CITY OF HAYWARD
AGENDA REPORT

Meeting Date 11/7/02
Agenda Item 2

TO: Planning Commission

FROM: Carl T. Emura, Associate Planner

SUBJECT: Appeal of Planning Director's Approval of Site Plan Review No. PL-2002-0358 – Dr. Ramon Reynoso (Appellant), Wade Rudnick –AT&T Wireless (Applicant), Willy Lim (Owner) – Request to Allow an Addition of Three Antennas and an Equipment Cabinet to an Existing Wireless Facility Site.

The Property is Located at 586 West Tennyson Road in the Neigborhood Commercial (CN) District

RECOMMENDATION:

Staff recommends that the Planning Commission:

1. Find that the proposed project is Categorically Exempt from the California Environmental Quality Act (CEQA) guidelines, Section 15301 Existing Facilities; and

2. Deny the appeal and approve the Site Plan Review application, subject to the attached findings and conditions of approval.

DISCUSSION:

The property is located easterly of the intersection of West Tennyson and Ruus Roads. The Boys and Girls Club and the Eden Youth Center are located to the west of the site, a vacant lot to the east, Tennyson Park to the south and Mission Plaza Center to the north. The existing building is a wood structure that has a parapet wall fronting West Tennyson Road and wrapping approximately 20-feet around each side of the building. Currently, AT&T has two antennas attached to the west and east side of the parapet wall. The applicant proposes to remove the existing antennas and replace them with three new antennas concealed in the parapet wall. Two new equipment cabinets will be located along the west wall of the building.

The Planning Director approved the Site Plan Review application on August 1, 2002. The appellant, Dr. Ramon Reynoso, whose office is located at the front of the building, appealed the Planning Director's decision as he contends the installation of the antennas may create bodily harm through the electro magnetic radiation that it emits and create undue noise from the cooling system in the equipment cabinets. The antenna system

meets the Federal Communications Commission (FCC) Controlled Limits and Uncontrolled Limits and is well below the Maximum Permissible Exposure (MPE) level for public safety. Federal law precludes cities from regulating the siting of telecommunication facilities based on the effects of radio frequencies, provided the facilities comply with FCC standards.

The equipment cabinet has a cooling fan and air conditioning unit that generate the noise. The cooling fan runs continuously, while the air conditioning unit cycles on and off. A sound baffle has been added to the exterior of the existing equipment cabinet. A Sound Survey Report prepared by PGI Group, Inc. concludes that the new and existing cabinets are not expected to significantly contribute to the noise level at or in the building with the baffle installed in the existing cabinet. The report indicates the noise generated at the exterior of the building is 65.8 dB and inside the building with the window closed is 48.5 dB. The General Plan indicates that "normally acceptable" levels ranges up to 70 dB exterior and should be maintained at or below 52 dB interior.

Another wireless facility has been proposed by Cingular Wireless on this property. Cingular is proposing to locate six antennas on a redwood tree stealth monopole. The monopole and equipment cabinet would be located toward the rear of the property. The application was administratively approved and no appeals were filed.

ENVIRONMENTAL REVIEW:

The proposed project is categorically exempt from the California Environmental Quality Act (CEQA) guidelines, pursuant to Section 15301, Existing Facilities.

PUBLIC NOTICE:

On October 21, 2002, a Notice of Public Hearing was mailed to every property owner and occupant within 300 feet of the subject site, as noted on the latest assessor's records, the Tennyson-Alquire Homeowners, Palma Ceia East Community, Warren Curtis Homeowners Association and Eastwood Homeowners Association.

CONCLUSION:

The antenna installation meets the FCC guidelines for public safety and the noise level is within the normally acceptable range for an office building, and will not be visible off the property. Therefore, staff recommends approval of the application subject to the conditions of approval.

Prepared by:

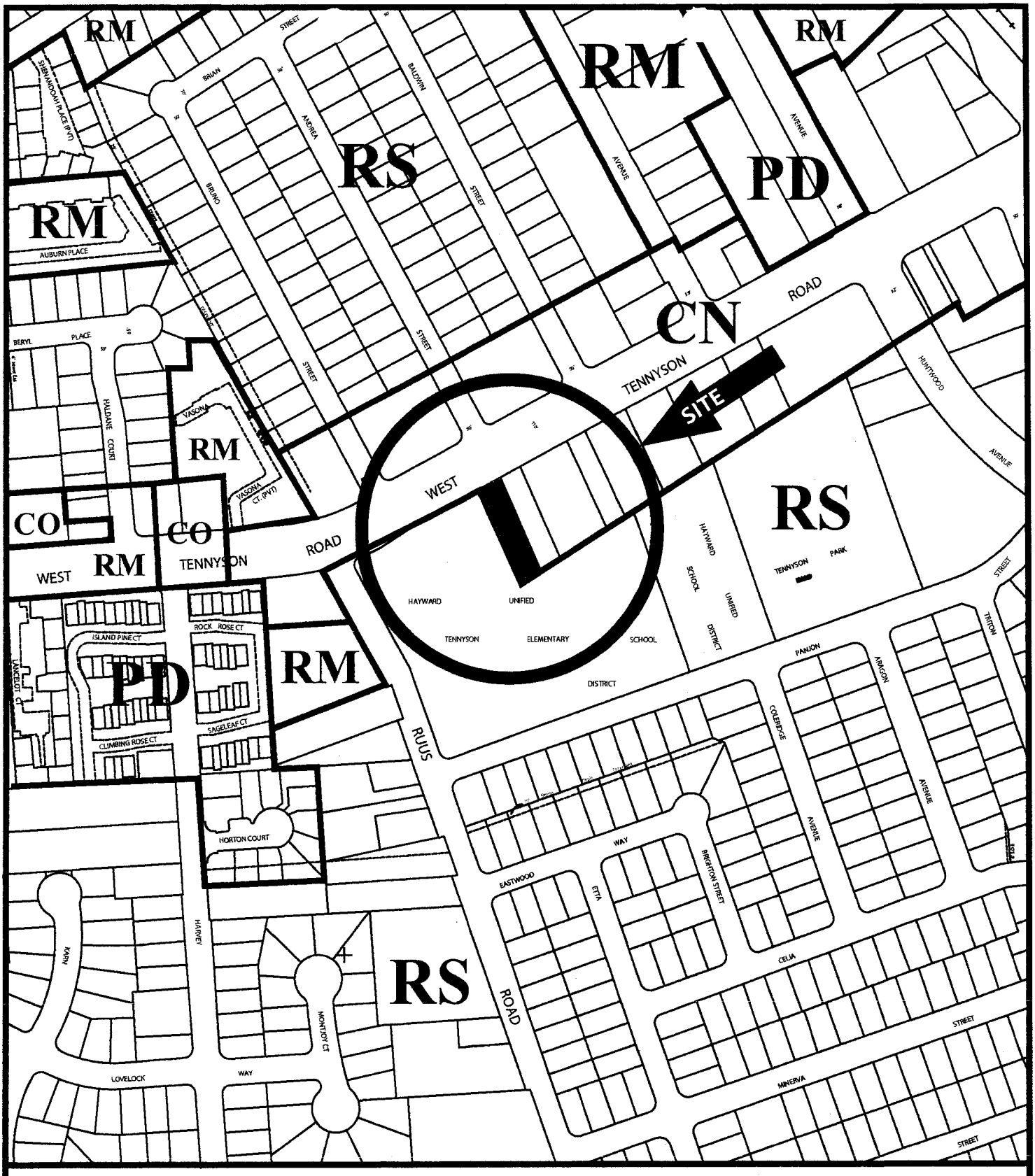
Carl T. Emura ASLA
Associate Planner

Recommended by:

Dyana Anderly, AICP
Planning Manager

Attachments:

A. Area and Zoning Map
B. Appellant's letter
C. Radio Frequency (RF) Report
D. Sound Survey Report
E. Land Use Compatibility Standards for Community Noise Environments
F. Findings and Conditions of Approval
   Plans



Area & Zoning Map
PL-2002-0358 SPR
Address: 586 W. Tennyson
Applicant: Wade Rudnick
Owner: Willy Lim

CN-Neighborhood Commercial
CO-Commercial Office
PD-Planned Development
RM-Medium Dendity Residntial RMB 3.5,RMB 4
RS-Single-Family Residential,RSB4,RSB6

ATTACHMENT A

From: Ramon Reynoso [drramonreynoso@yahoo.com]
Sent: Thursday, August 08, 2002 7:40 PM
To: Carl Emura
Subject: I wish to appeal the Planning Director's decision

I wish to appeal the Planning Director's decision.

Dr. Ramon Reynoso
586 W. Tennyson Road
Hayward, CA 94544-2345
(510) 782-8900

August 2, 2002

Carl T Emura, ASLA
City of Hayward Planning Division
777 "B" Street
Hayward, CA 94541

RE: OBJECTION TO ANY PROPOSED INSTALLATIONS OF ELECTRONIC DEVICES ON PREMISSES DUE TO NOISE AND SAFETY REASONS

Dear Mr. Emura:

NOTICE IS HEREBY GIVEN that the tenant of the above address objects to any past or future installations of electronic devises that create undue noise and may create bodily harm through any type of electro magnetic radiation that the antenna control systems may create.

Above party has not personally been served with any proposal of any wireless installation equipment from any party, past or present. To my knowledge the FCC or any other health agency has yet to issue any safe levels or assurance of the electromagnetic effects the antennas have on the human body.

We already have one of these units on the premises and the noise the unit creates is intolerable. We cannot open windows due to the noise.

Please deliver any and all safety measures/test taken to protect our safety regarding the above-proposed units to my attention.

Thank you for your assistance.

Sincerely yours,

Ramon Reynoso

cc: Law offices of John Lothrop

ATTACHMENT B

AT&T Wireless • Base Station No. SFO-G068
586 West Tennyson Road • Hayward, California

Statement of Hammett & Edison, Inc., Consulting Engineers

The firm of Hammett & Edison, Inc., Consulting Engineers, has been retained on behalf of AT&T Wireless, a telecommunications carrier, to evaluate the proposed modifications to the existing base station (Site No. SFO-G068) located at 586 West Tennyson Road in Hayward, for compliance with appropriate guidelines limiting human exposure to radio frequency electromagnetic fields.

Prevailing Exposure Standards

The U.S. Congress requires that the Federal Communications Commission ("FCC") evaluate its actions for possible significant impact on the environment. In Docket 93-62, effective October 15, 1997, the FCC adopted the human exposure limits for field strength and power density recommended in Report No. 86, "Biological Effects and Exposure Criteria for Radiofrequency Electromagnetic Fields," published in 1986 by the Congressionally chartered National Council on Radiation Protection and Measurements ("NCRP"). A summary of the exposure limits contained in NCRP-86 is shown in Figure 1. Separate limits apply for occupational and public exposure conditions, with the latter limits generally five times more restrictive. The more recent Institute of Electrical and Electronics Engineers ("IEEE") Standard C95.1-1999, "Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz," includes nearly identical exposure limits. These limits apply for continuous exposures and are intended to provide a prudent margin of safety for all persons, regardless of age, gender, size, or health.

The most restrictive thresholds for exposures of unlimited duration to radio frequency ("RF") energy for several personal wireless services are as follows:

Personal Wireless Service	Approx. Frequency	Occupational Limit	Public Limit
Personal Communication ("PCS")	1,950 MHz	5.00 mW/cm^2	1.00 mW/cm^2
Cellular Telephone	870	2.90	0.58
Specialized Mobile Radio	855	2.85	0.57
[most restrictive frequency range]	30–300	1.00	0.20

General Facility Requirements

Base stations typically consist of two distinct parts: the electronic transceivers (also called "radios" or "cabinets") that are connected to the traditional wired telephone lines, and the passive antennas that send the wireless signals created by the radios out to be received by individual subscriber units. The transceivers are often located at ground level and are connected to the antennas by coaxial cables about 1 inch thick. Because of the short wavelength of the frequencies assigned by the FCC for wireless services, the antennas require line-of-sight paths for their signals to propagate well and so are installed at some height above ground. The antennas are designed to concentrate their energy toward the

horizon, with very little energy wasted toward the sky or the ground. Along with the low power of such facilities, this means that it is generally not possible for exposure conditions to approach the maximum permissible exposure limits without being physically very near the antennas.

