



CITY OF SUNNYVALE REPORT ADMINISTRATIVE HEARING

October 14, 2009

File Number: 2009-0509

Permit Type: Special Development Permit

Location: 1119 Lawrence Expressway (near Lakedale Way) (APN: 110-23-110)

Applicant/Owner: BCI Sites for Clearwire / Dicks Lakewood Corp

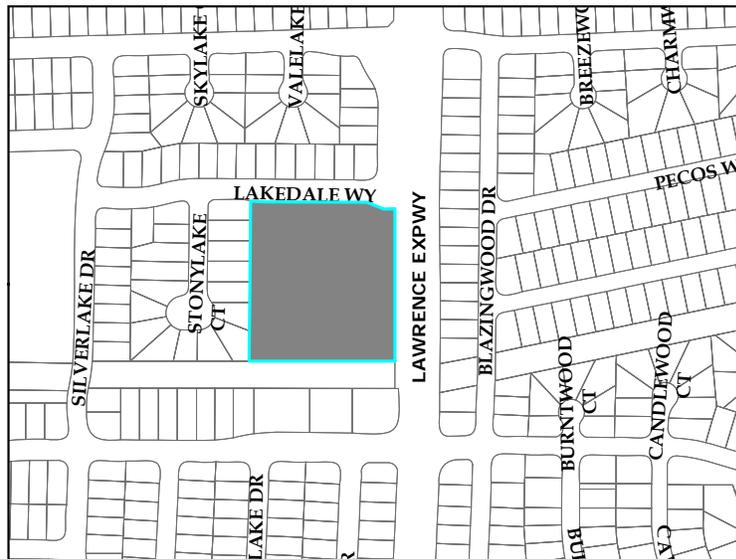
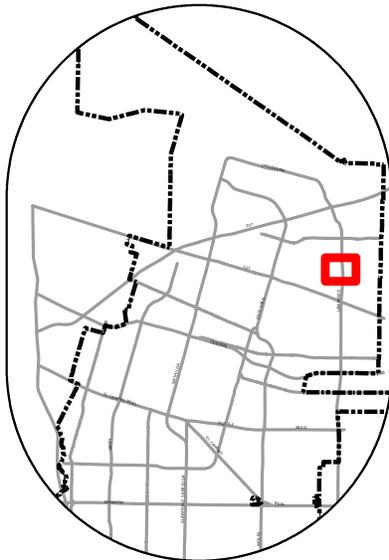
Staff Contact: Shaunn Mendrin, Senior Planner (408) 730-7429

Project Description: Special Development Permit to allow a second carrier to add three panel antennas and three microwave dishes and a GPS antenna on the existing roof. The project does not include a generator.

Reason for Permit: A Special Development Permit is required for any telecommunications facility that proposes co-location of not more than two.

Issues: Aesthetics

Recommendation: Approve with Conditions



PROJECT DESCRIPTION

Existing Conditions: Commercial Structure	Right Side Setback: 5'
Zoning District: C-1	Left Side Setback: 5'
Equipment Enclosure Area: Roof Parapet	Rear Setback: 15'

Previous Planning Projects related to subject Application.

UP 2007-0207 - The Administrative Hearing Officer approved the first wireless telecommunication facility at the subject site on May 28, 2008. The approval allowed 2 T-Mobile antennas stealthed within copulas placed on architectural elements of the existing structure.

Adjacent to Residential or Non-Commercial/Industrial Uses.

The subject property is surrounded by single-family residential (R-0 and R-1) to the east and west, and two-family dwelling (R-2) to the north and commercial to the south.

Facility Purpose: The proposed project is to allow the collocation of three panel antennas, three microwave dishes on an existing commercial building. Three antennas and three microwave dishes will be stealthed within two copulas, similar to the previously approved T-Mobile antennas. The microwave dishes are necessary to the wireless services that Clearwire provides, as they link all Clearwire sites together by providing point-to-point connections. Associated equipment cabinet will be mounted on the roof parapet wall located in the middle of the structure.

Design: The proposed copulas will be located on the north and south sides of the existing structure on top of the existing architectural element. The copula to the north will contain two microwave dishes and one antenna and the second cupola to the south will contain two antennas and one microwave dish. The proposed copulas will have a maximum height of approximately 34' to its highest point and approximately 5' wide. Exterior materials and color will match the existing structure.

Radio Frequency (RF) Emissions Exposure: The Federal Communications Commission (FCC) is the final authority on safety of telecommunications facilities. If the FCC has determined the facility to be in compliance with federal standards, the City is not permitted to make additional judgments on health and safety issues. The application can be reviewed by the City for compliance with design and location criteria only. The attached RF Emissions report (Attachment E) provides information about the proposed RF emissions of the facility. These results indicate the RF emissions are considered safe for inhabited areas.

Public Contact: 11 notices were sent to surrounding property owners and residents adjacent to subject site in addition to standard noticing practice. Staff received one inquiry about the proposed project; however no letters have been received.

Environmental Determination: A Categorical Exemption Class 3 (construction of small structures) relieves this project from CEQA provisions.

FINDINGS – SPECIAL DEVELOPMENT PERMIT

In order to approve the Special Development Permit, the following findings must be made:

1. The proposed use attains the objectives and purposes of the General Plan of the City of Sunnyvale.

There are three policies and action statements that relate to the proposed application.

- **Telecommunications Policy** Action Statement A.1.e- Support retention of local zoning authority for cellular towers, satellite dish antennas, and other telecommunications equipment, facilities and structures.
- **Land Use and Transportation Sub-Element N1.3.** Promote an attractive and functional commercial environment.
- **Land Use and Transportation Sub-Element N1.5** Establish and monitor standards for community appearance and property maintenance.

The proposed project is consistent with the objectives of the General Plan in that the proposed project provides collocation on an existing structure to accommodate the proposed antennas and equipment and the associated equipment will be stealthed within copulas, minimizing visual clutter at the project site. Standard conditions of approval will ensure that the standards for community appearance are maintained.

Staff was able to make the findings as the design meets the guidelines described above.

2. The proposed use ensures that the general appearance of proposed structures, or the uses to be made of the property to which the application refers, will not impair the orderly development of, or the existing uses being made of, adjacent properties.

The project is expected to have no impacts on surrounding properties.

ALTERNATIVES:

1. Approve the Special Development Permit with recommended Conditions in Attachment B.
2. Approve the Special Development Permit with modifications.
3. Deny the Special Development Permit.

RECOMMENDATION

Alternative 1 as staff was able to make the required findings.

Reviewed by:

Steve Lynch

Senior Planner

Prepared by: Shaunn Mendrin, Project Planner

Attachments:

- A. Standard Requirements and Recommended Conditions of Approval
- B. Site and Architectural Plans
- C. Photosimulations
- D. Letter from the Applicant including Special Development Permit Justification
- E. RF Emissions Report

Standard Requirements

The following is a list of standard requirements. This list is intended to assist the applicant and public in understanding basic related requirements, and is not intended as an exhaustive list. These requirements cannot be waived or modified.

- A. **Testing Within 15 Days:** The applicant shall test any wireless telecommunications site installed in the City of Sunnyvale within 15 days of operating the tower. The test shall confirm that any Emergency 911 wireless call made through the wireless telecommunications site shall provide Enhanced 911 capability (including phase 2 information when available from the caller's device) and direct the call to the City of Sunnyvale Department of Public Safety dispatcher, ensuring phase 2 information is transferred. If the call is to be directed elsewhere pursuant to State and Federal law the applicant shall ensure that the Enhanced 911 information transfers to that dispatch center. This capability shall be routinely tested to ensure compliance as long as the approved wireless telecommunications site is in service.
- B. **Permit Expiration:** The Use Permit and Variance for the use shall expire if the use is discontinued for a period of one year or more.
- C. **Permit Lapse if not Exercised (Ordinance 2895-09):** The Use Permit shall be valid for three (3) years from the date of approval by the final review authority (as adopted by City Council on April 21, 2009, RTC 09-094). Extensions of time may be considered, for a maximum of two one year extensions, if applied for and approved prior to the expiration of the permit approval. If the approval is not exercised within this time frame, the permit is null and void.
- D. **Building Permits:** Obtain Building Permits.
- E. **Certification:** Before January 31 of each even numbered year following the issuance of any authorizing establishment of a wireless telecommunication facility, an authorized representative for each wireless carrier providing service in the City of Sunnyvale shall provide written certification to the City executed under penalty of perjury that (i) each facility is being operated in accordance with the approved local and federal permits and includes test results that confirm the facility meets city noise requirements and federal RF emissions standards; (ii) each facility complies with the then-current general and design standards and is in compliance with the approved plans; (iii) whether the facility is currently being used by the owner or operator; and (iv) the basic contact and site information supplied by the owner or operator is current.
- F. **Renewal:** Every owner or operator of a wireless telecommunication facility shall renew the facility permit at least every ten (10) years from

the date of initial approval. If a permit or other entitlement for use is not renewed, it shall automatically become null and void without notice or hearing ten (10) years after it is issued, or upon cessation of use for more than a year and a day, whichever comes first. Unless a new use permit or entitlement of use is issued, within one hundred twenty (120) days after a permit becomes null and void all improvements, including foundations and appurtenant ground wires, shall be removed from the property and the site restored to its original pre-installation condition within one hundred eighty (180) days of nonrenewal or abandonment.

