SANTA BARBARA MONTECITO PLANNING COMMISSION Staff Report for the Appeal of NextG Networks Cellular Antenna #ESB11

Hearing Date: July 28, 2010 Staff Report Date: July 9, 2010 Case No.: 10APL-00000-00014

Deputy Director: Dave Ward Division: Development Review South Supervising Planner: Anne Almy Supervising Planner Phone #: 568-2053

Staff Contact: Megan Lowery Planner's Phone #: 568-2517

Environmental Document: Exempt Pursuant to CEQA Guidelines Sections 15061(b)(3),

15301(b), 15301(c), 15302(c), and 15304(f)

APPELLANTS:

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APPLICANT: NextG Networks Sharon James 5720 Thornwood Drive Goleta, CA 93117 (805) 683-4326

This site is identified as a utility pole in the public right of way on Santa Rosa Lane adjacent to Assessor Parcel Number 007-290-006, Montecito, 1st Supervisorial District.



Application Filed: August 5, 2009 Permit Approved: May 21, 2010 Appeal Filed: June 1, 2010

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1.0 REQUEST

Hearing on the request of Julia and Robert Teufel, in addition to named co-appellants, [appeal filed on June 1, 2010] to consider the Appeal 10APL-00000-00014 of the Director's decision to approve 10CDP-00000-00032, in compliance with Chapter 35-182 of the Coastal Zoning Ordinance Article II on property located in the 20-R-1 zone; and acknowledge that the California Public Utilities Commission is the appropriate agency for CEQA compliance on this project and the California Public Utilities Commission filed a Notice of Exemption on July 20, 2009 pursuant to California Environmental Quality Act sections 15061(b)(3), 15301(b), 15301(c), 15302(c), and 15304(f). The application involves the public right-of-way adjacent to AP No. 007-290-006, located on Santa Rosa Lane in the Montecito area, First Supervisorial District.

2.0 RECOMMENDATION AND PROCEDURES

Follow the procedures outlined below and deny the Appeal, Case No. 10APL-00000-00014, and approve the project, Case No. 10CDP-00000-00032 marked "Officially Accepted, County of Santa Barbara July 28, 2010 Montecito Planning Commission Attachment B", based upon the project's consistency with the Comprehensive Plan, including the Montecito Community Plan and the Coastal Land Use Plan, and based on the ability to make the required findings. Your Commission's motion should include the following:

- 1. Deny the appeal, Case No. 10APL-00000-00014;
- 2. Make the required findings for the project specified in Attachment A of this staff report, including CEQA findings;
- 3. Accept the exemption to CEQA prepared and adopted by the California Public Utilities Commission, the lead agency, as adequate pursuant to sections 15061(b)(3), 15301(b), 15301(c), 15302(c), and 15304(f) of the CEQA Guidelines included as Attachment C; and
- 4. Approve the project subject to the conditions included as Attachment B.

Alternatively, refer back to staff if the Montecito Planning Commission takes other than the recommended action for appropriate findings and conditions.

3.0 JURISDICTION

3.1 Appeal Jurisdiction

This project is being considered by the Montecito Planning Commission based on Section 35-182.4.A.2.d of Coastal Zoning Ordinance Article II which states that "Any decision of the Director to approve, conditionally approve or deny an application for a Coastal Development Permit" (with the exception of permits for temporary uses), "may be appealed to the Montecito Commission provided the appeal complies with the requirements of Subsection 35-182.2.C and D."

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3.2 Jurisdictional Limitations

Santa Barbara County's jurisdictional authority, and therefore your Commission's authority, in regulating telecommunications facilities is restricted by Federal law, namely the Telecommunications Act of 1996, which sets the framework for a local agency's regulatory authority.

The Federal Telecommunications Act of 1996 amended the Communications Act of 1932 to establish federal regulatory authority over the deployment of telecommunications facilities across the nation. The Federal Act set health and safety emissions thresholds and specifically restricted the regulatory treatment of telecommunications facilities by local agencies (i.e. cities and counties) in that regard.

The Federal Telecommunications Act preempts local authorities from prohibiting any telecommunications service, stating "No State or local statute or regulation, or other State or local legal requirement, may prohibit or have the effect of prohibiting the ability of any entity to provide any interstate or intrastate telecommunications service." (47 U.S.C.A. § 253 (b).) However, the Federal Telecommunications Act acknowledges that although local authorities may not prohibit telecommunications facilities, their general local zoning authority is preserved "over decisions regarding placement, construction, and modification of personal wireless service facilities," (47 U.S.C.A. § 332 (c)(7)) within certain limitations.

Although the County can influence siting and design of personal wireless service facilities, there are limitations as to the County's authority to regulate such facilities. Specifically, the purview of local agencies to apply zoning requirements is limited by the Federal Telecommunications Act as follows:

"LIMITATIONS.--

- (i) The regulation of the placement, construction, and modification of personal wireless service facilities by any State or local government or instrumentality thereof--
 - (I) shall not unreasonably discriminate among providers of functionally equivalent services; and
 - (II) shall not prohibit or have the effect of prohibiting the provision of personal wireless services.
- (ii) A State or local government or instrumentality thereof shall act on any request for authorization to place, construct, or modify personal wireless service facilities within a reasonable period of time after the request is duly filed with such government or instrumentality, taking into account the nature and scope of such request.
- (iii) Any decision by a State or local government or instrumentality thereof to deny a request to place, construct, or modify personal wireless service facilities shall be in writing and supported by substantial evidence contained in a written record.

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(iv) No State or local government or instrumentality thereof may regulate the placement, construction, and modification of personal wireless service facilities on the basis of the environmental effects of radio frequency emissions to the extent that such facilities comply with the Commission's regulations concerning such emissions." (47 U.S.C.A. § 332 (c)(7)(B).)

These limitations not only ensure due process for wireless applications but they ensure each carrier's rights to exercise their FCC licenses and provide full coverage to their network areas. In fact, denying a carrier the ability to provide full coverage may constitute a "prohibition" of wireless services with these limitations. In the *MetroPCS Inc. v. City & County of San Francisco* case in 2005, the Ninth Circuit determined that "[A] locality can run afoul of the Telecommunications Act 'effective prohibition' clause if it prevents a wire-less provider from closing a 'significant gap' in service coverage." Should a local agency deny a facility, and the applicant (carrier) challenges the denial, the applicant must show that they 1) are prevented from filling a significant gap in their own service coverage; and 2) their proposed way to fill that significant gap is the "least intrusive means." If the applicant makes the above showing, the County, not the carrier, must then show "[S]ome potentially available and technologically feasible alternative sites;" which "close the gap" in coverage.

3.3 Federal "Shot Clock" Ruling November 18, 2009

On July 11, 2008, CTIA – The Wireless Association® filed a petition requesting that the Federal Communications Commission issue a Declaratory Ruling, concerning provisions in 47 U.S.C. Sections 253 and 332(c)(7), regarding state and local review of wireless facility siting applications. On November 18, 2009, the Federal Communications Commission adopted and released its Declaratory Ruling in that matter, WT Docket No. 08-165.

Briefly addressing arguments that the FCC should deny CTIA's petition because of health hazards that commenters attributed to radiofrequency emissions, the Declaratory Ruling stated,

...To the extent commenters argue that State and local governments require flexibility to deny personal wireless service facility siting applications or delay action on such applications based on the perceived health effects of RF emissions, this authority is denied by statute under Section 332(c)(7)(B)(iv). Accordingly, such arguments are outside the scope of this proceeding.

The <u>first major part of the Declaratory Ruling</u> defines what is a presumptively "reasonable time" beyond which a local jurisdiction's inaction on a siting application constitutes a prohibited "failure to act" under 47 U.S.C. Section 332(c)(7). The FCC found that a "reasonable period of time" is, presumptively:

• 90 days to process personal wireless service facility siting applications requesting collocations; and

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• 150 days to process all other applications.

Accordingly, if state or local governments do not act upon applications within those timeframes, then a prohibited "failure to act" has occurred and personal wireless service providers may seek redress in court within 30 days, as provided in 47 U.S.C. Section 332(c)(7)(B)(v). The state or local government, however, would have the opportunity to rebut the presumption of reasonableness.

Within the first major part of the Declaratory Ruling, the FCC also adopted a general rule for currently pending applications that a "failure to act" will occur 90 days (for collocations) or 150 days (for other applications) after the November 18th release of the Declaratory Ruling. But, a party whose application already has been pending for the newly-established timeframes, or longer, as of the release date of the Declaratory Ruling, may, after providing notice to the relevant State or local government, file suit under Section 332(c)(7)(B)(v) if the State or local government fails to act within 60 days from the date of that notice.

The <u>second major part of the Declaratory Ruling</u> concluded that a state or local government violates 47 U.S.C. Section 332(c)(7)(B)(i)(II) if they deny a personal wireless service facility siting application solely because that service is available from <u>another</u> provider.

The <u>third major part of the Declaratory Ruling</u> denied CTIA's request for preemption of ordinances that impose blanket variance requirements on the siting of wireless facilities. The Declaratory Ruling stated, "CTIA does not present us with sufficient information or evidence of a specific controversy on which to base such action or ruling," and concluded that any further consideration of blanket variance ordinances should occur within the context of specific cases.

3.4 Permitting Framework – Santa Barbara County Telecommunications Program

The County Telecommunications Ordinance provides for a four tiered permitting system that requires: staff level review (LUP/CDPs) for small unobtrusive facilities; Director review for more visible facilities (Director DVPs); and Zoning Administrator or Planning Commission review for larger, more complex projects (CUPs). The theory behind this approach is that the review process for minor projects would be minimized and streamlined while still providing a higher level of review of larger projects. That is, as the size and complexity of the facility and potential for environmental impacts or policy inconsistencies increased, the decision-making body shifted upward (e.g., from the Director to the Zoning Administrator).

| Project Level Tier | Zones Where Allowed | Permit Requirements | Review Authority |
|-------------------------------------|----------------------|---------------------|------------------|
| Tier 1 Project | | Coastal Development | |
| (Small antenna installed on an | All zones | Permit or Coastal | Staff |
| existing utility pole) | | Development Permit | |
| Tier 1 Project | | Coastal Development | |
| (Antennas entirely concealed within | Nonresidential zones | Permit or Coastal | Staff |
| an existing structure) | | Development Permit | |

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| Project Level Tier | Zones Where Allowed | Permit Requirements | Review Authority |
|--|---|---|------------------------|
| Tier 2 Project (Tenant improvements and architectural projections) | Nonresidential zones | Development Plan approved by the Director | Director |
| Tier 2 Project (Additions to existing structures or New structure within height limit) | Nonresidential zones, except not allowed in the Recreation (REC) zone | Development Plan approved by the Director | Director |
| Tier 3 Project (New structure exceeding height limit but not to exceed 50 ft.) | Nonresidential zones, except not allowed in the Recreation (REC) zone | Minor Conditional Use Permit | Zoning Administrator |
| Tier 4 Project (All others) | All zones | Conditional Use Permit | Planning Commission |

The County's tiered permit process, shown in the chart above, allows for "very small facilities" more commonly known as Distributed Antenna Systems (DAS) in all zone districts, including residential, under the Tier 1 processing requirements. The intention of this provision is to encourage only small facilities in residential areas to the extent feasible, as opposed to the larger new tower sites, allowed in other zone districts.

4.0 APPEAL ISSUE SUMMARY

The appeal group consists of fourteen individuals, including Julia and Robert Teufel. The grounds for appeal are specified in Section III of the appellants' letter are organized in subsections A-F below. Staff will address the points of contention identified in each of the sections below. Please see Attachment D for a complete copy of the appeal application and letter.

A. "The Facilities Approved by this Permit Do Not Merit Approval under the County's Commercial Telecommunications Facilities Ordinance"

In this section the appellants contend that "P&D abused its discretion in processing each of the individual permit applications as a Tier 1 project requiring only 'ministerial' review when, viewed as a Distributed Antenna System in which all of the facilities are inter-dependent, they clearly require a higher level of review under the Coastal Zoning Ordinance, Article II, and the California Environmental Quality Act (CEQA)." The appellants also contend that P&D has not made the required Coastal Development Permit findings (Article II, Sec. 35-169.5) nor the additional required findings for telecommunications facilities (Article II, Sec. 35-144F.7) necessary to approve said permit.

Staff agrees that the "project" under CEQA requires environmental review of all of the components of the Distributed Antennas System network across the South Coast. Consistent with this, the entirety of the network was reviewed as a whole project under CEQA by the California Public Utilities Commission (CPUC), who assumed the lead agency status for purposes of CEQA. On July 20, 2009, the CPUC found the entirety of the "project" exempt under Guidelines sections 15061(b)(3), 15301(b), 15301(c), 15302(c), and 15304(f), including all antenna installations, equipment installations, aerial

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cabling and trenching for the network throughout the South Coast of Santa Barbara County (including the cities of Goleta, Santa Barbara, and Carpinteria).

With respect to <u>processing</u>, Section 35-144.F.3.b.1 of Article II specifically allows for "small facilities" mounted on existing utility poles, such as the antennas proposed as part of this Distributed Antenna System, to be permitted under Tier 1 permits. This tier was specifically created to encourage such installations, since they are small in nature, utilize existing infrastructure and therefore have minimal, if any, potential for environmental impacts (personal communication, County P&D planner Noel Langle October 10, 2009). The consideration of these types of networks intrinsically assumes that multiple antennas are needed to provide licensed coverage. Permitting the network under this tier imposes limitations in respect to size restrictions and design requirements on the communication facility.

Tier 1 permits are subject to required zoning ordinance development findings, including both Coastal Development Permit findings as well as additional telecommunications facility findings. These findings are articulated in Attachment A of this staff report. The proposed project meets all required standards and all applicable findings can be made.

B. "Health Risks Associated with Electromagnetic Frequency Exposures Are A Legitimate Community Concern"

In this section the appellants contend that "P&D abused its discretion when it approved the subject permit without adequate regard for the aesthetic and safety impacts resulting from the placement of facilities in the proposed project, which are well within the County's authority to regulate" noting that the Telecommunications Act "preserves local zoning authority over the decisions regarding the placement, construction and modification of personal wireless service device facilities."

The Telecommunications Act does indeed preserve local authority over placement, construction and modification of such facilities; however it does so with specific limitations. Namely, the limitation that "No State or local government or instrumentality thereof may regulate the placement, construction, and modification of personal wireless service facilities on the basis of the environmental effects of radio frequency emissions to the extent that such facilities comply with the Commission's regulations concerning such emissions." (47 U.S.C.A. § 332 (c)(7)(B)iv.) However, as stated, local agencies can ensure that a facility complies with the FCC's regulations. The County required NextG to submit a report assessing the proposed project's emissions and compliance with applicable safety limits (see Attachment H – Emissions Report prepared by Jerrold Bushberg, Ph.D., dated April 29, 2009). The report confirmed that the proposed facility would operate well below the applicable FCC safety limits (specifically at 0.3% of the Maximum Permissible Exposure limit at 26 ft. from the antenna). Therefore the County cannot regulate on this basis.

C. "The County's Police Power Includes Regulations of Land Uses Based upon Aesthetic Impacts"

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Although recent court cases¹ have challenged a local jurisdiction's authority to regulate cellular facilities on the basis of aesthetics, it is staff's understanding at this time that aesthetics and assessing visual impacts of cellular facilities is within the County's purview. All telecommunications facility projects are reviewed for visual impacts and compliance with the County's telecommunications design requirements and development standards. The subject project constituting one 26-inch whip antenna and one 32"x6"x6" utility box, both painted gray to blend with the metal utility pole, was determined by P&D to not have a significant visual impact as it meets the "small facility" criteria, is mounted on an existing utility pole and does not require the construction of a new freestanding support structure or the addition of large equipment components. The utility box is not as wide as the pole and therefore would not protrude visually in an intrusive way.

D. "Approval of the Permit is Contrary to the Montecito Community's Goals and Undermines the Character of the Community"

In this section the appellants contend that the proposed project is so "unsightly" and "aesthetically unacceptable" that the project "contradicts...community goals, and undermines the community's effort to preserve its semi-rural character." Therefore the appellants hold that P&D failed to make the required findings for approval of the permit, namely those relating to compatibility with the character of the area, as well as requirements to underground support facilities.

The permit is subject to required findings, including both Coastal Development Permit findings as well as additional telecommunications facility ordinance findings that require consideration of compatibility with the character of the area. These findings are included in Attachment A of this staff report. The proposed project meets all required standards and all applicable findings can be made. As previously discussed, P&D found the project to be compatible with the character of the area; the proposed design is arguably one of the least intrusive facility designs in comparison to typical wireless communication facilities installed by other carriers and is intended to recede visually due to its de minimus presence along the street.

The County recognizes that while telecommunications facilities are, intrinsically, aesthetically undesirable, they serve a utility function that transcends commercial areas and travel corridors. There is an ever-growing reliance on cell phones for safety needs during times of emergencies and natural disasters. In residential areas, land lines are becoming more and more obsolete as people use cell phones as their primary (or only) phone, thus increasing the areas in which carriers are needing to provide coverage. Additionally, with increasing numbers of cell phone users and other personal communications devices (i.e. PDA, Blackberry, Smart-phones), capacity needs have also greatly increased. As a result, cellular carriers are now applying for facilities located in the residential areas to provide the needed coverage. This in turn, requires the utilitarian

¹ Sprint v. County of San Diego, March 13, 2007.

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technology to "blend" with the character of the community to the extent feasible. The facilities never cease to be utilitarian in design therefore the extent to which they "blend" is limited by the constraints of the technology. The County has found acceptable solutions to include painting the equipment a color that coincides with the surrounding environment; incorporating landscaping; utilizing existing infrastructure such as buildings, light standards, or utility poles; or utilizing RF transparent materials to mimic manmade (i.e. windmills, water tanks, church steeples) or natural features (trees, rocks) in the environment.

Typically wireless communication facilities thus far processed by the County include anywhere between three to twelve panel antennas at a single location; panel antennas are typically between four to six feet in length, and are mounted on new structures between 30 and 65 feet in height. Support facilities for the antennas tend to vary based on the specific carrier's network technology. Support facilities range from multiple ground mounted cabinets (typically 4'1 x3'w x5'h) to full sized equipment shelters (typically 10'1 x20'w x10'h). However, the proposed NextG design utilizes existing infrastructure in the community and equipment that is significantly smaller than the typical facilities. The NextG facility only requires a single antenna, approximately 2 feet in length, and a single cabinet approximately 6"l x6"w x2'h, mounted on an existing pole. By using the existing infrastructure, the facility does not introduce any additional vertical elements to the area and is maintaining the existing character of the area (see Attachment F, visual comparison).

Telecommunications facilities are required to comply with development standards found in Article II, Sec. 35-144F.4, unless the decision maker finds grounds for exempting the project from one or more standards. Development Standard 2.d requires support facilities (i.e. cabinets and shelters) be undergrounded if feasible. Because the cabinet for this particular facility is small, and is mounted on an existing utility pole where similar transformer boxes are commonly found, undergrounding the cabinet would not significantly decrease the visibility of the facility. Furthermore, the additional grading and increased project footprint associated with undergrounding would increase the potential for environmental impacts. Therefore, the approved permit on appeal was premised on the fact that the proposed design qualified for an exemption from the Telecommunications Development Standard 2.d.

"Pole-Mounted Equipment Conflicts with the Community's Goal of Undergrounding Utilities"

While the County encourages undergrounding of utility poles, it does not have authoritative discretion over long term plans for utility poles. The proposed project requires authorization by the utility pole owners, the Southern California Joint Pole Committee (JPC),² to locate the equipment on the specified pole. The JPC has discretion

² "The Joint Pole Committee is made up of a group of member representatives of utilities and municipalities in Southern California who hold joint equity interest in utility poles. Established by telephone, electricity and railroad companies, the Committee has existed since October 10, 1906. It was formed as a result of the need to limit the

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over which poles are available candidates for equipment collocation and considers the physical capacity, the technological compatibility, and future development intentions (undergrounding) for each pole. The JPC issued authorization for NextG to pursue development permits to locate their equipment on the specific pole. However, it should be noted that the subject permit does not prohibit the pole owners from future undergrounding plans. Rather, the County's telecommunications ordinance considers this possibility, stating "If at a later date the utility poles are proposed for removal as part of the undergrounding of the utility lines, the permit for the facilities shall be null and void." (Article II, Sec. 35-144F.3.1.b.2).

"Both the Land Use Development Code and the Montecito Community Plan Call for Adequate Setbacks between Habitable Structures and Telecommunications Facilities"

The Montecito Community Plan, "Electromagnetic" Section includes Goal E-M-1: to "Protect citizens from elevated electromagnetic fields until the potential risk from EMF exposure can be determined." This goal is followed by Policy E-M-1.1 which states that "In reviewing permits for EMF sensitive uses (e.g., residential, schools, etc.), RMD shall require an adequate building setback from EMF-generating sources to minimize exposure hazards." However, it should be noted that per the Telecommunications Act limitations, the County is restricted from regulating "on the basis of health affects to the extent that the proposed facility is shown to comply with the Commission's regulations concerning such emissions." (47 U.S.C.A. § 332 (c)(7)(B)(iv).)

For all telecommunications facilities, emissions reports are required to address the emissions of the particular facility's equipment and location, as well as whether additional setbacks or fencing requirements are needed to comply with the FCC's health and safety standards for public exposure. A report by Jerrold Bushberg, Ph.D., dated April 29, 2009, was submitted for the proposed project that concludes that the facility operates well below the FCC's health and safety standards, therefore no additional setbacks are required for the proposed facility (refer to report in Attachment H). The report notes that at a distance of 26 feet from the antenna (i.e., at essentially ground level), the facility emits at 0.3% of the FCC Maximum Permissible Exposure level.

The appellants also raise the issue of setback requirements in the telecommunications ordinance. Although most of the County permitting Tiers require setbacks from residentially zoned properties, the ordinance doesn't preclude facilities from being located within those setbacks or even being located on a residential parcel itself; rather, if a facility is located in those setbacks or on a residentially zoned parcel, then a Tier 4 permit is required, and the decision-maker must be able to make the finding that "the area proposed to be served by the telecommunications facility would otherwise not be served by the carrier proposing the facility." The only exception to this requirement is for Tier 1 "small facilities" which can be located in all zone districts, including residential, without the additional setback requirements (Article II, Sec. 35-144F.3.1).

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E. "Impacts of the Permit Will Be Compounded by Connection to NextG's System and by Anticipated Co-Location"

In this section the appellants argue "P&D abused its discretion in not considering the impacts of the project as a whole, including its potential cumulative impacts, particularly since the approval of one antenna facilitates the creation of the Distributed Antennas System and this reasonably foreseeable consequence must be assessed." As discussed in subsection "A" above, the project was considered as a "whole" under CEQA and was found to be categorically exempt by the CPUC on July 20, 2009. In the event additional antennas are proposed to be connected to the NextG network in the future, additional permits and CEQA review would be required at that time.

F. "P&D Issued the Permit Based Upon Inadequate, Incomplete or Unreliable Data"

"P&D Based its Permit Decision on Inadequate Information Concerning Project Alternatives"

The appellants contend that "NextG's permit applications provide no substantive alternative site analysis." However, the approved location was a direct result of an alternative site analysis for the site ESB11. NextG initially submitted an application 09LUP-00000-00318 for ESB11, adjacent to 280 Santa Rosa Lane. As part of the application review and at the request of the community, P&D required NextG to explore alternative site locations, including the potential for adding a new pole on which the facility could be mounted. NextG explored 13 additional poles in the area, and considered the potential to add a new pole on the northern end of Santa Rosa Lane where no poles currently exist. Of these options, only one existing pole provided a feasible alternative, that being the pole adjacent to 245 Santa Rosa Lane, on which the project was ultimately permitted under 10CDP-00000-00032.

"P&D Has Not Established that the Proposed Location May Be Used Legally as Proposed"

The proposed facility would be mounted on an existing utility pole, in the public right of way. The pole was legally erected and therefore continues to be a legal use. NextG was deemed a "public utility" by the California Public Utilities Commission on January 30, 2003 and therefore has legal access to the utility pole.

P&D examined the County's franchise ordinance with Southern California Edison ("SCE") to determine whether:

- A separate franchise agreement is required or permissible before allowing a telecommunications provider (e.g. NextG) to install facilities in the right-of-way; and
- Whether a telecommunications provider is entitled to attach its equipment to SCE poles and structures.

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California Public Utilities Code Section 7901, and the sections following, establish a statewide franchise for telephone companies. As a result, P&D understands that the County is preempted from collecting franchise fees from a telecommunications provider if that provider holds a Certificate of Public Convenience and Necessity issued by the California Public Utilities Commission ("CPUC"). Such providers are entitled to use public rights-of-way without charge under this statewide franchise. NextG Networks was granted a Certificate of Public Convenience and Necessity by the CPUC on April 12, 2007.

The County Franchise Agreement with SCE provides at Section 2.5 that "Except in those cases where Grantee (SCE) is required by State or Federal law to provide access to its Facilities, use of Grantee's Facilities for any purpose other that the uses permitted by this Ordinance shall require notice and consent by County."

As allowed by federal law, the California Public Utilities Commission ("CPUC") regulates telecommunications activities within the state. CPUC Decision 98-10-058, known as the *Rights-of-Way Decision* ("the *Decision*"), regulates telecommunications access to electric utility poles. The *Decision* requires electric utilities to allow pole access to telecommunications providers possessing a Certificate of Public Convenience and Necessity from the CPUC.

Since the CPUC requires that SCE provides access on their poles to telecommunications providers possessing a Certificate of Public Convenience and Necessity, P&D understands that the provision of the County Franchise Agreement with SCE requiring notice and consent of the County is inapplicable, and that no franchise or other charge may be imposed on a telecommunications provider for the use of County rights-of-way.

"P&D Acted upon Information Inadequate to Establish Compliance with Federal Communications Commission Regulations"

As discussed previously, consistent with Article II, Sec. 35-144F.5.1.a, NextG submitted a radiofrequency emissions report that predicts the proposed project's consistency with FCC standards based on modeling methods (see report in Attachment H). This report concluded that the facility would not only comply with FCC limits, but would operate at 0.3% of the applicable Maximum Permissible Exposure standards. FCC's guidelines specifically note that "Where a site contains only one antenna array, the maximum exposure at any point in the horizontal plane can be predicted by calculations." Therefore, additional measurements were not required. The report was written by a qualified third party engineer, Jerrold Bushberg, Ph.D., and raised no concerns warranting peer review.

³ Kennard, William E., et al. "A Local Government Official's Guide to Transmitting Antenna RF Emission Safety: Rules, Procedures, and Practical Guidance," June 2, 2000, p. 1.

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The field of radiofrequency analysis and FCC emissions compliance is limited in resources. The technicians who work in this field are either in the industry or do consulting for the industry. When the County initially implemented its telecommunications ordinance, all carriers submitted emissions reports prepared by their own companies. However, since 2005, the County of Santa Barbara began requiring that the report be prepared by a qualified third party, meaning a hired third party not directly employed by the company. This change was made to ensure that the radiofrequency engineers designing the site were not the same ones preparing reports for emissions compliance. In the event that these reports were unclear, poorly written, or raised concern, the County required the report to be peer reviewed by a different radiofrequency engineer. Mr. Bushberg has acted in the capacity of the County's peer reviewer in a number of cases. He has not, and would not have been asked to review a report he himself had written. It is standard practice for the County to accept the conclusions of reports prepared by the experts in the field, regardless of whether those experts were hired directly by the applicant, barring staff level review raising questions requiring expert review. Many consultants have acted in the capacity of the County's peer review on one project and an applicant's expert on another not unlike Bushberg.

"P&D Has Not Addressed Critical Issues Raised by the Board of Supervisors"

The Board of Supervisor Hearings on October 20, 2009 and December 1, 2009 were informational briefings in which no action was taken by the Board. Consistent with the Board's direction on December 1, 2009, staff returned to the Board of Supervisors on January 19, 2010 and presented a proposed work plan for a possible Telecommunications Ordinance update. P&D is working on an ordinance amendment as part of its 2010-2011 work plan.

5.0 PROJECT INFORMATION

5.1 Site Information

| Site Information | | |
|--------------------------------|--|--|
| Comprehensive Plan Designation | Urban, Coastal, Montecito Community Plan area, SRR-1.8 | |
| Ordinance, Zone | Article II, 20-R-1 | |
| Site Size | Existing utility pole (no footprint) | |
| Present Use & Development | Utility pole, residence adjacent | |
| Surrounding Uses/Zone(s) | North: Residential (2-E-1) | |
| | South: Residential (20-R-1) | |
| | East: Residential (2-E-1) | |
| | West: Residential (20-R-1) | |
| Access | Road right-of-way, Santa Rosa Lane | |
| Public Services | Water Supply: N/A | |
| | Sewage: N/A | |
| | Fire: Montecito Fire Department | |
| | Other: N/A | |

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5.2 Setting

The proposed project is located in the Montecito Community Plan area, in the right of way of Santa Rosa Lane near its intersection with Amapola Lane, adjacent to the property at 245 Santa Rosa Lane. The proposed antenna and equipment box would be mounted on an existing utility pole at this situs. The pole is set back approximately 90 feet from the nearest habitable structure.

5.3 Approved Project Description

The project is a request by the agent, Sharon James, for the applicant, NextG Networks of California, Inc.), for a Coastal Development Permit to allow construction and use of an unmanned, telecommunications facility under provisions of County code zoning requirements for property zoned 20-R-1.

The applicant is proposing to construct an unmanned wireless facility that would include one 26-inch omni antenna. The antenna is omnidirectional and would be mounted on an existing metal pole in the public right of way. The service wattage for the facility would have a maximum Effective Radiated Power (ERP) of 8 watts per channel. The antenna would be operating in the AWS bandwidth at 1710 - 2170 MHz with a maximum of 3 channels. The proposed facility would cover the intersection of Santa Rosa Lane and Amapola Lane with a range of approximately 1500 - 2000 feet in each direction, providing service for Metro PCS.

An equipment box approximately 6"x6"x32" would be mounted on the existing wood utility pole, with the base of the equipment box no less than 9 feet above ground level. The equipment would be serviced by Southern California Edison via a power pole connection through a connection handhole from existing utilities on an existing utility pole. The proposed facility would not require grading.

Access to the facility would be from the public road. The visible equipment would be painted gray or other color as recommended by the County to match the existing pole.

5.4 Background Information

NextG Networks has applied for permits to deploy a Distributed Antenna System (DAS) throughout the south coast of Santa Barbara County. They have also applied for, and obtained in some cases, similar permits from other local municipalities such as City of Goleta, City of Santa Barbara, and the City of Carpinteria.

NextG Networks submitted 47 Tier 1 applications (CDP/CDP/CDH) to the County since August 5, 2009. The applications are for the installation of 47 different "node" or antenna sites

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throughout the south coast, including areas in Goleta, Santa Barbara, Hope Ranch, Montecito and Summerland.

According to their applications, each of the node sites would consist of one (1) 26-inch omnidirectional whip antenna to be placed on an existing utility pole along with a 32" x 6" x 5" equipment box, also to be mounted on the pole. The facilities would be unlit and would not require any vegetation removal.

Also required as part of the network, is the addition of fiber optic cabling to connect the individual node sites. The cabling would either be strung along the existing aerial power lines, or trenched underground. Aerial and undergrounded cabling installations are generally exempt from development permits, with the exception of underground trenching in the Coastal zone. NextG currently has five applications for undergrounding cabling in the Coastal zone.

Historically, the County has permitted wireless communication coverage in residential areas proposed by carriers by siting facilities on the fringes of urban areas and directing the signal towards the needed coverage area. However, with the increasing number of cell phone users and other personal communications devices (i.e. PDA, Blackberry, Smart-phones), coverage (and capacity) needs have greatly increased. Specifically, in residential areas, land lines are becoming more and more obsolete as people use their cell phones as their primary (or only) phone. As a result, cellular carriers are now applying for facilities (e.g. macrocells camouflaged as "monopines") located in the residential areas to provide the needed coverage.

The DAS network is a different approach to coverage in the urban area. It uses multiple low-power node sites that work in conjunction with each other to distribute coverage throughout the residential areas in which they are located; this is different than traditional cellular facilities that have several (3-12) large (4-6 ft.) antennas at one location, requiring a large support structure to reach the same coverage objective.

