



**CITY OF SUNNYVALE
REPORT
Planning Commission**

March 8, 2010

SUBJECT: **2009-0782 - T-Mobile** [Applicant] **City of Sunnyvale:**
Application for a project located at **221 Commercial Street**
(near E. California Ave.) in an M-S (Industrial & Service)
Zoning District (APN: 205-34-012)

Motion Use Permit to allow a second wireless telecommunications
carrier including six panel antennas and one microwave dish
on a new 100' tall monopole with associated ground
equipment at the City Corporation Yard.

REPORT IN BRIEF

Existing Site City Corporation Yard
Conditions

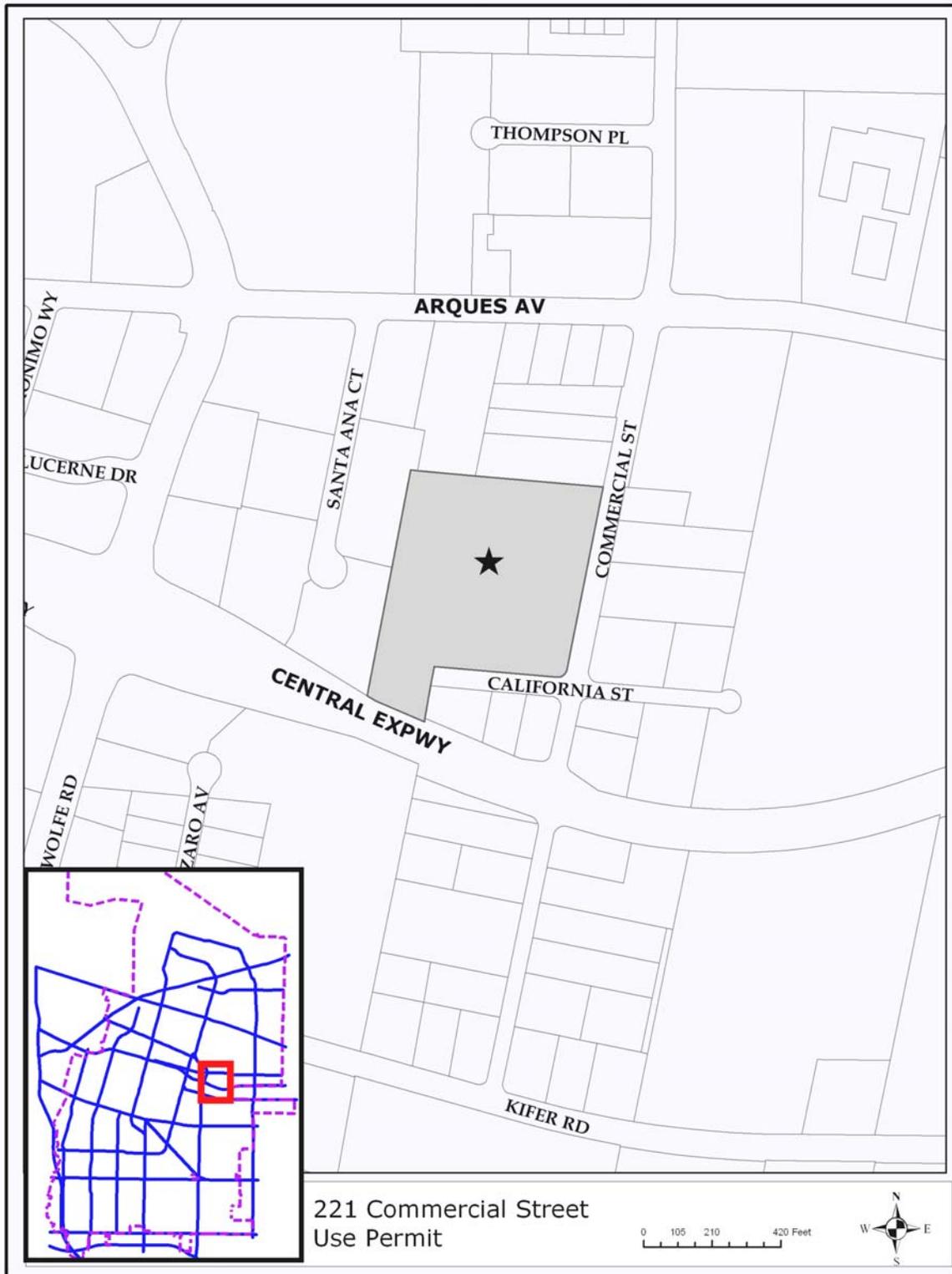
Surrounding Land Uses

North	Industrial
South	Industrial & Central Expressway
East	Industrial
West	Industrial

Issues Aesthetics

Environmental A Negative Declaration has been prepared in
Status compliance with California Environmental Quality
Act provisions and City Guidelines.

Staff Approve with conditions
Recommendation



PROJECT DATA TABLE

	EXISTING	PROPOSED	REQUIRED/ PERMITTED
General Plan	Industrial	Same	Industrial
Zoning District	M-S	Same	M-S
Lot Size (s.f.)	379,843	Same	22,500 min.
Height of Monopole	N/A	100'	100' max.
Setbacks to Monopole (Facing Property from Commercial St.)			
Front	N/A	410'-7"	25' min.
Left Side	N/A	528'-3"	0' min.
Right Side	N/A	68'-2" (596'-5" combined)	0' min. (20' combined)
Rear	N/A	189'-1"	0' min.

ANALYSIS**Description of Proposed Project**

The applicant proposes to build a new wireless telecommunications monopole along the northern part of the City Corporation Yard, in order to accommodate six antennas and one microwave dish for T-Mobile. Ground equipment will be added near the base of the pole inside a new solid masonry enclosure. No modifications are proposed to the existing wireless telecommunications lattice tower at the southwest portion of the property, which is currently at full capacity with existing carriers and City equipment.

According to Sunnyvale Municipal Code (SMC) Section 19.54.080, new monopoles that are greater than 90 feet in height require a major Use Permit (UP). The proposed monopole will be 100 feet tall; therefore, Planning Commission review is required for this project.

Background

Previous Actions on the Site: The existing lattice tower currently contains AT&T (formerly Cellular One) and City antennas at a height of approximately 107 feet. The tower was subsequently extended and now reaches a height of over 130 feet. Metricom's antennas, which was added to the tower in 1999, has since been removed. The following table summarizes previous planning applications related to the subject site.

File Number	Brief Description	Hearing/Decision	Date
1999-0431	Use Permit to add antennas on existing monopole (Metricom).	Planning Commission/ Approved	4/26/1999
1993-0434	Miscellaneous Plan Permit to add antennas to existing monopole (Cellular One).	Staff/Approved	4/18/1993
1988-0472	Use Permit for new 100' tall monopole (City of Sunnyvale).	Planning Commission/ Approved	3/30/1988

Environmental Review

A Negative Declaration has been prepared in compliance with the California Environmental Quality Act provisions and City Guidelines. An initial study has determined that the proposed project would not create any significant environmental impacts (see Attachment D, Initial Study).

Use Permit

Site Layout: The 8.7-acre site is located in an industrial area and is currently used by the City of Sunnyvale as a Corporation Yard. Central Expressway is located to the south, and is more than 800 feet away from the new monopole location. There are no residential developments within at least 1,000 feet of the project site.

The proposed monopole will be located within an unutilized paved area along the northwest (right side) portion of the property, and will be more than 400 feet away from the existing lattice tower to the south.

Pole Design: The proposed monopole is designed to be 100 feet in height and 3 feet in diameter. A total of six panel antennas will be mounted at the top of the pole in two arrays of three antennas each, which will be approximately 4-feet 8-inches in height. One 2-foot diameter microwave dish will be mounted between the two antenna arrays. The antennas and microwave dish are designed to fit as snug to the pole as possible. All coax cables will run inside the pole.

The applicant designed the pole to accommodate two additional carriers, with future antennas to be mounted below T-Mobile's equipment (Attachment G, Letter from the Applicant & Use Permit Justifications). Future carriers will be required to obtain separate permits.

Ground Equipment: A new 6-foot tall solid masonry enclosure will be located 11 feet to the north of the pole. The enclosure will be 266 square feet in size

and will contain equipment cabinets and a global positioning system (GPS) antenna. A permanent generator is not proposed at this time; however, a generator may be used in the future for emergencies subject to standard noise-reducing requirements. Staff recommends that the proposed enclosure be painted to match the color of the existing buildings on-site (Attachment B, Recommended Conditions of Approval).

An unscreened “ice bridge”, or rack, is proposed in order to run the coax cables from the enclosure to the pole. Staff explored the option to underground the coax cables that connect to the pole, in lieu of an ice bridge design. However, the visual benefit of undergrounding the ice bridge would be minimal, as existing buildings effectively screen the ice bridge from the street frontage.

In order to provide power to the ground equipment and pole, an unscreened utility rack is also proposed. The proposed rack is approximately 6 feet in height and will be visible from Commercial Street. Staff recommends that the applicant work with staff to screen the utility rack from the street frontage (Attachment B, Recommended Conditions of Approval). Options may include expanding the enclosure to accommodate the rack, or extending the wall of the masonry enclosure parallel to the street to provide screening (“wing wall”).

Landscaping: The site is partially screened with existing shrubs and mature trees, many of which are almost 60 feet in height, along the site perimeter. No changes are proposed to the existing landscaping.

Parking/Circulation: No additional parking is required for the proposed use. The site can be accessed by the existing driveways on Commercial Street. The site will be visited once a month by the service provider for general maintenance following completion of the construction.

Radio Frequency (RF) Emissions Exposure: The Federal Communications Commission (FCC) is the final authority on safety of telecommunications facilities. If the facility meets FCC standards, the City is not permitted to make additional judgments on health and safety issues. An RF report was prepared by Lexia Corporation, which concludes that the individual exposure level for the new equipment will be 0.19% of the limit for general public exposure and 0.29% for all carriers on-site for anywhere on the ground (Attachment F, RF Study). The project complies with Federal requirements; therefore the proposed application can be considered on design and location criteria only.

Visual Impacts: The applicant has worked with City staff on the pole design and location which would minimize visual impacts to the existing industrial area and adjacent streets. The new monopole will not be visible from Central Expressway to the south, as the proposed pole will be more than 800 feet away and existing mature landscaping provides partial screening.

Although the pole and enclosure will be visible from neighboring properties and Commercial Street, the pole and enclosure will be set back more than 400 feet away from the front property line (Attachment E, Photosimulations). The project site is within an industrial area, which is not considered to be visually sensitive. As conditioned by staff, the utility rack will be fully screened.

Compliance with Development Standards/Guidelines: As previously discussed, the project complies with Federal requirements for RF exposure. The project is also subject to the Sunnyvale wireless telecommunications regulations contained in SMC Section 19.54. The proposed project meets applicable height and setback requirements for the zoning district.

In addition, the Code requires that the facility be designed with sensitivity to the surrounding area. The following design standards apply to this project:

19.54.40 (b) - All facilities shall be designed to minimize the visual impact to the greatest extent feasible, considering technological requirements, by means of placement, screening, and camouflage, to be compatible with existing architectural elements and building materials, and other site characteristics. The applicant shall use the smallest and least visible antennas possible to accomplish the owner/operator's coverage objectives.

- All new pole equipment will be mounted snug against the pole and most ground equipment will be screened behind the proposed masonry wall or buildings. The quantity and size of the antennas and microwave dish is the smallest needed to provide meet coverage objectives (Attachment G, Coverage Maps).

19.54.40 (c) - SMC 19.54.040 - Colors and materials for facilities shall be chosen to minimize visibility. Facilities shall be painted or textured using colors to match or blend with the primary background

- The applicant proposes to paint the antennas and microwave dishes to match the color of the new monopole. In addition, the new masonry enclosure will be painted to match the color of the existing buildings on-site.

19.54.40 (j) - All monopoles and lattice towers shall be designed to be the minimum functional height and width required to support the proposed antenna installation.

- The new monopole is the minimum height and width needed to clear the height of existing trees and buildings. The project has also been designed to accommodate at least two additional future carriers.

19.54.40 (l) - In order of preference, ancillary support equipment for facilities shall be located either within a building, in a rear yard or on a screened roofs top area. Support equipment pads, cabinets, shelters and buildings require architectural, landscape, color, or other camouflage treatment for minimal visual impact.

- Most of the ground equipment will be screened behind the proposed masonry wall, existing buildings and mature landscaping. The ground equipment will be set back more than 400 feet from the front property line on Commercial Street, and will be minimally visible.

Fiscal Impact

No fiscal impacts other than normal fees and taxes are expected.

Public Contact

At the time of the staff report, no comments were received from the public.

Notice of Public Hearing	Staff Report	Agenda
<ul style="list-style-type: none"> • Published in the <i>San Jose Mercury News</i> newspaper • Posted on the site • 24 notices mailed to the property owners and tenants adjacent to the project site 	<ul style="list-style-type: none"> • Posted on the City of Sunnyvale's web site • Provided at the Reference Section of the City of Sunnyvale's Public Library 	<ul style="list-style-type: none"> • Posted on the City's official notice bulletin board • Posted on the City of Sunnyvale's web site

Conclusion

Findings and General Plan Goals: As conditioned, staff was able to make the required Findings based on the justifications for the Use Permit. Recommended Findings and General Plan Goals are located in Attachment A.

Conditions of Approval: Recommended Conditions of Approval are located in Attachment B.

Alternatives

1. Approve the Use Permit with the attached conditions.
2. Approve the Use Permit with modified conditions.
3. Deny the Use Permit.

Recommendation

Alternative 1.

Prepared by:

Noren Caliva
Project Planner

Reviewed by:

Steve Lynch
Senior Planner

Attachments:

- A. Recommended Findings
- B. Recommended Conditions of Approval
- C. Site and Architectural Plans
- D. Initial Study
- E. Photosimulations
- F. RF Study
- G. Coverage Maps
- H. Letter from the Applicant & Use Permit Justifications

Recommended Findings – Use Permit

Goals and Policies that relate to this project are:

Telecommunications Policy Goal B: *Promote universal access to telecommunications services for all Sunnyvale citizens.*

Land Use and Transportation Element Action Statement N1.1 – *Limit the intrusion of incompatible uses and inappropriate development into city neighborhoods.*

Land Use and Transportation Element Policy N1.3 – *Support a full spectrum of conveniently located commercial public and quasi-public uses that add to the positive image of the city.*

1. The proposed use attains the objectives and purposes of the General Plan of the City of Sunnyvale. *[Finding met]*

The proposed project will increase telecommunications coverage, while meeting federal emissions requirements for human exposure. The new monopole has been designed for future co-location opportunities; thus, reducing the need to build additional facilities elsewhere in the City.

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. *[Finding met]*

The project site is located within an industrial area, which is not considered to be visually sensitive. The proposed project would be minimally visible from the street frontage and neighboring properties. The new monopole will not be visible from Central Expressway or from residential properties that are located more than 1,000 feet away.