- G. **Comply with Applicable Regulations:** The facility must comply with any and all applicable regulations and standards promulgated or imposed by any state or federal agency, including but not limited to the Federal Communications Commission and Federal Aviation Agency.
- H. **RF Emissions:** Certification must be provided that the proposed facility will at all times comply with all applicable health requirements and standards pertaining to RF emissions.
- I. **Business License:** The owner or operator of the facility shall obtain and maintain current at all times a business license as issued by the city.
- J. **Maintain Current Information:** The owner or operator shall maintain, at all times, a sign mounted on the outside fence showing the operator name, site number and emergency contact telephone number. The owner or operator of the facility shall also submit and maintain current at all times basic contact and site information on a form to be supplied by the city. The applicant shall notify city of any changes to the information submitted within thirty (30) days of any change, including change of the name or legal status of the owner or operator. This information shall include, but is not limited to the following:
- i. Identity, including name, address and telephone number, and legal status of the owner of the facility including official identification numbers and FCC certification, and if different from the owner, the identity and legal status of the person or entity responsible for operating the facility.
 - ii. Name, address and telephone number of a local contact person for emergencies.
 - iii. Type of service provided.
- K. **Good Repair:** All facilities and related equipment, including lighting, fences, shields, cabinets, and poles, shall be maintained in good repair, free from trash, debris, litter and graffiti and other forms of vandalism, and any damage from any cause shall be repaired as soon as reasonably possible so as to minimize occurrences of dangerous conditions or visual blight. Graffiti shall be removed from any facility or equipment as soon as

practicable, and in no instance more than forty-eight (48) hours from the time of notification by the city.

- L. **Minimize Noise:** The facility shall be operated in such a manner so as to minimize any possible disruption caused by noise. Backup generators shall only be operated during periods of power outages, and shall not be tested on weekends or holidays, or between the hours of 10:00 p.m. and 7:00 a.m. on weekday nights. At no time shall equipment noise from any source exceed an exterior noise level of 60 dB at the property line.
- M. **Responsibility to Maintain:** The owner or operator of the facility shall routinely and regularly inspect each site to ensure compliance with the standards set forth in the Telecommunications Ordinance.
- N. **Hold Harmless:** The wireless telecommunication facility provider shall defend, indemnify, and hold harmless the city or any of its boards, commissions, agents, officers, and employees from any claim, action or proceeding against the city, its boards, commission, agents, officers, or employees to attack, set aside, void, or annul, the approval of the project when such claim or action is brought within the time period provided for in applicable state and/or local statutes. The city shall promptly notify the provider(s) of any such claim, action or proceeding. The city shall have the option of coordinating in the defense. Nothing contained in this stipulation shall prohibit the city from participating in a defense of any claim, action, or proceeding if the city bears its own attorney's fees and costs, and the city defends the action in good faith.
- O. **Liability:** Facility lessors shall be strictly liable for any and all sudden and accidental pollution and gradual pollution resulting from their use within the city. This liability shall include cleanup, intentional injury or damage to persons or property. Additionally, lessors shall be responsible for any sanctions, fines, or other monetary costs imposed as a result of the release of pollutants from their operations. Pollutants include any solid, liquid, gaseous or thermal irritant or contaminant, including smoke, vapor, soot, fumes, acids, alkalis, chemicals, and waste. Waste includes materials to be recycled, reconditioned or reclaimed.
- P. **No Interference with City Communication Systems:** The facility operator shall be strictly liable for interference caused by the facility with city communication systems. The operator shall be responsible for all labor and equipment costs for determining the source of the interference, all costs associated with eliminating the interference, (including but not limited to filtering, installing cavities, installing directional antennas, powering down systems, and engineering analysis), and all costs arising from third party claims against the city attributable to the interference.
- Q. **No Threat to Public Health:** The facility shall not be sited or operated in such a manner that is poses, either by itself or in combination with other

such facilities, a potential threat to public health. To that end, the subject facility and the combination of on-site facilities shall not produce at any time power densities in any inhabited area that exceed the FCC's Maximum Permissible Exposure (MPE) limits for electric and magnetic field strength and power density for transmitters or any more restrictive standard subsequently adopted or promulgated by the federal government.

Recommended Conditions of Approval

In addition to complying with all applicable City, County, State and Federal Statutes, Codes, Ordinances, Resolutions and Regulations, Permittee expressly accepts and agrees to comply with the following conditions of approval of this Permit:

1. **Project Conformance:** Project shall be in conformance with the plans approved at the public hearing(s). Minor changes may be approved by the Director of Community Development, major changes may be approved at a public hearing.
2. **Execute Permit Document:** Execute a Special Development Permit document prior to issuance of the building permit.
3. **Conditions of Approval on Plans:** The Conditions of Approval shall be reproduced on a page of the plans submitted for a Building permit for this project.
4. **Design:** The tower extension and new antennas shall be painted to match the existing facility.
5. **Tree Removal:** No trees shall be removed as part of this application.

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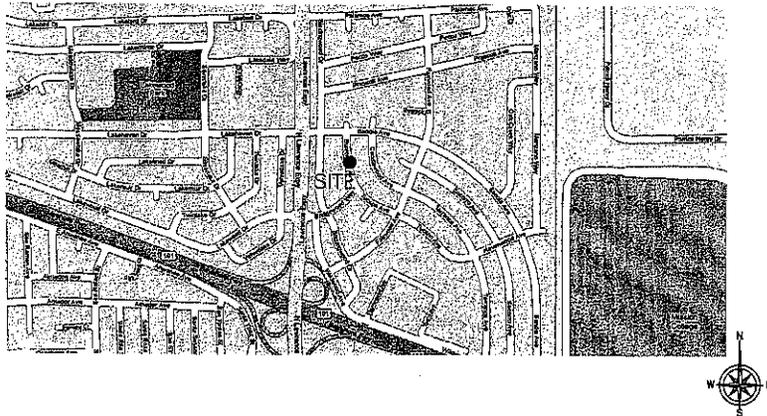
LAKWOOD SHOPPING CENTER CA-SJC0083A

1161 N. LAWRENCE EXPRESSWAY SUNNYVALE, CA 94089

SIGNATURE BLOCK

ZONING MANAGER	DATE
SITE ACQ. MANAGER	DATE
RF MANAGER	DATE
CONSTRUCTION MANAGER	DATE
MICROWAVE MANAGER	DATE

VICINITY MAP - N.T.S.