Computer Modeling Method

The FCC provides direction for determining compliance in its Office of Engineering and Technology Bulletin No. 65, "Evaluating Compliance with FCC-Specified Guidelines for Human Exposure to Radio Frequency Radiation," dated August 1997. Figure 2 attached describes the calculation methodologies, reflecting the facts that a directional antenna's radiation pattern is not fully formed at locations very close by (the "near-field" effect) and that the power level from an energy source decreases with the square of the distance from it (the "inverse square law"). The conservative nature of this method for evaluating exposure conditions has been verified by numerous field tests.

Site and Facility Description

Based upon information provided by AT&T, it is proposed to replace the existing antennas with three dualband (870/1,950 MHz) Allen Telecom Model 731DG65V1EXM directional panel antennas mounted behind fiberglass screens above the roof of the single-story building located at 586 West Tennyson Road in Hayward. The antennas would be mounted at an effective height of about 15½ feet above ground and would be oriented at 120° spacing, to provide service in all directions. The maximum effective radiated power in any direction would be 525 watts, representing the simultaneous operation of one cellular channel at 25 watts and two PCS channels at 250 watts each. There are reported no other wireless telecommunications base stations installed nearby.

Study Results

The maximum ambient RF level anywhere at ground level due to the proposed operation is calculated to be 0.016 mW/cm^2, which is 1.8% of the applicable public exposure limit. It should be noted that this result includes several "worst-case" assumptions and therefore is expected to overstate actual power density levels. Areas on the roof of the building may exceed the applicable exposure limit.

Recommended Mitigation Measures

It is recommended that the roof of the building be kept locked, so that the AT&T antennas are not accessible to the general public. To prevent occupational exposures in excess of the FCC guidelines, no access within 5 feet directly in front of the antennas themselves, such as might occur during building maintenance work, should be allowed while the base station is in operation, unless other measures can be demonstrated to ensure that occupational protection requirements are met. Posting explanatory

warning signs* at roof access location(s) and at the screens in front of the antennas, such that the signs would be readily visible from any angle of approach to persons who might need to work within that distance, would be sufficient to meet FCC-adopted guidelines.

Conclusion

Based on the information and analysis above, it is the undersigned's professional opinion that the base station operation by AT&T Wireless at 586 West Tennyson Road in Hayward can comply with the prevailing standards for limiting human exposure to radio frequency energy and, therefore, need not for this reason cause a significant impact on the environment. The highest calculated level in publicly accessible areas is much less than the prevailing standards allow for exposures of unlimited duration. This finding is consistent with measurements of actual exposure conditions taken at other operating base stations.

Authorship

The undersigned author of this statement is a qualified Professional Engineer, holding California Registration Nos. E-13026 and M-20676, which expire on June 30, 2005. This work has been carried out under his direction, and all statements are true and correct of his own knowledge except, where noted, when data has been supplied by others, which data he believes to be correct.

William F. Hammett, P.E.

October 25, 2002

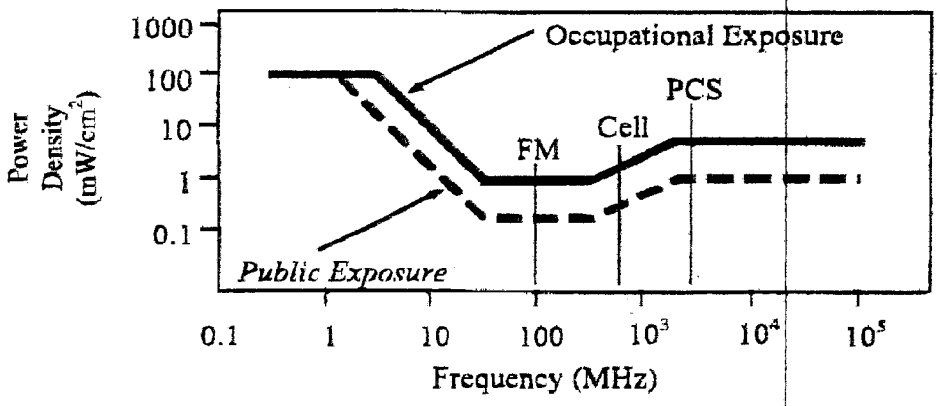
* Warning signs should comply with ANSI C95.2 color, symbol, and content conventions. In addition, contact information should be provided (*e.g.*, a telephone number) to arrange for access to restricted areas. The selection of language(s) is not an engineering matter, and guidance from the landlord, local zoning or health authority, or appropriate professionals may be required.

FCC Radio Frequency Protection Guide

The U.S. Congress required (1996 Telecom Act) the Federal Communications Commission ("FCC") to adopt a nationwide human exposure standard to ensure that its licensees do not, cumulatively, have a significant impact on the environment. The FCC adopted the limits from Report No. 86, "Biological Effects and Exposure Criteria for Radiofrequency Electromagnetic Fields," published in 1986 by the Congressionally chartered National Council on Radiation Protection and Measurements, which are nearly identical to the more recent Institute of Electrical and Electronics Engineers Standard C95.1-1999, "Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz." These limits apply for continuous exposures from all sources and are intended to provide a prudent margin of safety for all persons, regardless of age, gender, size, or health.

As shown in the table and chart below, separate limits apply for occupational and public exposure conditions, with the latter limits (in *italics* and/or dashed) up to five times more restrictive:

Frequency	Electromagnetic Fields (f is frequency of emission in MHz)					
Applicable Range (MHz)	Electric Field Strength (V/m)		Magnetic Field Strength (A/m)		Equivalent Far-Field Power Density (mW/cm^2)	
0.3 – 1.34	614	*614*	1.63	*1.63*	100	*100*
1.34 – 3.0	614	*823.8/f*	1.63	*2.19/f*	100	*180/f^2*
3.0 – 30	1842/f	*823.8/f*	4.89/f	*2.19/f*	900/f^2	*180/f^2*
30 – 300	61.4	*27.5*	0.163	*0.0729*	1.0	*0.2*
300 – 1,500	3.54$\sqrt{f}$	*1.59$\sqrt{f}$*	$\sqrt{f}$/106	*$\sqrt{f}$/238*	f/300	*f/1500*
1,500 – 100,000	137	*61.4*	0.364	*0.163*	5.0	*1.0*



Higher levels are allowed for short periods of time, such that total exposure levels averaged over six or thirty minutes, for occupational or public settings, respectively, do not exceed the limits, and higher levels also are allowed for exposures to small areas, such that the spatially averaged levels do not exceed the limits. However, neither of these allowances is incorporated in the conservative calculation formulas in the FCC Office of Engineering and Technology Bulletin No. 65 (August 1997) for projecting field levels. Hammett & Edison has built those formulas into a proprietary program that calculates, at each location on an arbitrary rectangular grid, the total expected power density from any number of individual radio sources. The program allows for the description of buildings and uneven terrain, if required to obtain more accurate projections.

MPE Checklist

Categorical Exclusion	
Does the AWS facility meet height or power criteria for categorical exclusion?	Yes_X___ No_____
Indicate whether antenna is:	Omni_____ Sector_X_____
Is the antenna building-mounted?	Yes_X____ No_____ **If yes**, state total power of all channels per sector in ERP: S_1 381.97 Watts, S_2 381.97 Watts, S_3 381.97 Watts
If non-building-mounted, state either the height or power criteria for categorical exclusion:	Distance from ground to lowest point of the antenna: _____, **OR** Total power of all channels per sector in ERP: S_1_____, S_2_____, S_3_____
Which band is this MPE Checklist for?	1900 (*i.e.* 850, 1900 [A,B,D,E], etc)
Is more than one AWS band used at this site?	Yes_X____ No
If Not Categorically Excluded, Perform MPE Analysis	
Was an AWS predictive spreadsheet analysis performed? (attach report)	Yes_____ No_____
Were on-site measurements performed? (attach report)	Yes_____ No_____
Does the power density meet FCC Public MPE limits in all accessible areas?	Yes_____ No_____
Does the AWS facility contribute 5% or less of the public MPE limit in all accessible areas?	Yes_____ No_____
If Public MPE Limit Exceeded, Create a Controlled Environment	
• Is the environment controlled? (restricting access with barriers, signage and/or locks)	Yes_____ No_____ **If yes**, please indicate what controls are in places: Signs:_____ Locked Access:_____ Fences:_____ Barriers:_____ Other:_____

Notes: (Attach separate page if necessary)

Date of Evaluation: 4/22/02 **Market Name: San Francisco Bay Area**

Is this a modification to a previously filed checklist? Yes:_____ No X

Site Number: G068 **Site Name: Tennyson & Ruus**

Site Latitude and Longitude: Lat: 37.63194 ° **Long: -122.067 °**

RECEIVED
APR 29 2002
PLANNING DIVISION

Engineer Responsible: Arvind Chauhan

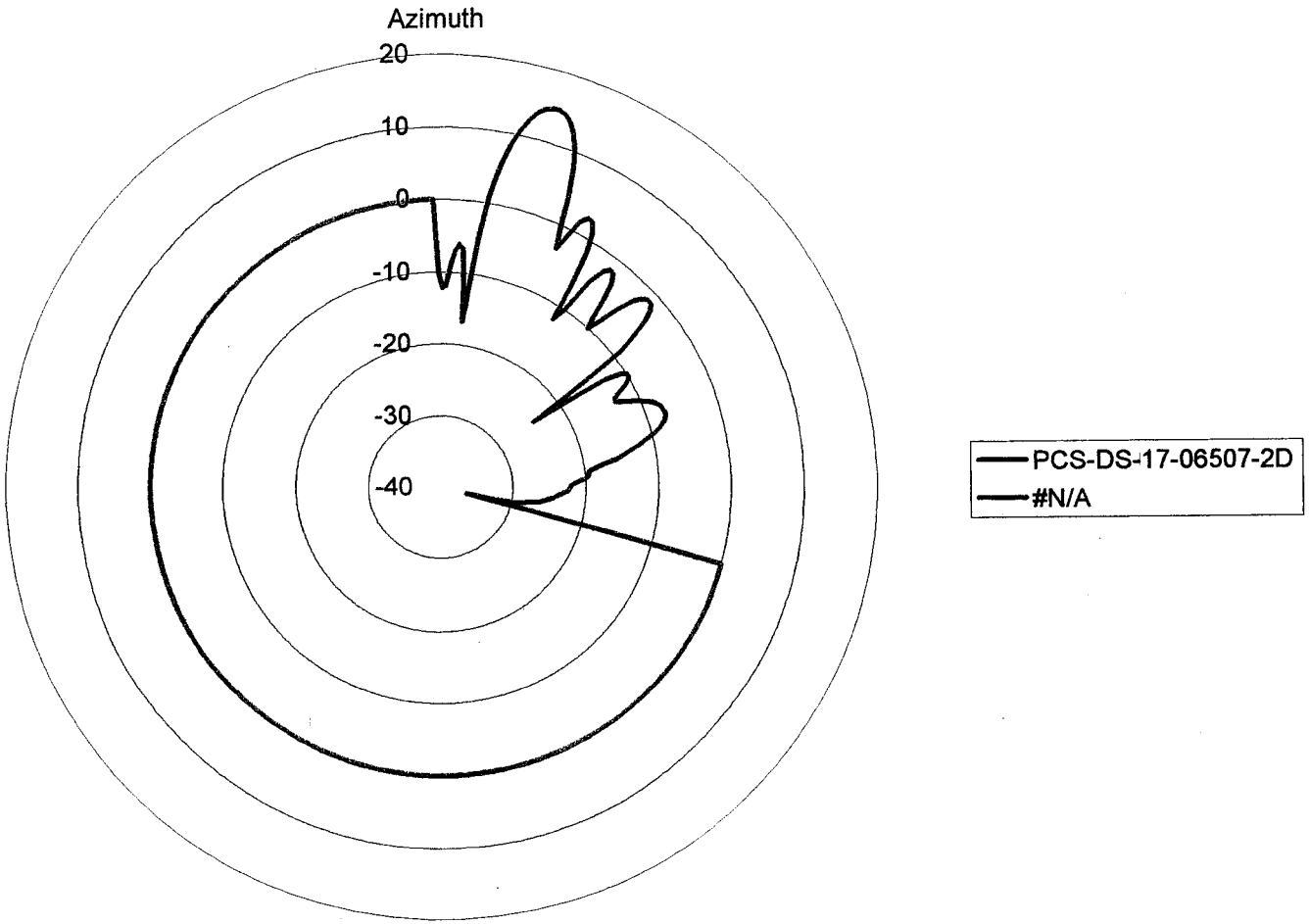
I certify that the above information is true and correct to the best of my knowledge.