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 Use 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. **Pole Design:** All new antennas and microwave dishes shall be painted to match the monopole.
5. **Equipment Enclosure:** The masonry enclosure shall be painted to match the color of existing buildings on-site.
6. **Utility Rack:** The applicant shall work with staff on a design to screen the utility rack from the street frontage, prior to issuance of building permits.
7. **Tree Removal:** No trees shall be removed as part of this application.

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 Special Development Permit 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 Special Development 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. A permanent generator is not approved as part of this project.
- 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.

T-Mobile

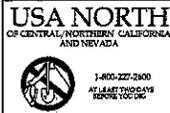
West Corporation

A DELAWARE CORPORATION

SF54275C

SUNNYVALE CORPORATE YARD

221 COMMERCIAL ST.
SUNNYVALE, CA 94089

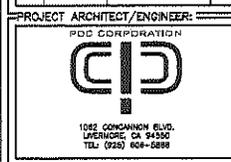


PROJECT INFORMATION:
SF54275C
SUNNYVALE
CORPORATE YARD
221 COMMERCIAL ST.
SUNNYVALE, CA 94089

CURRENT ISSUE DATE:
01/13/10

ISSUED FOR:
100% ZONING DRAWING

REV.	DATE	DESCRIPTION	BY:
A	07/08/09	90% ZONING DRAWING	NHP
0	08/15/09	100% ZONING DRAWING	NHP
1	01/13/10	100% ZONING DRAWING	PC



CONSULTANT:
DRAWN BY: _____ CHK. _____ APV. _____
NHP PP SAS

LICENSER:
SHEET TITLE:

**TITLE SHEET,
SITE INFORMATION
AND VICINITY MAP**

SHEET NUMBER:
T-1

CODE COMPLIANCE

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

- CALIFORNIA CODE OF REGULATIONS
- 2007 CALIFORNIA BUILDING CODE
- 2007 CALIFORNIA MECHANICAL CODE
- 2007 CALIFORNIA PLUMBING CODE
- 2007 CALIFORNIA ELECTRIC CODE
- ANY LOCAL BUILDING CODE AMENDMENTS TO THE ABOVE
- CITY/COUNTY ORDINANCES

HANDICAP REQUIREMENTS: FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. HANDICAPPED ACCESS NOT REQUIRED IN ACCORDANCE WITH CALIFORNIA ADMINISTRATIVE STATE CODE PART 2, TITLE 24, CHAPTER 11B, SECTION 11035.

PROJECT DESCRIPTION

THIS IS AN UNMANNED TELECOMMUNICATIONS FACILITY FOR T-MOBILE CONSISTING OF THE INSTALLATION AND OPERATION OF ANTENNAS AND ASSOCIATED EQUIPMENT.

- PROPOSED T-MOBILE (6) ANTENNAS MOUNTED ON PROPOSED 100' MONOPOLE.
 - (6) PANEL ANTENNAS TOTAL
 - (1) GPS ANTENNA
 - (1) MICROWAVE ANTENNA
- FOUR (4) T-MOBILE EQUIPMENT CABINETS (3) PROPOSED AND (1) FUTURE CABINETS WILL BE MOUNTED ON CONCRETE SLAB AT GROUND LEVEL INSIDE A PROPOSED 8'-0" HIGH BLOCKWALL ENCLOSURE.
- THE PROPOSED ANTENNA WILL BE PAINTED TO MATCH PROPOSED MONOPOLE.

DRIVING DIRECTIONS

FROM T-MOBILE OFFICE, CONCORD, CA

- START AT 1855 GATEWAY BLVD. CONCORD GOING TOWARD CLAYTON RD
- TURN RIGHT ON CLAYTON RD
- TAKE RAMP ONTO CA-242
- TAKE THE RAMP ONTO CA-242 S.
- MERGE ONTO 850 S.
- TAKE EXIT 12 TO MERGE ONTO CA-282 S/MISSION BLVD TOWARD I-880.
- TAKE THE RAMP ONTO I-880 S.
- TAKE THE EXIT ONTO CA-237 W TOWARD MOUNTAIN VIEW.
- EXIT ONTO E CARIBBEAN DR/COUNTY RTE-02/N LAWRENCE EXPY.
- TURN RIGHT AT E. ARQUES AVE.
- TURN LEFT AT COMMERCIAL ST.
- ARRIVE AT 221 COMMERCIAL ST., SUNNYVALE, ON THE RIGHT

GENERAL CONTRACTOR NOTES

DO NOT SCALE DRAWING.

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

SHEET INDEX

SHEET	DESCRIPTION
T-1	TITLE SHEET, SITE INFORMATION AND VICINITY MAP
LS-1	TOPOGRAPHIC SURVEY
LS-2	TOWER EXHIBIT
A-1	SITE PLAN
A-2	ENLARGED SITE PLAN
A-3	EQUIPMENT LAYOUT, ANTENNA PLAN & DETAILS
A-4	ELEVATIONS
A-5	ELEVATIONS

T-MOBILE APPROVALS

LANDLORD: _____
 RFENGINEER: _____
 CONSTRUCTION MANAGER: _____
 ZONING MANAGER: _____
 SITE ACQUISITION MANAGER: _____
 T-MOBILE CONSTRUCTION MANAGER: _____
 T-MOBILE ZONING MANAGER: _____
 T-MOBILE PROJECT MANAGER: _____
 T-MOBILE SA MANAGER: _____
 T-MOBILE POWER COORDINATOR: _____
 T-MOBILE TELCO COORDINATOR: _____

PROJECT TEAM

ARCHITECT/ENGINEER:
PDC CORPORATION
1082 CONAWAY BLVD.
LIVERMORE, CA 94550
CONTACT: PAULI PUEJAU
TEL: (910) 385-3541
EMAIL: pauli@pdc.com

APPLICANT/LESSEE:
T-MOBILE
1855 GATEWAY BOULEVARD SUITE 900
CONCORD, CALIFORNIA 94520
CONTACT: JED FRETAS
TEL: (925) 300-5451
EMAIL: jed@t-mobile.com

SITE ACQUISITION:
SUTRO CONSULTING
3145 GEARY BLVD., #509
SAN FRANCISCO, CA 94118
CONTACT: RYAN CROWLEY
MOBILE: (415) 341-8301
EMAIL: rcrowley@sutroconsulting.com

ZONING MANAGER:
SUTRO CONSULTING
4188 CLARKE/CIRCLE
DUBLIN, CA 94568
CONTACT: DATNA AGUIRRE
MOBILE: (925) 754-7888
EMAIL: dagnire@sutroconsulting.com

RF ENGINEER:
T-MOBILE
1855 GATEWAY BOULEVARD SUITE 900
CONCORD, CA 94520
CONTACT: CHRIS ALFRELO
TEL: (949) 394-8355
EMAIL: CHRISTOPHER.ALFRELO@T-MOBILE.COM

CONSTRUCTION MANAGER:
SUTRO CONSULTING
363 MESA VIEW DR.
ARROYO GRANDE, CA 93420
CONTACT: TROY HAKLUND
MOBILE: (805) 264-2880
EMAIL: Tred.haklund@charter.net

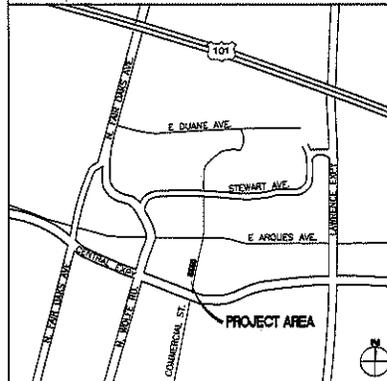
PROJECT INFORMATION

SITE ADDRESS: 221 COMMERCIAL ST., SUNNYVALE, CA 94089
 APN: 205-34-012
 PROPERTY OWNER: CITY OF SUNNYVALE
 458 W. OLIVE AVE.
 SUNNYVALE, CA 94088
 MACE CHAN
 (408) 730-7415
 LATITUDE: 37° 22' 44.8" N
 LONGITUDE: 122° 00' 32.3" W
 GROUND ELEVATION: 55.9' AWSL
 ZONING: MS
 JURISDICTION: CITY OF SUNNYVALE
 TELEPHONE: AT&T
 POWER: PG&E

POWER ORDER

POWER APPLICATION DATE: 7/9/09
 POWER APPLICATION NUMBER: AFS 103887724

VICINITY MAP



ATTACHMENT
Page 1 of 8

FLOOD ZONE:

By aecid map location and graphic plotting only, the subject property appears to be entirely in Zone X (Areas of 25 annual chance flood areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile, and areas protected by levees from 1% annual chance flood) according to the Flood Insurance Rate Map for the County of Santa Clara, Map Number 0502520045H, Effective Date May 15, 2009.

CERTIFICATION:

I, James M. Moloney, a California State Registered Professional Land Surveyor, License No. 5150, hereby certify that the following Latitude and Longitude values for the center of the above-referenced tower are accurate to within +/- 15 feet horizontally and that the following tower site elevation is accurate to within +/- 3 feet vertically:

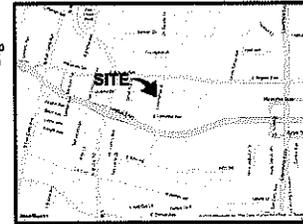
HORIZONTAL DATUM: NAD83
 LATITUDE: North 37°22'43.62"
 LONGITUDE: West 122°00'33.01"
 VERTICAL DATUM: NAVD 88
 GROUND ELEVATION: 56'

By: James M. Moloney
 California Professional Land Surveyor No. 5150
 For and on behalf of Millman Surveying, Inc.
 Date of Survey

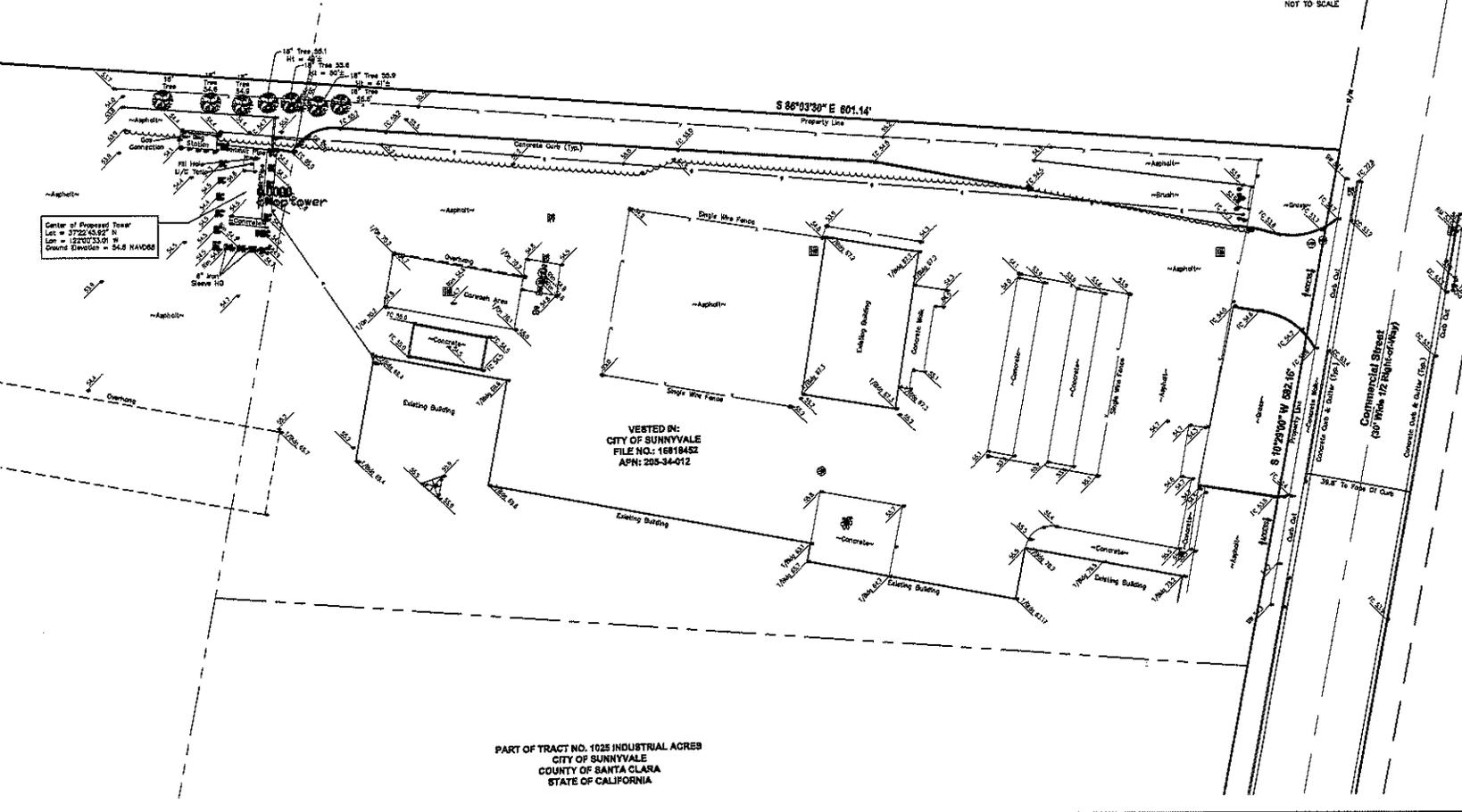


NORTH
 GRAPHIC SCALE
 1 INCH = 20 FT.

