ESCONDIDO
City of Choice

PLANNING COMMISSION

Agenda Item No.: G.2
Date: August 14, 2012

CASE NUMBER: PHG 12-0004

APPLICANT: Plancom, Inc.

LOCATION: The 11.56-acre property is located at the terminal end of the cul-de-sac for Aldergrove Avenue, addressed as 2310 Aldergrove Avenue.

TYPE OF PROJECT: Conditional Use Permit

PROJECT DESCRIPTION: A Conditional Use Permit to install a wireless communication facility for AT&T in an undeveloped area adjacent to the administration building for the Escondido Union School District. The proposed wireless facility consists of twelve (12) 8' panel antennas and 30 remote radio units mounted onto an approximately 70-foot-high structure designed to resemble a eucalyptus tree. The project also includes an 11'-6" x 20' equipment shelter painted to match the district buildings.

STAFF RECOMMENDATION: Approval

GENERAL PLAN DESIGNATION: LI (Light Industrial)

ZONING: IP (Industrial Park)

BACKGROUND/SUMMARY OF ISSUES: AT&T is proposing a wireless communication facility which would place up to twelve panel antennas on a new, approximately 70-foot-high simulated eucalyptus tree. The facility would be located in an undeveloped, graded area in the northeastern corner of a large industrial park lot. The remainder of the property is developed with a large structure that serves as the district offices for the Escondido Union School District, several detached accessory buildings and associated parking areas. The supporting electrical equipment and cabinets for the proposed wireless facility would be secured within a 230 SF prefabricated building painted to match the nearby accessory structures. The project applicant has indicated the new facility is being requested primarily to enhance phone and data coverage for the new Palomar Medical Center facility located west of the site.

LEGAL REQUIREMENTS: In 1996, the U.S. Congress added a section to the Communications Act of 1934 to promote the expansion of personal wireless communications service, adding section 332(c)(7). This section preserves local zoning authority over the "placement, construction, and modification" of wireless facilities, while imposing certain federal requirements. Specifically, Section 332(c)(7) requires that state or local government decisions regarding wireless service facilities must not: 1) unreasonably discriminate between one cellular provider and another; or 2) prohibit or have the effect of prohibiting the provision of personal wireless services; or 3) be founded on "the environmental effects of radio frequency (RF) emissions ***to the extent that such facilities comply*** with the FCC's regulations" (emphasis added).

In summary, once the Commission is satisfied the project's RF emissions are within the federal thresholds, then the review must be based on otherwise applicable local zoning criteria. A denial of a proposed facility must not run afoul of the federal restrictions set forth as 1), 2) and 3) above.

Staff feels the issues are as follows:

1. Whether the design and location of the proposed facility is appropriate for the site and consistent with the Wireless Facility Guidelines.

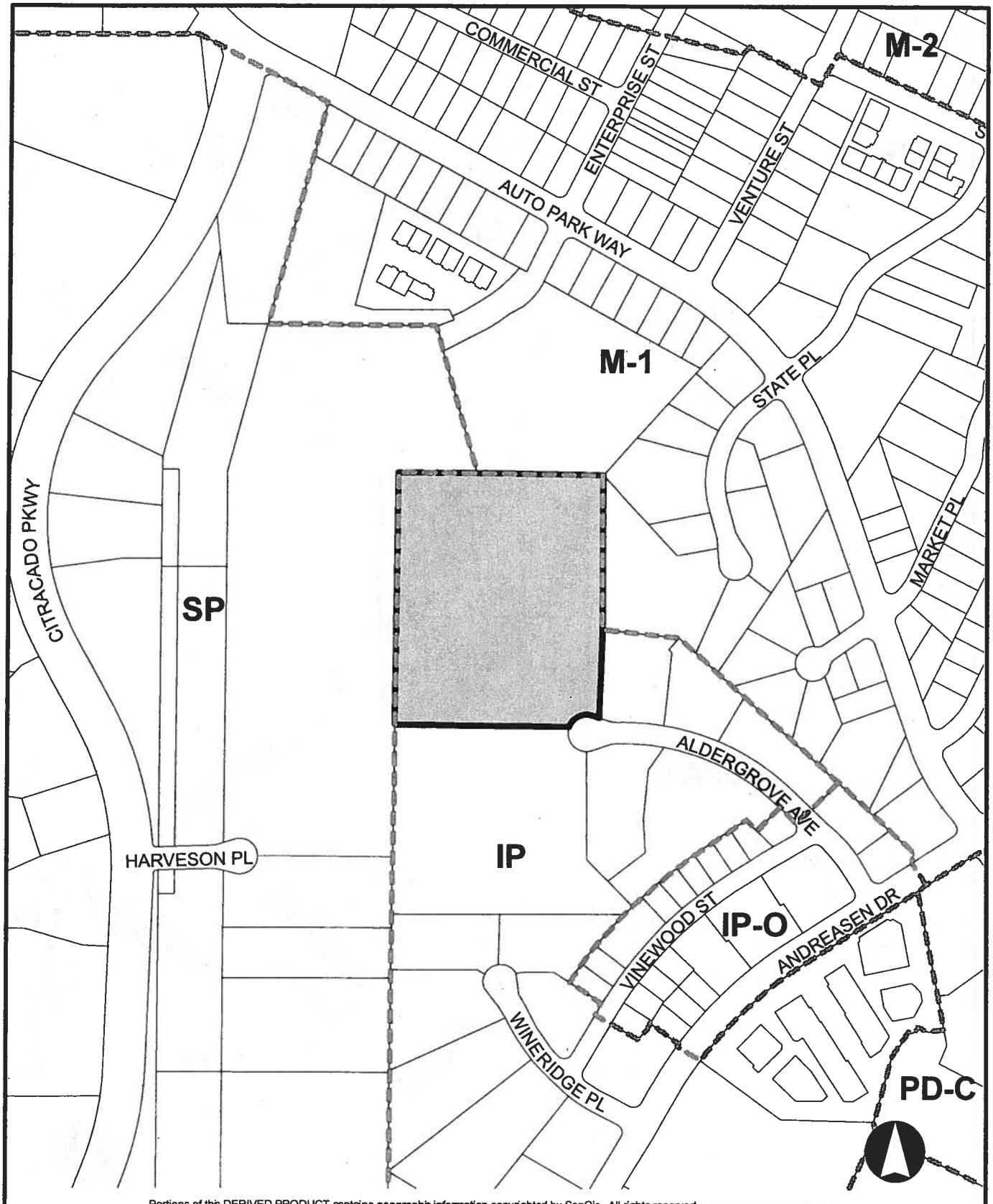
REASONS FOR STAFF RECOMMENDATION:

1. The proposed project would be consistent with the Communication Antennas Ordinance since the facility would incorporate an appropriate stealthy design to assist in visually screening the structure as viewed from surrounding properties. The proposed equipment cabinets would be placed within a new enclosure designed to be compatible with similar structures on the site. Existing eucalyptus trees both on the site and on adjacent properties will provide the necessary context that will allow the proposed faux tree to visually blend in as viewed from the eastern industrial area and the new medical center to the west. There are no residential properties in the vicinity of the project site; and any potential views of the site from residential properties would be from a great distance.

2. Staff feels the proposed facility would not result in a potential health hazards to people in the area since the Radio Frequency (RF) study prepared for the proposed project indicates the facility would be within maximum permissible exposure (MPE) limits and Federal Communication Commission (FCC) radio frequency emission standards.

Respectfully Submitted,

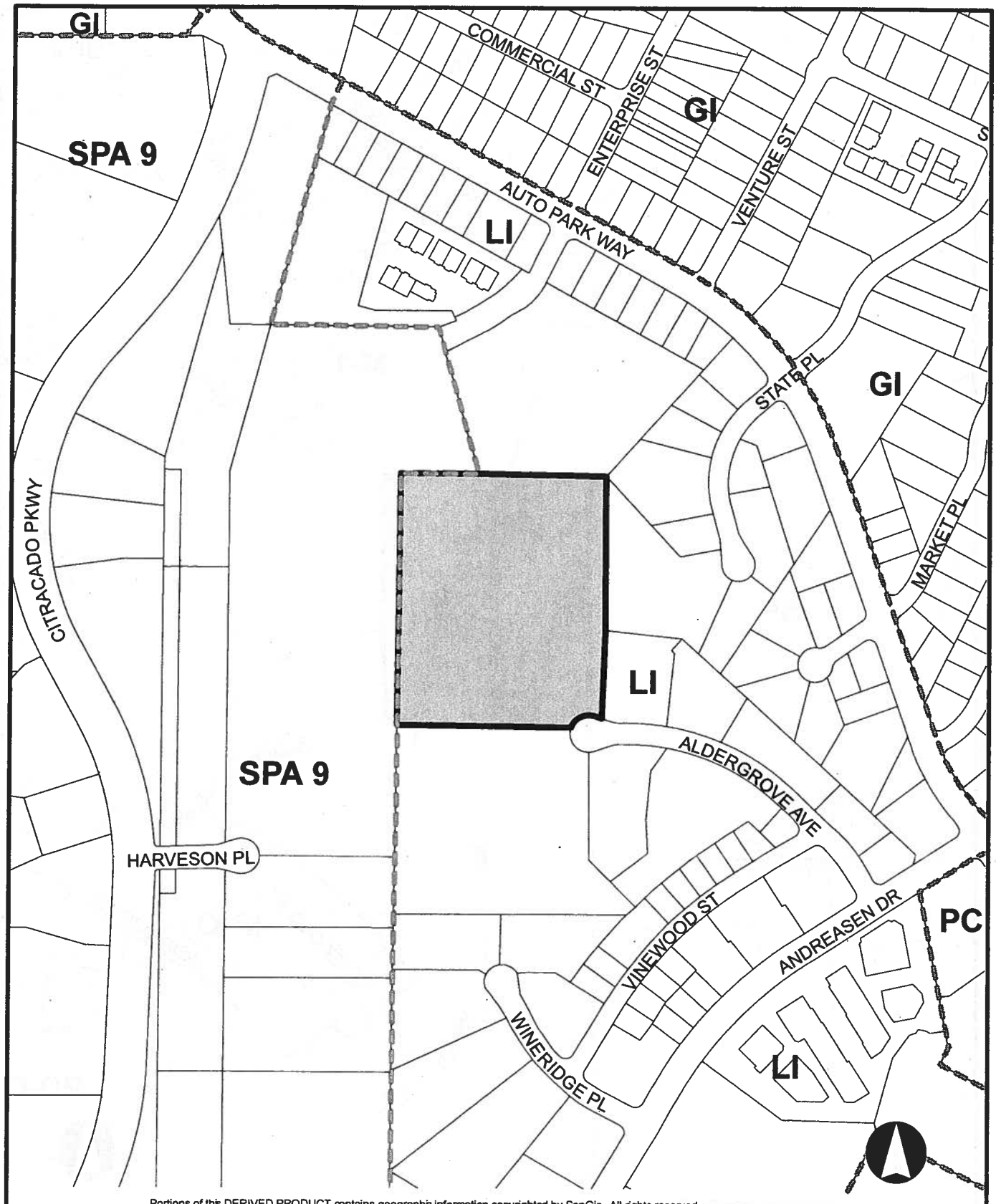
Bill Martin
Principal Planner



PROPOSED PROJECT
PHG 12-0004

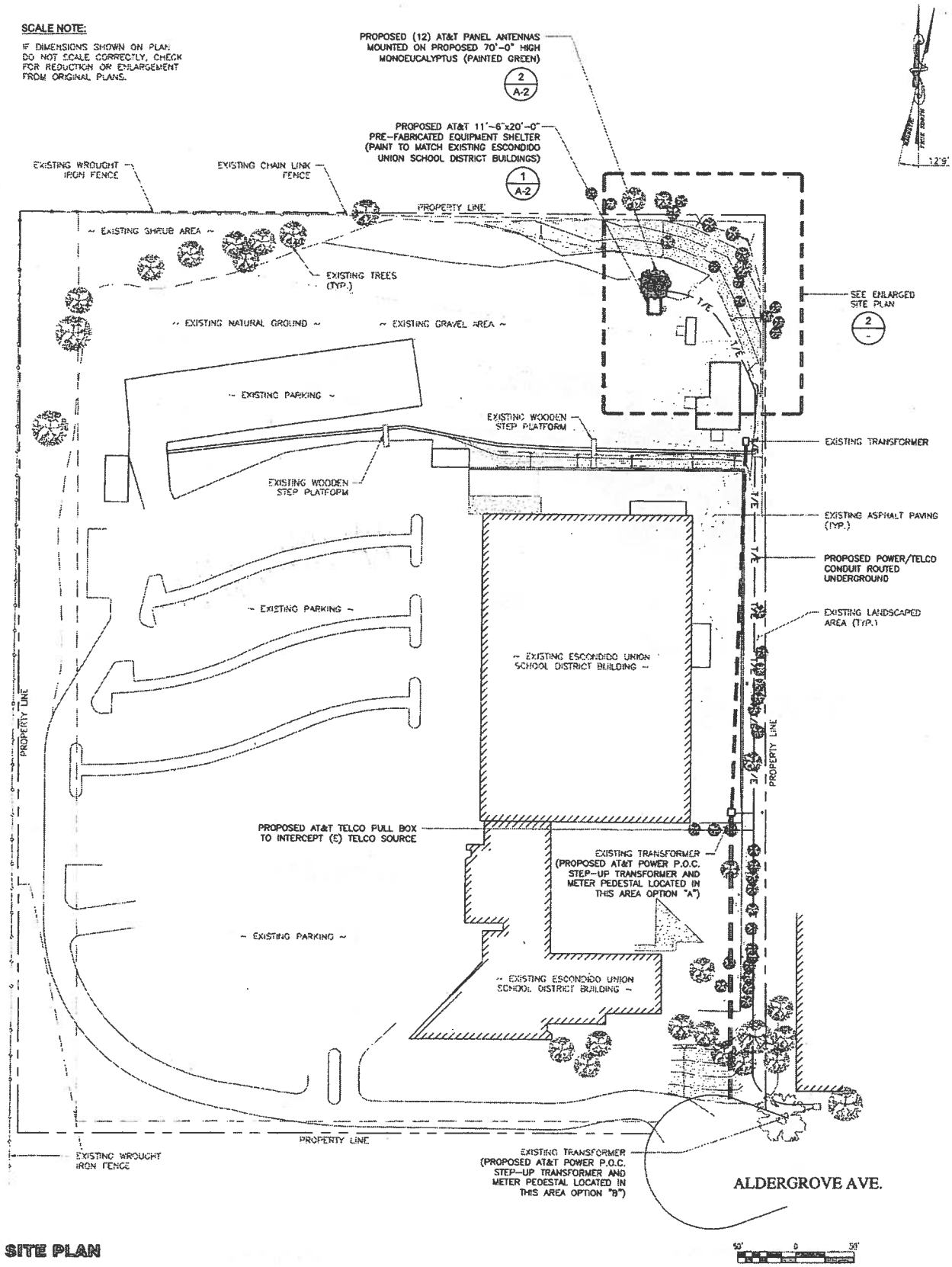
L

LOCATION/ZONING



PROPOSED PROJECT
PHG 12-0004

GP
GENERAL PLAN



SITE PLAN

PROPOSED PROJECT
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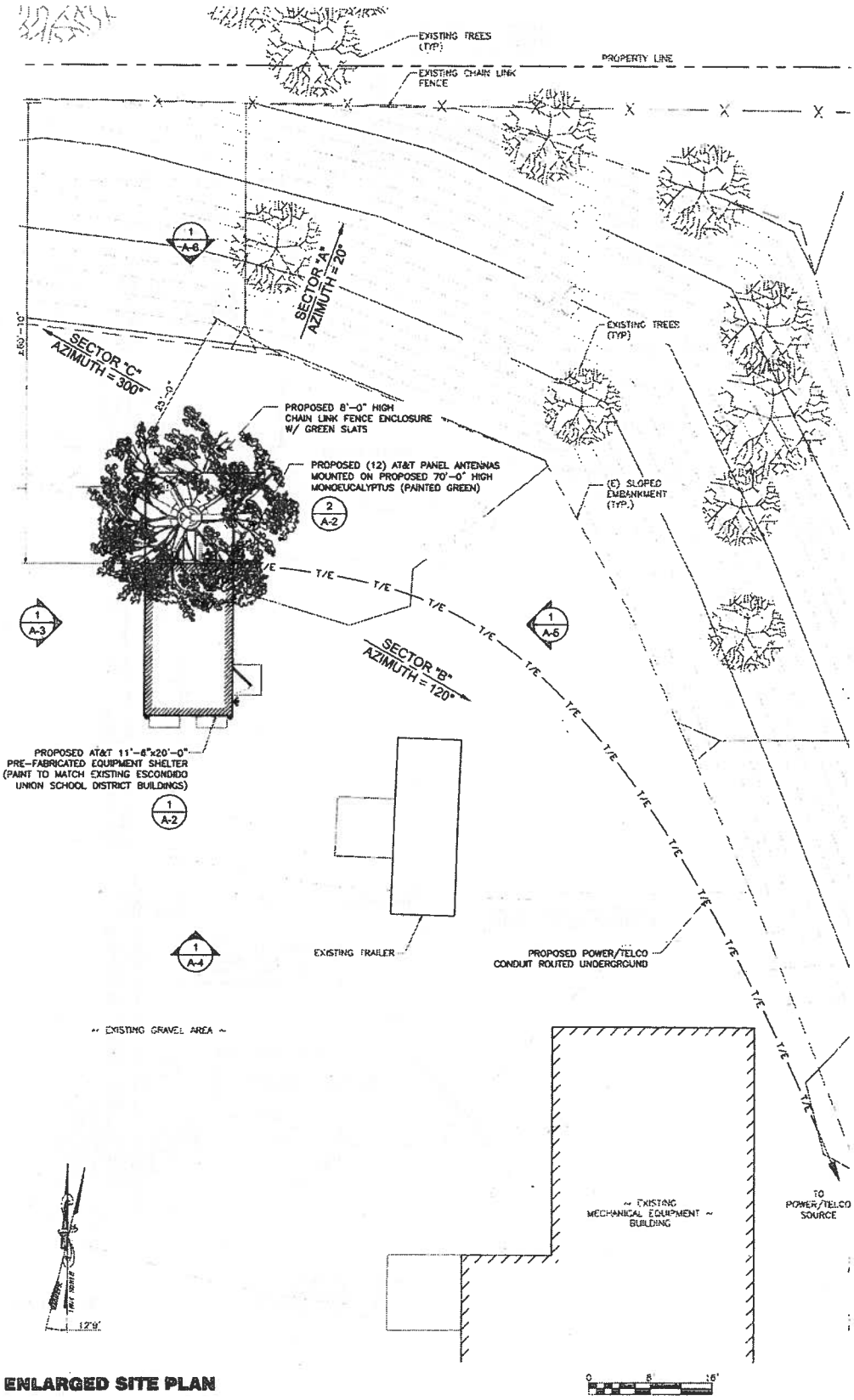
S