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6.0 PROJECT ANALYSIS

6.1 Environmental Review

The California Public Utilities Commission (CPUC), assumed the lead agency status for purposes of CEQA. On July 20, 2009, the CPUC found the entirety of the "project" exempt under guidelines sections 15061(b)(3), 15301(b), 15301(c), 15302(c), and 15304(f), including all antenna installations, equipment installations, aerial cabling and trenching for the network throughout the South Coast of Santa Barbara County (including the cities of Goleta, Santa Barbara, and Carpinteria). The approved permit on appeal, involved a single antenna and equipment box (which was a small part of the entire project considered under CEQA) was premised on the fact that the entire network qualified for an exemption (copy available on the project website http://www.sbcountyplanning.org/projects/09CNS-00032NextG/index.cfm and P&D office).

6.2 Comprehensive Plan Consistency

| REQUIREMENT | DISCUSSION | |
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| Coastal Land Use Plan (CLUP) | | |
| CLUP Policy 2-6. Public or private services and resources (i.e., water, sewer, roads, etc.) are available to serve the proposed development. | Consistent. The existing road and utility pole are sufficient to serve the proposed project as evidenced by the Joint Pole Agreement issued on April 10, 2009 by the Southern California Joint Pole Committee for NextG to place their equipment on the subject pole. | |
| CLUP Policy 4-1. All commercial, industrial, planned development, and greenhouse projects shall be required to submit a landscaping plan to the County for approval. | Consistent. The CPUC recognizes NextG as a utility. Additionally, the subject pole sited amongst existing vegetation, and the proposed facility has been designed to blend in with the existing utility infrastructure (not impacting any ground footprint). Therefore, this policy does not apply. | |
| CLUP Policy 4-4. In areas designated as urban on the land use plan maps and in designated rural neighborhoods, new structures shall be in conformance with the scale and character of the existing community. Clustered development, varied circulation patterns, and diverse housing types shall be encouraged. | Consistent. No new structures are being erected as a part of this project. | |
| CLUP Policy 4-7. <i>Utilities, including television, shall be placed underground in new developments</i> | Consistent. No new developments are proposed as a part of this project, but rather the project utilizes | |

| REQUIREMENT | DISCUSSION |
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| in accordance with the rules and regulations of the California Public Utilities Commission, except where cost of undergrounding would be so high as to deny service. | existing infrastructure on which the facility would be mounted. In the event that the utility pole is undergrounded in the future, the subject permit would be null and void per Article II, Sec. 35-144F.3.1.b.2. |
| Montecito Community Plan | |
| Goal LU-M-2. Preserve roads as important aesthetic elements that help to define the semirural character of the community. Strive to ensure that all development along roads is designed in a manner that does not impinge upon the character of the roadway. | Consistent. The proposed project has been designed as a Distributed Antenna System (DAS) to minimize the size and visibility of the facility, and to blend with the existing character of the area. Tier 1 facilities are required to comply with size requirements as well as the telecommunications facility development standards of the MLUDC. The proposed project complies with both. |
| Visual, Goal VIS-M-2. Protect public and private open space as an integral part of the community's semi-rural character and encourage its retention. | Consistent. The subject project has been designed to be as minimally visually intrusive as possible; the equipment meets the "small facility" criteria and would be mounted on an existing utility pole (reducing the need for construction of a new freestanding support structure) and the components would be painted to blend with the utility infrastructure. Moreover, the components are small with the equipment box narrower than the pole and extending only 6" in depth and the whip antenna only 26" in length. By minimizing the presence of the facility in these ways, the project preserves the existing streetscape character of the area. |
| Electromagnetic, Goal E-M-1. The protection of citizens from elevated electromagnetic fields until the potential risk from EMF exposure can be determined. | Consistent. "FCC rules require transmitting facilities to comply with RF exposure guidelines. The limits established in the guidelines are designed to protect the public health with a very large margin of safety. These limits have been endorsed by federal health and safety agencies such as the Environmental Protection Agency and the Food and Drug Administration. The FCC's rules have been upheld by a Federal Court of Appeals. As discussed below, most facilities create maximum exposures that are only a small fraction of the limits. Moreover, the limits themselves are many times below levels that are generally |

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| | accepted as having the potential to cause adverse health effects." An RF/EMF report was prepared by Jerrold Bushberg Ph.D. on April 29, 2009 for the proposed project which evaluated the emissions for the proposed NextG facility (see report in Attachment H). The report concludes that RF exposure from the proposed telecommunications facility would be less than 0.3% of the applicable FCC public exposure limit at ground level (approximately 26 feet) and therefore the facility is well within the |
| Electromagnetic, Policy E-M-1.1. In reviewing permits for EMF sensitive uses (e.g., residential, schools, etc.), P&D (formerly RMD) shall require an adequate building setback from EMF-generating sources to minimize exposure hazards. | FCC's health and safety limits. Consistent. As discussed above, the proposed project complies with all applicable FCC health and safety requirements, and as such no additional setbacks are required for this project. |

6.3 Zoning: Article II Compliance

| REQUIREMENT | DISCUSSION |
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| Sec. 35-144F.3 Processing Requirements | |
| Sec.35-144F.3.1.b.1. Antennas shall be limited to panel antennas or omnidirectional antennas. Antennas and associated equipment shall not exceed a combined volume of one cubic foot. | Consistent. The proposed antenna is an omnidirectional antenna. Additionally, the volume of the antenna (183 cubic inches) and associated equipment (1488 cubic inches), combined, equals 1671 cubic inches (0.967 cubic feet). Therefore the project complies with this standard. |
| Sec.35-144F.3.1.b.2. The antenna shall be mounted on either an existing operational public utility pole or similar support structure (e.g., streetlight standard) that is not being considered for removal, as determined by the Director, or the roof of an existing structure. More than two antennas shall not be located on a single utility pole or similar structure unless it is determined that there will not be a negative visual impact. If at a later date the utility poles are proposed for removal as part of the undergrounding of the utility lines, the permit for | Consistent. The proposed facility would be mounted on an existing utility pole. While the County encourages undergrounding of utility poles, it does not have authoritative discretion over long term plans for utility poles. The proposed project requires authorization by the utility pole owners, the Southern California Joint Pole Committee (JPC), to locate the equipment on the specified pole. The JPC has discretion over which poles are available candidates for equipment collocation and considers the physical capacity, the technological |

⁴ Kennard, William E., et al. "A Local Government Official's Guide to Transmitting Antenna RF Emission Safety: Rules, Procedures, and Practical Guidance," June 2, 2000, p. 1.

| REQUIREMENT | DISCUSSION |
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| the facilities shall be null and void. | compatibility, and future development intentions (undergrounding) for each pole. The JPC issued authorization for NextG to pursue development permits to locate their equipment on the specific pole, and therefore it is assumed that no current plans for undergrounding apply to this pole. |
| Sec.35-144F.3.1.b.3. The highest point of the antenna either does not exceed the height of the existing utility pole or similar support structure that it is mounted on, or in the case of an omnidirectional antenna, the highest point of the antenna is no higher than 40 inches above the height of the structure at the location where it is mounted. | Consistent. The proposed antenna would be mounted on the existing 71'10" utility pole at a height of 28'10" (not exceeding 31'0") and therefore complies with this requirement. |
| Sec. 35-144F.4 Development Standards Telecommunication facilities shall comply in all inste | ances with the following development standards. |
| Standard 1.a. The facility shall comply with the setback requirements of the zone district that the facility is located in except as follows: (1) Antennas may be located within the setback area without approval of a modification in compliance with Subsection 35.82.060.I (Conditions, restrictions, and modifications) or Subsection 35.82.080.H (Conditions, restrictions, and modifications) provided they are installed on an existing, operational, public utility pole, or similar existing support structure. (2) Underground equipment (e.g., equipment cabinet) may be located within the setback area and rights-of-way provided that no portion of the facility shall obstruct existing or proposed sidewalks, trails, and vehicular ingress or egress. (3) A modification to the setback is granted in compliance with Subsection 35.472.060.I (Conditions, restrictions and modifications), or Section 35.472.080.H (Conditions, restrictions or modifications). | Consistent. The proposed facility would be installed on an existing, operational, public utility pole. |
| Standard 1.b. The height of antennas and associated antenna support structures (e.g., lattice towers, monopoles) are limited to 50 feet in height and shall comply with the height limits specified in Subsection C. (Processing) above. | Consistent. The proposed antenna would be mounted on the existing 71'10" utility pole at a height of 28'10" (not exceeding 31'0") and therefore complies with this requirement. |

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| (1) This height limit may be increased to a maximum of 75 feet when technical requirements dictate. | |
| (2) Antennas and antenna support structures used in connection with wireless communication facilities may exceed 75 feet if: (a) The antenna is mounted on or within an existing building and the highest point of the antenna does not protrude above the roof of the building, including parapet walls and architectural facades, that the antenna is mounted on; or (b) The antenna is mounted on an existing, operational public utility pole or similar support structure (e.g., street light standard), as determined by the Director, provided the highest point of the antenna does not exceed the height of the existing utility pole or similar structure that it is mounted on. | |
| Standard 1.c. The general public is excluded from the facility by fencing or other barriers that prevent access to the antenna, associated support structure and equipment shelter. | Consistent. The proposed equipment would be mounted on an existing utility pole, at a height (9') above reach of the general public. |
| Standard 1.d. Facilities proposed to be installed in or on a structure or site that has been designated by the County as a historical landmark shall be reviewed and approved by the Historical Landmark Advisory Commission, or the Board on appeal. | Consistent. The proposed project is not located in or on a designated historical landmark. |
| Standard 1.e. The facility shall comply at all times with all Federal Communication Commission rules, regulations, and standards. | Consistent. A radiofrequency emissions report was submitted as part of the project application. The report by Jerrold Bushberg, Ph.D., dated April 29, 2009, concluded that the proposed facility would meet the FCC requirements. |
| Standard 1.f. The facility shall be served by roads and parking areas consistent with the following requirements: (1) New access roads or improvements to existing access roads shall be limited to the minimum required to comply with County regulations concerning roadway standards and regulations. (2) Existing parking areas shall be used whenever possible, and new parking areas shall not exceed 350 square feet in area. (3) Newly constructed roads or parking areas shall, whenever feasible, be shared with subsequent telecommunication facilities or other allowed uses. | Consistent. The proposed facility would be located in the road right-of-way in which access would be provided. Temporary parking for maintenance activities would be provided by onstreet public parking in the vicinity. |

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| Standard 1.g. The facility shall be unlit except for the following (1) a manually operated or motion-detector controlled light that includes a timer located above the equipment structure door that shall be kept off except when personnel are actually present at night, and (2) Where an antenna support structure is required to be lighted, the lighting shall be shielded or directed to the greatest extent feasible so as to minimize the amount of light that falls onto nearby residences. | Consistent. No lighting is proposed however a standard condition of approval is proposed to ensure compliance with this standard. | |
| Standard 1.h. The visible surfaces of support facilities (e.g., vaults, equipment rooms, utilities, equipment enclosures) shall be finished in nonreflective materials. | Consistent. The antennas, mounting brackets and equipment boxes would be painted gray with non-reflective paint or other non-reflective finish to blend into the metal utility pole. | |
| Standard 1.i. Structures, poles, towers, antenna supports, antennas, and other components of each telecommunication site shall be initially painted and repainted as necessary with a nonreflective paint. The lessee shall not oppose the repainting of their equipment in the future by another lessee if an alternate color is deemed more appropriate by the review authority in approving a subsequent permit for development. | Consistent. The proposed facility would be painted gray to blend with the utility pole. Painting would be confirmed by condition compliance monitoring prior to final building inspection. In addition, standard conditions of approval require the facility maintained in a state of good condition at all times, including painting. | |
| Standard 1.j. Landscaping. The facility shall be constructed so as to maintain and enhance existing vegetation through the implementation of the measures (1) through (6). | Consistent. No new structures are proposed to be constructed therefore no disturbance to existing vegetation is proposed. | |
| Sec. 35-144F.4.2 Development Standards Telecommunication facilities shall comply with the following development standards in all instances except that the decision-maker may exempt a facility from compliance with one or more of the following development standards. | | |
| Standard 2.a. The primary power source shall be electricity provided by a public utility. Backup generators shall only be operated during power outages and for testing and maintenance purposes. Any new underground utilities shall contain additional capacity (e.g., multiple conduits) for additional power lines and telephone lines if the site is determined to be suitable for collocation. | Consistent. Primary power to the facility would be provided by Southern California Edison via the utility pole. No new utility conduits, or back-up generators are proposed. | |
| Standard 2.b. In the Inland area disturbed areas associated with the development of a facility shall not occur within the boundaries of an environmentally sensitive habitat area. See Subsection D.3.e below regarding allowance for | Consistent. The proposed facility would not be located within a designated environmentally sensitive habitat area. | |

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| disturbance within environmentally sensitive habitat areas located within the Coastal Zone. | |
| Standard 2.c. Collocation on an existing support structure shall be required unless: | Consistent. The proposed project is collocating on an existing utility pole. |
| 1) The applicant can demonstrate that reasonable efforts, acceptable to the decision-maker, have been made to locate the antenna(s) on an existing support structure and such efforts have been unsuccessful; or | |
| 2) Collocation cannot be achieved because there are no existing facilities in the vicinity of the proposed facility; or | |
| 3) The decision-maker determines that collocation of the proposed facility would result in greater visual impacts than if a new support structure were proposed. | |
| Standard 2.d. Support facilities (e.g., vaults, equipment rooms, utilities, equipment enclosures) shall be located underground, if feasible, if they would otherwise be visible from public viewing areas (e.g., public roads, trails, recreational areas). | Consistent. The support facilities consist of a 32"x 6"x 6" equipment box, painted gray and mounted on the utility pole; no ground disturbance is proposed. Since the box meets the criteria for Tier 1 "small facilities" it would not significantly increase the visibility of the facility. The equipment box is slimmer than the utility pole and extrudes no further than 6" from the pole. Therefore, it is largely camouflaged and no more obtrusive than other utility boxes on utility poles. Additionally, the whip antenna is only 26" in height. Furthermore, not undergrounding the equipment box eliminates the potential for adverse impacts associated with grading or ground disturbance. Therefore, this project qualifies for an exemption from this standard and can be found consistent. |
| Standard 2.e. In the Coastal Zone, disturbed areas associated with the development of a facility shall be prohibited on prime agricultural soils. An exemption may be approved only upon a showing of sufficient evidence that there is no other feasible location in the area or other alternative facility configuration that would avoid or minimize impacts to prime soils. | Consistent. The proposed project is not located in the Coastal Zone or on prime agricultural soils. |
| Standard 2.f. In the Coastal Zone, facilities shall | Consistent. The proposed project is not located in |

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| be prohibited in areas that are located between the sea and the seaward side of the right-of-way of the first through public road parallel to the sea, unless a location on the seaward side would result in less visible impact. An exemption may be approved only upon showing of sufficient evidence that there is no other feasible location in the area or other alternative facility configuration that would avoid or minimize visual impacts. | the Coastal Zone or between the sea and the seaward side of the right-of-way of the first through public road parallel to the sea. |
| Sec. 35-144F.4.3 Development Standards Telecommunication facilities shall comply with the feature and exemption from one or more of the following standards conditional use permit approved by the Planning Conditional variables. | dards is requested, then the facility requires a major |
| Standard 3.a. A facility shall not be located so as to silhouette against the sky if substantially visible from a state-designated scenic highway or roadway located within a scenic corridor as designated on the Comprehensive Plan maps. | Consistent. The proposed facility would include a 26" whip antenna mounted on an existing utility pole amongst surrounding trees and development, therefore the facility itself would not silhouette against the sky nor would it be substantially visible. |
| Standard 3.b. A facility shall not be installed on an exposed ridgeline unless it blends with the surrounding existing natural or manmade environment in a manner that ensures that it will not be substantially visible from public viewing areas (e.g., public road, trails, recreation areas) or is collocated in a multiple user facility. | Consistent. The proposed facility is not proposed to be located on an exposed ridgeline however the facility has been designed to blend with the existing utility infrastructure to minimize its visibility from the surrounding area. |
| Standard 3.c. A facility that is substantially visible from a public viewing area shall not be installed closer than two miles from another substantially visible facility unless it is an existing collocated facility situated on multiple user site. | Consistent. There are no significantly visible (large monopole facilities) nearby. Although there are other DAS proposed facilities within 2 miles of the proposed project location, the other proposed facilities and the subject facility are designed to blend with the existing utility infrastructure and would not be substantially visible, as discussed above under Standard 2.d. |
| Standard 3.d. Telecommunication facilities that are substantially visible from public viewing areas shall be sited below the ridgeline, depressed or located behind earth berms in order to minimize their profile and minimize any intrusion into the skyline. In addition, where feasible, and where visual impacts would be reduced, the facility shall be designed to look like the natural or manmade environment (e.g., designed to look like a tree, rock outcropping, or streetlight) or designed to integrate | Consistent. The proposed project has been designed to blend with the existing utility infrastructure. The whip antenna is only 26" in height and the equipment box is slimmer than the utility pole and extrudes no further than 6" from the pole. Additionally, the equipment would be painted gray to match the pole. Therefore, it is largely camouflaged and no more obtrusive than other utility boxes on utility poles. |

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| into the natural environment (e.g., imbedded in a hillside). These facilities shall be compatible with the existing surrounding environment. | |
| Standard 3.e. In the Coastal Zone, disturbed areas associated with the development of a facility shall not occur within the boundaries or buffer of an environmentally sensitive habitat area. An exemption may be approved only upon showing of sufficient evidence that there is no other feasible location in the area or other alternative facility configuration that would avoid impacts to environmentally sensitive habitat areas. If an exemption is approved with regard to this standard, the County shall require the applicant to fully mitigate impacts to environmentally sensitive habitat consistent with the provisions of the certified Local Coastal Program. Associated landscaping in or adjacent to environmentally sensitive habitat areas shall be limited to locally native plant species appropriate to the habitat type and endemic to the watershed. Invasive, nonindigenous plant species that tend to supplant native species shall be prohibited. | Consistent. The proposed project is not located in the Coastal Zone or within an environmentally sensitive habitat area. |

6.4 Design Review

Per Section 35-144F.3.5, commercial telecommunications facilities are subject to design review by the Board of Architectural Review, if (a), "the facility includes the construction of a new structure or the remodel of or addition to an existing structure that is otherwise subject to Design Review by the Board of Architectural Review pursuant to Section 35-184" or (b), "the facility is under the jurisdiction of the Planning Commission." The utility pole on which the facility would be located would not otherwise require design review, nor is a Tier 1 permit under the jurisdiction of the Planning Commission. Therefore design review was not required.

7.0 APPEALS PROCEDURE

The action of the Planning Commission may be appealed to the Board of Supervisors within 10 calendar days of said action. The appeal fee to the Board of Supervisors is \$643.

The action of the Board of Supervisors is <u>not</u> appealable to the Coastal Commission.

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ATTACHMENTS

- Findings A.
- Approved Permit B.
- Exemption C.
- Appeal Application and Letter Visual Comparison Photo D.
- E.
- Project Photo Simulation F.
- Project Plans G.
- **Bushberg Emissions Report** H.

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ATTACHMENT A: FINDINGS

1.0 CEQA

1.1 CEQA Guidelines Exemption Findings

1.1.1 The proposed project was found to be exempt from environmental review pursuant to Sections 15061(b)(3), 15301(b), 15301(c), 15302(c), and 15304(f) of the Guidelines for Implementation of the California Environmental Quality Act (CEQA) by the California Public Utilities Commission (CPUC). Please see the Notice of Exemption, prepared by the CPUC on July 20, 2009 included in Attachment C of the staff report.

2.0 ARTICLE II ZONING ORDINANCE

2.1 Coastal Development Permit Findings (Sec. 35-169.5)

2.1.1 The proposed development conforms: 1) To the applicable provisions of the Comprehensive Plan, including the Coastal Land Use Plan; 2) The applicable provisions of this Article or the project falls within the limited exceptions allowed in compliance with Section 35-161 (Nonconforming Use of Land, Buildings and Structures).

As discussed in Sections 6.2 and 6.3 of this staff report, and incorporated herein by reference, the project would be in conformance with all applicable provisions of the Comprehensive Plan and the Coastal Land Use Plan as well as with the applicable provisions of Article II.

2.1.2 The proposed development is located on a legally created lot.

The proposed project is located within the public right-of-way, on an existing utility pole that was legally erected.

2.1.3 The subject property and development on the property is in compliance with all laws, rules and regulations pertaining to zoning uses, subdivisions, setbacks and any other applicable provisions of this Article, and any applicable zoning violation enforcement fees and processing fees have been paid. This subsection shall not be interpreted to impose new requirements on legal nonconforming uses and structures in compliance with Division 10 (Nonconforming Structures and Uses).

The utility pole upon which the facility would be mounted was legally erected and does not constitute a zoning violation. There are no zoning violations associated with the existing utility pole.

2.2 Commercial Telecommunication Facility Findings (Sec. 35-144F.7)

2.2.1 The facility will be compatible with existing and surrounding development in terms of land use and visual qualities.

As discussed in Sections 4.0 and 6.3 of the staff report and incorporated here by reference, the facility is designed to retain the visual character of the area by utilizing the existing utility pole and utilizing equipment that conforms to the Tier 1 "small facilities" requirements. Moreover, the equipment box is slimmer than the utility pole and extrudes no further than 6" from the pole; it is largely camouflaged and no more obtrusive than other utility boxes on utility poles. Furthermore, the antennas would be painted gray to blend with the pole. Therefore the proposed project preserves the existing streetscape character of the area and this finding can be made.

2.2.2 The facility is located so as to minimize its visibility from public view.

The facility is designed to blend with the utility infrastructure and therefore minimize its appearance as a telecommunications facility. Therefore this finding can be made.

2.2.3 The facility is designed to blend into the surrounding environment to the greatest extent feasible.

As discussed in Sections 4.0 and 6.3 of the staff report and incorporated here by reference, collocating on the existing utility infrastructure blends the facility with the existing visual character of the area. Therefore this finding can be made.

2.2.4 The facility complies with all required development standards unless granted a specific exemption by the decision-maker as provided in Section 35-144F.4.

Exemption provision Section 35-144F.4.2 states that an exemption may only be granted if the review authority finds, after receipt of sufficient evidence, that failure to adhere to the standard in the specific instance (a) will not increase the visibility of the facility, and will not decrease public safety, and will not result in greater impact to coastal resources, including but not limited to sensitive habitat, coastal waters, and public access; or (b) is required due to technical considerations such that if the exemption were not granted the area proposed to be served by the facility would otherwise not be served by the carrier proposing the facility, or (c) would avoid or reduce the potential for environmental impacts, and will not increase the visibility of the facility, and will not decrease public safety, and will not result in greater impact to coastal resources, including but not limited to sensitive habitat, coastal waters, and public access.

As analyzed in Sections 4.0 and 6.3 of the staff report and incorporated herein by reference, the proposed project complies with all required development standards of the telecommunication ordinance, with the exception of Development standard 2.d which requires support facilities (i.e. cabinets and shelters) be undergrounded if feasible.

Because the cabinet for this particular facility is small, and is mounted on an existing utility pole (similar to common transformer boxes), undergrounding the cabinet would not significantly decrease the visibility of the facility. Furthermore, the additional grading and increased project footprint of a non-pole project would increase the potential for environmental impacts, more than the proposed project. Therefore, the proposed design qualifies for an exemption from the Telecommunications Development Standard 2.d and this finding can be made.

2.2.5 The applicant has demonstrated that the facility will be operated within the allowed frequency range permitted by the Federal Communications Commission and complies with all other applicable health and safety standards.

The applicant submitted a projected emission report by Jerrold Bushberg, Ph.D., dated April 29, 2009, as a part of the project application for 10CDP-00000-00032 (contained in Attachment F of this staff report). The report concludes that RF exposure from the proposed telecommunications facility would be less than 0.3% of the applicable FCC public exposure limit at ground level (approximately 26 feet) and therefore the facility is well within the FCC's health and safety limits. Therefore this finding can be made.

2.3 Montecito Community Plan Overlay District Findings (Sec. 35-215)

2.3.1 In addition to the findings that are required for approval of a development project (as development is defined in the Santa Barbara County Coastal Plan), as identified in each section of Division 11 - Permit Procedures of Article II, a finding shall also be made that the project meets all the applicable development standards included in the Montecito Community Plan of the Coastal Land Use Plan.

As discussed in Sections 6.2 and 6.3 of the staff report and incorporated herein by reference, the project would be in conformance with all applicable provisions of the Montecito Community Plan of the Coastal Land Use Plan. Therefore this finding can be made.

2.3.2 For projects subject to discretionary review, a finding shall be made that the development will not adversely impact recreational facilities and uses.

The proposed project is located in the public right-of-way on Santa Rosa Lane, which is zoned residential (20-R-1). No parks or recreational facilities exist within the immediate vicinity of the proposed project, although a designated trail easement exists on Santa Rosa Lane. The proposed project has been designed to be minimally invasive by utilizing existing infrastructure and utilizing equipment that meets the Tier 1 "very small facility" criteria. Furthermore, the project would not have a ground footprint since the proposed antenna and equipment would be mounted on an existing operational public utility pole and would therefore not physically interfere with existing recreational use of the public road. Therefore this finding can be made.

2.4 Water and Other Public Services Findings (Sec. 35-60.5)

2.4.1 Prior to issuance of a Coastal Development Permit, the County shall make the finding, based on information provided by environmental documents, staff analysis, and/or the applicant, that adequate public or private services and resources (i.e., water, sewer, roads, etc.) are available to serve the proposed development.

The proposed project consists of an unmanned wireless telecommunications facility. Construction and operation of the proposed facility would not require any water or sewer services. The facility would be mounted on an existing operational utility pole in the public right of way along Santa Rosa Lane, to which access will be provided. Therefore this finding can be made.

COASTAL DEVELOPMENT PERMIT

Case No.: 10CDP-00000-00032

Project Name: NextG Networks Cellular Antenna #ESB11

Project Address: Public Right-of-Way on Santa Rosa Lane, Montecito

Assessor's Parcel No.: Adjacent to 007-290-006

Applicant Name: Sharon James, NextG Communications

The Planning and Development Department hereby approves this Coastal Development Permit for the development described below, based upon the required findings and subject to the attached terms and conditions.

Date of Approval: May 21, 2010

Associated Case Number(s): none

Project Description Summary: See attached.

Project Specific Conditions: See attached.

Permit Compliance Case: X Yes No.

Permit Compliance Case No:

Appeals: The approval of this Coastal Development Permit may be appealed to the Montecito Planning Commission by the applicant or an aggrieved person. The written appeal and accompanying fee must be filed with the Planning and Development Department at either 123 East Anapamu Street, Santa Barbara, or 624 West Foster Road, Suite C, Santa Maria, by 5:00 p.m. on or before May 31, 2010.

The final action by the County on this Coastal Development Permit, including any appeals to the Planning Commission and Board of Supervisors, may not be appealed to the California Coastal Commission. Therefore a fee is required to file an appeal of this Coastal Development Permit.

Terms of Permit Issuance:

- 1. Work Prohibited Prior to Permit Issuance. No work, development, or use intended to be authorized pursuant to this approval shall commence prior to issuance of this Coastal Development Permit and/or any other required permit (e.g., Building Permit). Warning! This is not a Building/Grading Permit.
- **2. Date of Permit Issuance.** This Permit shall be deemed effective and issued on June 1, 2010 provided an appeal of this approval has not been filed.
- 3. Time Limit. The approval of this Coastal Development Permit shall be valid for one year from the date of approval. Failure to obtain a required construction, demolition, or grading permit and to lawfully commence development within two years of permit issuance shall render this Coastal Development Permit null and void.

NOTE: Approval and issuance of a Coastal Development Permit for this project does not allow construction or use outside of the project description, terms or conditions; nor shall it be construed to be an approval of a violation of any provision of any County Policy, Ordinance or other governmental regulation.

Project Name: NextG Cellular Antenna

Page 2

Owner/Applicant Acknowledgement: Undersigned permittee acknowledges receipt of this pending approval and agrees to abide by all terms and conditions thereof.

| William HARKNESS | White | 15/21/10 |
|----------------------------|------------------------|----------|
| Print Name | Signature | Date |
| Planning and Development D | epartment Approval by: | |
| Mesan Vonverd | WIC. | ,5/21/10 |
| Print Name | Signature | Date |
| Planning and Development D | epartment Issuance by: | |
| | | |
| Print Name | Signature | Date |

Project Name: NextG Cellular Antenna

Project Address: ROW Santa Rosa Lane, Montecito

APN: Adjacent to 007-290-006

Attachment A, Page 1

ATTACHMENT A: PROJECT SPECIFIC CONDITIONS

1. This Coastal Development Permit is based upon and limited to compliance with the project description, the exhibits, and conditions of approval set forth below. Any deviations from the project description, exhibits or conditions must be reviewed and approved by the County for conformity with this approval. Deviations may require approved changes to the permit and/or further environmental review. Deviations without the above described approval will constitute a violation of permit approval.

The project description is as follows:

The project is a request by the agent, Sharon James, for the applicant, NextG Networks of California, Inc.), for a Coastal Development Permit to allow construction and use of an unmanned, telecommunications facility under provisions of County code zoning requirements for property zoned 20-R-1. The facility would be located adjacent to 245 Santa Rosa Lane in the public right of way.

The applicant is proposing to construct an unmanned wireless facility that would include one 26-inch omni antenna. The antenna is omnidirectional and would be mounted on an existing wood pole in the public right of way. The service wattage for the facility would have a maximum Effective Radiated Power (ERP) of 8 watts per channel. The antenna would be operating in the AWS bandwidth at 1710 – 2170 MHz with a maximum of 3 channels. The proposed facility would cover the intersection of Santa Rosa Lane and Amapola Lane with a range of approximately 1500 – 2000 feet in each direction, providing service for Metro PCS.

An equipment box approximately 6"x6"x32" would be mounted on the existing wood utility pole, with the base of the equipment box no less than 9 feet above ground level. The equipment would be serviced by Southern California Edison via a power pole connection through a connection handhole from existing utilities on an existing utility pole. The proposed facility would not require grading.

Access to the facility would be from the public road. The visible equipment would be painted gray or other color as recommended by the County to match the existing pole.

The grading, development, use, and maintenance of the property, the size, shape, arrangement, and location of structures, parking areas and landscape areas, and the protection and preservation of resources shall conform to the project description above, the referenced exhibits, and conditions of approval below. The property and any portions thereof shall be sold, leased or financed in compliance with this project description and the approved exhibits and conditions of approval hereto. All plans (such as Landscape and Tree Protection Plans) shall be implemented as approved by the County.

2. Abandonment/Site Restoration. If use of the facility is discontinued for a period of more than one year, the facility shall be considered abandoned. Except or unless the period is extended in the time and manner permitted by the County Code, the facility shall be removed and the site shall be restored to its natural state; provided, further that the landowner may request that the facility remain and obtains the necessary permits. The Applicant shall remove all support structures, antennas, equipment and associated improvements and restore the site to its natural pre-construction state within 180 days of the date of receipt of the County's notice to abate. If such facility is not removed within 180 days, the County may remove the facility at the Applicant's expense. Plan

Project Name: NextG Cellular Antenna

Project Address: ROW Santa Rosa Lane, Montecito

APN: Adjacent to 007-290-006

Attachment A, Page 2

Requirements: The Applicant shall restate the provisions for abandonment/site restoration on the construction plans. Timing: Prior to issuance of the Coastal Development Permit for the construction of the facility, the Applicant shall post a performance security in order to cover the cost of removal in the event that such facility is abandoned. The security shall equal 10 percent of the installation value of the facility as determined at the time of granting the building permit. Monitoring: P&D staff shall conduct a site inspection 12 months after notification is received by the County that the facility will no longer be in use to ensure that such facility has been removed. The performance security shall be retained until this condition is fully satisfied.