TOWER SURVEY
 Sunnyvale, CA



VICINITY MAP
 NOT TO SCALE



T-Mobile
 1885 GATEWAY BLVD., 9TH FLOOR
 CONCORD, CA 94520

PROJECT INFORMATION:
SITE No.: SF54275C
SITE NAME: Sunnyvale Corporate Yard
 221 Commercial Street
 Sunnyvale, Ca 95035
 County of Santa Clara

CURRENT ISSUE DATE:
07/02/2009

ISSUED FOR:
PRELIMINARY

REV.	DATE	DESCRIPTION	BY

PLANS PREPARED BY:

MILLMAN SURVEYING
 CORPORATE HEADQUARTERS
 1742 Georgetown Road, Suite 11
 Hudson, Ohio 44226
 www.MILLMANSURVEYING.com
 Phone: (800) 220-1510
 NS Site No. 17396

DRAWN BY: LMC CHK.: XXX APV.: SAS

LICENSER:

SHEET TITLE:

TOPOGRAPHIC SURVEY

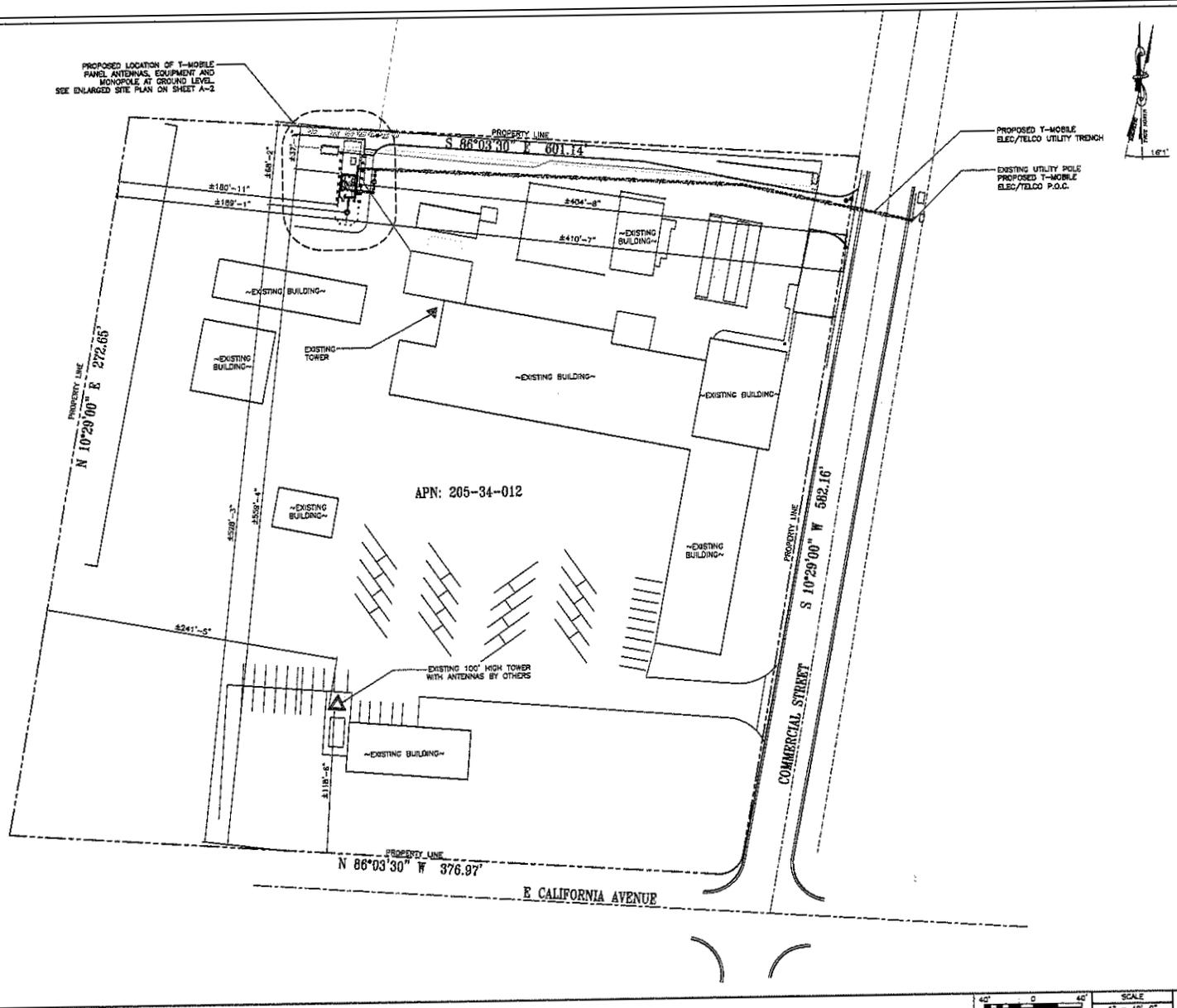
SHEET NUMBER:

LS-1

ATTACHMENT
 Page 2 of 8

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

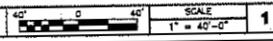
PROPOSED LOCATION OF T-MOBILE PANEL ANTENNAS, EQUIPMENT AND MONOPOLE AT GROUND LEVEL. SEE ENLARGED SITE PLAN ON SHEET A-2.



PROPOSED T-MOBILE ELEC/TELECO UTILITY TRENCH
 EXISTING UTILITY POLE PROPOSED T-MOBILE ELEC/TELECO P.O.C.

APN: 205-34-012

EXISTING 100' HIGH TOWER WITH ANTENNAS BY OTHERS



SITE PLAN

T-Mobile
 West Corporation
180 CALIFORNIA STREET, 18TH FLOOR
 SAN FRANCISCO, CALIFORNIA 94111

PROJECT INFORMATION:
SF54275C
SUNNYVALE
CORPORATE YARD
 221 COMMERCIAL ST.
 SUNNYVALE, CA 94089

CURRENT ISSUE DATE:
01/13/10

ISSUED FOR:
100% ZONING DRAWING

REV.	DATE	DESCRIPTION	BY
A	07/08/09	90% ZONING DRAWING	NHP
0	08/13/09	100% ZONING DRAWING	NHP
1	01/13/10	100% ZONING DRAWING	FG

PROJECT ARCHITECT/ENGINEER:
 PDD CORPORATION

 1082 CONCANNON BLVD.
 LYONMONT, CA 94535
 TEL: (925) 605-9888

CONSULTANT:

DRAWN BY: _____ CHK.: _____ APV.: _____
 NHP PP SAS

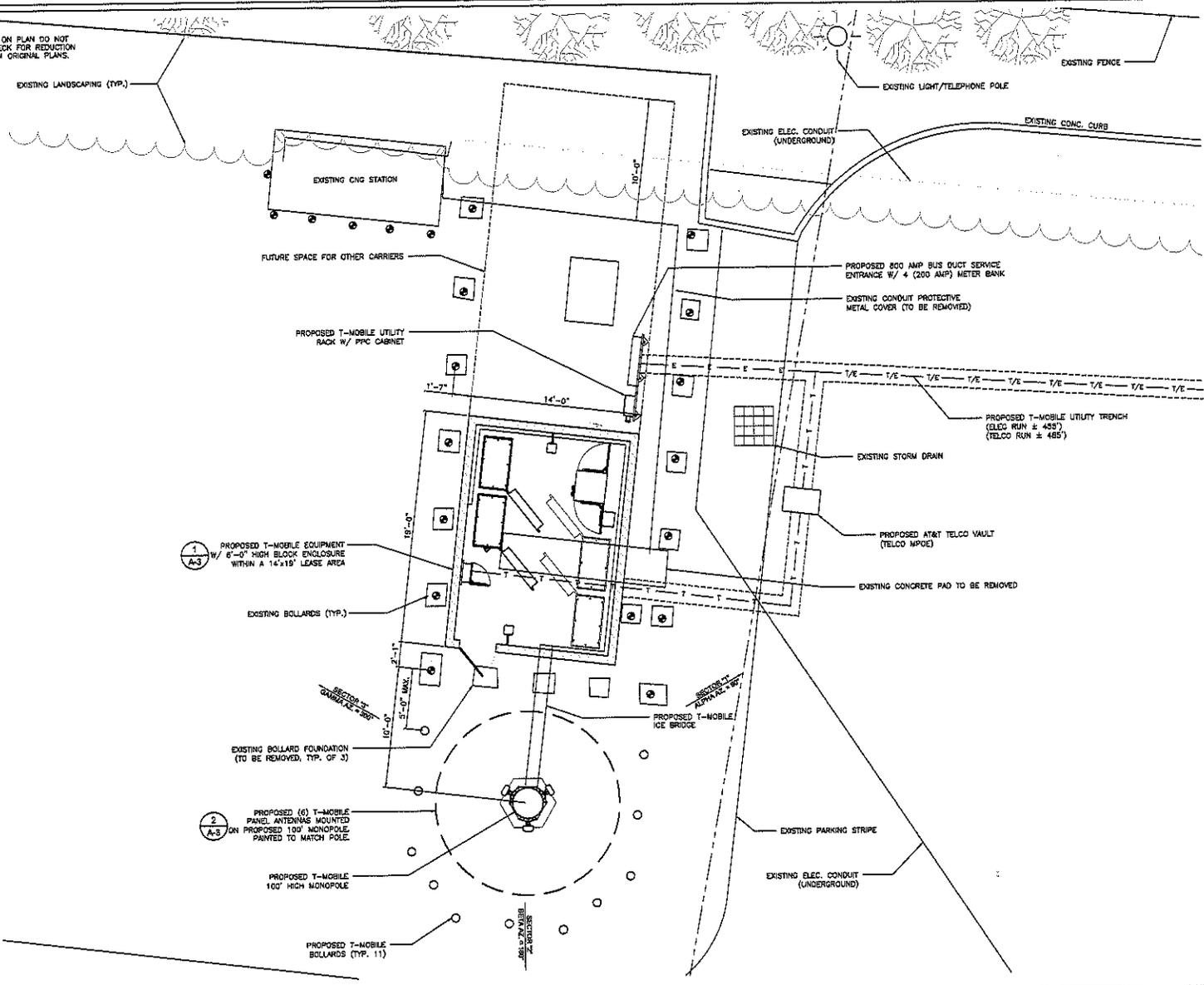
LICENSER:

SHEET TITLE:
SITE PLAN

SHEET NUMBER:
A-1

ATTACHMENT
 Page 4 of 8
 C

SCALE NOTE:
IF DIMENSIONS SHOWN ON PLAN DO NOT
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OR ENLARGEMENT FROM ORIGINAL PLANS.



ENLARGED SITE PLAN



T-Mobile
West Corporation
180 GARDWAY BLVD., 18TH FLOOR
SUNNYVALE, CA 94089

PROJECT INFORMATION:
SF54275C
SUNNYVALE
CORPORATE YARD
221 COMMERCIAL ST.
SUNNYVALE, CA 94089

CURRENT ISSUE DATE:
01/13/10

ISSUED FOR:
100% ZONING DRAWING

REV.	DATE	DESCRIPTION	BY:
A	07/06/09	80% ZONING DRAWING	NHP
0	08/13/09	100% ZONING DRAWING	NHP
1	01/13/10	100% ZONING DRAWING	FD

PROJECT ARCHITECT/ENGINEER:
PDS CORPORATION
CD
1043 CORKMAN BLVD.
LIVERMORE, CA 94550
TEL (925) 904-5889

CONSULTANT:

DRAWN BY: NHP CHK.: PP APV.: SAS

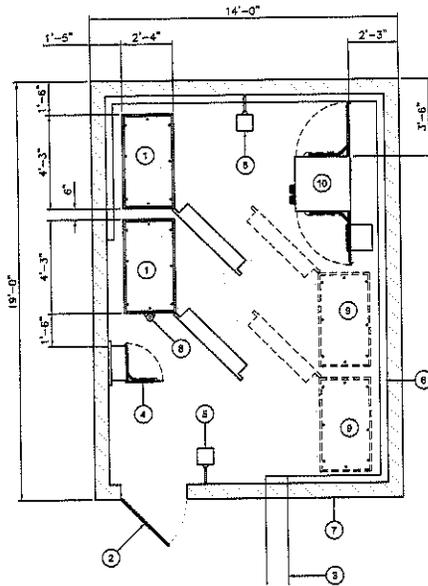
LICENSER:

SHEET TITLE:
ENLARGED SITE PLAN

SHEET NUMBER:
A-2

ATTACHMENT
 Page 5 of 8

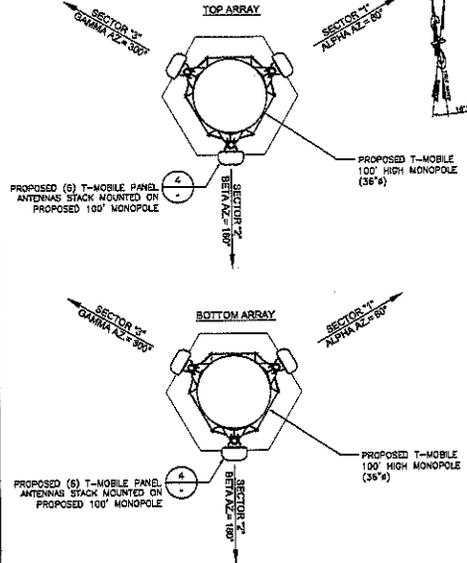
SCALE NOTE:
IF DIMENSIONS SHOWN ON PLAN DO NOT SCALE CORRECTLY, CHECK FOR REDUCTION OR ENLARGEMENT FROM ORIGINAL PLANS.



KEYED NOTES:

- ① PROPOSED RBS EQUIPMENT CABINET ON CONCRETE PAD (TYP-2)
- ② PROPOSED 3' WIDE GATE
- ③ PROPOSED T-MOBILE ICE BRIDGE
- ④ PROPOSED T-MOBILE TELCO CABINET MOUNTED ON UTILITY RACK
- ⑤ PROPOSED T-MOBILE SERVICE LIGHT
- ⑥ PROPOSED T-MOBILE WALL MOUNTED CABLE TRAY
- ⑦ PROPOSED T-MOBILE 6' HIGH BLOCK WALL EQUIPMENT ENCLOSURE
- ⑧ PROPOSED T-MOBILE GPS ANTENNA MOUNTED ON PROPOSED EQUIPMENT CABINET
- ⑨ FUTURE RBS 2102 EQUIPMENT CABINET ON CONCRETE PAD (TYP-2)
- ⑩ PROPOSED T-MOBILE 89U CABINET

RF SCHEDULE									
SECTOR	MODEL	QTY	TMA	EDT	MOT	ADZMUTH	CABLE SIZE	CABLE QTY	CABLE LENGTH
1	ALPHA RFS APX16DWY-160WVS	2	2	2'	0"	60°	7/8"	6	±120°
2	BETA RFS APX16DWY-160WVS	2	2	2'	0"	180°	7/8"	6	±120°
3	GAMMA RFS APX16DWY-160WVS	2	2	2'	0"	300°	7/8"	6	±120°



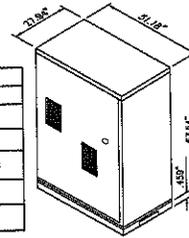
ANTENNA PLAN

SCALE
1/2" = 1'-0"

2 EQUIPMENT DETAIL

ERICSSON RBS 2102 MINIMUM CLEARANCES

DIRECTION	MINIMUM CLEARANCE
CABINET FRONT	52"
CABINET REAR	0"
CABINET LEFT	36" FOR 135° DOOR SWING
CABINET RIGHT	0"
ABOVE THE CABINET	42"



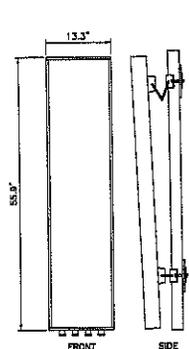
ISOMETRIC VIEW

ERICSSON RBS 2102 WEIGHT

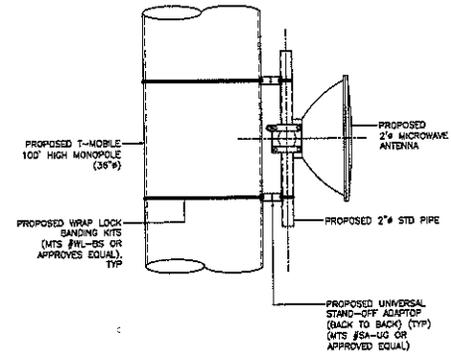
CABINET	CABINET FULLY EQUIPPED	BATTERIES	TOTAL WEIGHT
RBS 2102	1198 LBS	154 LBS	1212 LBS

