EVERGREEN	5 GAL.	4	NA	6' tall 6' wide	SCREEN
	EXISTING						

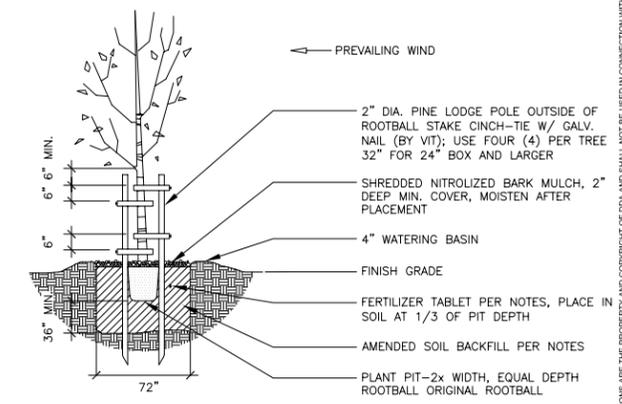
1. THE PLANTING PLAN IS DIAGRAMATIC AND SHALL BE USED AS A GUIDE FOR SETTING OUT PLANTS. PRIOR TO PLANTING, THE ARCHITECT SHALL BE CONTACTED TO APPROVE ALL PLANT LOCATIONS AND DIRECT ADJUSTMENTS.
2. PLANT MATERIALS SHALL CONFORM TO NURSERYMAN'S STANDARDS FOR SIZE AND HEALTH. ALL PLANTS ARE SUBJECT TO REJECTION BY THE ARCHITECT IF SUBSTANDARD IN SIZE, QUALITY AND HEALTH. PROVIDE WATERPROOF SPECIES IDENTIFICATION TAGS ON ONE PLANT PER SPECIES PER GROUPING.
3. PLANT COUNTS ARE FOR THE CONVENIENCE OF THE LANDSCAPE CONTRACTOR ONLY. CONTRACTOR IS RESPONSIBLE FOR ALL PLANTS SHOWN ON THE PLAN.
4. LANDSCAPE CONTRACTOR SHALL MAINTAIN A MINIMUM 2% DRAINAGE AWAY FROM ALL BUILDING AND FINISH GRADES SMOOTHED TO ELIMINATE PUDDLING OR STANDING WATER. CONTRACTOR SHALL COORDINATE WITH OTHER TRADES AND MAINTAIN DRAINAGE DURING CONSTRUCTION.
5. LANDSCAPE CONTRACTOR SHALL REMOVE ALL EXISTING VEGETATION, TRASH, CLIPPINGS, ROCK AND OTHER DEBRIS IN PLANTING AREAS. RAKE AND FINE GRADE ALL PLANTING AREAS PRIOR TO COMMENCEMENT OF PLANTING OPERATIONS.
6. PLANTING PITS SHALL BE PER PLANTING DETAILS.
7. PLANTING PITS AND PLANTERS SHALL BE BACKFILLED PER SOIL TEST REPORT FOR PLANTING. CONTRACTOR SHALL PROVIDE RESULTS OF AN AGRONOMIC SOILS TEST TO THE OWNER. CONTRACTOR SHALL ADD AMENDMENTS TO THE PLANTING AREAS PER SOILS TESTING RECOMMENDATIONS.
8. TREES AND SHRUBS SHALL BE FERTILIZED AT TIME OF PLANTING WITH 21-GRAM AGRIFORM TABLETS AT THE FOLLOWING RATES:
GROUNDCOVER - 1/2 TABLET
1 GAL. SIZE - 1 TABLET
5 GAL. SIZE - 3 TABLETS
15 GAL. SIZE - 5 TABLETS
24" BOX - 8 TABLETS
36" BOX - 10 TABLETS
48" BOX - 12 TABLETS
9. VERIFY TREE PIT DRAINAGE WITH 24 HOUR WATER FILL TEST PRIOR TO PLANTING. ALL BOXED TREES NOT DRAINING ARE TO HAVE A 4" DIAMETER AUGER HOLE DRILLED THROUGH ANY HARDPAN OR COMPACTED EARTH AS REQUIRED TO PROVIDE DRAINAGE IN 24 HOUR PERIOD.
10. POST PLANTING FERTILIZATION SHALL BE PERFORMED BY CONTRACTOR AT 30, 60, & 90 DAYS AFTER PLANTING.
11. NOT USED
12. LANDSCAPE CONTRACTOR SHALL MAINTAIN ALL PLANTINGS FOR A PERIOD OF THREE HUNDRED AND SIXTY-FIVE (365) DAYS AFTER FINAL ACCEPTANCE OF THE BUILDING. ALL AREAS SHALL BE KEPT CLEAN, WATERED AND WEED-FREE. ALL DEAD OR DYING PLANTS WATERED SHALL BE REPLACED WITHIN TWO (2) WEEKS. OWNER SHALL MAINTAIN SITE AFTER CONTRACTOR MAINTENANCE PERIOD.
13. CONTRACTOR SHALL GUARANTEE PLANT LONGEVITY AS FOLLOWS: TREES - ONE YEAR; SHRUBS AND GROUNDCOVER - THREE MONTHS.
14. WHERE TREE TRUNKS ARE WITHIN 6' OF PAVING, CONTRACTOR SHALL INSTALL ROOT BARRIER BY 'BIO-BARRIER' PER MANUFACTURER'S SPECIFICATIONS.

PLANTING NOTES

NTS 2

PLANT LEGEND

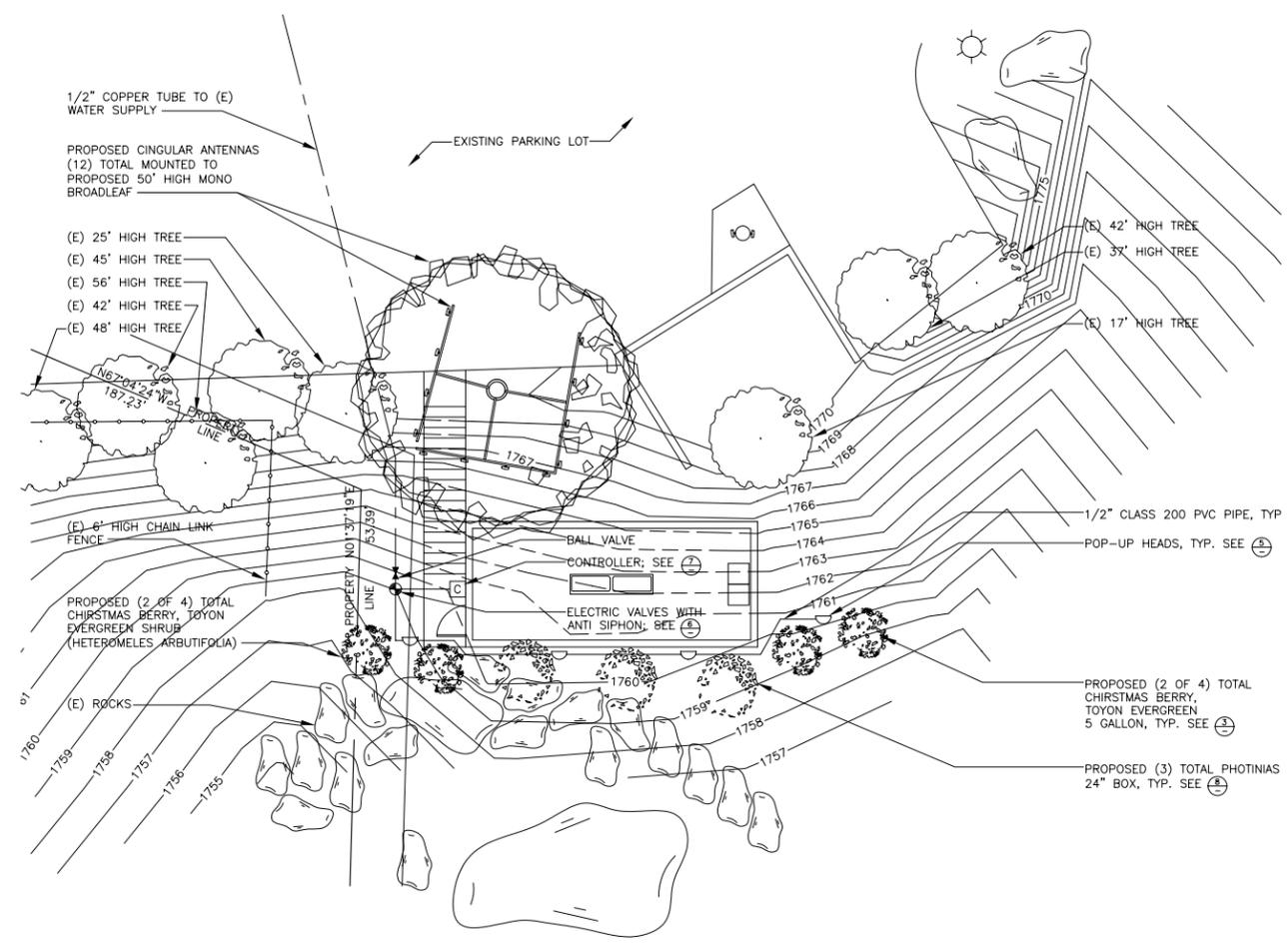
NTS 4



NOTE:
ALL 24" BOX TREES SHALL BE STAKED.