- 3. Colors and Painting. All exposed equipment and facilities (i.e., antennas, equipment cabinets, etc.) shall be finished in non-reflective materials (including painted surfaces) and shall be painted gray to match the existing pole. Plan Requirements and Timing: Color specifications shall be identified on final building plans submitted by the Permittee to the County. Monitoring: P&D staff shall conduct a Project Compliance Inspection prior to and as condition precedent to obtaining Final Building Inspection Clearance.
- 4. Construction Hours. Construction activity for site preparation and placement of the proposed communications equipment shall be limited to the hours between 7 a.m. and 4 p.m. Monday through Friday (excluding state holidays). Construction equipment maintenance shall be limited to the same hours. Non-noise generating construction activities such as interior painting are not subject to these restrictions. Plan Requirements: A sign stating these restrictions shall be provided by the applicant and posted at the project site. Timing: The sign shall be in place prior to land use clearance and throughout grading and construction activities. Agreements shall be submitted prior to Coastal Development Permit issuance for any development. Monitoring: Building Inspectors and Permit Compliance shall spot check and respond to complaints.
- 5. Transfer of Ownership. In the event that the Permittee sells or transfers its interest in the telecommunications facility, the Permittee and/or succeeding carrier shall assume all responsibilities concerning the Project and shall be held responsible by the County for maintaining consistency with all conditions of approval. The succeeding carrier shall immediately notify the County and provide accurate contact and billing information to the County for remaining compliance work for the life of the facility. Plan Requirements: The Permittee shall notify the County of changes in ownership to any or all of the telecommunications facility. Timing: Notification of changes in facility ownership shall be given by the Permittee and/or succeeding carrier to the County within 30 days of such change.
- 6. Exterior Lighting. Except as otherwise noted in the Project Description and approved plans, the antenna support structure shall not be lighted. The leased premises shall likewise be unlit except for a manually operated light which limits lighting to the area of the equipment in the immediate vicinity of the antenna support structure. The light fixture shall be fully shielded, full cut off and downcast so as to avoid spillage onto adjacent areas and shall be kept off except when maintenance personnel are actually present at night. Plan Requirements: The Permittee shall restate the lighting limitations on the construction plans. Plans for exterior lighting, if any are provided, shall be submitted to the County for review and approval. Timing: This condition shall be satisfied prerequisite to approval of building permit issuance. Monitoring: P&D staff shall conduct a Project Compliance Inspection prior to and as condition precedent to obtaining Final Building Inspection Clearance and respond to any complaints.
- 7. **Underground Utilities.** Except as otherwise noted in the Project Description and approved plans, all utilities necessary for facility operation, including coaxial cable, shall be placed underground.

Project Name: NextG Cellular Antenna

Project Address: ROW Santa Rosa Lane, Montecito

APN: Adjacent to 007-290-006

Attachment A, Page 3

Conduit shall be sized so as provide additional capacity to accommodate utilities for other telecommunication carriers should collocation be pursued in the future. If at a later date the utility poles are proposed for removal as part of the undergrounding of the utility lines, the permit for the facilities shall be null and void. **Plan Requirements:** The Permittee shall restate the provisions for utility undergrounding on all building and grading plans. **Timing:** This condition shall be satisfied prerequisite to building permit issuance for the Project. **Monitoring:** P&D shall check plans prior to approval of building plans for the Project.

- 8. FCC Compliance. The facility shall, at all times, be operated in strict conformance with: (i) all rules, regulations standards and guidance) published by the Federal Communications Commission ("FCC"), including but not limited to, safety signage, Maximum Permissible Exposure ("MPE") Limits, and any other similar requirements to ensure public protection or (ii) all other legally binding, more restrictive standards subsequently adopted by federal agencies having jurisdiction. Prior to the addition or replacement of equipment which has the potential to increase RF emissions at any public location beyond that estimated in the initial application and within the scope of the project description, the Permittee shall submit, to the Director, a report providing the calculation of predicted maximum effective radiated power including the new equipment as well as the maximum cumulative potential public RF exposure expressed as a percentage of the public MPE limit attributable to the site as a whole. Plan Requirements and Timing: The Permittee shall restate the provisions for MPE compliance on all building plans. Monitoring: P&D staff shall review, or obtain a qualified professional to review, all RF field test reports and estimated maximum cumulative RF exposure reports providing calculations of predicted compliance with the public MPE standard. P&D staff shall monitor changes in RF standards, as well as equipment modifications, additions and RF exposures at the Project site as reported by the applicant that might trigger the requirement for field-testing.
- 10. **Project Review.** Five years after issuance of the Coastal Development Permit for the Project and no more frequently than every five years thereafter, the Director may undertake inspection of the Project and require the Permittee to modify its facilities subject to the following parameters:
 - a. Modification Criteria. Modifications may be required if, at the time of inspection it is determined that: (i) the Project fails to achieve the intended purposes of the development standards listed in the Telecommunications Ordinance for reasons attributable to design or changes in environmental setting; or (ii) more effective means of ensuring aesthetic compatibility with surrounding uses become available as a result of subsequent technological advances or changes in circumstance from the time the Project was initially approved.
 - b. **Modification Limits.** The Director's decision shall take into account the availability of new technology, capacity and coverage requirements of the Permittee, and new facilities installed in the vicinity of the site. The scope of modification, if required, may include, but not be limited to a reduction in antenna size and height, collocation at an alternate permitted site, and similar site and architectural design changes. However, the Permittee shall not be required to undertake changes that exceed ten percent (10%) of the total cost of facility construction. The decision of the Director as to modifications required herein shall be deemed final unless appealed pursuant to the County Code.

Plan Requirements: The Permittee shall restate the provisions for emissions compliance on all building plans. **Timing:** Building permit valuation data shall be used for the purpose establishing the estimated cost of installing the facility. At the time of subsequent inspection and upon reasonable notice, the Permittee shall furnish supplemental documentation as necessary to evaluate new

Project Name: NextG Cellular Antenna

Project Address: ROW Santa Rosa Lane, Montecito

APN: Adjacent to 007-290-006

Attachment A, Page 4

technology, capacity and coverage requirements of the Permittee. **Monitoring:** P&D staff shall conduct periodic inspections and ascertain whether more effective mitigation is available with regard to design and technology. In the event of violation, the permit shall be referred to Zoning Enforcement for abatement.

- 11. **Collocation.** The Permittee shall avail its facility and site to other telecommunication carriers and, in good faith, accommodate all reasonable requests for collocation in the future subject to the following parameters: (i) the party seeking the collocation shall be responsible for all facility modifications, environmental review, Mitigation Measures, associated costs and permit processing; (ii) the Permittee shall not be required to compromise the operational effectiveness of its facility or place its prior approval at risk; (iii) the Permittee shall make its facilities and site available for collocation on a non-discriminatory and equitable cost basis; and (iv) the County retains the right to verify that the use of the Permittee's facilities and site conforms to County policies.
- 12. **Additional Permit Requirements.** The use and/or construction of the building, structure or other development authorized by this approval cannot commence until this Coastal Development Permit has been issued and all necessary Building and/or Grading Permits obtained from P&D. Prior to the issuance of the Coastal Development Permit, all of the project conditions that are required to be satisfied prior to issuance of the Coastal Development Permit must be satisfied.
- 13. **Traffic Control Permit Required.** The use and/or construction of the building, structure or other development authorized by this approval cannot commence until a Traffic Control Permit has been obtained from the Public Works Department.
- 14. Site Identification. The Permittee shall clearly identify each piece of equipment installed at a site with the Permittee's name and site number to distinguish from other telecommunication carriers' equipment, including but not limited to: antennas, microwave dishes, equipment shelters, support poles, and cabinetry. The Permittee shall be responsible for clearly marking with permanent paint, tags, or other suitable identification all facility equipment belonging to the Permittee as stated on the site plans. Timing: This condition shall be satisfied prior to Final Building Inspection Clearance. Monitoring: P&D staff shall check plans and conduct compliance inspections as needed to ensure permit compliance.
- 15. **Facility Maintenance.** The facility shall be maintained in a state of good condition at all times. This includes, but is not limited to: painting; landscaping; site identification; equipment repair; and keeping the facility clear of debris, trash, and graffiti.
- 14. **Time Extension.** If the applicant requests a time extension for this permit/project, the permit/project may be revised to include updated language to standard conditions and/or mitigation measures and additional conditions and/or mitigation measures which reflect changed circumstances or additional identified project impacts. Mitigation fees shall be those in effect at the time of approval of a Coastal Development Permit.
- 15. **Permit Expiration.** Unless a permit extension is obtained, this Coastal Development Permit shall expire one year from the date of approval, if the permit has not been issued and two years from the date of issuance, if the use, building or structure for which the permit was issued has not been established or commenced in conformance with the effective permit.

Project Name: NextG Cellular Antenna

Project Address: ROW Santa Rosa Lane, Montecito

APN: Adjacent to 007-290-006

Attachment A, Page 5

16. **Print & Illustrate Conditions on Plans.** All applicable final conditions of approval shall be printed in their entirety on applicable pages of grading/construction or building plans submitted to P&D or Building and Safety Division. These shall be graphically illustrated where feasible.

- 17. **Compliance Fee.** The applicant shall ensure that the project complies with all approved plans and all project conditions. To accomplish this, the applicant agrees to:
 - a. Contact P&D staff as soon as possible after project approval to provide the name and phone number of the future contact person for the project and give estimated dates for future project activities.
 - b. Contact P&D staff at **least two weeks** prior to commencement of construction activities to schedule an on-site pre-construction meeting with the owner, compliance staff, other agency personnel and with key construction personnel.
 - c. Pay a deposit fee of \$500.00 prior to issuance of the Coastal Development Permit as authorized under ordinance and to cover costs of monitoring as described above. This may include additional costs for P&D to hire and manage outside consultants when deemed necessary by P&D staff (e.g., non-compliance situations, special monitoring needed for sensitive areas including but not limited to biologists, archaeologists) to assess damage and/or ensure compliance. In such cases, the applicant shall comply with P&D recommendations to bring the project into compliance. The decision of the Director of P&D shall be final in the event of a dispute.
 - d. In the event that staff determines that any portion of the project is not in compliance with the conditions of approval of this permit, or approved plans an immediate STOP WORK ORDER may be issued.
- 18. **Fees Required.** Prior to issuance of the Coastal Development Permit, the applicant shall pay all applicable P&D permit processing fees in full.
- 19. **Change of Use.** Any change of use in the proposed building or structure shall be subject to environmental analysis and appropriate review by the County including building code compliance.
- 20. Indemnity and Separation Clauses. Developer shall defend, indemnify and hold harmless the County or its agents, officers and employees from any claim, action or proceeding against the County or its agents, officers or employees, to attack, set aside, void, or annul, in whole or in part, the County's approval of the Coastal Development Permit. In the event that the County fails promptly to notify the applicant of any such claim, action or proceeding, or that the County fails to cooperate fully in the defense of said claim, this condition shall thereafter be of no further force or effect.
- 21. Legal Challenge. In the event that any condition imposing a fee, exaction, dedication or other mitigation measure is challenged by the project sponsors in an action filed in a court of law or threatened to be filed therein which action is brought within the time period provided for by law, this approval shall be suspended pending dismissal of such action, the expiration of the limitation period applicable to such action, or final resolution of such action. If any condition is invalidated by a court of law, the entire project shall be reviewed by the County and substitute conditions may be imposed.

| To: | Ø | Office of Planning and Research | From: (Public Agency) | | |
|------|---|--|---|--|--|
| | | PO Box 3044, 1400 Tenth Street, Room 212 Sacramento, CA 95812-3044 | California Public Utilities Commission | | |
| | | County Clark | 505 Van Ness, SF CA, 94102 | | |
| | L | County Clerk County of | (Address) | | |
| | | | | | |
| | | | | | |
| | | | | | |
| Proj | ect Title | : Santa Barbara Distributed Antenna | System (DAS) project | | |
| Proj | ect Loc | ation - Specific: | | | |
| _ | | bara, Montecito, Summerland, Carpen | tiria | | |
| | | | | | |
| Proj | ect Loc | ation - City: Santa Barbara, etc P | roject Location – County: Santa Barbara | | |
| Des | cription | of Project: | | | |
| Ins | tallat | ion of DAS nodes, including but not | limited to, micro-antenna, | | |
| unc | lergrou | nd/overhead fiber optic lines, util | ity poles. | | |
| | | | | | |
| | | | | | |
| | | blic Agency Approving Project: _Californi | | | |
| Nan | ne of Pe | rson or Agency Carrying Out Project: Next | on behalf of Metro PCS | | |
| Exe | mpt Sta | tus: (check one) | | | |
| | | terial (Sec. 21080(b)(1); 15268); | | | |
| | | red Emergency (Sec. 21080(b)(3); 15269(a)); | | | |
| | | gency Project (Sec. 21080(b)(4); 15269(b)(c)); | 1506b3; 1530lb/c; 1530lc; 15302c; 15304f | | |
| | ☐ Categorical Exemption. State type and section number: 1506b3; 15301b/c; 15301c; 15302c; 15304f ☐ Statutory Exemptions. State code number: | | | | |
| | | | | | |
| | | ny project is exempt: | | | |
| | | 07-04-045, the CPUC determined that under one or more categorical exempt | the DAS projects proposed by NextG would ions under CEQA. | | |
| _ | - | | | | |
| | | | | | |
| Lea | d Agend | rson: Jensen Uchida Arc | 415 703 5484 | | |
| COL | itact Pei | Son: Are | a Code/Telephone/Extension: 415 703 5484 | | |
| | ed by ap | plicant: certified document of exemption finding. | | | |
| | 2. Has a Notice of Exemption been filed by the public agency approving the project? Yes No | | | | |
| ۵. | | Xerry 166 6 | 7/00/00 | | |
| Sign | ature: | Joseph Chile Dat | e: 1/20/03 Title: Analyst | | |
| | ¥ | 1'Signed by Lead Ageney | g at OPR: | | |
| | | Signed by Applicant | January 2004 | | |

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PLANNING & DEVELOPMENT

| APPEAL FORM |
|---|
| SITE ADDRESS: 245 SANTA ROSA LANE (ADTACENT TO) ASSESSOR PARCEL NUMBER: 007-290-006 (ANTACENT TO) PARCEL SIZE (acres/sq.ft.): Gross No Net No COMPREHENSIVE/COASTAL PLAN DESIGNATION: No ZONING: No Are there previous permits/applications? Ono Dyes numbers: 0000-000-00030 (include permit# & lot # if tract) Are there previous environmental (CEQA) documents? Ono Dyes numbers: |
| 1. Appellant: JULIA & RUBERT RUFEL Phone: 205.916, 916 FAXES 916, 7807 Mailing Address: 273 SANTA ROSA LAWE B. 9108 E-mail: INTRUCE ROX. NET 2. Owner: NEVT C NETWORKS Phone: 683 4506 FAX: Mailing Address: E-mail: PMAN@NeV+G.NETWORKS 3. Agent: JULIA ROBERT RUFEL Phone: 805.916, 916 FAX: 805.916, 78 Mailing Address Phone: Street Street Street Phone: FAX: FAX: FAX: FAX: FAX: FAX: FAX: FAX |
| |

| 10APL-00000-00014 | COUNTY USE | ONLY |
|---------------------------|------------|------|
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Case Numbε Supervisoria $Applicable \, Z$ Project Plan. Zoning Desi

NEXTG ANTENNA #ESB11:APPEAL

SANTA ROSA LN 6/1/10

SANTA BARBARA

Companion Case Number:_

Submittal Date:_ _Receipt Number:_

Accepted for Processing Comp. Plan Designation

COUNTY OF SANTA BARBARA APPEAL TO THE:

| BOARD OF SUPERVISORS |
|---|
| PLANNING COMMISSION:COUNTY MONTECITO |
| RE: Project Title NEXT G XETWORKS ANTENNA |
| Case No. 10 CDP - 00000 - 000 32 |
| Date of Action MAY 2/ST, 2010 |
| I hereby appeal theapprovalapproval w/conditionsdenial of the: |
| Board of Architectural Review – Which Board? |
| Coastal Development Permit decision |
| Land Use Permit decision |
| Planning Commission – Which Commission? MONTECITO |
| Planning & Development Director decision |
| Zoning Administrator decision |
| Is the appellant the applicant or an aggrieved party? |
| Applicant |
| Aggrieved party – if you are not the applicant, provide an explanation of how you are and "aggrieved party" as defined on page two of this appeal form: |
| PROPERTY VALUES |
| ABSTHETIBS. PLEASE SEE ATTACHED |
| DOCUMENT |
| |
| |

Reason of grounds for the appeal – Write the reason for the appeal below or submit 8 copies of your appeal letter that addresses the appeal requirements listed on page two of this appeal form:

inconsistent with the provisions and purposes of the County's Zoning Ordinances or other applicable law; and

• Grounds shall be specifically stated if it is claimed that there was error or abuse of discretion, or lack of a fair and impartial hearing, or that the decision is not supported by the evidence presented for consideration, or that there is significant new evidence relevant to the decision which could not have been presented at the time the decision was made.

PUTMONE SEAR ATMONE**

DIMONE

**Specific conditions imposed which I wish to appeal are (if applicable):

a. **POPURTY

DATABLETICS

b. AUSTMETICS

**c. **

**C. **Examples of the County's Zoning Ordinances or other applicable (if applicable):

DIMONE

**Examples of discretion, or that there was error or abuse of discretion, or lack of a fair and imported by the evidence presented by the evidence pres

A clear, complete and concise statement of the reasons why the decision or determination is

CERTIFICATION OF ACCURACY AND COMPLETENESS Signatures must be completed for each line. If one or more of the parties are the same, please re-sign the applicable line.

Applicant's signature authorizes County staff to enter the property described above for the purposes of inspection.

I hereby declare under penalty of perjury that the information contained in this application and all attached materials are correct, true and complete. I acknowledge and agree that the County of Santa Barbara is relying on the accuracy of this information and my representations in order to process this application and that any permits issued by the County may be rescinded if it is determined that the information and materials submitted are not true and correct. I further acknowledge that I may be liable for any costs associated with rescission of such permits.

| Print name and sign - Firm TULLA TEUFEL & MULLINGER | 5,31.10 |
|---|---------|
| Print name and sign - Preparer of this form | Date |
| Print name and sign - Applicant TULIA TEUTER - That Julel | 6.31.10 |
| Print name and sign - Agent | Date |
| Print name and sign - Landowner | Date |

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SANTA ROSA LANE CELL PHONE ANTENNA APPEAL

Re:

Appeal of # <u>10CDP-00000-00032</u> NextG Networks Cellular Antenna

Santa Rosa Lane

Dear Chairwoman Wolf and Supervisors:

Appellants Julia Teufel, Robert Teufel, Jo Saxon, Ken Saxon, Bonnie Rand, Jess Rand, William Drewry, Wendy Drewry, Robert Colleary, Bridget Colleary, Mary Jacqueline Inskeep, Steven Crossland, Joan Crossland and John Abraham Powell are preparing an appeal of the above-captioned Land Use Permit for one of the 39 telecommunications facilities applications submitted by NextG Networks of California, Inc. ("NextG" or "Applicant").

On May 21st, 2010 Montecito Planning Commission issued its notice and intent to approve Land Use Permit #10-CDP-00000-00032, with an appeal period ending May 31st, 2010. Appellants are filing this appeal within the requisite appeal period.

This letter is intended to provide the framework for the appeal and to identify the grounds for appeal in summary fashion. Appellants expect to provide additional information and fully-developed arguments in support of their appeal prior to the Commission's hearing on this appeal, and they reserve their right to do so.

I. <u>Project on Appeal</u>

NextG has proposed the construction and use of an unmanned wireless telecommunications facility within the public right of way in an area zoned for residential use. It intends to attach its facilities to an existing wooden utility pole located in the public right of way adjacent to privately-owned real property identified by the County Assessor <u>007-290-006</u>. The proposed facilities to be mounted on the pole include one 26-inch whip omnidirectional antenna and an equipment box measuring 32" x 6" x 5" (inexplicably not described specifically in the approved project description). The antenna would have a range of approximately 1500 to 2000 feet in each direction.

While the pending permit indicates "none" where asked to identify "associated case numbers," this pending permit is part of a larger package of "Tier 1" permit applications from NextG, through which it intends to install a "Distributed Antenna System" throughout the south coast areas of Santa Barbara County. The permit at issue here is one of 39 proposed for the South County, with 13 proposed for Montecito. NextG has identified Metro PCS as the carrier that would use these facilities to provide wireless service. In addition, NextG's plans include installation of fiber-optic cabling to connect all of the antennas. With the exception of cabling requiring trenching in coastal zone areas, the placement of cable is exempt from zoning permits. Installation of aerial cabling requires no permits, and installation of underground cable will require only road encroachment permits. This cabling is designed to support up to five carriers, each of

which presumably would seek to co-locate its antennas on the same poles included in the NextG network of facilities, including the pole at issue in this particular permit.

In addition to the permit at issue here, Appellants expect to appeal P&D's decisions to approve some of these additional facilities where the proposed locations are similarly in conflict with the community's goals and with the interests of its citizens.

II. Appellants Have Standing As Aggrieved Persons

Appellants are all aggrieved persons adversely affected by P&D's decision within the meaning of Chapter 35.500 of the Montecito Land Use and Development Code. which defines an "aggrieved person" as "[a]ny person who, in person or through a representative, appeared at a public hearing of the local government in connection with the decision or action appealed, or who, by other appropriate means prior to a hearing, informed the local government of the nature of his concerns or who for good cause was unable to do either." The permit here appealed was issued administratively; therefore none of the appellants had an opportunity to attend a public hearing concerning the specific action. However, appellants have participated in several hearings before the Board of Supervisors that were characterized by P&D as informational briefings related to the NextG Distributed Antenna System and numerous pending NextG applications. including the application for the permit at issue here. These hearings were prompted by members of the community, including some of the appellants, who expressed concern regarding the NextG projects during the public comment period at the Board's October 6, 2009 hearing, requesting that the Board impose a moratorium on the processing of applications for additional facilities to allow time for research and review of standards for approval of such facilities. As a result, the Board requested Staff briefings on the permitting framework for such applications and considered public testimony on October 20, 2009 and December 1, 2009.

The lead appellants, Julia and Robert Teufel, have sent letters to the County expressing their opposition to the NextG network proposal and Julia and Robert Teufel spoke against the permit at issue here, as well as the NextG project generally, at Board of Supervisor meetings. Other individual appellants have written letters to the County to express their concerns and have attended one or more Board of Supervisors meetings related to the NextG permits. The Montecito Association has expressed its views in writing and its representatives have attended the Board of Supervisors meetings. Cindy Feinberg, in addition, has expressed her opposition publicly through local media including the Montecito Journal, the Independent, and KEYT News. Many of the appellants have called or emailed P&D staff with their concerns.

In summary, all of the appellants have appeared at a public hearing focused on this matter or otherwise have made their concerns known to P&D during the time when P&D was processing the permit application.

III. Grounds for Appeal

A. The Facilities Approved by this Permit Do Not Merit Approval under the County's Commercial Telecommunications Facilities Ordinance

Chapter 35.444 of the Montecito Land Use and Development Code (and Chapter 35.44 of the County Land Use and Development Code) ("LUDC") provides that commercial telecommunications facilities are to be considered under "tiered" standards, with a "very small facility" in a residential zone treated as a Tier 1 project requiring a Land Use Permit. While the processing requirements for Tier 1 projects are limited, the LUDC includes more demanding development standards applicable to all telecommunication facilities. Appellants contend that certain of these development standards have not been met and that the permit was approved in error.

Except for very small facilities that qualify under Tier 1, all wireless facilities proposed to be located in any residential zone require a Major Conditional Use Permit under the jurisdiction of the Planning Commission. Appellants contend that P&D abused its discretion in processing each of the individual permit applications as a Tier 1 project requiring only "ministerial" review when, viewed as a Distributed Antenna System in which all of the facilities are inter-dependent, they clearly require a higher level of review under the LUDC and the California Environmental Quality Act ("CEQA").¹

In issuing a Land Use Permit for a telecommunications facility, the review authority must make certain required findings, including the finding that the proposed development will conform to the applicable provisions of the County's Comprehensive General Plan including the Montecito Community Plan and the LUDC. (LUDC § 35.472.100) Appellants content that P&D did not make this or other required findings and could not have made these findings, as discussed within this letter.

Moreover, Chapter 35.444 requires that the review authority must make certain additional required findings in the issuance of any permit for telecommunications facilities, including Land Use Permits and Coastal Development Permits. These include the following:

- 1. The facility will be compatible with the existing and surrounding development in terms of land use and visual qualities.
- 2. The facility is located to minimize its visibility from public view.
- 3. The facility is designed to blend into the surrounding environment to the greatest extent feasible.

¹ In a letter dated October 26, 2009, NextG has asserted that the California Public Utilities Commission is the "lead agency" under CEQA and "the only entity with broad discretionary decision-making authority over NextG's proposed services, facilities, and construction throughout the state." Appellants contend that the County of Santa Barbara has a responsibility under CEQA as a responsible agency if not as a lead agency and is responsible for assessing the environmental impacts of the proposed project within its own jurisdiction.

- 4. The facility complies with all required development standards unless granted a specific exemption by the review authority as provided in Subsection D. (Additional development standards for telecommunications facilities) above.
- 5. The applicant has demonstrated that the facility shall be operated within the frequency range allowed by the Federal Communications Commission and complies with all of the applicable safety standards.

P&D has made <u>none</u> of these findings in the permit at issue and, as Appellants will show, cannot make these findings based upon the facts and evidence readily available concerning this project. Accordingly, P&D has abused its discretion and acted in error in issuing the permit.

B. <u>Health Risks Associated with Electromagnetic Frequency Exposures Are a Legitimate Community Concern</u>

As Appellants have stated in the Board of Supervisors hearings and in their written communications, they are extremely concerned about the health risks of exposure to electromagnetic frequencies ("EMF") associated with wireless communications, particularly where NextG proposes to add substantially to existing and presently unavoidable exposures all around us. Their concerns have not been addressed in Condition 8 of the Conditions of Approval associated with this permit, which requires compliance with Federal Communications Commission exposure limitations. The federal standards have not been updated to reflect the most recent scientific knowledge, which was presented to the Board of Supervisors during its several hearings, and the federal standards provide inadequate protection against health risks as they are understood today.

The Board of Supervisors has expressed the same concerns in its Resolution 09-339, approved on November 10, 2009, where the Board objected to lobbying efforts by the Cellular Telecommunications Industry of America to have the Federal Communications Commission impose even greater restrictions on a local government's authority to undertake meaningful review of all aspects of telecommunications projects. Instead, the Board urged repeal of the sections of the 1996 Telecommunications Act that pre-empt local control and prevent local governments from considering health effects. At the same time, the Board authorized the County's legislative advocates "to actively seek and support state legislation that would give local governments greater flexibility to regulate the placement of cellular facilities within the road right of way."

Appellants join the Board of Supervisors in their frustration with constraints under the 1996 Telecommunications Act of 1996. However, they recognize that the Telecommunications Act does not prevent the County from denying applications on other grounds. Specifically, the Act preserves local zoning authority over decisions regarding the placement, construction, and modification of personal wireless service facilities as long as regulation does not have the effect of prohibiting the provision of personal wireless services. (47 USC §§ 253(b), 332(c)(7).) Appellants contend that P&D abused its discretion when it approved the subject permit without adequate regard for the

aesthetic and safety impacts resulting from the placement of facilities in the proposed project, which are well within the County's authority to regulate.

C. <u>The County's Police Power Includes Regulation of Land Uses Based upon Aesthetic Impacts</u>

The California Constitution, Article XI section 7, establishes the County's authority to "make and enforce within its limits all local, police, and other ordinances and regulations not in conflict with general laws." This constitutional police power is an exercise of the sovereign right of the government to protect the lives, health, morals, comfort, and general welfare of the people. Under California law, a local government's exercise of police power is valid if its restrictions bear a reasonable relation to the general welfare. City of Los Angeles v. County of Kern (C.D.Cal. 2006) 462 F.Supp.2d 1105. One California court has described the police power as follows:

[P]olice power is not a circumscribed prerogative, but is elastic and, in keeping with the growth of knowledge and the belief in the popular mind of the need for its application, capable of expansion to meet existing conditions of modern life, and thereby keep pace with the social, economic, moral, and intellectual evolution of the human race.

(Richeson v. Helal (2007) 158 Cal.App.4th 268.)

Certainly consideration of the impacts of new technologies such as the network proposed by NextG is amenable to the exercise of the County's authority as it keeps pace with both the growth of knowledge and the need for expansion to meet conditions of modern life. Certainly, too, the "belief in the popular mind" concerning the NextG Distributed Antenna System is that the County should exercise its authority in the interest of the public health, safety and welfare.

Both state and federal courts have determined that regulation to protect aesthetic interests is within the exercise of the police power. In *Metromedia, Inc. v. San Diego* (1981) 453 U.S. 490, the United States Supreme Court determined that even if the only interest implicated in the selected location is aesthetic, that aesthetic concern is a legitimate and significant governmental interest. In *Echevarrieta v. City of Rancho Palos Verdes* (2001) 86 Cal.App.4th 472, the California Court of Appeal concluded that the exercise of governmental authority for aesthetic purposes is clearly a legitimate exercise of traditional police power. The *Echevarrieta* Court agreed with the trial court in that case that "[t]he concept of the public welfare is broad and inclusive. The values it represents are spiritual as well as physical, aesthetic, [and] monetary." (*Echevarrieta*, 86 Cal.App.4th at p. 478.)

The regulation of visual blight as an aesthetic concern is certainly within the County's authority. For example, in *Crown Motors v. City of Redding* (1991) 232 Cal.App.3d 173, the Court of Appeal concluded that the power of government to advance the quality of life in the community included eliminating the visual blight created by two

proposed reader boards. (*Crown Motors*, 232 Cal.App.3d at pp. 178-179.) The court reasoned that the governmental interest in attempting to preserve "the quality of urban life" is one that must be accorded high respect.

The Crown Motors Court went a step farther in determining that the aesthetic condition of a community is related to public health. The court reasoned that the term "public health" must be interpreted according to the circumstances in which it is used. It "takes on new definitions when new conditions arise, but generally speaking, it means the wholesome condition of the community at large." (Crown Motors, supra 233 Cal.App.3d at p. 178 [quoting Chisholm v. California Jockey Club (1958) 164 Cal.App.2d 367, 369].)

The "wholesome condition" of the Montecito community is at the heart of this appeal because that is what this NextG permit jeopardizes. The NextG facilities will create a visual blight on a well-traveled thoroughfare where they will be seen daily by many Montecito residents, all of whom chose to live in the community because of its semi-rural character. By impacting the quality of life in the community, NextG's numerous antennas and equipment boxes may also impact the mental and spiritual well-being of some residents. They certainly will create a visual distraction for drivers, raising traffic and safety concerns on the community's roads, particularly in the vicinity of schools. Whip antennas and equipment boxes mounted on poles throughout the community conflict with the aesthetics of the community and cannot possibly be in concert with the public health and safety.

D. <u>Approval of the Permit is Contrary to the Montecito Community's Goals and Undermines the Character of the Community</u>

To approve this permit, P&D must find that the proposed facility will be compatible with the existing and surrounding development in terms of land use and visual qualities. P&D also must find that the facility is located to minimize its visibility from public view and that it is designed to blend into the surrounding environment to the greatest extent feasible. (LUDC § 35.444.010(G).) P&D has not made these findings and cannot make such findings.

When members of the Montecito community prepared the Montecito Community Plan in 1992, they stated as an over-arching goal the preservation of a semi-rural residential quality of life, and they identified the features of the community that establish its character, including the presence of narrow winding roads and the absence of urbanizing features. The Montecito Community Plan is integral to the County's Comprehensive General Plan, and its policies must be considered in the review of any permit for the Montecito planning area.

Aesthetic considerations and preservation of the character of the community are paramount throughout the Community Plan as well as the Montecito Architectural Guidelines and Development Standards. The Community Plan includes Goal LU-M-2:

Preserve Roads As Important Aesthetic Elements That Help to Define the Semi-Rural Character of the Community. Strive To Ensure That all Development Along Roads Is Designed In A Manner That Does Not Impinge Upon the Character of the Roadway.

The Guidelines state as goals: "To maintain the semi-rural character of the roads and lanes" and "To preserve, protect and enhance the existing semi-rural environment of Montecito." Accordingly, when reviewing a proposed new residential development, the Board of Architectural Review must find, among other things, that there is "a harmonious relationship with existing developments in the surrounding neighborhood."