CODE COMPLIANCE

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

- | | |
|--|---|
| 1. CALIFORNIA ADMINISTRATIVE CODE (INCL TITLE 24 & 25) | 6. ANSI/ISA-222-F LIFE SAFETY CODE NFPA-101 |
| 2. 2007 CALIFORNIA BUILDING CODE | 7. 2007 CALIFORNIA PLUMBING CODE |
| 3. CITY/COUNTY ORDINANCES | 8. 2007 CALIFORNIA ELECTRICAL CODE |
| 4. BUILDING OFFICIALS AND CODE ADMINISTRATORS (BOCA) | 9. LOCAL BUILDING CODE |
| 5. MECHANICAL 2007 CALIFORNIA CODE | |

PROJECT SUMMARY

PROPERTY OWNER: DICK'S LAKEWOOD CORPORATION 1119 NORTH LAWRENCE EXPRESSWAY SUNNYVALE, CA 94089 CONTACT: STAN YEE PHONE: (408) 805-2478	ARCHITECT: DELTA GROUPS ENGINEERING, INC. 5635 WEST LAS POSITAS, SUITE 403 PLEASANTON, CA 94588 NAME: FRANCIS ONG CONTACT: HAROLD TRIAS PHONE: (925) 468-0115
APPLICANT: CLEARWIRE 2999 OAK RD. WALNUT CREEK, CA 94597 CONTACT: TOM DERKAS PHONE: (925) 202-3333	STRUCTURAL ENGINEER: DELTA GROUPS ENGINEERING, INC. 5635 WEST LAS POSITAS, SUITE 403 PLEASANTON, CA 94588 CONTACT: ALBERT TENG PHONE: (949) 622-0333
LEASING MANAGER: GOODMAN NETWORKS 204 FOREST CREEK LANE SAN RAMON, CA 94583 CONTACT: SUSAN PETERSEN PHONE: (530) 312-2168	CONSTRUCTION MANAGER: GOODMAN NETWORKS 204 FOREST CREEK LANE SAN RAMON, CA 94583 CONTACT: ERIK THORENSEN PHONE: (813) 495-2164
ZONING MANAGER: GOODMAN NETWORKS 204 FOREST CREEK LANE SAN RAMON, CA 94583 CONTACT: GORDON BELL PHONE: (530) 647-1932	

BUILDING/ SITE DATA LEGEND

LATITUDE:	37° 23' 50.83" N (NAD83)
LONGITUDE:	121° 59' 49.86" W (NAD83)
ELEVATION:	21' AMSL (NGVD 29)
A.P.N.:	110-23-110
ZONING:	C1/PD COMMERCIAL NEIGHBORHOOD SHOPPING CENTER/PLANNED DEVELOPMENT
PROPOSED USE:	U, UNMANNED
TYPE OF CONSTRUCTION:	VH
LEASE AREA:	9.0 SQ. FT.
HANDICAP REQUIREMENTS:	FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. HANDICAPPED ACCESS NOT REQUIRED.
TITLE 24 REQUIREMENTS:	FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. TITLE 24 IS EXEMPT.

PROJECT DESCRIPTION

PROPOSED UNMANNED WIRELESS FACILITY, INCLUDING THE INSTALLATION OF (1) NEW EQUIPMENT CABINET, (3) MICROWAVE DISHES, (3) PANEL ANTENNAS, AND (1) GPS.

SHEET INDEX

T1	TITLE SHEET
A1	OVERALL SITE PLAN
A2	EQUIPMENT AREA PLAN, ANTENNA LAYOUT & EQUIPMENT LAYOUT
A3	NORTH & EAST ELEVATIONS
A4	SOUTH & WEST ELEVATIONS

DRIVING DIRECTIONS

FROM: CLEARWIRE REGIONAL OFFICE 2999 OAK RD. WALNUT CREEK, CA 94597 TO: 1161 N. LAWRENCE EXPRESSWAY SUNNYVALE, CA 94089 DISTANCE: 47.2 MILES

- HEAD SOUTHEAST ON OAK RD.
- TURN RIGHT AT TREAT BLVD.
- SLIGHT LEFT TO STAY ON TREAT BLVD.
- TURN RIGHT AT N. MAIN ST
- TAKE THE RAMP ONTO I-880 SOUTH
- TAKE EXIT 12 TO MERGE ONTO CA-262 SOUTH/MISSION BLVD. TOWARD I-880
- TAKE THE RAMP ONTO I-880 SOUTH
- TAKE THE EXIT ONTO CA-237 WEST TOWARD MOUNTAIN VIEW
- EXIT ONTO COUNTY RTE-22/LAWRENCE EXPY
- TURN RIGHT AT LAKEBIRD DR
- TURN LEFT AT LAKE DALE WAY
- ARRIVE AT 1161 LAWRENCE EXPRESSWAY

clearw're

4400 CARILLON POINT
KIRKLAND, WA 98033

PROJECT INFORMATION:

LAKWOOD SHOPPING CENTER
CA-SJC0083A
1161 N. LAWRENCE EXPRESSWAY
SUNNYVALE, CA 94089
SANTA CLARA COUNTY

CURRENT ISSUE DATE:

8/11/09

ISSUED FOR:

ZONING (100%)

REV. - DATE: DESCRIPTION: BY:

REV.	DATE	DESCRIPTION	BY
8/11/09		ZONING (100%)	CL
6/16/09		ZONING (90%)	JS

PLANS PREPARED BY:

DELTA GROUPS ENGINEERING, INC.
CONSULTING ENGINEERS

5635 WEST LAS POSITAS, SUITE 403
PLEASANTON, CA 94588
TEL: (925) 468-0115 FAX: (925) 468-0333

CONSULTANT:

SEAL OF APPROVAL:

SHEET TITLE:

TITLE SHEET

SHEET NUMBER:

11

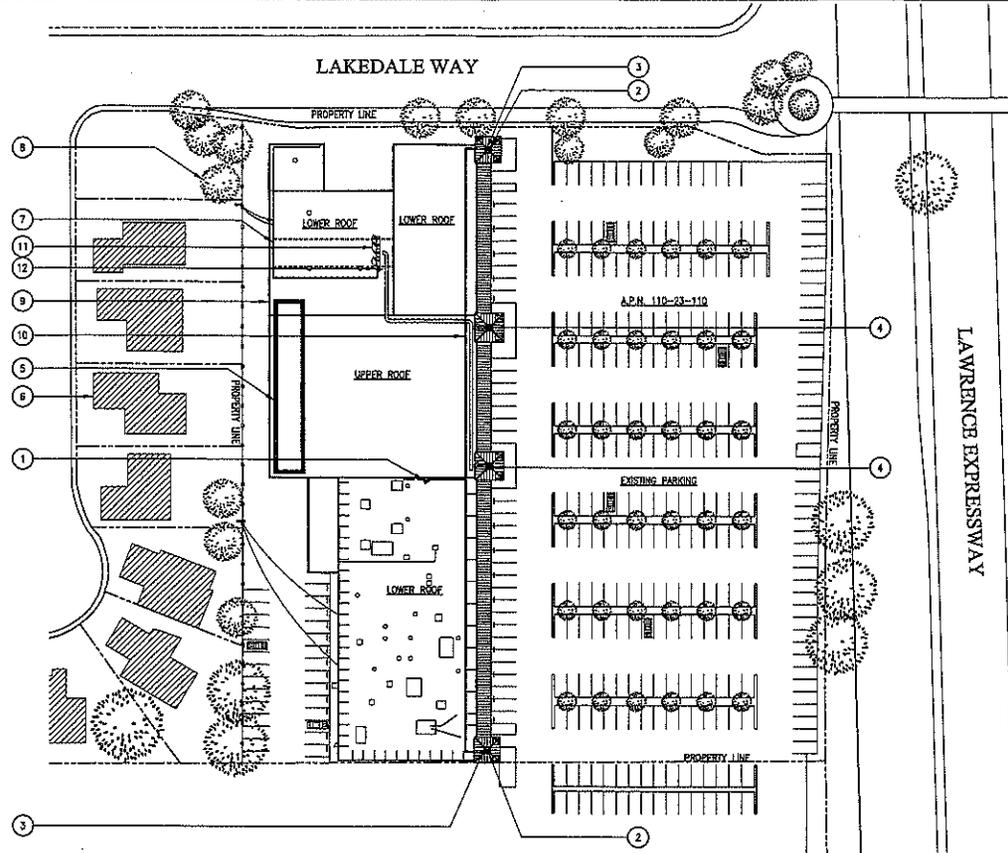
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ATTACHMENT

R

KEY NOTES:

- ① PROPOSED 3'-0"x3'-0" CLEARWIRE LEASE AREA (9.0 SQ. FT. TOTAL) ⑤
⑩
- ② PROPOSED CLEARWIRE PANEL ANTENNA - STEALTHED IN PROPOSED CUPOLA STRUCTURE TO MATCH EXISTING BUILDING (1 PER SECTOR, 3 SECTORS TOTAL) ②
⑩
⑤
- ③ PROPOSED CLEARWIRE MICROWAVE DISH - STEALTHED IN PROPOSED CUPOLA STRUCTURE TO MATCH EXISTING BUILDING (1 PER SECTOR, 3 SECTORS TOTAL) ②
⑩
⑤
- ④ EXISTING T-MOBILE ANTENNAS STEALTHED IN CUPOLA STRUCTURE
- ⑤ EXISTING SCREEN WALL
- ⑥ EXISTING BUILDING
- ⑦ EXISTING T-MOBILE COAXIAL CABLE ROUTING
- ⑧ EXISTING TREES/LANDSCAPING (HEIGHT TO BE VERIFIED ON SITE)
- ⑨ EXISTING BUILDING FOOTPRINT
- ⑩ PROPOSED CLEARWIRE CABLE ROUTING WITHIN 12" WIDE CABLE TRAY
- ⑪ EXISTING T-MOBILE EQUIPMENT CABINET (TYP.)
- ⑫ EXISTING T-MOBILE EMERGENCY CONTACT SIGNAGE



NOTES:
 1. DO NOT SCALE DRAWINGS. ALL DIMENSIONS OF AND BETWEEN EXISTING BUILDINGS/STRUCTURES, OR RELATIVE DISTANCES AS SHOWN BETWEEN EXISTING BUILDINGS/STRUCTURES, PROPERTY LINES, EASEMENTS AND THE TRUE NORTH ARE TO BE CONFIRMED BY THE SURVEYOR.
 2. POWER ROUTING DESIGN IS PRELIMINARY AND MUST BE VERIFIED WITH LOCAL UTILITY COMPANIES.