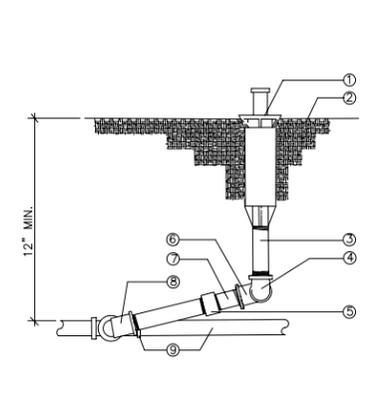
24' BOX PLANTING

NTS 8



PLANTING AND IRRIGATION PLAN

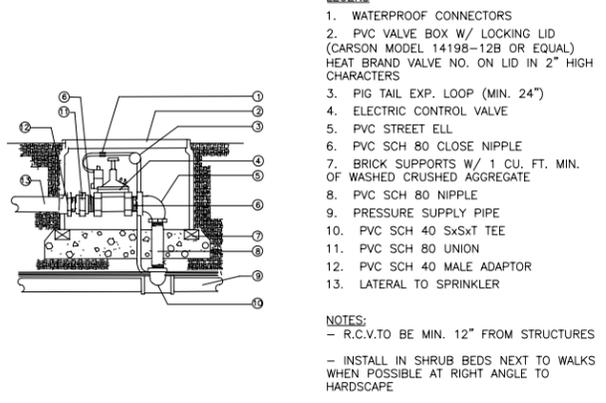
1/8" = 1'-0" 1



- LEGEND**
1. 4" POP-UP BUBBLER HEAD
 2. FINISH GRADE (1" BELOW HEAD)
 3. PVC SCH 80 THREADED NIPPLE LENGTH AS REQ.
 4. PVC SCH 40 T x T 90 DEGREE ELL
 5. ANTI-DRAIN VALVE TO BE FITTED ON ALL DOWN SLOPE HEADS IF NOT PRE-FITTED IN HEAD
 6. MARLEX 90 DEGREE STREET ELL
 7. PVC SCH 80 NIPPLE (6" LONG)
 8. MARLEX 90 DEGREE STREET ELL
 9. NON-PRESSURE LATERAL LINE & TEE FITTING
- NOTES:**
- LOCATE HEADS 2" FROM WALKS, CURBS, HARDSCAPE AND MOW STRIPS
- LOCATE HEADS 6" FROM ALL STRUCTURES
- USE TEFLON TAPE ON ALL PVC TO PVC THREADS

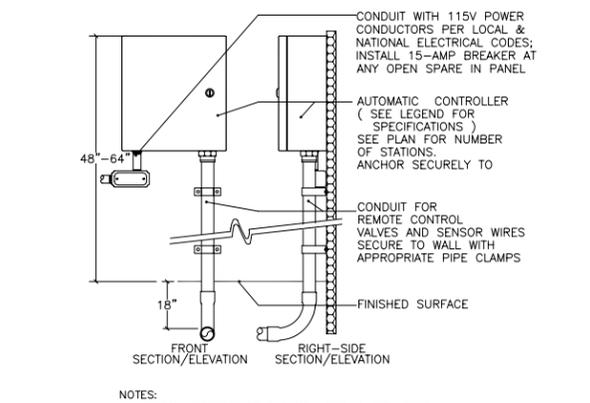
BUBBLER ON POP-UP

NTS 5



ELECTRIC VALVE

NTS 6



CONTROLLER

NTS 7

- NOTES:**
- INSTALL CONTROLLER PER MFG. REC. & CITY CODE
- NO WIRE SPLICES BETWEEN CONTROLLER & VALVES
- RADIUS EDGES OF CONCRETE PAD

APPENDIX B

Pertinent Sections of the County of San Diego Scoping Letter, Dated July 14,
2005

ATTACHMENT C

Noise

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 C37 Heavy Commercial that allows a one-hour average sound level of **60** decibels (dBA) from 7 a.m. to 10 p.m. and **55** 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.

Project Specific Information: The project site contains four existing wireless telecommunications facilities. There is no previous noise study completed for the existing sites, therefore the County requires the requested noise study to make reference to each potential noise source. It will be especially important to understand the impact at the nearest property line with regards to the proposed site and an existing Nextel facility near-by.

APPENDIX C

San Diego County Code, Section 36.404, Sound Level Limits

Section 36.404

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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

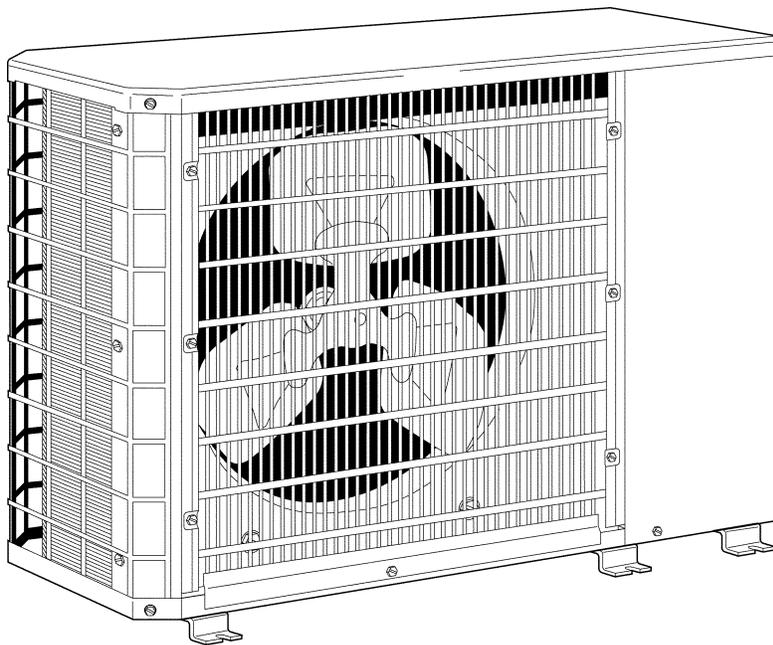
Manufacturer's Noise Emission Data



Product Data

38QR018-060 Heat Pump Condensing Unit

1½ to 5 Nominal Tons



The 38QR Energy-Efficient condensing unit incorporates innovative technology to provide reliable cooling and heating performance. Built into these units are features most desired by the industry, including:

- SEER (Seasonal Energy Efficiency Ratio) ratings of up to 11.0 when matched with Duct Free System Fan Coils. All models are UL (Underwriters' Laboratories); UL, Canada; ARI and CEC (California Energy Commission) listed.
- A wide range of accessories is available to meet a variety of installation requirements.
- The 38QR can be installed within 6 in. of an outside wall, on a roof, balcony, or on or under a deck.

Features/Benefits

Simple servicing and maintenance

Removing a single panel on outdoor units provides immediate access to the isolated compressor and control compartment, allowing a service technician access to check unit operation without a loss of condenser airflow. In addition, 38QR units have a blow-thru design for the outdoor section which means that dirt accumulates on the inside surface of the coil. Coils can be cleaned quickly from the outside using a pressure hose and detergent without removing grilles or using fin combs.

Secure operation

If security is an issue, outdoor and indoor units are connected only by refrigerant piping and wiring to prevent intruders from crawling through ductwork.

ARI* capacity ratings



PISTONS AND CHARGE

UNDER CEILING

NOMINAL CAPACITY (Tons)	INDOOR UNIT	OUTDOOR UNIT	ARI CAPACITIES		ARI CFM	SEER	EER	HSPF	INDOOR PISTON	OUTDOOR PISTON	CHARGE (lb)
			C/O (Btuh)	H/P (Btuh)							
2.0	40QAE024-331	38QR018C-3	19,000	17,000	500	11.0	10.0	7.2	55	49	4.3
		38QR024C-3	24,000	22,600	525	11.0	10.0	7.3	55	49	6.3
3.0	40QAE036-321	38QR030C-3	30,000	28,000	870	11.0	10.2	7.4	63	55	6.4
		38QR036C-3,5,6	33,400	33,400	870	11.2	10.2	7.2	63	61	8.7
4.0	40QAE048-321	38QR048C-3,5,6	48,000	45,500	1100	10.2	9.6	7.3	84	78	10.0
5.0	40QAE060-311	38QR060C-3,5,6	58,000	57,500	1600	11.0	9.9	7.4	96	82	11.9

CASSETTE

NOMINAL CAPACITY (Tons)	INDOOR UNIT	OUTDOOR UNIT	ARI CAPACITIES		ARI CFM	SEER	EER	HSPF	INDOOR PISTON	OUTDOOR PISTON	CHARGE (lb)
			C/O (Btuh)	H/P (Btuh)							
1.5	40QKE024-3	38QR018C-3	18,000	17,600	525	10.0	9.0	6.8	51.0	49.0	5.5
2.0	40QKE036-3	38QR024C-3	25,000	23,800	980	10.7	10.2	7.6	61.0	49.0	5.9
		38QR030C-3	29,000	27,000	980	11.5	11.1	7.6	63.0	55.0	5.9
3.0	40QKE048-3	38QR036C-3, 5, 6	32,000	33,000	1100	10.0	9.5	6.8	67.0	59.0	5.9

LEGEND

- EER — Energy Efficiency Ratio
- HSPF — Heating Seasonal Performance Factor
- SEER — Seasonal Energy Efficiency Rating
- C/O — Cooling Only
- H/P — Heat Pump

NOTE Systems are rated and certified in accordance with ARI Standards 210/240 and 270.

*Air Conditioning and Refrigeration Institute.