The installation of pole-mounted antennas, equipment boxes and a cable network along narrow, winding roadways throughout the community contradicts these stated community goals and undermines the community's effort to preserve its semi-rural character. Appellants contend that P&D abused its discretion when it failed to consider these goals in approving the permit.

Moreover, under Section 35.44.010(D)(2) of the LUDC, all commercial telecommunications facilities must meet particular development standards, among which is the following:

d. Support facilities (e.g., vaults, equipment rooms, utilities, equipment enclosures) shall be located underground, if feasible, if they would otherwise be visible from public viewing areas (e.g., public road, trails, recreational areas).

The review authority may grant an exemption only if it "finds, after receipt of sufficient evidence, that failure to adhere to the standard in the specific instance either will not increase the visibility of the facility or decrease public safety, or is required due to technical considerations that if the exemption were not granted the area proposed to be served by the facility would otherwise not be served by the carrier proposing the facility, or it would avoid or reduce the potential for environmental impacts."

The facilities in question include a 26 inch whip antenna and an unsightly equipment box that will hang on the utility pole, fully visible from a public road and adjacent areas. The proposed antenna by itself is visually intrusive, and the equipment box makes it completely unacceptable aesthetically. Under Subsection (D)(2), these facilities should be located underground because they are visible from public viewing areas. Clearly NextG wants to install its facilities exactly as it has proposed, but to Appellants' knowledge, NextG has not provided information sufficient for P&D to conclude that there are no possible alternatives.

P&D is required to make a finding that the facility "complies with all required development standards unless granted a specific exemption by the review authority as provided in Subsection D." The permit at issue includes no grant of an exemption from this requirement, nor would it qualify for such an exemption based upon the criteria provided in the ordinance. Accordingly, Appellants content that P&D abused its

discretion by issuing a permit for facilities that do not comply with this development standard.

2. Pole-Mounted Equipment Conflicts with the Community's Goal of Undergrounding Utilities

Recognizing the aesthetic aspects of the community's character, Appellant Montecito Association recently adopted an Overhead Utility Policy, which states the following:

The Montecito Association affirms its long-term support for the elimination of overhead utilities. This is consistent with our long-standing support of the Montecito Community Plan goals to sustain and enhance the exceptional beauty and semi-rural character of the Montecito community as well as to maintain property values and a high quality living environment.

Indeed, undergrounding of utilities has been a priority in the Montecito Community for many years. There are several districts in the community where utilities have been undergrounded pursuant to Public Utilities Commission Rule 20, some with government funding under Rule 20A and others by private funding under Rules 20B and 20C. In 1986 the Board of Supervisors approved a Rule 20A district on San Ysidro Road, and one of the NextG antennas is proposed for a pole that might well be removed in an expansion of undergrounding. Considering that the NextG facilities are part of a network of interdependent antennas, it makes little sense to approve the installation of antennas on any poles that are likely to be proposed for removal as part of undergrounding projects in the future.

Notably, LUDC section 35.44.010(C)(a)(2) states: "If at a later date the utility poles are proposed for removal as part of the undergrounding of the utility lines, the permit for the facilities shall be null and void." This provision provides little comfort to Appellants, since it is highly unlikely that NextG would accept an automatic nullification of a permit on which it has relied for an installation that it may claim is integral to its network.

2. Both the Land Use and Development Code and the Montecito Community
Plan Call for Adequate Setbacks between Habitable Structures and
Telecommunications Facilities

In 1992 wireless communications were in their infancy. Even so, the Montecito Community Plan included as Goal E-M-1 the protection of citizens from elevated electromagnetic fields until the potential risk from EMF exposure can be determined. The Plan recognized the County's authority to protect the community from this potential hazard by requiring "adequate building setbacks from EMF-generating sources to minimize exposure to this hazard."

As it has turned out, the EMF hazard remains a concern and building setbacks have taken on broader significance as telecommunications systems have changed. With antennas and large equipment boxes mounted on numerous poles throughout the community, setbacks from buildings are important so as not to block the views or otherwise compromise the enjoyment of adjacent private property, consistent with the Community Plan's goals.

Similarly, as the County has updated its Commercial Telecommunications Facilities ordinances, it has included as a requirement that in a residential zone, the base of any new freestanding antenna support structure shall be set back from adjacent residential property "a distance equal to five times the height of the antenna and antenna support structure, or a minimum of 300 feet, whichever is greater." While LUDC Section 35.444.010(D) includes an exception from setback requirements for antennas installed on existing public utility poles, the exception contradicts the basic premise of setbacks – that two uses are either fundamentally incompatible or are made so by proximity to each other.

Aesthetically an antenna and equipment box mounted on an existing pole may be as intrusive visually as a new freestanding antenna support system. The appellants who live near the permit at issue here certainly find the prospect of looking at them every day a visual intrusion on their area.

Once telecommunications facilities are installed, the future use of the adjacent property is compromised. Regardless of whether the Telecommunications Act recognizes health risks as a legitimate basis for denying a project, people in the community generally are aware that scientists have raised substantial exposure concerns and they do not want to live close to antennas when proximity can be avoided. The installation of an antenna next to a residential property effectively limits the property owner's opportunity to expand or remodel his residence in the area closest to the antenna.

For these same reasons, the presence of any telecommunications equipment close to residential uses may jeopardize the long-term value of the adjacent residential properties. Appellants are aware of other situations in the community where properties have lost substantial value after the installation of nearby telecommunications equipment.

In short, approving any pole mounted facilities is contrary to County policies and a step backward from the 1992 Montecito Community Plan. Appellants contend that P&D abused its discretion in permitting the installation of any NextG antennas on poles where the requisite setback from existing structures cannot be achieved, thereby compromising the interests of private residential property owners.

E. <u>Impacts of this Permit Will Be Compounded by Connection to NextG's System and by Anticipated Co-Location</u>

This permit cannot be viewed as though it approves a single whip antenna and single equipment box on a single pole. As objectionable as these facilities are in their

own right, they must be seen as enabling something far more damaging to the community: an interdependent network of similar installations that together will create a Distributed Antenna System, causing an immeasurable change in the community's character. NextG has proposed 39 pole locations today, and its Distributed Antenna System, if approved, will pave the way for up to five additional antennas on each pole, including the pole at issue in this permit.

As discussed throughout this letter, Appellants object to P&D's decision to consider each of the proposed antennas as a single "Tier 1" project pursuant to the LUDC section 35.444.010, requiring only ministerial review. P&D explained to the Board of Supervisors in its December 1, 2009 Agenda Letter that the theory behind a tiered approach is that "as the size and complexity of the facility and potential for environmental impacts or policy inconsistencies increased, the decision-making body shift[s] upward." Under this theory, the NextG permit applications and the entire Distributed Antenna System should have been viewed as one project subject to higher scrutiny.

Moreover, in accepting each of NextG's multiple applications as a single "Tier 1" permit application, P&D concluded that only a "ministerial" permit is required and therefore apparently concluded that, apart from NextG's contentions concerning the California Public Utilities Commission as the "lead agency," that each such "ministerial" project is exempt from review under the CEQA. Appellants contend that P&D abused its discretion in not considering the impacts of the project as a whole, including its potential cumulative impacts, particularly since the approval of one antenna facilitates the creation of the Distributed Antenna System and this reasonably foreseeable consequences must be assessed. They maintain that P&D should have conducted this level of review not solely because of CEQA but also because the project requires a higher level of scrutiny under the LUDC.

- F. <u>P&D Issued the Permit Based Upon Inadequate, Incomplete or Unreliable</u>
 Data
 - 1. P&D Based its Permit Decision on Inadequate Information
 Concerning Project Alternatives

NextG's permit applications provide no substantive alternative site analysis as is required before an application may be deemed complete. Instead, NextG asserts in its applications that it has selected its pole locations "based on their network efficiency allowing the least number of equipment installations as well as structural integrity and constructability." The presumptions in this "analysis" pre-determine the conclusion.

NextG proposes a particular kind of network — a Distributed Antenna System — in which the maximum separation between its antennas is determined by design and environmental factors. To Appellants' knowledge, P&D did not require NextG to justify its facility location on any scientific basis, particularly "gap of service."

But for the fact that NextG wants to install this particular type of system, other options would be available. Even accepting the practical limitations of this type of system, alternative locations and configurations certainly are available within the Montecito community. Such alternatives might have been pursued as a result of a thorough peer review. They certainly would have been reviewed in a CEQA analysis, which requires consideration of project alternatives, including the "no project" alternative. However, P&D did not avail itself of either source of information and relied on insufficient information from the applicant. Appellants contend that P&D abused its discretion in not fully exploring project alternatives, including but not limited to alternative locations for the facilities at issue in this permit.

2. P&D Has Not Established that the Proposed Location May Be Used Legally as Proposed

LUDC section 35.472.100(E) states, among the required findings for issuance of a Land Use Permit, that the proposed development must be "located on a legally created lot" and that the subject property is "in compliance with all laws, regulations, and rules pertaining to uses, subdivisions, setbacks, and other applicable provisions of this Development Code." P&D has not made either required finding in the subject permit and, to Appellants' knowledge, no analysis has been completed that would warrant such a finding.

Among other things, P&D has not addressed the specific limitations on use of the utility easements where the poles are located. Each of the poles proposed for location of NextG facilities, including the pole at issue in this appeal, is located in a public right of way and is owned or maintained by another utility. Appellants do not yet know the specifics of the easement affected by the permit at issue. However, they have seen no evidence that P&D has considered those specifics in approving this permit. For example, the right of way may exist under an easement granted by an adjacent property owner who continues to own the fee in the land, and the use of the easement may be restricted in a way that would prevent the County from extending rights to a particular user.

In addition, the pole may be owned by Southern California Edison or another utility that has the authority to limit NextG's use. In its December 1, 2009 Agenda Letter, P&D explained to the Board of Supervisors that the County's franchise agreement with Southern California Edison provides: "Except in those cases where Grantee (SCE) is required by State or Federal law to provide access to its Facilities, use of Grantee's Facilities for any pursue other than the uses permitted by this ordinance shall require notice and consent by County." P&D also explained that the California Public Utilities Commission requires electrical utilities to allow pole access to telecommunications providers possessing a Certificate of Public Convenience and Necessity from the Commission. However, P&D did not state whether NextG has such a Certificate, and Appellants are not aware of one.

In the absence of information establishing the legal status of the location and NextG's right to occupy it, P&D cannot make the required findings. Appellants contend that P&D abused its discretion in issuing the permit without adequate foundation.

3. P&D Acted upon Information Inadequate to Establish Compliance with Federal Communications Commission Regulations

In its October 20, 2009 Agenda Letter, P&D stated that it had asked NextG to provide "site-specific cumulative emissions tests in order to be able to affirmatively make the finding of the installation's compliance with FCC's emissions thresholds. Upon receipt of the site specific radio frequency emissions tests, the County will have the reports peer reviewed for accuracy; following, decisions on these LUP, CDP and CDH permit applications will be rendered." Appellants have been unable to obtain any information that would indicate completion of the reports.

Moreover, Appellants are aware that P&D selected for its peer review expert a Mr. Bushberg who has worked extensively for major telecommunications carriers throughout the state, including but not limited to NextG. The county maintains a list of accepted consultants in various fields and, to Appellants' knowledge, Mr. Bushberg is not among them. Clearly Mr. Bushberg had a conflict of interest if asked to provide an unbiased peer review of reports prepared by or on behalf of his current or potential future client. To the extent that he may have provided any peer review of the subject permit, his review cannot be relied upon.

To approve this permit, P&D must make the required finding that "[t]he applicant has demonstrated that the facility shall be operated within the frequency range allowed by the Federal Communications Commission and complies with all of the applicable safety standards." To Appellants' knowledge, P&D did not receive reports and/or did not complete the peer review of this project and therefore cannot make this finding. Under these circumstances, P&D abused its discretion and issued the permit in error.

4. P&D Has Not Addressed Critical Issues Raised by the Board of Supervisors.

On October 20, 2009, after hearing public testimony, the Board of Supervisors voted to direct staff to explore, among other things, the "role of CEQA in the regulatory/permitting process, relocation of existing sites, issues related to third-party/peer review, conflict of interest/revolving door policies and laws, . . . [and] cumulative impacts of such facilities." The December 1, 2009 Agenda Letter did not address these concerns in any detail and Appellants do not believe that Staff's oral report expanded the response significantly.

Appellants understand that part of the Board's focus was the proposed moratorium on the processing of new permit applications, but the 39 NextG applications were pending and the information requested by the Board was as relevant to the substantive consideration of those permits as to the prospect of a moratorium ordinance. Had P&D presented an explanation of each of these areas of concern, it is possible that the processing of the permits would have been done with greater "transparency," as the Board suggested, and with greater attention to the matters that have resulted in flawed permits.

* * * * *

In summary, Appellants have concluded that P&D issued the permit in error because the NextG network, and the subject permit in particular, did not receive the full and complete review that state and County law and community policies require. Required findings were not made and, on the facts, cannot be made. Accordingly, P&D should have denied the permit. Appellants are continuing to investigate their concerns and remain open to considering additional information. We look forward to presenting their appeal in greater detail for your consideration at hearing.

Very truly yours,

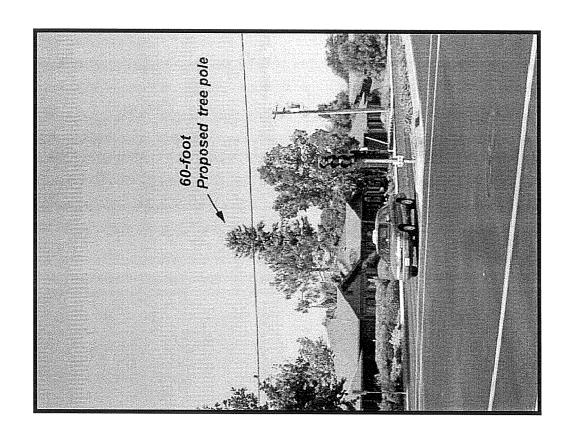
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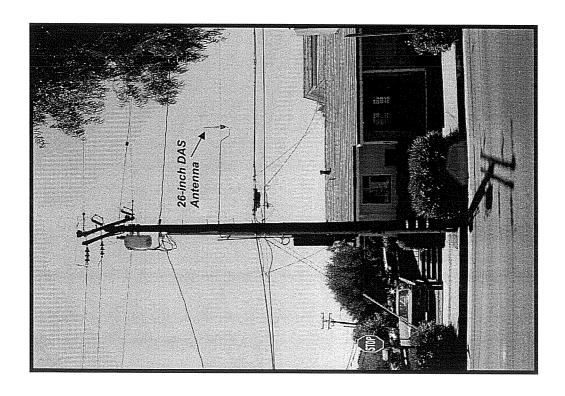
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| NAME: ROBERT TEUFEL |
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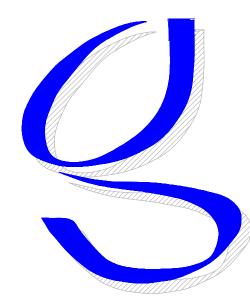
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NextG Networks of California, Inc.

MPC1035CA-ESBN011 EAST SANTA BARBARA SANTA BARBARA, CA 93108







THE PROJECT CONSISTS OF THE INSTALLATION AND OPERATION OF ANTENNAS AND ASSOCIATED EQUIPMENT CABINETS FOR NEXTG. THE INSTALLATION OF GROUND MOUNTED EQUIPMENT CABINETS, ANTENNAS ON AN EXISTING STREET LIGHT, WOOD POLE, TRAFFIC SIGNAL AND NEW STEEL

PROJECT DESCRIPTION

INSTALL / PLACE NEW FIBER TO NEW OR EXISTING POLE. INSTALL EITHER OMNI OR PANEL ANTENNAS AND ALL ASSOCIATED BRACKETS IN ACCORDANCE TO CONSTRUCTION SPECIFICATIONS. REARRANGE ANY EXISTING FACILITIES IN ACCORDANCE TO GOVERNING CONSTRUCTION GUIDELINES.

PROJECT SCOPE

| SHEET | DESCRIPTION | REV. |
|-------|---|------|
| 1 | TITLE SHEET | 0 |
| 2 | UTILITY NODE / REPEATER POLE EQUIPMENT PROFILES | 0 |
| 3 | MAPS | 0 |
| 4 | TYPICALS | 0 |
| 5 | TYPICALS | 0 |
| | | |
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| | SHEET INDEX | |

DO NOT SCALE DRAWINGS

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.

GENERAL CONTRACTOR NOTES

| | NextG Networks of California, Inc. 5720 THORNWOOD DR. GOLETA, CA 93117 PHONE: (408) 954–1580 |
|--------------|--|
| PROJECT INFO | RMATION: |
| MPC1 | 035CA-ESBN011 |

| | 12/28/2009 | |
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| PERMIT | SUBMISSION: | |
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5720 THORNWOOD DR. GOLETA, CA 93117 PHONE: (951) 471-1919



TITLE SHEET

1 OF 5

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

1. STATE ADMINISTRATIVE CODE 2. STATE BUILDING CODE 3. ANSI/EIA-222-F LIFE SAFETY CODÉ NFPA-101-1990

4. STATE MECHANICAL CODE

CONFORMING TO THE AREAS GOVERNING CODES.

5. STATE PLUMBING CODE 6. STATE ELECTRIC CODE 7. LOCAL BUILDING CODE 8. CITY/COUNTY ORDINANCES

CODE COMPLIANCE

PROPERTY INFORMATION

CUSTOMER: NEXTG NETWORKS OF CALIFORNIA, INC. PROJECT: EAST SANTA BARBARA MPC1035CA-ESBN011 NODE:

LATITUDE: 34.42765 LONGITUDE: -119.62650

STREET ADDRESS: 255 SANTA ROSA LN. CITY, STATE: SANTA BARBARA, CA 93108 COUNTY OF SANTA BARBARA JURISDICTION:

POLE# : 1236167E POLE TYPE: WOOD UTILITY POLE

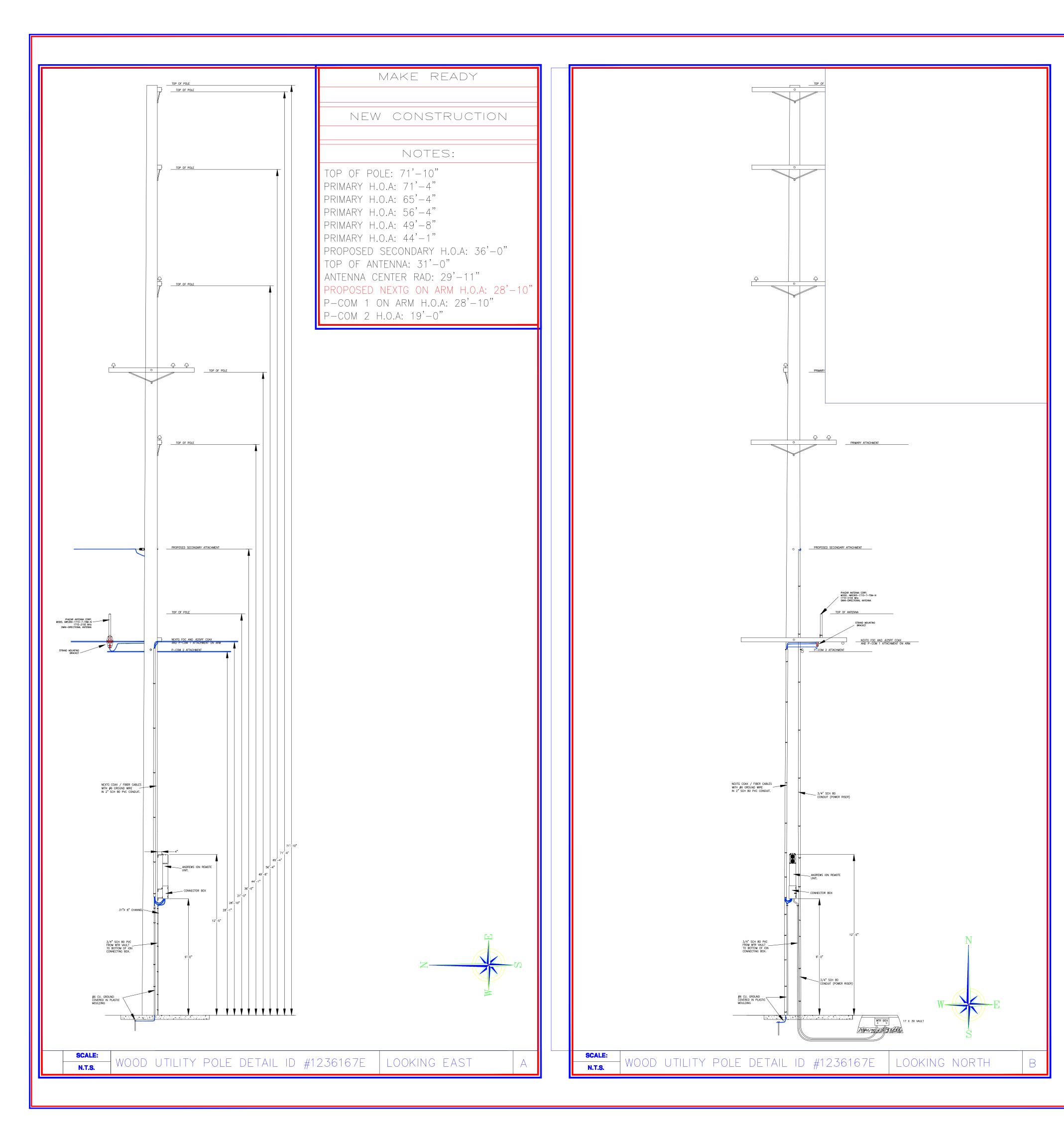
RAD CENTER / ANTENNA HEIGHT:

ANTENNA TYPE: AWS360-1710-7-T0-N

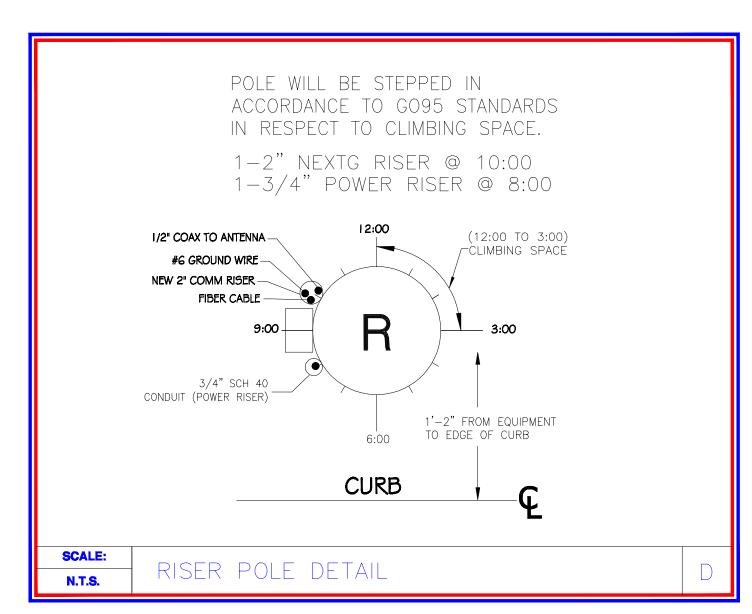
AZIMUTH FOR ANTENNA: N/A POWER TO POLE: SECONDARY POLE ACCESS: ON ROAD

POLE OWNER: POLE LOCATION &

PROJECT SUMMARY









UNDERGROUND SERVICE ALERT OF NORTHERN CALIFORNIA

TICKET #



PROJECT INFORMATION:

MPC1035CA-ESBN011 EAST SANTA BARBARA SANTA BARBARA, CA 93108

CURRENT ISSUE DATE:

12/28/2009

PERMIT SUBMISSION:

REV.: DATE: DESCRIPTION:

PLANS PREPARED BY:

HP COMMUNICATIONS

INC.

5720 THORNWOOD DR. GOLETA, CA 93117 PHONE: (951) 471–1919

PLANS APPROVED BY

NextG Networks of California, Inc.

COMMENTS:

SUEET TITLE.

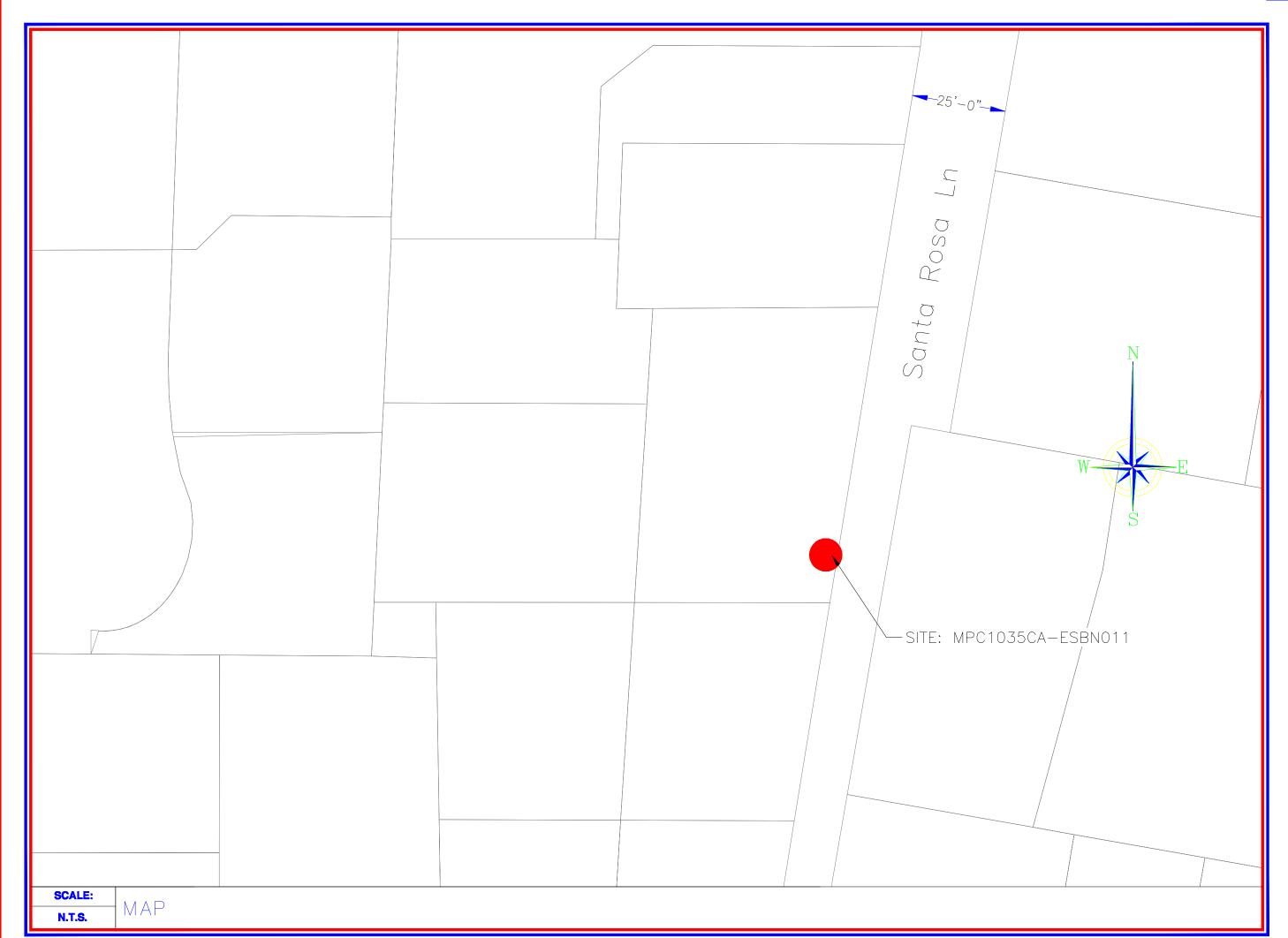
PROFILES

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2 OF 5







PROJECT INFORMATION

MPC1035CA-ESBN011 EAST SANTA BARBARA SANTA BARBARA, CA 93108

CURRENT ISSUE DATE

12/28/2009

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PLANS PREPARED BY

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5720 THORNWOOD DR.
GOLETA, CA 93117
PHONE: (951) 471-1919

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NextG Networks of California, Inc.