ERICSSON RBS 2102 DIMENSIONS

CABINET	HEIGHT x WIDTH x DEPTH
RBS 2102	± 82.54"H x 51.18"W x 27.64"D



TOP
MODEL AND MODEL NO.:
RFS APX16DWY-160WVS
FREQUENCY RANGE:
1710-2200 MHz
ANTENNA TYPE:
PANEL DUAL POLARIZED
HORIZONTAL BEAMWIDTH, DEG:
65
VERTICAL BEAMWIDTH, DEG:
5.9 TO 7.7
CONNECTOR TYPE:
(4) 7-16 DIN FEMALE
CONNECTOR LOCATION:
BOTTOM
MOUNT TYPE:
DOWNTILT
WEIGHT w/o MTG HARDWARE:
40.7 lbs
DIMENSIONS:
55.9 x 13.3 x 3.15



4 MICROWAVE ANTENNA DETAIL

EQUIPMENT LAYOUT

SCALE
3/8" = 1'-0"

1 ANTENNA DETAIL

T-Mobile
West Corporation
180 GARDWAY ROAD, FRIEDLAND
CONCORD, CALIF. 94501

PROJECT INFORMATION:
SF54275C
SUNNYVALE
CORPORATE YARD
221 COMMERCIAL ST.
SUNNYVALE, CA 94089

CURRENT ISSUE DATE:
01/13/10

ISSUED FOR:
100% ZONING DRAWING

REV. DATE DESCRIPTION BY

A	07/08/09	90% ZONING DRAWING	NHP
0	06/13/09	100% ZONING DRAWING	NHP
1	01/13/10	100% ZONING DRAWING	FG

PROJECT ARCHITECT/ENGINEER:
RBS CORPORATION
cid
1082 CONCOMAN BLVD.
LIVERMORE, CA 94550
TEL: (925) 808-5888

CONSULTANT:
DRAWN BY: CHK. BY: APV. BY:
NHP PP SAS

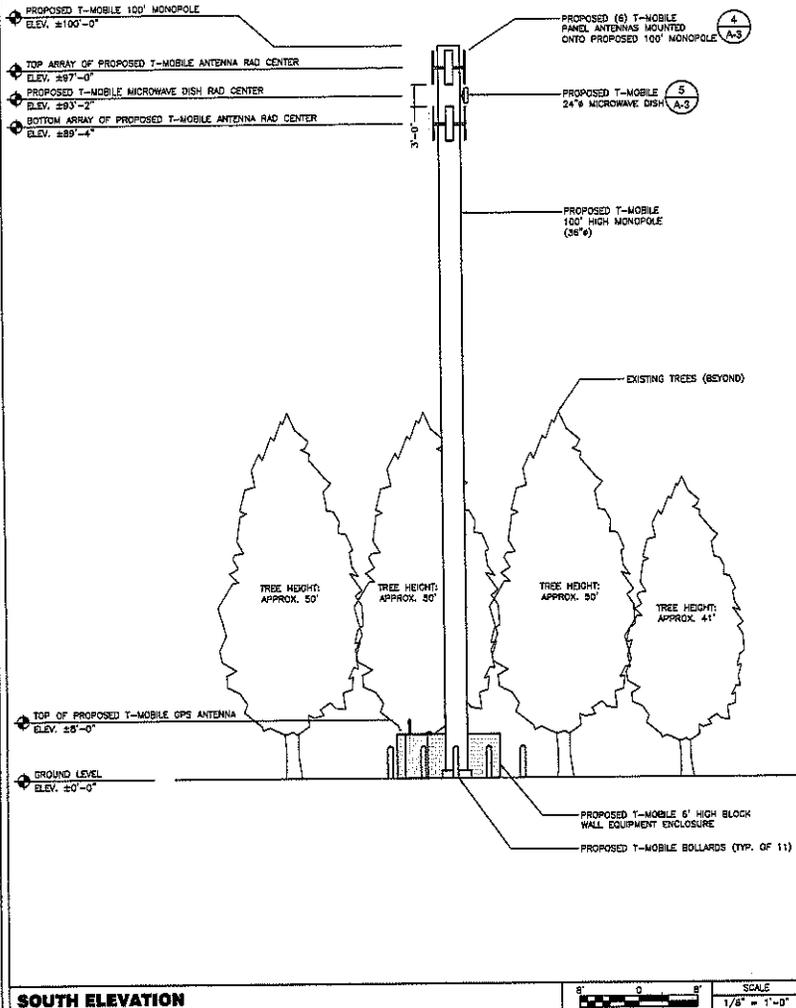
LICENSER:
SHEET TITLE:

EQUIPMENT LAYOUT
ANTENNA PLAN & DETAILS

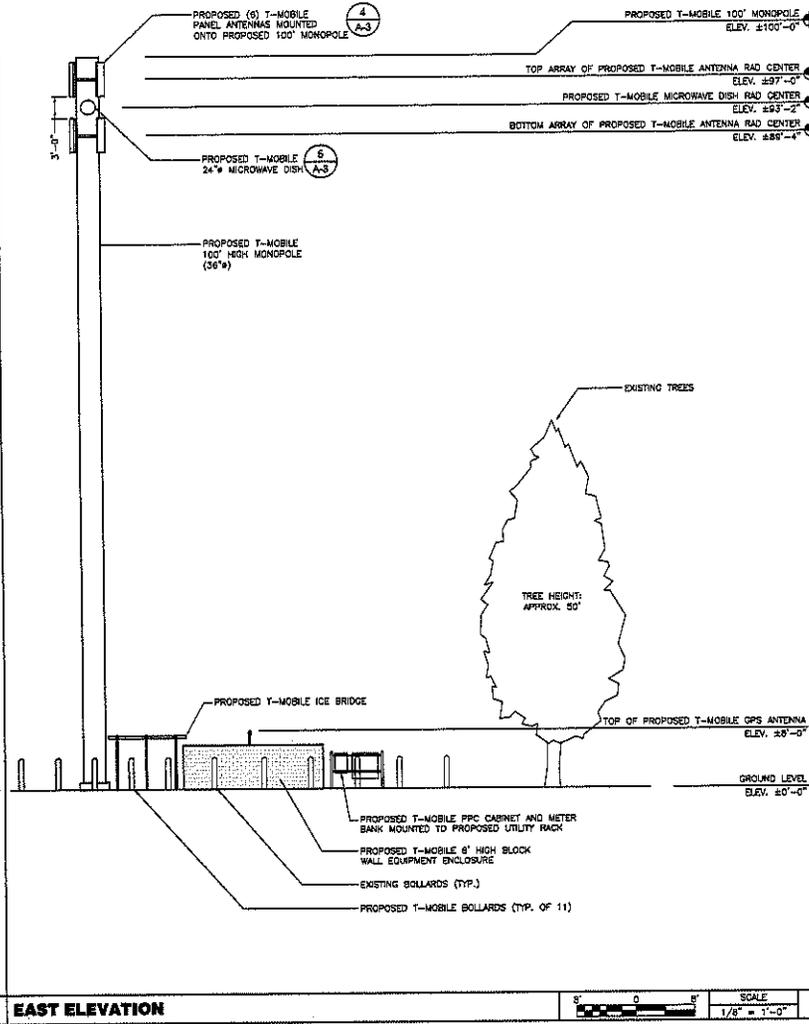
SHEET NUMBER:
A-3

ATTACHMENT
Page 6 of 8

SCALE NOTE:
IF DIMENSIONS SHOWN ON PLAN DO NOT
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SOUTH ELEVATION



EAST ELEVATION

T-Mobile
West Corporation
181 GATEWAY BLVD., 29th FLOOR
CONCORD, CA 94520

PROJECT INFORMATION:
SF54275C
SUNNYVALE
CORPORATE YARD
221 COMMERCIAL ST.
SUNNYVALE, CA 94089

CURRENT ISSUE DATE:
01/13/10

ISSUED FOR:
100% ZONING DRAWING

REV.	DATE	DESCRIPTION	BY
A	07/08/08	90% ZONING DRAWING	NHP
0	08/13/08	100% ZONING DRAWING	NHP
1	01/13/10	100% ZONING DRAWING	FG

PROJECT ARCHITECT/ENGINEER:
CDP CORPORATION
CDP
1882 COMMONWEALTH BLVD.
LIVERMORE, CA 94550
TEL: (925) 854-5966

CONSULTANT:

DRAWN BY: _____ CHK. _____ APV. _____
NHP PP SAS

LICENSER:

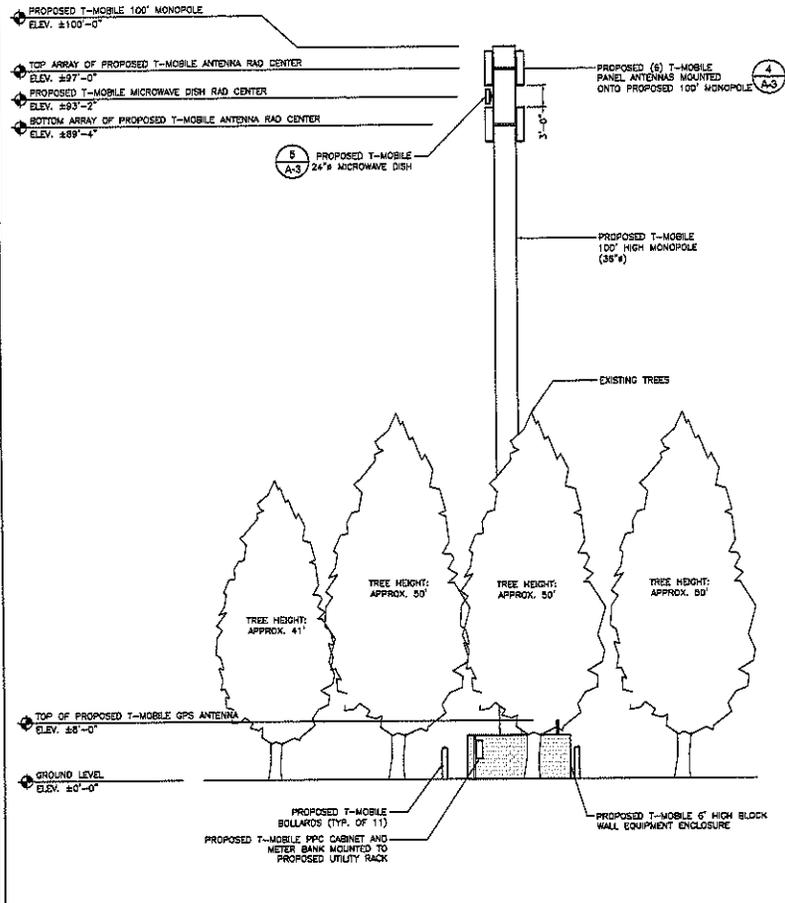
SHEET TITLE:
ELEVATIONS

SHEET NUMBER:
A-4

ATTACHMENT
 Page 7 of 8

SCALE NOTE:

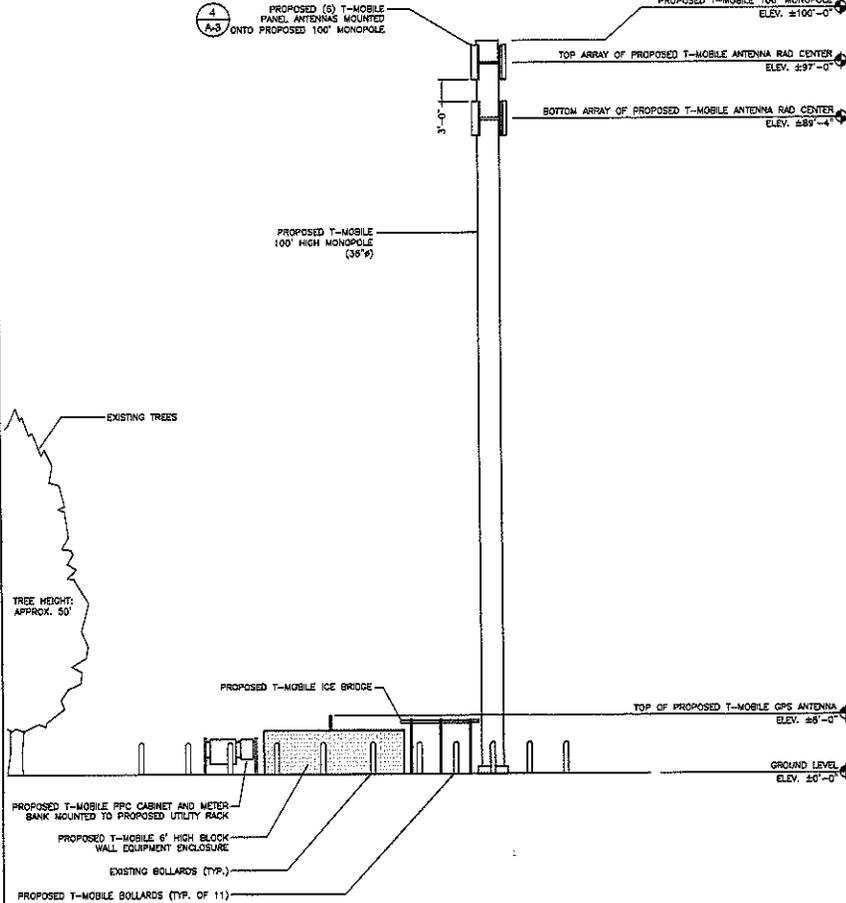
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NORTH ELEVATION



1 WEST ELEVATION



T-Mobile
West Corporation
180 GATEWAY BLVD., 20TH FLOOR
SUNNYVALE, CA 94089

PROJECT INFORMATION:
SF54275C
SUNNYVALE
CORPORATE YARD
221 COMMERCIAL ST.
SUNNYVALE, CA 94089

CURRENT ISSUE DATE:
01/13/10

ISSUED FOR:
100% ZONING DRAWING

REV.	DATE	DESCRIPTION	BY
A	07/02/09	SOX ZONING DRAWING	NHP
0	08/13/09	100% ZONING DRAWING	NHP
1	01/13/10	100% ZONING DRAWING	PG

PROJECT ARCHITECT/ENGINEER:
PGS CORPORATION

1025 CONANTON BLVD.
LIVERMORE, CA 94550
TEL: (925) 858-5666

CONSULTANT:

DRAWN BY: _____ CHK. _____ APV. _____
NHP PP SAS

LICENSER:

SHEET TITLE:
ELEVATIONS

SHEET NUMBER:
A-5

ATTACHMENT
Page 8 of 8

INITIAL STUDY
 City of Sunnyvale
 Department of Community Development
 Planning Division
 P.O. Box 3707
 Sunnyvale, CA 94088-3707

Project #:	2009-0782
Project Address:	221 Commercial Street
Applicant:	T-Mobile

1. Project Title: Application for a Use Permit to allow a second wireless telecommunications carrier including six panel antennas and one microwave dish on a new 100-foot tall monopole with associated ground equipment at the City Corporation Yard.