SOUND DATA (A Weighted)

UNIT	SOUND POWER NO. 1 (dBa)	SOUND PRESSURE (dBa)	FAN SPEED	SOUND POWER DATA OCTAVE BAND (dBa)						
				125	250	500	1000	2000	4000	8000
38QR018C	67.2	56.2	Single	51.0	57.0	62.0	62.5	62.0	56.5	47.5
38QR024C	66.3	55.3	Single	54.5	59.0	61.5	62.0	60.5	54.5	49.5
38QR030C	65.9	54.9	Single	55.0	56.5	61.0	63.0	58.5	53.5	43.0
38QR036C	66.2	55.2	Single	57.0	61.0	61.0	62.5	59.0	55.5	51.0
38QR048C	73.0	62.0	Single	60.5	68.5	68.0	68.5	67.0	62.5	54.0
38QR060C	73.6	62.6	Single	62.5	67.5	71.0	68.0	67.0	63.5	54.5

LEGEND

dBa — Decibels on the A Scale

NOTE: Sound pressure data is measured 1 m away from the unit.

APPENDIX E

Cadna Analysis Data and Results

Nextel Noise Levels

Name	M. ID	Level Lr		Limit. Value		Land Use			Height (m)	Coordinates			
		Day	Night	Day	Night	Type	Auto	Noise Type		X	Y	Z	
		(dBA)	(dBA)	(dBA)	(dBA)					(m)	(m)	(m)	
Northern Property Line	R1	29.0	29.0	0.0	0.0		x	Total	1.52	r	74.19	100.76	535.07
Southern Property Line	R2	41.7	41.7	0.0	0.0		x	Total	1.52	r	82.27	0.06	534.52
Eastern Property Line	R3	46.4	46.4	0.0	0.0		x	Total	1.52	r	101.81	13.52	537.01
Eastern Property Line	R4	34.5	34.5	0.0	0.0		x	Total	1.52	r	101.81	55.92	538.55
Western Property Line	R5	58.4	58.4	0.0	0.0		x	Total	1.52	r	74.73	13.52	537.97
Southwestern Property Line	R6	51.9	51.9	0.0	0.0		x	Total	1.52	r	62.33	21.55	541.02
Western Property Line	R7	31.0	31.0	0.0	0.0		x	Total	1.52	r	0.09	50.31	535.19

Sprint Noise Levels

Name	M. ID	Level Lr		Limit. Value		Land Use			Height		Coordinates		
		Day	Night	Day	Night	Type	Auto	Noise Type			X	Y	Z
		(dBA)	(dBA)	(dBA)	(dBA)				(m)		(m)	(m)	(m)
Northern Property Line	R1	26.1	26.1	0.0	0.0		x	Total	1.52	r	74.19	100.76	535.07
Southern Property Line	R2	13.1	13.1	0.0	0.0		x	Total	1.52	r	82.27	0.06	534.52
Eastern Property Line	R3	20.8	20.8	0.0	0.0		x	Total	1.52	r	101.81	13.52	537.01
Eastern Property Line	R4	28.9	28.9	0.0	0.0		x	Total	1.52	r	101.81	55.92	538.55
Western Property Line	R5	23.7	23.7	0.0	0.0		x	Total	1.52	r	74.73	13.52	537.97
Southwestern Property Line	R6	29.9	29.9	0.0	0.0		x	Total	1.52	r	62.33	21.55	541.02
Western Property Line	R7	11.0	11.0	0.0	0.0		x	Total	1.52	r	0.09	50.31	535.19

T-Mobile Noise Levels

Name	M. ID	Level Lr		Limit. Value		Land Use			Height		Coordinates		
		Day	Night	Day	Night	Type	Auto	Noise Type			X	Y	Z
		(dBA)	(dBA)	(dBA)	(dBA)				(m)		(m)	(m)	(m)
Northern Property Line	R1	8.3	8.3	0.0	0.0		x	Total	1.52	r	74.19	100.76	535.07
Southern Property Line	R2	15.8	15.8	0.0	0.0		x	Total	1.52	r	82.27	0.06	534.52
Eastern Property Line	R3	14.5	14.5	0.0	0.0		x	Total	1.52	r	101.81	13.52	537.01
Eastern Property Line	R4	17.4	17.4	0.0	0.0		x	Total	1.52	r	101.81	55.92	538.55
Western Property Line	R5	21.5	21.5	0.0	0.0		x	Total	1.52	r	74.73	13.52	537.97
Southwestern Property Line	R6	31.3	31.3	0.0	0.0		x	Total	1.52	r	62.33	21.55	541.02
Western Property Line	R7	10.5	10.5	0.0	0.0		x	Total	1.52	r	0.09	50.31	535.19

Existing Noise Levels

Name	M. ID	Level Lr		Limit. Value		Land Use			Height (m)	Coordinates			
		Day	Night	Day	Night	Type	Auto	Noise Type		X	Y	Z	
		(dBA)	(dBA)	(dBA)	(dBA)					(m)	(m)	(m)	
Northern Property Line	R1	30.8	30.8	0.0	0.0		x	Total	1.52	r	74.19	100.76	535.07
Southern Property Line	R2	41.7	41.7	0.0	0.0		x	Total	1.52	r	82.27	0.06	534.52
Eastern Property Line	R3	46.4	46.4	0.0	0.0		x	Total	1.52	r	101.81	13.52	537.01
Eastern Property Line	R4	35.7	35.7	0.0	0.0		x	Total	1.52	r	101.81	55.92	538.55
Western Property Line	R5	58.4	58.4	0.0	0.0		x	Total	1.52	r	74.73	13.52	537.97
Southwestern Property Line	R6	52.0	52.0	0.0	0.0		x	Total	1.52	r	62.33	21.55	541.02
Western Property Line	R7	31.0	31.0	0.0	0.0		x	Total	1.52	r	0.09	50.31	535.19

Cingular Noise Levels

Name	M. ID	Level Lr		Limit. Value		Land Use			Height		Coordinates		
		Day	Night	Day	Night	Type	Auto	Noise Type			X	Y	Z
		(dBA)	(dBA)	(dBA)	(dBA)				(m)		(m)	(m)	(m)
Northern Property Line	R1	11.8	11.8	0.0	0.0		x	Total	1.52	r	74.19	100.76	535.07
Southern Property Line	R2	29.8	29.8	0.0	0.0		x	Total	1.52	r	82.27	0.06	534.52
Eastern Property Line	R3	28.8	28.8	0.0	0.0		x	Total	1.52	r	101.81	13.52	537.01
Eastern Property Line	R4	20.2	20.2	0.0	0.0		x	Total	1.52	r	101.81	55.92	538.55
Western Property Line	R5	34.7	34.7	0.0	0.0		x	Total	1.52	r	74.73	13.52	537.97
Southwestern Property Line	R6	32.5	32.5	0.0	0.0		x	Total	1.52	r	62.33	21.55	541.02
Western Property Line	R7	12.4	12.4	0.0	0.0		x	Total	1.52	r	0.09	50.31	535.19

Cumulative Noise Levels

Name	M. ID	Level Lr		Limit. Value		Land Use			Height		Coordinates		
		Day	Night	Day	Night	Type	Auto	Noise Type			X	Y	Z
		(dBA)	(dBA)	(dBA)	(dBA)				(m)		(m)	(m)	(m)
Northern Property Line	R1	30.9	30.9	0.0	0.0		x	Total	1.52	r	74.19	100.76	535.07
Southern Property Line	R2	42.0	42.0	0.0	0.0		x	Total	1.52	r	82.27	0.06	534.52
Eastern Property Line	R3	46.5	46.5	0.0	0.0		x	Total	1.52	r	101.81	13.52	537.01
Eastern Property Line	R4	35.8	35.8	0.0	0.0		x	Total	1.52	r	101.81	55.92	538.55
Western Property Line	R5	58.4	58.4	0.0	0.0		x	Total	1.52	r	74.73	13.52	537.97
Southwestern Property Line	R6	52.0	52.0	0.0	0.0		x	Total	1.52	r	62.33	21.55	541.02
Western Property Line	R7	31.1	31.1	0.0	0.0		x	Total	1.52	r	0.09	50.31	535.19

Cadna/A-Berechnung
Version 3.5.115 (32 Bit)

Datei: P:\Jobs 2005\A50904N1 PlanCom-Cingular ZAP 05-010-Tavern Rd, Alpine-MBVA50904N1 Plancom VFW.cna

Berechnungsparameter:

General
Country International
Max. Error (dB) 0
Max. Search Radius (m) 2000
Min. Dist Src to Rcvr 0
Partition
Raster Factor 0.5
Max. Length of Section (m) 1000
Min. Length of Section (m) 1
Min. Length of Section (%) 0
Proj. Line Sources On
Proj. Area Sources On
Ref. Time
Reference Time Day (min) 960
Reference Time Night (min) 480
Daytime Penalty (dB) 0
Recr. Time Penalty (dB) 6
Night-time Penalty (dB) 10
DTM
Standard Height (m) 539.5
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
Screening Excl. Ground Att. over Barrier
Dz with limit
Barrier Coefficients C1,2,3 3.0 20.0 0.0
Temperature (°C) 10
rel. Humidity (%) 70
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: Northern Property Line
ID: R1
X: 74.19
Y: 100.76
Z: 535.07
Ground: 533.55

ISO	Bezeichnung	ID	X	Y	Z	Ground	ReflOrd	LxT	LxN	L/A	Dist.	hm	Freq	Adiv	K0b	Agr	Abar	z	Aatm	Afol	Ahous	Cmet	CmetN	Dc	RL	LtotT	LtotN	
	Sun HVAC Unit		84.18	19.04	540.72	539.5	0	-18.7	-18.7	1	82.51	0.9	32	49.33	0	-3	3.79	0.32	0	0	0	0	0	0	0	0	-68.84	-68.84
	Sun HVAC Unit		84.18	19.04	540.72	539.5	0	71.9	71.9	1	82.51	0.9	63	49.33	0	-3	5.33	0.32	0.01	0	0	0	0	0	0	0	20.21	20.21
	Sun HVAC Unit		84.18	19.04	540.72	539.5	0	76.4	76.4	1	82.51	0.9	125	49.33	0	1.18	5.63	0.32	0.03	0	0	0	0	0	0	0	20.2	20.2
	Sun HVAC Unit		84.18	19.04	540.72	539.5	0	83.7	83.7	1	82.51	0.9	250	49.33	0	11.7	0.02	0.32	0.09	0	0	0	0	0	0	0	22.53	22.53