SITE PLAN

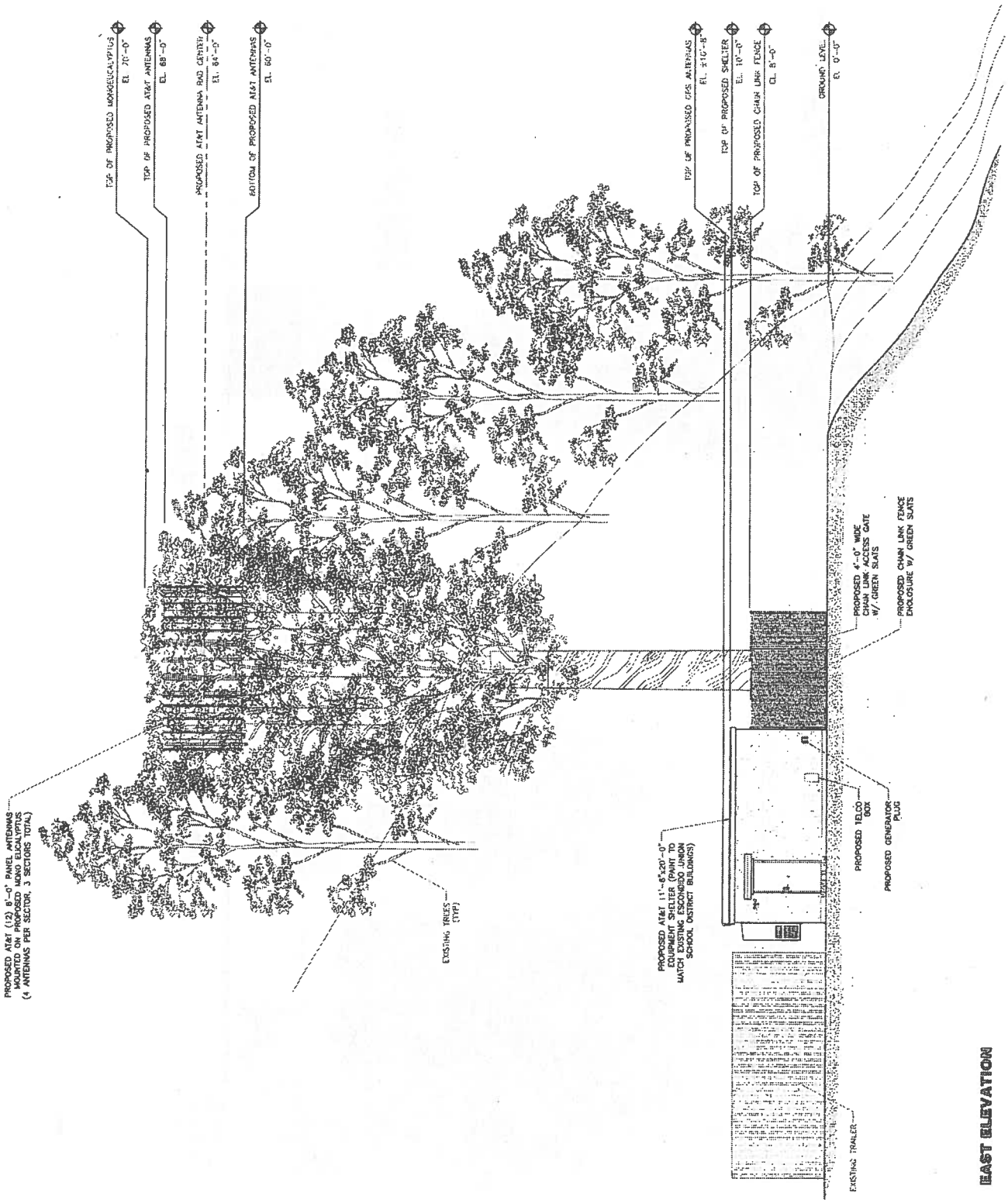


ENLARGED SITE PLAN

PROPOSED PROJECT
PHG 12-0004

S

SITE PLAN



PROPOSED PROJECT
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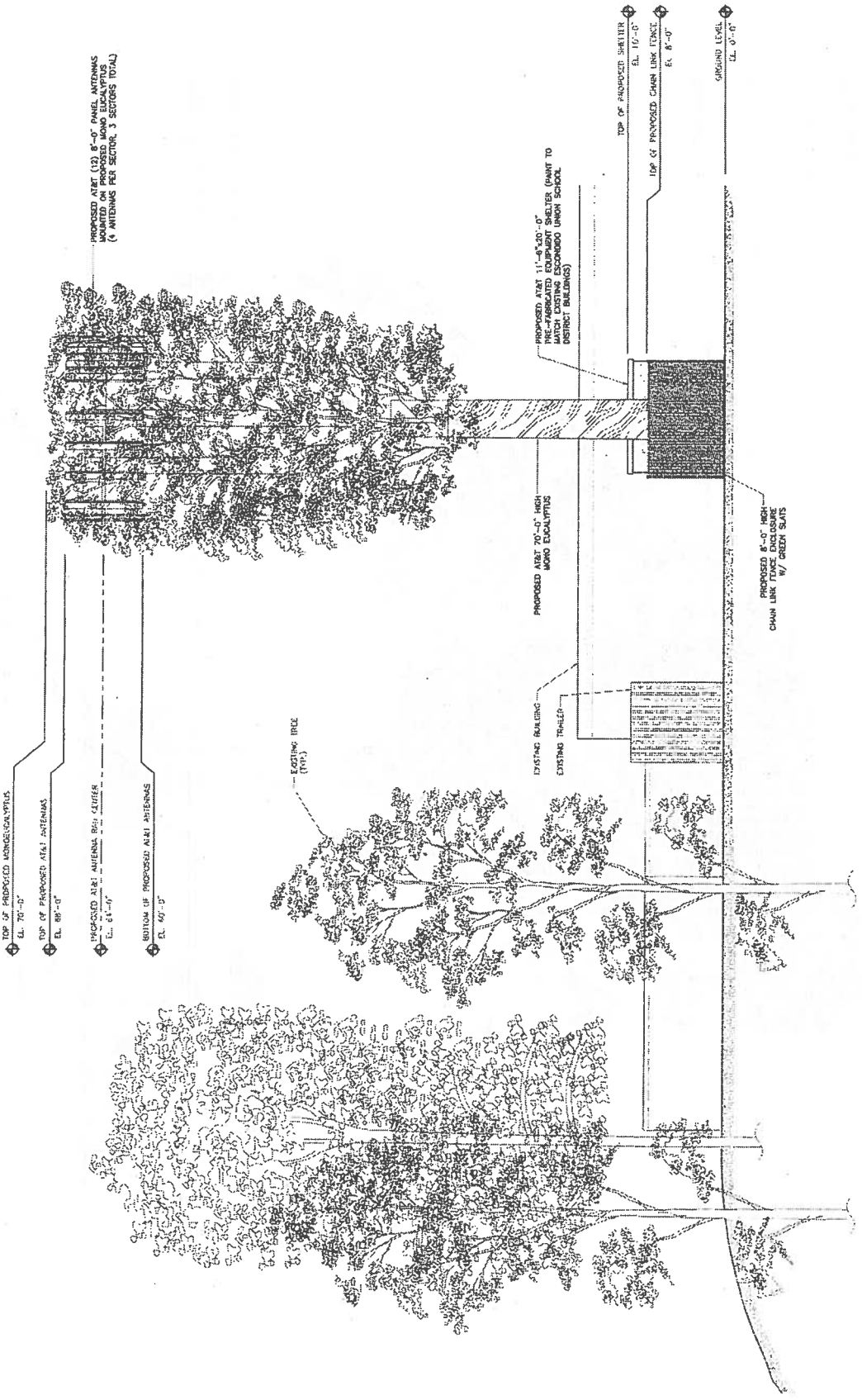
ELEVATIONS



NORTH ELEVATION

PROPOSED PROJECT
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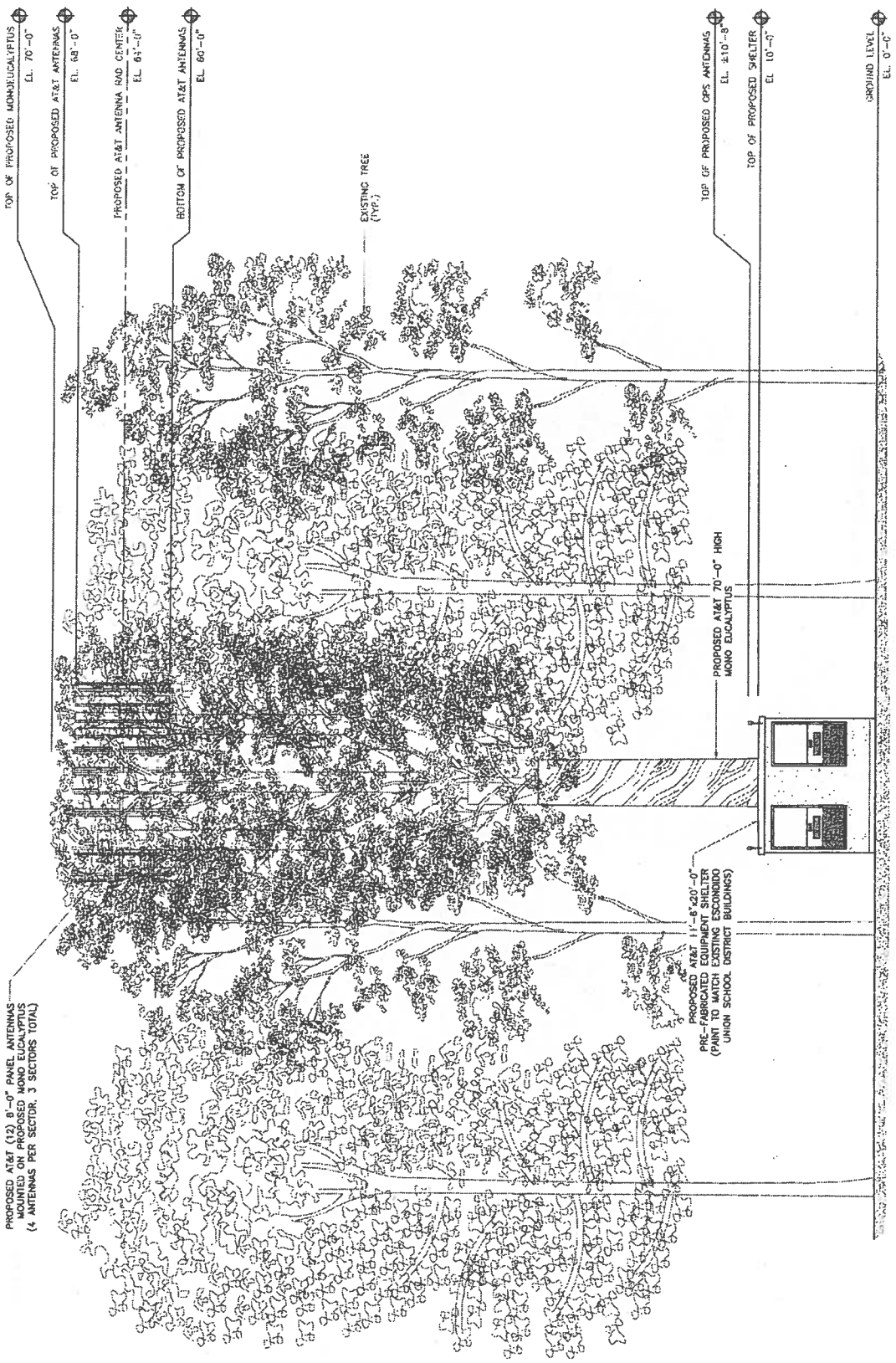
ELEVATIONS



PROPOSED PROJECT
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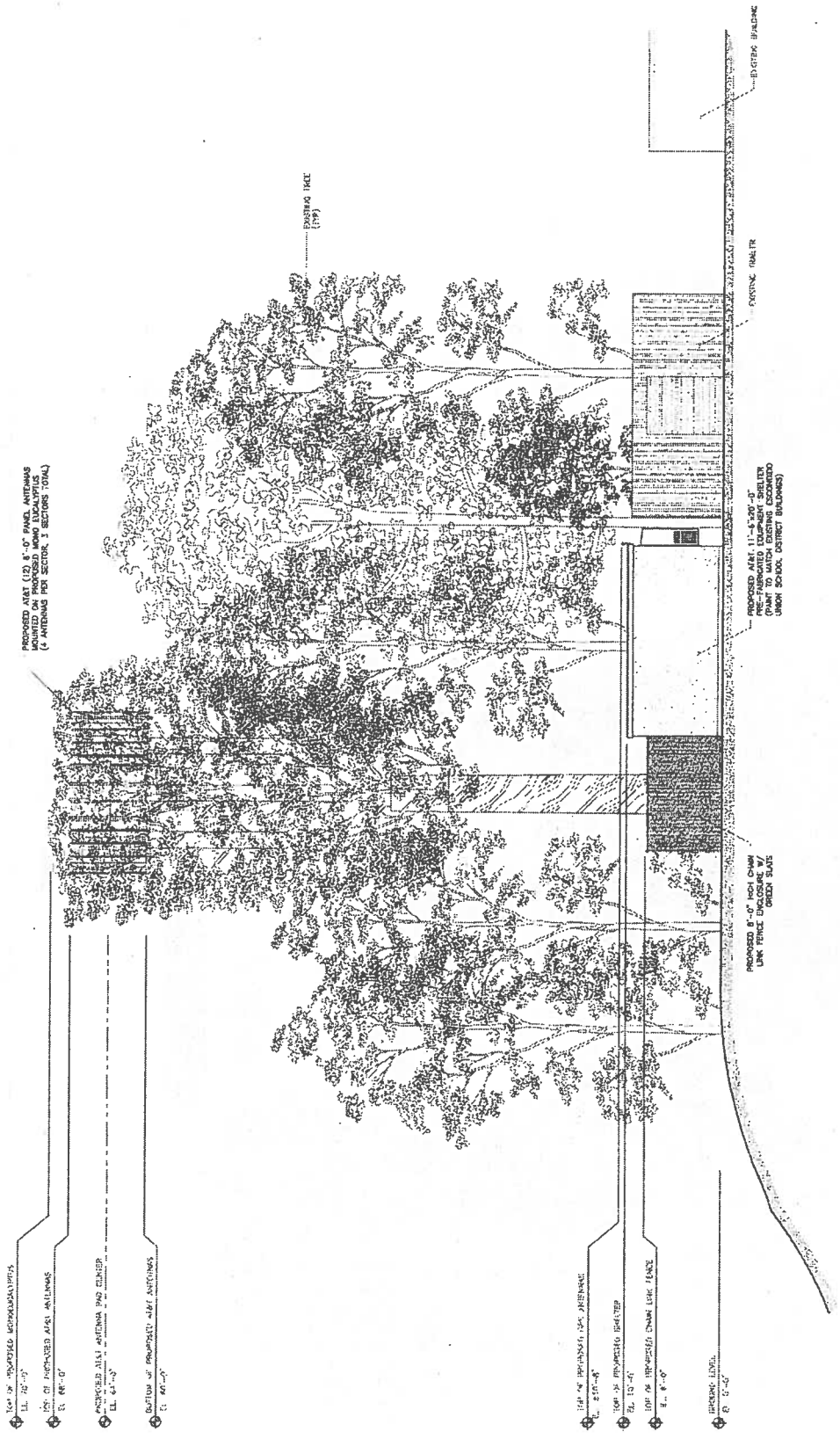
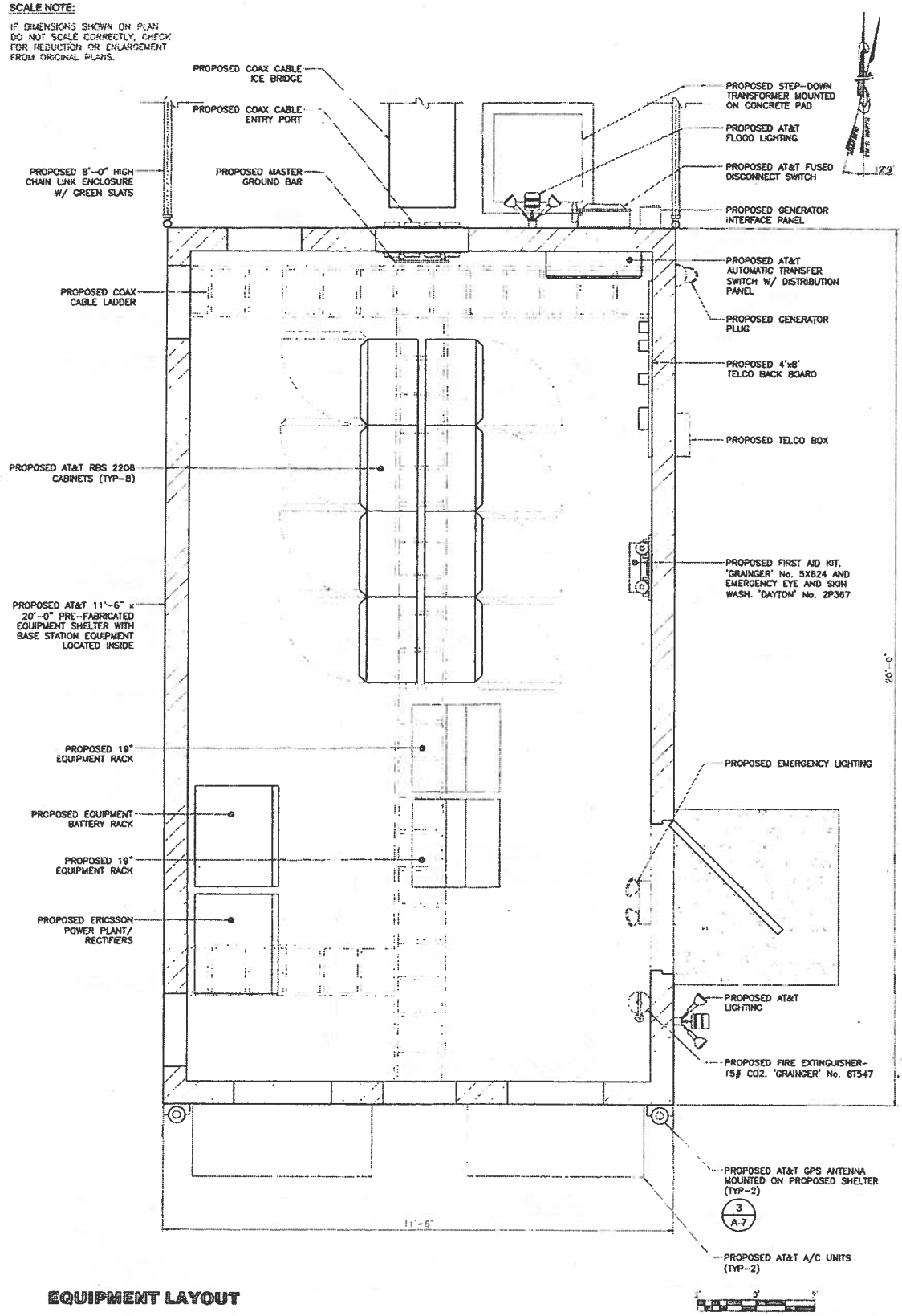
ELEVATIONS



WEST ELEVATION

PROPOSED PROJECT
PHG 12-0004

ELEVATIONS

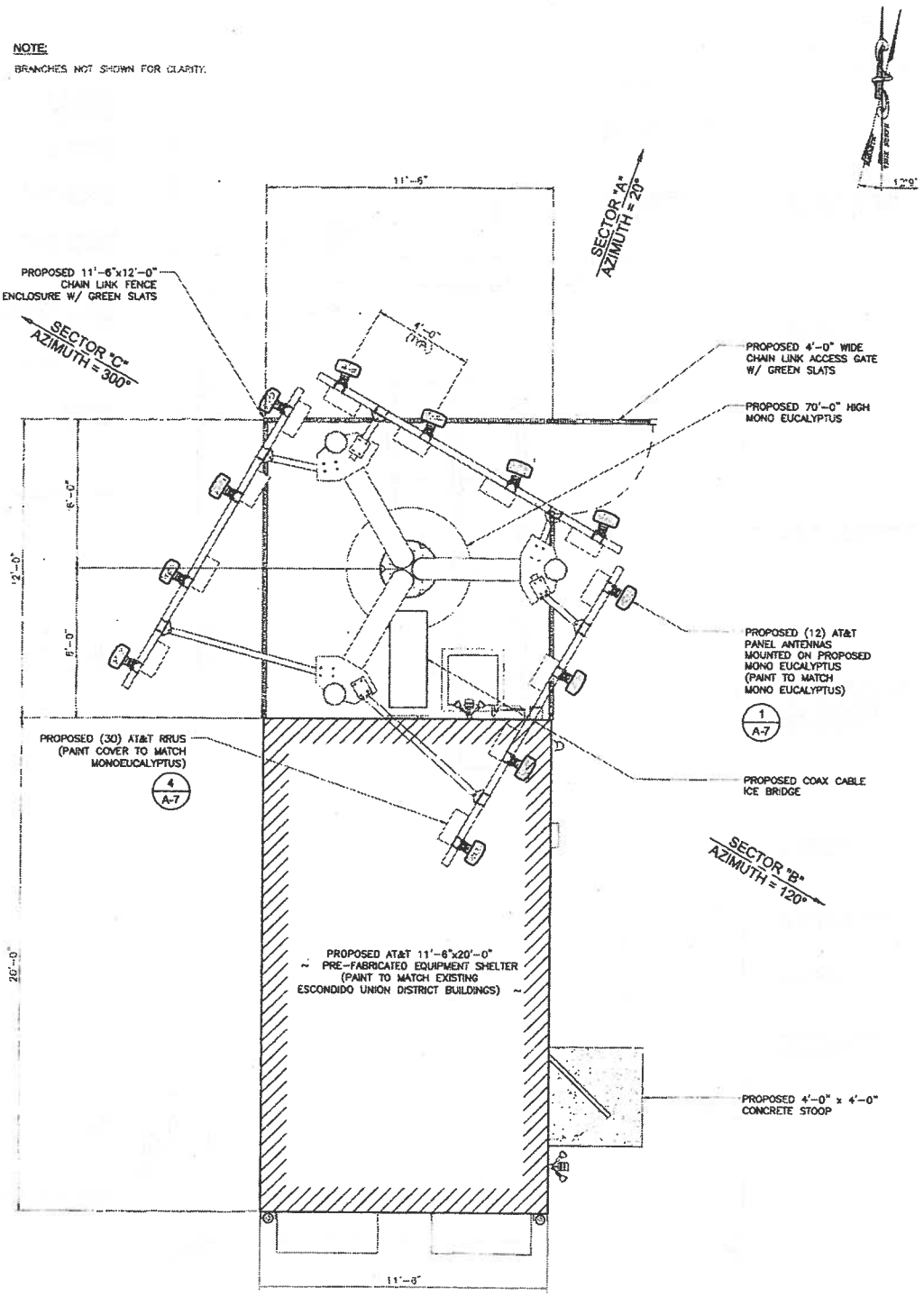


PROPOSED PROJECT
PHG 12-0004

FLOOR PLAN

NOTE:

BRANCHES NOT SHOWN FOR CLARITY.