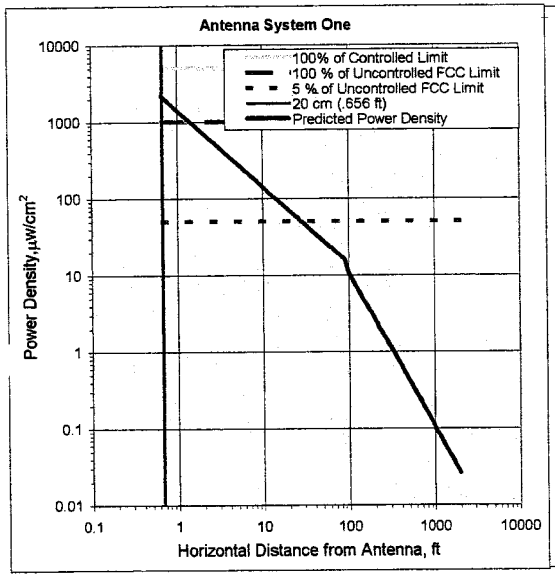
Signature:

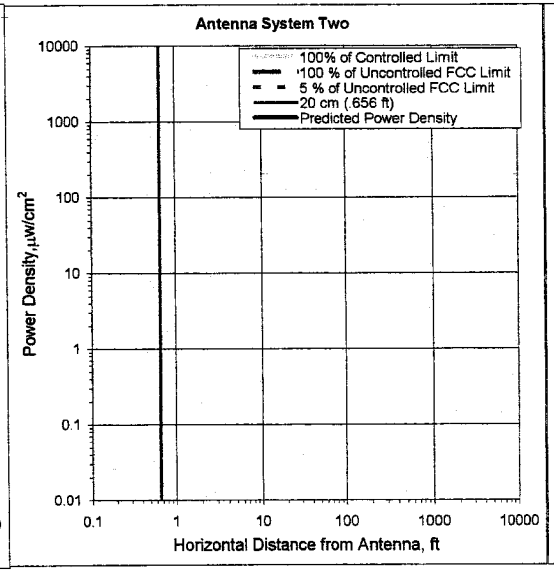
***Submit to: Shirley Sutton**, AT&T Wireless Services, 1150 Connecticut Avenue NW, Washington, DC 20036.*

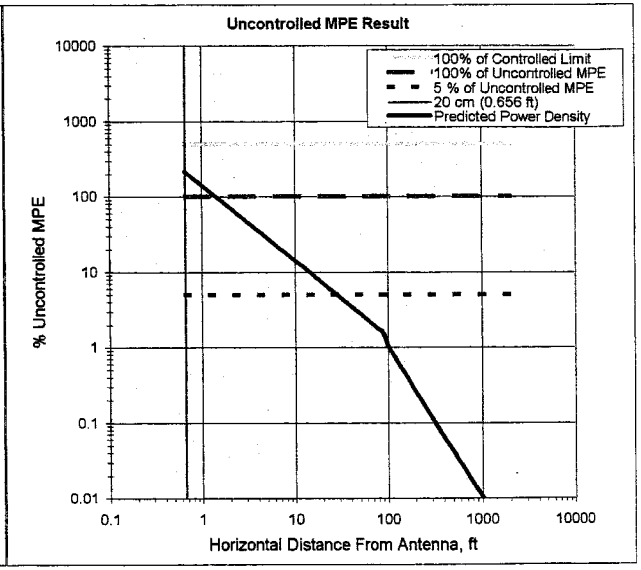
Revised February 8, 2000

Selected Antennas Vertical Pattern









Antenna System One

	units	Value
Frequency	MHz	1900
# of Channels	#	2
Max ERP/Ch	Watts	190.985
Max Pwr/Ch Into Ant.	Watts	6.324
BS Height (Center of Radiator)	feet	19
Calculation Point (above ground or roof surface)	feet	19
Antenna Model No.		PCS-DS-17-06507-2D
Max Ant Gain	dBd	14.8
Down tilt	degrees	0
Miscellaneous Att.	dB	0
Height of aperture	feet	7.6
Ant HBW	degrees	71.7
Distance to Ant_{bottom}	feet	-3.8
WOS?	Y/N?	n

Ant System ONE Owner: AT&T
Sector: A,B,C
Azimuth: 0,240,120

Antenna System Two

	units	Value
Frequency	MHz	
# of Channels	#	
Max ERP/Ch	Watts	
Max Pwr/Ch Into Ant.	Watts	#N/A
BS Height (Center of Radiator)	feet	
Calculation Point (above ground or roof surface)	feet	
Antenna Model No.		
Max Ant Gain	dBd	#N/A
Down tilt	degrees	
Miscellaneous Att.	dB	
Height of aperture	feet	#N/A
Ant HBW	degrees	#N/A
Distance to Ant_{bottom}	feet	#N/A
WOS?	Y/N?	

Ant System TWO Owner:
Sector:
Azimuth

Number of Antenna Systems: 1

Meets FCC Controlled Limits for Antenna System ONE.

Meets FCC Uncontrolled Limits beyond
2 feet from the antenna for Antenna System ONE.

Meets 5% of the FCC Uncontrolled Limits beyond
29 feet from the antenna for Antenna System ONE.

Further RFE Analysis Required

	Power Density		@Horiz. Dist.
	µW/cm²	% of limit	feet
Maximum Power Density =	2182.15	218.22	0.66
0.46 times lower than the MPE limit for uncontrolled environment			
Composite Power (ERP) =	381.97	Watts	

Site ID: G068
Site Name: Tennyson & Ruus
Site Location: Roof top

Performed By: Arvind chauhan
Date: 29-Apr-02

AWS Version: MPEHQ60

Sound Survey Report

Site:	586 West Tennyson, Hayward, Ca.
Date of Survey:	10/03/02
Time of Survey:	3:45 PM

Site Description: An AT&T Wireless equipment cabinet is installed on a concrete pad approximately 30" from the fence line. An approximately 6' high wood fence separates the equipment area from the adjacent commercial property.

The equipment is situated in a courtyard. Traffic on West Tennyson may contribute to the ambient noise levels in the courtyard.

The equipment cabinet is has a cooling fan and air conditioning unit attached. The cooling fan runs continuously, while the air conditioning unit cycles on and off on a periodic basis. Since the last visit to this site (9/3/02), a sound baffle has been added to the exterior of the existing equipment cabinet.

Methodology: Matthew Runte, PE of Diamond Services[1] utilized an SPER Scientific model 840029 Digital Sound Meter to quantify the site sound levels. The SPER Digital Sound Meter is self-calibrating, and the unit calibration was checked as satisfactory prior to the measurements. Sound levels were measured at a height of approximately 4 ½ above ground level.

[1] PGI Group Inc. dba Diamond Services

ATTACHMENT D

The table below lists the measured sound levels.

Site Sound Levels		
Location	*Maximum Sound Level*	*Notes*
At AT&T Wireless equipment	69.8 dB(A)	HVAC unit running
At building, opposite existing equipment cabinet.	65.7 dB(A)	HVAC unit running
Inside building (Suite F), opposite existing equipment cabinet, with window closed.	48.2 dB(A)	HVAC unit running
Inside building (Suite F), opposite existing equipment cabinet, with window open.	62.1 dB(A)	HVAC unit running
Fence line (approximately 2'-6" from AT&T Wireless equipment)	61.7 dB(A)	HVAC unit running

Calculation Of Noise Level At Fence Line With Proposed New Equipment

According to information obtained from AT&T Wireless, the proposed new equipment sound levels are as follows:

a) 5.8 Bel = 58 Decibels at environmental temperature below +30 degrees centigrade.

b) 6.3 Bel = 63 Decibels at maximum environmental temperature above +30 degrees centigrade.

Assuming 63 dB(A), the calculated sound contribution from the new equipment at the building is 51.4 dB(A).

Utilizing the inverse square law, the computed combined (existing sound level with HVAC running + new equipment sound level) decibel level at the building is 65.8 dB.

Utilizing the inverse square law, the computed combined (existing sound level with HVAC running + new equipment sound level) decibel level inside the building with the window closed is 48.5 dB.

Conclusion: The addition of the new cabinet is not expected to significantly contribute to the noise level at or in the building. This is due to the fact that the reported sound levels of the new equipment are much lower than the existing sound levels at the site.

Report prepared by:

Matthew Runte, PE
Registered Electrical Engineer
California License #E015450

Attachment: appendix "A" Typical Noise Levels

Appendix "A"
Typical Noise Levels

Environmental Noise	
Weakest sound heard	0dB
Normal conversation (3-5')	60-70dB
Telephone dial tone	80dB
City Traffic (inside car)	85dB
Train whistle at 500'	90dB
Subway train at 200'	95dB
Level at which sustained exposure may result in hearing loss	*90 - 95dB*
Power mower	107dB
Power saw	110dB
Pain begins	*125dB*
Pneumatic riveter at 4'	125dB
Jet engine at 100'	140dB
Death of hearing tissue	180dB
Loudest sound possible	194dB

OSHA Daily Permissible Noise Level Exposure	
Hours per day	Sound level
8	90dB
6	92dB
4	95dB
3	97dB
2	100dB
1.5	102dB
1	105dB
.5	110dB
.25 or less	115dB

Perceptions of Increases in Decibel Level	
Imperceptible Change	1dB
Barely Perceptible Change	3dB
Clearly Noticeable Change	5dB
About Twice as Loud	10dB
About Four Times as Loud	20dB

Sound Levels of Music

Normal piano practice	60 -70dB
Fortissimo Singer, 3'	70dB
Chamber music, small auditorium	75 - 85dB
Piano Fortissimo	84 - 103dB
Violin	82 - 92dB
Cello	85 -111dB
Oboe	95-112dB
Flute	92 -103dB
Piccolo	90 -106dB
Clarinet	85 - 114dB
French horn	90 - 106dB
Trombone	85 - 114dB
Tympani & bass drum	106dB
Walkman on 5/10	94dB
Symphonic music peak	120 - 137dB
Amplifier rock, 4-6'	120dB
Rock music peak	150dB