Sun HVAC Unit	84.18	19.04	540.72	539.5	0	87	87	1	82.51	0.9	500	49.33	0	9.61	4.64	0.32	0.16	0	0	0	0	0	0	0	23.24	23.24
Sun HVAC Unit	84.18	19.04	540.72	539.5	0	86.6	86.6	1	82.51	0.9	1000	49.33	0	1.56	13.43	0.32	0.3	0	0	0	0	0	0	0	21.96	21.96
Sun HVAC Unit	84.18	19.04	540.72	539.5	0	83.1	83.1	1	82.51	0.9	2000	49.33	0	0	17.12	0.32	0.8	0	0	0	0	0	0	0	15.83	15.83
Sun HVAC Unit	84.18	19.04	540.72	539.5	0	77.1	77.1	1	82.51	0.9	4000	49.33	0	0	20.08	0.32	2.7	0	0	0	0	0	0	0	4.97	4.97
Sun HVAC Unit	84.18	19.04	540.72	539.5	0	68.3	68.3	1	82.51	0.9	8000	49.33	0	0	22.34	0.32	9.64	0	0	0	0	0	0	0	-13.04	-13.04
Sprint Modcell Cabinet Set	70.48	55.92	540.72	539.5	0	75.6	75.6	1	45.34	1.1	500	44.13	0	7.06	1.05	0.12	0.09	0	0	0	0	0	0	0	23.25	23.25
Carrier 38QR060C Condensor	81.54	13.52	540.73	537.36	0	-39.4	-39.4	1	87.73	1.33	32	49.86	0	-3	8.48	0.23	0	0	0	0	0	0	0	0	-94.75	-94.75
Carrier 38QR060C Condensor	81.54	13.52	540.73	537.36	0	-26.2	-26.2	1	87.73	1.33	63	49.86	0	-3	9.53	0.23	0.01	0	0	0	0	0	0	0	-82.61	-82.61
Carrier 38QR060C Condensor	81.54	13.52	540.73	537.36	0	62.5	62.5	1	87.73	1.33	125	49.86	0	2.52	5.93	0.23	0.04	0	0	0	0	0	0	0	4.15	4.15
Carrier 38QR060C Condensor	81.54	13.52	540.73	537.36	0	67.5	67.5	1	87.73	1.33	250	49.86	0	8.34	2.49	0.23	0.09	0	0	0	0	0	0	0	6.72	6.72
Carrier 38QR060C Condensor	81.54	13.52	540.73	537.36	0	71	71	1	87.73	1.33	500	49.86	0	4.06	9.35	0.23	0.17	0	0	0	0	0	0	0	7.56	7.56
Carrier 38QR060C Condensor	81.54	13.52	540.73	537.36	0	68	68	1	87.73	1.33	1000	49.86	0	0.52	15.64	0.23	0.32	0	0	0	0	0	0	0	1.66	1.66
Carrier 38QR060C Condensor	81.54	13.52	540.73	537.36	0	67	67	1	87.73	1.33	2000	49.86	0	0	19.01	0.23	0.85	0	0	0	0	0	0	0	-2.73	-2.73
Carrier 38QR060C Condensor	81.54	13.52	540.73	537.36	0	63.5	63.5	1	87.73	1.33	4000	49.86	0	0	21.95	0.23	2.87	0	0	0	0	0	0	0	-11.18	-11.18
Carrier 38QR060C Condensor	81.54	13.52	540.73	537.36	0	54.5	54.5	1	87.73	1.33	8000	49.86	0	0	24.91	0.23	10.3	0	0	0	0	0	0	0	-30.53	-30.53
RBS 2106 Cabinet	67.51	37.03	540.72	539.5	0	-24.7	-24.7	1	64.32	1.28	32	47.17	0	-3	8.5	0.29	0	0	0	0	0	0	0	0	-77.42	-77.42
RBS 2106 Cabinet	67.51	37.03	540.72	539.5	0	52.9	52.9	1	64.32	1.28	63	47.17	0	-3	9.33	0.29	0.01	0	0	0	0	0	0	0	-0.65	-0.65
RBS 2106 Cabinet	67.51	37.03	540.72	539.5	0	59.8	59.8	1	64.32	1.28	125	47.17	0	1.01	7.15	0.29	0.03	0	0	0	0	0	0	0	4.4	4.4
RBS 2106 Cabinet	67.51	37.03	540.72	539.5	0	61.4	61.4	1	64.32	1.28	250	47.17	0	10.5	0.58	0.29	0.07	0	0	0	0	0	0	0	3.05	3.05
RBS 2106 Cabinet	67.51	37.03	540.72	539.5	0	58.5	58.5	1	64.32	1.28	500	47.17	0	8.59	5.52	0.29	0.12	0	0	0	0	0	0	0	-2.95	-2.95
RBS 2106 Cabinet	67.51	37.03	540.72	539.5	0	60.6	60.6	1	64.32	1.28	1000	47.17	0	1.4	15.66	0.29	0.24	0	0	0	0	0	0	0	-3.9	-3.9
RBS 2106 Cabinet	67.51	37.03	540.72	539.5	0	58.1	58.1	1	64.32	1.28	2000	47.17	0	0	19.99	0.29	0.62	0	0	0	0	0	0	0	-9.72	-9.72
RBS 2106 Cabinet	67.51	37.03	540.72	539.5	0	59.7	59.7	1	64.32	1.28	4000	47.17	0	0	22.95	0.29	2.11	0	0	0	0	0	0	0	-12.57	-12.57
RBS 2106 Cabinet	67.51	37.03	540.72	539.5	0	48.2	48.2	1	64.32	1.28	8000	47.17	0	0	25	0.29	7.52	0	0	0	0	0	0	0	-31.53	-31.53

Limit. Value D/N: 0 0
Level D/N: 30.1316 30.1316

Receiver: Southern Property Line
ID: R2

X: 82.27
Y: 0.06
Z: 534.52
Ground: 533

ISO	Bezeichnung	ID	X	Y	Z	Ground	ReffOrd	LxT	LxN	L/A	Dist.	hm	Freq	Adiv	K0b	Agr	Abar	z	Aatm	Afol	Ahous	Cmet	CmetN	Dc	RL	LtotT	LtotN
Sun HVAC Unit	84.18	19.04	540.72	539.5	0	-18.7	-18.7	1	20.06	2.73	32	37.05	0	-3	3.95	0.72	0	0	0	0	0	0	0	0	0	-56.72	-56.72
Sun HVAC Unit	84.18	19.04	540.72	539.5	0	71.9	71.9	1	20.06	2.73	63	37.05	0	-3	5.55	0.72	0	0	0	0	0	0	0	0	0	32.28	32.28
Sun HVAC Unit	84.18	19.04	540.72	539.5	0	76.4	76.4	1	20.06	2.73	125	37.05	0	0.4	6.1	0.72	0.01	0	0	0	0	0	0	0	0	32.82	32.82
Sun HVAC Unit	84.18	19.04	540.72	539.5	0	83.7	83.7	1	20.06	2.73	250	37.05	0	4.6	5.96	0.72	0.02	0	0	0	0	0	0	0	0	36.05	36.05
Sun HVAC Unit	84.18	19.04	540.72	539.5	0	87	87	1	20.06	2.73	500	37.05	0	3.78	9.93	0.72	0.04	0	0	0	0	0	0	0	0	36.19	36.19
Sun HVAC Unit	84.18	19.04	540.72	539.5	0	86.6	86.6	1	20.06	2.73	1000	37.05	0	0.61	15.23	0.72	0.07	0	0	0	0	0	0	0	0	33.61	33.61
Sun HVAC Unit	84.18	19.04	540.72	539.5	0	83.1	83.1	1	20.06	2.73	2000	37.05	0	0	18.71	0.72	0.19	0	0	0	0	0	0	0	0	27.13	27.13
Sun HVAC Unit	84.18	19.04	540.72	539.5	0	77.1	77.1	1	20.06	2.73	4000	37.05	0	0	21.1	0.72	0.66	0	0	0	0	0	0	0	0	18.28	18.28
Sun HVAC Unit	84.18	19.04	540.72	539.5	0	68.3	68.3	1	20.06	2.73	8000	37.05	0	0	22.62	0.72	2.35	0	0	0	0	0	0	0	0	6.27	6.27
Carrier 38QR060C Condensor	81.54	13.52	540.73	537.36	0	-39.4	-39.4	1	14.84	2.81	32	34.43	0	-3	5.44	0.35	0	0	0	0	0	0	0	0	0	-76.27	-76.27
Carrier 38QR060C Condensor	81.54	13.52	540.73	537.36	0	-26.2	-26.2	1	14.84	2.81	63	34.43	0	-3	6.98	0.35	0	0	0	0	0	0	0	0	0	-64.62	-64.62
Carrier 38QR060C Condensor	81.54	13.52	540.73	537.36	0	62.5	62.5	1	14.84	2.81	125	34.43	0	0.68	5.93	0.35	0.01	0	0	0	0	0	0	0	0	21.44	21.44
Carrier 38QR060C Condensor	81.54	13.52	540.73	537.36	0	67.5	67.5	1	14.84	2.81	250	34.43	0	2.38	6.27	0.35	0.02	0	0	0	0	0	0	0	0	24.39	24.39
Carrier 38QR060C Condensor	81.54	13.52	540.73	537.36	0	71	71	1	14.84	2.81	500	34.43	0	1.16	9.58	0.35	0.03	0	0	0	0	0	0	0	0	25.8	25.8
Carrier 38QR060C Condensor	81.54	13.52	540.73	537.36	0	68	68	1	14.84	2.81	1000	34.43	0	0.15	13.02	0.35	0.05	0	0	0	0	0	0	0	0	20.34	20.34
Carrier 38QR060C Condensor	81.54	13.52	540.73	537.36	0	67	67	1	14.84	2.81	2000	34.43	0	0	15.91	0.35	0.14	0	0	0	0	0	0	0	0	16.51	16.51
Carrier 38QR060C Condensor	81.54	13.52	540.73	537.36	0	63.5	63.5	1	14.84	2.81	4000	34.43	0	0	18.79	0.35	0.49	0	0	0	0	0	0	0	0	9.79	9.79
Carrier 38QR060C Condensor	81.54	13.52	540.73	537.36	0	54.5	54.5	1	14.84	2.81	8000	34.43	0	0	19.68	0.35	1.74	0	0	0	0	0	0	0	0	-1.35	-1.35
Sprint Modcell Cabinet Set	70.48	55.92	540.72	539.5	0	75.6	75.6	1	57.43	1.97	500	46.18	0	8.1	12.35	1.34	0.11	0	0	0	0	0	0	0	0	8.83	8.83
RBS 2106 Cabinet	67.51	37.03	540.72	539.5	0	-24.7	-24.7	1	40.29	0.83	32	43.1	0	-3	8.09	0.14	0	0	0	0	0	0	0	0	0	-72.94	-72.94
RBS 2106 Cabinet	67.51	37.03	540.72	539.5	0	52.9	52.9	1	40.29	0.83	63	43.1	0	-3	8.39	0.14	0	0	0	0	0	0	0	0	0	4.35	4.35
RBS 2106 Cabinet	67.51	37.03	540.72	539.5	0	59.8	59.8	1	40.29	0.83	125	43.1	0	0.72	5.2	0.14	0.02	0	0	0	0	0	0	0	0	10.71	10.71
RBS 2106 Cabinet	67.51	37.03	540.72	539.5	0	61.4	61.4	1	40.29	0.83	250	43.1	0	7.96	0	0.14	0.04	0	0	0	0	0	0	0	0	10.24	10.24
RBS 2106 Cabinet	67.51	37.03	540.72	539.5	0	58.5	58.5	1	40.29	0.83	500	43.1	0	6.53	1.69	0.14	0.08	0	0	0	0	0	0	0	0	7.05	7.05
RBS 2106 Cabinet	67.51	37.03	540.72	539.5	0	60.6	60.6	1	40.29	0.83	1000	43.1	0	1.06	9.06	0.14	0.15	0	0	0	0	0	0	0	0	7.18	7.18