AT&T RF SCHEDULE							
SECTOR	NO. OF ANT.	ANTENNA MODEL	AZIMUTH	ANT. RAD CENTER	COAX LENGTH	COAX SIZE	NO. OF COAX
A	4	KATHREIN 800-10766K	20°	64'-0"	±110'	7/8"	8
B	4	KATHREIN 800-10766K	120°	64'-0"	±110'	7/8"	8
C	4	KATHREIN 800-10766K	300°	64'-0"	±110'	7/8"	8

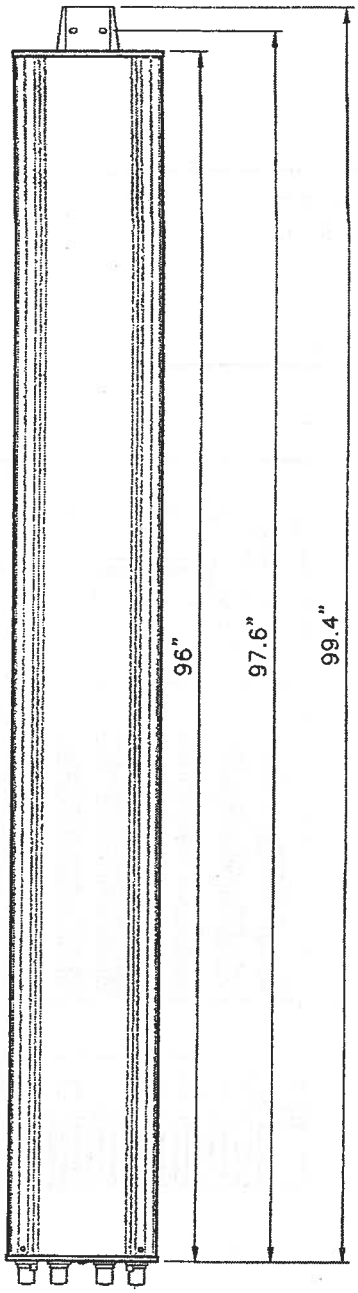
NOTES:

- (30) RRUS (RRUS-01) MOUNTED ON PROPOSED MONO EUCAPLYPTUS
- 8 EQUIPMENT CABINETS AND ASSOCIATE EQUIPMENT INSIDE PRE-FAB SHELTER

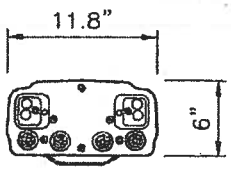
ANTENNA PLAN

PROPOSED PROJECT
PHG 12-0004

FLOOR PLAN



FRONT



BOTTOM

MANUFACTURER: KATHREIN
MODEL #: 800-10766 K
FREQUENCY RANGE: 698-894 MHz
1710-2170 MHz
WEIGHT: 61.7 LBS
STANDARD MOUNTING HARDWARE:
* INCLUDED FOR 2" TO 4.6" O.D. MAST
* MECHANICAL TILT BRACKET
CONNECTORS: 4-7/16 DIN FEMALE (LONG NECK)

ANTENNA DETAIL

PROPOSED PROJECT
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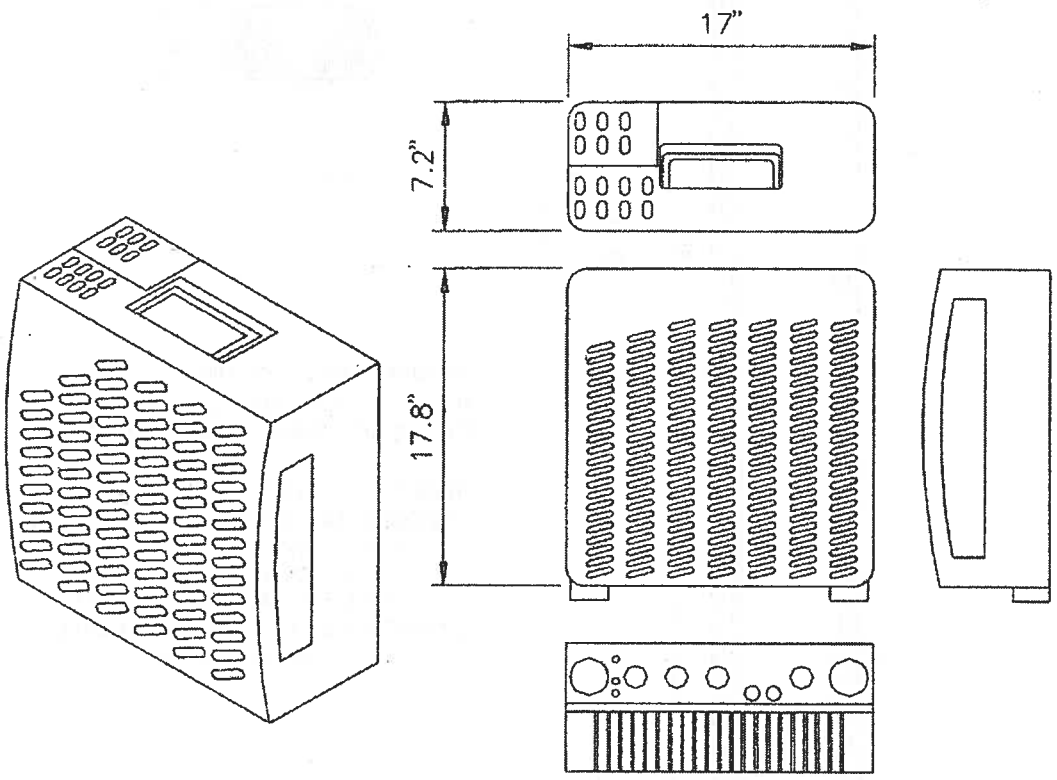
DETAIL

ERICSSON RRUS-11

DIMENSIONS, WxDxH:	431x183x452 mm (17"x7.2"x17.8")
POWER CONSUMPTION:	200 WATTS
TOTAL WEIGHT:	55 LBS.
TEMPERATURE:	−40° TO 55° C



REMOTE RADIO UNIT (RRU) SPECIFICATIONS

ANALYSIS

A. LAND USE COMPATIBILITY/SURROUNDING ZONING

NORTH - M-1 (Light Industrial) and SP (ERTC Specific Plan) zoning – North and slightly below the site is a four-building multi-tenant industrial development. A portion of the Palomar Energy 500 MW electric generating facility is also located at a higher elevation along the northern boundary of the site.

SOUTH - IP (Industrial Park) zoning – A large bakery and several other industrial buildings are located to the south.

EAST - M-1 and IP zoning – Several buildings located at a lower elevation to the east are utilized by industrial and office tenants.

WEST - SP zoning - The Palomar Energy 500 MW electric generating facility is located along the western boundary of the site.

B. AVAILABILITY OF PUBLIC SERVICES

1. Effect on Police Service – The Police Department has expressed no concern regarding their ability to provide service to the site.

2. Effect on Fire Service – The site is served by Fire Station No. 1 (310 North Quince Street), which is within the seven and one-half minute response time specified for urbanized areas in the General Plan. Development of the site would contribute incremental increases in demand for fire services. The Fire Department has indicated that adequate services can be provided to the site and the proposed project would not impact levels of service.

3. Traffic – The project takes access from Aldergrove Avenue, which is an unclassified cul-de-sac providing access to several industrial and office buildings. The Engineering Department indicated the project would not have any impacts to existing traffic or circulation within the area.

4. Utilities – City sewer and water mains with sufficient capacity to serve the project are available within the adjoining street or easement. The project does not materially degrade the levels of service of the public sewer and water system.

5. Drainage – The project site is not located within a 100-year Flood Zone as indicated on current FEMA maps. There are no significant drainage courses within or adjoining the property. The project does not materially degrade the levels of service of the existing drainage facilities.

C. ENVIRONMENTAL STATUS

1. The proposal is exempt from the requirements of the California Environmental Quality Act (CEQA) in conformance with Section 15303, "New Small Facilities and Structures." A Notice of Exemption was issued on August 7, 2012.

2. In staff's opinion, no significant issues remain unresolved through compliance with code requirements and the recommended conditions of approval.

3. The project will have no impact on fish and wildlife resources as no sensitive or protected habitat occurs on-site or will be impacted by the proposed development.

D. CONFORMANCE WITH CITY POLICY/ANALYSIS

General Plan

The requested Conditional Use Permit is consistent with the Light Industrial designation of the General Plan since wireless facilities are allowed when they are in conformance with the Communication Antennas Ordinance, underlying zoning requirements, and are compatible with the surrounding properties and built environment. The project is in substantial compliance with the Industrial Park zone standards, and also is in conformance with the Personal Wireless Service Facilities Guidelines as discussed in the analysis section below and project findings.

Appropriateness of the Proposed Design and Whether the Proposed Wireless Facility Would Be in Conformance with the Communication Antennas Ordinance

AT&T proposes to install a 70-foot-high simulated eucalyptus tree to support up to 12 panel antennas on an 11.56-acre industrial park lot. The property is developed with a large office building for the Escondido Union School District and includes several parking areas and associated landscaping. The northern portion of the property has the highest elevation and has been graded flat with a gravel and dirt surface. The pad is vacant except for two small accessory buildings located on the eastern side of the pad that serve the district offices. The proposed wireless facility consisting of the faux eucalyptus tree and an equipment building would be located near the accessory buildings on the northeastern corner of the pad. The proposed equipment building would be low profile like the accessory buildings and painted to match. An eight-foot-high chain link fence with slats would provide security at the base of the faux tree to prevent unauthorized access.

Views of the proposed wireless facility from adjacent properties are expected to be fairly limited. The school district site is slightly elevated over the industrial area to the north and east and bordered by a variety of industrial and office uses. The western side of the site is dominated by the SDG&E Palomar Energy plant. The upper floors of the new Palomar Medical Center are visible beyond the power plant approximately one-half mile west of the proposed wireless site. The property north of the proposed wireless facility has several industrial buildings located approximately 20 feet downslope from the site. The closest building has roll-up doors that face the site. Views of the proposed wireless facility from the northern industrial property would be limited to the upper portion of the faux tree and would be screened by four, 40-foot ± eucalyptus trees located on that property next to the property line. A similar condition exists with two office buildings to the east. The closest building is located about 100 feet away and approximately 20 feet downslope from the proposed wireless facility, while the other building is farther and lower from the site. The site may be visible from one set of windows on the second floor of the nearest office building, but views would be screened by two large eucalyptus trees on that property and approximately 15 eucalyptus trees on the slope.

The Wireless facilities Guidelines for IP zone properties permit pole-mounted facilities less than 35 feet in height by right, and require a Conditional Use Permit for those facilities higher than 35 feet. The applicant has indicated the 70-foot height of the facility is needed to provide the best level of service over the adjacent electric generating plant and down to the lower floors of the new hospital on Citracado Parkway. The Wireless Facilities Guidelines encourage the use of commercial and industrial sites whenever possible and require designs that are in scale and context with their surroundings. The proposed new freestanding facility would be consistent with the guidelines since the facility would be located on a 11.56-acre industrial park lot with minimal visibility to the site from surrounding properties and the faux tree design would be in context with the numerous eucalyptus trees located both on the site and off-site adjacent to the property lines. The nearest residential properties are located approximately one-half mile away to the west and have no direct views into site. Any views of the site from residential properties are likely going to be from a much greater distance. Staff feels the proposed facilities would be in conformance with the Wireless Facilities Guidelines and would be appropriate for the site, and therefore is recommending approval. Staff feels the existing trees in the vicinity of the site provide an appropriate context for the facility and no additional landscaping is necessary due to the limited number of views into the site.

Conformance with FCC Emission Requirements

Operation of the facility would generate radio frequency energy emissions (RF). A radio frequency power density study was prepared for the project by Jerrold T. Bushberg, Ph.D, DABMP, DABSNM, to determine whether the proposed communication facility complies with the FCC Radio Frequency Safety guidelines. The study assumes a worst case scenario at maximum capacity, and compares the figures to existing standards. The analysis indicated the anticipated MPE limits at ground level (areas of potential General Population Exposure to RF electromagnetic fields) from the proposed AT&T facility is less than 1% of FCC exposure limits. Appropriate safety signage would be installed at the facility in accordance with AT&T signage policy and FCC requirements. A copy of the study has been attached with this report.

SUPPLEMENT TO STAFF REPORT/DETAILS OF REQUEST

A. PHYSICAL CHARACTERISTICS

The site is an undeveloped graded pad with a gravel base located on the northern side of the school district office building. Two accessory buildings, including a metal storage building and the mechanical equipment building for the offices, are located close to the proposed facility. The site is elevated approximately 20 feet above the closest industrial and office buildings located to the north and east. The slope separating the site from the properties to the north and east has been planted with eucalyptus trees that have attained some height, but tend to have narrow canopies. Larger eucalyptus trees ranging up to approximately 60 feet in height are located on the adjacent northern and eastern properties next to the property line.

B. SUPPLEMENTAL DETAILS OF REQUEST

1.	Property Size:	11.56-acres
2.	Antenna Structure:	Approx. 68' to top of panel antennas. Approx. 70' to top of faux tree limbs.
3.	Antennas:	12 panel antennas (3 sectors with 4 panels per sector). 8' tall, 12" wide painted green. 30 remote radio units (18" x17") mounted onto antenna array and painted green.
4.	Power Density:	Less than 1% of the FCC General Public Limit for Maximum Public Exposure (MPE) at ground level.
5.	Equipment:	Equipment racks and cabinets, battery rack, telco equipment, electrical panel, mechanical air units, GPS antenna(s), and other related equipment. A generator plug will be provided to facilitate emergency power, if needed.
6.	Equipment Building:	240 SF building (20' L x 11'-6" W x 10' H). Prefabricated building with stucco exterior painted beige to match nearby district buildings.
7.	Landscaping:	No new landscaping is proposed. There are approximately 15 eucalyptus trees near the proposed project with most being located on the adjacent slope or just across the property line on adjacent properties. Three small eucalyptus volunteer trees are located on the pad close to the proposed facility.

C. CODE COMPLIANCE ANALYSIS

		Existing	IP Zoning Requirements
1.	Setbacks		
	Front:	660+ feet from Aldergrove to south	20 feet min.
	Side:	85 feet to east property line 530+ feet to west property line	0 feet min.
	Rear:	53 feet to north property line	0 feet min.

FINDINGS OF FACT
PHG 12-0004
EXHIBIT "A"

1. Granting this Conditional Use Permit to allow a personal wireless communication facility on the subject property would be based on sound principles of land use since the use is in response to services required by the community and the facility would enhance communication services in the city without posing a health threat to the surrounding area. The proposed wireless antenna panels would be incorporated into a stealthy design appropriate for the site, which would avoid potential visual impacts in conformance with the Communication Antennas Ordinance. The ground equipment would be located within a secured equipment enclosure area. The proposed facility would not result in a substantial alteration of the present or planned land use since the project site is in a relatively undeveloped area except for two accessory structures that serve the school district offices. The facility also would not result in a potential health hazard to nearby residents since the nearest residences are located approximately ½-mile to the west and the facility would be within MPE (maximum permissible exposure) limits as indicated in the radio frequency analysis prepared for the project.

2. The proposed personal wireless communication facility would be located within the IP (Industrial Park) zone. Personal wireless communication facilities in excess of 35-feet in height are permitted within this zone subject to approval of a Conditional Use Permit (CUP). The proposal would not cause deterioration of bordering land uses or create special problems in the area since the antenna panels would be incorporated into a stealthy type of facility (faux tree), and the location, number and size of the panels have been designed to integrate into the design and scale of the proposed faux tree. The proposed facility would be consistent with the Communication Antennas Ordinance because the facility would be in conformance with the height and setback requirements for the IP zone, incorporates a stealthy design; the proposed equipment cabinet(s) would be placed within a secured area; existing landscaping provides the appropriate context for the faux eucalyptus tree; and the project would be in conformance with FCC emission standards.

3. The proposed Conditional Use Permit has been considered in relationship to its effect on the community, and the request would be in compliance with the General Plan Policies and the Wireless Facility Guidelines, and would not result in a negative impact to the adjacent neighborhood for the reasons stated above and detailed in the Planning Commission staff report and radio frequency analysis. Anticipated traffic generated by the project generally would be limited to approximately one routine maintenance trip per month. The antennas would be in conformance with FCC requirements for RF emissions.

4. The proposal is exempt from the requirements of the California Environmental Quality Act (CEQA) in conformance with Section 15303, "New Small Facilities or Structures" and a Notice of Exemption was prepared for the proposed project. In staff's opinion, the request does not have the potential for causing a significant effect on the environment since the facility would be secured and would not be accessible to the general public. The proposed facility would not result in any adverse noise impacts. The antennas would be in conformance with FCC requirements for RF emissions. The subject lease site does not contain any protected or sensitive habitat, and the project would not result in a direct or cumulative impacts to any protected or sensitive resource or animals.

CONDITIONS OF APPROVAL
PHG 12-0004
EXHIBIT "B"

Planning Division Conditions

1. The developer shall be required to pay all development fees of the City then in effect at the time and in such amounts as may prevail when building permits are issued, including any applicable City-Wide Facilities fees.

2. All construction and grading shall comply with all applicable requirements of the Escondido Zoning Code and requirements of the Planning Division, Engineering Division, Building Division, and Fire Department.

3. The legal description attached to the application has been provided by the applicant and neither the City of Escondido nor any of its employees assume responsibility for the accuracy of said legal description.

4. All requirements of the Public Art Partnership Program, Ordinance No. 86-70, shall be satisfied prior to building permit issuance. The ordinance requires that a public art fee be added at the time of the building permit issuance for the purpose of participating in the City Public Art Program.

5. All exterior lighting shall conform to the requirements of Article 35 (Outdoor Lighting) of the Escondido Zoning Code. All outdoor lighting shall be provided with appropriate shields to prevent light from adversely affecting adjacent properties.

6. As proposed, the design, color and materials of the proposed facilities shall be in accordance with the staff report, exhibits and the project's Details of Request, including the following to the satisfaction of the Planning Division:

    a. RF transparent type covers (socks) shall be installed on all the antenna panels with an appropriate number of leaves to screen the antenna panels. A sufficient number of branches shall be incorporated into the tree and shall extend an appropriate distance beyond the antennas panels vertically and horizontally and this shall be noted on the building plans. A detailed drawing shall be provided with the building plans indicating the actual design and number of branches that will be attached to the central pole, and how they will be attached/positioned to provide the appropriate depth/relief.

    b. The support poles, brackets and other support equipment shall be painted to blend in with the faux tree. This requirement shall be noted on the building plans.

7. All new utility runs shall be placed underground, to the satisfaction of the Planning Division and the Engineering Department, unless as specifically approved by this permit.