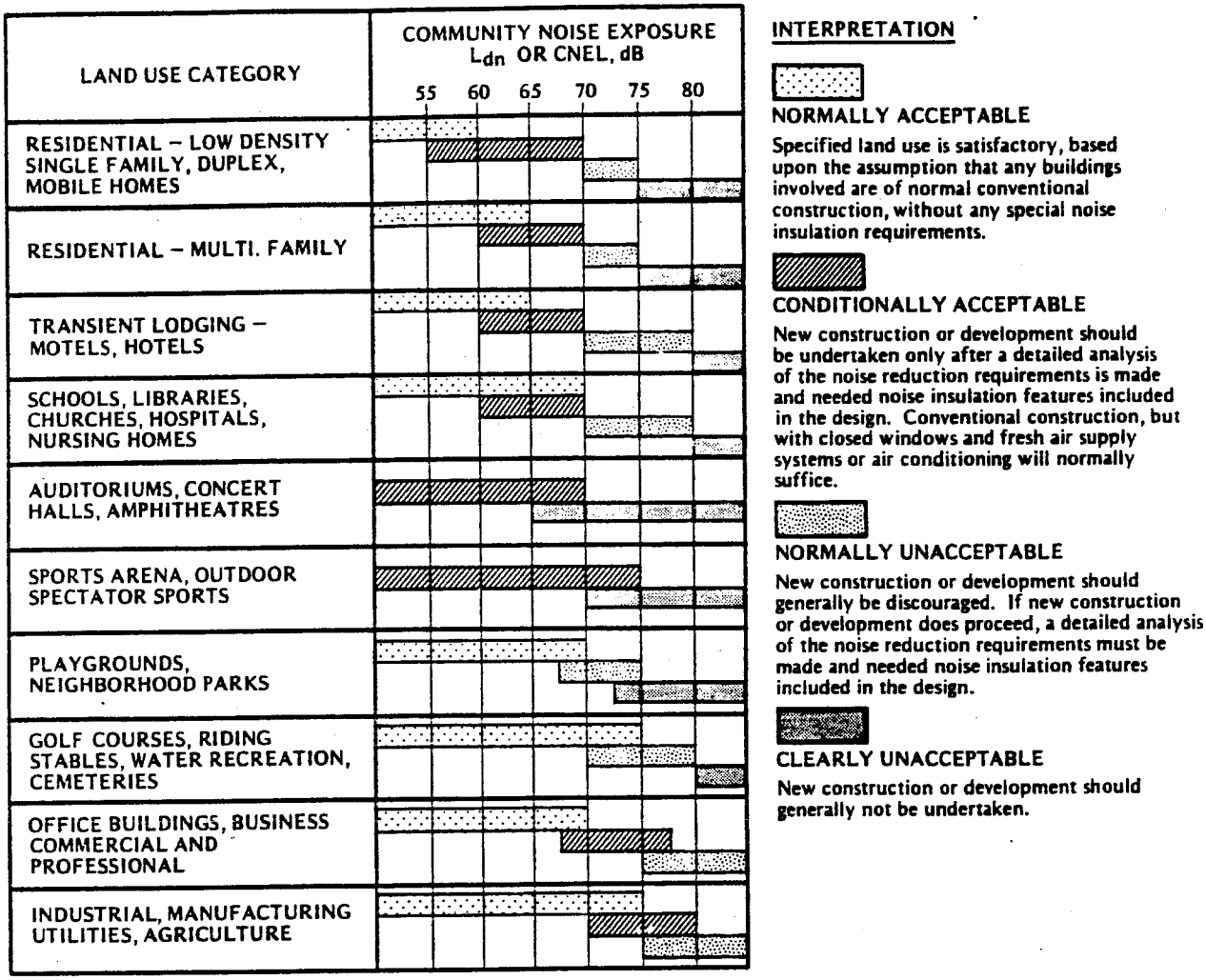
NOTES:

- One-third of the total power of a 75-piece orchestra comes from the bass drum.
- High frequency sounds of 2-4,000 Hz are the most damaging. The uppermost octave of the piccolo is 2,048-4,096 Hz.
- Aging causes gradual hearing loss, mostly in the high frequencies.
- Speech reception is not seriously impaired until there is about 30 dB loss; by that time severe damage may have occurred.
- Hypertension and various psychological difficulties can be related to noise exposure.
- The incidence of hearing loss in classical musicians has been estimated at 4-43%, in rock musicians 13-30%.

Statistics for the Decibel (Loudness) Comparison Chart were taken from a study by Marshall Chasin , M.Sc., Aud(C), FAAA, Centre for Human Performance & Health, Ontario, Canada. There were some conflicting readings and, in many cases, authors did not specify at what distance the readings were taken or what the musician was actually playing. In general, when there were several readings, the higher one was chosen.

Figure 1

Land Use Compatibility Standards for Community Noise Environments



INTERPRETATION

NORMALLY ACCEPTABLE

Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.

CONDITIONALLY ACCEPTABLE

New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.

NORMALLY UNACCEPTABLE

New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.

CLEARLY UNACCEPTABLE

New construction or development should generally not be undertaken.

CITY OF HAYWARD
PLANNING DIVISION
SITE PLAN REVIEW APPROVAL
November 7, 2002

SITE PLAN REVIEW NO. PL-2002-0358 – Wade Rudnick - AT&T Wireless (Applicant) Willy Lim (Property Owner) – Addition of 3 antennas and an equipment cabinet to an existing wireless facility site.

The site is located at 586 West Tennyson Road in the Neighborhood Commercial (CN) District (APN: 465 0001 008-02).

FINDINGS FOR APPROVAL

A. Approval of PL 2002-0358 SPR, as conditioned, will have no significant impact on the environment, cumulative or otherwise, and the project reflects the City's independent judgment and is exempt from CEQA review under Section 15301 Existing Facilities Class 1.

B. The proposed telecommunications facility, as conditioned, is compatible with, and is an attractive addition to, the neighborhood and the City as it integrates the antenna enclosure into the existing building.

C. The proposed antenna facility, as conditioned, takes into consideration physical and environmental constraints as it is designed such that it is screened from view.

D. The proposed use is permitted subject to Site Plan Review permit approval and the use, as conditioned, complies with the intent of applicable City policies and regulations, including the Antenna and Telecommunications Facilities Ordinance (City of Hayward Municipal Code Article 13 of Chapter 10).

E. The proposed antenna telecommunication facility, as conditioned, will be operated in a manner determined to be acceptable and compatible with surrounding development, complying with the Antenna and Telecommunications Facilities Ordinance (City of Hayward Municipal Code Article 13 of Chapter 10).

CITY OF HAYWARD
PLANNING DIVISION
SITE PLAN REVIEW APPROVAL
November 7, 2002

SITE PLAN REVIEW NO. PL-2002-0358 – Wade Rudnick - AT&T Wireless (Applicant) Willy Lim (Property Owner) – Addition of 3 antennas and an equipment cabinet to an existing wireless facility site.

The site is located at 586 West Tennyson Road in the Neighborhood Commercial (CN) District (APN: 465 0001 008-02).

CONDITIONS OF APPROVAL

1. The wireless facility shall operate according to these conditions of approval and the plans labeled Exhibit "A". This approval is void one year after the effective date of approval unless a building permit application has been submitted and accepted for processing by the Building Official. Any modification to this permit shall require review and approval by the Planning Director.

2. Prior to final inspection all pertinent conditions of approval and all improvements shall be completed to the satisfaction of the Planning Director.

3. Applicant shall apply for all necessary building permits from the Building Division. All structures and antenna improvements shall be in accordance with the Uniform Building Code, Uniform Mechanical and Plumbing Code, National Electrical Code, and the Uniform Fire Code as adopted by the City of Hayward.

4. All facility equipment other than antennas shall be contained entirely within the equipment cabinets. No storage of materials, equipment or supplies shall be permitted outside of the cabinets.

5. The equipment cabinet, to be located along the side of the building, shall be painted a flat color blending in with the color of the building. Cabinet color shall be approved by the Planning Director.

6. A redwood lattice fence shall be provided on both sides of proposed and existing equipment cabinets. Height of lattice fence shall be as high as equipment cabinet and less than 6 feet. Redwood lattice fence shall be approved by the Planning Director.

7. Any existing landscaping and irrigation damaged due to the installation of the wireless facility shall be repaired or replaced.

8. Stealth panels shall match existing building wall. Design of enclosure shall be approved by the Planning Director.

9. Unless a new permit is issued within 180 days thereafter, all improvements installed including their foundation shall be removed from the property and the site restored to its natural pre-construction state within 180 days of permit expiration, revocation or abandonment.

14. The applicant shall provide notification to the Planning Director upon cessation of operations, or expiration of its permit, subject to the determination of Planning Director that the use of the site has ceased for a period of six months. Should the owner fail to effect such removal, the property owner shall be responsible for the removal of the equipment.

15. Any future replacement or reinstallation of structures or equipment at this telecommunication facility shall be subject to the requirements and standards of the City of Hayward at that time.

16. If determined to be necessary for the protection of the public peace, safety and general welfare, the City of Hayward may impose additional conditions or restrictions on this permit.

17. The applicant shall provide signage on the equipment cabinet, including phone numbers of emergency contact persons, in case of an emergency for the facility. The sign shall not exceed 1 1/2 square feet in area.

18. The applicant shall be responsible for graffiti-free maintenance of the telecommunications facilities, and shall remove any graffiti within seven days of occurrence.

19. Notice shall give to anyone doing maintenance work within five feet in front of the antennas while the base station is in operation, unless other measures can be demonstrated to ensure that occupational protection requirements are met.

20. Warning signs shall be posted at roof access locations and at the screens, such that the signs would be readily visible from any angle of approach to persons who might need to work within in five feet of the antennas.

21. Safety precautions measures shall be provided to the owner or owner's representatives.

22. Violation of these conditions or requirements may result in the City of Hayward instituting a revocation hearing before the Planning Commission.

AT&T

AT&T WIRELESS SERVICES, INC.

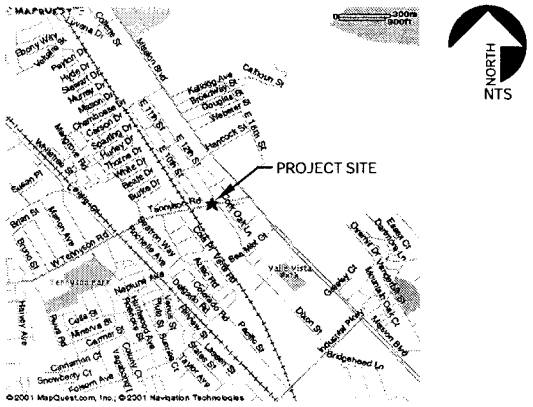
SITE NUMBER: SFO-G068

SITE NAME: TENNYSON AND RUUS

DRAWING INDEX		REV
FO-G068-Z1	TITLE SHEET	F
FO-G068-Z2	SITE PLAN AND ENLARGED SITE PLAN	F
FO-G068-Z3	ELEVATION	F

ZONING DRAWINGS

VICINITY MAP



N.T.S.

PROJECT TEAM:

APPLICANT:
AT&T WIRELESS SERVICES INC.
651 GATEWAY BLVD.
S. SAN FRANCISCO, CA. 94080

OWNER:
JAMES SULLIVAN, STANLEY & CATHERINE NAMES
HAYWARD, CA. 94544
TELE. #: (510) 557-4656

ENGINEER:
PACIFIC 17
1455 FRAZEE ROAD, SUITE 805
SAN DIEGO , CA. 92108
CONTACT: WILL TATE
TELE. #: (619) 542-1717

BECHTEL:
JOHN ROBINSON
MARKET LEAD
375 FREMONT STREET
SAN FRANCISCO, CA. 94105
TELE. #: (415) 537-7060

PROJECT INFORMATION

SITE ADDRESS:
586 TENNYSON ROAD
HAYWARD, CA.

COORDINATES:
LATITUDE: 37.63194°
LONGITUDE: -122.06667°
GROUND ELEVATION: ABOVE SEA LEVEL

JURISDICTION: CITY OF HAYWARD
CURRENT USE: TELECOMUNICATIONS FACILITY
PROPOSED USE: TELECOMUNICATIONS FACILITY

APPLICABLE CODES AND STANDARDS

SUBCONTRACTOR'S WORK SHALL COMPLY WITH ALL APPLICABLE NATIONAL, STATE, AND LOCAL CODES AS ADOPTED BY THE LOCAL AUTHORITY HAVING JURISDICTION (AHJ) FOR THE LOCATION. THE EDITION OF THE AHJ ADOPTED CODES AND STANDARDS IN EFFECT ON THE DATE OF CONTRACT AWARD SHALL GOVERN THE DESIGN

BUILDING CODE: UNIFORM BUILDING CODE 1997

ALL WORK IS TO COMPLY WITH THE 1999 CALIFORNIA BUILDING CODE(CBC) AMENDMENTS AND STANDARDS, INCLUDING THE FOLLOWING CODES IN ORDER OF PRECEDENCE:

THE 1997: UNIFORM BLDG. CODE STANDARDS AND AMENDMENTS; UNIFORM MECHANICAL CODE STANDARDS AND AMENDMENTS; UNIFORM FIRE CODE STANDARDS AND AMENDMENTS; UNIFORM PLUMBING CODE STANDARDS AND AMENDMENTS; LOCAL BUILDING CODE; CITY/COUNTY ORDINANCES.