OVERALL SITE PLAN

SCALE: 1" = 40' - 0"
 0' 20' 40' 80'

clearw're
 4400 CARILLON POINT
 KIRKLAND, WA 98033

PROJECT INFORMATION:
LAKEWOOD SHOPPING CENTER
CA-SJC0083A
 1161 N. LAWRENCE EXPRESSWAY
 SUNNYVALE, CA 94089
 SANTA CLARA COUNTY

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ZONING (100%)

REV. DATE DESCRIPTION BY:

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△	6/16/09	ZONING (90%)	JS

PLANS PREPARED BY:
DELTA GROUPS ENGINEERING, INC.
 CONSULTING ENGINEERS
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 TEL: (925) 468-0115 FAX: (925) 468-0355

CONSULTANT:

SEAL OF APPROVAL:

SHEET TITLE:
OVERALL SITE PLAN

SHEET NUMBER:
Page 2 of 5

ATTACHMENT B

PROPOSED CLEARWIRE RF HEAD
(TYP. OF 3) - MOUNTED BEHIND
PANEL ANTENNA

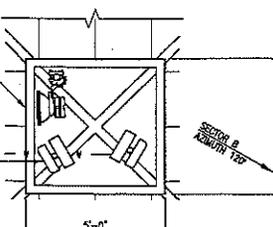
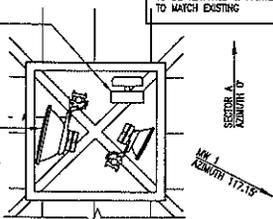
PROPOSED CLEARWIRE
MICROWAVE DISH (1 PER
SECTOR, 3 SECTORS TOTAL)

PROPOSED STEALTH
CUPOLA WITH FRP MATERIAL
- TO MATCH EXISTING
(TYP. OF 2)

PROPOSED CLEARWIRE PANEL
ANTENNA - STEALTHED IN
PROPOSED CUPOLA STRUCTURE
TO MATCH EXISTING BUILDING (1
PER SECTOR, 3 SECTORS TOTAL)

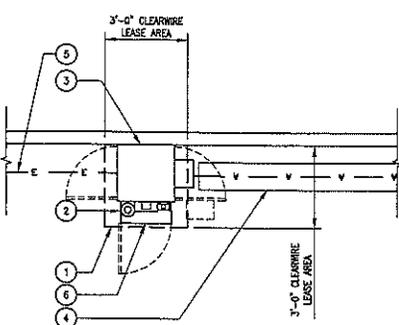
NOTE:
ALL STEALTH FEATURES ARE
TO BE TEXTURED & PAINTED
TO MATCH EXISTING

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ANTENNA LAYOUT

SCALE: 1/4" = 1'-0" 2



KEY NOTES:

- 1 PROPOSED 3'-0"x3'-0" CLEARWIRE LEASE AREA (9.0 SQ. FT. TOTAL)
- 2 PROPOSED CLEARWIRE GPS - MOUNTED TO EQUIPMENT CABINET
- 3 PROPOSED CLEARWIRE EQUIPMENT CABINET MOUNTED TO EXISTING CONCRETE WALL
- 4 PROPOSED CLEARWIRE CABLE ROUTING WITHIN PROPOSED 12" WIDE CABLE TRAY
- 5 PROPOSED CLEARWIRE ELECTRICAL ROUTING
- 6 PROPOSED CLEARWIRE EMERGENCY CONTACT SIGNAGE



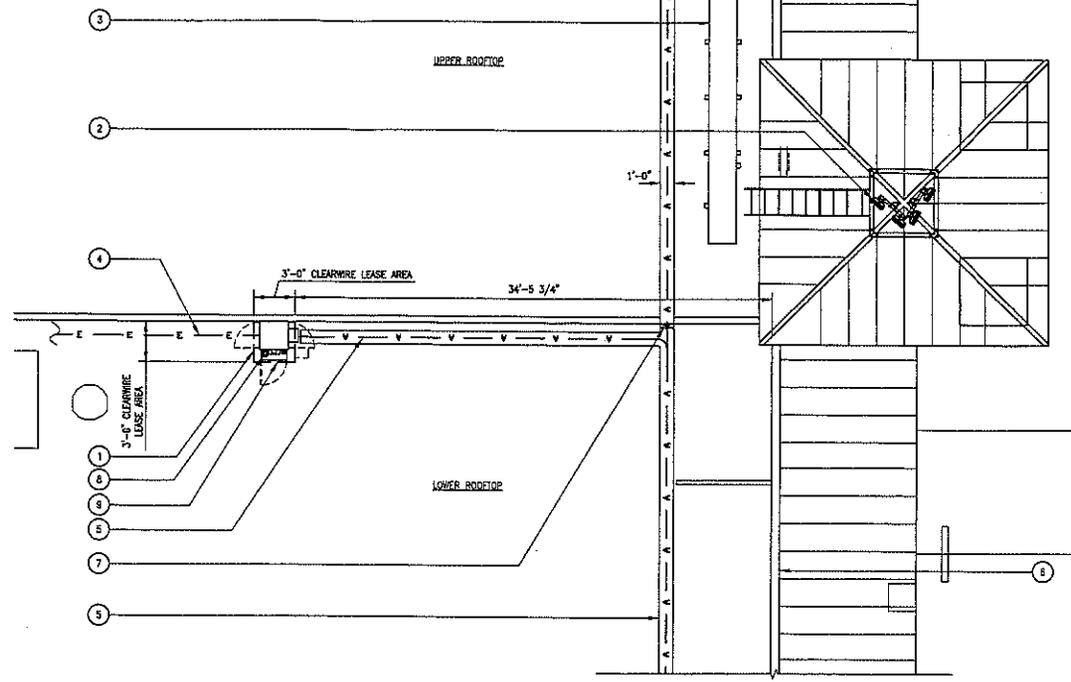
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2. POWER ROUTING DESIGN IS PRELIMINARY AND MUST BE VERIFIED WITH LOCAL UTILITY COMPANIES.

EQUIPMENT LAYOUT

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

EQUIPMENT AREA PLAN

SCALE: 1/4" = 1'-0" 1



KEY NOTES:

- 1 PROPOSED 3'-0"x3'-0" CLEARWIRE LEASE AREA (9.0 SQ. FT. TOTAL)
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- 3 EXISTING T-MOBILE COAXIAL CABLE ROUTING
- 4 PROPOSED CLEARWIRE ELECTRICAL ROUTING TO POWER P.O.C. - LOCATION T.B.D.
- 5 PROPOSED CLEARWIRE ANTENNA COAX & FIBER ROUTING WITHIN PROPOSED 12" WIDE CABLE TRAY
- 6 EXISTING ROOFTOP PARAPET WALL
- 7 PROPOSED CLEARWIRE CABLE LADDER
- 8 PROPOSED CLEARWIRE GPS - MOUNTED TO EQUIPMENT CABINET
- 9 PROPOSED CLEARWIRE EMERGENCY CONTACT SIGNAGE

clearw're
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SANTA CLARA COUNTY

CURRENT ISSUE DATE: 8/11/09

ISSUED FOR: ZONING (100%)

REV. DATE	DESCRIPTION	BY
8/11/09	ZONING (100%)	CL
6/16/09	ZONING (90%)	JS

PLANS PREPARED BY:

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TEL: (925) 450-0115 FAX: (925) 466-0355