8. All proposed signage associated with the project must comply with the City of Escondido Sign Ordinance (Ord. 92-47) and the exhibits included in the staff report(s), to the satisfaction of the Planning Division. A sign conforming to ANSI C95.2 color, symbol and content, and other markings as appropriate, should be placed close to the antennas with appropriate contact information in order to alert maintenance or other workers approaching the antennas to the presence of RF transmissions and to take precautions to avoid exposures in excess of FCC limits. The requirement for the appropriate signage/notice shall be indicated on the building plans.

9. AT&T or any subsequent operator/lease holder of the wireless facility agrees to investigate any complaints related to possible interference with electronic equipment in the surrounding area to determine the cause of the interference. Any interference shall be resolved in a timely manner to the satisfaction of the Director of Community Development. If the facility is determined to be the cause of the electronic interference, AT&T shall solve the problem in a timely manner to the satisfaction of the complainant and the Director of Community Development. In addition, any interference with public safety communications shall be corrected immediately, to the satisfaction of the City of Escondido.

10. All project generated noise shall conform to the City's Noise Ordinance (Ordinance 90-08).

11. If requested by the City of Escondido, AT&T, or any subsequent operator/lease holder of the facilities shall permit co-location of other wireless providers on its facility (subject to City of Escondido approval) if it can be demonstrated that there would be no adverse effect on the existing facilities/operations, and the new facilities can be appropriately integrated into the design of the existing facility.

12. AT&T shall select an independent third party consultant to conduct actual power density measurements of the facility within 90 days after installation and under full operation of the facility. The results of the study shall be submitted to the Director of Community Development so that the theoretical power density study can be compared to the actual output to ensure compliance with FCC requirements.

13. AT&T or any subsequent operator/lease holder of the wireless facility shall be responsible for all on-going maintenance of the facility, including the antennas and supporting equipment to ensure the condition of the facility does not appear weathered.

14. All communication facilities on the site shall be promptly removed upon non-use of the facilities, to the satisfaction of the Planning Division and Building Department.

15. No additional antennas or expansion of this facility shall be permitted without a modification of the Conditional Use Permit and a public hearing before the Planning Commission. Minor changes within the approved size and design parameters may be permitted by the Director of Community Development.

16. The Conditional Use Permit shall be null and void if not utilized within twelve months of the effective date of approval, as determined by the Planning Division.

17. This Conditional Use Permit only is for the installation of AT&T equipment on the site. The number of antennas approved by this Conditional Use Permit shall be used solely for AT&T and not transferred or subleased to any other carriers unless approved by the City. No other additional carriers shall be allowed to be placed on the existing wireless communication facility, unless a new Conditional Use Permit is approved by the City.

18. This item may be referred back to the Planning Commission upon recommendation of the Director of Community Development for review and possible revocation or modification of the Conditional Use Permit upon receipt of nuisance complaints regarding the facility or non-compliance with the Conditions of Approval.

19. A copy of these Conditions of Approval shall be submitted with the submittal of the building plans indicating compliance with all of the Conditions and Details of Request and exhibits contained in the Planning Commission staff report.

20. An inspection by the Planning Division will be required prior to operation of the project. Everything should be installed prior to calling for an inspection, although preliminary inspections may be requested. Contact the project planner at (760) 839-4671 to arrange a final inspection.

21. The City of Escondido hereby notifies the applicant that the County Clerk's Office requires a documentary handling fee of $50.00 in order to file a Notice of Exemption for the project (environmental determination for the project). The applicant shall remit to the City of Escondido Planning Division, within two working days of the final approval of the project (the final approval being the hearing date of the Planning Commission or City Council, if applicable) a check payable to the "San Diego County Clerk" in the amount of $50.00. In accordance with California Environmental Quality Act (CEQA) section 15062, the filing of a Notice of Exemption and the posting with the County Clerk starts a 35 day statute of limitations period on legal challenges to the agency's decision that the project is exempt from CEQA. Failure to submit the required fee within the specified time noted above will result in the Notice of Exemption not being filed with the County Clerk, and a 180 day statute of limitations will apply.

CITY OF ESCONDIDO
PLANNING DIVISION
201 NORTH BROADWAY
ESCONDIDO, CA 92025-2798
(760) 839-4671

Notice of Exemption

To: San Diego County Recorder's Office
Attn: Vanessa Esquivel
P.O. Box 121750
San Diego, CA 92112-1750

From: City of Escondido
Planning Division
201 North Broadway
Escondido, CA 92025

Project Title/Case No.: Conditional Use Permit for AT&T Wireless Facility – PHG 12-0004

Project Applicant: Plancom, Inc.

Project Location - Specific: The 11.56-acre property is located at the terminal end of the cul-de-sac for Aldergrove Avenue, addressed as 2310 Aldergrove Avenue.

Project Location - City: Escondido **Project Location - County**: San Diego

Description of Nature, Purpose and Beneficiaries of Project: A Conditional Use Permit to install a wireless communication facility for AT&T in an undeveloped area adjacent to the administration building for the Escondido Union School District. The proposed wireless facility consists of twelve (12) 8' panel antennas and 30 remote radio units mounted onto an approximately 70-foot-high structure designed to resemble a eucalyptus tree. The project also includes an 11'-6" x 20' equipment shelter painted to match the district buildings.

Name of Public Agency Approving Project: City of Escondido

Name of Person or Agency Carrying Out Project:

Name: Krystal Patterson, Plancom, Inc. Telephone: (760) 715-8703
Address: 302 State Place, Escondido, CA 92029
☒ Private entity ☐ School district ☐ Local public agency ☐ State agency ☐ Other special district

Exempt Status:

Categorical Exemption. CEQA Section 15303, "New Small Facilities and Structures"

Reasons why project is exempt:

1. The proposed facility will be located in an industrial park area and incorporates a stealthy faux tree design that will assist in visually screening the panel antennas. The facility would not result in any adverse visual or noise impacts to surrounding areas, and would be in conformance with FCC radio frequency emission standards.
2. The project site is a previously graded pad with a gravel surface located adjacent to a large office building and has no value as habitat for endangered, threatened or rare species.
3. The proposed facility would not be hazardous to the health of nearby residents or the general public since the facility would be within maximum permissible exposure (MPE) limits and Federal Communication Commission (FCC) standards.

Lead Agency Contact Person: Bill Martin, Planning Division Area Code/Telephone/Extension (760) 839-4557

Signature: _____ August 7, 2012
Bill Martin, Principal Planner Date

☒ Signed by Lead Agency Date received for filing at OPR:

☐ Signed by Applicant

JERROLD T. BUSHBERG Ph.D., DABMP, DABSNM
♦HEALTH AND MEDICAL PHYSICS CONSULTING♦

7784 Oak Bay Circle Sacramento, CA 95831
(800) 760-8414–jbushberg@hampc.com

Darrell W. Daugherty
PlanCom Inc.
302 State Place
Escondido, California 92029-1362

June 15, 2012

Introduction

At your request, I have reviewed the technical specifications and calculated the maximum radiofrequency, (RF), power density from the proposed AT&T wireless telecommunications site, (referenced as SD0503 Escondido Union), to be located at, located at 2310 Aldergrove Drive Escondido, California as depicted in attachment one.

This proposed AT&T telecommunication site will utilize directional transmit panel antennae configured in three (3) sectors. The antennae are planned to be mounted to a mono-eucalyptus with their center at least 64 feet above grade directed at 20 (sector A), 120 (sector B), and 300 (sector C) degrees true north. The antennas specified are Kathrien model #800-100766 for all sectors. Technical specifications of these antennae are provided in attachment two. The sectorized antennas are designed to transmit utilizing LTE and UTMS technology with an effective radiated power (ERP) of up to 1,456 watts per sector within a bandwidth between approximately 704 and 834 MHz (collectively referred to in this report as cellular frequencies) and with an ERP of up to 2,080 watts per sector within a bandwidth between approximately 1,740 and 1,874 MHz (collectively referred to in this report as PCS frequencies). There are no other wireless carriers co-located at the proposed site.

Calculation Methodology, Results & Recommendations

Calculations were made in accordance with the recommendations contained in the Federal Communications Commission, Office of Engineering and Technology Bulletin 65 (edition 97-01, page 24, equation 10) entitled "Evaluating Compliance with FCC-Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields." Several assumptions were made in order to provide the most conservative or "worse case" projections of power densities. Calculations were made assuming that all channels were operating simultaneously at their maximum design effective radiated power. Attenuation (weakening) of the signal that would result from surrounding foliage or buildings was ignored. Buildings can reduce the signal strength by a factor of 10 (i.e., 10 dB) or more depending upon the construction material. The ground or other surfaces were considered to be perfect reflectors (which they are not) and the RF energy was assumed to overlap and interact constructively at all locations (which they would not) thereby resulting in the calculation of the maximum potential exposure. In fact, the accumulations of all these very conservative assumptions will significantly overestimate the actual exposures that would typically be expected from such a facility. However, this method is a prudent approach that errs on the side of safety.

The maximum public RF exposure from this AT&T facility was calculated to be less than 0.84% of the FCC public safety standard. This total exposure is comprised of 3.0 ì W/cm^2 (i.e., ~0.6% of the public safety standard at cellular frequencies) and less than 2.4 ì W/cm^2 (i.e., ~0.24 % of the public safety standard at PCS frequencies). RF exposure expressed in percent of the FCC public exposure standard as a function of distance from the proposed facility at ground level is shown in appendix A.

A sign conforming to with ANSI C95.2 color, symbol and content, and other markings as appropriate, should be placed close to the antennas with appropriate contact information in order to alert maintenance or other workers approaching the antenna to the presence of RF transmissions and to take precautions to avoid exposures in excess of FCC limits.

RF Safety Standards

The two most widely recognized standards for protection against RF field exposure are those published by the American National Standards Institute (ANSI) C95.1 and the National Council on Radiation Protection and measurement (NCRP) report #86.

The NCRP is a private, congressionally chartered institution with the charge to provide expert analysis of a variety of issues (especially health and safety recommendations) on radiations of all forms. The scientific analyses of the NCRP are held in high esteem in the scientific and regulatory community both nationally and internationally. In fact, the vast majority of the radiological health regulations currently in existence can trace their origin, in some way, to the recommendations of the NCRP.

All RF exposure standards are frequency-specific, in recognition of the differential absorption of RF energy as a function of frequency. The most restrictive exposure levels in the standards are associated with those frequencies that are most readily absorbed in humans. Maximum absorption occurs at approximately 80 MHz in adults. The NCRP maximum allowable continuous occupational exposure at this frequency is 1,000 ì W/cm^2. This compares to 5,000 ì W/cm^2 at the most restrictive of the PCS frequencies (~1,800 MHz) that are absorbed much less efficiently than exposures in the VHF TV band.

The traditional NCRP philosophy of providing a higher standard of protection for members of the general population compared to occupationally exposed individuals, prompted a two-tiered safety standard by which levels of allowable exposure were substantially reduced for "uncontrolled " (e.g., public) and continuous exposures. This measure was taken to account for the fact that workers in an industrial environment are typically exposed no more than eight hours a day while members of the general population in proximity to a source of RF radiation may be exposed continuously. This additional protection factor also provides a greater margin of safety for children, the infirmed, aged, or others who might be more sensitive to RF exposure. After several years of evaluating the national and international scientific and biomedical literature, the members of the NCRP scientific committee selected 931 publications in the peer-reviewed scientific literature on which to base their recommendations. The current NCRP recommendations limit continuous public exposure at PCS frequencies to 1,000 ì W/cm^2.

The 1992 ANSI standard was developed by Scientific Coordinating Committee 28 (SCC 28) under the auspices of the Institute of Electrical and Electronic Engineers (IEEE). This standard, entitled "IEEE Standards for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz" (IEEE C95.1-1991), was issued in April 1992 and subsequently adopted by ANSI. A revision of this standard (C95.1-2005) was completed in October 2005 by SCC 39 the IEEE International

Committee on Electromagnetic Safety. Their recommendations are similar to the NCRP recommendation for the maximum permissible exposure (MPE) to the public PCS frequencies (950 ì W/cm^2 for continuous exposure at 1,900 MHz) and incorporates the convention of providing for a greater margin of safety for public as compared with occupational exposure. Higher whole body exposures are allowed for brief periods provided that no 30 minute time-weighted average exposure exceeds these aforementioned limits.

On August 9, 1996, the Federal Communications Commission (FCC) established a RF exposure standard that is a hybrid of the current ANSI and NCRP standards. The maximum permissible exposure values used to assess environmental exposures are those of the NCRP (i.e., maximum public continuous exposure at PCS frequencies of 1,000 ì W/cm^2). The FCC issued these standards in order to address its responsibilities under the National Environmental Policy Act (NEPA) to consider whether its actions will "significantly affect the quality of the human environment." In as far as there was no other standard issued by a federal agency such as the Environmental Protection Agency (EPA), the FCC utilized their rulemaking procedure to consider which standards should be adopted. The FCC received thousands of pages of comments over a three-year review period from a variety of sources including the public, academia, federal health and safety agencies (e.g., EPA & FDA) and the telecommunications industry. The FCC gave special consideration to the recommendations by the federal health agencies because of their special responsibility for protecting the public health and safety. In fact, the maximum permissible exposure (MPE) values in the FCC standard are those recommended by EPA and FDA. The FCC standard incorporates various elements of the 1992 ANSI and NCRP standards which were chosen because they are widely accepted and technically supportable. There are a variety of other exposure guidelines and standards set by other national and international organizations and governments, most of which are similar to the current ANSI/IEEE or NCRP standard, figure one.

The FCC standards "Guidelines for Evaluating the Environmental Effects of Radiofrequency Radiation" (Report and Order FCC 96-326) adopted the ANSI/IEEE definitions for controlled and uncontrolled environments. In order to use the higher exposure levels associated with a controlled environment, RF exposures must be occupationally related (e.g., PCS company RF technicians) and they must be aware of and have sufficient knowledge to control their exposure. All other environmental areas are considered uncontrolled (e.g., public) for which the stricter (i.e., lower) environmental exposure limits apply. All carriers were required to be in compliance with the new FCC RF exposure standards for new telecommunications facilities by October 15, 1997. These standards applied retroactively for existing telecommunications facilities on September 1, 2000.

The task for the physical, biological, and medical scientists that evaluate health implications of the RF data base has been to identify those RF field conditions that can produce harmful biological effects. No panel of experts can guarantee safe levels of exposure because safety is a null concept, and negatives are not susceptible to proof. What a dispassionate scientific assessment can offer is the presumption of safety when RF-field conditions do not give rise to a demonstrable harmful effect.

Summary & Conclusions

The RF exposure from the proposed AT&T facility as specified above will be in full compliance with FCC RF public safety standards. Wireless telecommunications transmitters, by design and operation, are low-power devices. Even under maximal exposure conditions, in which all the channels from all antennas are operating at full design basis power, the maximum RF exposures will be less than 0.84% of the public safety standard at any publically accessible location. This maximum exposure is more than 119 times lower than the FCC public exposure standards for these frequencies. A chart of the electromagnetic spectrum and a

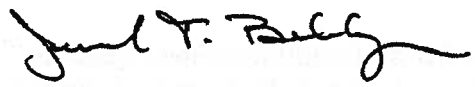
comparison of RF power densities from various common sources is presented in figures two and three respectively in order to place exposures from wireless telecommunications systems in perspective.

It is important to realize that the FCC maximum allowable exposures are not set at a threshold between safety and known hazard but rather at 50 times below a level that the majority of the scientific community believes may pose a health risk to human populations. Thus the previously mentioned maximum exposure from the site represent a "safety margin" from this threshold of potentially adverse health effects of more than 5,950 times.

Given the low levels of radiofrequency fields that would be generated from this facility, and given the evidence on biological effects in a large data base, there is no scientific basis to conclude that harmful effects will attend the utilization of the proposed wireless telecommunications facility. This conclusion is supported by a large numbers of scientists that have participated in standard-setting activities in the United States who are overwhelmingly agreed that RF radiation exposure below the FCC exposure limits has no demonstrably harmful effects on humans.

These findings are based on my professional evaluation of the scientific issues related to the health and safety of non-ionizing electromagnetic radiation and my analysis of the technical specification as provided by AT&T. The opinions expressed herein are based on my professional judgement and are not intended to necessarily represent the views of any other organization or institution. Please contact me if you require any additional information.

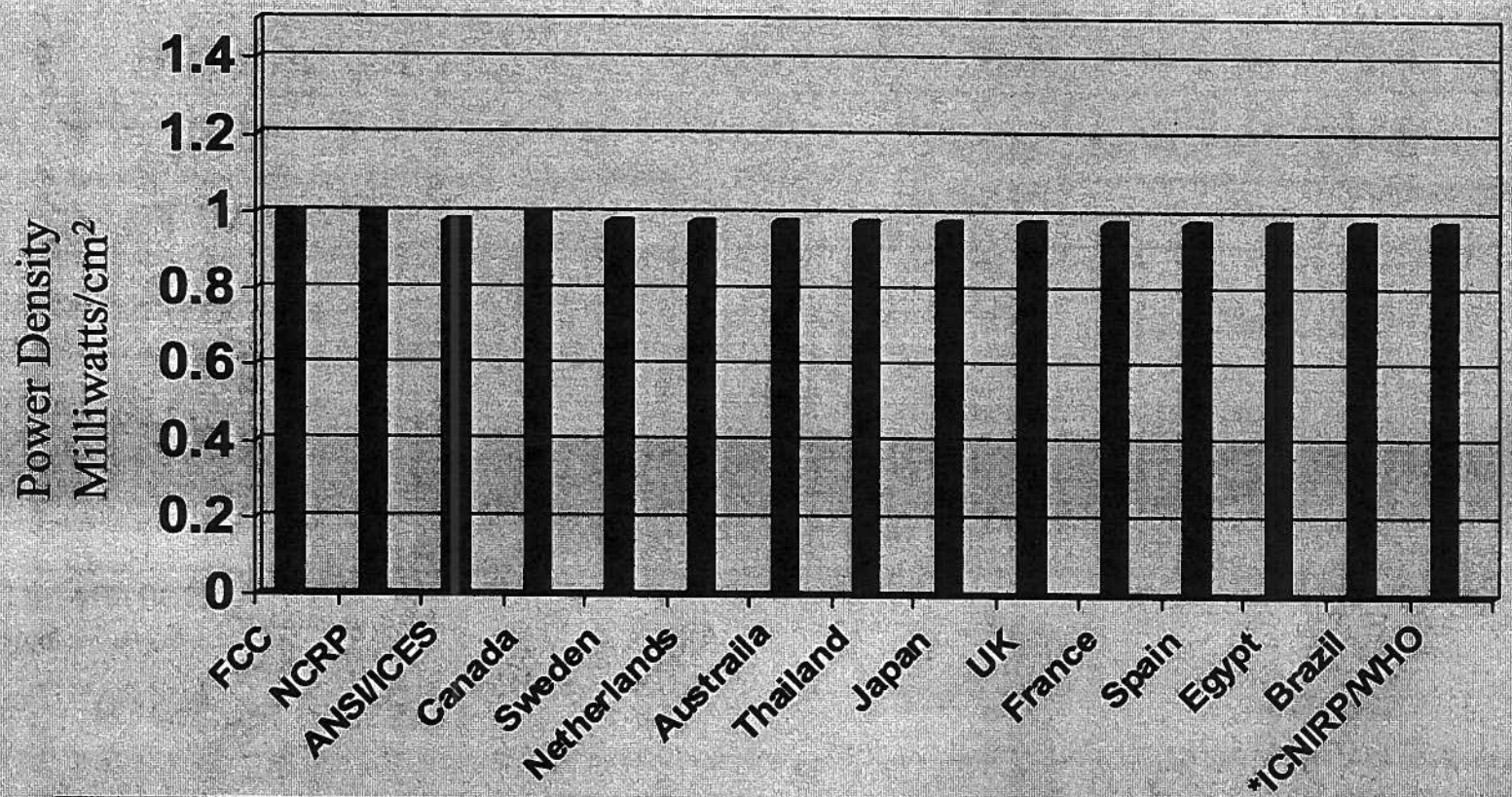
Sincerely,



Jerrold T. Bushberg Ph.D., DABMP, DABSNM
Diplomate, American Board of Medical Physics (DABMP)
Diplomate, American Board of Science in Nuclear Medicine (DABSNM)

Enclosures: Figures 1-3; Attachments 1, 2; Appendix A, and Statement of Experience.