TIA/EIA-222-1996 F, 607 COMMERCIAL BUILDING GROUNDING AND BONDING REQUIREMENTS FOR TELECOMMUNICATIONS

AISC, CONSTRUCTION MANUAL, 9th EDITION OR LATER.

IEEE: 81, GUIDE FOR MEASURING EARTH RESISTIVITY, GROUND IMBEDANCE AND EARTH SURFACE POTENTIALS OF A GROUND SYSTEM

IEEE 1100 (1999) RECOMMENDED PRACTICE FOR POWERING AND GROUNDING OF ELECTRONIC EQUIPMENT

NEC (NATIONAL ELECTRIC CODE) 1999 (NFPA 70) LIGHTNING PROTECTION CODE NFPA-780

TIA 607 COMMERCIAL BUILDING GROUNDING AND BONDING REQUIREMENTS FOR TELECOMMUNICATIONS

TELCORDIA GR-63 NETWORK EQUIPMENT-BUILDING SYSTEM (NEBS): PHYSICAL PROTECTION

TELCORDIA GR-347 CENTRAL OFFICE POWER WIRING

TELCORDIA GR-1275 GENERAL INSTALLATION REQUIREMENTS

TELCORDIA GR-1503 COAXIAL CABLE CONNECTIONS

FOR ANY CONFLICTS BETWEEN SECTIONS OF LISTED CODES AND STANDARDS REGARDING MATERIAL, METHODS OF CONSTRUCTION, OR OTHER REQUIREMENTS, THE MOST RESTRICTIVE REQUIREMENT SHALL GOVERN. WHERE THERE IS CONFLICT BETWEEN A GENERAL REQUIREMENT AND A SPECIFIC REQUIREMENT, THE SPECIFIC REQUIREMENT SHALL GOVERN.

Pacific 17
Telecommunications
Engineering Consulting
1455 Frazee Road, Suite 805
San Diego, California 92108
Phone (619) 542-1717
Fax (619) 574-6563

TENNYSON AND RUUS
SITE NO. SFO-G068
586 TENNYSON ROAD
HAYWARD, CA.

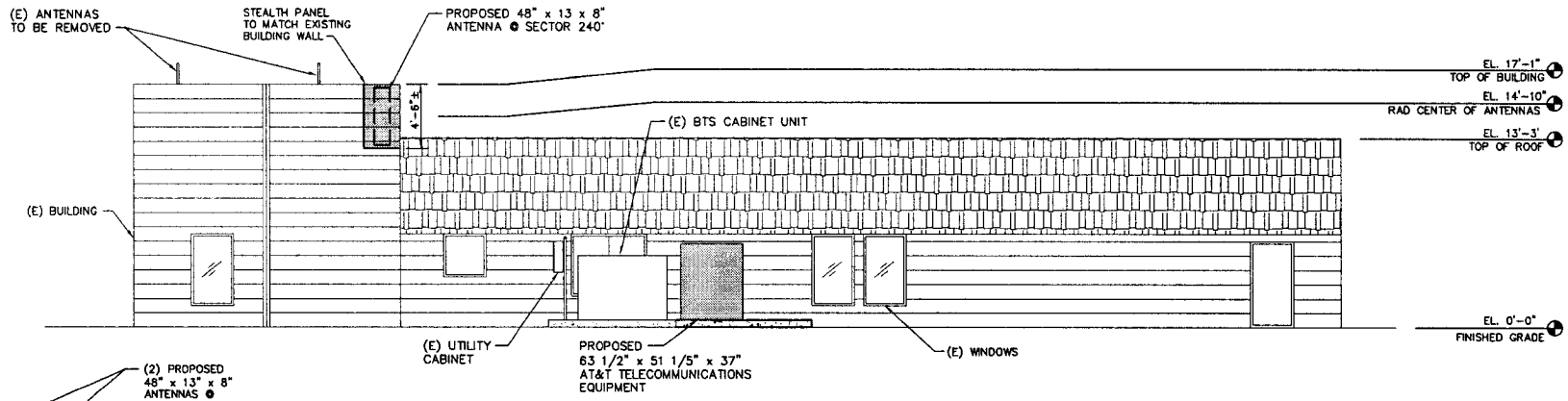
AT&T
AT&T WIRELESS SERVICES, INC.

NO	DATE	REVISIONS	BY	CHK	APP'D
F	10/22/02	INCORPORATED COMMENTS & RE-ISSUE	WT	EFS	EFS
E	07/10/02	REDESIGN OF EQUIPMENT	FP	EFS	EFS
D	07/03/02	ISSUE FOR REVIEW	TR	EFS	EFS
C	04/09/02	REDESIGN OF EQUIPMENT	WT	EFS	EFS
B	02/20/02	RESPONSE TO COMMENTS	WT	EFS	EFS

SCALE: AS SHOWN | DESIGNED: WT | DRAWN: WT

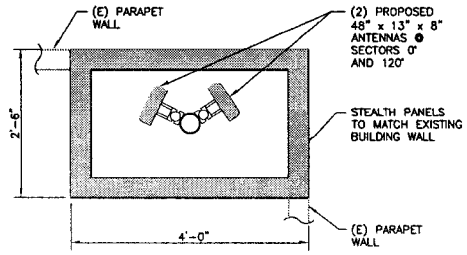
ZONING
TITLE SHEET AND
GENERAL NOTES

DRAWING NUMBER	REV
24623-843-SFO-G068-Z1	F



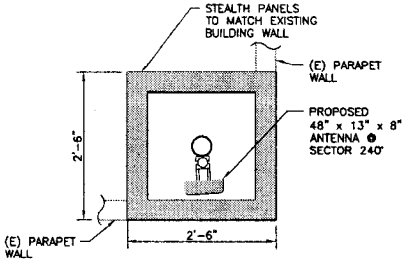
WEST ELEVATION

N.T.S.



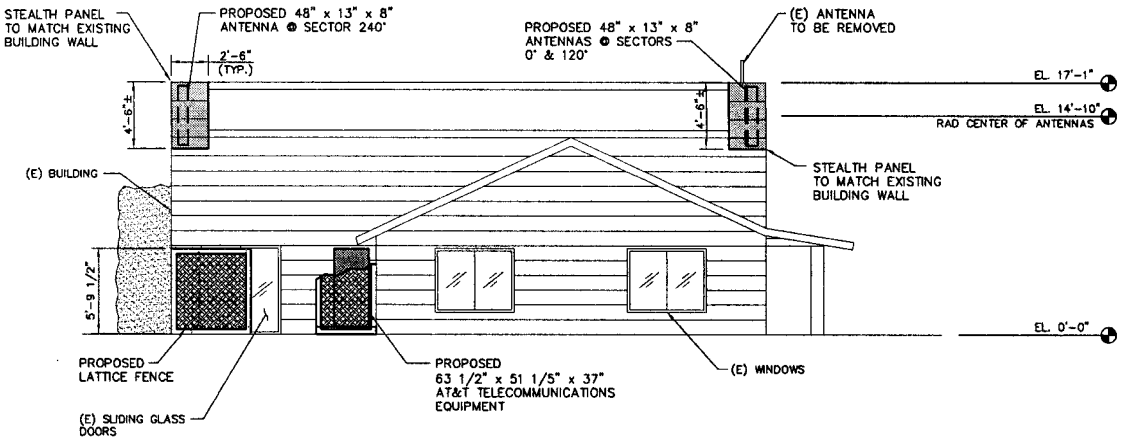
DETAIL 1

1/2"=1'-0"



DETAIL 2

1/2"=1'-0"



SOUTH ELEVATION

N.T.S.

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TENNYSON AND RUUS
SITE NO. SFO-G068
586 TENNYSON ROAD
HAYWARD, CA

AT&T
AT&T WIRELESS SERVICES, INC.

NO.	DATE	REVISIONS	BY	CHK	APP'D
F	10/22/02	INCORPORATED COMMENTS & RE-ISSUE	WT	EFS	EFS
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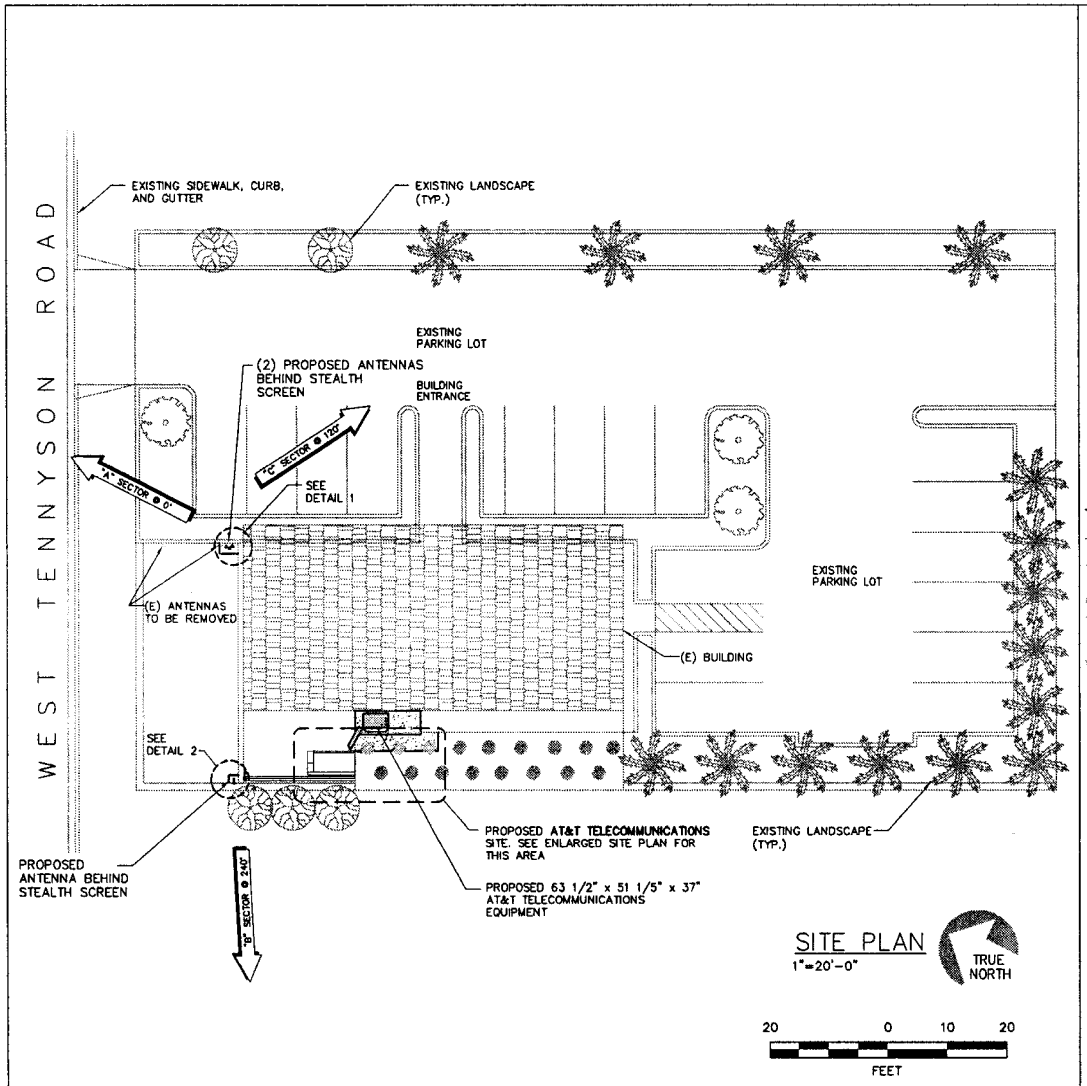
C	04/09/02	REDESIGN OF EQUIPMENT	WT	EFS	EFS
B	02/20/02	RESPONSE TO COMMENTS	WT	EFS	EFS