RBS 2106 Cabinet	67.51	37.03	540.72	539.5	0	58.1	58.1	1	40.29	0.83	2000	43.1	0	0	12.45	0.14	0.39	0	0	0	0	0	0	2.11	2.11	
RBS 2106 Cabinet	67.51	37.03	540.72	539.5	0	59.7	59.7	1	40.29	0.83	4000	43.1	0	0	15.07	0.14	1.32	0	0	0	0	0	0	0	0.16	0.16
RBS 2106 Cabinet	67.51	37.03	540.72	539.5	0	48.2	48.2	1	40.29	0.83	8000	43.1	0	0	17.87	0.14	4.71	0	0	0	0	0	0	0	-17.54	-17.54

Limit. Value D/N: 0 0
Level D/N: 41.9509 41.9509

Receiver: Eastern Property Line
ID: R3
X: 101.81
Y: 13.52
Z: 537.01
Ground: 535.49

ISO	Bezeichnung	ID	X	Y	Z	Ground	ReflOrd	LxT	LxN	L/A	Dist.	hm	Freq	Adiv	K0b	Agr	Abar	z	Aatm	Afol	Ahous	Cmet	CmetN	Dc	RL	LtotT	LtotN
	Sun HVAC Unit		84.18	19.04	540.72	539.5	0	-18.7	-18.7	1	18.84	1.43	32	36.5	0	-3	3.03	0.46	0	0	0	0	0	0	0	-55.25	-55.25
	Sun HVAC Unit		84.18	19.04	540.72	539.5	0	71.9	71.9	1	18.84	1.43	63	36.5	0	-3	3.71	0.46	0	0	0	0	0	0	0	34.66	34.66
	Sun HVAC Unit		84.18	19.04	540.72	539.5	0	76.4	76.4	1	18.84	1.43	125	36.5	0	0.39	3.57	0.46	0.01	0	0	0	0	0	0	35.91	35.91
	Sun HVAC Unit		84.18	19.04	540.72	539.5	0	83.7	83.7	1	18.84	1.43	250	36.5	0	4.48	3.06	0.46	0.02	0	0	0	0	0	0	39.62	39.62
	Sun HVAC Unit		84.18	19.04	540.72	539.5	0	87	87	1	18.84	1.43	500	36.5	0	3.68	5.5	0.46	0.04	0	0	0	0	0	0	41.27	41.27
	Sun HVAC Unit		84.18	19.04	540.72	539.5	0	86.6	86.6	1	18.84	1.43	1000	36.5	0	0.6	9.03	0.46	0.07	0	0	0	0	0	0	40.38	40.38
	Sun HVAC Unit		84.18	19.04	540.72	539.5	0	83.1	83.1	1	18.84	1.43	2000	36.5	0	0	11.89	0.46	0.18	0	0	0	0	0	0	34.5	34.5
	Sun HVAC Unit		84.18	19.04	540.72	539.5	0	77.1	77.1	1	18.84	1.43	4000	36.5	0	0	14.77	0.46	0.62	0	0	0	0	0	0	25.19	25.19
	Sun HVAC Unit		84.18	19.04	540.72	539.5	0	68.3	68.3	1	18.84	1.43	8000	36.5	0	0	17.31	0.46	2.2	0	0	0	0	0	0	12.27	12.27
	Carrier 38QR060C Condensor		81.54	13.52	540.73	537.36	0	-39.4	-39.4	1	20.61	2.52	32	37.28	0	-3	4.71	0.18	0	0	0	0	0	0	0	-78.4	-78.4
	Carrier 38QR060C Condensor		81.54	13.52	540.73	537.36	0	-26.2	-26.2	1	20.61	2.52	63	37.28	0	-3	6.09	0.18	0	0	0	0	0	0	0	-66.58	-66.58
	Carrier 38QR060C Condensor		81.54	13.52	540.73	537.36	0	62.5	62.5	1	20.61	2.52	125	37.28	0	0.97	4.56	0.18	0.01	0	0	0	0	0	0	19.69	19.69
	Carrier 38QR060C Condensor		81.54	13.52	540.73	537.36	0	67.5	67.5	1	20.61	2.52	250	37.28	0	3.36	3.78	0.18	0.02	0	0	0	0	0	0	23.05	23.05
	Carrier 38QR060C Condensor		81.54	13.52	540.73	537.36	0	71	71	1	20.61	2.52	500	37.28	0	1.64	7.13	0.18	0.04	0	0	0	0	0	0	24.91	24.91
	Carrier 38QR060C Condensor		81.54	13.52	540.73	537.36	0	68	68	1	20.61	2.52	1000	37.28	0	0.21	10.64	0.18	0.08	0	0	0	0	0	0	19.8	19.8
	Carrier 38QR060C Condensor		81.54	13.52	540.73	537.36	0	67	67	1	20.61	2.52	2000	37.28	0	0	13.36	0.18	0.2	0	0	0	0	0	0	16.16	16.16
	Carrier 38QR060C Condensor		81.54	13.52	540.73	537.36	0	63.5	63.5	1	20.61	2.52	4000	37.28	0	0	16.12	0.18	0.68	0	0	0	0	0	0	9.43	9.43
	Carrier 38QR060C Condensor		81.54	13.52	540.73	537.36	0	54.5	54.5	1	20.61	2.52	8000	37.28	0	0	18.99	0.18	2.41	0	0	0	0	0	0	-4.18	-4.18
	Sprint Modcell Cabinet Set		70.48	55.92	540.72	539.5	0	75.6	75.6	1	52.85	0.71	500	45.46	0	7.75	5.26	0.2	0.1	0	0	0	0	0	0	17	17
	RBS 2106 Cabinet		67.51	37.03	540.72	539.5	0	-24.7	-24.7	1	41.75	0.59	32	43.41	0	-3	8.06	0.11	0	0	0	0	0	0	0	-73.23	-73.23
	RBS 2106 Cabinet		67.51	37.03	540.72	539.5	0	52.9	52.9	1	41.75	0.59	63	43.41	0	-3	8.39	0.11	0.01	0	0	0	0	0	0	4.05	4.05
	RBS 2106 Cabinet		67.51	37.03	540.72	539.5	0	59.8	59.8	1	41.75	0.59	125	43.41	0	0.75	5.42	0.11	0.02	0	0	0	0	0	0	10.15	10.15
	RBS 2106 Cabinet		67.51	37.03	540.72	539.5	0	61.4	61.4	1	41.75	0.59	250	43.41	0	8.19	0	0.11	0.04	0	0	0	0	0	0	9.7	9.7
	RBS 2106 Cabinet		67.51	37.03	540.72	539.5	0	58.5	58.5	1	41.75	0.59	500	43.41	0	6.72	3.86	0.11	0.08	0	0	0	0	0	0	4.38	4.38
	RBS 2106 Cabinet		67.51	37.03	540.72	539.5	0	60.6	60.6	1	41.75	0.59	1000	43.41	0	1.09	12.26	0.11	0.15	0	0	0	0	0	0	3.63	3.63
	RBS 2106 Cabinet		67.51	37.03	540.72	539.5	0	58.1	58.1	1	41.75	0.59	2000	43.41	0	0	16.16	0.11	0.4	0	0	0	0	0	0	-1.93	-1.93
	RBS 2106 Cabinet		67.51	37.03	540.72	539.5	0	59.7	59.7	1	41.75	0.59	4000	43.41	0	0	19.05	0.11	1.37	0	0	0	0	0	0	-4.17	-4.17
	RBS 2106 Cabinet		67.51	37.03	540.72	539.5	0	48.2	48.2	1	41.75	0.59	8000	43.41	0	0	21.98	0.11	4.88	0	0	0	0	0	0	-22.12	-22.12