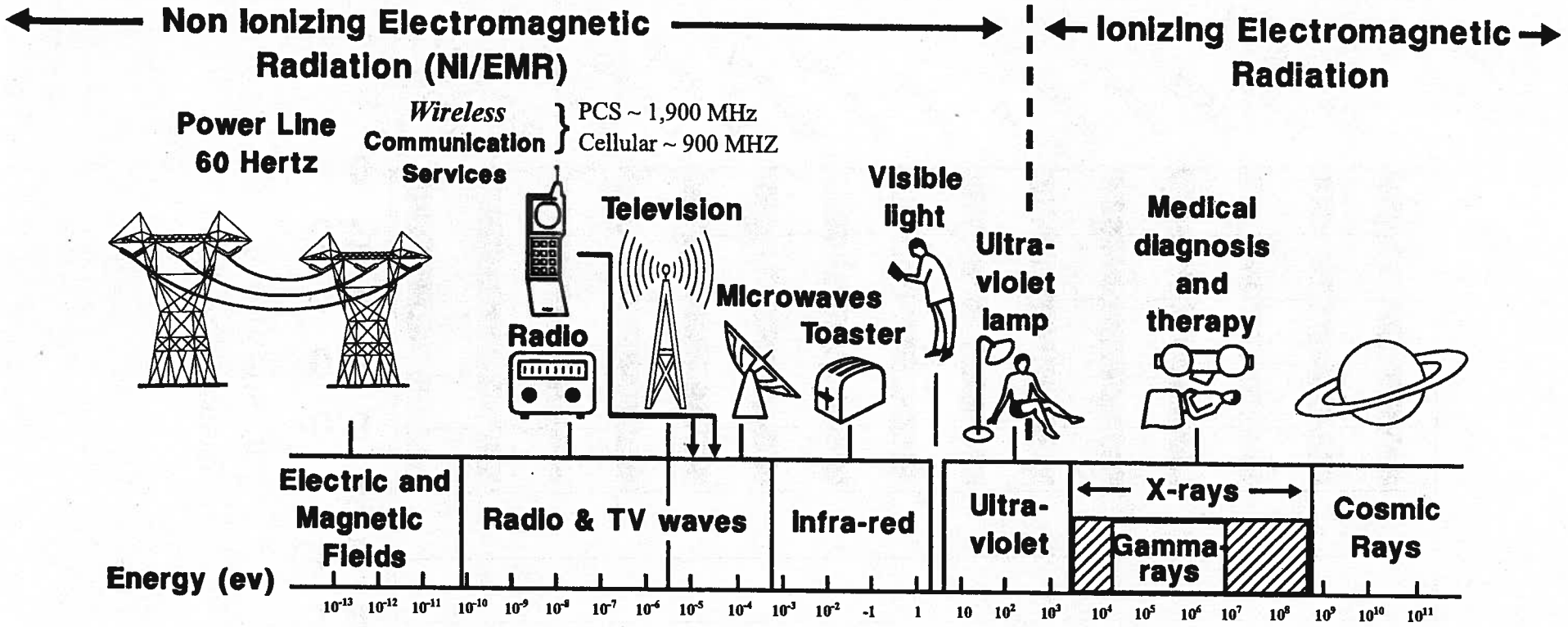
National and International Public RF Exposure Standards (PCS @ 1,950 MHz)



*International Commission on Non-Ionizing Radiation Protection (ICNIRP) Public Safety Exposure Standard. ICNIRP standard recommended by the World Health Organization (WHO). Members of the ICNIRP Scientific Committee were from:

- Australia
- Finland
- France
- Germany
- Hungary
- Italy
- Sweden
- Japan
- United Kingdom
- United States

Figure 1



The Electromagnetic Spectrum

Figure 2

Typical Exposure from Various Radio Frequency / Microwave Sources

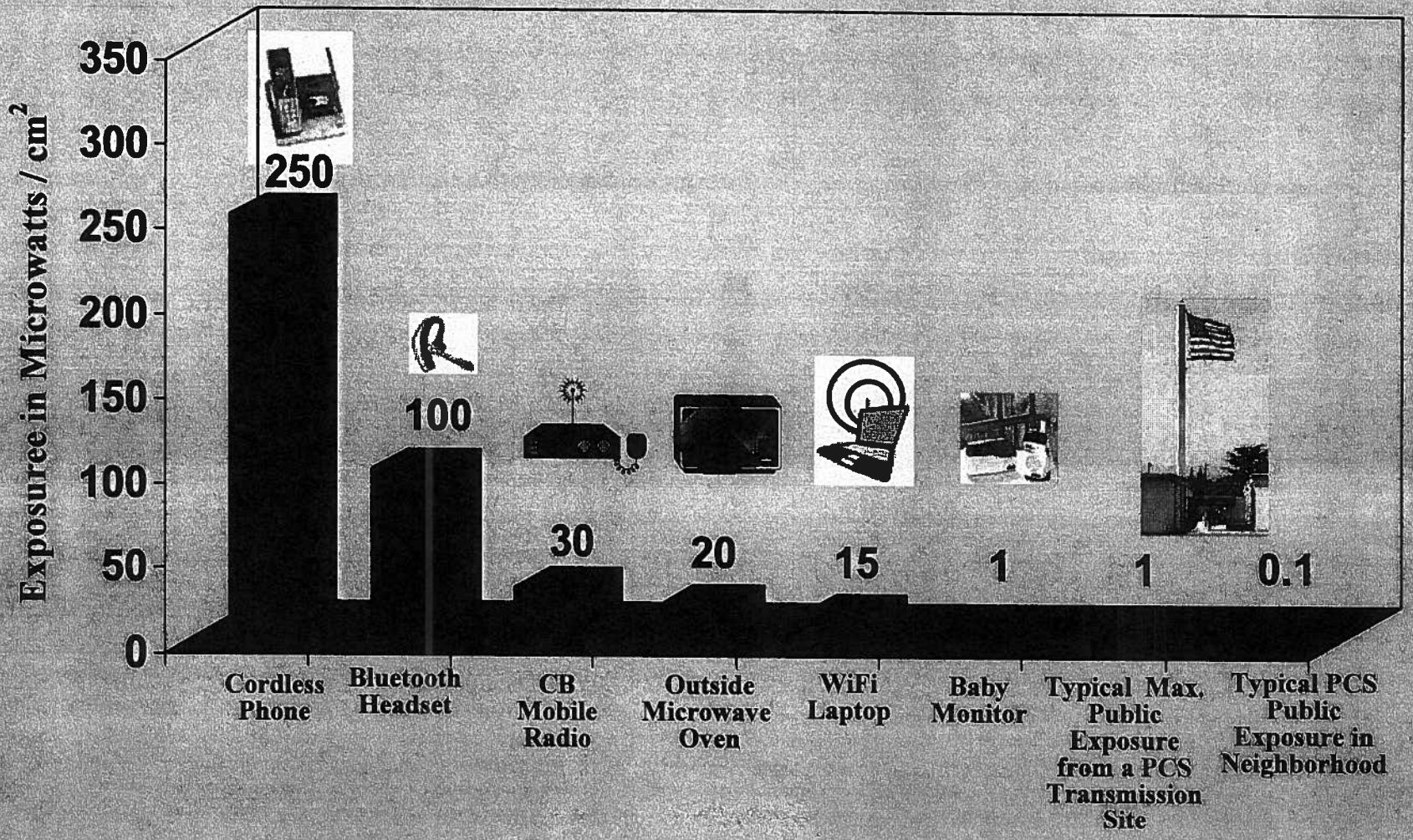


Figure 3

Attachment 1

Site Specifications

SITE NUMBER: SD0503
SITE NAME: ESCONDIDO UNION SCHOOL DISTRICT
SITE ADDRESS: 2310 ALDERGROVE AVE.
ESCONDIDO, CA 92029

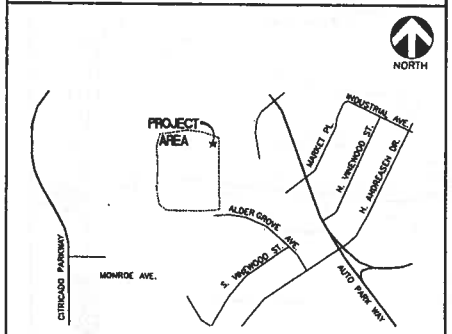
DIGALERT 1-800-227-2600 AT LEAST TWO DAYS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

GENERAL CONTRACTOR NOTE

DO NOT SCALE DRAWING.

CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE ARCHITECT IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.

VICINITY MAP



DRIVING DIRECTIONS

FROM AT&T OFFICE, SAN DIEGO,CA

1. HEAD TOWARD BUSINESSPARK AVE ON WILLOW CREEK RD.
2. TURN ONTO BUSINESSPARK AVE.
3. TURN ONTO CARROLL CANYON RD.
4. TURN AND TAKE RAMP ONTO ESCONDIDO FWY (I-15 N).
5. TAKE THE I-15 EXPRESS H EXIT TO THE ONTO I-15 EXPRESS LN, ESCONDIDO FWY HOV.
6. EXIT ONTO ESCONDIDO FWY (I-15 N).
7. TAKE THE 9TH AVENUE/AUTO PARK WAY EXIT.
8. TURN ONTO W 9TH AVE.
9. CONTINUE ON AUTO PARK WAY.
10. BEAR ONTO S ANDREASEN DR.
11. TURN ONTO ALDERGROVE AVE.
12. YOUR DESTINATION ON ALDERGROVE AVE IS ON THE LEFT.

CODE COMPLIANCE

ALL WORK AND MATERIALS SHALL BE PERFORMED AND INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUCTED TO PERMIT WORK NOT CONFORMING TO THESE CODES.

1. 2010 CALIFORNIA ADMINISTRATIVE CODE
2. 2010 CALIFORNIA BUILDING CODE
3. 2010 CALIFORNIA ELECTRIC CODE
4. 2010 CALIFORNIA MECHANICAL CODE
5. 2010 CALIFORNIA PLUMBING CODE
6. 2010 CALIFORNIA FIRE CODE
7. ANY LOCAL BUILDING CODE AMENDMENTS TO THE ABOVE
8. CITY/COUNTY ORDINANCES

HANDICAP REQUIREMENTS: FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. HANDICAPPED ACCESS NOT REQUIRED IN ACCORDANCE WITH CALIFORNIA ADMINISTRATIVE STATE CODE PART 2, TITLE 24, CHAPTER 11B, SECTION 11038.

UTILITY CONTACTS

	COMPANY	CONTACTS
GAS COMPANY	SDG&E	
ELECTRIC COMPANY	SDG&E	
WATER COMPANY		
SCHOOL DISTRICT	ESCONDIDO UNION	
TELEPHONE COMPANY	AT&T	

APPROVALS

CONSTRUCTION: _____ SIGNATURE _____ DATE

RF ENGINEER: _____ SIGNATURE _____ DATE

SITE ACQUISITION: _____ SIGNATURE _____ DATE

NET OPS: _____ SIGNATURE _____ DATE

ZONING: _____ SIGNATURE _____ DATE

LANDLORD: _____ SIGNATURE _____ DATE

PROJECT SUMMARY

SCOPE OF WORK: UNMANNED TELECOMMUNICATIONS FACILITY FOR AT&T WIRELESS CONSISTING OF THE INSTALLATION AND OPERATION OF ANTENNAS AND ASSOCIATED EQUIPMENT. AT&T IS PROPOSING TO INSTALL THE FOLLOWING:

1. ONE (1) 11'-6" X 20' PRE-FABRICATED EARTH TONE EQUIPMENT SHELTER.
2. ONE (1) 70' HIGH MONO EUCALYPTUS LOCATED INSIDE A 11'-6" X 12' CHAIN LINK FENCE ENCLOSURE WITH GREEN SLATS.
3. TWELVE (12) 8' HIGH PANEL ANTENNAS, THIRTY (30) RRUS, AND TWO (2) SURGE SUPPRESSION SYSTEMS MOUNTED ON THE MONO EUCALYPTUS NEAR THE ANTENNAS.
4. TWO (2) GPS ANTENNAS TO BE MOUNTED ON THE EQUIPMENT SHELTER, A MINIMUM OF 10' APART

PROPERTY OWNER: ESCONDIDO UNION SCHOOL DISTRICT, 2310 ALDERGROVE DRIVE, ESCONDIDO, CA 92029

APPLICANT: AT&T, 5738 PACIFIC CENTER BLVD., SAN DIEGO, CA 92121

EXISTING WIRELESS CARRIERS: NONE

LATITUDE: 33° 06' 55.03" N

LONGITUDE: 117° 06' 41.19" W

LAT/LONG TYPE: NAD 83

ELEVATION: 841 FT A.M.S.L.

APN #: 232-051-18

JURISDICTION: CITY OF ESCONDIDO

CURRENT ZONING: I-P

PROPOSED USE: UNMANNED TELECOMMUNICATION FACILITY

PROJECT TEAM

PROJECT MANAGER:
BLACK & VEATCH CORPORATION
9820 WILLOW CREEK ROAD, SUITE 295
SAN DIEGO, CA 92131
CONTACT: ZACHARY STARK
PHONE: (858) 603-7329
FAX: (858) 566-6988
E-MAIL: starkzm@bv.com

ENGINEER:
PDC CORPORATION
13225 DANIELSON STREET, SUITE 200
POWAY, CA 92064
CONTACT: SOHAIL SHAH, PE
PHONE: (858) 668-2828
FAX: (858) 668-2827
EMAIL: sohs@pdccorp.net

SITE ACQUISITION:
PLANCOM
302 STATE PLACE
ESCONDIDO, CA 92029
PHONE: (925) 548-2050
CONTACT: DUFFY DAUGHERTY
EMAIL: duffy.daugherty@plancominc.com

ZONING:
PLANCOM
302 STATE PLACE
ESCONDIDO, CA 92029
PHONE: (619) 917-6703
CONTACT: DARRELL DAUGHERTY
EMAIL: darrell.daugherty@plancominc.com

RF ENGINEER:
AT&T
5738 PACIFIC CENTER BLVD.
SAN DIEGO, CA 92121
CONTACT: RAVI JINDAL
PHONE: (714) 258-1147
EMAIL: ravijindal@att.com

CONSTRUCTION MANAGER:
BLACK AND VEATCH CORPORATION
9820 WILLOW CREEK ROAD, SUITE 295
SAN DIEGO, CA 92131
CONTACT: JEREMY KINDER
PHONE: (619) 203-1939
EMAIL: KINDERJM@bv.com

SHEET INDEX

SHEET	DESCRIPTION	REV
T-1	TITLE SHEET	0
A-1	SITE PLAN AND ENLARGED SITE PLAN	0
A-2	EQUIPMENT LAYOUT AND ANTENNA PLAN	0
A-3	ELEVATION	0
A-4	ELEVATION	0
A-5	ELEVATION	0
A-6	ELEVATION	0
A-7	EQUIPMENT AND ANTENNA DETAILS	0
LS-1	TOPOGRAPHICAL SURVEY	C

APPLICANT:
at&t
5738 PACIFIC CENTER BLVD.
SAN DIEGO, CA 92121

PROJECT INFORMATION:
SD0503
ESCONDIDO UNION SCHOOL DISTRICT
2310 ALDERGROVE AVE.
ESCONDIDO, CA 92029

REVISIONS:

REV.	DATE	DESCRIPTION	BY
A	11/18/11	90% ZONING DRAWING	SJV
0	11/02/11	100% ZONING DRAWING	JCC

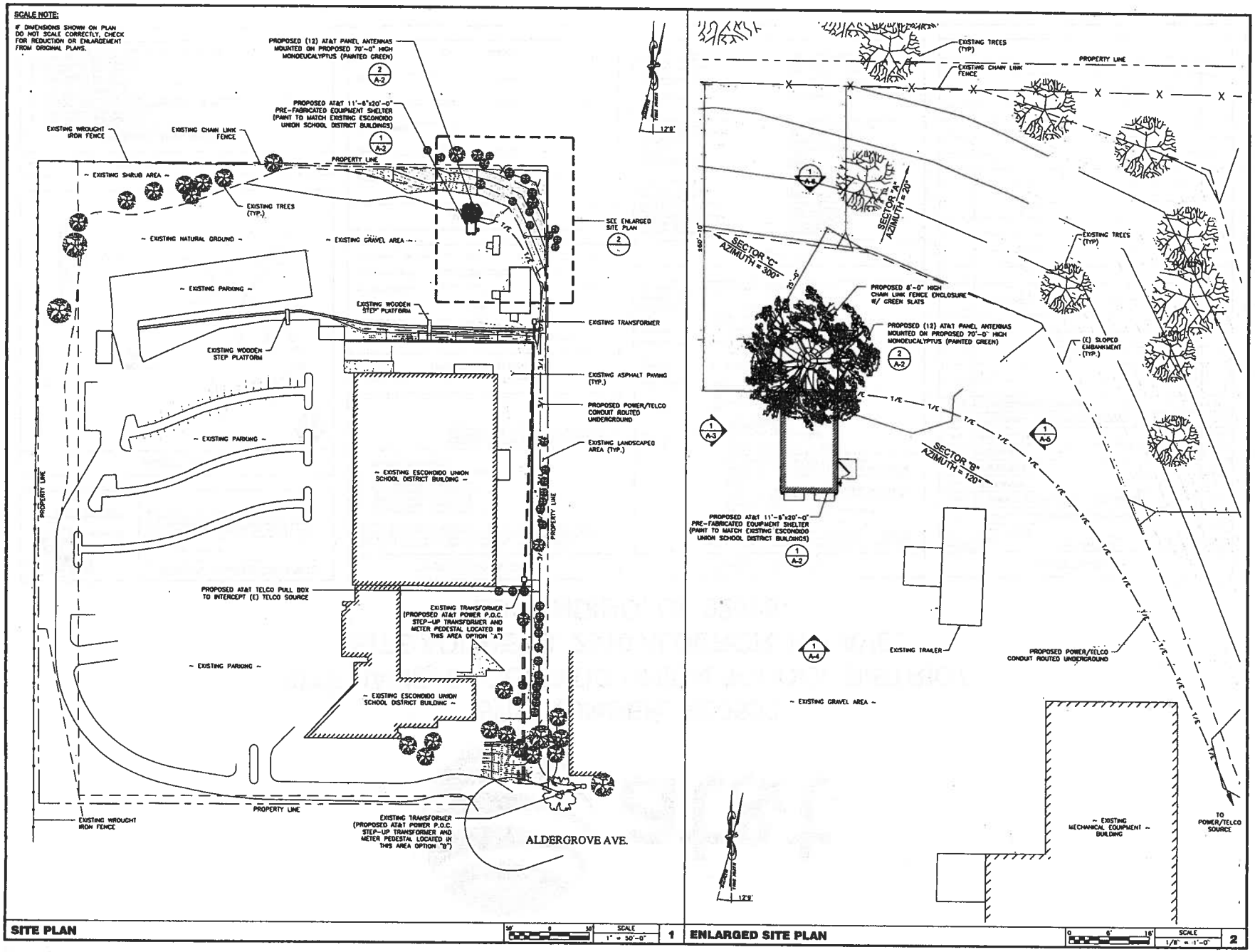
CONSULTANT:
BLACK & VEATCH
9820 WILLOW CREEK RD., SUITE 310
SAN DIEGO, CA 92131

ENGINEER:
PDC CORPORATION
13225 DANIELSON ST, SUITE 200
POWAY, CA 92064
TEL: (858) 668-2828
FAX: (858) 668-2827

LICENSER:

SHEET TITLE:
TITLE SHEET

SHEET NUMBER:
T-1



APPLICANT:

at&t

5738 PACIFIC CENTER BLVD.
SAN DIEGO, CA 92121

PROJECT INFORMATION:

SD0503
ESCONDIDO UNION SCHOOL DISTRICT

2310 ALDERGROVE AVE.
ESCONDIDO, CA 92029

REVISIONS:

REV.	DATE	DESCRIPTION	BY
A	11/18/11	90% ZONING DRAWING	SJV
0	12/02/11	100% ZONING DRAWING	JCC

CONSULTANT:

BLACK & VEATCH

9820 WILLOW CREEK RD., SUITE 310
SAN DIEGO, CA 92131

ENGINEER:

PDC CORPORATION

13225 DANIELSON ST, SUITE 200
POWAY, CA 92064
TEL: (858) 668-2828
FAX: (858) 668-2827

LICENSER:

SHEET TITLE:

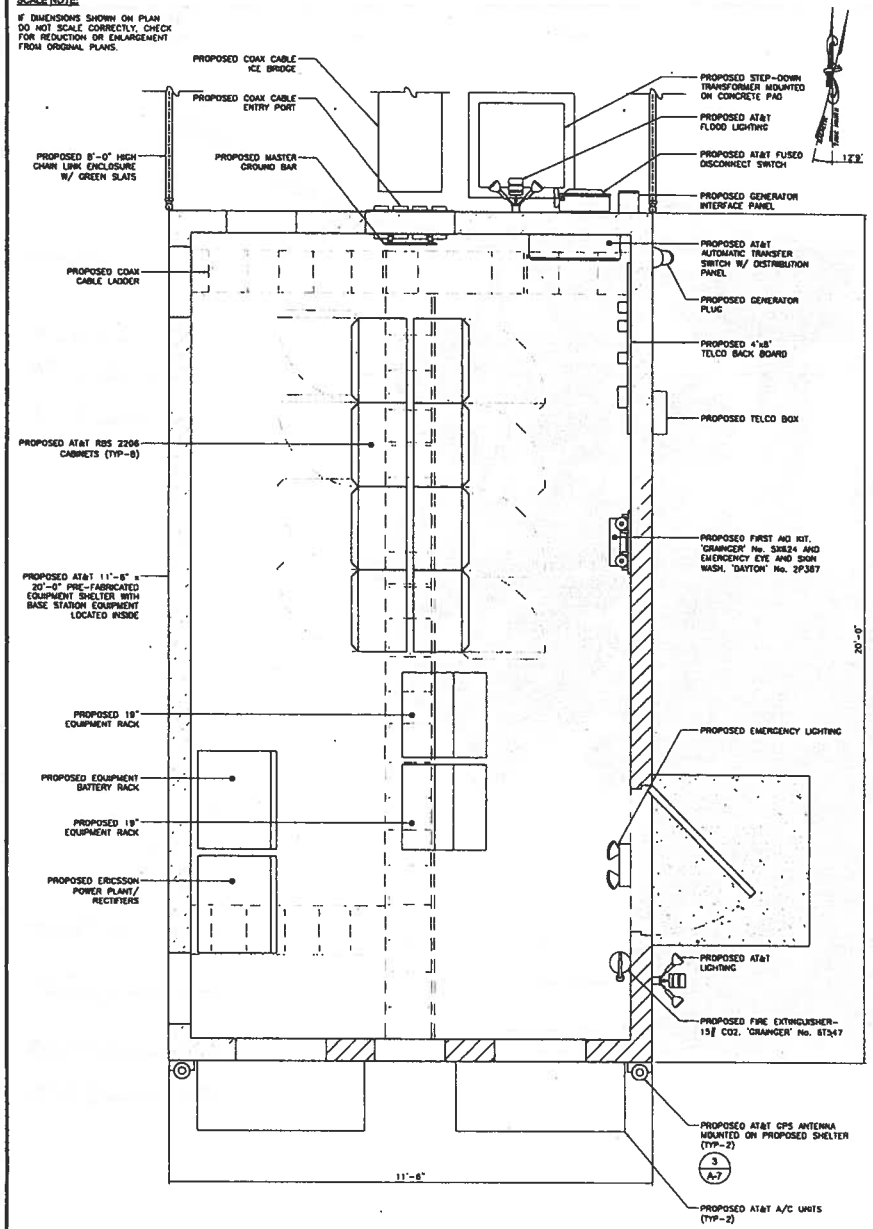
SITE PLAN AND ENLARGED SITE PLAN

SHEET NUMBER:

A-1

SCALE NOTE:

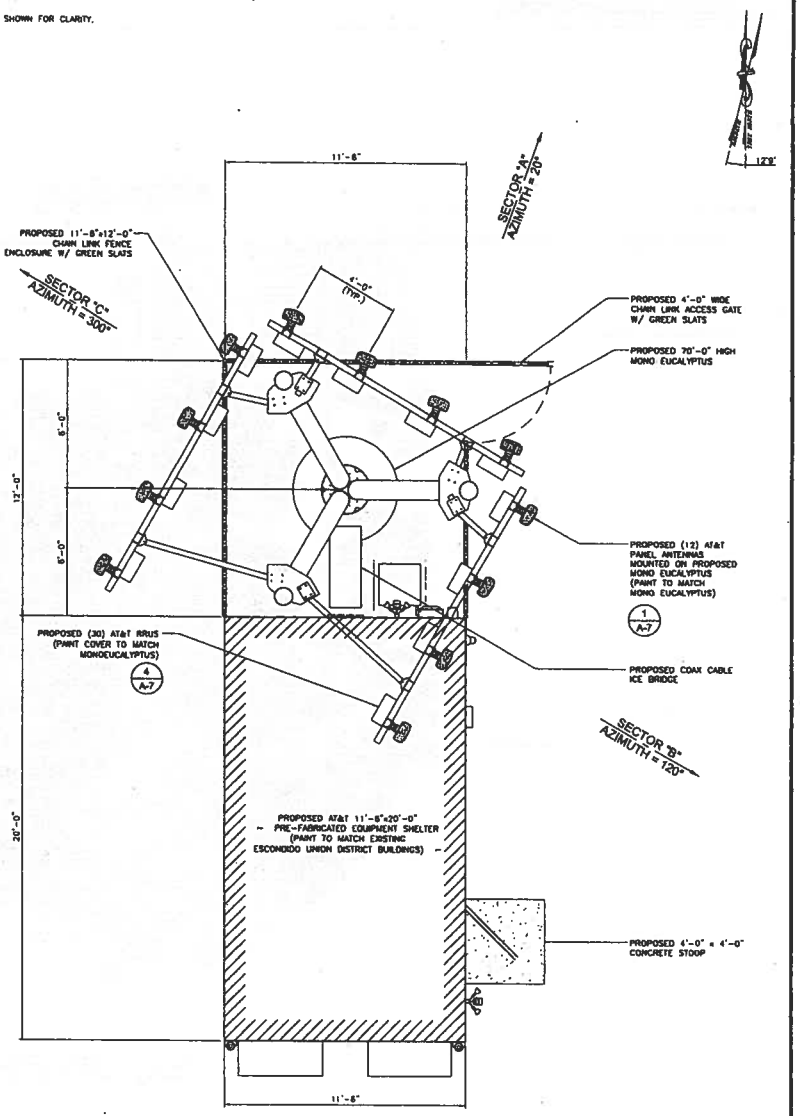
IF DIMENSIONS SHOWN ON PLAN DO NOT SCALE CORRECTLY, CHECK FOR REDUCTION OR ENLARGEMENT FROM ORIGINAL PLANS.



EQUIPMENT LAYOUT — SCALE 1/2" = 1'-0" — 1

NOTE:

BRANCHES NOT SHOWN FOR CLARITY.



ANTENNA PLAN — SCALE 3/8" = 1'-0" — 2

AT&T RF SCHEDULE

SECTOR	NO. OF ANT.	ANTENNA MODEL	AZIMUTH	ANT. RAD CENTER	COAX LENGTH	COAX SIZE	NO. OF COAX
A	4	KATHREIN 800-10766K	20°	64'-0"	±110'	7/8"	8
B	4	KATHREIN 800-10766K	120°	64'-0"	±110'	7/8"	8
C	4	KATHREIN 800-10766K	300°	64'-0"	±110'	7/8"	8

NOTES:

- (30) RRUS (RRUS-01) MOUNTED ON PROPOSED MONO EUCAPLYPTUS
- 8 EQUIPMENT CABINETS AND ASSOCIATE EQUIPMENT INSIDE PRE-FAB SHELTER

APPLICANT:

at&t

5738 PACIFIC CENTER BLVD.
SAN DIEGO, CA 92121

PROJECT INFORMATION:

SD0503
ESCONDIDO UNION SCHOOL DISTRICT
2310 ALDERGROVE AVE.
ESCONDIDO, CA 92029

REVISIONS:

REV.	DATE	DESCRIPTION	BY
A	11/18/11	90% ZONING DRAWING	SJV
B	12/02/11	100% ZONING DRAWING	JCC

CONSULTANT:

BLACK & VEATCH
9820 WILLOW CREEK RD., SUITE 310
SAN DIEGO, CA 92131

ENGINEER:

POC CORPORATION
13225 DANIELSON ST, SUITE 200
POWAY, CA 92064
TEL: (858) 668-2626
FAX: (858) 668-2627

LICENSER:

SHEET TITLE:

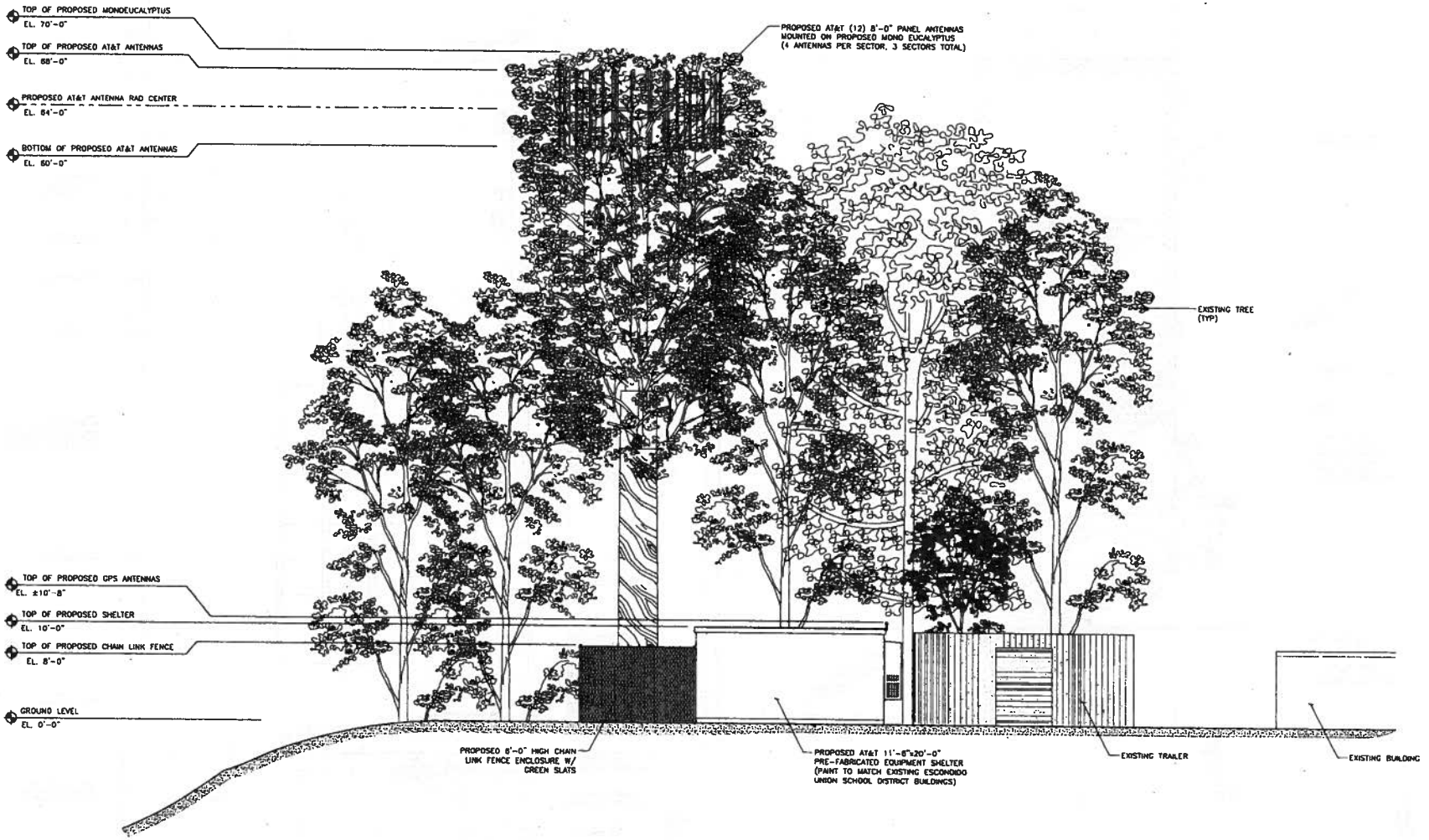
EQUIPMENT LAYOUT AND ANTENNA PLAN

SHEET NUMBER:

A-2

SCALE NOTE:

IF DIMENSIONS SHOWN ON PLAN DO NOT SCALE CORRECTLY, CHECK FOR REDUCTION OR ENLARGEMENT FROM ORIGINAL PLANS.



WEST ELEVATION

4' 0 4' 8' SCALE 3/16" = 1'-0" 1

APPLICANT:

at&t

5738 PACIFIC CENTER BLVD.
SAN DIEGO, CA 92121

PROJECT INFORMATION:

SD0503
ESCONDIDO UNION SCHOOL DISTRICT

2310 ALDERGROVE AVE.
ESCONDIDO, CA 92029

REVISIONS:

REV.	DATE	DESCRIPTION	BY
A	11/10/11	90% ZONING DRAWING	SJV
0	12/02/11	100% ZONING DRAWING	JCC

CONSULTANT:

BLACK & VEATCH

9820 WILLOW CREEK RD., SUITE 310
SAN DIEGO, CA 92131

ENGINEER:

PDC CORPORATION

13225 DANIELSON ST, SUITE 200
POWAY, CA 92064
TEL: (858) 668-2828
FAX: (858) 668-2827

LICENSER:

SHEET TITLE:

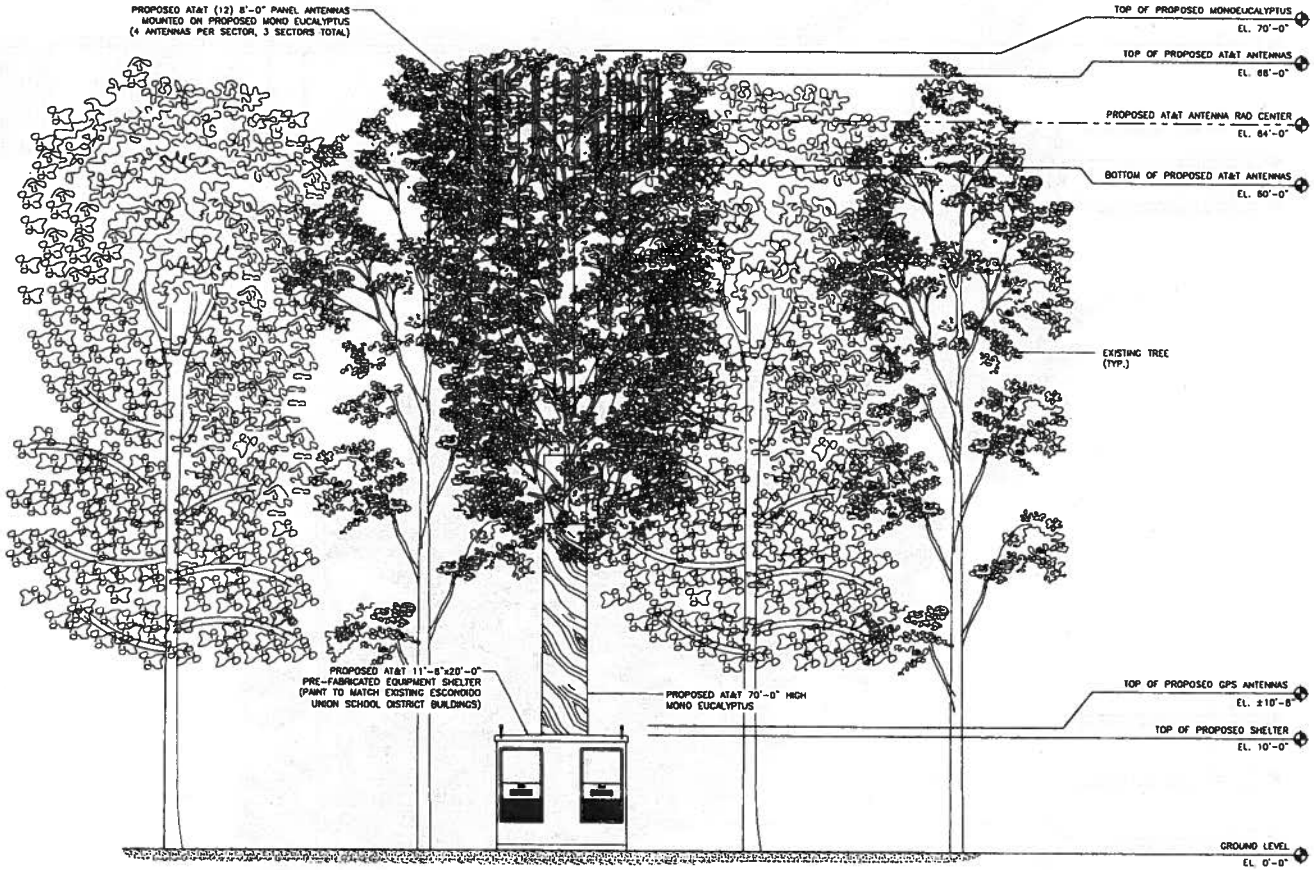
ELEVATION

SHEET NUMBER:

A-3

SCALE NOTE:

IF DIMENSIONS SHOWN ON PLAN DO NOT SCALE CORRECTLY, CHECK FOR REDUCTION OR ENLARGEMENT FROM ORIGINAL PLANS.



SOUTH ELEVATION

4' 0 4' 8' SCALE 3/16" = 1'-0" 1

APPLICANT:

at&t

5738 PACIFIC CENTER BLVD.
SAN DIEGO, CA 92121

PROJECT INFORMATION:

SD0503
ESCONDIDO UNION SCHOOL DISTRICT

2310 ALDERGROVE AVE.
ESCONDIDO, CA 92029

REVISIONS:

REV.	DATE	DESCRIPTION	BY
A	11/18/11	90% ZONING DRAWING	SJV
0	12/02/11	100% ZONING DRAWING	JCC

CONSULTANT:

BLACK & VEATCH

9820 WILLOW CREEK RD., SUITE 310
SAN DIEGO, CA 92131

ENGINEER:

PDC CORPORATION

13225 DANIELSON ST, SUITE 200
POWAY, CA 92064
TEL: (858) 668-2828
FAX: (858) 668-2827

LICENSER:

SHEET TITLE:

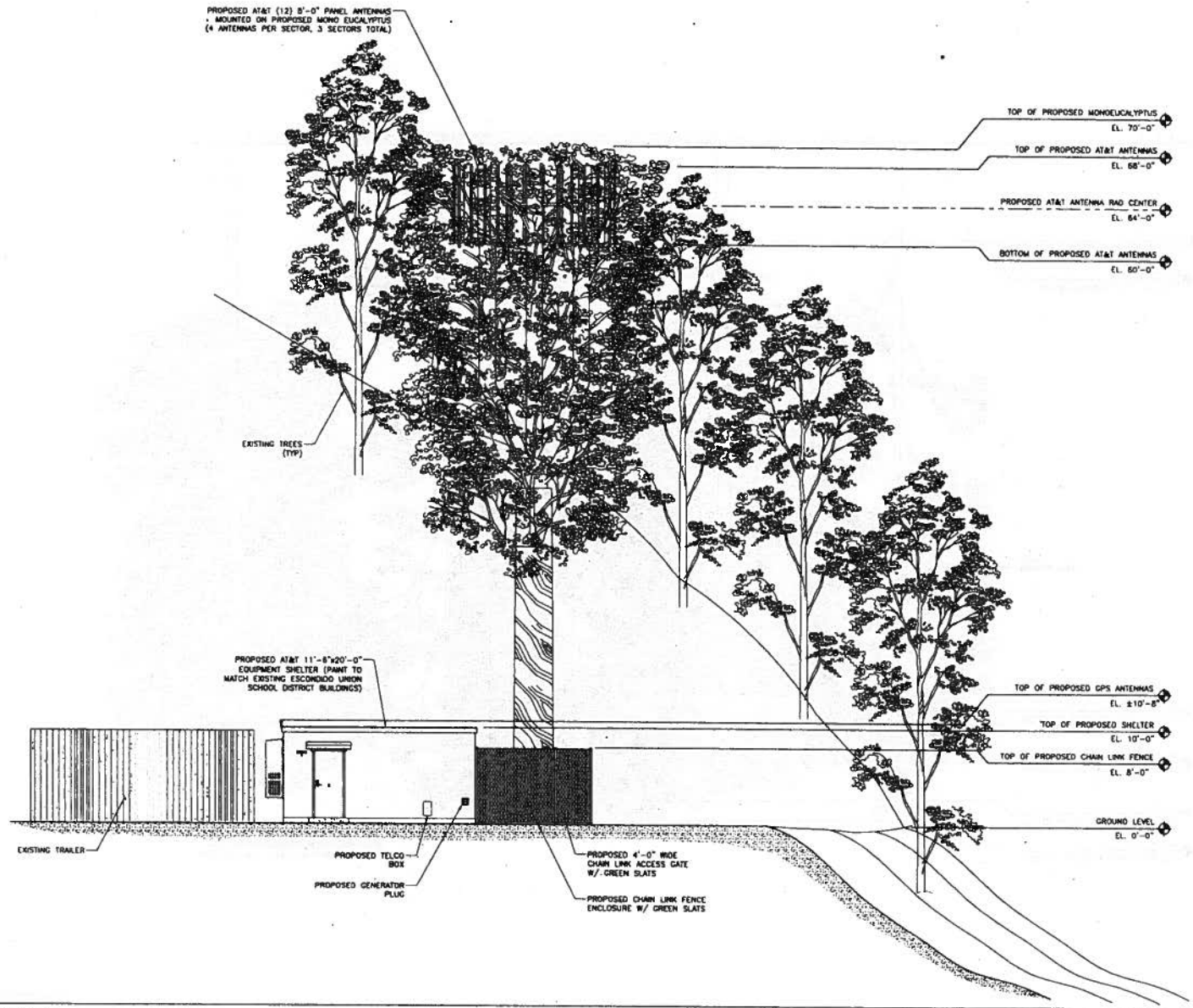
ELEVATION

SHEET NUMBER:

A-4

SCALE NOTE:

IF DIMENSIONS SHOWN ON PLAN DO NOT SCALE CORRECTLY, CHECK FOR REDUCTION OR ENLARGEMENT FROM ORIGINAL PLANS.