2. Lead Agency Name and Address: City of Sunnyvale, Planning Division
 456 W. Olive Avenue
 P.O. Box 3707
 Sunnyvale, CA 94088

3. Contact Person and Phone Number: Noren Caliva, Assistant Planner (408) 730-7637

4. Project Location: 221 Commercial Street, Sunnyvale, CA 94085

5. Project Sponsor's Name and Address: T-Mobile c/o Dayna Aguirre
 4166 Clarinbridge Circle
 Dublin, CA 94568

6. General Plan Designation: Industrial

7. Zoning: M-S (Industrial and Service)

8. Description of the Project:

The project is a Special Development Permit to allow a second wireless telecommunications carrier on a new 100-foot tall monopole at the City Corporation Yard. Six panel antennas and one microwave dish would be mounted on the pole, with the possibility of future collocation of other carriers (subject to obtaining necessary permits). Associated ground equipment consisting of equipment cabinets and one GPS (Global Positioning System) antenna would be placed within a new 6-foot tall masonry enclosure at the base of the monopole. No additional modifications are proposed to the site.

The applicant has submitted a Radio Frequency exposure study indicating compliance with FCC standards for individual and cumulative impacts. The applicant will be required to obtain a building permit subsequent to Planning approval of the project.

9. Surrounding Land Uses and Setting: (Briefly describe the project's surroundings) The site is located within an industrial area and is currently being used by the City of Sunnyvale as a corporation yard (industrial and office uses). The site is surrounded on all sides by industrial uses. There are no residential properties within at least 1,000 feet of the project site.

10. Other public agencies whose approval is required (e.g. permits, financing approval, or participation agreement). None

Project #: 2009-0782
 Project Address: 221 Commercial Street
 Applicant: T-Mobile

INITIAL STUDY ENVIRONMENTAL CHECKLIST

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

- | | | |
|---|--|---|
| <input type="checkbox"/> Aesthetics | <input type="checkbox"/> Hazards & Hazardous Materials | <input type="checkbox"/> Public Services |
| <input type="checkbox"/> Agricultural Resources | <input type="checkbox"/> Hydrology/Water Quality | <input type="checkbox"/> Recreation |
| <input type="checkbox"/> Air Quality | <input type="checkbox"/> Land Use/Planning | <input type="checkbox"/> Transportation/Traffic |
| <input type="checkbox"/> Biological Resources | <input type="checkbox"/> Mineral Resources | <input type="checkbox"/> Utilities/Service Systems |
| <input type="checkbox"/> Cultural Resources | <input type="checkbox"/> Noise | <input type="checkbox"/> Mandatory Findings of Significance |
| <input type="checkbox"/> Geology/Soils | <input type="checkbox"/> Population/Housing | |

DETERMINATION: (To be completed by the Lead Agency)

On the basis of this initial evaluation:

I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared. X

I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared. 0

I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required. 0

I find that the proposed project MAY have a "potential significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed. 0

I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required. 0

Noren Caliva
 Signature

2/11/10
 Date

Noren Caliva, Assistant Planner

Printed Name:

For: *City of Sunnyvale*

Project #: 2009-0782
Project Address: 221 Commercial Street
Applicant: T-Mobile

INITIAL STUDY ENVIRONMENTAL CHECKLIST

EVALUATION OF ENVIRONMENTAL IMPACTS

- 1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g. the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g. the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
- 2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
- 3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.
- 4) "Negative Declaration: Potentially Significant Unless Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from Section 17, "Earlier Analysis," may be cross-referenced).
- 5) Earlier analysis may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063 (c) (3) (d). In this case, a brief discussion should identify the following:
 - a. Earlier Analysis Used. Identify and state where they are available for review.
 - b. Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
 - c. Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project
- 6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g. general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.
- 7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.
- 8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.
- 9) The analysis of each issue should identify: (a) the significance criteria or threshold used to evaluate each question; and (b) the mitigation measure identified, if any, to reduce the impact to less than significance.

Project #: 2009-0782
Project Address: 221 Commercial Street
Applicant: T-Mobile

INITIAL STUDY ENVIRONMENTAL CHECKLIST

Issues and Supporting Information	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Source
I. AESTHETICS. Would the project:					
a. Have a substantial adverse effect on a scenic vista?	0	0	0	X	1, 9, 58, 93
b. Substantially damage scenic resources, including, but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway?	0	0	0	X	1, 9, 58, 93
c. Substantially degrade the existing visual character or quality of the site and its surroundings?	0	0	X	0	See Discussion
d. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	0	0	0	X	33, 110, 111
II. AIR QUALITY: Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:					
a. Conflict with or obstruct implementation of the applicable air quality plan?	0	0	0	X	2, 109, 110, 121, 122
b. Violate any air quality standard or contribute substantially to an existing or projected air quality violation.	0	0	0	X	2, 109, 110, 121, 122
c. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	0	0	0	X	2, 109, 110, 121, 122
d. Expose sensitive receptors to substantial pollutant concentrations?	0	0	0	X	2, 109, 110, 121, 122
e. Create objectionable odors affecting a substantial number of people?	0	0	0	X	2, 109, 110, 121, 122

Project #: 2009-0782
Project Address: 221 Commercial Street
Applicant: T-Mobile

INITIAL STUDY ENVIRONMENTAL CHECKLIST

Issues and Supporting Information	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Source
-----------------------------------	--------------------------------	--	------------------------------	-----------	--------

III. BIOLOGICAL RESOURCES:

- | | | | | | |
|---|---|---|---|---|-----------------------------------|
| a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U. S. Fish and Wildlife Service? | 0 | 0 | 0 | X | 1, 53, 93 |
| b. Have a substantially adverse impact on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S Wildlife Service? | 0 | 0 | 0 | X | 1, 23, 53, 93 |
| <p><i>Storm Water Runoff Guidance:</i>
Include aquatic and wetland habitats as part of the sensitive habitat review. Also evaluate adverse changes to sensitive habitats that favor the development of mosquitoes and other biting flies that may pose a threat to public health. Aquatic and wetland habitats such as those found near Stevens Creek, Calabazas Creek, Sunnyvale East Channel, Sunnyvale West Channel, El Camino Channel, Moffett Channel, Guadalupe Slough and the Baylands are considered sensitive habitat areas.</p> | | | | | |
| c. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means? | 0 | 0 | 0 | X | 1, 23, 53, 93, 119, 124, 125, 126 |
| d. Interfere substantially with the movement of any resident or migratory fish or wildlife species or with established native resident migratory wildlife corridors, or impede the use of native wildlife nursery sites? | 0 | 0 | 0 | X | 1, 53, 93 |
| e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? | 0 | 0 | 0 | X | 38 |
| f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, other approved local, regional, or state habitat conservation plan? | 0 | 0 | 0 | X | 108 |

Project #: 2009-0782
 Project Address: 221 Commercial Street
 Applicant: T-Mobile

INITIAL STUDY ENVIRONMENTAL CHECKLIST

Issues and Supporting Information	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Source
-----------------------------------	--------------------------------	--	------------------------------	-----------	--------

IV. CULTURAL RESOURCES. Would the project:

- | | | | | | |
|---|---|---|---|---|-----------|
| a. Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5? | θ | θ | θ | X | 9, 58, 93 |
| b. Cause a substantial adverse change in the significance of an archaeological resources pursuant to Section 15064.5? | θ | θ | θ | X | 9, 58, 93 |
| c. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? | θ | θ | θ | X | 9, 58, 93 |
| d. Disturb any human remains, including those interred outside of formal cemeteries? | θ | θ | θ | X | 9, 58, 93 |

V. LAND USE AND PLANNING. Would the project:

- | | | | | | |
|---|---|---|---|---|-----------|
| a. Physically divide an established community? | θ | θ | θ | X | 1, 53, 93 |
| b. Conflict with an applicable land use plan, policy or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect? | θ | θ | θ | X | 27, 31 |
| c. Conflict with any applicable habitat conservation plan or natural communities conservation plan? | θ | θ | θ | X | 16, 93 |

VI. MINERAL RESOURCES. Would the project:

- | | | | | | |
|---|---|---|---|---|-------|
| a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state? | θ | θ | θ | X | 1, 53 |
| b. Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan? | θ | θ | θ | X | 1, 53 |

VII. NOISE. Would the project result in:

- | | | | | | |
|---|---|---|---|---|----------|
| a. Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies? | θ | θ | θ | X | 117, 120 |
| b. Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels? | θ | θ | θ | X | 116 |

Project #: 2009-0782
Project Address: 221 Commercial Street
Applicant: T-Mobile

INITIAL STUDY ENVIRONMENTAL CHECKLIST

Issues and Supporting Information	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Source
c. A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	θ	θ	θ	X	33, 110
d. A substantially temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	θ	θ	X	θ	See Discussion
VIII. POPULATION AND HOUSING. Would the project:					
a. Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	θ	θ	θ	X	1, 53, 110
b. Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	θ	θ	θ	X	93
c. Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	θ	θ	θ	X	93
IX. PUBLIC SERVICES. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities, need for new or physically altered government facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:					
a. Parks?	θ	θ	θ	X	17
b. Fire protection?	θ	θ	θ	X	7, 18
c. Schools?	θ	θ	θ	X	110
d. Other public facilities?	θ	θ	θ	X	14, 21, 24
e. Police protection?	θ	θ	θ	X	12

Project #: 2009-0782
 Project Address: 221 Commercial Street
 Applicant: T-Mobile

INITIAL STUDY ENVIRONMENTAL CHECKLIST

Issues and Supporting Information	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Source
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X. MANDATORY FINDINGS OF SIGNIFICANCE

- | | | | | | |
|---|---|---|---|---|--------------------|
| a. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory? | 0 | 0 | 0 | X | 1, 9, 53, 108 |
| b. Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of the past projects, the effects of other current projects, and the effects of probable future projects)? | 0 | 0 | 0 | X | 2, 11, 15, 122 |
| c. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly? | 0 | 0 | 0 | X | 110, 111, 117, 120 |

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 Project Address: 221 Commercial Street
 Applicant: T-Mobile

INITIAL STUDY ENVIRONMENTAL CHECKLIST

Issues and Supporting Information	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Source
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XI. GEOLOGY AND SOILS. Would the project:

a. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death involving:

(i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	θ	θ	θ	X	18, 102, 104, 105, 106, 107
---	---	---	---	---	--

(ii) Strong seismic ground shaking?	θ	θ	θ	X	18, 102, 104, 105, 106, 107
-------------------------------------	---	---	---	---	--

(iii) Seismic-related ground failure, including liquefaction?	θ	θ	θ	X	18, 102, 104, 105, 106, 107
---	---	---	---	---	--

(iv) Landslides?	θ	θ	θ	X	18, 93 102, 104, 105, 106, 107
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b. Result in substantial soil erosion or the loss of topsoil?	θ	θ	θ	X	93, 124, 126
---	---	---	---	---	--------------------

c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	θ	θ	θ	X	18, 102, 104, 105, 106, 107
--	---	---	---	---	--

d. Be located on expansive soil, as defined in the California Building Code, creating substantial risks to life or property?	θ	θ	θ	X	102, 104, 105, 106, 107
--	---	---	---	---	-------------------------------------

Project #: 2009-0782
Project Address: 221 Commercial Street
Applicant: T-Mobile

INITIAL STUDY ENVIRONMENTAL CHECKLIST

Issues and Supporting Information	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Source
e. Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	0	0	0	X	19, 87, 110

Issues and Supporting Information	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Source
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XII. UTILITIES AND SERVICE SYSTEMS. Would the project:

a. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	0	0	0	X	19
b. Require or result in construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	0	0	0	X	19
c. Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	0	0	0	X	119, 124, 125, 126
d. Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	0	0	0	X	24
e. Result in a determination by the wastewater treatment provider that services or may serve the project determined that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	0	0	0	X	19
f. Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	0	0	0	X	21
g. Comply with federal, state, and local statues and regulations related to solid waste?	0	0	0	X	21

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INITIAL STUDY ENVIRONMENTAL CHECKLIST

Issues and Supporting Information	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Source
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XIII. TRANSPORTATION/TRAFFIC. Would the project:

a. Cause an increase in the traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?	θ	θ	θ	X	118
b. Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	θ	θ	θ	X	118
c. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	θ	θ	θ	X	110
d. Substantially increase hazards to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment)?	θ	θ	θ	X	1, 27, 53, 110
e. Result in inadequate emergency access?	θ	θ	θ	X	111
f. Result in inadequate parking capacity?	θ	θ	θ	X	111, 118
g. Conflict with adopted policies or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	θ	θ	θ	X	111, 128

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INITIAL STUDY ENVIRONMENTAL CHECKLIST

Issues and Supporting Information	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Source
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XIV. HAZARDS AND HAZARDOUS MATERIALS. Would the project?

a. Create a significant hazard to the public or the environment through the routine transport, use or disposal of hazardous materials?	θ	θ	θ	X	18, 110
b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment?	θ	θ	θ	X	18, 110
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	θ	θ	θ	X	110
d. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result would it create a significant hazard to the public or the environment?	θ	θ	θ	X	110
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	θ	θ	θ	X	18, 112
f. Impair implementation of, or physically interfere with an adopted emergency response plan or emergency evacuation plan?	θ	θ	θ	X	7, 18, 112
g. Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	θ	θ	θ	X	1, 18, 53

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Issues and Supporting Information	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Source
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XV. RECREATION

- | | | | | | |
|---|---|---|---|---|---------|
| a. Would the project increase the use of existing neighborhood or regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated? | 0 | 0 | 0 | X | 16, 110 |
| b. Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment? | 0 | 0 | 0 | X | 16, 110 |

XIX. AGRICULTURE RESOURCES: In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project?

- | | | | | | |
|--|---|---|---|---|-------|
| a. Convert Prime Farmland, Unique Farmland or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency to non-agricultural use? | 0 | 0 | 0 | X | 1, 53 |
| b. Conflict with existing zoning for agricultural use, or a Williamson Act contract? | 0 | 0 | 0 | X | 1, 53 |
| c. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use? | 0 | 0 | 0 | X | 1, 53 |

Project #: 2009-0782
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INITIAL STUDY ENVIRONMENTAL CHECKLIST

Issues and Supporting Information	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Source
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XX. HYDROLOGY AND WATER QUALITY. Would the project?

a. Violate any water quality standards or waste discharge requirements?	0	0	0	X	19, 24
(i.) Is the project tributary to an already impaired water body, as listed on the Clean Water Act Section 303(d) list? If so, will it result in an increase in any pollutant for which the water body is already impaired?	0	0	0	X	1, 5
(ii.) Will the proposed project cause or contribute to an exceedance of applicable surface or groundwater receiving water quality objectives or degradation of beneficial uses?	0	0	0	X	119, 124, 125, 126