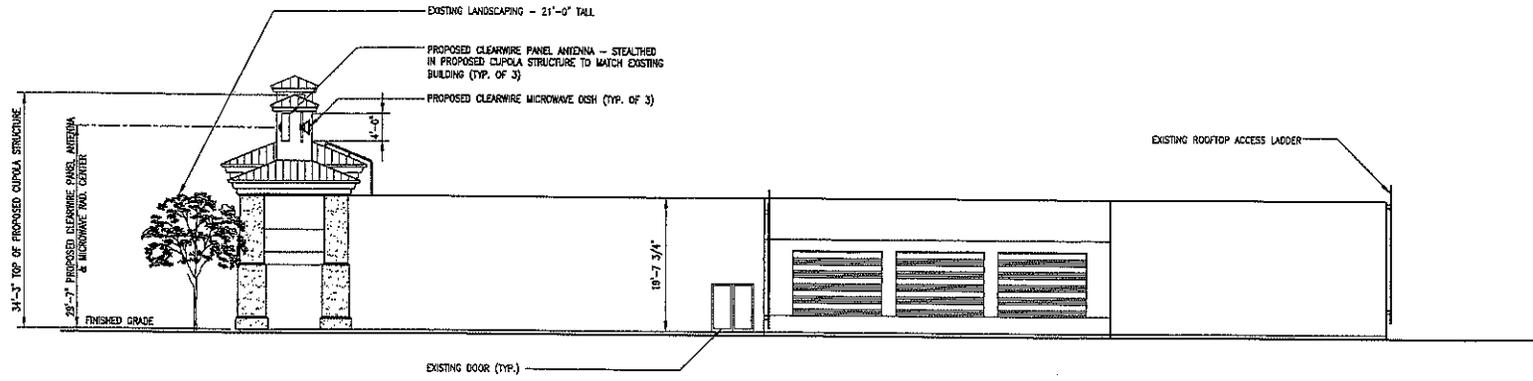
CONSULTANT:

SEAL OF APPROVAL:

SHEET TITLE: EQUIPMENT AREA PLAN, ANTENNA LAYOUT, & EQUIPMENT LAYOUT

SHEET NUMBER: 2 OF 5
ATTACHMENT
Page 2 of 5
10/10/09

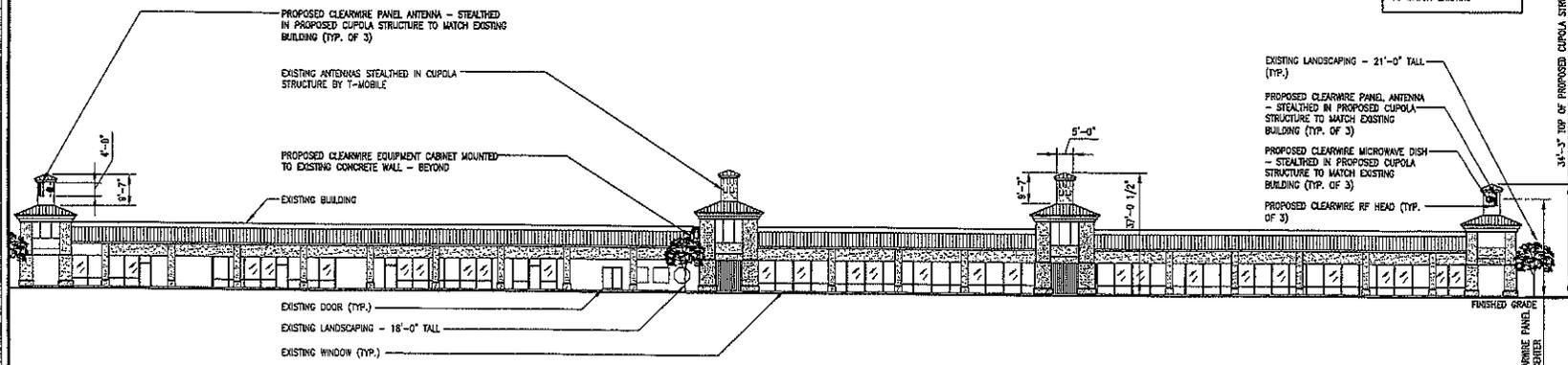
NOTE:
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TO BE TEXTURED & PAINTED
TO MATCH EXISTING



NORTH ELEVATION

SCALE: 1/8" = 1'-0"
1

NOTE:
ALL STEALTH FEATURES ARE
TO BE TEXTURED & PAINTED
TO MATCH EXISTING



EAST ELEVATION

SCALE: 1/16" = 1'-0"
2

clearw're
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CONSULTANT:

SEAL OF APPROVAL:

SHEET TITLE:

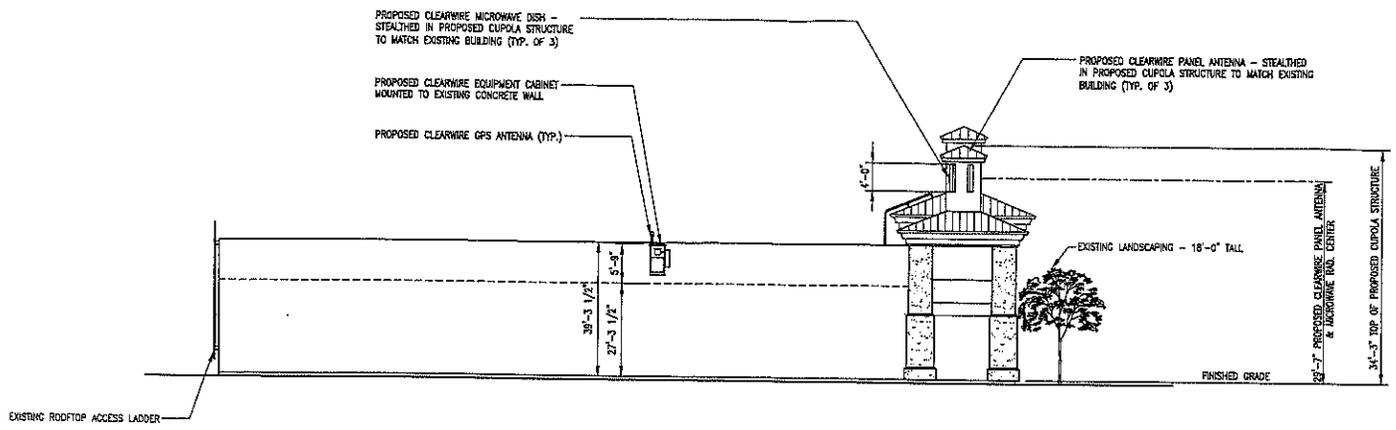
NORTH & EAST ELEVATIONS

SHEET NUMBER: 1 OF 5

A3

ATTACHMENT
of 5

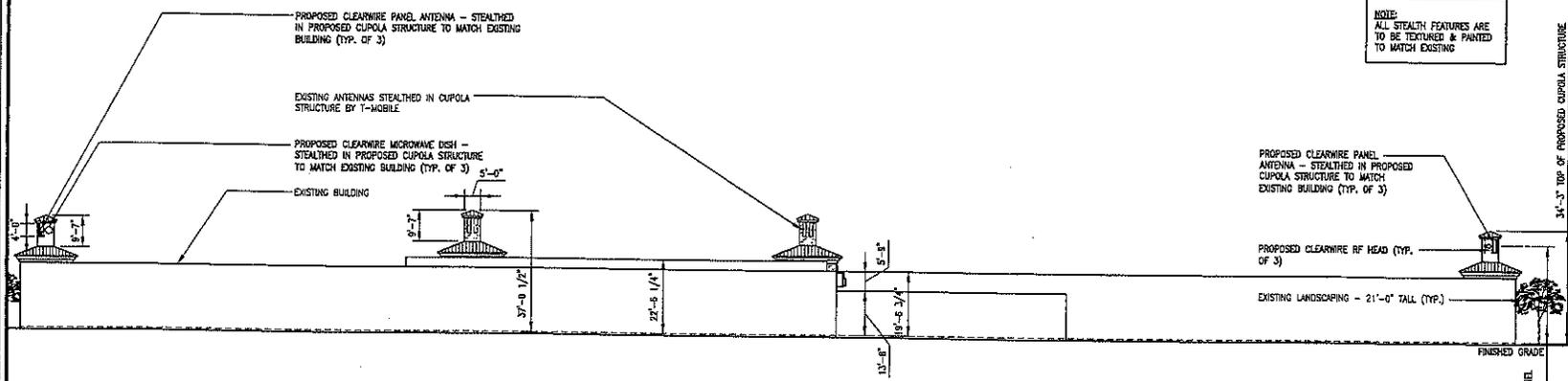
NOTE:
ALL STEALTH FEATURES ARE
TO BE TEXTURED & PAINTED
TO MATCH EXISTING



SOUTH ELEVATION

SCALE: 1/8" EACH = 1'-0"
1

NOTE:
ALL STEALTH FEATURES ARE
TO BE TEXTURED & PAINTED
TO MATCH EXISTING



WEST ELEVATION

SCALE: 1/16" EACH = 1'-0"
2

clearw're

4400 CARILLON POINT
KIRKLAND, WA 98033

PROJECT INFORMATION:

LAKEWOOD SHOPPING CENTER
CA-SJC0083A
1161 N. LAWRENCE EXPRESSWAY
SUNNYVALE, CA 94089
SANTA CLARA COUNTY

CURRENT ISSUE DATE:

8/11/09

ISSUED FOR:

ZONING (100%)

REV.-DATE-DESCRIPTION-BY:

REV.	DATE	DESCRIPTION	BY
1	8/11/09	ZONING (100%)	CL
2	8/16/09	ZONING (80%)	JS

PLANS PREPARED BY:

DELTA GROUPS ENGINEERING, INC.
CONSULTING ENGINEERS
3435 WEST LAS POSITAS, SUITE 403
PLEASANTON, CA 94588
TEL: (925) 468-0115 FAX: (925) 468-0355

CONSULTANT:

SEAL OF APPROVAL:

SHEET TITLE:

SOUTH & WEST ELEVATIONS

SHEET NUMBER: REVISION:

A4 ATTACHMENT

of 5

(View Looking West to Site)



EXISTING

clearw're

LAKWOOD SHOPPING CENTER (CA-SJC0083A)
1161 N. LAWRENCE EXPRESSWAY, SUNNYVALE, CA 94089

Proposed Clearwire Panel Antenna (Typ. of 3)
and Microwave Dish (Typ. of 3) - Stealthed in
Proposed Cupola Structure to Match Existing
Building

(View Looking West to Site)



PROPOSED

ATTACHMENT
of
1 - 1





September 16, 2009

City of Sunnyvale
Planning Division
456 W. Olive Avenue
Sunnyvale, CA 94088

RE: **ClearWire Site CA-SJC0083:** Application for a Minor Use Permit for a Wireless Communications Facility at 1119-1161 N. Lawrence Expressway, Sunnyvale, CA, APN 110-23-110

This letter is hereby submitted in conjunction with an application for a minor use permit for an unmanned wireless communications facility located on the rooftop of a commercial building at property located at 1119-1161 N. Lawrence Expressway in the City of Sunnyvale. The proposed facility is part of a wireless communications network for ClearWire Technologies.

I. Applicant Information

Lessee/Applicant

ClearWire Technologies
12657 Alcosta Blvd., Ste. 300
San Ramon, CA 94583
Attn: Tom Derkas
Phone: (925) 202-3333

Agent for Applicant

bci Communications, Inc (Attn: Gordon Bell)
4020 Sierra Springs Drive
Pollock Pines, CA 95726
Phone: (530) 647-1932
Fax: (805) 456-3958
Email: gbell61639@aol.com

Property Owner

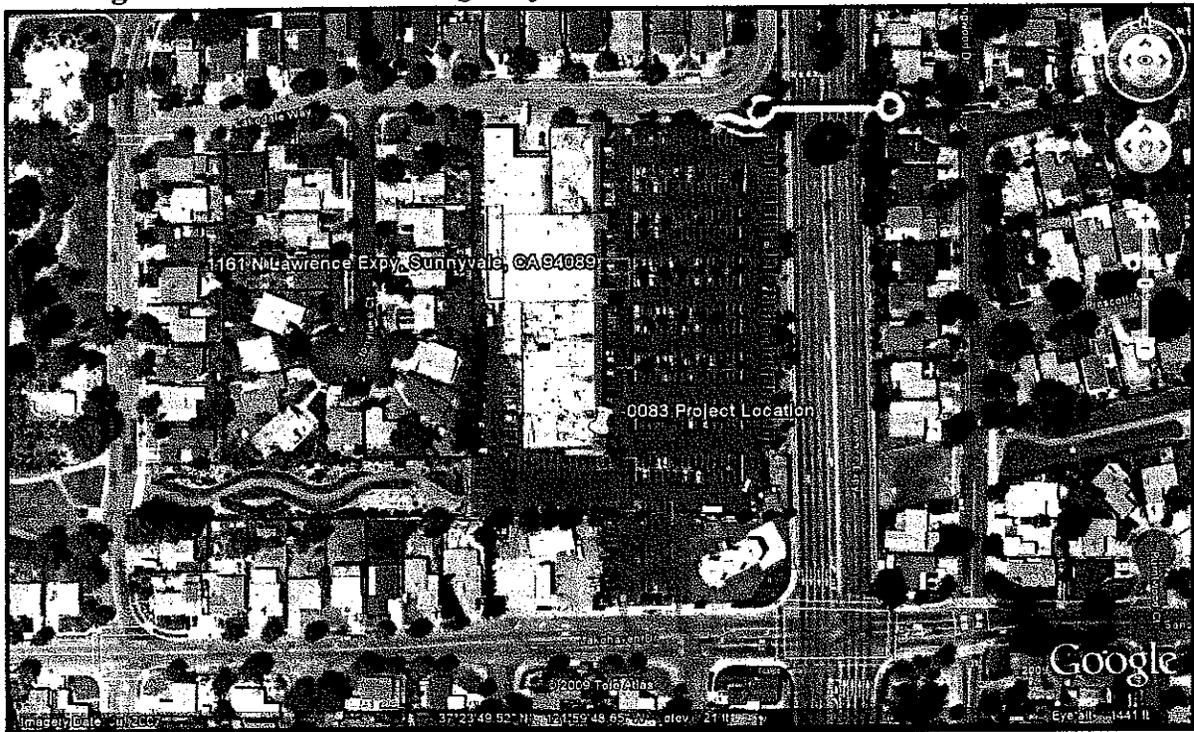
Dicks Lakewood Corporation
1119 N. Lawrence Expressway
Sunnyvale, CA 94089
Attn: General Manager
Phone: 408.752.0381

II. Project Description

Project Location

The proposed project is located at 1119-1161 N. Lawrence Expressway in the City of Sunnyvale. The proposed communications facility will be located the rooftop of the existing building. The project site is located on Assessor's Parcel 110-23-110. Geographic coordinates (NAD 83) for the proposed facility are Latitude: 37°23' 48.48"; Longitude: - 121° 59' 48.61", at an elevation of approximately 22' AMSL (above mean sea level). The aerial photo below shows project location and surrounding land uses.

Fig. 1. Aerial Photo Showing Project Location and Surrounding Land Uses



Project Components

The proposed project would consist of the installation of antennas and radio equipment on the rooftop of the building as shown on the attached plans. The proposed project components would consist of the following elements to be contained within a 9.0 (3' x 3') square foot lease area:

- Radio equipment cabinet (approx. 30" x 30" x 50"[H]) to be installed on a steel platform mounted on the rooftop below the parapet. The equipment will not be visible from any surrounding locations due to the parapet height and line of sight issues.
- Three (3) panel and three (3) microwave antennas to be mounted inside an extension of existing cupolas (similar in design to existing cupolas in the middle of the building) on

the rooftop of the building behind RF transparent material textured and painted to match the building walls. Existing cupolas in the middle of the building are approximately 37 feet in height and are 5' x 5' in width. The proposed cupolas would be approximately 3 feet lower than the existing cupolas to provide architectural scaling to the building given that the rooflines of those corner elements are lower than the middle elements. The width dimensions would be the same as it is not possible to fit all equipment any smaller dimensioned elements. The antennas are completely stealthed and would not be visible from any location.

- Associated fiber/coax cable to be run from the radio cabinets on the rooftop to the antennas inside conduit/cable tray. Power would be pulled from existing electrical service at the rear of the building
- A generator is not proposed as part of this project.

Access is provided by existing driveways on Lawrence Expressway, Lakehaven Drive, and Lakedale Way.