Limit. Value D/N: 0 0
Level D/N: 46.4623 46.4623

Receiver: Eastern Property Line
ID: R4
X: 101.81
Y: 55.92
Z: 538.55
Ground: 537.03

ISO	Bezeichnung	ID	X	Y	Z	Ground	ReflOrd	LxT	LxN	L/A	Dist.	hm	Freq	Adiv	K0b	Agr	Abar	z	Aatm	Afol	Ahous	Cmet	CmetN	Dc	RL	LtotT	LtotN
	Sun HVAC Unit		84.18	19.04	540.72	539.5	0	-18.7	-18.7	1	40.93	0.96	32	43.24	0	-3	4.1	0.39	0	0	0	0	0	0	0	-63.07	-63.07
	Sun HVAC Unit		84.18	19.04	540.72	539.5	0	71.9	71.9	1	40.93	0.96	63	43.24	0	-3	5.93	0.39	0	0	0	0	0	0	0	25.7	25.7
	Sun HVAC Unit		84.18	19.04	540.72	539.5	0	76.4	76.4	1	40.93	0.96	125	43.24	0	0.74	6.62	0.39	0.02	0	0	0	0	0	0	25.76	25.76
	Sun HVAC Unit		84.18	19.04	540.72	539.5	0	83.7	83.7	1	40.93	0.96	250	43.24	0	8.1	4.01	0.39	0.04	0	0	0	0	0	0	28.29	28.29
	Sun HVAC Unit		84.18	19.04	540.72	539.5	0	87	87	1	40.93	0.96	500	43.24	0	6.65	8.13	0.39	0.08	0	0	0	0	0	0	28.88	28.88
	Sun HVAC Unit		84.18	19.04	540.72	539.5	0	86.6	86.6	1	40.93	0.96	1000	43.24	0	1.08	15.02	0.39	0.15	0	0	0	0	0	0	27.08	27.08
	Sun HVAC Unit		84.18	19.04	540.72	539.5	0	83.1	83.1	1	40.93	0.96	2000	43.24	0	0	18.57	0.39	0.4	0	0	0	0	0	0	20.87	20.87

Sun HVAC Unit	84.18	19.04	540.72	539.5	0	77.1	77.1	1	40.93	0.96	4000	43.24	0	0	21.55	0.39	1.34	0	0	0	0	0	0	0	10.95	10.95
Sun HVAC Unit	84.18	19.04	540.72	539.5	0	68.3	68.3	1	40.93	0.96	8000	43.24	0	0	23.15	0.39	4.78	0	0	0	0	0	0	0	-2.9	-2.9
Sprint Modcell Cabinet Set	70.48	55.92	540.72	539.5	0	75.6	75.6	1	31.4	0.86	500	40.94	0	5.54	3.68	0.07	0.06	0	0	0	0	0	0	0	25.36	25.36
Carrier 38QR060C Condensor	81.54	13.52	540.73	537.36	0	-39.4	-39.4	1	47.05	1.16	32	44.45	0	-3	7.34	0.09	0	0	0	0	0	0	0	0	-88.19	-88.19
Carrier 38QR060C Condensor	81.54	13.52	540.73	537.36	0	-26.2	-26.2	1	47.05	1.16	63	44.45	0	-3	8.1	0.09	0.01	0	0	0	0	0	0	0	-75.75	-75.75
Carrier 38QR060C Condensor	81.54	13.52	540.73	537.36	0	62.5	62.5	1	47.05	1.16	125	44.45	0	1.8	4.69	0.09	0.02	0	0	0	0	0	0	0	11.54	11.54
Carrier 38QR060C Condensor	81.54	13.52	540.73	537.36	0	67.5	67.5	1	47.05	1.16	250	44.45	0	6.15	2.05	0.09	0.05	0	0	0	0	0	0	0	14.81	14.81
Carrier 38QR060C Condensor	81.54	13.52	540.73	537.36	0	71	71	1	47.05	1.16	500	44.45	0	2.99	7.23	0.09	0.09	0	0	0	0	0	0	0	16.24	16.24
Carrier 38QR060C Condensor	81.54	13.52	540.73	537.36	0	68	68	1	47.05	1.16	1000	44.45	0	0.38	12.21	0.09	0.17	0	0	0	0	0	0	0	10.79	10.79
Carrier 38QR060C Condensor	81.54	13.52	540.73	537.36	0	67	67	1	47.05	1.16	2000	44.45	0	0	15.24	0.09	0.45	0	0	0	0	0	0	0	6.85	6.85
Carrier 38QR060C Condensor	81.54	13.52	540.73	537.36	0	63.5	63.5	1	47.05	1.16	4000	44.45	0	0	18.06	0.09	1.54	0	0	0	0	0	0	0	-0.56	-0.56
Carrier 38QR060C Condensor	81.54	13.52	540.73	537.36	0	54.5	54.5	1	47.05	1.16	8000	44.45	0	0	20.98	0.09	5.5	0	0	0	0	0	0	0	-16.43	-16.43
RBS 2106 Cabinet	67.51	37.03	540.72	539.5	0	-24.7	-24.7	1	39.22	0.62	32	42.87	0	-3	7.87	0.04	0	0	0	0	0	0	0	0	-72.49	-72.49
RBS 2106 Cabinet	67.51	37.03	540.72	539.5	0	52.9	52.9	1	39.22	0.62	63	42.87	0	-3	7.97	0.04	0	0	0	0	0	0	0	0	5.01	5.01
RBS 2106 Cabinet	67.51	37.03	540.72	539.5	0	59.8	59.8	1	39.22	0.62	125	42.87	0	0.72	4.44	0.04	0.02	0	0	0	0	0	0	0	11.71	11.71
RBS 2106 Cabinet	67.51	37.03	540.72	539.5	0	61.4	61.4	1	39.22	0.62	250	42.87	0	7.88	0	0.04	0.04	0	0	0	0	0	0	0	10.56	10.56
RBS 2106 Cabinet	67.51	37.03	540.72	539.5	0	58.5	58.5	1	39.22	0.62	500	42.87	0	6.46	0	0.04	0.08	0	0	0	0	0	0	0	9.05	9.05
RBS 2106 Cabinet	67.51	37.03	540.72	539.5	0	60.6	60.6	1	39.22	0.62	1000	42.87	0	1.05	6.14	0.04	0.14	0	0	0	0	0	0	0	10.34	10.34
RBS 2106 Cabinet	67.51	37.03	540.72	539.5	0	58.1	58.1	1	39.22	0.62	2000	42.87	0	0	8.74	0.04	0.38	0	0	0	0	0	0	0	6.06	6.06
RBS 2106 Cabinet	67.51	37.03	540.72	539.5	0	59.7	59.7	1	39.22	0.62	4000	42.87	0	0	10.78	0.04	1.29	0	0	0	0	0	0	0	4.72	4.72
RBS 2106 Cabinet	67.51	37.03	540.72	539.5	0	48.2	48.2	1	39.22	0.62	8000	42.87	0	0	13.21	0.04	4.58	0	0	0	0	0	0	0	-12.51	-12.51

Limit. Value D/N: 0 0
Level D/N: 35.2427 35.2427

Receiver: Western Property Line
ID: R5
X: 74.73
Y: 13.52
Z: 537.97
Ground: 536.45