Storm Water Runoff Guidance:

For example, projects that could increase pollutant discharges such as mercury, copper, nickel, sediment, organophosphate pesticides, PCBs, or other listed contaminants will need to address those impacts. Beneficial uses for Sunnyvale water bodies may include Cold Freshwater Habitat (e.g., Stevens Creek), Estuarine Habitat (e.g., Guadalupe Slough, north portions of Sunnyvale East and West Channels), Groundwater Recharge (e.g., Calabazas Creek and Stevens Creek), Preservation of Rare or Endangered Species (e.g., Stevens Creek, Baylands), Warm Freshwater Habitats and Wildlife Habitat (e.g., Sunnyvale East and West Channels).

b. Substantially degrade groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	0	0	0	X	119, 124, 125, 126
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INITIAL STUDY ENVIRONMENTAL CHECKLIST

Issues and Supporting Information	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Source
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	0	0	0	X	111, 119, 124, 125, 126, 127
<p><i>Storm Water Runoff Guidance:</i> Evaluation of a project's effect on drainage patterns should refer to the final approved SCVURPPP Hydromodification Management Plan (HMP) where applicable, to assess the significance of altering existing drainage patterns and to develop any mitigation measures. The evaluation of hydromodification effects should also consider any potential for streambed or bank erosion downstream from the project. Areas that may be impacted within Sunnyvale include the storm water drainage area into Stevens Creek and the southern reach of Calabazas Creek between Homestead Road and Lawrence Expressway. Areas that drain into Sunnyvale East and West Channels and El Camino Channel have been proposed to be exempt from HMP requirements since they are artificial channels and the northern portions of Sunnyvale East and West Channels are under tidal influence.</p>					
d. Create or contribute runoff which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	0	0	0	X	111, 119, 124, 125, 126, 127
(i.) Will the proposed project result in increased impervious surfaces and associated increased runoff?	0	0	0	X	111, 119, 124, 125, 126, 127
(ii.) If so, does the project meet the NPDES permit's Group 1 or Group 2 criteria?	0	0	0	X	111, 119, 124, 125, 126, 127
<p><i>Storm Water Runoff Guidance:</i> If applicable, document Best Management Practices in fulfillment of Provision C.3 requirements as CEQA mitigation measures.</p>					

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INITIAL STUDY ENVIRONMENTAL CHECKLIST

Issues and Supporting Information	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Source
e. Otherwise substantially degrade water quality?	0	0	0	X	119, 124, 125, 126
(i.) Would the proposed project result in an increase in pollutant discharges to receiving waters? <i>Storm Water Runoff Guidance:</i> Consider water quality parameters such as temperature, dissolved oxygen, turbidity and other typical storm water pollutants (e.g., heavy metals, pathogens, petroleum derivatives, synthetic organics, sediment, nutrients, oxygen-demanding substances, and trash).	0	0	0	X	119, 124, 125, 126
(ii.) Does the project have the potential to result in a significant impact to surface water quality, marine, fresh, or wetland waters, or to groundwater quality?	0	0	0	X	119, 124, 125, 126
(iii.) Will the project result in avoiding creation of mosquito larval sources that would subsequently require chemical treatment to protect human and animal health?	0	0	0	X	119, 124, 125, 126
f. Place housing within a 100-year floodplain, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	0	0	0	X	18, 55
g. Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	0	0	0	X	18, 55
h. Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	0	0	0	X	18, 55
i. Inundation by seiche, tsunami, or mudflow?	0	0	0	X	18, 55

DISCUSSION OF IMPACTS THAT ARE LESS THAN SIGNIFICANT

1. **AESTHETICS c):** Although there are visual impacts resulting from a new monopole and ground equipment, staff finds that it does not rise to the level of a significant environmental impact. The project is located within an industrial zone, which is not considered a visually sensitive area. The City's standard implementation of the design requirements and Use Permit findings in Sunnyvale Municipal Code Chapter

Project #: 2009-0782
Project Address: 221 Commercial Street
Applicant: T-Mobile

INITIAL STUDY ENVIRONMENTAL CHECKLIST

19.54 will ensure that the final design of the project will not degrade the visual character or quality of the site and its surroundings. As a result, this impact will be less than significant.

VII. NOISE d): No generators are proposed with this project. Noise impacts are limited to short-term and temporary noise associated with the construction of the project. Through the City's implementation of the Municipal Code noise regulations contained in Chapters 19.42.030 and 16.08.030, this impact will be lessened to a less than significant level during construction.

RF Emissions: The facility is subject to Federal Communication Commission (FCC) limits of exposure standards for human exposure. The applicant has submitted an RF exposure study conducted by Lexia Corporation. The study found that the individual exposure level for the T-Mobile antennas will be 0.19% of the limit for general public exposure and 0.29% for all carriers on-site. Therefore, the project complies with these Federal requirements.

Noren Caliva
Completed By:

February 11, 2010
Date:

ENVIRONMENTAL CHECKLIST REFERENCE LIST

Note: All references are for the most recent version, as of the date the Initial Study was prepared.

City of Sunnyvale General Plan:

1. Map
2. Air Quality Sub-Element
3. Community Design Sub-Element
4. Community Participation Sub-Element
5. Cultural Arts Sub-Element
6. Executive Summary
7. Fire Services Sub-Element
8. Fiscal Sub-Element
9. Heritage Preservation Sub-Element
10. Housing & Community Revitalization Sub-Element
11. Land Use & Transportation Sub-Element
12. Law Enforcement Sub-Element
13. Legislative Management Sub-Element
14. Library Sub-Element
15. Noise Sub-Element
16. Open Space and Recreation Sub-Element.
17. (retired)
18. Safety & Seismic Safety Sub-Element
19. Wastewater Management Sub-Element
20. Socio-Economic Sub-Element
21. Solid Waste Management Sub-Element
22. Support Services Sub-Element
23. Surface Run-off Sub-Element
24. Water Resources Sub-Element

City of Sunnyvale Municipal Code:

25. Chapter 10
26. Chapter 12.60 Storm Water Management
27. Chapter 19.18. Residential Zoning Districts
28. Chapter 19.20. Commercial Zoning Districts
29. Chapter 19.22. Industrial Zoning Districts
30. Chapter 19.24. Office Zoning Districts
31. Chapter 19.26. Combining Zoning Districts
32. Chapter 19.28. Downtown Specific Plan
33. Chapter 19.42. Operating Standards
34. Chapter 19.46. Off-Street Parking & Loading
35. Chapter 19.56. Solar Access
36. Chapter 19.66. Affordable Housing
37. Chapter 19.72. Conversion of Mobile Home Parks to Other Uses
38. Chapter 19.94. Tree Preservation
39. Chapter 19.96. Heritage Preservation

Specific Plans:

40. Downtown Specific Plan (SMC 19.28)
41. El Camino Real Precise Plan
42. Lockheed Site Master Use Permit
43. Moffett Field Comprehensive Use Plan
44. 101 & Lawrence Site Specific Plan
45. Southern Pacific Corridor Plan

Environmental Impact Reports:

46. Futures Study Environmental Impact Report
47. Lockheed Site Master Use Permit Environmental Impact Report
48. Tasman Corridor LRT Environmental Impact Study (supplemental)
49. Kaiser Permanente Medical Center Replacement Center Environmental Impact Report (City of Santa Clara)
50. Downtown Development Program Environmental Impact Report
51. Caribbean-Moffett Park Environmental Impact Report
52. Southern Pacific Corridor Plan Environmental Impact Report

Maps:

53. Zoning Map
54. City of Sunnyvale Aerial Maps
55. Flood Insurance Rate Maps (FEMA)
56. Santa Clara County Assessors Parcel
57. Utility Maps (50 scale)

Lists / Inventories:

58. Sunnyvale Cultural Resources Inventory List
59. Heritage Landmark Designation List
60. Santa Clara County Heritage Resource Inventory
61. Hazardous Waste & Substances Sites List (State of California)
62. List of Known Contaminants in Sunnyvale

Legislation / Acts / Bills / Codes:

63. Subdivision Map Act

ENVIRONMENTAL CHECKLIST REFERENCE LIST

Note: All references are the most recent version as of the date the Initial Study was prepared:

- | | |
|---|---|
| <p>64. Uniform Fire Code, including amendments per SMC adoption</p> <p>65. National Fire Code (National Fire Protection Association)</p> <p>66. Title 19 California Administrative Code</p> <p>67. California Assembly Bill 2185 / 2187 (Waters Bill)</p> <p>68. California Assembly Bill 3777 (La Follette Bill)</p> <p>69. Superfund Amendments & Reauthorization Act (SARA) Title III</p> <p>Transportation:</p> <p>70. California Department of Transportation Highway Design Manual</p> <p>71. California Department of Transportation Traffic Manual</p> <p>72. California Department of Transportation Standard Plan</p> <p>73. California Department of Transportation Standard Specification</p> <p>74. Institute of Transportation Engineers - Trip Generation</p> <p>75. Institute of Transportation Engineers Transportation and Traffic Engineering Handbook</p> <p>76. U.S. Dept. of Transportation Federal Highway Admin. Manual on Uniform Traffic Control Devices for Street and Highways</p> <p>77. California Vehicle Code</p> <p>78. Traffic Engineering Theory & Practice by L. J. Pegnataro</p> <p>79. Santa Clara County Congestion Management Program and Technical Guidelines</p> <p>80. Santa Clara County Transportation Agency Short Range Transit Plan</p> <p>81. Santa Clara County Transportation Plan</p> <p>82. Traffic Volume Studies, City of Sunnyvale Public works Department of Traffic Engineering Division</p> <p>83. Santa Clara County Sub-Regional Deficiency Plan</p> <p>84. Bicycle Plan</p> <p>Public Works:</p> <p>85. Standard Specifications and Details of the Department of Public Works</p> | <p>86. Storm Drain Master Plan</p> <p>87. Sanitary Sewer Master Plan</p> <p>88. Water Master Plan</p> <p>89. Solid Waste Management Plan of Santa Clara County</p> <p>90. Geotechnical Investigation Reports</p> <p>91. Engineering Division Project Files</p> <p>92. Subdivision and Parcel Map Files</p> <p>Miscellaneous:</p> <p>93. Field Inspection</p> <p>94. Environmental Information Form</p> <p>95. Annual Summary of Containment Excesses (BAAQMD)</p> <p>96. Current Air Quality Data</p> <p>97. Chemical Emergency Preparedness Program (EPA) Interim Document in 1985?)</p> <p>98. Association of Bay Area Governments (ABAG) Population Projections</p> <p>99. Bay Area Clean Air Plan</p> <p>100. City-wide Design Guidelines</p> <p>101. Industrial Design Guidelines</p> <p>Building Safety:</p> <p>102. California Building Code,</p> <p>103. (retired)</p> <p>104. California Plumbing Code,</p> <p>105. California Mechanical Code,</p> <p>106. California Electrical Code</p> <p>107. Title 16 of the Sunnyvale Municipal Code</p> <p>Additional References:</p> <p>108. USFWS / CA Dept. F&G Special Status Lists</p> <p>109. Project Traffic Impact Analysis</p> <p>110. Project Description</p> <p>111. Project Development Plans</p> <p>112. Santa Clara County Airport Land Use Plan</p> <p>113. Federal Aviation Administration</p> <p>114. Site Map</p> <p>115. Citywide Design Guidelines</p> <p>116. Project construction schedule</p> <p>117. Project Noise Measurements</p> <p>118. Project Traffic Impact Analysis</p> <p>119. Project Draft Stormwater Management Plan</p> <p>120. Project Generator Specifications</p> <p>121. Project Generator Air Quality Analysis</p> <p>122. BAAQMD CEQA Guidelines</p> |
|---|---|

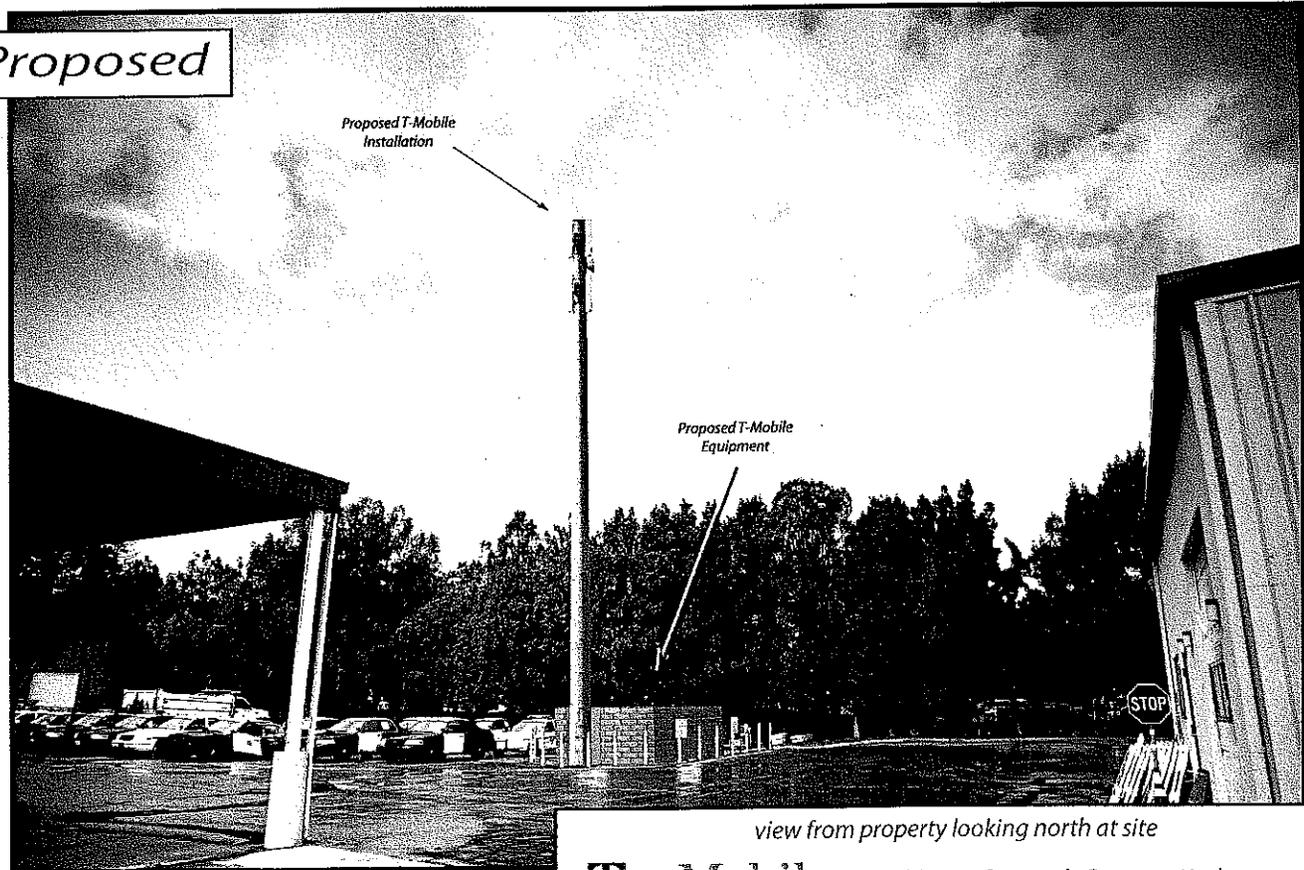
Note: All references are the most recent version as of the date the Initial Study was prepared:

123. C3 Municipal Regional Permit – Santa Clara Valley Runoff Pollution Prevention Plan
124. Sunnyvale Municipal Code 12.60 Stormwater Management
125. Stormwater Quality Best Management Practices Guidelines Manual 2007
126. Palo Alto Medical Foundation Clinic Project EIR January 2009
127. Valley Transportation Authority Technical Bicycle Guidelines 2007

Existing



Proposed

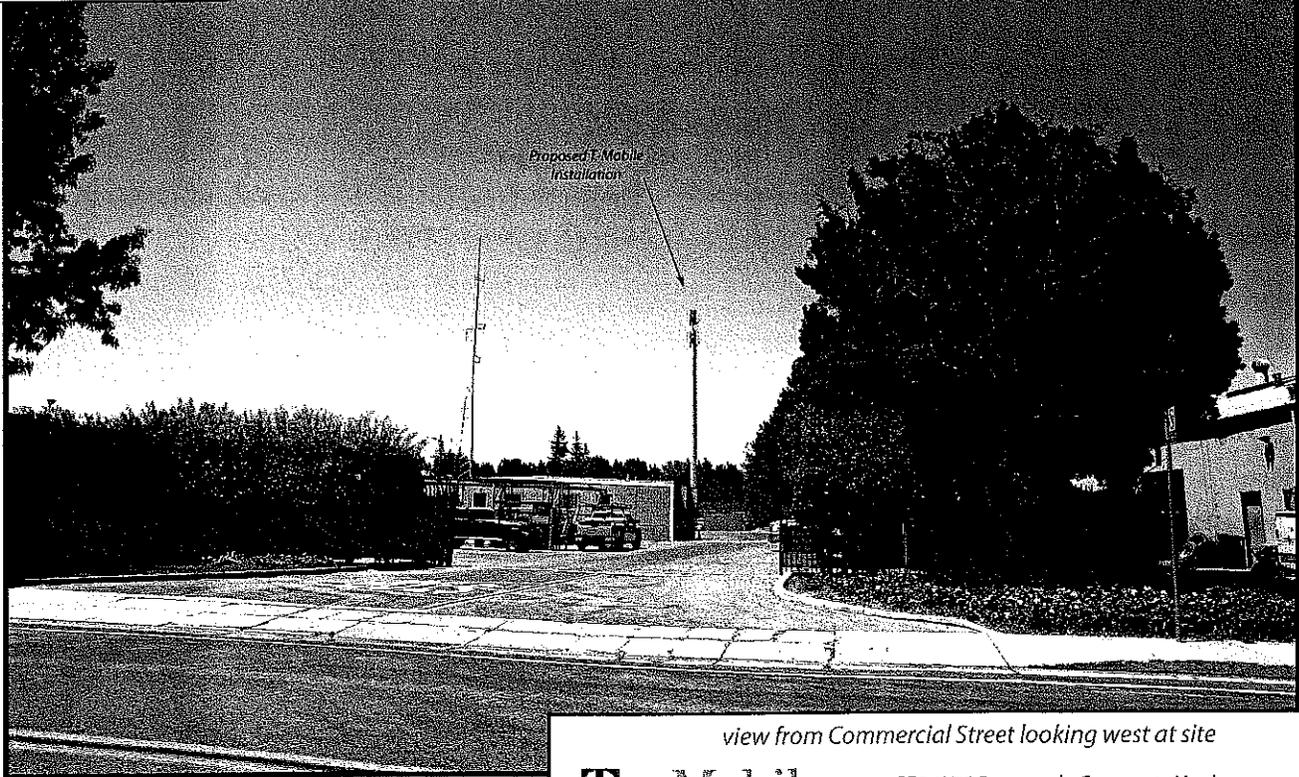


view from property looking north at site

Existing

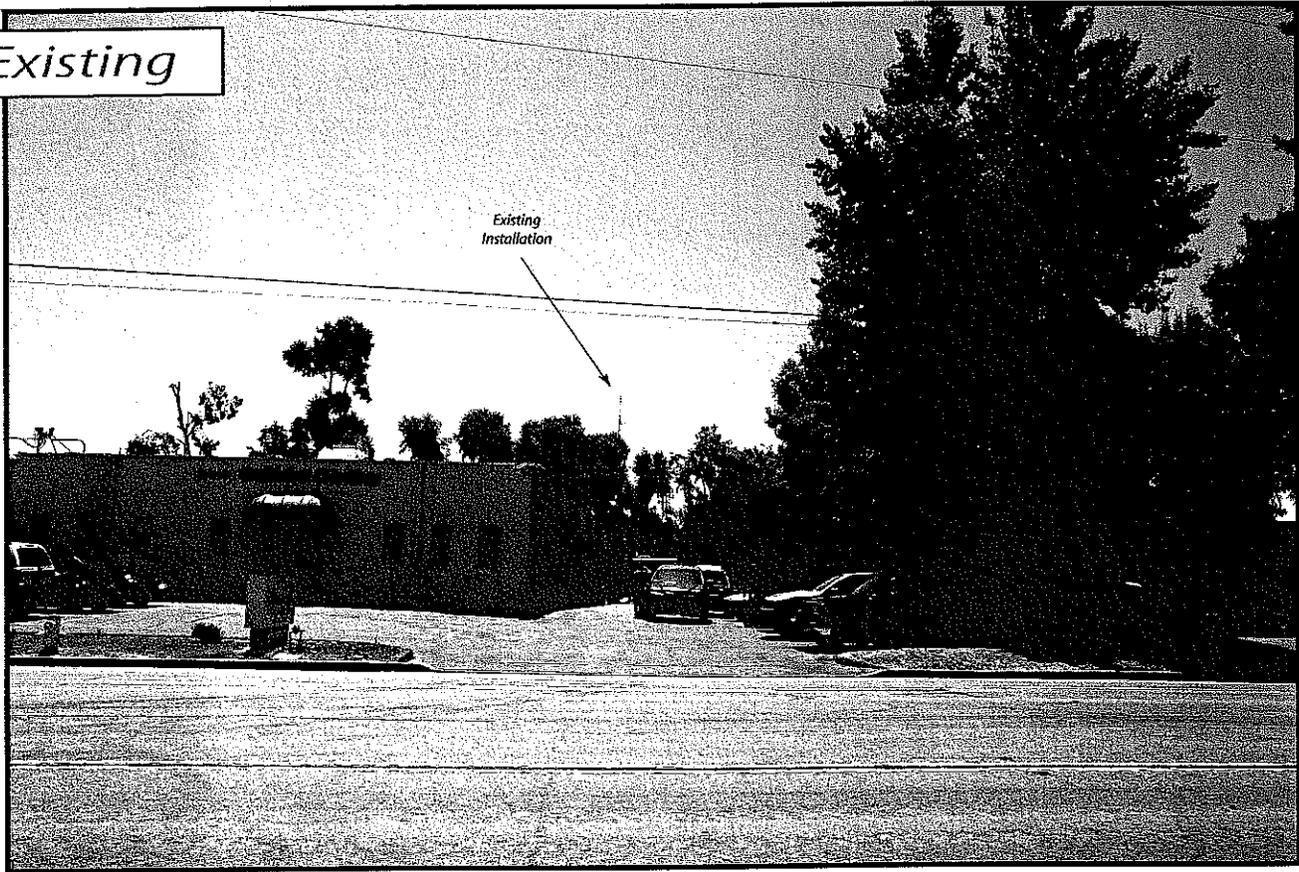


Proposed



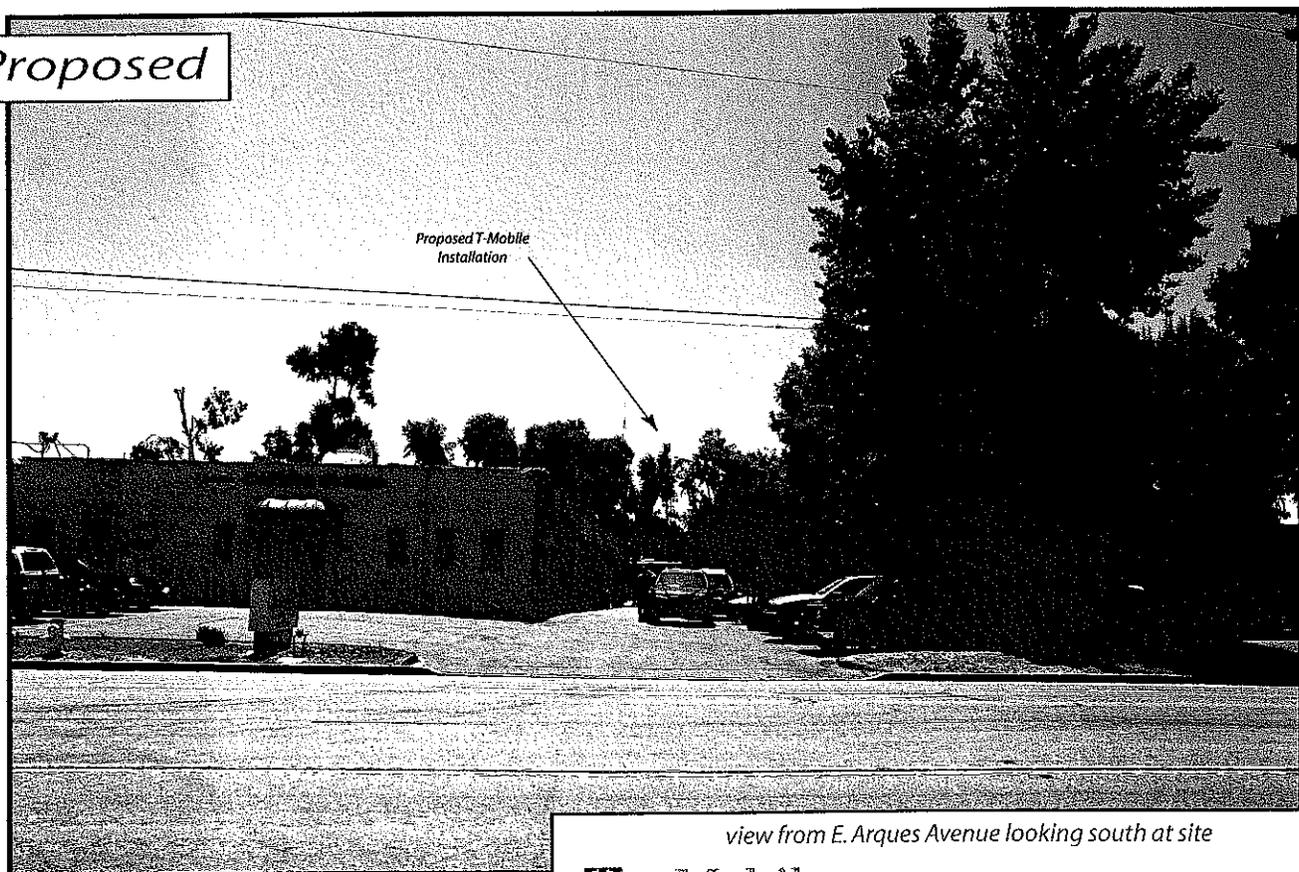
view from Commercial Street looking west at site
T-Mobile SF54275 Sunnyvale Corporate Yard
221 Commercial Street, Sunnyvale, CA

Existing



Existing
Installation

Proposed



Proposed T-Mobile
Installation

view from E. Arques Avenue looking south at site

Lexia Corporation

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ATTACHMENT F
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RADIO FREQUENCY ANALYSIS
PERSONAL COMMUNICATION SYSTEM BASE
STATION
T MOBILE SITE NO. SF54275-C
"SUNNYVALE CORPORATE YARD"
221 COMMERCIAL STREET,
SUNNYVALE, CALIFORNIA

By: Lexia Corporation
Date 08/05/2009

Report Summary

Based upon information provided by T-Mobile, and through physical verification of the emitted RF field strength, and through calculations of expected field strength, it is the engineer's opinion that the proposed T Mobile site which will be located at 221 Commercial Street, Sunnyvale, California will comply with the FCC's current prevailing standard for limiting human exposure to RF energy. Therefore, no significant impact on the environment or general population is expected. The measured and calculated electromagnetic field strength in normally publicly accessible areas is less than the existing standard allows for general population uncontrolled exposure. Accessible areas at ground level were surveyed. The maximum measured RF level on the ground was 0.19% of the limit for general public uncontrolled exposure.

The combined effect of the measured RF level and the maximum calculated additional contribution at ground level is 0.29% of the existing standard for general population uncontrolled exposure.

General Recommendations

Maintenance personnel should be instructed to notify the appropriate Carrier prior to working in front of an antenna.

RF warning signs should be posted at the base of the new monopole.

Background

Lexia Corporation has been retained by T-Mobile to conduct a Radio Frequency (RF) electromagnetic field analysis for a proposed telecommunications site at 221 Commercial Street, Sunnyvale, California. This analysis consists of a review of the site conditions, measurement of the RF field strength at ground level, calculation of the expected contribution by the new T-Mobile antennas and the provision of a comparison of the estimated field strength with the Federal Communication Commission (FCC) recommended guidelines for human exposure to RF electromagnetic fields.

Site Description

Based upon the drawings provided by the design engineer and observations at the site, multiple antennas are mounted on an existing tower. Six new T-Mobile antennas are proposed to be mounted on a new monopole. The T-Mobile antennas will be mounted approximately 97' above ground level.

RF Field Strength Survey Methodology

Charles Mathewson, of Lexia Corporation utilized an EMC Test Design Smart Fieldmeter with model PI-01 Isotropic Probe to quantify the RF field strength at various points at ground level around the site. The calibration date for the Isotropic Probe is May 17, 2009. The maximum observed field on the ground was 0.0012 mW/cm². This equates to a maximum of 0.19% of the limit for general public uncontrolled exposure based upon the 300 – 1500 Mhz frequency range. The survey was performed on July 27, 2009, at approximately 10:30 AM.

RF Field Strength Calculation Methodology

A generally accepted method is used to calculate the expected RF field strength. The method uses the FCC's recommended equation¹ which predicts field strength on a worst case basis by doubling the predicted field strength. The following equation is used to predict maximum RF field strength:

$$\text{Equation 1} \quad S = \frac{(2)^2 PG}{4\pi R^2} = \frac{PG}{\pi R^2} = \frac{EIRP}{\pi R^2}$$

Where:

S = power density

P = power input to the antenna

G = power gain of the antenna in the direction of interest relative to an isotropic radiator

R = distance to the center of radiation of the antenna

Using a maximum effective radiated power of 1349 watts, and a down tilt of 5°, the maximum calculated field strength for this site at 6'-6" above ground level in front of a T Mobile antenna is 0.0010 mW/cm². Using this result, the maximum calculated additional field strength at ground level (from T Mobile) is 0.10% of the limit for general public uncontrolled exposure.