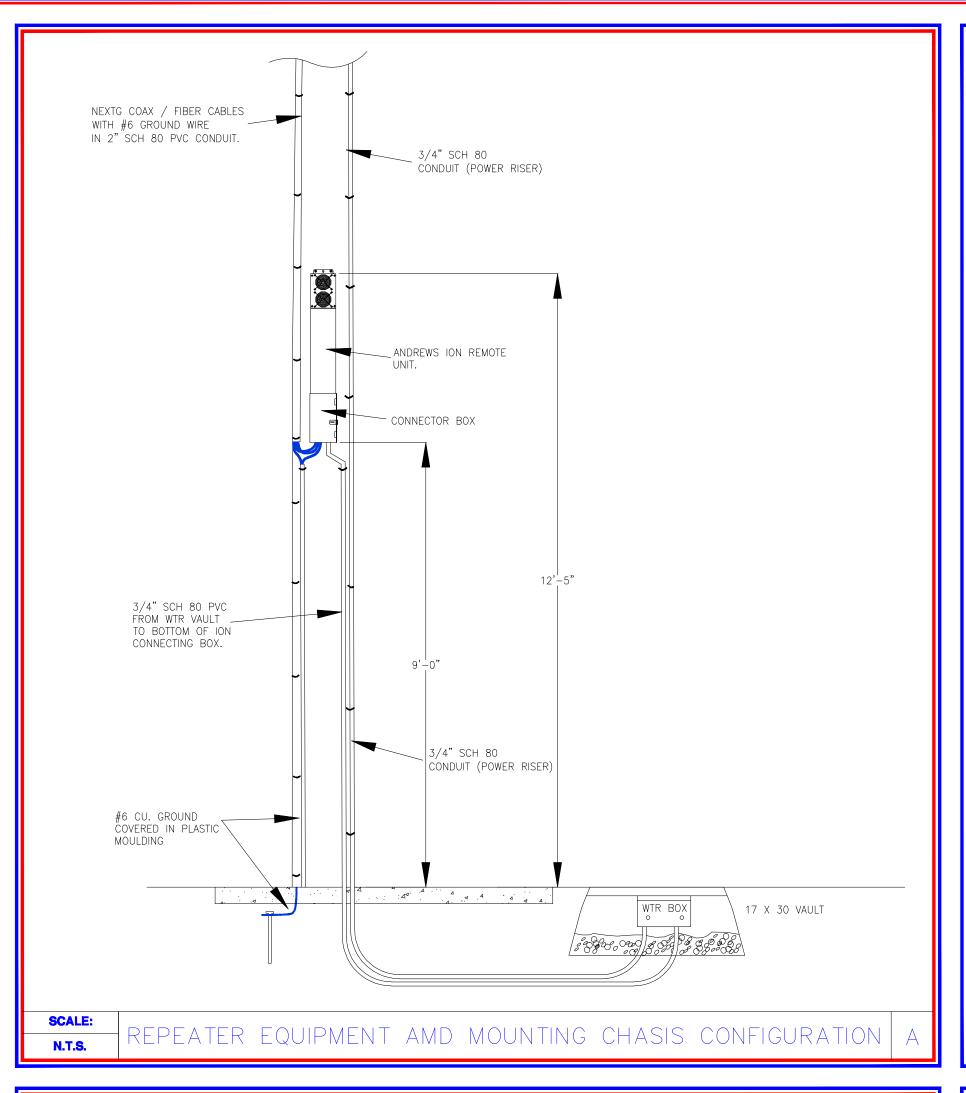
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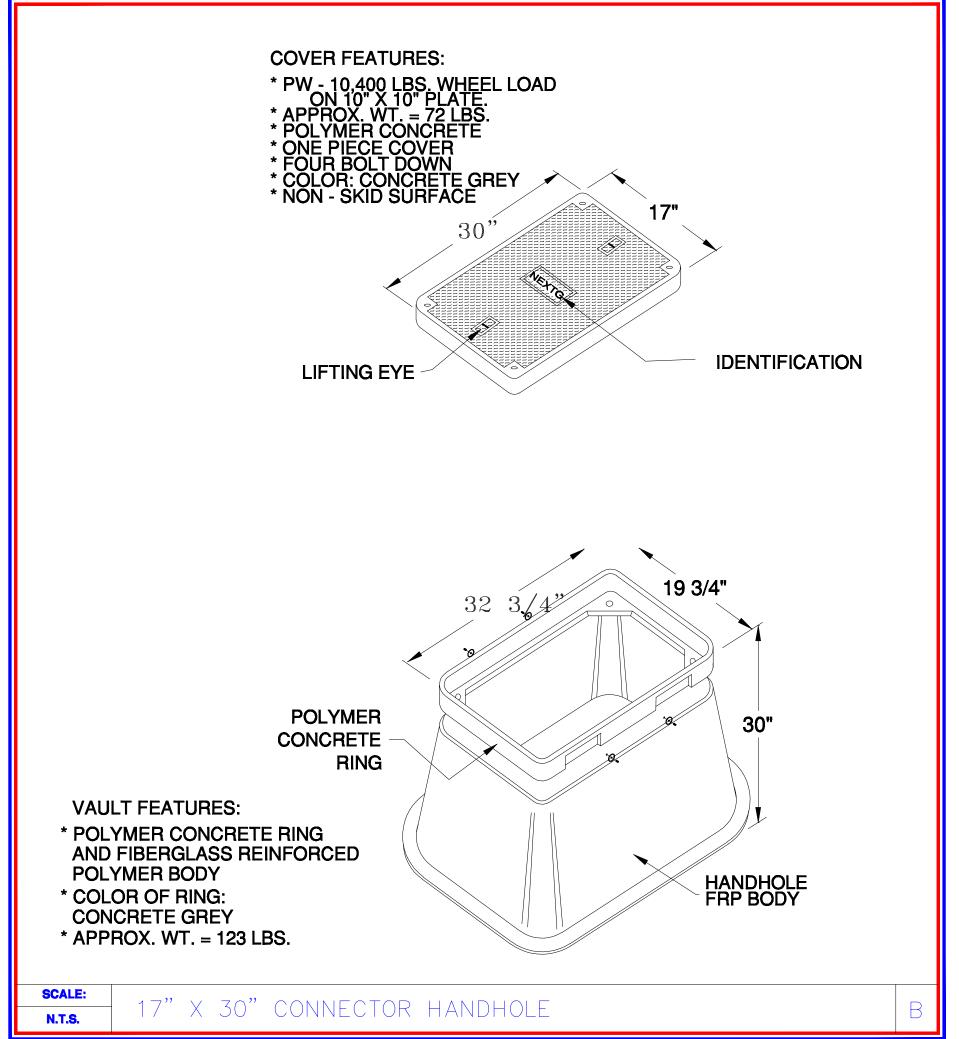
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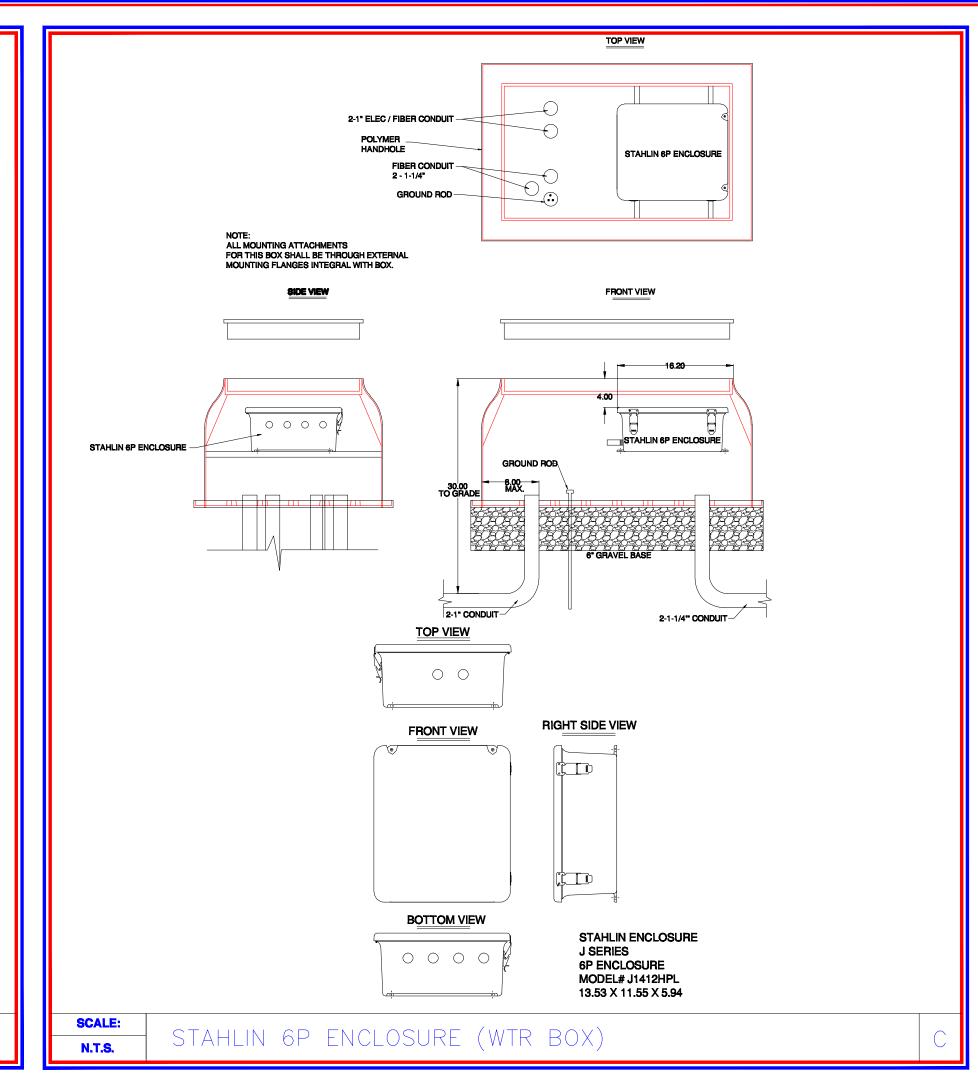
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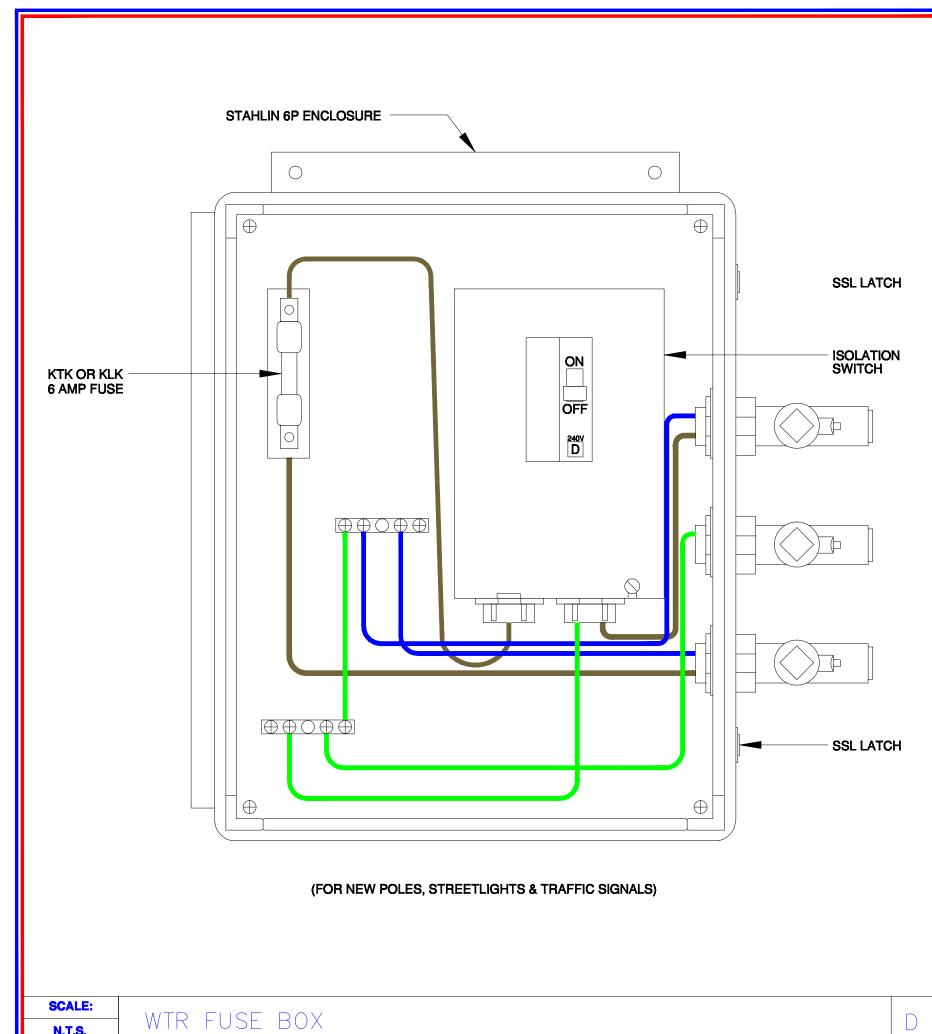


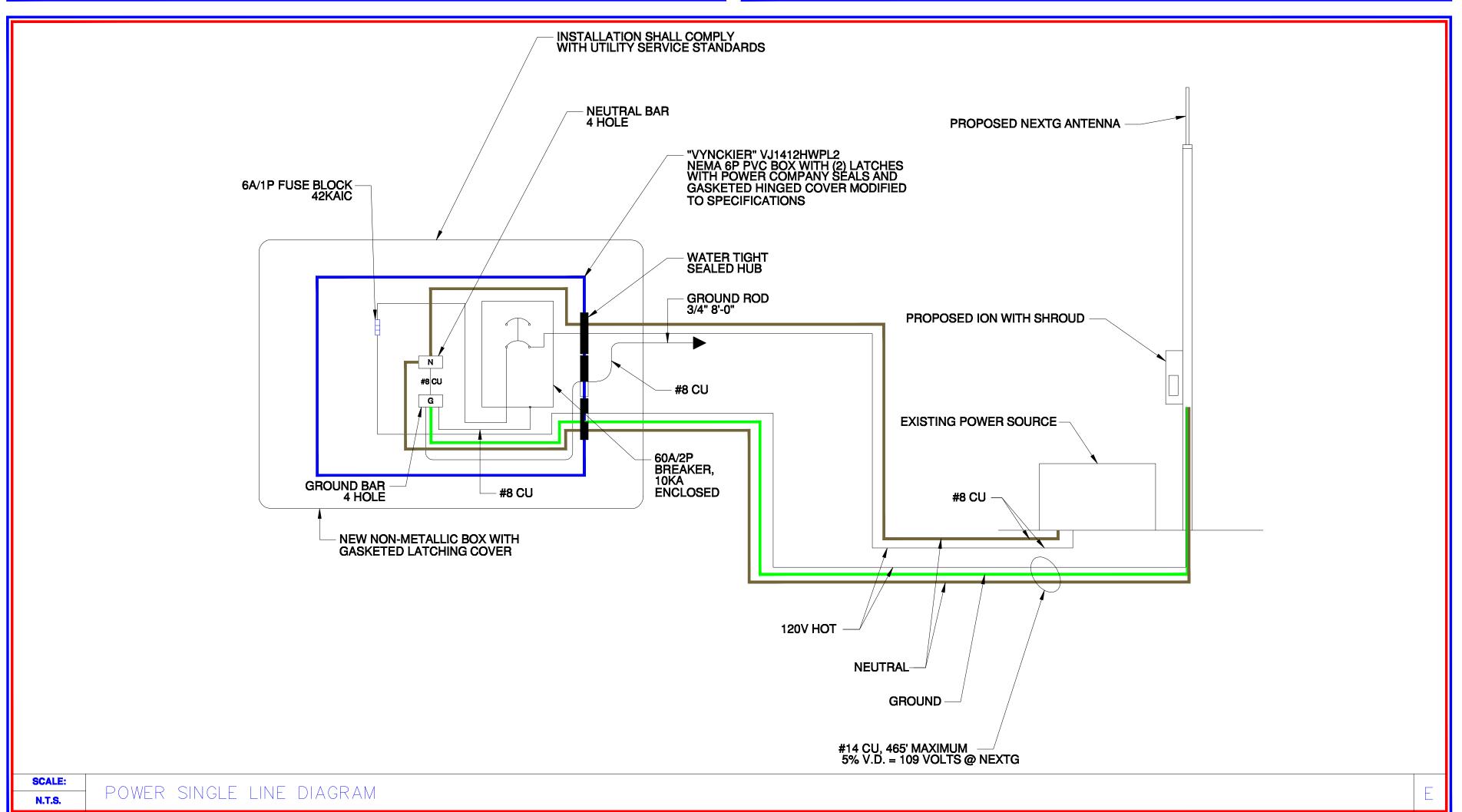
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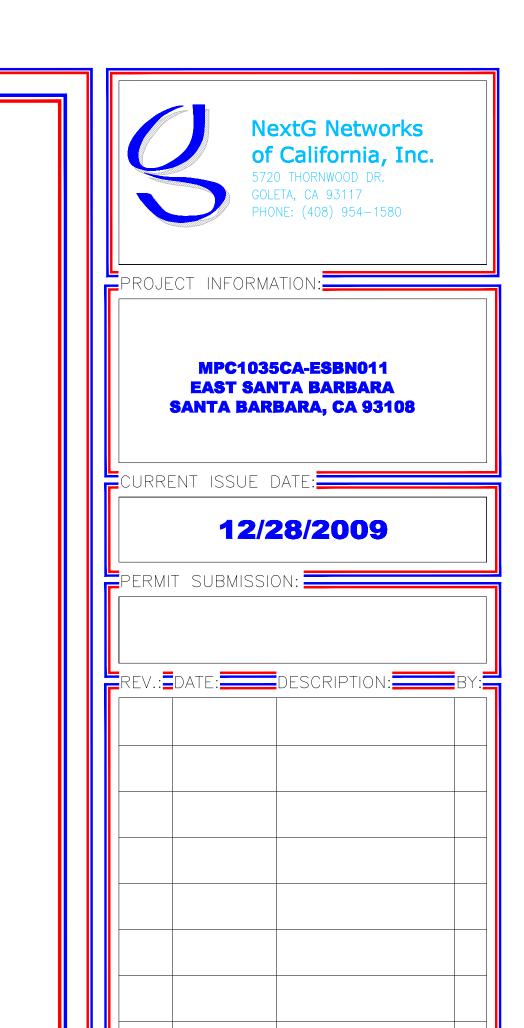














PLANS PREPARED B

5720 THORNWOOD DR.
GOLETA, CA 93117
PHONE: (951) 471-1919

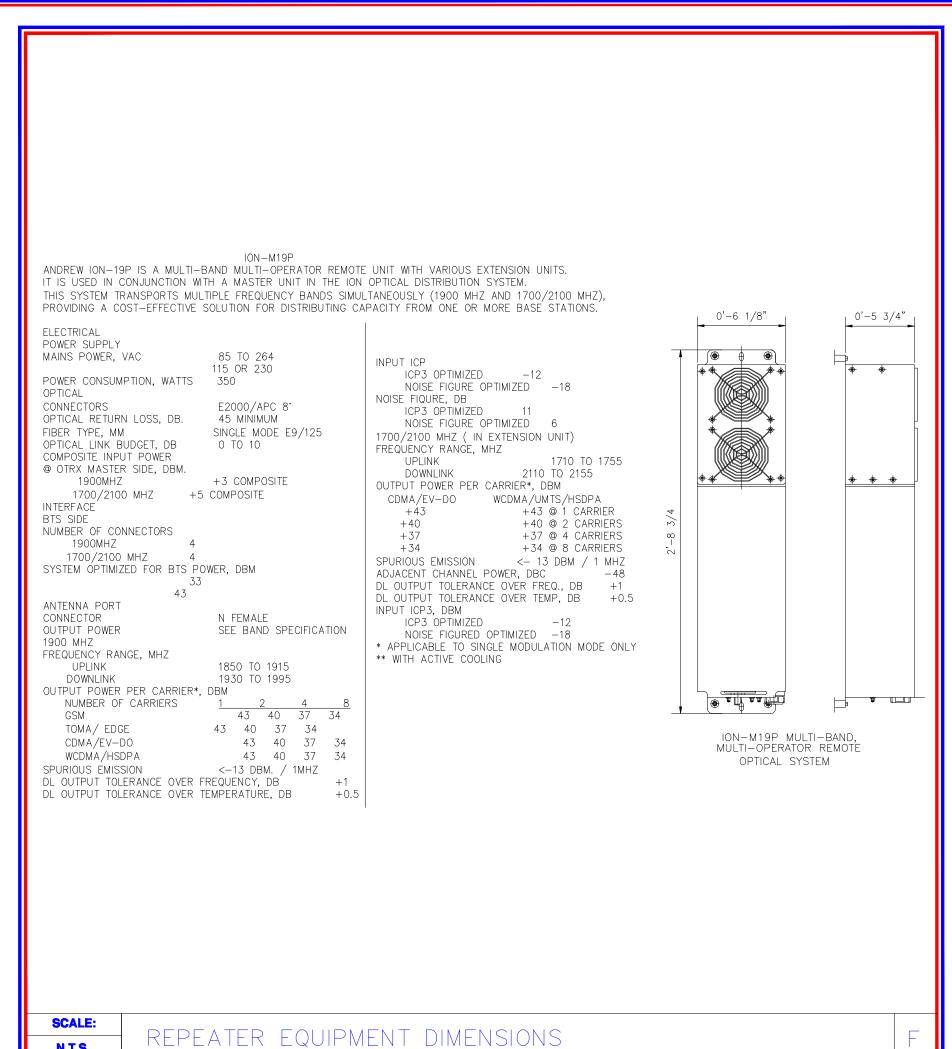
NextG Networks
of California, Inc.

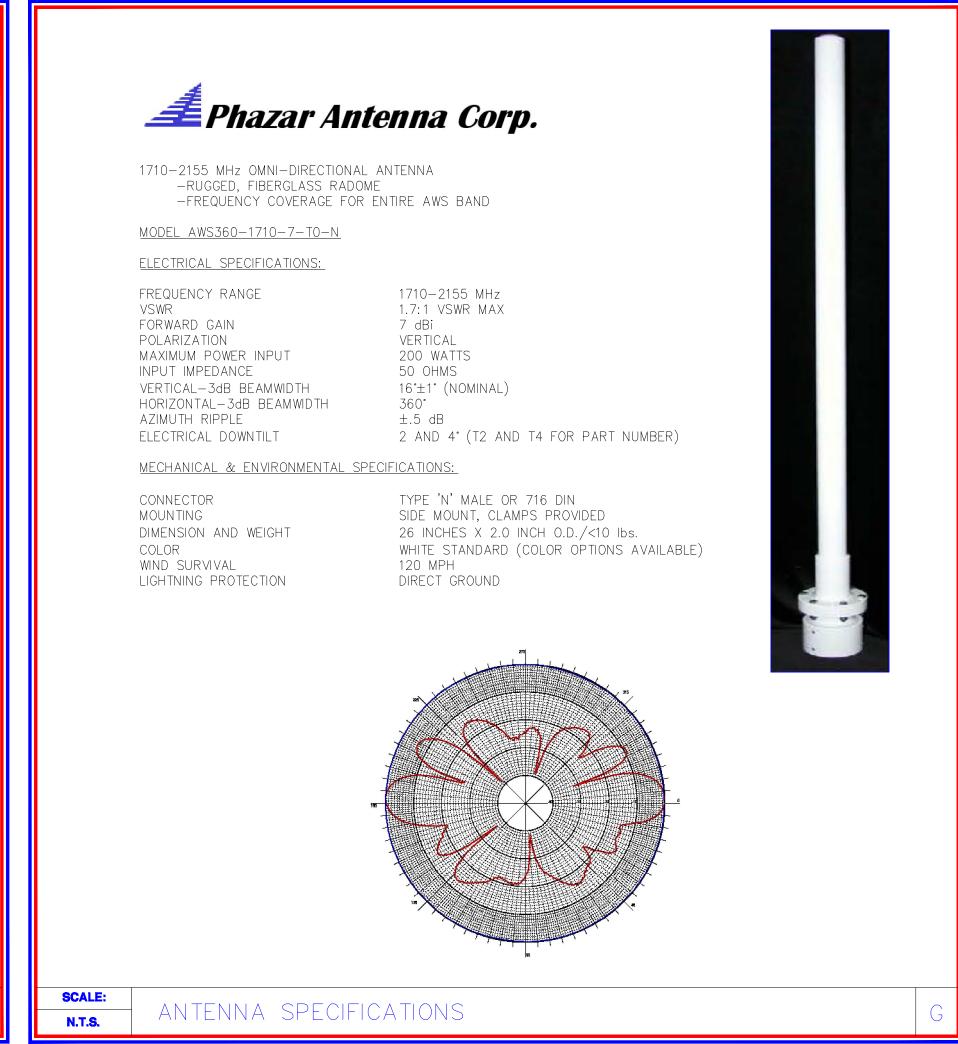
TYPICALS PAGE 1

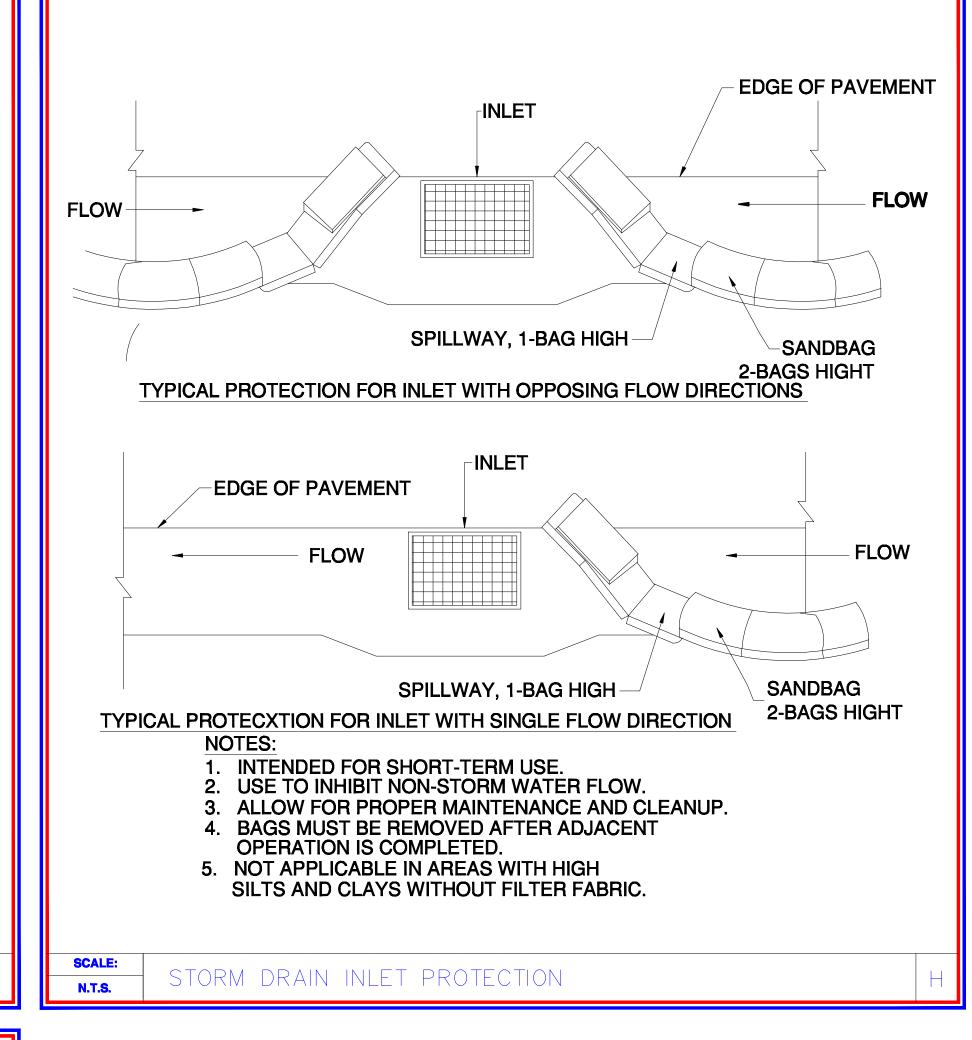
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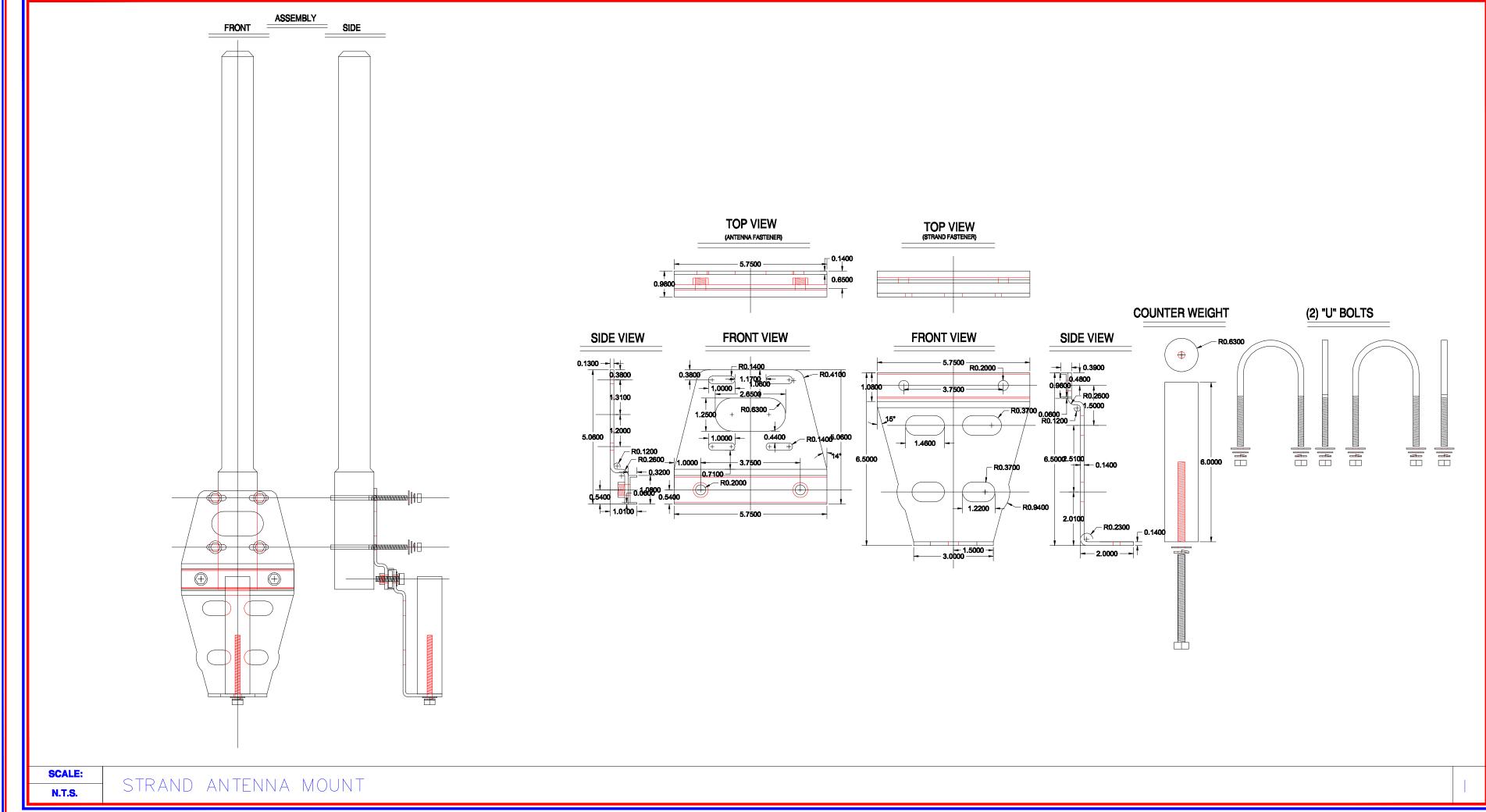
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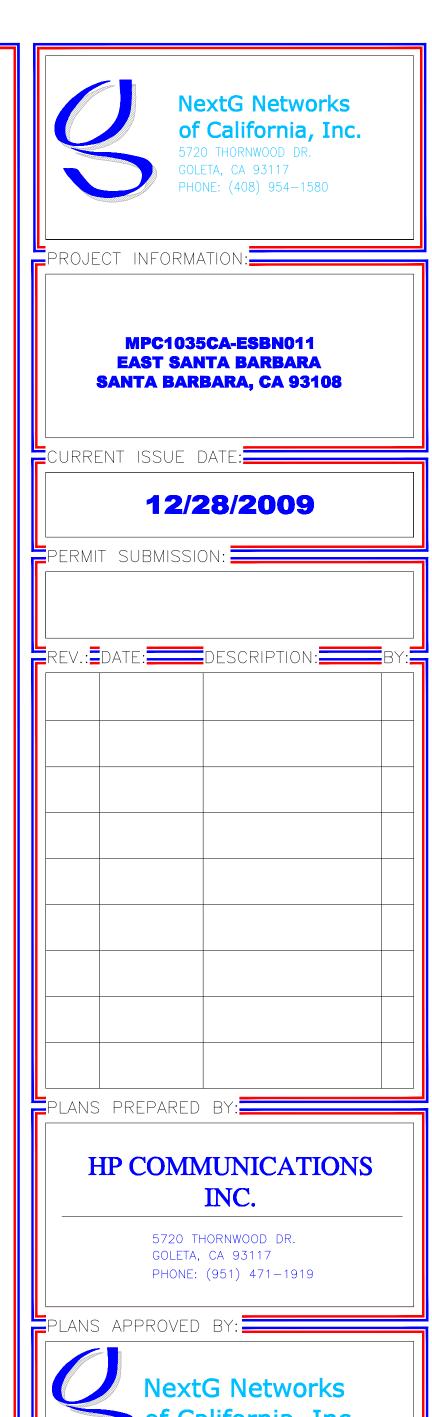
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TYPICALS PAGE 2

5 OF 5

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

7784 Oak Bay Circle Sacramento CA 95831-5800 (800) 760-8414-jbushberg@hampc.com

Christopher D. Hourigan NextG Networks 2216 O'Toole Ave San Jose CA 95131 April 29, 2009

Introduction

At your request, I have reviewed the technical specifications and calculated the maximum radiofrequency, (RF), power density from the Phazar antenna model #AWS360-1710-7-T0-N planned for the Metro PCS wireless telecommunications facilities in Santa Barbara and Goleta, CA. Detailed antenna specifications are provided in attachment 1. This analysis is applicable to any situation in which this antenna is the only RF transmission source located on a light standard, utility pole or similar structure, where the distance from the antenna center to the ground is at least 26 feet and the maximum input power is 20.0 watts. The antenna planned for use in this network is omnidirectional, with a gain of 7 dBi, and is designed to transmit within a bandwidth between approximately 1,710 and 2,155 MHz.

Calculation Methodology

Calculations were made in accordance with the cylindrical model recommendations for near-field analysis contained in the Federal Communications Commission, Office of Engineering and Technology Bulletin 65 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 or other structures can reduce the signal strength by a factor of 10 (i.e., 10 dB) or more depending upon the construction material. In addition, for the far field analysis of ground level RF exposure, 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.

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 μ W/cm². This compares to 5,000 μ W/cm² 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 µW/cm².

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 µW/cm² 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 $1,000~\mu\text{W/cm}^2$). 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

All wireless transmission systems utilizing Phazar antenna model #AWS360-1710-7-T0-N and operating with the characteristics specified above will be in full compliance with FCC RF public safety exposure standards. These transmitters, by design and operation, are low-power devices. Even under maximal exposure conditions in which all the channels are operating at full power, the maximum exposure next to and at the elevation of the antenna will not result in RF exposures in excess of 57.2% of the FCC public safety RF exposure standard for these frequencies (see appendix A-1). An information sign containing appropriate contact information and indicating that RF exposures do not exceed the public MPE should be placed near the antenna (see appendix A-2). The maximum RF exposure at ground level will not result in RF exposures in excess of 0.3% of the FCC public safety standard (see appendix A-3).