SCALE: AS SHOWN | DESIGNED: WT | DRAWN: WT

ZONING
ELEVATIONS

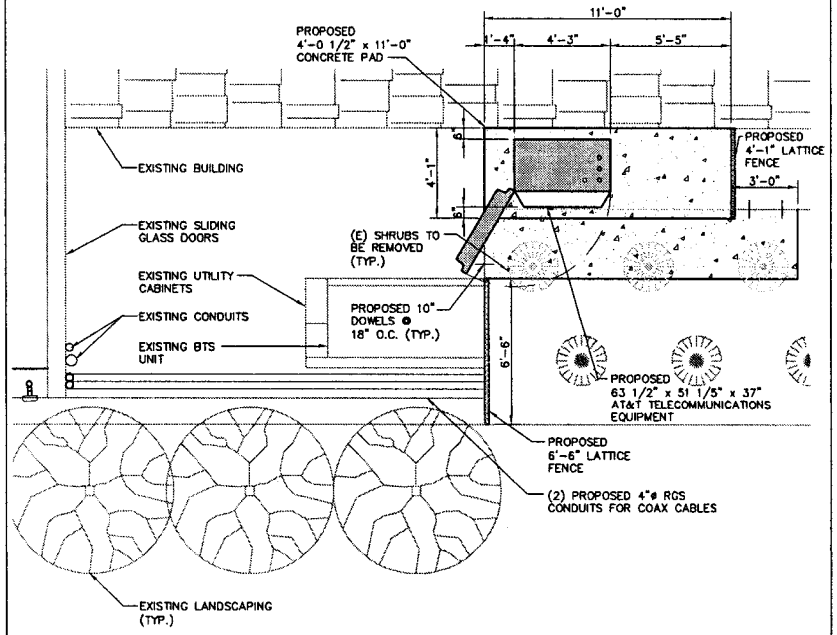
DRAWING NUMBER	REV
24623-843-SFO-G068--Z3	F



SITE PLAN
1"=20'-0"

TRUE NORTH

20 0 10 20
FEET



ENLARGED SITE PLAN
1"=10'-0"

TRUE NORTH

10 0 5 10
FEET

EXIST LEASE AREA	SQ. FOOTAGE: 64.0
PROPOSED LEASE AREA: 5'-6 1/2"x 11'-3"	SQ. FOOTAGE: 61.0
TOTAL LEASE AREA	SQ. FOOTAGE: 125.0

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HAYWARD, CA.

AT&T
AT&T WIRELESS SERVICES, INC.
651 GATEWAY BLVD.
S. SAN FRANCISCO, CA. 94080

NO	DATE	REVISIONS	BY	CHK	APP'D
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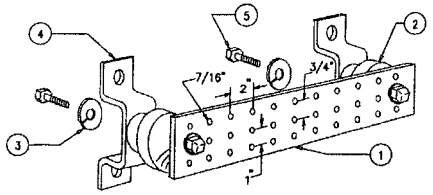
D	07/03/02	ISSUE FOR REVIEW	TR	EFS	EFS
C	04/09/02	REDESIGN OF EQUIPMENT	WT	EFS	EFS
B	02/20/02	RESPONSE TO COMMENTS	WT	EFS	EFS

SCALE: AS SHOWN | DESIGNED: WT | DRAWN: WT

ZONING
SITE PLAN &
ENLARGE SITE PLAN

DRAWING NUMBER: 24623-843-SFO-G068-Z2
REV: F

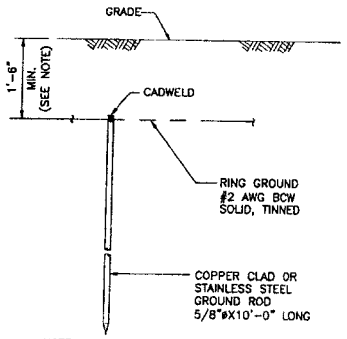


LEGEND

1- COPPER GROUND BAR, ¼"X 4"X 20", NEWTON INSTRUMENT CO. CAT. NO. B-6142 OR EQUAL. HOLE CENTERS TO MATCH NEMA DOUBLE LUG CONFIGURATION
2- INSULATORS, NEWTON INSTRUMENT CAT. NO. 3061-4
3- 5/8" LOCKWASHERS, NEWTON INSTRUMENT CO. CAT. NO. 3015-8
4- WALL MOUNTING BRACKET, NEWTON INSTRUMENT CO. CAT NO. A-6056
5- 5/8-11 X 1" HHCS BOLTS, NEWTON INSTRUMENT CO. CAT NO. 3012-1

GROUNDING – STANDARD
DETAIL GROUND BAR DETAIL

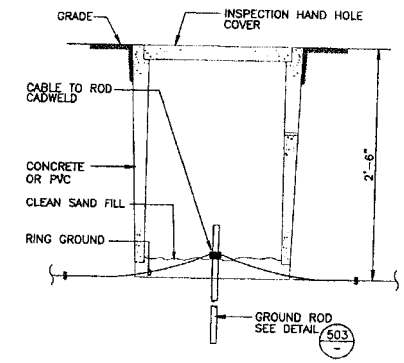
DETAIL 509 (NTS)



NOTE:
GROUND BAR SHALL BE MIN. 1'-6" BELOW GRADE OR 6" BELOW FROST LINE. (WHICH EVER IS GREATER)

GROUNDING – STANDARD
DETAIL GROUND ROD

DETAIL 503 (NTS)



NOTE: INSPECTION HAND HOLE MAY BE CONCRETE OR PVC AND SHALL BE A MINIMUM OF 8" IN WIDTH/DIAMETER

GROUNDING – STANDARD DETAIL
GROUND ROD WITH ACCESS

DETAIL 506 (NTS)

1. THE SUBCONTRACTOR SHALL REVIEW AND INSPECT THE EXISTING FACILITY GROUNDING SYSTEM AND LIGHTNING PROTECTION SYSTEM (AS DESIGNED AND INSTALLED) FOR STRICT COMPLIANCE WITH THE NEC (AS ADOPTED BY THE AUTHORITY HAVING JURISDICTION), THE SITE-SPECIFIC (UL, LPI, OR NFPA) LIGHTING PROTECTION CODE, AND GENERAL COMPLIANCE WITH TELCORDIA AND TIA GROUNDING STANDARDS. THE SUBCONTRACTOR SHALL REPORT ANY VIOLATIONS OR ADVERSE FINDINGS TO THE CONTRACTOR FOR RESOLUTION.

2. ALL GROUND ELECTRODE SYSTEMS (INCLUDING TELECOMMUNICATION, RADIO, LIGHTNING PROTECTION AND AC POWER GES'S) SHALL BE BONDED TOGETHER, AT OR BELOW GRADE, BY TWO OR MORE COPPER BONDING CONDUCTORS IN ACCORDANCE WITH THE NEC.

3. THE SUBCONTRACTOR SHALL PERFORM IEEE FALL-OF-POTENTIAL RESISTANCE TO EARTH TESTING (PER IEEE 1100 AND 81) FOR NEW GROUND ELECTRODE SYSTEMS. THE SUBCONTRACTOR SHALL FURNISH AND INSTALL SUPPLEMENTAL GROUND ELECTRODES AS NEEDED TO ACHIEVE A TEST RESULT OF 5 OHMS OR LESS.

4. METAL RACEWAY SHALL NOT BE USED AS THE NEC REQUIRED EQUIPMENT GROUND CONDUCTOR. STRANDED COPPER CONDUCTORS WITH GREEN INSULATION, SIZED IN ACCORDANCE WITH THE NEC, SHALL BE FURNISHED AND INSTALLED WITH THE POWER CIRCUITS TO BTS EQUIPMENT.

5. EACH INDOOR BTS CABINET FRAME SHALL BE DIRECTLY CONNECTED TO THE MASTER GROUND BAR WITH SUPPLEMENTAL EQUIPMENT GROUND WIRES, #2 AWG.

6. EXOTHERMIC WELDS SHALL BE USED FOR ALL GROUNDING CONNECTIONS BELOW GRADE.

7. APPROVED ANTIOXIDANT COATINGS (I.E., CONDUCTIVE GEL OR PASTE) SHALL BE USED ON ALL COMPRESSION AND BOLTED GROUND CONNECTIONS.

8. ICE BRIDGE BONDING CONDUCTORS SHALL BE EXOTHERMICALLY BONDED OR BOLTED TO THE BRIDGE AND THE TOWER GROUND BAR.

GROUNDING NOTES 502

CONCRETE AND REINFORCING STEEL NOTES:

1. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI 301, ACI 318, ACI 336, ASTM A184, ASTM A185 AND THE DESIGN AND CONSTRUCTION SPECIFICATION FOR CAST-IN-PLACE CONCRETE.

2. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS, UNLESS NOTED OTHERWISE.

3. REINFORCING STEEL SHALL CONFORM TO ASTM A 615, GRADE 60, DEFORMED UNLESS NOTED OTHERWISE. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A 185 WELDED STEEL WIRE FABRIC UNLESS NOTED OTHERWISE. SPLICES SHALL BE CLASS "B" AND ALL HOOKS SHALL BE STANDARD, UNO.

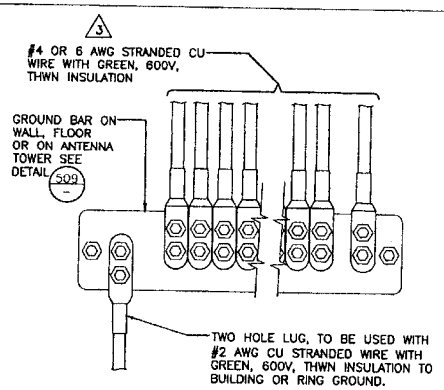
4. THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING STEEL UNLESS SHOWN OTHERWISE ON DRAWINGS:

CONCRETE CAST AGAINST EARTH.....3 IN.
CONCRETE EXPOSED TO EARTH OR WEATHER:
#6 AND LARGER .....2 IN.
#5 AND SMALLER & WWF.....1 1/2 IN.
CONCRETE NOT EXPOSED TO EARTH OR WEATHER OR NOT CAST AGAINST THE GROUND:
SLAB AND WALL .....3/4 IN.
BEAMS AND COLUMNS.....1 1/2 IN.

5. A CHAMFER 3/4" SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE, UNO, IN ACCORDANCE WITH ACI 301 SECTION 4.2.4.

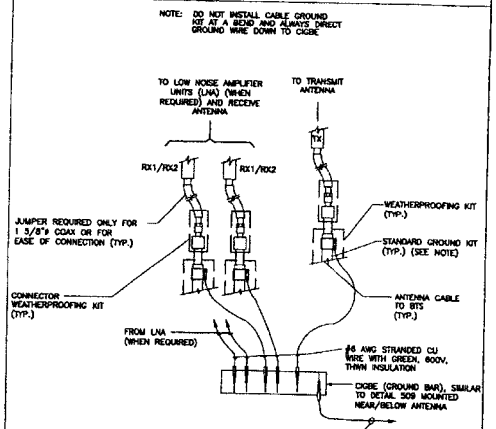
6. INSTALLATION OF CONCRETE EXPANSION/WEDGE ANCHOR, SHALL BE PER MANUFACTURER'S WRITTEN RECOMMENDED PROCEDURE. THE ANCHOR BOLT, DOWEL OR ROD SHALL CONFORM TO MANUFACTURER'S RECOMMENDATION FOR EMBEDMENT DEPTH OR AS SHOWN ON THE DRAWINGS. NO REBAR SHALL BE CUT WITHOUT PRIOR ENGINEERING APPROVAL WHEN DRILLING HOLES IN CONCRETE. EXPANSION BOLTS SHALL BE PROVIDED BY RAMSET/REDHEAD OR APPROVED EQUAL.

CONCRETE AND REINFORCING STEEL NOTES 302



INSTALLATION OF GROUND
WIRE TO GROUND BAR

DETAIL 508A



CONNECTION OF GROUND WIRE TO
GROUNDING BAR (CIGBE)
TOWER/MONOPOLE

DETAIL 522A

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SITE NO. SFO-G068
586 TENNYSON ROAD
HAYWARD, CA.