EAST ELEVATION

4' 0 4' 8' SCALE 3/16" = 1'-0" 1

APPLICANT:

at&t

5738 PACIFIC CENTER BLVD.
SAN DIEGO, CA 92121

PROJECT INFORMATION:

SD0503
ESCONDIDO UNION SCHOOL DISTRICT

2310 ALDERGROVE AVE.
ESCONDIDO, CA 92029

REVISIONS:

REV.	DATE	DESCRIPTION	BY
A	11/18/11	90% ZONING DRAWING	SJV
0	12/02/11	100% ZONING DRAWING	JCC

CONSULTANT:

BLACK & VEATCH

9820 WILLOW CREEK RD., SUITE 310
SAN DIEGO, CA 92131

ENGINEER:

PDC CORPORATION

13225 DANIELSON ST, SUITE 200
POWAY, CA 92064
TEL: (858) 668-2825
FAX: (858) 668-2827

LICENSER:

SHEET TITLE:

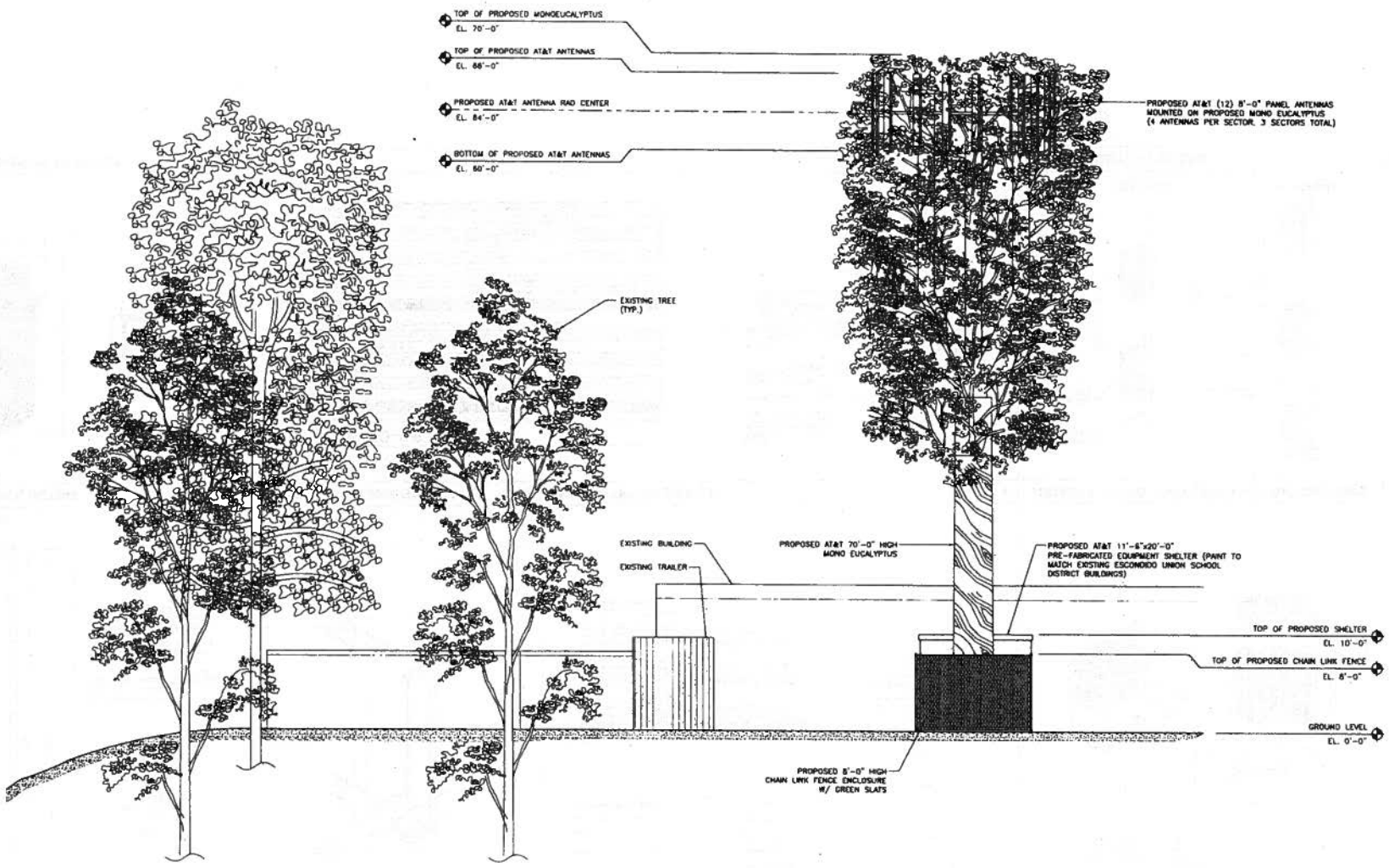
ELEVATION

SHEET NUMBER:

A-5

SCALE NOTE:

IF DIMENSIONS SHOWN ON PLAN DO NOT SCALE CORRECTLY, CHECK FOR REDUCTION OR ENLARGEMENT FROM ORIGINAL PLANS.



NORTH ELEVATION

4' 0 4' 8'

SCALE 3/16" = 1'-0"

1

APPLICANT:

at&t

5738 PACIFIC CENTER BLVD.
SAN DIEGO, CA 92121

PROJECT INFORMATION:

SD0503
ESCONDIDO UNION SCHOOL DISTRICT
2310 ALDERGROVE AVE.
ESCONDIDO, CA 92029

REVISIONS:

REV.	DATE	DESCRIPTION	BY
A	11/18/11	90% ZONING DRAWING	SJV
0	12/02/11	100% ZONING DRAWING	JCC

CONSULTANT:

BLACK & VEATCH
9820 WILLOW CREEK RD., SUITE 310
SAN DIEGO, CA 92131

ENGINEER:

PDC CORPORATION

13225 DANIELSON ST, SUITE 200
POWAY, CA 92064
TEL: (858) 668-2826
FAX: (858) 668-2827

LICENSER:

SHEET TITLE:

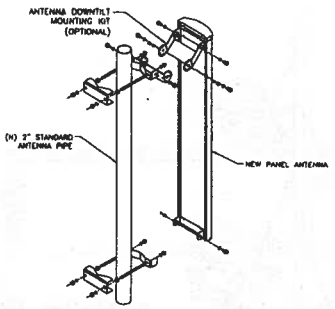
ELEVATION

SHEET NUMBER:

A-6

MANUFACTURER: KATHREIN
MODEL #: 800-10766 K
FREQUENCY RANGE: 698-894 MHz
1710-2170 MHz
WEIGHT: 61.7 LBS
STANDARD MOUNTING HARDWARE:
* INCLUDED FOR 2" TO 4.6" O.D. MAST
* MECHANICAL TILT BRACKET
CONNECTORS: 4-7/16 DIN FEMALE (LONG NECK)

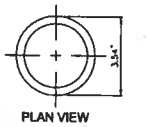
ANTENNA DETAIL | 1



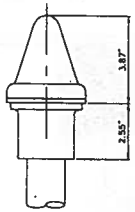
ANTENNA MOUNTING DETAIL | 2

SYMMETRICOM 58532A

ANTENNA DIMENSIONS, DxH:	90x128mm (3.5"x5")
ANTENNA BASE, IDxODxH:	43x75x65mm (1.7"x3"x2.55")
MOUNTING MAST (OPTIONAL), IDxODxL:	38x42x355mm (1.5"x1.7"x14")
ANTENNA WEIGHT W/O. BASE:	0.41 LBS.
MOUNTING BASE WEIGHT:	0.53 LBS.
MOUNTING MAST WEIGHT:	0.53 LBS.



PLAN VIEW



ELEVATION VIEW

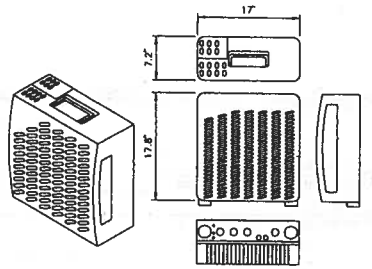
NOTES:

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

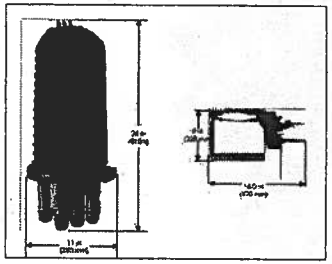
GPS ANTENNA DETAIL | 3

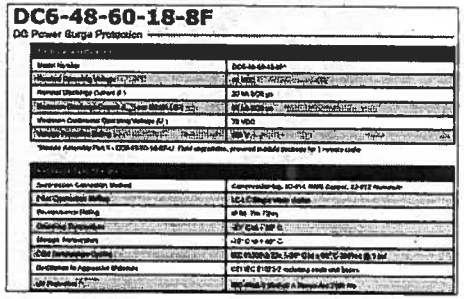
ERICSSON RRUS-11

DIMENSIONS, WxDxH:	431x183x452 mm (17"x7.2"x17.8")
POWER CONSUMPTION:	200 WATTS
TOTAL WEIGHT:	55 LBS.
TEMPERATURE:	-40° TO 55° C



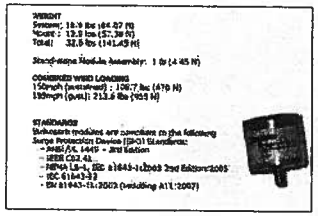
REMOTE RADIO UNIT (RRU) SPECIFICATIONS | 4



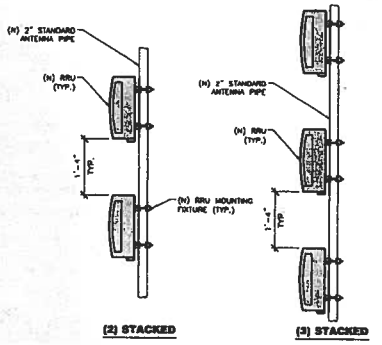


DC6-48-60-18-8F

DC Power Surge Protection



DC6-48-60-18-8F SPECS | 5



RRU MOUNTING DETAIL | 6

APPLICANT:
at&t
5738 PACIFIC CENTER BLVD.
SAN DIEGO, CA 92121

PROJECT INFORMATION:
SD0503
ESCONDIDO UNION SCHOOL DISTRICT
2310 ALGERGROVE AVE.
ESCONDIDO, CA 92029

REVISIONS:

REV.	DATE	DESCRIPTION	BY
A	11/19/11	90% ZONING DRAWING	SJV
0	12/02/11	100% ZONING DRAWING	JCC

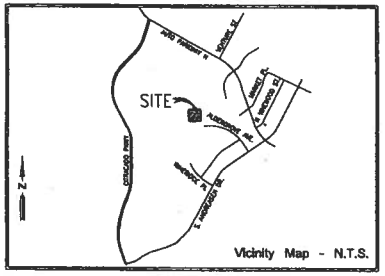
CONSULTANT:
BLACK & VEATCH
9820 WILLOW CREEK RD., SUITE 310
SAN DIEGO, CA 92131

ENGINEER:
PDC CORPORATION
13225 DANIELSON ST, SUITE 200
POWAY, CA 92064
TEL: (858) 668-2828
FAX: (858) 668-2827

LICENSER:

SHEET TITLE:
EQUIPMENT AND ANTENNA DETAILS

SHEET NUMBER:
A-7



Title Insurance Report

PREPARED BY: LAWYERS TITLE COMPANY
FILE NO.: 0128156SB-10
DATED: NOVEMBER 16, 2011

Assessor's Parcel No.

232-051-16

Legal Description

ALL THAT CERTAIN REAL PROPERTY SITUATED IN THE COUNTY OF SAN DIEGO, STATE OF CALIFORNIA, DESCRIBED AS FOLLOWS:

PARCEL 1 OF PARCEL MAP NO. 13996 IN THE CITY OF ESCONDIDO, COUNTY OF SAN DIEGO, STATE OF CALIFORNIA, FILED IN THE OFFICE OF THE COUNTY RECORDER OF SAID SAN DIEGO, OCTOBER 25, 1985, A CERTIFICATE OF CORRECTION THERETO RECORDED APRIL 22, 1988 AS INSTRUMENT NO. 135048 OF OFFICIAL RECORDS.

Items - Schedule B

7 AN EASEMENT OVER SAID LAND FOR SUBSURFACE WATER PIPELINES AND RIGHTS INCIDENTAL THERETO AS RESERVED BY ESCONDIDO LAND AND TOWN COMPANY IN DEED, RECORDED DECEMBER 31, 1888 IN BOOK 87, PAGE 186 OF DEEDS. THE EXACT LOCATION AND/OR EXTENT OF SAID EASEMENT IS NOT DISCLOSED IN THE PUBLIC RECORDS.

A AN EASEMENT GRANTED TO SAN DIEGO GAS & ELECTRIC CO. FOR POLELINES PURPOSES RECORDED JULY 21, 1944 IN BOOK 1712, PAGE 328 OF OFFICIAL RECORDS. AFFECTS SAID LAND.

A AN EASEMENT FOR DRAINAGE PURPOSES AS RECORDED PER PARCEL MAP 13996. AFFECTS AS SHOWN ON SAID MAP.

9 AN EASEMENT GRANTED TO SAN DIEGO GAS & ELECTRIC COMPANY, A CORPORATION FOR PUBLIC UTILITIES, INGRESS AND EGRESS PURPOSES RECORDED FEBRUARY 19, 1963 AS INSTRUMENT NO. 88-064686 OF OFFICIAL RECORDS. AFFECTS SAID LAND MORE PARTICULARLY DESCRIBED THEREIN.

A AN EASEMENT GRANTED TO SAN DIEGO GAS & ELECTRIC COMPANY, A CORPORATION FOR PUBLIC UTILITIES, INGRESS AND EGRESS PURPOSES RECORDED APRIL 10, 1967 AS INSTRUMENT NO. 67-194685 OF OFFICIAL RECORDS. AFFECTS SAID LAND MORE PARTICULARLY DESCRIBED THEREIN.

A AN EASEMENT GRANTED TO SAN DIEGO GAS & ELECTRIC COMPANY, A CORPORATION FOR PUBLIC UTILITIES, INGRESS AND EGRESS PURPOSES RECORDED JUNE 29, 2000 AS INSTRUMENT NO. 2000-0343227 OF OFFICIAL RECORDS. AFFECTS SAID LAND MORE PARTICULARLY DESCRIBED THEREIN.

A AN EASEMENT GRANTED TO SAN DIEGO GAS & ELECTRIC COMPANY FOR PUBLIC UTILITIES, INGRESS AND EGRESS PURPOSES RECORDED MARCH 11, 2004 AS INSTRUMENT NO. 2004-0159538 OF OFFICIAL RECORDS. AFFECTS SAID LAND MORE PARTICULARLY DESCRIBED THEREIN.

10 ANY EASEMENT NOT DISCLOSED BY THOSE PUBLIC RECORDS WHICH IMPART CONSTRUCTIVE NOTICE AND WHICH ARE NOT VISIBLE AND APPARENT FROM AN INSPECTION OF THE SURFACE OF SAID LAND.

Basis of Bearings

THE BEARINGS SHOWN HEREON ARE BASED UPON THE STATE PLANE COORDINATE SYSTEM OF 1983 (NAD 83), CALIFORNIA ZONE 6.

Benchmark:

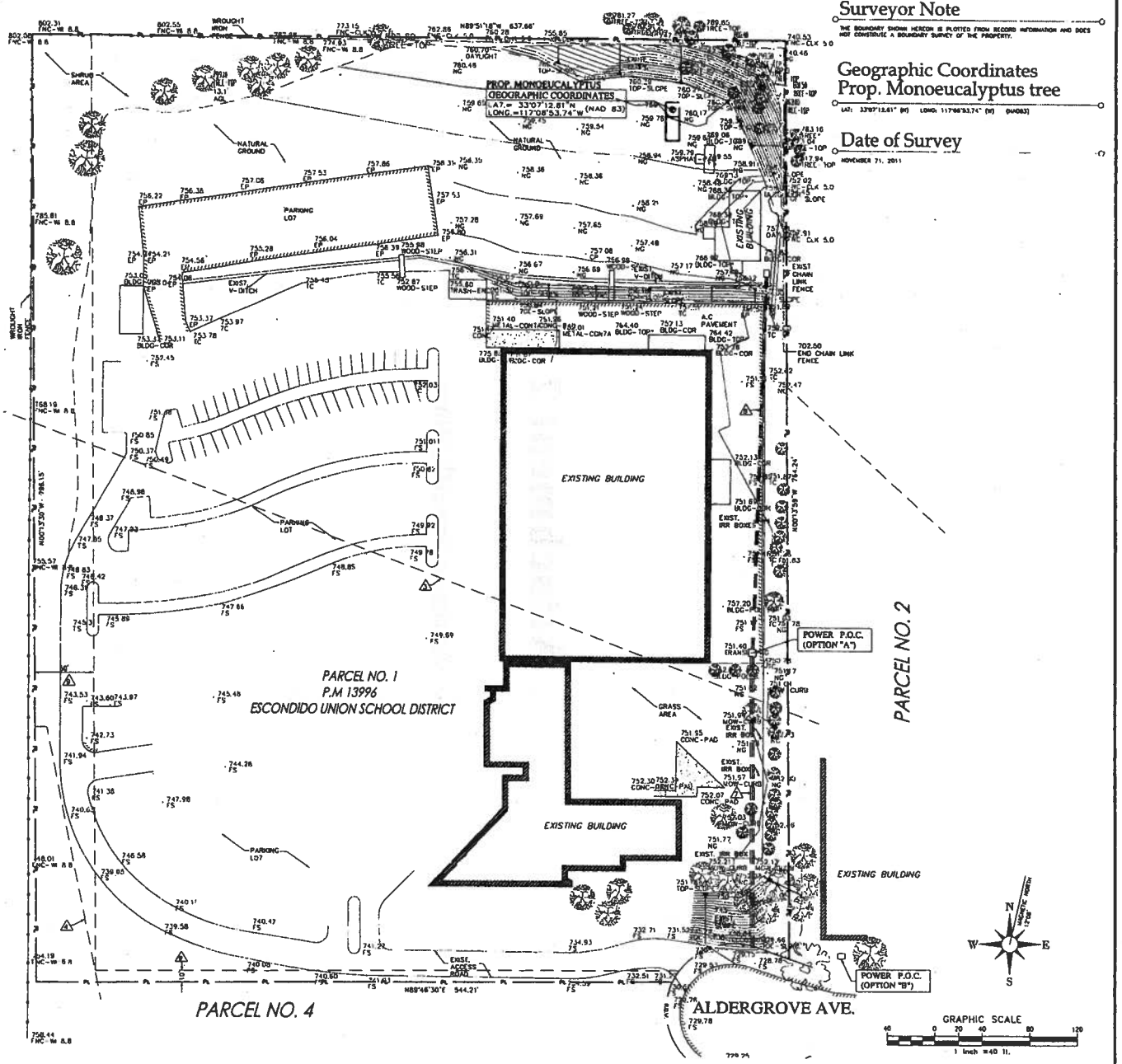
COUNTY OF SAN DIEGO NGS BENCHMARK No. DX1145
ELEVATION = 841.00 FEET (NAVD88)

Symbols - Legend

FS	FINISH SURFACE	ROW	RIGHT-OF-WAY		ROW LINE
NG	NATURAL GROUND	PBN	UTILITY PULLBOX		PROPERTY LINE
FL	FLOW LINE	GRND	ELECTRIC GROUND		LOT LINE
L&P	LIP OF CONCRETE	W	METER		OLD RECORD MAPS LINE
CB	CATCH BASIN	V	VALVE		CENTER LINE
TC	TOP OF CURB	VLT	VAULT		CHAIN LINK FENCE
TW	TOP OF WALL	FO	FIBER OPTIC		COP
TOP	TOP OF STRUCTURE		FOUND MONUMENT		WOOD FENCE
OH	OVERHANG				IRON FENCE
OHE	OVERHEAD ELECTRIC CABLE		FIRE HYDRANT		ELECTRIC LINE
RL	RIDGE LINE		POWER POLE		OVERHEAD ELECTRIC LINE
R	ROOF ELEVATION		GATE/DOOR		TELECOM LINE
BTM	BOTTOM OF STRUCTURE		STANDARD LIGHT		GAS LINE
ARN	ARN OF STRUCTURE		HANDICAPPED		WATER LINE
ANT	ANTENNA		TREE		SANITARY SEWER LINE (SS)
POC	POINT OF COMMECTION OR		CONIFER TREE		STORM DRAIN LINE (D) (SD)
POB	POINT OF BEGINNING		PALM TREE		
CAB	UTILITY CABINET				
+0	LOWER SPOT ELEVATION				
TS	TOP OF SCREEN				

Boundary and Overall Site plan

SCALE: 1"=40'



Surveyor Note

THE BOUNDARY SHOWN HEREON IS PLOTTED FROM RECORD INFORMATION AND DOES NOT CONSTITUTE A BOUNDARY SURVEY OF THE PROPERTY.