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, next to and at the elevation of the antenna, represents a "safety margin" from this threshold of potentially adverse health effects of more than 87 times. The maximum public exposure at ground level is more than 16,660 times below this threshold of potentially adverse health effects.

Given the low levels of radiofrequency fields that would be generated from wireless installations conforming to the configuration specified above, and given the evidence on RF biological effects in a large data base, there is no scientific basis to conclude that harmful effects will attend the utilization of these proposed wireless telecommunications facilities. 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 NextG Networks. 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,

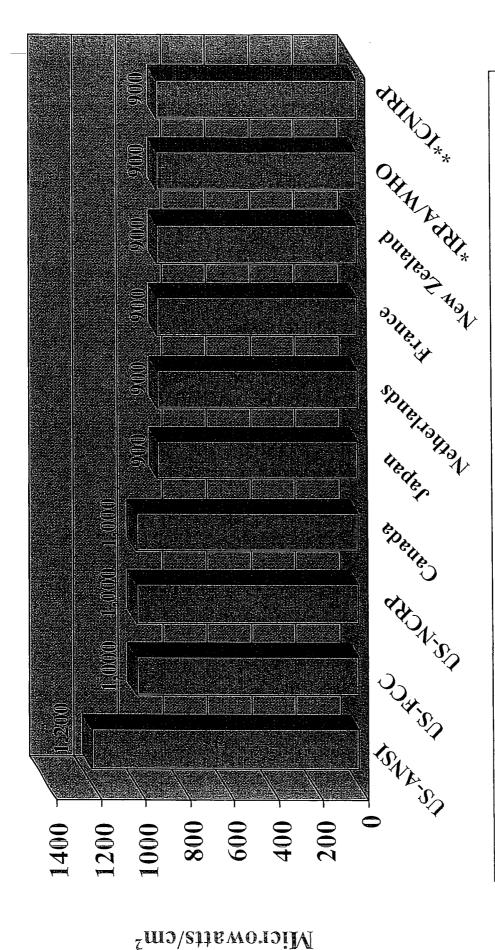
Jerrold T. Bushberg Ph.D., DABMP, DABSNM

June 4. Bully

Diplomate, American Board of Medical Physics (DABMP)

Diplomate, American Board of Science in Nuclear Medicine (DABSNM)

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



*International Radiation Protection Association (IRPA)/ World Health Organization Environmental Health (WHO) Public Safety Exposure Standard (1993). Members of the Scientific Committee were from:

• United Kingdom Germany • France . Russia · Canada · Poland · Australia • Italy

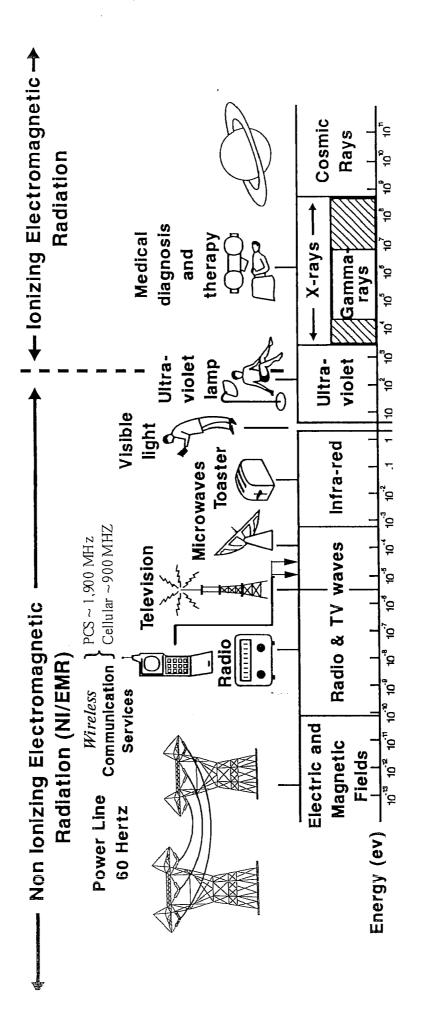
· United States · Hungary

**International Commission on Non-Ionizing Radiation Protection Public Safety Exposure Standard (1998). Members of the Scientific Committee were from:

 Hungary
 United States · United Kingdom • Austria · Poland . Australia . Italy

Figure 1

· Japan



The Electromagnetic Spectrum

Figure 2

Typical Exposure from Various Radio Frequency / Microwave Sources

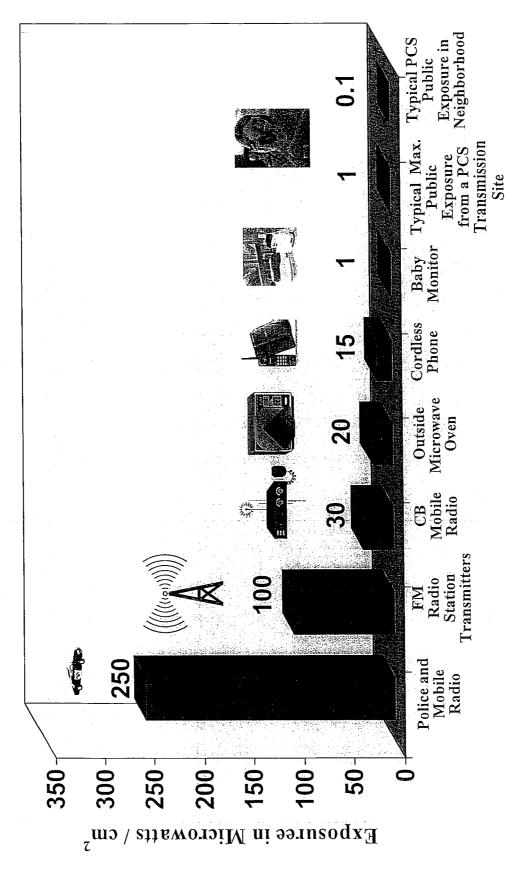


Figure 3

Attachment 1

Example Utility Pole with Antenna Mounted on Bracket



NextG Networks,

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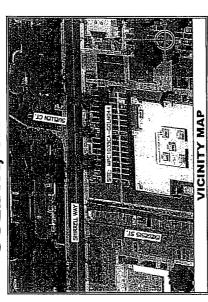
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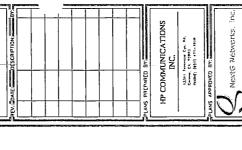


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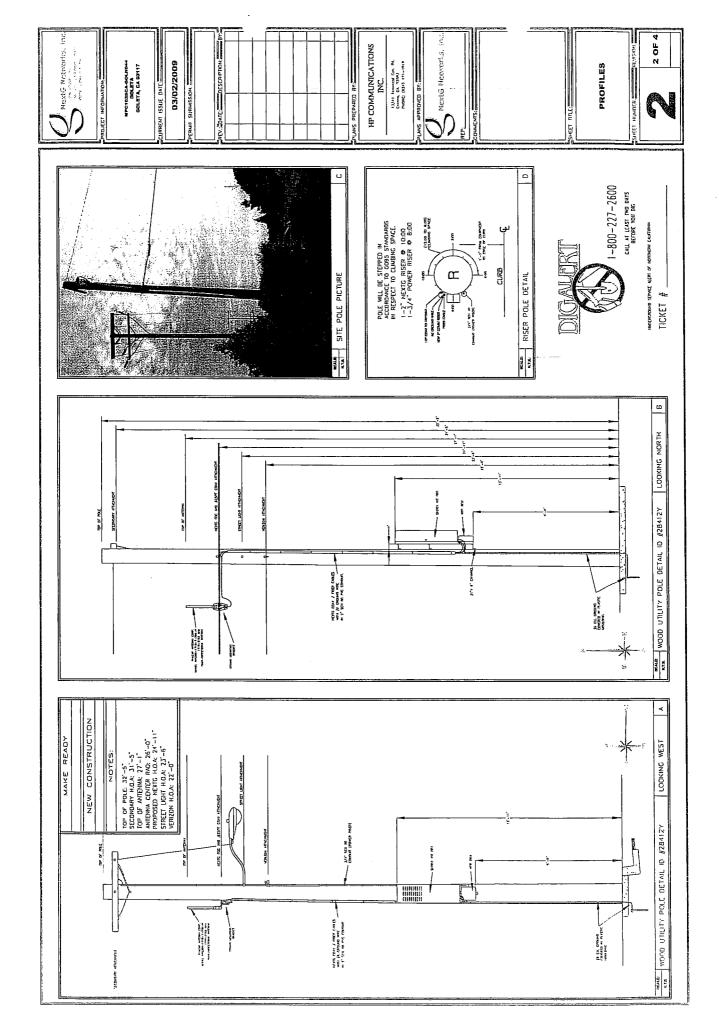
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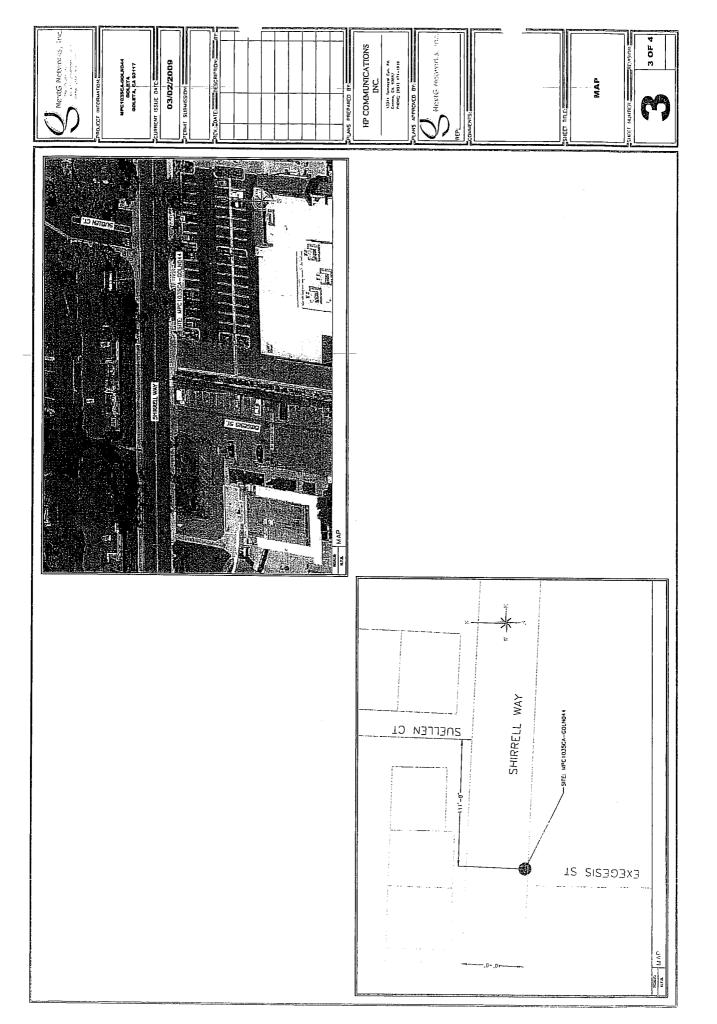
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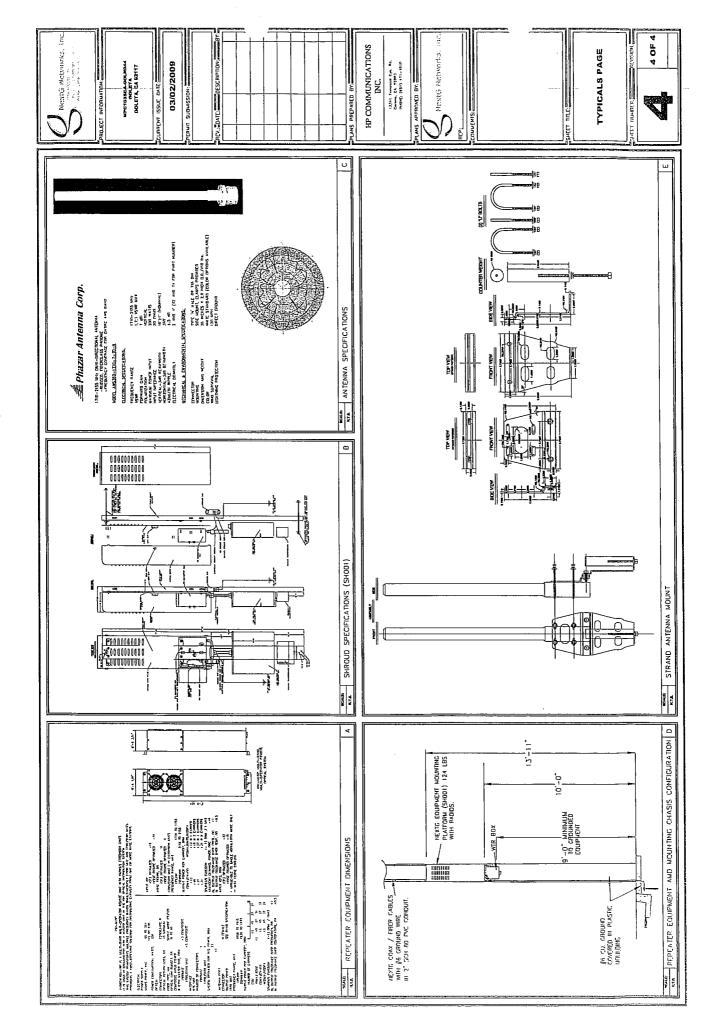
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Attachment 2

Antenna Specifications

1710 – 2155 MHz Omni-Directional Antenna



WIRELESS ANTENNAS

· Rugged, fiberglass radome

- Model AWS360-1710-7-T0-N
- Frequency coverage for entire AWS band

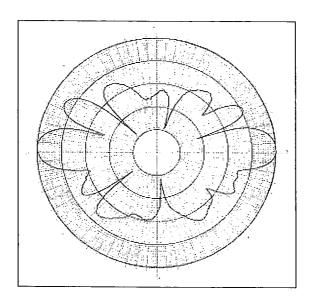


ELECTRICAL SPECIFICATIONS

| SPECS | PERFORMANCE | | |
|---------------------------|---|--|--|
| Frequency Range | 1710-2155 MHz | | |
| VSWR | 1.7:1 Max | | |
| Forward Gain | 7 dBi | | |
| Polarization | Vertical | | |
| Max Power Input | 200 Watts | | |
| Input Impedance | 50 ohms | | |
| Vertical -3dB beamwidth | 16 +/- 1 Degree (nominal) | | |
| Horizontal -3dB beamwidth | 360 degrees | | |
| Azimuth Ripple | +/- 0.5 dB | | |
| Electrical Downtilt | 2 and 4 degrees (T2 and T4 for Part Number) | | |

MECHANICAL SPECIFICATIONS

| SPECS | PERFORMANCE | | | |
|----------------------|--|--|--|--|
| Connector | Type N Female | | | |
| Mounting | Side mount; clamps provided | | | |
| Dimension and Weight | 26" x 2.0" O.D. / <10 lbs. | | | |
| Color | White Standard (Color Options Available) | | | |
| Wind Survival | 120 mph. | | | |
| Lightning Protection | Direct Ground | | | |



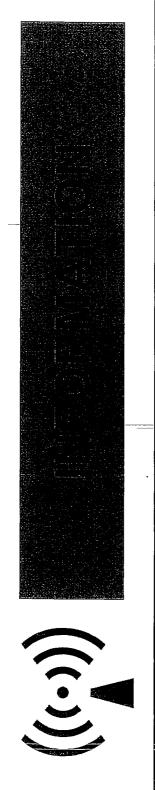
Appendix A-1

RF EXPOSURE AT THE LEVEL OF THE ANTENNA

BASED ON PERCENTAGE OF FCC MAXIMUM PUBLIC EXPOSURE (MPE) LIMIT Maximum RF Exposure <57.2% Public MPE RF EXPOSURE AT THE LEVEL OF THE ANTENNA 10 feet At Antenna Red: Greater than 100% Public MPE Yellow: Less than 100% Public MPE Green: Less than 1% Public MPE Blue: Less than 20% Public MPE Tan: Less thah 5% Public MPE & Mounting Bracket Utility Pole

Appendix A-2

RF NOTICE SIGN



The radio frequency (RF) emissions|at this site have been evaluated for potential RF exposure to personnel who may need to work near these antennae.

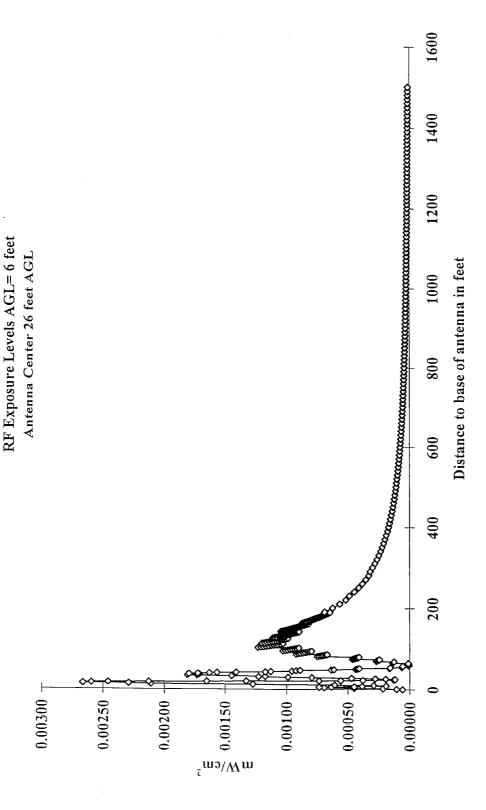
EXPOSURE STANDARD AND THUS HAS BEEN DETERMINED TO BE RF EXPOSURE AT THIS SITE DOES NOT EXCEED THE FCC PUBLIC SAFE FOR THE GENERAL POPULATION.

Reference: Federal Communications Commission (FCC) Public Exposure Standard. OET Bulletin-65, Edition 97-01, August 1997

Appendix A-3

Phazar Antenna Corp. Antenna model # AWS360-1710-7-T0-N Exposure Calculation 6.0 ft Above Grade Level (AGL) Antenna Center 26.0 ft AGL ERP 48.6 Watts (AWS)

Appendix A-3



Max gain ARL 20 (dBd): 4.86

Max exposure: 0.00266293

mW/cm²

Max ERP

(W):

48.6

Ant type: Phazar AWS 360-1710-7-T0-N

Feet from site: 15

RF Exposure Level dB from Prop dist Act ER

| Feet to | Depress | Antenna | dB from | Prop dist | Act ERP | Level | Precent of |
|-----------|---------|----------|-----------|-----------|-----------|---------|------------|
| Ant. base | angle | gain | max ERP | in cm | in mW | mW/cm² | FCC STD |
| | • | • | | | | | |
| | | | | | | | |
| 0 | 90.000 | -25.88 | -30.74 | 609.60 | 40.9861 | 0.00006 | 0.00576 |
| 1 | 87.138 | -23.2467 | -28.10669 | 610.36 | 75.1567 | 0.00011 | 0.01053 |
| 2 | 84.289 | -20.0869 | -24.94692 | 612.64 | 155.5765 | 0.00022 | 0.02164 |
| 3 | 81.469 | -16.8628 | -21.72277 | 616.42 | 326.8582 | 0.00045 | 0.04491 |
| 4 | 78.690 | -14.9056 | -19.76558 | 621.67 | 512.9537 | 0.00069 | 0.06929 |
| 5 | 75.964 | -14.5567 | -19.41669 | 628.36 | 555.8620 | 0.00073 | 0.07349 |
| 6 | 73.301 | -15.0779 | -19.93791 | 636.44 | 492.9983 | 0.00064 | 0.06354 |
| 7 | 70.710 | -16.4469 | -21.30692 | 645.86 | 359.7036 | 0.00045 | 0.04502 |
| 8 | 68.199 | -16.9833 | -21.84327 | 656.56 | 317.9137 | 0.00038 | 0.03850 |
| 9 | 65.772 | -19.9026 | -24.76264 | 668.48 | 162.3202 | 0.00019 | 0.01896 |
| 10 | 63.435 | -17.8501 | -22.71007 | 681.55 | 260.3930 | 0.00029 | 0.02926 |
| 11 | 61.189 | -14.5008 | -19.36084 | 695.72 | 563.0569 | 0.00061 | 0.06073 |
| 12 | 59.036 | -11.0898 | -15.94978 | 710.91 | 1234.9763 | 0.00128 | 0.12756 |
| 13 | 56.976 | -8.71154 | -13.57154 | 727.06 | 2135.4139 | 0.00211 | 0.21088 |
| 14 | 55.008 | -8.1511 | -13.0111 | 744.11 | 2429.5508 | 0.00229 | 0.22906 |
| 15 | 53.130 | -7.2906 | -12.1506 | 762.00 | 2961.9395 | 0.00266 | 0.26629 |
| 16 | 51.340 | -7.18966 | -12.04966 | 780.67 | 3031.5889 | 0.00260 | 0.25968 |
| 17 | 49.635 | -7.21 | -12.07 | 800.06 | 3017.4235 | 0.00246 | 0.24608 |
| 18 | 48.013 | -7.62941 | -12.48941 | 820.13 | 2739.6536 | 0.00213 | 0.21263 |
| 19 | 46.469 | -8.50976 | -13.36976 | 840.83 | 2236.9726 | 0.00165 | 0.16517 |
| 20 | 45.000 | -9.23985 | -14.09985 | 862.10 | 1890.8261 | 0.00133 | 0.13281 |
| 21 | 43.603 | -11.586 | -16.446 | 883.92 | 1101.6302 | 0.00074 | 0.07360 |
| 22 | 42.274 | -12.5595 | -17.41949 | 906.24 | 880.4146 | 0.00056 | 0.05596 |
| 23 | 41.009 | -14.0297 | -18.88966 | 929.02 | 627.5821 | 0.00038 | 0.03796 |
| 24 | 39.806 | -18.5393 | -23.3993 | 952.23 | 222.1809 | 0.00013 | 0.01279 |
| 25 | 38.660 | -18.7401 | -23.60007 | 975.84 | 212.1433 | 0.00012 | 0.01163 |
| 26 | 37.569 | -16.337 | -21.197 | 999.82 | 368.9235 | 0.00019 | 0.01927 |
| 27 | 36.529 | -14.5211 | -19.38115 | 1024.15 | 560.4301 | 0.00028 | 0.02789 |
| 28 | 35.538 | -12.0418 | -16.90177 | 1048.80 | 991.8810 | 0.00047 | 0.04707 |
| 29 | 34.592 | -9.56356 | -14.42356 | 1073.74 | 1755.0145 | 0.00079 | 0.07946 |
| 30 | 33.690 | -8.41314 | -13.27314 | 1098.97 | 2287.2930 | 0.00099 | 0.09886 |
| 31 | 32.829 | -7.27007 | -12.13007 | 1124.46 | 2975.9721 | 0.00123 | 0.12287 |
| 32 | 32.005 | -7.27007 | -12.13007 | 1150.19 | 2975.9721 | 0.00117 | 0.11743 |
| 33 | 31.218 | -6.17142 | -11.03142 | 1176.15 | 3832.6082 | 0.00145 | 0.14463 |
| 34 | 30.466 | -5.20211 | -10.06211 | 1202.32 | 4790.9855 | 0.00173 | 0.17301 |
| 35 | 29.745 | -4.82067 | -9.680671 | 1228.69 | 5230.8127 | 0.00181 | 0.18088 |