The combined effect of the measured RF level and the maximum expected RF contributions from T-Mobile at ground level is equal to 0.29% of the limit for general public uncontrolled exposure.

Calculations were performed for the main antenna lobe, the -3dB point, and the first and second lower lobes.

See Table 1 for the FCC's guidelines on Maximum Permissible Exposure (MPE). Note that the RF range referenced (for T-Mobile) for this analysis is the range of 1500 – 100,000 Mhz. Table 1 is included in Appendix A.

¹ Reference Federal Communication Commission Office of Engineering Technology Bulletin 65

Exposure Environments

The FCC guidelines incorporate two separate tiers of exposure limits that are dependent on the situation in which the exposure takes place and/or the status of the individuals who are subject to exposure. The decision as to which tier applies in a given situation should be based on the application of the following definitions.

Occupational/controlled exposure limits apply to situations in which persons are exposed as a consequence of their employment and in which those persons who are exposed have been made fully aware of the potential for exposure and can exercise control over their exposure. Occupational/controlled exposure limits also apply where exposure is of a transient nature as a result of incidental passage through a location where exposure levels may be above general population/uncontrolled limits (see below), as long as the exposed person has been made fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means.

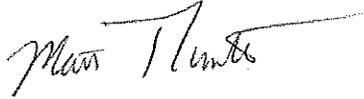
General population/uncontrolled exposure limits apply to situations in which the general public may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Therefore, members of the general public always fall under this category when exposure is not employment-related.

For purposes of applying these definitions, awareness of the potential for RF exposure in a workplace or similar environment can be provided through specific training as part of a RF safety program. Warning signs and labels can also be used to establish such awareness as long as they provide information, in a prominent manner, on risk of potential exposure and instructions on methods to minimize such exposure risk. For example, a sign warning of RF exposure risk and indicating that individuals should not remain in the area for more than a certain period of time could be acceptable.

Another important point to remember concerning the FCC's exposure guidelines is that they constitute ***exposure*** limits (not ***emission*** limits), and they are relevant only to locations that are ***accessible*** to workers or members of the public. Such access can be restricted or controlled by appropriate means such as the use of fences, warning signs, etc., as noted above. For the case of occupational/controlled exposure, procedures can be instituted for working in the vicinity of RF sources that will prevent exposures in excess of the guidelines. An example of such procedures would be restricting the time an individual could be near an RF source or requiring that work on or near such sources be performed while the transmitter is turned off or while power is appropriately reduced.

Qualifications of Reporting Engineer

Mr. Runte has been involved in the measurement and analysis of RF emissions since 1979. He has designed numerous RF systems including both site design and RF system design. He is a registered Professional Engineer in the state of California, and all contents of this report are true and correct to the best of his knowledge.



Signed:

Matthew J. Runte, P.E.

Date: 08/05/2009



Professional Engineer Stamp

APPENDIX A

Term Definitions

Exposure Exposure occurs whenever and wherever a person is subjected to electric, magnetic or electromagnetic fields other than those originating from physiological processes in the body and other natural phenomena.

Exposure, partial-body. Partial-body exposure results when RF fields are substantially nonuniform over the body. Fields that are nonuniform over volumes comparable to the human body may occur due to highly directional sources, standing-waves, re-radiating sources or in the near field.

General population/uncontrolled exposure. For FCC purposes, applies to human exposure to RF fields when the general public is exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Therefore, members of the general public always fall under this category when exposure is not employment-related.

Maximum permissible exposure (MPE). The rms and peak electric and magnetic field strength, their squares, or the plane-wave equivalent power densities associated with these fields to which a person may be exposed without harmful effect and with an acceptable safety factor.

Occupational/controlled exposure. For FCC purposes, applies to human exposure to RF fields when persons are exposed as a consequence of their employment and in which those persons who are exposed have been made fully aware of the potential for exposure and can exercise control over their exposure. Occupational/controlled exposure limits also apply where exposure is of a transient nature as a result of incidental passage through a location where exposure levels may be above general population/uncontrolled limits (see definition above), as long as the exposed person has been made fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means.

Table 1. LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

(A) Limits for Occupational/Controlled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm ²)	Averaging Time (E ² , H ² or S) (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842/f	4.89/f	(900/f ²)*	6
30-300	61.4	0.163	1.0	6
300-1500	--	--	f/300	6
1500-100,000	--	--	5	6

(B) Limits for General Population/Uncontrolled Exposure

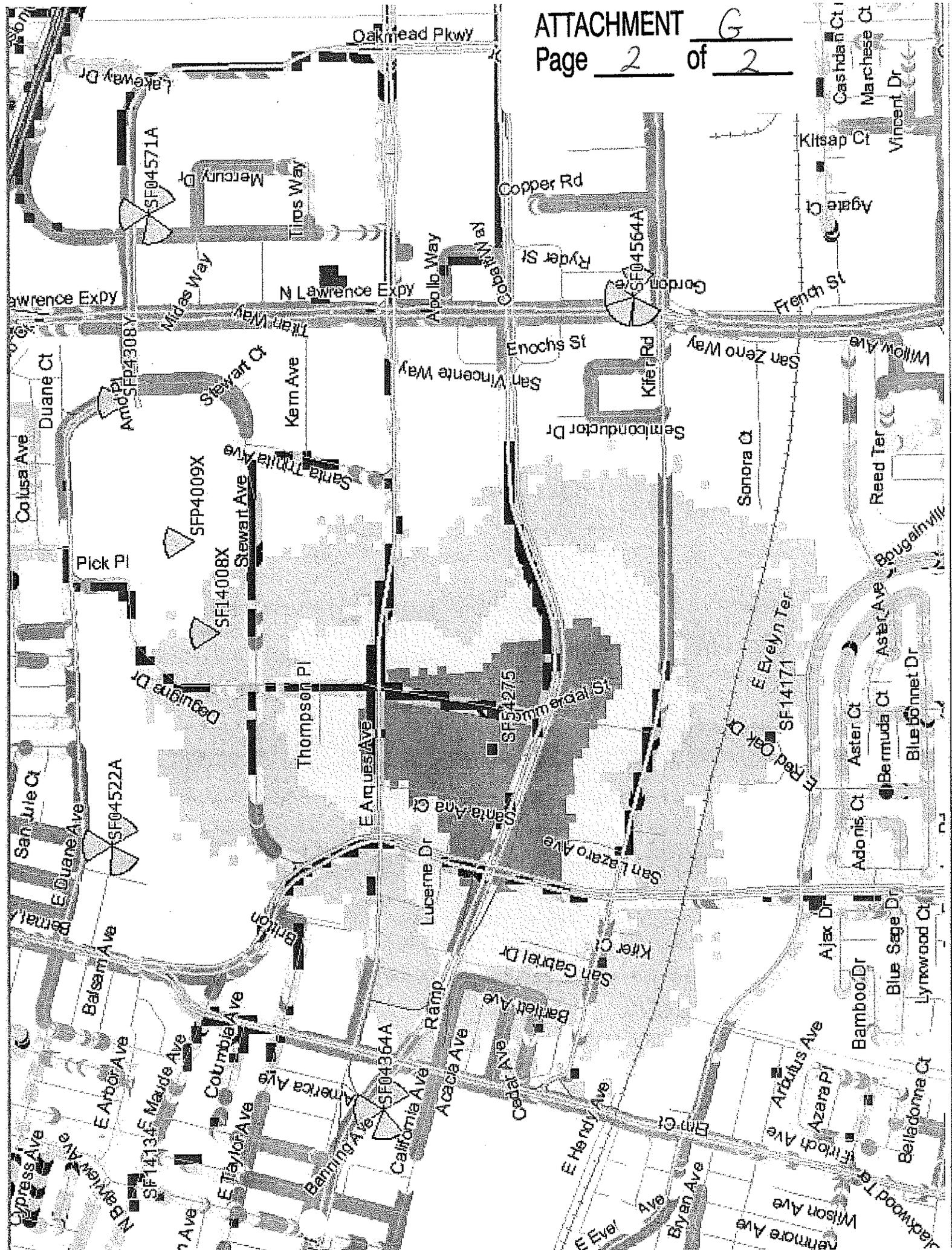
Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm ²)	Averaging Time (E ² , H ² or S) (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f ²)*	30
30-300	27.5	0.073	0.2	30
300-1500	--	--	f/1500	30
1500-100,000	--	--	1.0	30

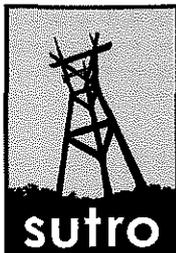
f = frequency in MHz

*Plane-wave equivalent power density

NOTE 1: *Occupational/controlled* limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. Limits for occupational/controlled exposure also apply in situations when an individual is transient through a location where occupational/controlled limits apply provided he or she is made aware of the potential for exposure.

NOTE 2: *General population/uncontrolled* exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or can not exercise control over their exposure.



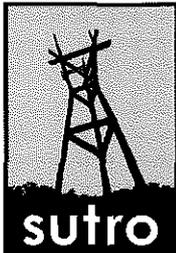


54275 : Sunnyvale Corporate Yard
Address: 221 Commercial Street, Sunnyvale, CA 94089
Zone: MS
APN: 205-34-012

Project Description

T-mobile is proposing to construct, operate and maintain a new wireless telecommunications facility at the Sunnyvale Corporate Yard. The proposed one hundred feet (100') in height monopole is located at 221 Commercial Street within the northwest portion of the city-owned yard. There is an existing monopole on site which is completely utilized by other carriers. Working with city staff, they were amenable to the development and location of a new pole in which the T-Mobile team met with them on site. The proposed facility will consist of three (3) sectors, with two (2) antennas per sector, totaling six (6) antennas. The antennas will be flush-mounted and vertically stacked on the pole. In addition, a twenty-four inches (24") in diameter microwave dish will be installed between the antennas to maximize opportunities for additional carriers to co-locate. The microwave dish is a requirement for all new builds in the event of emergency needs or the need for a temporary telephone connection. The Base Transceiver Station (BTS) equipment cabinets will be placed at the base of the monopole within a new six feet (6') in height concrete masonry equipment enclosure. The ice bridge location allows the coaxial cables to go directly into the port of the pole, eliminating unnecessary turns and bends for the cables. Although the ice bridge could be screened with a box, it would only create more bulk, creating greater focus on the bridge. If the port were to be lower on the pole, the pole loses some of its structural integrity which is discouraged by the construction team. No parking spaces or landscaping areas will be removed.

The location and configuration of the proposed antennas have been selected to achieve the functional requirements for T-mobile Radio Frequency Engineers. As referenced in the RF Coverage Maps, T-Mobile subscribers experience minimal or loss of coverage along Central Expressway from North Wolfe Road heading east towards Lawrence Expressway. The development of this portion of the network will allow its customers seamless access to a network of services, providing commercial and in building coverage to those driving or working in this particular area. Much like the other carriers and as a mandate by the FCC, T-mobile seeks to provide an additional communication infrastructure to the wireless community. This location was also selected because of its position relative to existing sites, providing favorable site geometry for federally mandated E911 location accuracy requirements. Since 40 percent of 911 calls are from mobile phones, effective site geometry within the overall network is needed to achieve accurate location information of mobile users, through triangulation with active wireless facilities.



Safety and Compliance

The proposed facility will not be detrimental to the character of development, as it will not be staffed, having no impact on parking or traffic. After construction of the facility, the site will be serviced once a month, during a routine scheduled maintenance window by a service technician. Furthermore, the facility will generate no noise, odor, smoke or any other adverse impacts to adjacent land uses. T-Mobile technology does not interfere with any other forms of private or public communications systems. In addition, the proposed wireless telecommunications facility will operate in full compliance with all local, state and federal regulations including the Telecommunications Act of 1996.

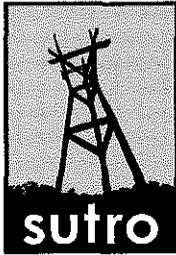
T-Mobile Company Information

Based in Bellevue, Washington, the U.S. operations of T-Mobile International AG & Co. K.G., consists of T-Mobile USA, Inc. (formerly VoiceStream Wireless) and Powertel, Inc. (together "T-Mobile"). A cornerstone of T-Mobile's strong consumer appeal has been its Get More® business strategy to provide customers with the best overall value in their wireless service so they can enjoy the benefits of mobile communications to Get More From Life®. The T-Mobile global brand name made its debut in the United States in July 2002, choosing California and Nevada as the first markets in the country to launch its wireless voice and data services. Here in the Bay Area, T-Mobile has purchased and taken control of the former PacBell Wireless/Cingular System on January 5, 2005. T-Mobile operates an all-digital, national wireless network based exclusively on GSM technology. T-Mobile holds a license in the California Market as follows: 1950.2-1964.8, 1965.2-1969.8 MHz and 1870.2-1884.8, 1885.2-1889.8 MHz.

T-Mobile Site Selection/Co-location/Height Justification

In an effort to minimize the number of new facilities in an area, T-Mobile is always looking for opportunities to co-locate on existing buildings, utility poles or existing wireless structures. For this particular site, T-Mobile identified an existing lattice tower but unfortunately, is occupied at full capacity. Although one carrier has abandoned the site, the antenna location they are presently at is too low to cover the RF objective. The trees along the perimeter are currently at a height of fifty feet (50') and with growth, would block the signal. Therefore, T-Mobile is requesting to construct their own monopole at one hundred feet (100') in height to propagate over the existing trees and structures. In addition, the proposed monopole will allow for future carriers to locate on the pole without having to extend or swap out the pole. It is estimated that two additional carriers may be able to co-locate below T-Mobile's antennas.

Since their introduction, wireless telecommunications systems have proven to be an invaluable communications tool in the event of emergencies (traffic accidents, fires, etc.) and natural disasters (earthquakes, floods, etc.) where normal land line communications are often disrupted, overlooked, or inaccessible during and after an event has occurred. This service and similar technology are utilized by numerous governmental and quasi-governmental



agencies that provide emergency service. Wireless telecommunications systems, including cellular telephones, have also proven to be invaluable tools in business communications and everyday personal use. In this sense, wireless telecommunications system networks are desirable in the interest of public convenience, health, safety and welfare, and thus are proper in relation to the development community.

Unlike other land uses, which can be spatially determined through the General Plan, the location of wireless telecommunication facilities is based on technical requirements which include service area, geographical elevations, alignment with surrounding sites and customer demand components. Placement within the urban geography is dependent on these requirements. Consequently, wireless telecommunication facilities have been located adjacent to and within all major land use categories including residential, commercial, industrial, open space, etc. proving to be compatible in all locations.