Geographic Coordinates Prop. Monoeucalyptus tree

LAT: 33°07'12.81" (N) LONG: 117°08'53.74" (W) (NAD83)

Date of Survey

NOVEMBER 21, 2011

APPLICANT:

at&t
5738 PACIFIC CENTER BLVD.
SAN DIEGO, CA 92121

PROJECT INFORMATION:

SD0503
ESCONDIDO UNION SCHOOL DISTRICT
2310 ALDERGROVE DRIVE
ESCONDIDO ,CA 92029

REVISIONS:

REV.	DATE	DESCRIPTION	BY
A	11/29/11	PRELIM SUBMITTAL	FR
B	12/01/11	REFLECT TOPO	FR
C	12/06/11	REFLECT TITLE	FR

CONSULTANT:

BLACK & VEATCH
9820 WILLOW CREEK RD., SUITE 310
SAN DIEGO, CA 92131

ENGINEER:

PDC CORPORATION
13225 DANIELSON ST, SUITE 200
POWAY, CA 92064
TEL: (858) 668-2828
FAX. (858) 668-2827

LICENSER:

R.FRANCISCO & Associates
Civil Engineering Surveying Land Development
22994 IAMBER RIDGE CT.
WILDOMAR, CA. 92595
tel: (951) 873-8076

SHEET TITLE:

TOPOGRAPHIC SURVEY

SHEET NUMBER:

LS-1

SHEET 1 OF 1

Attachment 2

Antenna Specifications

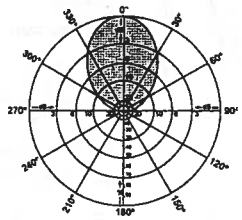
KATHREIN
SCALA DIVISION

800 10766 K
700 MHz Dual Band 8', 65 Degree Antenna RET

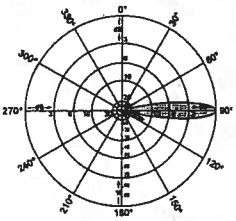
Kathrein's X-polarized antennas are designed for use in digital polarization diversity systems.

- X-polarized (+45° and -45°).
- UV resistant fiberglass radomes.
- Wideband vector dipole technology.
- DC Grounded metallic parts for impulse suppression.
- RET motor housed inside the radome and field replaceable.

698–894 MHz

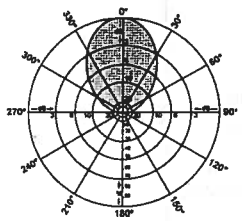


Horizontal pattern
±45°- polarization

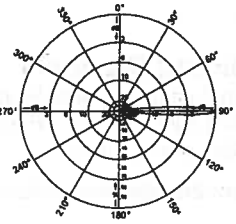


Vertical pattern
±45°- polarization
0°–10° electrical downtilt

1710–2170 MHz



Horizontal pattern
±45°- polarization



Vertical pattern
±45°- polarization
0°–10° electrical downtilt

General specifications:

Frequency range	698–894 MHz // 1710–2170 MHz
Impedance	50 ohms
VSWR	<1.5:1
Intermodulation (2x20w)	IM3:< -150 dBc
Polarization	+45° and -45°
Connector	4 x 7-16 DIN female (long neck)
Isolation	intrasystem >30 dB // intersystem >40 dB
See reverse for order information.	

IRT specifications:

Logical interface ex factory[1]	AISG 1.1
Protocols	AISG 1.1 and 3GPP/AISG 2.0 compliant
Hardware interface[2]	2 x 8pin connector acc. IEC 60130-9; according to AISG: – IRTin (male): Control / Daisy chain in – IRTout (female): Daisy chain out
Power supply	10–30 V
Power Consumption	<1 W (standby); <8.5 W (motor activated)
Adjustment time (full range)	40 seconds
Adjustment cycles	>50,000
Certification	FCC 15.107 Class B Computing Devices

[1] The protocol of the logical interface can be switched from AISG 1.1 to 3GPP/AISG 2.0 and vice versa with a vendor specific command.

Please note: If the Primary of the RETsystem doesn't support the standard of the 'logical interface ex factory', the RCU must be switched to the appropriate standard of the Primary before installation. Please contact Kathrein for further information.

[2] The tightning torque for fixing the connector must be 0.5 – 1.0 Nm ('hand-tightened'). The connector should be tightened by hand only!

Specifications:	698–806 MHz	824–894 MHz	1710–1755 MHz	1850–1990 MHz	2110–2170 MHz
Gain	16.4 dBi	17 dBi	18 dBi	18.5 dBi	18 dBi
Front-to-back ratio	>30 dB (co-polar) 34 dB (average)	>30 dB (co-polar) 34 dB (average)	>27 dB (co-polar) 34 dB (average)	>27 dB (co-polar) 34 dB (average)	>27 dB (co-polar) 34 dB (average)
Maximum input power per input	500 watts (at 50°C)	500 watts (at 50°C)	300 watts (at 50°C)	300 watts (at 50°C)	300 watts (at 50°C)
+45° and -45° polarization horizontal beamwidth	68° (half-power)	65° (half-power)	63° (half-power)	62° (half-power)	63° (half-power)
+45° and -45° polarization vertical beamwidth	9.5° (half-power)	8.5° (half-power)	5.8° (half-power)	5.8° (half-power)	5.8° (half-power)
Electrical downtilt continuously adjustable	0°–10°	0°–10°	0°–10°	0°–10°	0°–10°
Min sidelobe suppression for first sidelobe above main beam average	0° 5° 10° T 16 16 16 dB 18 20 18 dB	0° 5° 10° T 18 18 16 dB 20 20 20 dB	0° 5° 10° T 18 18 18 dB 20 22 20 dB	0° 5° 10° T 18 18 17 dB 20 22 20 dB	0° 5° 10° T 18 18 18 dB 20 22 20 dB
Cross polar ratio Main direction 0° Sector ±60°	25 dB (typical) >10 dB, 15 dB (avg)	20 dB (typical) >10 dB, 12 dB (avg)	25 dB (typical) >8 dB, 15 dB (avg)	30 dB (typical) >10 dB, 15 dB (avg)	25 dB (typical) >8 dB, 15 dB (avg)

RoHS Lead-Free

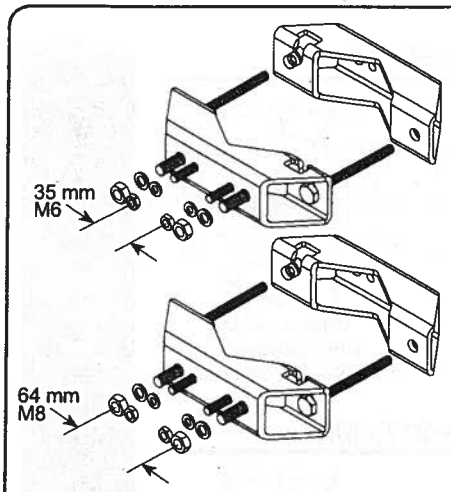
11191-FRO/c
936.A2713/a

AISG® Antenna Interface Standards Group

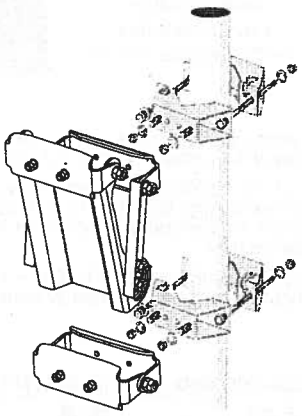
Kathrein Inc., Scala Division Post Office Box 4580 Medford, OR 97501 (USA) Phone: (541) 779-6500 Fax: (541) 779-3991
Email: communications@kathrein.com Internet: www.kathrein-scala.com

KATHREIN
SCALA DIVISION

800 10766 K
700 MHz Dual Band 8', 65 Degree Antenna RET



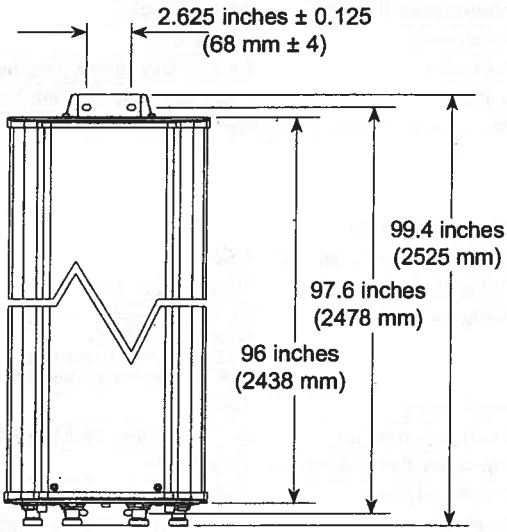
Mounting Brackets
for use with 2-point mount antennas
Mast dia. 2–4.5 inches (50–115 mm)
Weight: 4 lb (1.8 kg)



Mechanical Tilt Brackets
for use with 2-point mount antennas
Weight: 13 lb (5.9 kg)
(Model 850 10007)

Mechanical specifications:

Weight	61.7 lb (28 kg)
Dimensions	96 x 11.8 x 6 inches (2438 x 300 x 152 mm)
Wind load Front/Side/Rear	at 93 mph (150kph) 286 lbf / 61 lbf / 335 lbf (1270 N / 270 N / 1490 N)
Wind survival rating*	150 mph (240 kph)
Shipping dimensions	99.9 x 12.6 x 7.5 inches (2537 x 320 x 190 mm)
Shipping weight	75 lb (34 kg)
Mounting	Mounting hardware included for 2 to 4.6 inch (50 to 115 mm) OD masts.

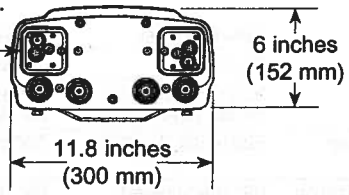


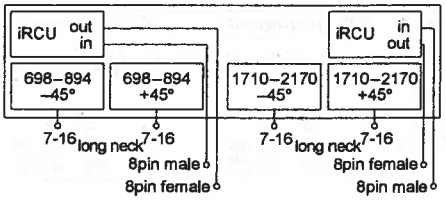
KATHREIN 860 10145

FC Tested To Comply With FCC Standards

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Note: Refer to part number 860 10145 for the specifications of the remote control actuator.





Order Information:

Model	Description
800 10766	Dualband antenna with mounting bracket 0°–10° // 0°–10° electrical downtilt
800 10766 K	Dualband antenna with mounting bracket and mechanical tilt bracket 0°–10° // 0°–10° electrical downtilt

*Mechanical design is based on environmental conditions as stipulated in TIA-222-G-2 (December 2009) and/or ETS 300 019-1-4 which include the static mechanical load imposed on an antenna by wind at maximum velocity. See the Engineering Section of the catalog for further details.

All specifications are subject to change without notice. The latest specifications are available at www.kathrein-scala.com.

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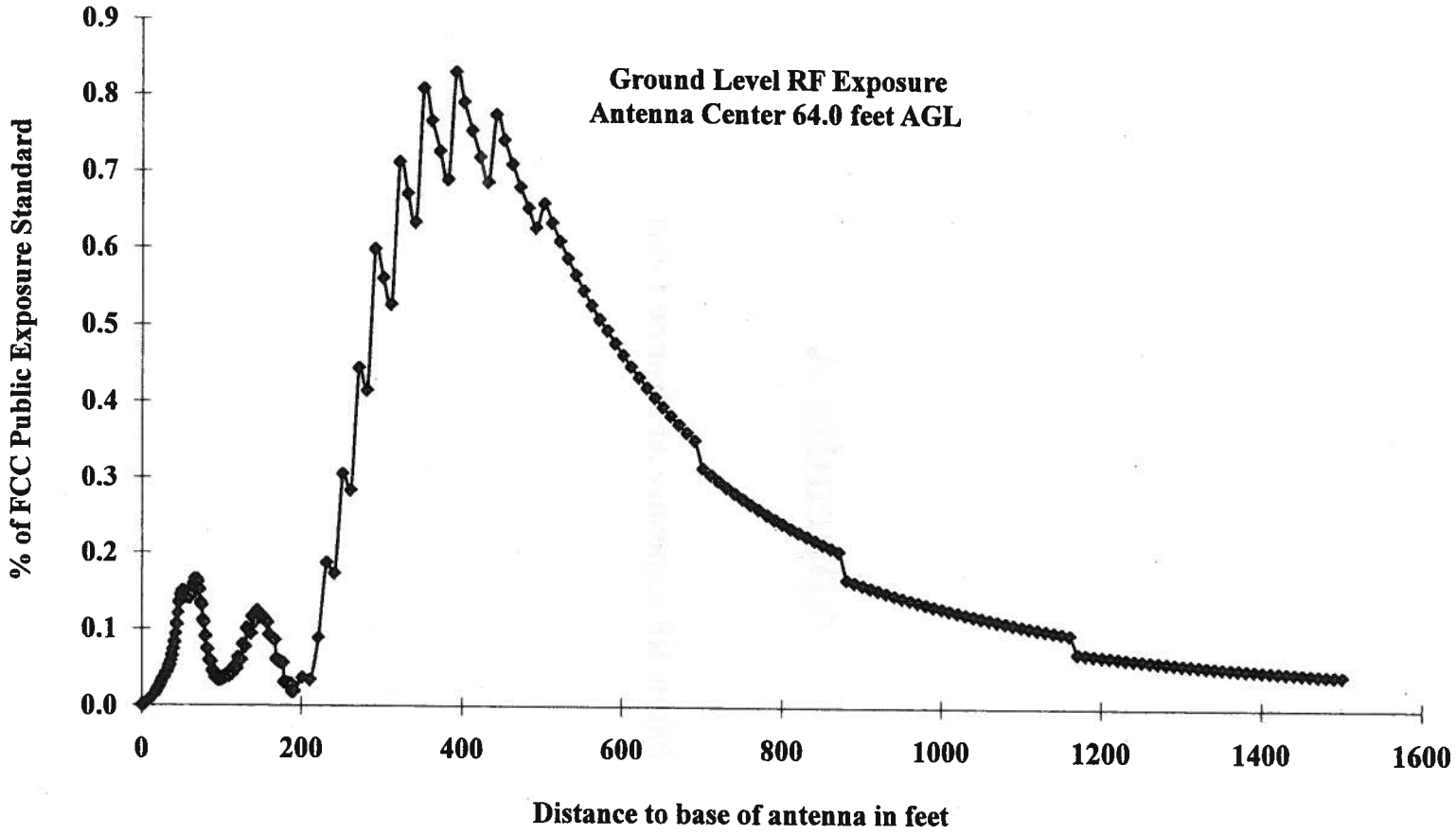
Appendix A

Public RF Exposure At Ground Level


Ground Level RF Exposure
Antenna Center 64.0 feet AGL
% of FCC Public Exposure Standard
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
0
200
400
600
800
1000
1200
1400
1600
Distance to base of antenna in feet

STATEMENT OF EXPERIENCE

Jerrold Talmadge Bushberg, Ph.D., DABMP, DABSNM
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Dr. Jerrold Bushberg has performed health and safety analysis for RF & ELF transmissions systems since 1978 and is an expert in both health physics and medical physics. The scientific discipline of Health Physics is devoted to radiation protection, which, among other things, involves providing analysis of radiation exposure conditions, biological effects research, regulations and standards as well as recommendations regarding the use and safety of ionizing and non-ionizing radiation. In addition, Dr. Bushberg has extensive experience and lectures on several related topics including medical physics, radiation protection, (ionizing and non-ionizing), radiation biology, the science of risk assessment and effective risk communication in the public sector.

Dr. Bushberg's doctoral dissertation at Purdue University was on various aspects of the biological effects of microwave radiation. He has maintained a strong professional involvement in this subject and has served as consultant or appeared as an expert witness on this subject to a wide variety of organizations/institutions including, local governments, school districts, city planning departments, telecommunications companies, the California Public Utilities Commission, national news organizations, and the U.S. Congress. In addition, his consultation services have included detailed computer based modeling of RF exposures as well as on-site safety inspections and RF & ELF environmental field measurements of numerous transmission facilities in order to determine their compliance with FCC and other safety regulations. The consultation services provided by Dr. Bushberg are based on his professional judgement as an independent scientist, however they are not intended to necessarily represent the views of any other organization.

Dr. Bushberg is a member of the main scientific body of International Committee on Electromagnetic Safety (ICES) which reviews and evaluates the scientific literature on the biological effects of non-ionizing electromagnetic radiation and establishes exposure standards. He also serves on the ICES Risk Assessment Working Group that is responsible for evaluating and characterizing the risks of non-ionizing electromagnetic radiation. Dr. Bushberg was appointed and is serving as a member of the main scientific council of the National Council on Radiation Protection and Measurement's (NCRP). He is also a Scientific Vice-President of the NCRP, a member of the NCRP Board of Directors and chairs its committee on Radiation Protection in Medicine. In addition, Dr. Bushberg is a member of NCRP's scientific advisory committee on Non-ionizing Radiation Safety. The NCRP is the nation's preeminent scientific radiation protection organization, chartered by Congress to evaluate and provide expert consultation on a wide variety of radiological health issues. The current FCC RF exposure safety standards are based in large part on the recommendations of the NCRP. Dr. Bushberg was elected to the International Engineering in Medicine and Biology Society Committee on Man and Radiation (COMAR) which has as its primary area of responsibility the examination and interpreting the biological effects of non-ionizing electromagnetic energy and presenting its findings in an authoritative and professional manner. Dr. Bushberg is also a member of a six person U.S. expert delegation to the international scientific community on Scientific and Technical Issues for Mobile Communication Systems established by the Federal Communications Commission.

Dr. Bushberg is a full member of the Bioelectromagnetics Society, the Health Physics Society and the Radiation Research Society. Dr. Bushberg received both a Masters of Science and Ph.D. from the Department of Bionucleonics at Purdue University. Dr. Bushberg is certified by several national professional boards with specific sub-specialty certification in radiation protection and medical physics. Prior to coming to California, Dr. Bushberg was on the faculty of Yale University School of Medicine.