ARL 20 | Max gain (dBd): 4.86 | Max exposure: 0.00266293 | mW/cm²

Max ERP

(W): 48.6 Ant type: Phazar AWS 360-1710-7-T0-N Feet from site: 15

| Ant. base argle gain max ERP in cm in mW mWcm² FCC STD 36 29.055 -4.82067 -9.680671 1255.24 5230.8127 0.00173 0.17330 37 28.393 -4.80937 -9.549374 1281.97 5391.3672 0.00171 0.17125 38 27.759 -4.30058 -9.160582 1338.91 5896.2796 0.00180 0.17247 40 26.565 -4.37009 9.230094 1363.11 5802.6570 0.00163 0.16303 41 26.063 -4.65961 9.519612 1417.89 5428.402 0.00141 0.14096 42 25.463 -6.65961 -9.519612 1417.89 5428.402 0.00141 0.14096 43 24.944 -5.28942 -10.14942 1445.47 4695.6355 0.00113 0.11295 45 23.962 -5.84995 -10.70995 150.97 4127.0611 0.00096 0.9663 46 23.499 -5.84995 -10.7 | M Exposure Level | | | | | | | |
|--|------------------|---------|----------|-----------|-----------|-----------|---------|------------|
| 36 | Feet to | Depress | Antenna | dB from | Prop dist | Act ERP | | Precent of |
| 37 | Ant. base | | gain | max ERP | | in mW | mW/cm² | FCC STD |
| 38 27.759 -4.30058 -9.160582 1308.87 5896.2796 0.00180 0.17967 39 27.150 -4.30058 -9.160582 1335.91 5896.2796 0.00172 0.17247 40 26.565 -4.37009 -9.230094 1363.11 5802.6570 0.00163 0.16303 41 26.003 -4.37009 -9.230094 1363.11 5802.6570 0.00157 0.15668 42 25.463 -4.65961 -9.519612 1417.89 5428.4402 0.00141 0.14096 43 24.944 -5.28942 -10.14942 1445.47 4695.6355 0.00117 0.11732 44 24.444 -5.28942 -10.14942 1445.47 4695.6355 0.00113 0.11295 45 23.962 -5.84995 -10.70995 1500.97 4127.0611 0.00096 0.09563 46 23.499 -5.84995 -10.70995 1528.87 4127.0611 0.00096 0.09563 47 23.051 -5.84995 -10.70995 1556.87 4127.0611 0.00099 0.08819 48 22.620 -7.14898 -12.00898 1584.96 3060.1181 0.00064 0.06359 49 22.203 -7.14898 -12.00898 1613.14 3060.1181 0.00064 0.06359 49 22.203 -7.14898 -12.00898 1613.14 3060.1181 0.00064 0.06359 50 21.801 -8.46954 -13.32954 1669.74 2257.7852 0.00042 0.04227 51 21.413 -8.46954 -13.32954 1669.74 2257.7852 0.00044 0.04375 51 21.413 -8.46954 -13.32954 1669.74 2257.7852 0.00041 0.04087 52 21.038 -8.6954 -13.32954 1698.15 2257.7852 0.00041 0.04087 53 20.674 -12.3602 -17.22022 1726.63 291.7530 0.00016 0.01614 54 20.323 -12.3602 -17.22022 1726.63 921.7530 0.00016 0.01614 54 20.323 -12.3602 -17.22022 1726.63 921.7530 0.00016 0.01614 54 20.323 -12.3602 -17.22022 1726.63 921.7530 0.00016 0.01614 56 19.654 -16.252 -21.11199 1812.47 376.2163 0.00006 0.00579 58 19.935 -16.252 -21.11199 1881.20 376.2163 0.00006 0.00579 58 19.026 -16.252 -21.11199 1881.20 376.2163 0.00006 0.00579 58 19.026 -16.252 -21.11199 1881.40 376.2163 0.00006 0.00562 59 18.776 -25.4966 -30.35658 1995.666 44.7691 0.00001 0.00113 66 17.679 -22.4546 -27.3146 2014.68 90.1937 0.00001 0.00116 67 17.103 -22.4546 -27.3146 2014.68 90.1937 0.00001 0.00116 68 16.858 -11.4187 -16.27874 2108.02 1144.8867 0.00013 0.01366 69 16.144.877 -16.27874 2108.02 1144.8867 0.00013 0.01366 60 16.858 -1.1.4187 -16.27874 2108.02 1144.8867 0.00013 0.01360 60 16.144 -17.354 -22.4546 -27.3146 2014.68 90.1937 0.00001 0.00113 61 15.732 -7.94152 -12.80152 2248.30 2549.6705 0. | | | | | | 5230.8127 | 0.00173 | 0.17330 |
| 39 27.150 -4.30058 -9.160582 1335.91 5896.2796 0.00172 0.17247 40 26.565 -4.37009 9.230094 1363.11 5802.6570 0.00163 0.16303 41 26.003 -4.37009 9.230094 1390.44 5802.6570 0.00157 0.15668 42 25.463 -4.65961 9.519612 1417.89 5428.4402 0.00141 0.14096 43 24.944 -5.28942 10.14942 1445.47 4695.6355 0.00117 0.11732 44 24.444 -5.28942 10.14942 1473.16 4695.6355 0.00117 0.11732 45 23.962 -5.84995 10.70995 1500.97 4127.0611 0.00096 0.09563 46 23.499 -5.84995 -10.70995 1500.97 4127.0611 0.00096 0.09563 46 23.499 -5.84995 -10.70995 1558.87 4127.0611 0.00099 0.08889 48 22.620 -7.14898 -12.00898 1584.96 3060.1181 0.00064 0.06359 49 22.203 -7.14898 -12.00898 1544.96 3060.1181 0.00064 0.06359 50 21.801 -8.46954 -13.32954 1669.74 2257.7852 0.00044 0.04375 51 21.413 -8.46954 -13.32954 1669.74 2257.7852 0.00044 0.04275 52 21.038 -8.46954 -13.32954 1698.15 2257.7852 0.00044 0.04287 53 20.674 -12.3602 -17.22022 1726.63 921.7530 0.00016 0.01614 54 20.323 -12.3602 -17.22022 1726.63 921.7530 0.00016 0.01614 54 20.323 -16.252 -21.11199 1812.47 376.2163 0.00006 0.00598 57 19.335 -16.252 -21.11199 1812.47 376.2163 0.00006 0.00598 59 18.726 -25.4966 -30.35658 1898.83 44.7691 0.00001 0.00065 60 18.435 -25.4966 -30.35658 1898.83 44.7691 0.00001 0.00061 61 18.153 -25.4966 -30.35658 1898.83 44.7691 0.00001 0.00013 61 18.153 -25.4966 -30.35658 1898.83 44.7691 0.00001 0.00016 62 17.879 -22.4546 -27.3146 2043.75 90.1937 0.00001 0.00016 63 17.613 -22.4546 -27.3146 2043.75 90.1937 0.00001 0.00113 65 17.103 -22.4546 -27.3146 2043.75 90.1937 0.00001 0.00113 66 16.856 -11.4187 -16.27874 2102.02 1144.8867 0.00013 0.01353 67 16.621 -11.4187 -16.27874 2100.02 1144.8867 0.00013 0.01366 68 16.390 -11.4187 -16.27874 2100.02 1144.8867 0.00015 0.00267 70 15.945 -7.94152 -12.80152 2248.30 2549.6705 0.00026 0.02507 71 15.732 -7.94152 -12.80152 2248.30 2549.6705 0.00026 0.02507 73 15.524 -7.94152 -12.80152 2248.30 2549.6705 0.00026 0.02507 74 15.124 -7.94152 -12.80152 2338.45 2549.6705 0.00024 0.02438 | | 28.393 | | | 1281.97 | 5391.3672 | 0.00171 | 0.17125 |
| 40 26.565 -4.37009 -9.230094 1363.11 5802.6570 0.00163 0.16303 41 26.003 -4.37009 9.230094 1390.44 5802.6570 0.00157 0.15668 42 25.463 -4.65961 -9.519612 1417.89 5428.4402 0.00141 0.14096 43 24.944 -5.28942 -10.14942 1445.47 4695.6355 0.00117 0.11732 44 24.444 -5.28942 -10.14942 1473.16 4695.6355 0.00113 0.11295 45 23.962 -5.84995 -10.70995 1500.97 4127.0611 0.0096 0.09563 46 23.499 -5.84995 -10.70995 1500.97 4127.0611 0.00096 0.09563 46 23.499 -5.84995 -10.70995 1528.87 427.0611 0.00099 0.09217 47 23.051 -5.84995 -10.70995 1528.87 4127.0611 0.00099 0.08889 48 22.620 -7.14898 12.00898 1584.96 3060.1181 0.00064 0.06359 49 22.203 -7.14898 12.00898 1613.14 3060.1181 0.00064 0.06359 50 21.801 -8.46954 -13.32954 1641.40 2257.7852 0.00044 0.04375 51 21.413 -8.46954 -13.32954 1698.15 52 21.038 -8.46954 -13.32954 1698.15 53 20.674 -12.3602 -17.22022 -17.55.48 921.7530 0.00016 0.04687 53 20.674 -12.3602 -17.22022 -17.55.48 921.7530 0.00016 0.01614 54 20.323 -12.3602 -17.22022 -17.55.48 921.7530 0.00016 0.01614 54 20.323 -12.602 -17.22022 -17.55.48 921.7530 0.00016 0.01614 56 19.654 -16.252 -21.11199 1841.20 376.2163 0.00006 0.00579 57 19.335 -16.252 -21.11199 1841.20 376.2163 0.00006 0.00579 58 19.026 -16.252 -21.11199 1841.20 376.2163 0.00006 0.00579 58 19.026 -16.252 -21.11199 1841.20 376.2163 0.00006 0.00579 59 18.726 -25.4966 30.35658 1898.83 44.7691 0.00001 0.00065 60 18.435 -25.4966 30.35658 1898.83 44.7691 0.00001 0.00065 61 18.153 -25.4966 30.35658 1898.83 44.7691 0.00001 0.00013 61 18.153 -25.4966 30.35658 1898.83 44.7691 0.00001 0.00013 63 17.613 -22.4546 -27.3146 2014.88 90.1937 0.00001 0.00113 65 17.103 -22.4546 -27.3146 2014.88 90.1937 0.00001 0.00113 66 17.03 -22.4546 -27.3146 2014.88 90.1937 0.00001 0.00113 66 16.858 1.14187 16.27874 2131.20 144.8867 0.00013 0.01336 67 16.621 -11.4187 16.27874 2131.20 144.8867 0.00013 0.01336 68 16.390 -11.4187 16.27874 2139.98 2549.6705 0.00026 0.02563 72 15.524 -7.94152 -12.80152 2248.30 2549.6705 0.00026 0 | | | | -9.160582 | | 5896.2796 | 0.00180 | 0.17967 |
| 41 26.003 -4.37009 -9.230094 1390.44 5802.6570 0.00157 0.15668 42 25.463 -4.65961 -9.519612 1417.89 5428.4402 0.00141 0.14096 143 24.944 -5.28942 -10.14942 1445.47 4695.6355 0.00117 0.11732 144 24.444 -5.28942 -10.14942 1473.16 4695.6355 0.00113 0.11295 145 23.962 -5.84995 -10.70995 1500.97 4127.0611 0.00096 0.09563 146 23.499 -5.84995 -10.70995 1500.97 4127.0611 0.00096 0.09563 146 23.499 -5.84995 -10.70995 1558.87 4127.0611 0.00099 0.09217 147 23.051 -5.84995 -10.70995 1558.87 4127.0611 0.00098 0.08889 148 22.620 -7.14898 -12.00898 1584.96 3060.1181 0.00064 0.06359 149 22.203 -7.14898 -12.00898 1613.14 3060.1181 0.00064 0.06359 149 22.203 -7.14898 -12.00898 1613.14 3060.1181 0.00064 0.06359 12.1413 -8.46954 -13.32954 1669.74 2257.7852 0.00044 0.04375 12.1413 -8.46954 -13.32954 1669.74 2257.7852 0.00044 0.04375 12.1413 -8.46954 -13.32954 1698.74 2257.7852 0.00041 0.04087 153 20.674 -12.3602 -17.22022 1726.63 921.7530 0.00016 0.01614 154 20.323 -12.3602 -17.22022 1726.63 921.7530 0.00016 0.01614 154 20.323 -12.3602 -17.22022 1726.63 921.7530 0.00016 0.01614 155 19.983 -16.252 -21.11199 1783.80 376.2163 0.00006 0.00598 157 19.335 -16.252 -21.11199 1812.47 376.2163 0.00006 0.00598 157 19.335 -16.252 -21.11199 1841.20 376.2163 0.00006 0.00579 18.726 -25.4966 -30.35658 1898.83 44.7691 0.00001 0.00065 162 17.879 -22.45466 -27.3146 1985.65 90.1937 0.00001 0.00016 0.00116 18.435 -25.4966 -30.35658 1956.66 44.7691 0.00001 0.00065 17.1487 -12.24546 -27.3146 2043.75 90.1937 0.00001 0.00119 1666 18.858 11.4187 -16.27874 2102.02 1144.8867 0.0001 0.00110 0.0113 1666 16.858 11.4187 -16.27874 2102.02 1144.8867 0.0001 0.00110 0.0110 1666 16.858 11.4187 -16.27874 2102.02 1144.8867 0.0001 0.00013 0.0126 17.504 11.4187 -16.27874 2102.02 1144.8867 0.0001 0.0001 0.0026 17.504 11.4187 -16.27874 2102.02 1144.8867 0.0001 0.0001 0.0026 17.504 11.4187 -16.27874 210.03 1144.8867 0.0001 0.0001 0.0026 17.504 11.4187 -16.27874 210.03 1144.8867 0.0001 0.0001 0.0026 15.504 -7.94152 -12.80152 2248.30 2549.6705 0.00026 0.02633 17.5124 -7.94152 | | 27.150 | | | 1335.91 | 5896.2796 | 0.00172 | 0.17247 |
| 42 25.463 -4.65961 -9.519612 1417.89 5428.4402 0.00141 0.14096 43 24.944 -5.28942 -10.14942 1445.47 4695.6355 0.00117 0.11732 44 24.444 -5.28942 -10.70995 1500.97 4127.0611 0.00096 0.09563 46 23.499 -5.84995 -10.70995 1500.97 4127.0611 0.00099 0.09217 47 23.051 -5.84995 -10.70995 1556.87 4127.0611 0.00089 0.08889 48 22.620 -7.14898 -12.00898 1584.96 3060.1181 0.00064 0.06359 49 22.203 -7.14898 -12.00898 1613.14 3060.1181 0.00064 0.06359 50 21.801 -8.46954 -13.32954 1669.74 2257.7852 0.00044 0.04375 51 21.413 -8.46954 -13.32954 1669.74 2257.7852 0.00041 0.04087 52 21.038 -8.46954 | | 26.565 | | | 1363.11 | 5802.6570 | 0.00163 | 0.16303 |
| 43 24.944 -5.28942 -10.14942 1445.47 4695.6355 0.00117 0.11732 44 24.444 -5.28942 -10.14942 1473.16 4695.6355 0.00113 0.11295 45 23.962 -5.84995 -10.70995 1500.97 4127.0611 0.00096 0.09563 46 23.499 -5.84995 -10.70995 1528.87 4127.0611 0.00092 0.09217 47 23.051 -5.84995 -10.70995 1556.87 4127.0611 0.00089 0.08889 48 22.620 -7.14898 -12.00898 1584.96 3060.1181 0.00064 0.06359 49 22.203 -7.14898 -12.00898 1613.14 3060.1181 0.00061 0.06139 50 21.801 8.46954 -13.32954 1661.40 2257.7852 0.00042 0.04227 52 21.038 8.46954 -13.32954 1698.15 2257.7852 0.00041 0.04087 53 20.53 -12.3602 | | 26.003 | -4.37009 | -9.230094 | 1390.44 | 5802.6570 | 0.00157 | 0.15668 |
| 44 24.444 -5.28942 -10.14942 1473.16 4695.6355 0.00113 0.11295 45 23.962 -5.84995 -10.70995 1500.97 4127.0611 0.00096 0.09563 46 23.499 -5.84995 -10.70995 1528.87 4127.0611 0.00092 0.09217 47 23.051 -5.84995 -10.70995 1556.87 4127.0611 0.00099 0.08889 48 22.620 -7.14898 -12.00898 1584.96 3060.1181 0.00064 0.06359 49 22.203 -7.14898 -12.00898 1613.14 3060.1181 0.00064 0.06359 50 21.801 -8.46954 -13.32954 1669.74 2257.7852 0.00042 0.04227 51 21.318 -8.46954 -13.32954 1669.74 2257.7852 0.00041 0.04087 53 20.674 -12.3602 -17.22022 1726.63 921.7530 0.00016 0.01614 54 20.323 -12.3602 | | 25.463 | -4.65961 | -9.519612 | 1417.89 | 5428.4402 | 0.00141 | 0.14096 |
| 45 23.962 -5.84995 -10.70995 1500.97 4127.0611 0.00096 0.09563 46 23.499 -5.84995 -10.70995 1528.87 4127.0611 0.00092 0.09217 47 23.051 -5.84995 -10.70995 1556.87 4127.0611 0.00089 0.08889 48 22.620 -7.14898 -12.00898 1584.96 3060.1181 0.00064 0.06359 49 22.203 -7.14898 -12.00898 1613.14 3060.1181 0.00061 0.06139 50 21.801 -8.46954 -13.32954 1641.40 2257.7852 0.00044 0.04375 51 21.413 -8.46954 -13.32954 1669.74 2257.7852 0.00044 0.04375 52 21.038 -8.46954 -13.32954 1698.15 2257.7852 0.00042 0.04227 52 21.038 -8.46954 -13.32954 1698.15 2257.7852 0.00041 0.04087 53 20.674 -12.3602 -17.22022 1726.63 921.7530 0.00016 0.01614 54 20.323 -12.3602 -17.22022 1726.63 921.7530 0.00016 0.01662 55 19.983 -16.252 -21.11199 1783.80 376.2163 0.00066 0.00517 56 19.654 -16.252 -21.11199 1812.47 376.2163 0.00006 0.00598 57 19.335 -16.252 -21.11199 1841.20 376.2163 0.00006 0.00598 58 19.026 -16.252 -21.11199 1841.20 376.2163 0.00006 0.00559 59 18.726 -25.4966 -30.35658 1898.83 44.7691 0.00001 0.00065 60 18.435 -25.4966 -30.35658 1898.83 44.7691 0.00001 0.00063 61 18.153 -25.4966 -30.35658 1927.72 44.7691 0.00001 0.00063 61 18.153 -25.4966 -30.35658 1927.72 44.7691 0.00001 0.00063 61 17.613 -22.4546 -27.3146 1985.65 90.1937 0.00001 0.00119 63 17.613 -22.4546 -27.3146 2043.75 90.1937 0.00001 0.00113 65 17.103 -22.4546 -27.3146 2043.75 90.1937 0.00001 0.00113 65 17.103 -22.4546 -27.3146 2072.86 90.1937 0.00001 0.00113 66 16.858 -11.4187 -16.27874 2102.02 1144.8867 0.0001 0.00113 67 16.621 -11.4187 -16.27874 2102.02 1144.8867 0.00013 0.01353 68 16.390 -11.4187 -16.27874 2102.02 1144.8867 0.00012 0.01247 70 15.945 -7.94152 -12.80152 2248.80 2549.6705 0.00025 0.02501 74 15.524 -7.94152 -12.80152 2277.65 2549.6705 0.00026 0.02566 73 15.524 -7.94152 -12.80152 2307.04 2549.6705 0.00024 0.02438 | 43 | 24.944 | | | 1445.47 | 4695.6355 | 0.00117 | 0.11732 |
| 46 23.499 -5.84995 -10.70995 1528.87 4127.0611 0.00092 0.09217 47 23.051 -5.84995 -10.70995 1556.87 4127.0611 0.00089 0.08889 48 22.620 -7.14898 -12.00898 1584.96 3060.1181 0.00064 0.06359 50 21.801 -8.46954 -13.32954 1641.40 2257.7852 0.00044 0.04375 51 21.413 -8.46954 -13.32954 1669.74 2257.7852 0.00042 0.04227 52 21.038 -8.46954 -13.32954 1669.74 2257.7852 0.00041 0.04087 53 20.674 -12.3602 -17.22022 1726.63 921.7530 0.00016 0.01614 54 20.323 -12.3602 -17.22022 1726.63 921.7530 0.00016 0.01662 55 19.983 -16.252 -21.11199 1783.80 376.2163 0.0006 0.00617 56 19.654 -16.252 < | | 24.444 | -5.28942 | -10.14942 | 1473.16 | 4695.6355 | | 0.11295 |
| 47 23.051 -5.84995 -10.70995 1556.87 4127.0611 0.00089 0.08889 48 22.620 -7.14898 -12.00898 1584.96 3060.1181 0.00064 0.06359 49 22.203 -7.14898 -12.00898 1613.14 3060.1181 0.00061 0.06139 50 21.801 -8.46954 -13.32954 1641.40 2257.7852 0.00044 0.04375 51 21.413 -8.46954 -13.32954 1669.74 2257.7852 0.00041 0.04087 52 21.038 -8.46954 -13.32954 1698.15 2257.7852 0.00041 0.04087 53 20.674 -12.3602 -17.22022 1726.63 921.7530 0.00016 0.01614 54 20.323 -12.3602 -17.22022 1726.63 921.7530 0.00016 0.01562 55 19.983 -16.252 -21.11199 1783.80 376.2163 0.0006 0.00517 56 19.654 -16.252 < | | | -5.84995 | -10.70995 | 1500.97 | 4127.0611 | 0.00096 | 0.09563 |
| 48 22.620 -7.14898 -12.00898 1584.96 3060.1181 0.00064 0.06359 49 22.203 -7.14898 -12.00898 1613.14 3060.1181 0.00061 0.06139 50 21.801 -8.46954 -13.32954 1641.40 2257.7852 0.00042 0.04375 51 21.413 -8.46954 -13.32954 1669.74 2257.7852 0.00042 0.04227 52 21.038 -8.46954 -13.32954 1669.74 2257.7852 0.00041 0.04087 53 20.674 -12.3602 -17.22022 1726.63 921.7530 0.00016 0.01614 54 20.323 -16.252 -21.11199 1783.80 376.2163 0.0006 0.00617 55 19.983 -16.252 -21.11199 182.47 376.2163 0.0006 0.00598 57 19.335 -16.252 -21.11199 1841.20 376.2163 0.0006 0.00598 57 19.335 -16.252 -21 | | | -5.84995 | -10.70995 | 1528.87 | 4127.0611 | 0.00092 | 0.09217 |
| 49 22.203 -7.14898 -12.00898 1613.14 3060.1181 0.00061 0.06139 50 21.801 -8.46954 -13.32954 1641.40 2257.7852 0.00044 0.04375 51 21.413 -8.46954 -13.32954 1669.74 2257.7852 0.00042 0.04227 52 21.038 -8.46954 -13.32954 1698.15 2257.7852 0.00041 0.04087 53 20.674 -12.3602 -17.22022 1726.63 921.7530 0.00016 0.01614 54 20.323 -12.3602 -17.22022 1725.84 921.7530 0.00016 0.0162 55 19.983 -16.252 -21.11199 1783.80 376.2163 0.00066 0.00617 56 19.654 -16.252 -21.11199 1841.20 376.2163 0.00066 0.00579 58 19.026 -16.252 -21.11199 1841.20 376.2163 0.00066 0.00579 58 19.026 -16.252 - | | | | | 1556.87 | 4127.0611 | 0.00089 | 0.08889 |
| 50 21.801 -8.46954 -13.32954 1641.40 2257.7852 0.00044 0.04375 51 21.413 -8.46954 -13.32954 1669.74 2257.7852 0.00042 0.04227 52 21.038 -8.46954 -13.32954 1698.15 2257.7852 0.00041 0.04087 53 20.674 -12.3602 -17.22022 1726.63 921.7530 0.00016 0.01514 54 20.323 -12.3602 -17.22022 -17.555-18 921.7530 0.00016 0.01562 55 19.983 -16.252 -21.11199 1783.80 376.2163 0.00006 0.00579 56 19.654 -16.252 -21.11199 1841.20 376.2163 0.00006 0.00579 58 19.026 -16.252 -21.11199 1849.99 376.2163 0.00006 0.00562 59 18.726 -25.4966 -30.35658 1898.83 44.7691 0.00001 0.00065 60 18.435 -25.4966 <t< td=""><td></td><td></td><td>-7.14898</td><td>-12.00898</td><td>1584.96</td><td>3060.1181</td><td>0.00064</td><td>0.06359</td></t<> | | | -7.14898 | -12.00898 | 1584.96 | 3060.1181 | 0.00064 | 0.06359 |
| 51 21.413 -8.46954 -13.32954 1669.74 2257.7852 0.00042 0.04227 52 21.038 -8.46954 -13.32954 1698.15 2257.7852 0.00041 0.04087 53 20.674 -12.3602 -17.22022 1726.63 921.7530 0.00016 0.01614 54 20.323 -12.3602 -17.22022 1785.48 921.7530 0.00016 0.01614 55 19.983 -16.252 -21.11199 1783.80 376.2163 0.00006 0.0058 57 19.335 -16.252 -21.11199 1841.20 376.2163 0.00006 0.00579 58 19.026 -16.252 -21.11199 1869.99 376.2163 0.00006 0.00562 59 18.726 -25.4966 -30.35658 1898.83 44.7691 0.00001 0.0065 60 18.435 -25.4966 -30.35658 1956.66 44.7691 0.00001 0.00661 62 17.879 -22.4546 -27.3 | | | | | 1613.14 | | 0.00061 | 0.06139 |
| 52 21.038 -8.46954 -13.32954 1698.15 2257.7852 0.00041 0.04087 53 20.674 -12.3602 -17.22022 1726.63 921.7530 0.00016 0.01614 54 20.323 -12.3602 -17.22022 -1755.48 921.7530 0.00016 0.01562 55 19.983 -16.252 -21.11199 1783.80 376.2163 0.00006 0.00598 57 19.335 -16.252 -21.11199 1841.20 376.2163 0.00006 0.00579 58 19.026 -16.252 -21.11199 1869.99 376.2163 0.00006 0.00579 58 19.026 -16.252 -21.11199 1869.99 376.2163 0.00006 0.00562 59 18.726 -25.4966 -30.35658 1898.83 44.7691 0.00001 0.0065 60 18.435 -25.4966 -30.35658 1956.66 44.7691 0.00001 0.0061 61 18.153 -22.4546 -27.31 | | | | | | 2257.7852 | 0.00044 | 0.04375 |
| 53 20.674 -12.3602 -17.22022 1726.63 921.7530 0.00016 0.01614 54 20.323 -12.3602 -17.22022 -17.555-18 921.7530 0.00016 0.01562 55 19.983 -16.252 -21.11199 1783.80 376.2163 0.00006 0.00598 56 19.654 -16.252 -21.11199 1812.47 376.2163 0.00006 0.00598 57 19.335 -16.252 -21.11199 1841.20 376.2163 0.00006 0.00579 58 19.026 -16.252 -21.11199 1869.99 376.2163 0.00006 0.00562 59 18.726 -25.4966 -30.35658 1898.83 44.7691 0.00001 0.0065 60 18.435 -25.4966 -30.35658 1956.66 44.7691 0.00001 0.0063 61 18.153 -25.4966 -27.3146 1985.65 90.1937 0.00001 0.00119 63 17.613 -22.4546 -27.314 | | | | -13.32954 | | | 0.00042 | 0.04227 |
| 54 20.323 -12.3602 -17.22022 -17.556-18 921.7530 0.00016 0.01562 55 19.983 -16.252 -21.11199 1783.80 376.2163 0.00006 0.00598 56 19.654 -16.252 -21.11199 1812.47 376.2163 0.00006 0.00598 57 19.335 -16.252 -21.11199 1869.99 376.2163 0.00006 0.00579 58 19.026 -16.252 -21.11199 1869.99 376.2163 0.00006 0.00562 59 18.726 -25.4966 -30.35658 1898.83 44.7691 0.00001 0.00663 60 18.435 -25.4966 -30.35658 1956.66 44.7691 0.00001 0.00663 61 18.153 -25.4966 -30.35658 1956.66 44.7691 0.00001 0.00616 62 17.879 -22.4546 -27.3146 1985.65 90.1937 0.00001 0.00119 63 17.613 -22.4546 -27.31 | | | | | | 2257.7852 | 0.00041 | 0.04087 |
| 55 19.983 -16.252 -21.11199 1783.80 376.2163 0.00006 0.00617 56 19.654 -16.252 -21.11199 1812.47 376.2163 0.00006 0.00598 57 19.335 -16.252 -21.11199 1841.20 376.2163 0.00006 0.00579 58 19.026 -16.252 -21.11199 1869.99 376.2163 0.00006 0.00562 59 18.726 -25.4966 -30.35658 1898.83 44.7691 0.00001 0.00065 60 18.435 -25.4966 -30.35658 1927.72 44.7691 0.00001 0.00063 61 18.153 -25.4966 -30.35658 1956.66 44.7691 0.00001 0.00061 62 17.879 -22.4546 -27.3146 1985.65 90.1937 0.00001 0.00119 63 17.613 -22.4546 -27.3146 2043.75 90.1937 0.00001 0.00116 64 17.354 -22.4546 -27.3146 <td></td> <td></td> <td></td> <td></td> <td></td> <td>921.7530</td> <td>0.00016</td> <td>0.01614</td> | | | | | | 921.7530 | 0.00016 | 0.01614 |
| 56 19.654 -16.252 -21.11199 1812.47 376.2163 0.00006 0.00598 57 19.335 -16.252 -21.11199 1841.20 376.2163 0.00006 0.00579 58 19.026 -16.252 -21.11199 1869.99 376.2163 0.00006 0.00562 59 18.726 -25.4966 -30.35658 1898.83 44.7691 0.00001 0.00065 60 18.435 -25.4966 -30.35658 1927.72 44.7691 0.00001 0.00063 61 18.153 -25.4966 -30.35658 1956.66 44.7691 0.00001 0.00061 62 17.879 -22.4546 -27.3146 1985.65 90.1937 0.00001 0.00119 63 17.613 -22.4546 -27.3146 2043.75 90.1937 0.00001 0.00116 64 17.354 -22.4546 -27.3146 2072.86 90.1937 0.00001 0.00113 65 17.103 -22.4546 -27.3146 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>0.01562</td> | | | | | | | | 0.01562 |
| 57 19.335 -16.252 -21.11199 1841.20 376.2163 0.00006 0.00579 58 19.026 -16.252 -21.11199 1869.99 376.2163 0.00006 0.00562 59 18.726 -25.4966 -30.35658 1898.83 44.7691 0.00001 0.00065 60 18.435 -25.4966 -30.35658 1927.72 44.7691 0.00001 0.00063 61 18.153 -25.4966 -30.35658 1956.66 44.7691 0.00001 0.00061 62 17.879 -22.4546 -27.3146 1985.65 90.1937 0.00001 0.00119 63 17.613 -22.4546 -27.3146 2014.68 90.1937 0.00001 0.00116 64 17.354 -22.4546 -27.3146 2043.75 90.1937 0.00001 0.00113 65 17.103 -22.4546 -27.3146 2072.86 90.1937 0.00001 0.00110 66 16.858 -11.4187 -16.27874 <td></td> <td></td> <td></td> <td></td> <td></td> <td>376.2163</td> <td>0.00006</td> <td>0.00617</td> | | | | | | 376.2163 | 0.00006 | 0.00617 |
| 58 19.026 -16.252 -21.11199 1869.99 376.2163 0.00006 0.00562 59 18.726 -25.4966 -30.35658 1898.83 44.7691 0.00001 0.00065 60 18.435 -25.4966 -30.35658 1927.72 44.7691 0.00001 0.00063 61 18.153 -25.4966 -30.35658 1956.66 44.7691 0.00001 0.00061 62 17.879 -22.4546 -27.3146 1985.65 90.1937 0.00001 0.00119 63 17.613 -22.4546 -27.3146 2014.68 90.1937 0.00001 0.00116 64 17.354 -22.4546 -27.3146 2043.75 90.1937 0.00001 0.00113 65 17.103 -22.4546 -27.3146 2072.86 90.1937 0.00001 0.00110 66 16.858 -11.4187 -16.27874 2102.02 1144.8867 0.00014 0.01353 67 16.621 -11.4187 -16.27874 </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> | | | | | | | | |
| 59 18.726 -25.4966 -30.35658 1898.83 44.7691 0.00001 0.00065 60 18.435 -25.4966 -30.35658 1927.72 44.7691 0.00001 0.00063 61 18.153 -25.4966 -30.35658 1956.66 44.7691 0.00001 0.00061 62 17.879 -22.4546 -27.3146 1985.65 90.1937 0.00001 0.00119 63 17.613 -22.4546 -27.3146 2014.68 90.1937 0.00001 0.00116 64 17.354 -22.4546 -27.3146 2043.75 90.1937 0.00001 0.00113 65 17.103 -22.4546 -27.3146 2072.86 90.1937 0.00001 0.00110 66 16.858 -11.4187 -16.27874 2102.02 1144.8867 0.00014 0.01353 67 16.621 -11.4187 -16.27874 2131.20 1144.8867 0.00013 0.01280 69 16.164 -11.4187 -16.27874 | | | | | | | | |
| 60 18.435 -25.4966 -30.35658 1927.72 44.7691 0.00001 0.00063 61 18.153 -25.4966 -30.35658 1956.66 44.7691 0.00001 0.00061 62 17.879 -22.4546 -27.3146 1985.65 90.1937 0.00001 0.00119 63 17.613 -22.4546 -27.3146 2014.68 90.1937 0.00001 0.00116 64 17.354 -22.4546 -27.3146 2043.75 90.1937 0.00001 0.00113 65 17.103 -22.4546 -27.3146 2072.86 90.1937 0.00001 0.00110 66 16.858 -11.4187 -16.27874 2102.02 1144.8867 0.00014 0.01353 67 16.621 -11.4187 -16.27874 2131.20 1144.8867 0.00013 0.01280 69 16.164 -11.4187 -16.27874 2189.69 1144.8867 0.00012 0.01247 70 15.945 -7.94152 -12.801 | | | | | | | | 0.00562 |
| 61 18.153 -25.4966 -30.35658 1956.66 44.7691 0.00001 0.00061 62 17.879 -22.4546 -27.3146 1985.65 90.1937 0.00001 0.00119 63 17.613 -22.4546 -27.3146 2014.68 90.1937 0.00001 0.00116 64 17.354 -22.4546 -27.3146 2043.75 90.1937 0.00001 0.00113 65 17.103 -22.4546 -27.3146 2072.86 90.1937 0.00001 0.00110 66 16.858 -11.4187 -16.27874 2102.02 1144.8867 0.00014 0.01353 67 16.621 -11.4187 -16.27874 2131.20 1144.8867 0.00013 0.01316 68 16.390 -11.4187 -16.27874 2160.43 1144.8867 0.00013 0.01280 69 16.164 -11.4187 -16.27874 2189.69 1144.8867 0.00012 0.01247 70 15.945 -7.94152 -12.8 | | | | | | | | |
| 62 17.879 -22.4546 -27.3146 1985.65 90.1937 0.00001 0.00119 63 17.613 -22.4546 -27.3146 2014.68 90.1937 0.00001 0.00116 64 17.354 -22.4546 -27.3146 2043.75 90.1937 0.00001 0.00113 65 17.103 -22.4546 -27.3146 2072.86 90.1937 0.00001 0.00110 66 16.858 -11.4187 -16.27874 2102.02 1144.8867 0.00014 0.01353 67 16.621 -11.4187 -16.27874 2131.20 1144.8867 0.00013 0.01316 68 16.390 -11.4187 -16.27874 2160.43 1144.8867 0.00013 0.01280 69 16.164 -11.4187 -16.27874 2189.69 1144.8867 0.00012 0.01247 70 15.945 -7.94152 -12.80152 2218.98 2549.6705 0.00027 0.02703 71 15.732 -7.94152 -12 | | | | | | 44.7691 | 0.00001 | 0.00063 |
| 63 17.613 -22.4546 -27.3146 2014.68 90.1937 0.00001 0.00116 64 17.354 -22.4546 -27.3146 2043.75 90.1937 0.00001 0.00113 65 17.103 -22.4546 -27.3146 2072.86 90.1937 0.00001 0.00110 66 16.858 -11.4187 -16.27874 2102.02 1144.8867 0.00014 0.01353 67 16.621 -11.4187 -16.27874 2131.20 1144.8867 0.00013 0.01316 68 16.390 -11.4187 -16.27874 2160.43 1144.8867 0.00013 0.01280 69 16.164 -11.4187 -16.27874 2189.69 1144.8867 0.00012 0.01247 70 15.945 -7.94152 -12.80152 2218.98 2549.6705 0.00027 0.02703 71 15.732 -7.94152 -12.80152 2277.65 2549.6705 0.00026 0.02566 73 15.322 -7.94152 | | | | | | | | |
| 64 17.354 -22.4546 -27.3146 2043.75 90.1937 0.00001 0.00113 65 17.103 -22.4546 -27.3146 2072.86 90.1937 0.00001 0.00110 66 16.858 -11.4187 -16.27874 2102.02 1144.8867 0.00014 0.01353 67 16.621 -11.4187 -16.27874 2131.20 1144.8867 0.00013 0.01316 68 16.390 -11.4187 -16.27874 2160.43 1144.8867 0.00013 0.01280 69 16.164 -11.4187 -16.27874 2189.69 1144.8867 0.00012 0.01247 70 15.945 -7.94152 -12.80152 2218.98 2549.6705 0.00027 0.02703 71 15.732 -7.94152 -12.80152 2248.30 2549.6705 0.00026 0.02533 72 15.524 -7.94152 -12.80152 2307.04 2549.6705 0.00025 0.02501 74 15.124 -7.94152 < | | | | | | 90.1937 | 0.00001 | 0.00119 |
| 65 17.103 -22.4546 -27.3146 2072.86 90.1937 0.00001 0.00110 66 16.858 -11.4187 -16.27874 2102.02 1144.8867 0.00014 0.01353 67 16.621 -11.4187 -16.27874 2131.20 1144.8867 0.00013 0.01316 68 16.390 -11.4187 -16.27874 2160.43 1144.8867 0.00013 0.01280 69 16.164 -11.4187 -16.27874 2189.69 1144.8867 0.00012 0.01247 70 15.945 -7.94152 -12.80152 2218.98 2549.6705 0.00027 0.02703 71 15.732 -7.94152 -12.80152 2248.30 2549.6705 0.00026 0.02633 72 15.524 -7.94152 -12.80152 2277.65 2549.6705 0.00026 0.02566 73 15.322 -7.94152 -12.80152 2307.04 2549.6705 0.00025 0.02501 74 15.124 -7.94152 | | | | | | | | |
| 66 16.858 -11.4187 -16.27874 2102.02 1144.8867 0.00014 0.01353 67 16.621 -11.4187 -16.27874 2131.20 1144.8867 0.00013 0.01316 68 16.390 -11.4187 -16.27874 2160.43 1144.8867 0.00013 0.01280 69 16.164 -11.4187 -16.27874 2189.69 1144.8867 0.00012 0.01247 70 15.945 -7.94152 -12.80152 2218.98 2549.6705 0.00027 0.02703 71 15.732 -7.94152 -12.80152 2248.30 2549.6705 0.00026 0.02633 72 15.524 -7.94152 -12.80152 2277.65 2549.6705 0.00026 0.02566 73 15.322 -7.94152 -12.80152 2307.04 2549.6705 0.00025 0.02501 74 15.124 -7.94152 -12.80152 2336.45 2549.6705 0.00024 0.02438 | | | | | | 90.1937 | | 0.00113 |
| 67 16.621 -11.4187 -16.27874 2131.20 1144.8867 0.00013 0.01316 68 16.390 -11.4187 -16.27874 2160.43 1144.8867 0.00013 0.01280 69 16.164 -11.4187 -16.27874 2189.69 1144.8867 0.00012 0.01247 70 15.945 -7.94152 -12.80152 2218.98 2549.6705 0.00027 0.02703 71 15.732 -7.94152 -12.80152 2248.30 2549.6705 0.00026 0.02633 72 15.524 -7.94152 -12.80152 2277.65 2549.6705 0.00026 0.02566 73 15.322 -7.94152 -12.80152 2307.04 2549.6705 0.00025 0.02501 74 15.124 -7.94152 -12.80152 2336.45 2549.6705 0.00024 0.02438 | | | | | | | | |
| 68 16.390 -11.4187 -16.27874 2160.43 1144.8867 0.00013 0.01280 69 16.164 -11.4187 -16.27874 2189.69 1144.8867 0.00012 0.01247 70 15.945 -7.94152 -12.80152 2218.98 2549.6705 0.00027 0.02703 71 15.732 -7.94152 -12.80152 2248.30 2549.6705 0.00026 0.02633 72 15.524 -7.94152 -12.80152 2277.65 2549.6705 0.00026 0.02566 73 15.322 -7.94152 -12.80152 2307.04 2549.6705 0.00025 0.02501 74 15.124 -7.94152 -12.80152 2336.45 2549.6705 0.00024 0.02438 | | | | | | 1144.8867 | 0.00014 | 0.01353 |
| 69 16.164 -11.4187 -16.27874 2189.69 1144.8867 0.00012 0.01247 70 15.945 -7.94152 -12.80152 2218.98 2549.6705 0.00027 0.02703 71 15.732 -7.94152 -12.80152 2248.30 2549.6705 0.00026 0.02633 72 15.524 -7.94152 -12.80152 2277.65 2549.6705 0.00026 0.02566 73 15.322 -7.94152 -12.80152 2307.04 2549.6705 0.00025 0.02501 74 15.124 -7.94152 -12.80152 2336.45 2549.6705 0.00024 0.02438 | | | | | | 1144.8867 | 0.00013 | 0.01316 |
| 70 15.945 -7.94152 -12.80152 2218.98 2549.6705 0.00027 0.02703 71 15.732 -7.94152 -12.80152 2248.30 2549.6705 0.00026 0.02633 72 15.524 -7.94152 -12.80152 2277.65 2549.6705 0.00026 0.02566 73 15.322 -7.94152 -12.80152 2307.04 2549.6705 0.00025 0.02501 74 15.124 -7.94152 -12.80152 2336.45 2549.6705 0.00024 0.02438 | | | | -16.27874 | | 1144.8867 | | 0.01280 |
| 71 15.732 -7.94152 -12.80152 2248.30 2549.6705 0.00026 0.02633 72 15.524 -7.94152 -12.80152 2277.65 2549.6705 0.00026 0.02566 73 15.322 -7.94152 -12.80152 2307.04 2549.6705 0.00025 0.02501 74 15.124 -7.94152 -12.80152 2336.45 2549.6705 0.00024 0.02438 | | | | | | | 0.00012 | 0.01247 |
| 72 15.524 -7.94152 -12.80152 2277.65 2549.6705 0.00026 0.02566 73 15.322 -7.94152 -12.80152 2307.04 2549.6705 0.00025 0.02501 74 15.124 -7.94152 -12.80152 2336.45 2549.6705 0.00024 0.02438 | | | -7.94152 | | 2218.98 | 2549.6705 | 0.00027 | 0.02703 |
| 73 15.322 -7.94152 -12.80152 2307.04 2549.6705 0.00025 0.02501 74 15.124 -7.94152 -12.80152 2336.45 2549.6705 0.00024 0.02438 | | | | -12.80152 | | | 0.00026 | 0.02633 |
| 74 15.124 -7.94152 -12.80152 2336.45 2549.6705 0.00024 0.02438 | | | -7.94152 | | 2277.65 | 2549.6705 | 0.00026 | 0.02566 |
| | | | -7.94152 | | | 2549.6705 | 0.00025 | 0.02501 |
| 75 44 004 5 0544 0 044007 0005 00 1000 1000 | | | | | 2336.45 | 2549.6705 | 0.00024 | 0.02438 |
| <u>/> 14.931 -5.0511 -9.911097 2365.88 4960.5133 0.00046 0.04626</u> | 75 | 14.931 | -5.0511 | -9.911097 | 2365.88 | 4960.5133 | 0.00046 | 0.04626 |