ISO	Bezeichnung	ID	X	Y	Z	Ground	RefOrd	LxT	LxN	L/A	Dist.	hm	Freq	Adiv	K0b	Agr	Abar	z	Aatm	Afol	Ahous	Cmet	CmetN	Dc	RL	LtotT	LtotN
	Sun HVAC Unit		84.18	19.04	540.72	539.5	0	-18.7	-18.7	1	11.29	1.23	32	32.05	0	-3	7.27	-0.2	0	0	0	0	0	0	0	-55.04	-55.04
	Sun HVAC Unit		84.18	19.04	540.72	539.5	0	71.9	71.9	1	11.29	1.23	63	32.05	0	-3	6.7	-0.2	0	0	0	0	0	0	0	36.13	36.13
	Sun HVAC Unit		84.18	19.04	540.72	539.5	0	76.4	76.4	1	11.29	1.23	125	32.05	0	0.25	2.04	-0.2	0	0	0	0	0	0	0	42.03	42.03
	Sun HVAC Unit		84.18	19.04	540.72	539.5	0	83.7	83.7	1	11.29	1.23	250	32.05	0	2.85	0	-0.2	0.01	0	0	0	0	0	0	48.76	48.76
	Sun HVAC Unit		84.18	19.04	540.72	539.5	0	87	87	1	11.29	1.23	500	32.05	0	2.34	0	-0.2	0.02	0	0	0	0	0	0	52.57	52.57
	Sun HVAC Unit		84.18	19.04	540.72	539.5	0	86.6	86.6	1	11.29	1.23	1000	32.05	0	0.38	0	-0.2	0.04	0	0	0	0	0	0	54.11	54.11
	Sun HVAC Unit		84.18	19.04	540.72	539.5	0	83.1	83.1	1	11.29	1.23	2000	32.05	0	0	0	-0.2	0.11	0	0	0	0	0	0	50.92	50.92
	Sun HVAC Unit		84.18	19.04	540.72	539.5	0	77.1	77.1	1	11.29	1.23	4000	32.05	0	0	0	-0.2	0.37	0	0	0	0	0	0	44.66	44.66
	Sun HVAC Unit		84.18	19.04	540.72	539.5	0	68.3	68.3	1	11.29	1.23	8000	32.05	0	0	0	-0.2	1.32	0	0	0	0	0	0	34.91	34.91
	Carrier 38QR060C Condensor		81.54	13.52	540.73	537.36	0	-39.4	-39.4	1	7.35	3.33	32	28.32	0	-3	4.7	0.71	0	0	0	0	0	0	0	-69.42	-69.42
	Carrier 38QR060C Condensor		81.54	13.52	540.73	537.36	0	-26.2	-26.2	1	7.35	3.33	63	28.32	0	-3	6.52	0.71	0	0	0	0	0	0	0	-58.04	-58.04
	Carrier 38QR060C Condensor		81.54	13.52	540.73	537.36	0	62.5	62.5	1	7.35	3.33	125	28.32	0	0.37	6.83	0.71	0	0	0	0	0	0	0	26.98	26.98
	Carrier 38QR060C Condensor		81.54	13.52	540.73	537.36	0	67.5	67.5	1	7.35	3.33	250	28.32	0	1.28	8.55	0.71	0.01	0	0	0	0	0	0	29.34	29.34
	Carrier 38QR060C Condensor		81.54	13.52	540.73	537.36	0	71	71	1	7.35	3.33	500	28.32	0	0.62	11.62	0.71	0.01	0	0	0	0	0	0	30.42	30.42
	Carrier 38QR060C Condensor		81.54	13.52	540.73	537.36	0	68	68	1	7.35	3.33	1000	28.32	0	0.08	14.79	0.71	0.03	0	0	0	0	0	0	24.78	24.78
	Carrier 38QR060C Condensor		81.54	13.52	540.73	537.36	0	67	67	1	7.35	3.33	2000	28.32	0	0	17.75	0.71	0.07	0	0	0	0	0	0	20.86	20.86
	Carrier 38QR060C Condensor		81.54	13.52	540.73	537.36	0	63.5	63.5	1	7.35	3.33	4000	28.32	0	0	18.99	0.71	0.24	0	0	0	0	0	0	15.95	15.95
	Carrier 38QR060C Condensor		81.54	13.52	540.73	537.36	0	54.5	54.5	1	7.35	3.33	8000	28.32	0	0	19.46	0.71	0.86	0	0	0	0	0	0	5.86	5.86
	Sprint Modcell Cabinet Set		70.48	55.92	540.72	539.5	0	75.6	75.6	1	42.7	0.82	500	43.61	0	6.81	5.05	0.15	0.08	0	0	0	0	0	0	20.02	20.02
	RBS 2106 Cabinet		67.51	37.03	540.72	539.5	0	-24.7	-24.7	1	24.75	0.67	32	38.87	0	-3	7.94	0.07	0	0	0	0	0	0	0	-68.56	-68.56
	RBS 2106 Cabinet		67.51	37.03	540.72	539.5	0	52.9	52.9	1	24.75	0.67	63	38.87	0	-3	8.1	0.07	0	0	0	0	0	0	0	8.88	8.88
	RBS 2106 Cabinet		67.51	37.03	540.72	539.5	0	59.8	59.8	1	24.75	0.67	125	38.87	0	0.5	4.9	0.07	0.01	0	0	0	0	0	0	15.47	15.47
	RBS 2106 Cabinet		67.51	37.03	540.72	539.5	0	61.4	61.4	1	24.75	0.67	250	38.87	0	5.63	0.32	0.07	0.03	0	0	0	0	0	0	16.51	16.51
	RBS 2106 Cabinet		67.51	37.03	540.72	539.5	0	58.5	58.5	1	24.75	0.67	500	38.87	0	4.61	2.26	0.07	0.05	0	0	0	0	0	0	12.66	12.66
	RBS 2106 Cabinet		67.51	37.03	540.72	539.5	0	60.6	60.6	1	24.75	0.67	1000	38.87	0	0.75	7.54	0.07	0.09	0	0	0	0	0	0	13.31	13.31
	RBS 2106 Cabinet		67.51	37.03	540.72	539.5	0	58.1	58.1	1	24.75	0.67	2000	38.87	0	0	10.2	0.07	0.24	0	0	0	0	0	0	8.74	8.74
	RBS 2106 Cabinet		67.51	37.03	540.72	539.5	0	59.7	59.7	1	24.75	0.67	4000	38.87	0	0	12.54	0.07	0.81	0	0	0	0	0	0	7.43	7.43
	RBS 2106 Cabinet		67.51	37.03	540.72	539.5	0	48.2	48.2	1	24.75	0.67	8000	38.87	0	0	15.17	0.07	2.89	0	0	0	0	0	0	-8.78	-8.78

Limit. Value D/N: 0 0
 Level D/N: 58.4032 58.4032

Receiver: Southwestern Property Line
 ID: R6
 X: 62.33
 Y: 21.55
 Z: 541.02
 Ground: 539.5

ISO	Bezeichnung	ID	X	Y	Z	Ground	ReflOrd	LxT	LxN	L/A	Dist.	hm	Freq	Adiv	K0b	Agr	Abar	z	Aatm	Afol	Ahous	Cmet	CmetN	Dc	RL	LtotT	LtotN
	Sun HVAC Unit		84.18	19.04	540.72	539.5	0	-18.7	-18.7	1	22	1.37	32	37.85	0	-3	0	0	0	0	0	0	0	0	0	-53.57	-53.57
	Sun HVAC Unit		84.18	19.04	540.72	539.5	0	71.9	71.9	1	22	1.37	63	37.85	0	-3	0	0	0	0	0	0	0	0	0	37.03	37.03
	Sun HVAC Unit		84.18	19.04	540.72	539.5	0	76.4	76.4	1	22	1.37	125	37.85	0	0.45	0	0	0.01	0	0	0	0	0	0	38.07	38.07
	Sun HVAC Unit		84.18	19.04	540.72	539.5	0	83.7	83.7	1	22	1.37	250	37.85	0	5.16	0	0	0.02	0	0	0	0	0	0	40.64	40.64
	Sun HVAC Unit		84.18	19.04	540.72	539.5	0	87	87	1	22	1.37	500	37.85	0	4.24	0	0	0.04	0	0	0	0	0	0	44.85	44.85
	Sun HVAC Unit		84.18	19.04	540.72	539.5	0	86.6	86.6	1	22	1.37	1000	37.85	0	0.69	0	0	0.08	0	0	0	0	0	0	47.96	47.96
	Sun HVAC Unit		84.18	19.04	540.72	539.5	0	83.1	83.1	1	22	1.37	2000	37.85	0	0	0	0	0.21	0	0	0	0	0	0	45.02	45.02
	Sun HVAC Unit		84.18	19.04	540.72	539.5	0	77.1	77.1	1	22	1.37	4000	37.85	0	0	0	0	0.72	0	0	0	0	0	0	38.51	38.51
	Sun HVAC Unit		84.18	19.04	540.72	539.5	0	68.3	68.3	1	22	1.37	8000	37.85	0	0	0	0	2.57	0	0	0	0	0	0	27.86	27.86
	Carrier 38QR060C Condensor		81.54	13.52	540.73	537.36	0	-39.4	-39.4	1	20.82	2.52	32	37.37	0	-3	7.79	0.01	0	0	0	0	0	0	0	-81.56	-81.56
	Carrier 38QR060C Condensor		81.54	13.52	540.73	537.36	0	-26.2	-26.2	1	20.82	2.52	63	37.37	0	-3	7.81	0.01	0	0	0	0	0	0	0	-68.38	-68.38
	Carrier 38QR060C Condensor		81.54	13.52	540.73	537.36	0	62.5	62.5	1	20.82	2.52	125	37.37	0	0.99	3.86	0.01	0.01	0	0	0	0	0	0	20.27	20.27
	Carrier 38QR060C Condensor		81.54	13.52	540.73	537.36	0	67.5	67.5	1	20.82	2.52	250	37.37	0	3.44	1.49	0.01	0.02	0	0	0	0	0	0	25.18	25.18
	Carrier 38QR060C Condensor		81.54	13.52	540.73	537.36	0	71	71	1	20.82	2.52	500	37.37	0	1.67	3.4	0.01	0.04	0	0	0	0	0	0	28.51	28.51
	Carrier 38QR060C Condensor		81.54	13.52	540.73	537.36	0	68	68	1	20.82	2.52	1000	37.37	0	0.21	5.15	0.01	0.08	0	0	0	0	0	0	25.19	25.19
	Carrier 38QR060C Condensor		81.54	13.52	540.73	537.36	0	67	67	1	20.82	2.52	2000	37.37	0	0	5.88	0.01	0.2	0	0	0	0	0	0	23.55	23.55
	Carrier 38QR060C Condensor		81.54	13.52	540.73	537.36	0	63.5	63.5	1	20.82	2.52	4000	37.37	0	0	6.76	0.01	0.68	0	0	0	0	0	0	18.68	18.68
	Carrier 38QR060C Condensor		81.54	13.52	540.73	537.36	0	54.5	54.5	1	20.82	2.52	8000	37.37	0	0	8.12	0.01	2.43	0	0	0	0	0	0	6.57	6.57
	Sprint Modcell Cabinet Set		70.48	55.92	540.72	539.5	0	75.6	75.6	1	35.33	1.65	500	41.96	0	6.03	0.44	0.02	0.07	0	0	0	0	0	0	27.07	27.07
	RBS 2106 Cabinet		67.51	37.03	540.72	539.5	0	-24.7	-24.7	1	16.33	1.37	32	35.26	0	-3	0	0	0	0	0	0	0	0	0	-57.01	-57.01
	RBS 2106 Cabinet		67.51	37.03	540.72	539.5	0	52.9	52.9	1	16.33	1.37	63	35.26	0	-3	0	0	0	0	0	0	0	0	0	20.59	20.59
	RBS 2106 Cabinet		67.51	37.03	540.72	539.5	0	59.8	59.8	1	16.33	1.37	125	35.26	0	0.35	0	0	0.01	0	0	0	0	0	0	24.13	24.13
	RBS 2106 Cabinet		67.51	37.03	540.72	539.5	0	61.4	61.4	1	16.33	1.37	250	35.26	0	4.04	0	0	0.02	0	0	0	0	0	0	22.03	22.03
	RBS 2106 Cabinet		67.51	37.03	540.72	539.5	0	58.5	58.5	1	16.33	1.37	500	35.26	0	3.31	0	0	0.03	0	0	0	0	0	0	19.85	19.85
	RBS 2106 Cabinet		67.51	37.03	540.72	539.5	0	60.6	60.6	1	16.33	1.37	1000	35.26	0	0.54	0	0	0.06	0	0	0	0	0	0	24.69	24.69
	RBS 2106 Cabinet		67.51	37.03	540.72	539.5	0	58.1	58.1	1	16.33	1.37	2000	35.26	0	0	0	0	0.16	0	0	0	0	0	0	22.64	22.64
	RBS 2106 Cabinet		67.51	37.03	540.72	539.5	0	59.7	59.7	1	16.33	1.37	4000	35.26	0	0	0	0	0.54	0	0	0	0	0	0	23.86	23.86
	RBS 2106 Cabinet		67.51	37.03	540.72	539.5	0	48.2	48.2	1	16.33	1.37	8000	35.26	0	0	0	0	1.91	0	0	0	0	0	0	10.98	10.98