AT&T
AT&T WIRELESS SERVICES, INC.
851 GATEWAY BLVD.
S. SAN FRANCISCO, CA. 94080

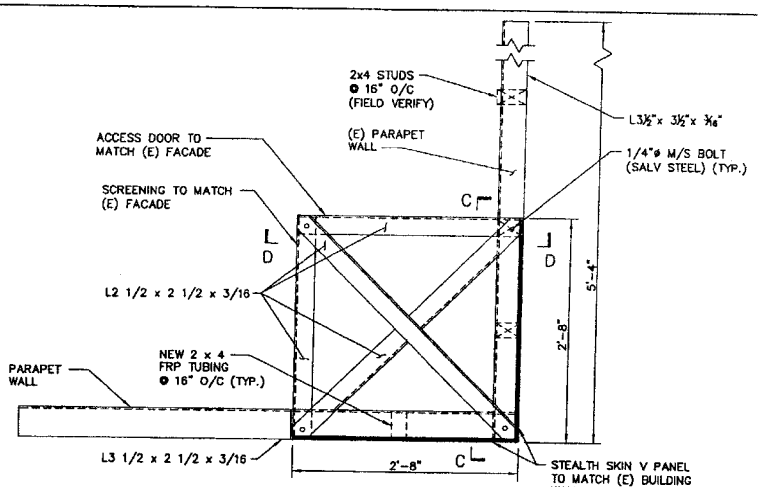
NO	DATE	REVISIONS	BY	CHK	APP'D
4	10/22/02	ISSUE FOR CONSTRUCTION	WT	EFS	EFS
3	08/01/02	ISSUE FOR CONSTRUCTION	FP	EFS	EFS
2	07/25/02	ISSUE FOR CONSTRUCTION	FP	EFS	EFS
1	06/04/02	ISSUE FOR CONSTRUCTION	TR	EFS	EFS
0	05/14/02	ISSUE FOR CONSTRUCTION	WT	EFS	EFS

SCALE: AS SHOWN | DESIGNED: WT | DRAWN: WT

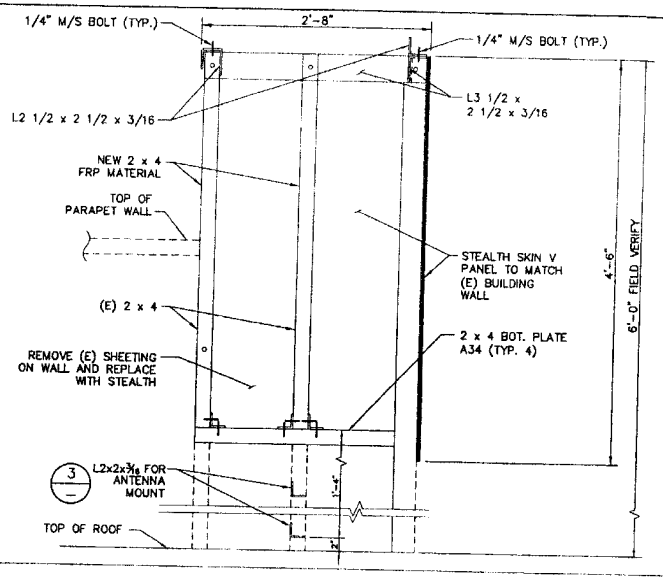
REGISTERED PROFESSIONAL ENGINEER ERIC F. SOUZA 54633 EXP 12-31-03 STATE OF CALIFORNIA CIVIL

AWS 3G UPGRADE
GROUNDING DETAILS

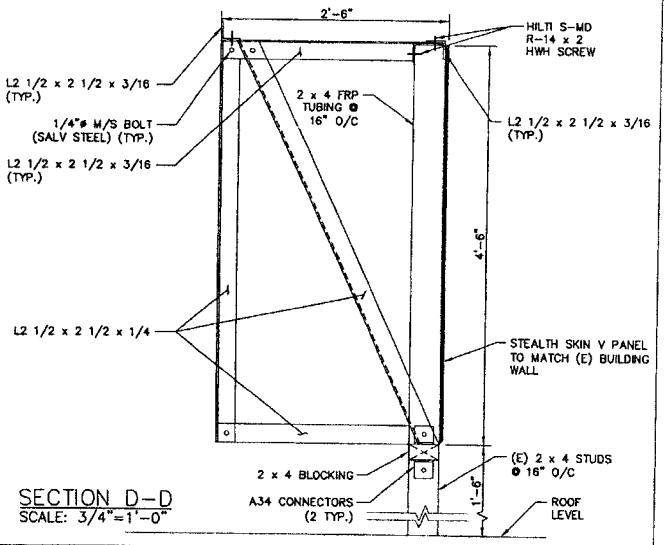
DRAWING NUMBER: 24623-843-SFO-G068-09 | REV: 4



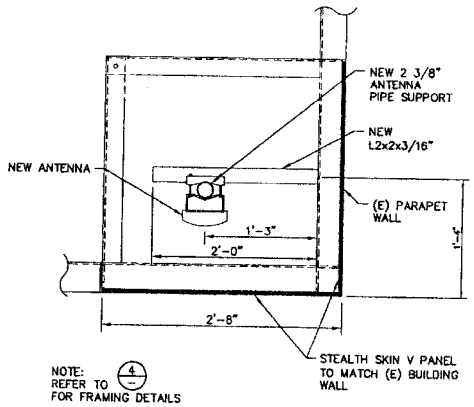
4 — SCREEN FRAMING PLAN
SCALE: 3/4"=1'-0"



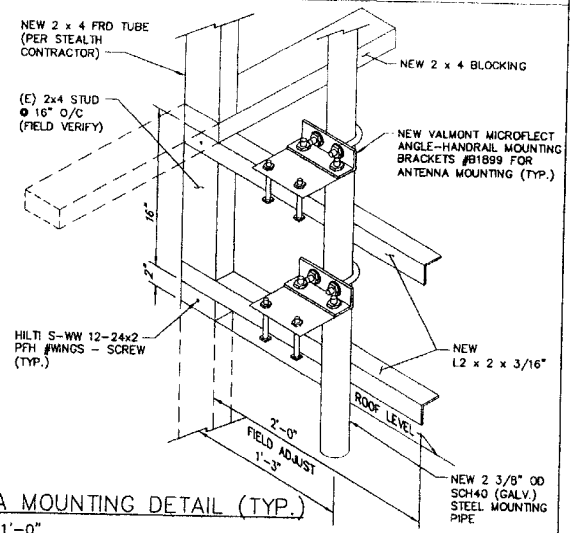
SECTION C–C
SCALE: 3/4"=1'-0"



SECTION D–D
SCALE: 3/4"=1'-0"



2 — ANTENNA ENCLOSURE LAYOUT
N.T.S.



3 — ANTENNA MOUNTING DETAIL (TYP.)
SCALE: 1"=1'-0"

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HAYWARD, CA.

AT&T
AT&T WIRELESS SERVICES, INC.
851 GATEWAY BLVD
S. SAN FRANCISCO, CA. 94080

NO.	DATE	REVISIONS	BY	CHK	APP'D
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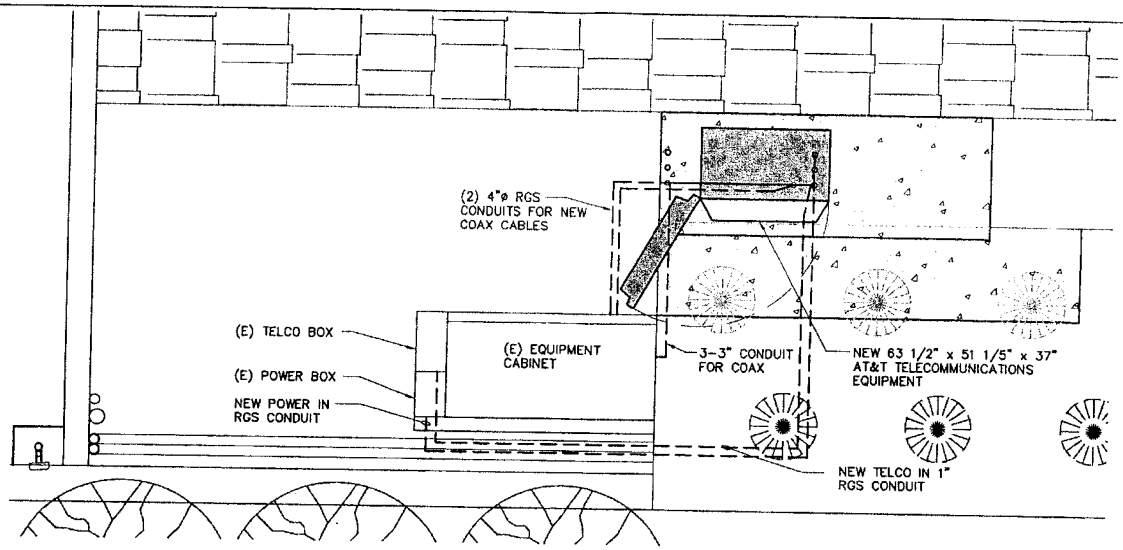
1	06/04/02	ISSUE FOR CONSTRUCTION	TR	EFS	EFS
0	05/14/02	ISSUE FOR CONSTRUCTION	WT	EFS	EFS

SCALE: AS SHOWN | DESIGNED: WT | DRAWN: WT

REGISTERED PROFESSIONAL ENGINEER EDUARDO F. SOUSA 54633 EXP. 12-31-03 CIVIL STATE OF CALIFORNIA

AWS 3G UPGRADE
STRUCTURAL DETAILS

DRAWING NUMBER	REV
24623-843-SFO-G068-07	4



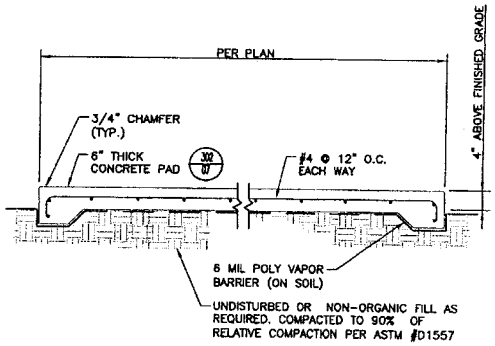
TRUE NORTH

POWER, GROUNDING AND TELCO PLAN

1/4" = 1'-0"

LEGEND

- EXISTING EQUIPMENT
- NEW EQUIPMENT
- NEW ROUTING

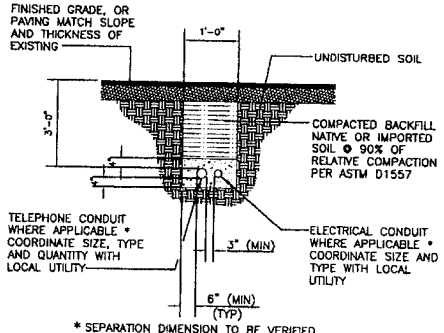


TYPICAL FOUNDATION SECTION (A)

NTS

NOTE:

SLOPE TOP OF CONCRETE PAD @ 1% MINIMUM AWAY FROM EQUIPMENT FOOTPRINT FOR DRAINAGE. SEE SHEET "05"



CONCRETE DUCT BANK ELECT/ TELEPHONE

DETAIL (310)

NTS

Pacific 17
Telecommunications Engineering Consulting
1455 Frazee Road, Suite 805
San Diego, California 92108
Phone (619) 542-1717
PACIFIC 17 Fax (619) 574-6563

TENNYSON AND RUUS
SITE NO. SFO-G068
586 TENNYSON ROAD
HAYWARD, CA.