Max gain
ARL 20 (dBd): 4.86

Max exposure: 0.00266293

mW/cm²

Max ERP

(W): 48.6 Ant type: Phazar AWS 360-1710-7-T0-N Feet from site: 15

| Til Exposure Level | | | | | | | |
|--------------------|---------|----------|-----------|-----------|------------|---------|------------|
| Feet to | Depress | Antenna | dB from | Prop dist | Act ERP | Level | Precent of |
| Ant. base | angle | gain | max ERP | in cm | in mW | mW/cm² | FCC STD |
| 76 | 14.744 | -5.0511 | -9.911097 | 2395.35 | 4960.5133 | 0.00045 | 0.04513 |
| 77 | 14.560 | -5.0511 | -9.911097 | 2424.84 | 4960.5133 | 0.00044 | 0.04404 |
| 78 | 14.381 | -5.0511 | -9.911097 | 2454.35 | 4960.5133 | 0.00043 | 0.04299 |
| 79 | 14.207 | -5.0511 | -9.911097 | 2483.89 | 4960.5133 | 0.00042 | 0.04197 |
| 80 | 14.036 | -5.0511 | -9.911097 | 2513.45 | 4960.5133 | 0.00041 | 0.04099 |
| 81 | 13.870 | -2.3328 | | 2543.03 | 9275.9144 | 0.00075 | 0.07488 |
| 82 | 13.707 | | -7.192795 | 2572.63 | 9275.9144 | 0.00073 | 0.07316 |
| 83 | 13.548 | | -7.192795 | 2602.25 | 9275.9144 | 0.00072 | 0.07151 |
| 84 | 13.392 | -2.3328 | -7.192795 | 2631.89 | 9275.9144 | 0.00070 | 0.06991 |
| 85 | 13.241 | | -7.192795 | 2661.55 | 9275.9144 | 0.00068 | 0.06836 |
| 86 | 13.092 | | -7.192795 | 2691.23 | 9275.9144 | 0.00067 | 0.06686 |
| 87 | 12.947 | -0.84236 | -5.702363 | 2720.93 | 13073.7451 | 0.00092 | 0.09218 |
| 88 | 12.804 | -0.84236 | -5.702363 | 2750.64 | 13073.7451 | 0.00090 | 0.09020 |
| 89 | 12.665 | -0.84236 | | 2780.37 | 13073.7451 | 0.00088 | 0.08829 |
| 90 | 12.529 | | -5.702363 | 2810.12 | 13073.7451 | 0.00086 | 0.08643 |
| 91 | 12.395 | -0.84236 | | 2839.88 | 13073.7451 | 0.00085 | 0.08462 |
| 92 | 12.265 | -0.84236 | | 2869.66 | 13073.7451 | 0.00083 | 0.08288 |
| 93 | 12.137 | -0.84236 | | 2899.45 | 13073.7451 | 0.00081 | 0.08118 |
| 94_ | 12.011 | -0.84236 | | 2929.25 | 13073.7451 | 0.00080 | 0.07954 |
| 95 | 11.889 | | | 2959.07 | 17281.5683 | 0.00103 | 0.10303 |
| 96 | 11.768 | | -4.490531 | 2988.91 | 17281.5683 | 0.00101 | 0.10098 |
| 97 | 11.650 | | | 3018.75 | 17281.5683 | 0.00099 | 0.09900 |
| 98 | 11.535 | 0.369469 | | 3048.61 | 17281.5683 | 0.00097 | 0.09707 |
| 99 | 11.421 | 0.369469 | -4.490531 | 3078.48 | 17281.5683 | 0.00095 | 0.09519 |
| 100 | 11.310 | 0.369469 | -4.490531 | 3108.36 | 17281.5683 | 0.00093 | 0.09337 |
| 101 | 11.201 | 0.369469 | | 3138.26 | 17281.5683 | 0.00092 | 0.09160 |
| 102 | 11.094 | | -4.490531 | 3168.16 | 17281.5683 | 0.00090 | 0.08988 |
| 103 | 10.989 | 1.818394 | -3.041606 | 3198.08 | 24125.4611 | 0.00123 | 0.12314 |
| 104 | 10.886 | 1.818394 | | 3228.00 | 24125.4611 | 0.00121 | 0.12087 |
| 105 | 10.784 | 1.818394 | | 3257.94 | 24125.4611 | 0.00119 | 0.11865 |
| 106 | 10.685 | 1.818394 | -3.041606 | 3287.89 | 24125.4611 | 0.00117 | 0.11650 |
| 107 | 10.587 | 1.818394 | -3.041606 | 3317.84 | 24125.4611 | 0.00114 | 0.11441 |
| 108 | 10.491 | 1.818394 | -3.041606 | 3347.81 | 24125.4611 | 0.00112 | 0.11237 |
| 109 | 10.397 | 1.818394 | -3.041606 | 3377.78 | 24125.4611 | 0.00110 | 0.11038 |
| 110 | 10.305 | 1.818394 | -3.041606 | 3407.77 | 24125.4611 | 0.00108 | 0.10845 |
| 111 | 10.214 | 1.818394 | -3.041606 | 3437.76 | 24125.4611 | 0.00107 | 0.10657 |
| 112 | 10.125 | 1.818394 | -3.041606 | 3467.76 | 24125.4611 | 0.00105 | 0.10473 |
| 113 | 10.037 | 1.818394 | -3.041606 | 3497.77 | 24125.4611 | 0.00103 | 0.10294 |
| 114 | 9.951 | 2.558738 | | 3527.79 | 28609.4900 | 0.00120 | 0.12000 |
| 115 | 9.866 | 2.558738 | -2.301262 | 3557.81 | 28609.4900 | 0.00118 | 0.11799 |
| | | | | | | | |

Max gain
ARL 20 (dBd): 4.86

Max exposure: 0.00266293

mW/cm²

Max ERP

(W):

48.6

Ant type: Phazar AWS 360-1710-7-T0-N

Feet from site: 15

| Feet to | Depress | Antenna | dB from | Prop dist | Act ERP | Level | Precent of |
|-----------|---------|----------|-----------|-----------|------------|---------|------------|
| Ant. base | angle | gain | max ERP | in cm | in mW | mW/cm² | FCC STD |
| 116 | 9.782 | 2.558738 | -2.301262 | 3587.85 | 28609.4900 | 0.00116 | 0.11602 |
| 117 | 9.700 | 2.558738 | | 3617.89 | 28609.4900 | 0.00114 | 0.11410 |
| 118 | 9.620 | 2.558738 | -2.301262 | 3647.94 | 28609.4900 | 0.00112 | 0.11223 |
| 119 | 9.540 | 2.558738 | -2.301262 | 3677.99 | 28609.4900 | 0.00110 | 0.11040 |
| 120 | 9.462 | 2.558738 | -2.301262 | 3708.05 | 28609.4900 | 0.00109 | 0.10862 |
| 121 | 9.386 | 2.558738 | -2.301262 | 3738.12 | 28609.4900 | 0.00107 | 0.10688 |
| 122 | 9.310 | 2.558738 | | 3768.20 | 28609.4900 | 0.00105 | 0.10518 |
| 123 | 9.236 | 2.558738 | -2.301262 | 3798.28 | 28609.4900 | 0.00104 | 0.10352 |
| 124 | 9.162 | 2.558738 | -2.301262 | 3828.37 | 28609.4900 | 0.00102 | 0.10190 |
| 125 | 9.090 | 2.558738 | -2.301262 | 3858.46 | 28609.4900 | 0.00100 | 0.10032 |
| 126 | 9.019 | 2.558738 | -2.301262 | 3888.56 | 28609.4900 | 0.00099 | 0.09877 |
| 127 | 8.949 | 3.149905 | -1.710095 | 3918.67 | 32781.3444 | 0.00111 | 0.11144 |
| 128 | 8.881 | 3.149905 | -1.710095 | 3948.78 | 32781.3444 | 0.00110 | 0.10975 |
| 129 | 8.813 | 3.149905 | -1.710095 | 3978.90 | 32781.3444 | 0.00108 | 0.10809 |
| 130 | 8.746 | 3.149905 | -1.710095 | 4009.02 | 32781.3444 | 0.00106 | 0.10647 |
| 131 | 8.680 | 3.149905 | -1.710095 | 4039.15 | 32781.3444 | 0.00105 | 0.10489 |
| 132 | 8.616 | 3.149905 | -1.710095 | 4069.28 | 32781.3444 | 0.00103 | 0.10334 |
| 133 | 8.552 | 3.149905 | -1.710095 | 4099.42 | 32781.3444 | 0.00102 | 0.10183 |
| 134 | 8.489 | 3.149905 | -1.710095 | 4129.56 | 32781.3444 | 0.00100 | 0.10035 |
| 135 | 8.427 | 3.149905 | -1.710095 | 4159.71 | 32781.3444 | 0.00099 | 0.09890 |
| 136 | 8.366 | | -1.710095 | 4189.86 | 32781.3444 | 0.00097 | 0.09748 |
| 137 | 8.306 | 3.149905 | -1.710095 | 4220.02 | 32781.3444 | 0.00096 | 0.09609 |
| 138 | 8.246 | 3.149905 | -1.710095 | 4250.18 | 32781.3444 | 0.00095 | 0.09473 |
| 139 | 8.188 | 3.149905 | -1.710095 | 4280.35 | 32781.3444 | 0.00093 | 0.09340 |
| 140 | 8.130 | 3.149905 | -1.710095 | 4310.52 | 32781.3444 | 0.00092 | 0.09210 |
| 141 | 8.073 | 3.149905 | -1.710095 | 4340.70 | 32781.3444 | 0.00091 | 0.09082 |
| 142 | 8.017 | 3.149905 | -1.710095 | 4370.88 | 32781.3444 | 0.00090 | 0.08957 |
| 143 | 7.962 | 3.889043 | -0.970957 | 4401.06 | 38863.3836 | 0.00105 | 0.10474 |
| 144 | 7.907 | 3.889043 | -0.970957 | 4431.25 | 38863.3836 | 0.00103 | 0.10332 |
| 145 | 7.853 | 3.889043 | -0.970957 | 4461.44 | 38863.3836 | 0.00102 | 0.10193 |
| 146 | 7.800 | 3.889043 | -0.970957 | 4491.64 | 38863.3836 | 0.00101 | 0.10056 |
| 147 | 7.748 | 3.889043 | -0.970957 | 4521.84 | 38863.3836 | 0.00099 | 0.09922 |
| 148 | 7.696 | 3.889043 | -0.970957 | 4552.04 | 38863.3836 | 0.00098 | 0.09791 |
| 149 | 7.645 | 3.889043 | -0.970957 | 4582.25 | 38863.3836 | 0.00097 | 0.09662 |
| 150 | 7.595 | 3.889043 | -0.970957 | 4612.46 | 38863.3836 | 0.00095 | 0.09536 |
| 151 | 7.545 | 3.889043 | -0.970957 | 4642.68 | 38863.3836 | 0.00094 | 0.09412 |
| 152 | 7.496 | 3.889043 | -0.970957 | 4672.89 | 38863.3836 | 0.00093 | 0.09291 |
| 153 | 7.447 | 3.889043 | -0.970957 | 4703.11 | 38863.3836 | 0.00092 | 0.09172 |
| 154 | 7.400 | 3.889043 | -0.970957 | 4733.34 | 38863.3836 | 0.00091 | 0.09055 |
| 155 | 7.352 | 3.889043 | -0.970957 | 4763.57 | 38863.3836 | 0.00089 | 0.08941 |

ARL 20 (dBd): 4.86

Max exposure: 0.00266293

mW/cm²

Max ERP

(W):

48.6

Ant type: Phazar AWS 360-1710-7-T0-N

Feet from site: 15

| Feet to | Depress | Antenna | dB from | Prop dist | Act ERP | Level | Precent of |
|-----------|---------|----------|-----------|-----------|------------|---------|------------|
| Ant. base | angle | gain | max ERP | in cm | in mW | mW/cm² | FCC STD |
| 156 | 7.306 | 3.889043 | -0.970957 | 4793.80 | 38863.3836 | 0.00088 | 0.08828 |
| 157 | 7.260 | 3.889043 | -0.970957 | 4824.03 | 38863.3836 | 0.00087 | 0.08718 |
| 158 | 7.214 | 3.889043 | -0.970957 | 4854.27 | 38863.3836 | 0.00086 | 0.08610 |
| 159 | 7.169 | 3.889043 | -0.970957 | 4884.51 | 38863.3836 | 0.00085 | 0.08503 |
| 160 | 7.125 | 3.889043 | -0.970957 | 4914.75 | 38863.3836 | 0.00084 | 0.08399 |
| 161 | 7.081 | 3.889043 | -0.970957 | 4945.00 | 38863.3836 | 0.00083 | 0.08297 |
| 162 | 7.038 | 3.889043 | -0.970957 | 4975.25 | 38863.3836 | 0.00082 | 0.08196 |
| 163 | 6.995 | 4.219751 | -0.640249 | 5005.50 | 41938.3492 | 0.00087 | 0.08738 |
| 164 | 6.953 | 4.219751 | -0.640249 | 5035.75 | 41938.3492 | 0.00086 | 0.08633 |
| 165 | 6.911 | 4.219751 | -0.640249 | 5066.01 | 41938.3492 | 0.00085 | 0.08530 |
| 166 | 6.870 | 4.219751 | -0.640249 | 5096.27 | 41938.3492 | 0.00084 | 0.08429 |
| 167 | 6.829 | 4.219751 | -0.640249 | 5126.53 | 41938.3492 | 0.00083 | 0.08330 |
| 168 | 6.789 | 4.219751 | -0.640249 | 5156.80 | 41938.3492 | 0.00082 | 0.08233 |
| 169 | 6.749 | 4.219751 | -0.640249 | 5187.07 | 41938.3492 | 0.00081 | 0.08137 |
| 170 | 6.710 | 4.219751 | -0.640249 | 5217.34 | 41938.3492 | 0.00080 | 0.08043 |
| 171 | 6.671 | 4.219751 | -0.640249 | 5247.61 | 41938.3492 | 0.00080 | 0.07950 |
| 172 | 6.633 | 4.219751 | -0.640249 | 5277.88 | 41938.3492 | 0.00079 | 0.07859 |
| 173 | 6.595 | 4.219751 | -0.640249 | 5308.16 | 41938.3492 | 0.00078 | 0.07770 |
| 174 | 6.557 | 4.219751 | -0.640249 | 5338.44 | 41938.3492 | 0.00077 | 0.07682 |
| 175 | 6.520 | 4.219751 | -0.640249 | 5368.72 | 41938.3492 | 0.00076 | 0.07596 |
| 176 | 6.483 | 4.219751 | -0.640249 | 5399.01 | 41938.3492 | 0.00075 | 0.07511 |
| 177 | 6.447 | 4.219751 | -0.640249 | 5429.29 | 41938.3492 | 0.00074 | 0.07427 |
| 178 | 6.411 | 4.219751 | -0.640249 | 5459.58 | 41938.3492 | 0.00073 | 0.07345 |
| 179 | 6.375 | 4.219751 | -0.640249 | 5489.87 | 41938.3492 | 0.00073 | 0.07264 |
| 180 | 6.340 | 4.219751 | -0.640249 | 5520.16 | 41938.3492 | 0.00072 | 0.07185 |
| 181 | 6.305 | 4.219751 | -0.640249 | 5550.46 | 41938.3492 | 0.00071 | 0.07106 |
| 182 | 6.271 | 4.219751 | -0.640249 | 5580.75 | 41938.3492 | 0.00070 | 0.07029 |
| 183 | 6.237 | 4.219751 | -0.640249 | 5611.05 | 41938.3492 | 0.00070 | 0.06954 |
| 184 | 6.203 | 4.219751 | -0.640249 | 5641.35 | 41938.3492 | 0.00069 | 0.06879 |
| 185 | 6.170 | 4.219751 | -0.640249 | 5671.66 | 41938.3492 | 0.00068 | 0.06806 |
| 186 | 6.137 | 4.219751 | -0.640249 | 5701.96 | 41938.3492 | 0.00067 | 0.06734 |
| 187 | 6.105 | 4.219751 | -0.640249 | 5732.27 | 41938.3492 | 0.00067 | 0.06663 |
| 188 | 6.072 | 4.219751 | -0.640249 | 5762.57 | 41938.3492 | 0.00066 | 0.06593 |
| 189 | 6.041 | 4.219751 | -0.640249 | 5792.88 | 41938.3492 | 0.00065 | 0.06524 |
| 190 | 6.009 | 4.219751 | -0.640249 | 5823.20 | 41938.3492 | 0.00065 | 0.06456 |
| 191 | 5.978 | 4.559852 | -0.300148 | 5853.51 | 45354.6122 | 0.00069 | 0.06910 |
| 201 | 5.682 | 4.559852 | -0.300148 | 6156.73 | 45354.6122 | 0.00062 | 0.06246 |
| 211 | 5.415 | 4.559852 | -0.300148 | 6460.11 | 45354.6122 | 0.00057 | 0.05673 |
| 221 | 5.171 | 4.559852 | -0.300148 | 6763.61 | 45354.6122 | 0.00052 | 0.05176 |
| 231 | 4.948 | 4.679971 | -0.180029 | 7067.22 | 46626.5588 | 0.00049 | 0.04873 |

| | | Max gain | |
|-----|----|----------|------|
| ARL | 20 | (dBd): | 4.86 |

Max exposure: 0.00266293

mW/cm²

Max ERP

(W):

48.6 Ant type: Phazar AWS 360-1710-7-T0-N

Feet from site: 15

| Feet to | Depress | Antenna | dB from | Prop dist | Act ERP | Level | Precent of |
|-----------|---------|----------|-----------|-----------|------------|---------|------------|
| Ant. base | angle | gain | max ERP | in cm | in mW | mW/cm² | FCC STD |
| 241 | 4.744 | 4.679971 | -0.180029 | 7370.93 | 46626.5588 | 0.00045 | 0.04480 |
| 251 | 4.556 | 4.679971 | -0.180029 | 7674.73 | 46626.5588 | 0.00041 | 0.04132 |
| 261 | 4.382 | 4.679971 | -0.180029 | 7978.60 | 46626.5588 | 0.00038 | 0.03824 |
| 271 | 4.221 | 4.679971 | -0.180029 | 8282.54 | 46626.5588 | 0.00035 | 0.03548 |
| 281 | 4.071 | 4.679971 | -0.180029 | 8586.55 | 46626.5588 | 0.00033 | 0.03301 |
| 291 | 3.932 | 4.849938 | -0.010062 | 8890.60 | 48487.5323 | 0.00032 | 0.03202 |
| 301 | 3.801 | 4.849938 | -0.010062 | 9194.71 | 48487.5323 | 0.00030 | 0.02994 |
| 311 | 3.680 | 4.849938 | -0.010062 | 9498.86 | 48487.5323 | 0.00028 | 0.02805 |
| 321 | 3.565 | 4.849938 | -0.010062 | 9803.05 | 48487.5323 | 0.00026 | 0.02634 |
| 331 | 3.458 | 4.849938 | -0.010062 | 10107.28 | 48487.5323 | 0.00025 | 0.02478 |
| 341 | 3.357 | 4.849938 | -0.010062 | 10411.54 | 48487.5323 | 0.00023 | 0.02335 |
| 351 | 3.261 | 4.849938 | -0.010062 | 10715.83 | 48487.5323 | 0.00022 | 0.02204 |
| 361 | 3.171 | 4.849938 | | 11020.15 | 48487.5323 | 0.00021 | 0.02084 |
| 371 | 3.086 | 4.849938 | | 11324.50 | 48487.5323 | 0.00020 | 0.01974 |
| 381 | 3.005 | 4.849938 | | 11628.87 | 48487.5323 | 0.00019 | 0.01872 |
| 391 | 2.928 | 4.810153 | -0.049847 | 11933.26 | 48045.3723 | 0.00018 | 0.01761 |
| 401 | 2.855 | 4.810153 | -0.049847 | 12237.67 | 48045.3723 | 0.00017 | 0.01675 |
| 411 | 2.786 | 4.810153 | | 12542.10 | 48045.3723 | 0.00016 | 0.01594 |
| 421 | 2.720 | 4.810153 | | 12846.55 | 48045.3723 | 0.00015 | 0.01520 |
| 431 | 2.657 | | -0.049847 | 13151.02 | 48045.3723 | 0.00015 | 0.01450 |
| 441 | 2.597 | 4.810153 | | 13455.50 | 48045.3723 | 0.00014 | 0.01385 |
| 451 | 2.539 | 4.810153 | | 13759.99 | 48045.3723 | 0.00013 | 0.01325 |
| 461 | 2.484 | 4.810153 | -0.049847 | 14064.50 | 48045.3723 | 0.00013 | 0.01268 |
| 471 | 2.431 | 4.810153 | -0.049847 | 14369.02 | 48045.3723 | 0.00012 | 0.01215 |
| 481 | 2.381 | 4.810153 | | 14673.55 | 48045.3723 | 0.00012 | 0.01165 |
| 491 | 2.333 | 4.810153 | | 14978.09 | 48045.3723 | 0.00011 | 0.01118 |
| 501 | 2.286 | 4.810153 | -0.049847 | 15282.64 | 48045.3723 | 0.00011 | 0.01074 |
| 511 | 2.241 | 4.810153 | -0.049847 | 15587.20 | 48045.3723 | 0.00010 | 0.01032 |
| 521 | 2.198 | 4.810153 | | 15891.78 | 48045.3723 | 0.00010 | 0.00993 |
| 531 | 2.157 | 4.810153 | -0.049847 | 16196.36 | 48045.3723 | 0.00010 | 0.00956 |
| 541 | 2.117 | 4.810153 | -0.049847 | 16500.94 | 48045.3723 | 0.00009 | 0.00921 |
| 551 | 2.079 | 4.810153 | -0.049847 | 16805.54 | 48045.3723 | 0.00009 | 0.00888 |
| 561 | 2.042 | 4.810153 | -0.049847 | 17110.14 | 48045.3723 | 0.00009 | 0.00857 |
| 571 | 2.006 | 4.810153 | -0.049847 | 17414.75 | 48045.3723 | 0.00008 | 0.00827 |
| 581 | 1.972 | 4.780013 | -0.079987 | 17719.37 | 47713.0981 | 0.00008 | 0.00793 |
| 591 | 1.938 | 4.780013 | -0.079987 | 18023.99 | 47713.0981 | 0.00008 | 0.00767 |
| 601 | 1.906 | 4.780013 | -0.079987 | 18328.62 | 47713.0981 | 0.00007 | 0.00741 |
| 611 | 1.875 | 4.780013 | -0.079987 | 18633.25 | 47713.0981 | 0.00007 | 0.00717 |
| 621 | 1.845 | 4.780013 | -0.079987 | 18937.89 | 47713.0981 | 0.00007 | 0.00694 |
| 631 | 1.815 | 4.780013 | -0.079987 | 19242.54 | 47713.0981 | 0.00007 | 0.00673 |

Max gain ARL 20 (dBd): 4.86

Max exposure: 0.00266293

mW/cm²

Max ERP

(W):

48.6 Ant type: Phazar AWS 360-1710-7-T0-N

Feet from site: 15

| Feet to | Depress | Antenna | dB from | Prop dist | Act ERP | Level | Precent of |
|-----------|---------|----------|-----------|-----------|------------|---------|------------|
| Ant. base | angle | gain | max ERP | in cm | in mW | mW/cm² | FCC STD |
| 641 | 1.787 | 4.780013 | -0.079987 | 19547.19 | 47713.0981 | 0.00007 | 0.00652 |
| 651 | 1.760 | 4.780013 | -0.079987 | 19851.84 | 47713.0981 | 0.00006 | 0.00632 |
| 661 | 1.733 | 4.780013 | -0.079987 | 20156.50 | 47713.0981 | 0.00006 | 0.00613 |
| 671 | 1.707 | 4.780013 | -0.079987 | 20461.16 | 47713.0981 | 0.00006 | 0.00595 |
| 681 | 1.682 | 4.780013 | -0.079987 | 20765.83 | 47713.0981 | 0.00006 | 0.00578 |
| 691 | 1.658 | 4.780013 | -0.079987 | 21070.50 | 47713.0981 | 0.00006 | 0.00561 |
| 701 | 1.634 | 4.780013 | -0.079987 | 21375.17 | 47713.0981 | 0.00005 | 0.00545 |
| 711 | 1.611 | 4.780013 | -0.079987 | 21679.85 | 47713.0981 | 0.00005 | 0.00530 |
| 721 | 1.589 | 4.780013 | -0.079987 | 21984.53 | 47713.0981 | 0.00005 | 0.00515 |
| 731 | 1.567 | 4.780013 | -0.079987 | 22289.22 | 47713.0981 | 0.00005 | 0.00501 |
| 741 | 1.546 | 4.780013 | -0.079987 | 22593.91 | 47713.0981 | 0.00005 | 0.00488 |
| 751 | 1.525 | 4.780013 | -0.079987 | 22898.60 | 47713.0981 | 0.00005 | 0.00475 |
| 761 | 1.505 | 4.780013 | -0.079987 | 23203.29 | 47713.0981 | 0.00005 | 0.00463 |
| 771 | 1.486 | 4.780013 | -0.079987 | 23507.99 | 47713.0981 | 0.00005 | 0.00451 |
| 781 | 1.467 | 4.780013 | -0.079987 | 23812.68 | 47713.0981 | 0.00004 | 0.00439 |
| 791 | 1.448 | 4.780013 | -0.079987 | 24117.39 | 47713.0981 | 0.00004 | 0.00428 |
| 801 | 1.430 | 4.780013 | -0.079987 | 24422.09 | 47713.0981 | 0.00004 | 0.00418 |
| 811 | 1.413 | 4.780013 | -0.079987 | 24726.80 | 47713.0981 | 0.00004 | 0.00407 |
| 821 | 1.395 | 4.780013 | -0.079987 | 25031.50 | 47713.0981 | 0.00004 | 0.00398 |
| 831 | 1.379 | 4.780013 | -0.079987 | 25336.21 | 47713.0981 | 0.00004 | 0.00388 |
| 841 | 1.362 | 4.780013 | -0.079987 | 25640.93 | 47713.0981 | 0.00004 | 0.00379 |
| 851 | 1.346 | 4.780013 | -0.079987 | 25945.64 | 47713.0981 | 0.00004 | 0.00370 |
| 861 | 1.331 | 4.780013 | -0.079987 | 26250.36 | 47713.0981 | 0.00004 | 0.00361 |
| 871 | 1.315 | 4.780013 | -0.079987 | 26555.08 | 47713.0981 | 0.00004 | 0.00353 |
| 881 | 1.300 | 4.780013 | -0.079987 | 26859.80 | 47713.0981 | 0.00003 | 0.00345 |
| 891 | 1.286 | 4.780013 | -0.079987 | 27164.52 | 47713.0981 | 0.00003 | 0.00338 |
| 901 | 1.272 | 4.780013 | -0.079987 | 27469.24 | 47713.0981 | 0.00003 | 0.00330 |
| 911 | 1.258 | 4.780013 | -0.079987 | 27773.97 | 47713.0981 | 0.00003 | 0.00323 |
| 921 | 1.244 | 4.780013 | -0.079987 | 28078.70 | 47713.0981 | 0.00003 | 0.00316 |
| 931 | 1.231 | 4.780013 | -0.079987 | 28383.43 | 47713.0981 | 0.00003 | 0.00309 |
| 941 | 1.218 | 4.780013 | -0.079987 | 28688.16 | 47713.0981 | 0.00003 | 0.00303 |
| 951 | 1.205 | 4.780013 | -0.079987 | 28992.89 | 47713.0981 | 0.00003 | 0.00296 |
| 961 | 1.192 | 4.780013 | -0.079987 | 29297.62 | 47713.0981 | 0.00003 | 0.00290 |
| 971 | 1.180 | 4.780013 | -0.079987 | 29602.36 | 47713.0981 | 0.00003 | 0.00284 |
| 981 | 1.168 | 4.780013 | -0.079987 | 29907.09 | 47713.0981 | 0.00003 | 0.00278 |
| 991 | 1.156 | 4.780013 | -0.079987 | 30211.83 | 47713.0981 | 0.00003 | 0.00273 |
| 1001 | 1.145 | 4.780013 | -0.079987 | 30516.57 | 47713.0981 | 0.00003 | 0.00267 |
| 1011 | 1.133 | 4.780013 | -0.079987 | 30821.31 | 47713.0981 | 0.00003 | 0.00262 |
| 1021 | 1.122 | 4.780013 | -0.079987 | 31126.05 | 47713.0981 | 0.00003 | 0.00257 |
| 1031 | 1.111 | 4.780013 | -0.079987 | 31430.79 | 47713.0981 | 0.00003 | 0.00252 |

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 nonionizing 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 nonionizing 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.