Limit. Value D/N: 0 0
 Level D/N: 52.0193 52.0193

Receiver: Western Property Line
 ID: R7
 X: 0.09
 Y: 50.31
 Z: 535.19
 Ground: 533.67

ISO	Bezeichnung	ID	X	Y	Z	Ground	ReflOrd	LxT	LxN	L/A	Dist.	hm	Freq	Adiv	K0b	Agr	Abar	z	Aatm	Afol	Ahous	Cmet	CmetN	Dc	RL	LtotT	LtotN
	Sun HVAC Unit		84.18	19.04	540.72	539.5	0	-18.7	-18.7	1	89.88	0.7	32	50.07	0	-3.3	8.37	0.18	0	0	0	0	0	0	0	-73.91	-73.91
	Sun HVAC Unit		84.18	19.04	540.72	539.5	0	71.9	71.9	1	89.88	0.7	63	50.07	0	-3.3	8.68	0.18	0.01	0	0	0	0	0	0	16.36	16.36
	Sun HVAC Unit		84.18	19.04	540.72	539.5	0	76.4	76.4	1	89.88	0.7	125	50.07	0	1.25	4.75	0.18	0.04	0	0	0	0	0	0	20.27	20.27
	Sun HVAC Unit		84.18	19.04	540.72	539.5	0	83.7	83.7	1	89.88	0.7	250	50.07	0	12.1	0	0.18	0.09	0	0	0	0	0	0	21.41	21.41
	Sun HVAC Unit		84.18	19.04	540.72	539.5	0	87	87	1	89.88	0.7	500	50.07	0	9.92	0	0.18	0.17	0	0	0	0	0	0	26.81	26.81
	Sun HVAC Unit		84.18	19.04	540.72	539.5	0	86.6	86.6	1	89.88	0.7	1000	50.07	0	1.62	8.73	0.18	0.33	0	0	0	0	0	0	25.83	25.83
	Sun HVAC Unit		84.18	19.04	540.72	539.5	0	83.1	83.1	1	89.88	0.7	2000	50.07	0	0	12.7	0.18	0.87	0	0	0	0	0	0	19.43	19.43
	Sun HVAC Unit		84.18	19.04	540.72	539.5	0	77.1	77.1	1	89.88	0.7	4000	50.07	0	0	15.35	0.18	2.95	0	0	0	0	0	0	8.71	8.71
	Sun HVAC Unit		84.18	19.04	540.72	539.5	0	68.3	68.3	1	89.88	0.7	8000	50.07	0	0	18.16	0.18	10.5	0	0	0	0	0	0	-10.47	-10.47
	Sprint Modcell Cabinet Set		70.48	55.92	540.72	539.5	0	75.6	75.6	1	70.82	3.81	500	48	0	9	12.66	2.76	0.14	0	0	0	0	0	0	5.77	5.77

Carrier 38QR060C Condensor	81.54	13.52	540.73	537.36	0	-39.4	-39.4	1	89.54	1.04	32	50.04	0	-3	6.36	0.19	0	0	0	0	0	0	0	0	0	0	-92.8	-92.8
Carrier 38QR060C Condensor	81.54	13.52	540.73	537.36	0	-26.2	-26.2	1	89.54	1.04	63	50.04	0	-3	7.96	0.19	0.01	0	0	0	0	0	0	0	0	0	-81.21	-81.21
Carrier 38QR060C Condensor	81.54	13.52	540.73	537.36	0	62.5	62.5	1	89.54	1.04	125	50.04	0	2.55	5.24	0.19	0.04	0	0	0	0	0	0	0	0	0	4.64	4.64
Carrier 38QR060C Condensor	81.54	13.52	540.73	537.36	0	67.5	67.5	1	89.54	1.04	250	50.04	0	8.4	1.78	0.19	0.09	0	0	0	0	0	0	0	0	0	7.19	7.19
Carrier 38QR060C Condensor	81.54	13.52	540.73	537.36	0	71	71	1	89.54	1.04	500	50.04	0	4.09	8.4	0.19	0.17	0	0	0	0	0	0	0	0	0	8.3	8.3
Carrier 38QR060C Condensor	81.54	13.52	540.73	537.36	0	68	68	1	89.54	1.04	1000	50.04	0	0.52	14.42	0.19	0.33	0	0	0	0	0	0	0	0	0	2.69	2.69
Carrier 38QR060C Condensor	81.54	13.52	540.73	537.36	0	67	67	1	89.54	1.04	2000	50.04	0	0	17.73	0.19	0.87	0	0	0	0	0	0	0	0	0	-1.64	-1.64
Carrier 38QR060C Condensor	81.54	13.52	540.73	537.36	0	63.5	63.5	1	89.54	1.04	4000	50.04	0	0	20.65	0.19	2.93	0	0	0	0	0	0	0	0	0	-10.13	-10.13
Carrier 38QR060C Condensor	81.54	13.52	540.73	537.36	0	54.5	54.5	1	89.54	1.04	8000	50.04	0	0	23.62	0.19	10.5	0	0	0	0	0	0	0	0	0	-29.62	-29.62
RBS 2106 Cabinet	67.51	37.03	540.72	539.5	0	-24.7	-24.7	1	68.93	3.87	32	47.77	0	-3	3.85	3.13	0	0	0	0	0	0	0	0	0	0	-73.37	-73.37
RBS 2106 Cabinet	67.51	37.03	540.72	539.5	0	52.9	52.9	1	68.93	3.87	63	47.77	0	-3	4.42	3.13	0.01	0	0	0	0	0	0	0	0	0	3.65	3.65
RBS 2106 Cabinet	67.51	37.03	540.72	539.5	0	59.8	59.8	1	68.93	3.87	125	47.77	0	1.05	4.65	3.13	0.03	0	0	0	0	0	0	0	0	0	6.25	6.25
RBS 2106 Cabinet	67.51	37.03	540.72	539.5	0	61.4	61.4	1	68.93	3.87	250	47.77	0	10.8	3.71	3.13	0.07	0	0	0	0	0	0	0	0	0	-1.03	-1.03
RBS 2106 Cabinet	67.51	37.03	540.72	539.5	0	58.5	58.5	1	68.93	3.87	500	47.77	0	8.89	6.02	3.13	0.13	0	0	0	0	0	0	0	0	0	-4.36	-4.36
RBS 2106 Cabinet	67.51	37.03	540.72	539.5	0	60.6	60.6	1	68.93	3.87	1000	47.77	0	1.45	8	3.13	0.25	0	0	0	0	0	0	0	0	0	3.09	3.09
RBS 2106 Cabinet	67.51	37.03	540.72	539.5	0	58.1	58.1	1	68.93	3.87	2000	47.77	0	0	9.87	3.13	0.67	0	0	0	0	0	0	0	0	0	-0.26	-0.26
RBS 2106 Cabinet	67.51	37.03	540.72	539.5	0	59.7	59.7	1	68.93	3.87	4000	47.77	0	0	12.09	3.13	2.26	0	0	0	0	0	0	0	0	0	-2.47	-2.47
RBS 2106 Cabinet	67.51	37.03	540.72	539.5	0	48.2	48.2	1	68.93	3.87	8000	47.77	0	0	14.53	3.13	8.06	0	0	0	0	0	0	0	0	0	-22.2	-22.2

Limit. Value D/N: 0 0
Level D/N: 31.0677 31.0677

Berechnung, Ende 14.03.06 12:05:52 (0 s)