Network Technology

Clearwire offers a robust suite of advanced voice, high-speed Internet services to consumers and businesses. The company is building the first Mobile WiMax 4G network in the San Francisco Bay area bringing together an unprecedented combination of speed and mobility. Clearwire is licensed by the FCC to operate the Mobile WiMax Network in the 2.5-2.7GHz frequency range in San Francisco market. Clearwire will be using microwave backhaul for the Mobile WiMax network.

The Clearwire network is designed upon utilization of microwave backhaul throughout the network of hundreds of sites in the Bay area. This is a 100 percent backhaul solution, with no hardline connections within the system. What this means is that the majority of the sites transport a signal to at least three other sites with "hubs" located at the center of some of the rings to transport an initial signal. Because sites are inextricably linked by these microwave connections, it is imperative that the MW dishes obtain maximum height over the surrounding clutter and topography to ensure a point-to-point connection with other sites in the system.

In terms of Clearwire's relationship to other carriers and their networks, it should be known that Clearwire is a subsidiary of Sprint/Nextel (Sprint owns 51%), but the systems are not integrated. Clearwire's network is an entirely new network. Eventually, Clearwire's subscribers may have roaming agreements with Sprint/Nextel where Clearwire is not present, but the systems are not integrated to support each other. Because of the ownership relationship, Clearwire's footprint is very similar to Sprint's in the Bay area because we know that it is possible to utilize Sprint/Nextel's shelters, mounting brackets, coax cable trays, etc. with the appropriate collocation agreement with Sprint/Nextel. We also know we're more likely to have willing landlords were Sprint/Nextel is already located.

Collocation

The existing building already supports communications facilities (T-Mobile) on the rooftop and may be capable of handling additional antennas should other wireless communications companies be interested in collocation on the rooftop.

Public Services

Public services such as fire and law enforcement are not required given that the facilities are designed to be vandalism resistant (located on the rooftop) and are uninhabitable. The project does not require school or transit facilities, as it is an unmanned wireless communications facility.

Operations

The site is an unmanned facility that will not generate any noise, dust, or odors. It is expected that a service technician may visit the site for routine maintenance once every month to two months if needed. Ample parking is available in the parking lot for this transient visit.

III. Land Use

Zoning

The project parcel is zoned C1/PD, Commercial Planned Development. The project site is bounded on the south by similar commercial uses. Land north, west and east of the project site is zoned single-family residential and used for such at the current time.

Environmental Setting

The project is located on a relatively level, commercially-zoned parcel that has been entirely developed with commercial retail building, parking lot, and landscaping as well as existing wireless communications facilities on the rooftop. The project is located entirely on the rooftop of the existing building and will not have any environmental impacts on area resources. The proposed antennas will not be visible from surrounding public viewsheds given proposed stealthing measures, and as such the project will not have an impact on any scenic resources.

IV. Conclusion

In conclusion, the proposed project is a compatible use with the surrounding land uses as proven by the fact that an existing facility is located on and behind the building. The proposed project will provide valuable communications services to area residents and

Page 5
City of Sunnyvale
CA-SJC0083
9/16/09

ATTACHMENT D
Page 5 of 6

businesses. Should you have any questions regarding this application, please feel free to call me at (530) 647-1932.

Sincerely,

bciSites, Inc.

Gordon J. Bell
Gordon J. Bell
Zoning Specialist

Encl.



USE PERMIT/SPECIAL DEVELOPMENT PERMIT JUSTIFICATIONS

One of the two following findings must be made in order to approve a Use Permit or Special Development Permit application.

The Sunnyvale Municipal code states that at least one of the following two justifications must be met before granting the Use Permit or Special Development Permit. Please provide us information on how your project meets at least one of the following criteria.

1. The proposed use attains the objectives and purposes of the General Plan of the City of Sunnyvale as the project ...

OR

2. The proposed use ensures that the general appearance of proposed structures, or the uses to be made of the property to which the application refers, will not impair either the orderly development of, or the existing uses being made of, adjacent properties as ...

The proposed project is to be located on the rooftop of the existing building. Antennas will be stealthed inside architectural elements and will not be readily visible from surrounding areas. Building architecture will not change significantly except for the expansion of existing cupolas. The telecommunications use is a passive use and will have no impact on existing commercial uses or surrounding residential uses.

If you need assistance in answering either of these justifications, contact the Planning Division staff at the One-Stop Permit Center.

Statement of Hammett & Edison, Inc., Consulting Engineers

The firm of Hammett & Edison, Inc., Consulting Engineers, has been retained on behalf of Clearwire, LLC, a personal wireless service provider, to evaluate the base station (Site No. CA-SJC0083) proposed to be located at 1161 North Lawrence Expressway in Sunnyvale, California, for compliance with appropriate guidelines limiting human exposure to radio frequency ("RF") electromagnetic fields.

Prevailing Exposure Standards

The U.S. Congress requires that the Federal Communications Commission ("FCC") evaluate its actions for possible significant impact on the environment. In Docket 93-62, effective October 15, 1997, the FCC adopted the human exposure limits for field strength and power density recommended in Report No. 86, "Biological Effects and Exposure Criteria for Radiofrequency Electromagnetic Fields," published in 1986 by the Congressionally chartered National Council on Radiation Protection and Measurements ("NCRP"). Separate limits apply for occupational and public exposure conditions, with the latter limits generally five times more restrictive. The more recent standard, developed by the Institute of Electrical and Electronics Engineers and approved as American National Standard ANSI/IEEE C95.1-2006, "Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz," includes similar exposure limits. A summary of the FCC's exposure limits is shown in Figure 1. These limits apply for continuous exposures and are intended to provide a prudent margin of safety for all persons, regardless of age, gender, size, or health.

The most restrictive FCC limit for exposures of unlimited duration to radio frequency energy for several personal wireless services are as follows:

Personal Wireless Service	Approx. Frequency	Occupational Limit	Public Limit
Broadband Radio ("BRS")	2,600 MHz	5.00 mW/cm ²	1.00 mW/cm ²
Advanced Wireless ("AWS")	2,100	5.00	1.00
Personal Communication ("PCS")	1,950	5.00	1.00
Cellular Telephone	870	2.90	0.58
Specialized Mobile Radio ("SMR")	855	2.85	0.57
Long Term Evolution ("LTE")	700	2.33	0.47
[most restrictive frequency range]	30-300	1.00	0.20

General Facility Requirements

Base stations typically consist of two distinct parts: the electronic transceivers (also called "radios" or "channels") that are connected to the traditional wired telephone lines, and the passive antennas that send the wireless signals created by the radios out to be received by individual subscriber units. The transceivers are often located at ground level and are connected to the antennas by coaxial cables

about 1 inch thick. Because of the short wavelength of the frequencies assigned by the FCC for wireless services, the antennas require line-of-sight paths for their signals to propagate well and so are installed at some height above ground. The antennas are designed to concentrate their energy toward the horizon, with very little energy wasted toward the sky or the ground. Along with the low power of such facilities, this means that it is generally not possible for exposure conditions to approach the maximum permissible exposure limits without being physically very near the antennas.

Computer Modeling Method

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

Site and Facility Description

Based upon information provided by Clearwire, including drawings by Delta Groups Engineering, Inc., dated June 16, 2009, it is proposed to mount three Argus Model LLPX310R directional panel antennas within two enclosures configured to match an existing cupola above the roof of the single-story commercial building located at 1161 North Lawrence Expressway in Sunnyvale. The antennas would be mounted with 2° downtilt at an effective height of about 32½ feet above ground, 18 feet above the main roof, and would be oriented at about 120° spacing, to provide service in all directions. The maximum effective radiated power in any direction would be about 970 watts. Also proposed to be mounted in another enclosure, to be placed on the main roof, are three microwave "dish" antennas, for interconnection of this site with others in the Clearwire network.

Presently located on the same building are similar antennas for use T-Mobile, another wireless telecommunications carrier. For the limited purpose of this study, it is assumed that T-Mobile has installed Andrew Model TMBX-6516-R2M dualband PCS and AWS antennas, mounted at an effective height of about 32½ feet above ground and operates with a maximum effective radiated power of 2,770 watts, representing simultaneous operation at 2,000 watts for PCS and 770 watts for AWS.

Study Results

For a person anywhere at ground, the maximum ambient level of RF exposure due to the proposed Clearwire operation by itself would be 0.0027 mW/cm^2 , which is 0.27% of the applicable public limit. The maximum calculated cumulative level anywhere at ground, for the simultaneous operation of both carriers, is 1.1% of the applicable public limit; the maximum calculated cumulative level at the second floor elevation of any nearby building* is 2.2% of the applicable public limit. It should be noted that these results include several “worst-case” assumptions and therefore are expected to overstate actual power density levels.