AT&T
AT&T WIRELESS SERVICES, INC.
651 GATEWAY BLVD.
S. SAN FRANCISCO, CA. 94080

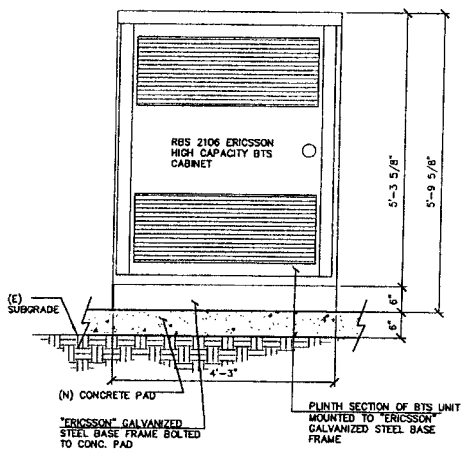
NO.	DATE	REVISIONS	BY	CHK	APP'D
4	10/22/02	ISSUE FOR CONSTRUCTION	WT	EFS	EFS
3	08/01/02	ISSUE FOR CONSTRUCTION	FP	EFS	EFS
2	07/25/02	ISSUE FOR CONSTRUCTION	FP	EFS	EFS
1	06/04/02	ISSUE FOR CONSTRUCTION	TH	EFS	EFS
0	05/14/02	ISSUE FOR CONSTRUCTION	WT	EFS	EFS

SCALE: AS SHOWN | DESIGNED: WT | DRAWN: WT

REGISTERED PROFESSIONAL ENGINEER — EDWARD F. SOTO — 54633 — EXP. 12-31-03 — CIVIL — STATE OF CALIFORNIA

AWS 3G UPGRADE
POWER, GROUNDING AND TELCO PLAN

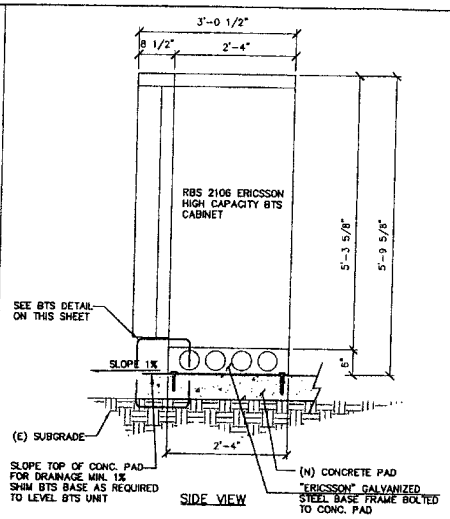
DRAWING NUMBER: 24823-843-SFO-G068-08 | REV: 4



FRONT VIEW

BTS ELEVATION

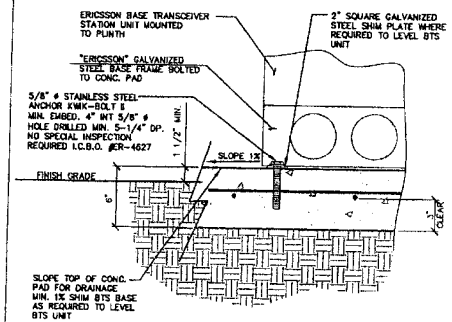
SCALE: N.T.S.



SIDE VIEW

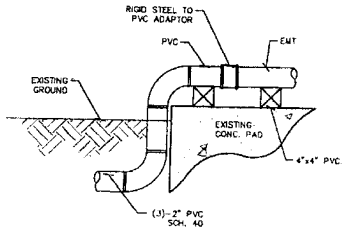
BTS SECTION

SCALE: N.T.S.



BTS DETAIL

SCALE: N.T.S.

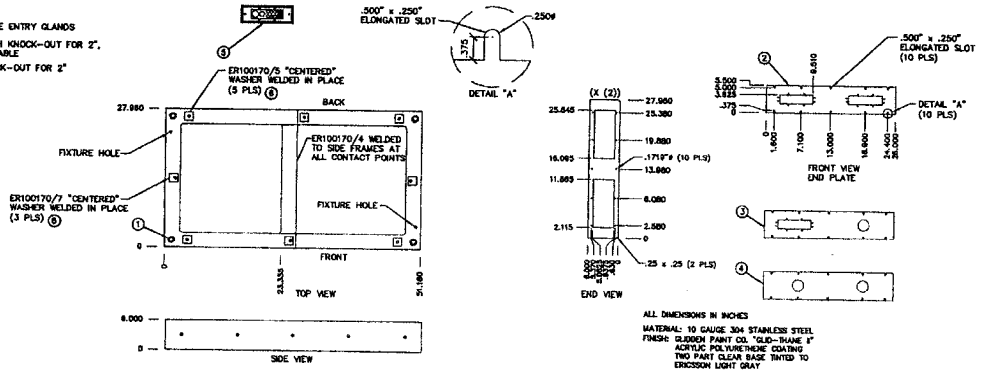


STUB UP DETAIL

SCALE: N.T.S.

NOTES:

1. ACCESS HOLES (4 PLACES)
2. END-PLATE FOR MOUNTING ROXTEC CABLE ENTRY GLANDS
3. END-PLATE FOR ONE ROXTEC GLAND WITH KNOCK-OUT FOR 2", SEALTIGHT TYPE FLEXIBLE CONDUIT AVAILABLE
4. END-PLATE REVISION "B" WITH TWO KNOCK-OUT FOR 2" SEALTIGHT TYPE FLEXIBLE CONDUIT
5. CSF 18 ROXTEC CABLE ENTRY GLAND
6. EARTHQUAKE WASHERS WELDED IN PLACE 5 CENTERED, 3 OFFSET



ALL DIMENSIONS IN INCHES

MATERIAL: 10 GAUGE 304 STAINLESS STEEL
FINISH: GLIDDEN PAINT CO. "GLID-THANE 8" ACRYLIC POLYURETHENE COATING TWO PART CLEAR BASE TINTED TO ERICSSON LIGHT GRAY

ERICSSON BTS SUPPORT FRAME

SCALE: N.T.S.

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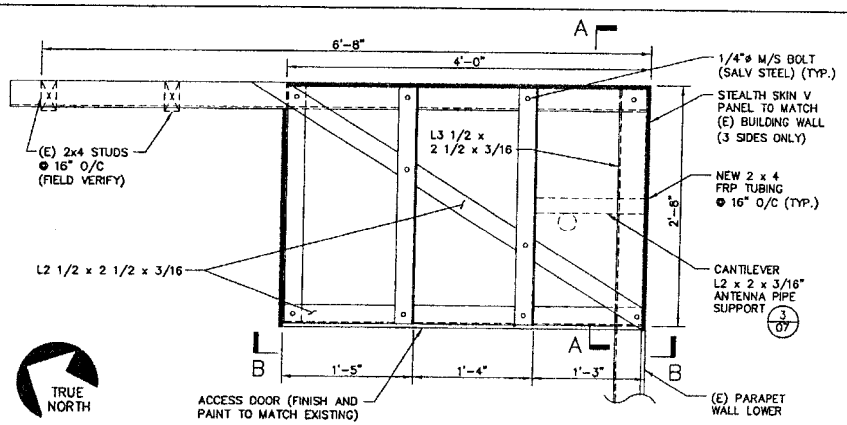
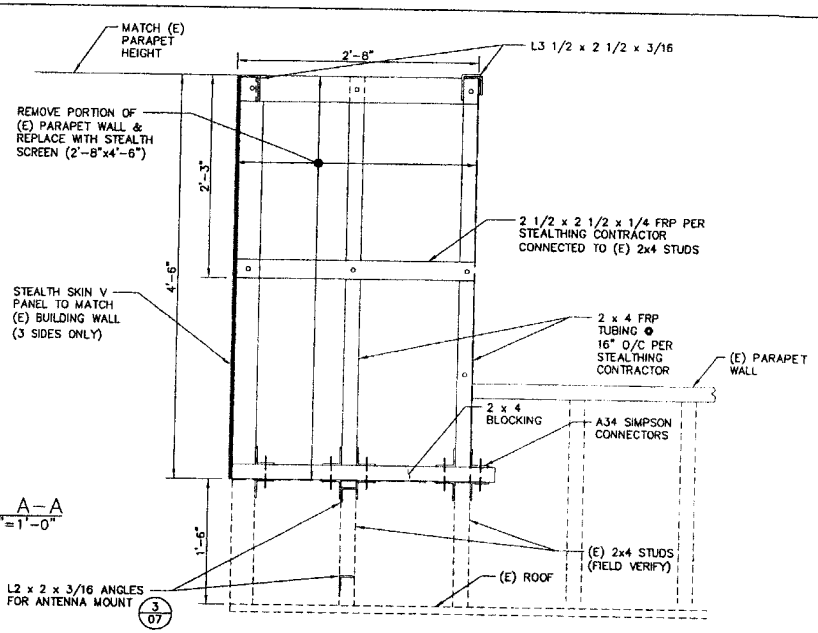
REGISTERED PROFESSIONAL ENGINEER
ERICSSON A. SWISS
54633
EXP. 12-31-03
CIVIL
STATE OF CALIFORNIA

AWS 3G UPGRADE
STANDARD DETAILS

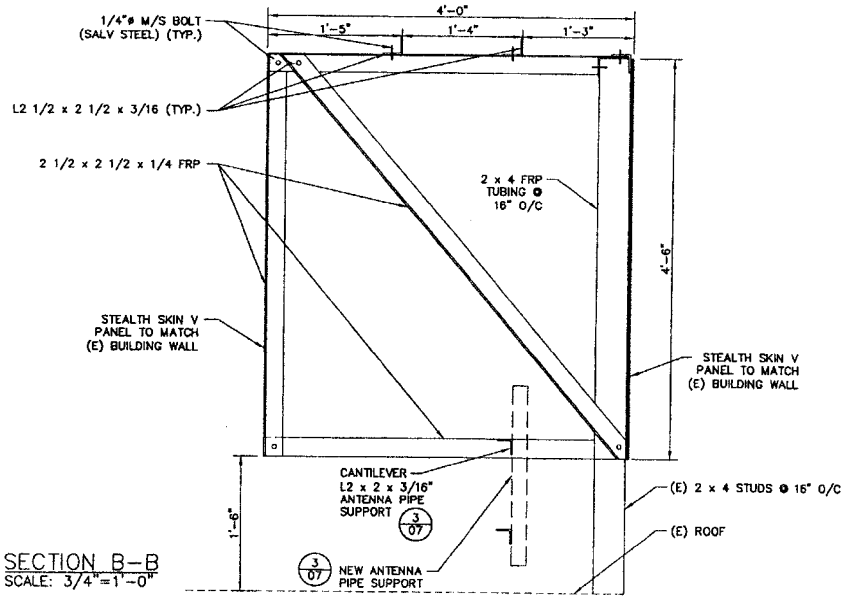
DRAWING NUMBER: 24623-843-SFO-G068 -05
REV: 4



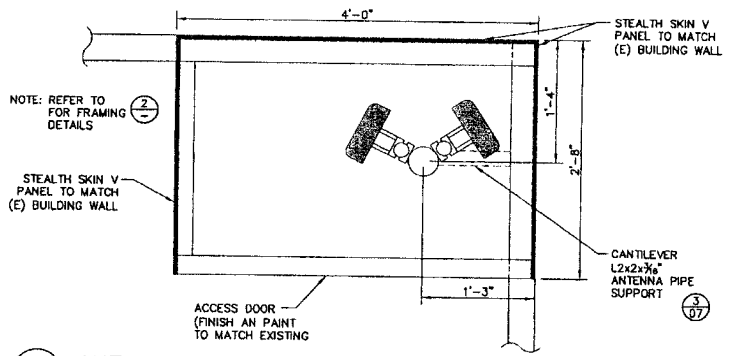
2/– SCREEN FRAMING PLAN
SCALE: 3/4"=1'-0"



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



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



1/– ANTENNA ENCLOSURE LAYOUT
SCALE: 3/4"=1'-0"

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REGISTERED PROFESSIONAL ENGINEER TO LICENSED TO PRACTICE 54633 EXP. 12-31-03 STATE OF CALIFORNIA

AWS 3G UPGRADE
STRUCTURAL DETAILS

DRAWING NUMBER	REV
24623-843-SFO-G068 -06	4