Recommended Mitigation Measures

Due to their mounting locations, the Clearwire antennas would not be accessible to the general public, and so no mitigation measures are necessary to comply with the FCC public exposure guidelines. To prevent occupational exposures in excess of the FCC guidelines, no access within 3 feet in front of the Clearwire antennas themselves, such as might occur during building maintenance activities, should be allowed while the site is in operation, unless other measures can be demonstrated to ensure that occupational protection requirements are met. Posting explanatory warning signs† at the roof access ladder and on the antenna enclosures, such that the signs would be readily visible from any angle of approach to persons who might need to work within that distance, would be sufficient to meet FCC-adopted guidelines. Similar measures should already be in place for the other carrier at the site; applicable keep-back distances have not been determined as part of this study.

Conclusion

Based on the information and analysis above, it is the undersigned’s professional opinion that the base station proposed by Clearwire, LLC at 1161 North Lawrence Expressway in Sunnyvale, California, will comply with the prevailing standards for limiting public exposure to radio frequency energy and, therefore, will not for this reason cause a significant impact on the environment. The highest calculated level in publicly accessible areas is much less than the prevailing standards allow for exposures of unlimited duration. This finding is consistent with measurements of actual exposure conditions taken at other operating base stations. Posting of explanatory signs is recommended to establish compliance with occupational exposure limitations.

* Located at least 40 feet away, based on aerial photographs from Google Maps.

† Warning signs should comply with OET-65 color, symbol, and content recommendations. Contact information should be provided (e.g., a telephone number) to arrange for access to restricted areas. The selection of language(s) is not an engineering matter, and guidance from the landlord, local zoning or health authority, or appropriate professionals may be required.

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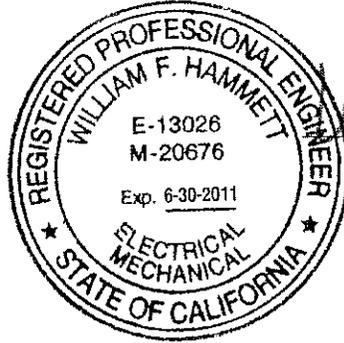
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Clearwire, LLC • Proposed Base Station (Site No. CA-0083)
1161 North Lawrence Expressway • Sunnyvale, California

Authorship

The undersigned author of this statement is a qualified Professional Engineer, holding California Registration Nos. E-13026 and M-20676, which expire on June 30, 2011. This work has been carried out under his direction, and all statements are true and correct of his own knowledge except, where noted, when data has been supplied by others, which data he believes to be correct.



William F. Hammett

William F. Hammett, P.E.

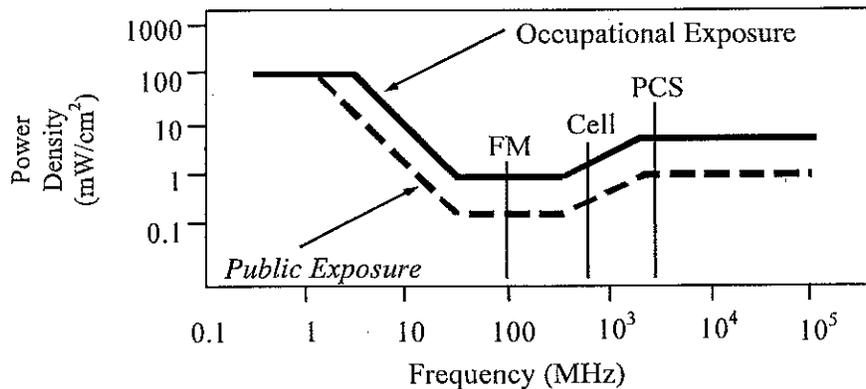
July 27, 2009

FCC Radio Frequency Protection Guide

The U.S. Congress required (1996 Telecom Act) the Federal Communications Commission (“FCC”) to adopt a nationwide human exposure standard to ensure that its licensees do not, cumulatively, have a significant impact on the environment. The FCC adopted the limits from Report No. 86, “Biological Effects and Exposure Criteria for Radiofrequency Electromagnetic Fields,” published in 1986 by the Congressionally chartered National Council on Radiation Protection and Measurements (“NCRP”). Separate limits apply for occupational and public exposure conditions, with the latter limits generally five times more restrictive. The more recent standard, developed by the Institute of Electrical and Electronics Engineers and approved as American National Standard ANSI/IEEE C95.1-2006, “Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz,” includes similar limits. These limits apply for continuous exposures from all sources and are intended to provide a prudent margin of safety for all persons, regardless of age, gender, size, or health.

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

Frequency Applicable Range (MHz)	Electromagnetic Fields (f is frequency of emission in MHz)					
	Electric Field Strength (V/m)		Magnetic Field Strength (A/m)		Equivalent Far-Field Power Density (mW/cm ²)	
0.3 – 1.34	614	<i>614</i>	1.63	<i>1.63</i>	100	<i>100</i>
1.34 – 3.0	614	<i>823.8/f</i>	1.63	<i>2.19/f</i>	100	<i>180/f²</i>
3.0 – 30	1842/f	<i>823.8/f</i>	4.89/f	<i>2.19/f</i>	900/f ²	<i>180/f²</i>
30 – 300	61.4	<i>27.5</i>	0.163	<i>0.0729</i>	1.0	<i>0.2</i>
300 – 1,500	3.54√f	<i>1.59√f</i>	√f/106	<i>√f/238</i>	f/300	<i>f/1500</i>
1,500 – 100,000	137	<i>61.4</i>	0.364	<i>0.163</i>	5.0	<i>1.0</i>



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

Assessment by Calculation of Compliance with FCC Exposure Guidelines

The U.S. Congress required (1996 Telecom Act) the Federal Communications Commission ("FCC") to adopt a nationwide human exposure standard to ensure that its licensees do not, cumulatively, have a significant impact on the environment. The maximum permissible exposure limits adopted by the FCC (see Figure 1) apply for continuous exposures from all sources and are intended to provide a prudent margin of safety for all persons, regardless of age, gender, size, or health. Higher levels are allowed for short periods of time, such that total exposure levels averaged over six or thirty minutes, for occupational or public settings, respectively, do not exceed the limits.

Near Field.

Prediction methods have been developed for the near field zone of panel (directional) and whip (omnidirectional) antennas, typical at wireless telecommunications base stations, as well as dish (aperture) antennas, typically used for microwave links. The antenna patterns are not fully formed in the near field at these antennas, and the FCC Office of Engineering and Technology Bulletin No. 65 (August 1997) gives suitable formulas for calculating power density within such zones.

For a panel or whip antenna, power density $S = \frac{180}{\theta_{BW}} \times \frac{0.1 \times P_{net}}{\pi \times D \times h}$, in mW/cm²,

and for an aperture antenna, maximum power density $S_{max} = \frac{0.1 \times 16 \times \eta \times P_{net}}{\pi \times h^2}$, in mW/cm²,

- where θ_{BW} = half-power beamwidth of the antenna, in degrees, and
 P_{net} = net power input to the antenna, in watts,
 D = distance from antenna, in meters,
 h = aperture height of the antenna, in meters, and
 η = aperture efficiency (unitless, typically 0.5-0.8).

The factor of 0.1 in the numerators converts to the desired units of power density.

Far Field.

OET-65 gives this formula for calculating power density in the far field of an individual RF source:

$$\text{power density } S = \frac{2.56 \times 1.64 \times 100 \times RFF^2 \times ERP}{4 \times \pi \times D^2}, \text{ in mW/cm}^2,$$

- where ERP = total ERP (all polarizations), in kilowatts,
RFF = relative field factor at the direction to the actual point of calculation, and
D = distance from the center of radiation to the point of calculation, in meters.

The factor of 2.56 accounts for the increase in power density due to ground reflection, assuming a reflection coefficient of 1.6 (1.6 x 1.6 = 2.56). The factor of 1.64 is the gain of a half-wave dipole relative to an isotropic radiator. The factor of 100 in the numerator converts to the desired units of power density. This formula has been built into a proprietary program that calculates, at each location on an arbitrary rectangular grid, the total expected power density from any number of individual radiation sources. The program also allows for the description of uneven terrain in the vicinity, to obtain more accurate projections.