# **PROJECT TEAM**

### APPLICANT:

5001 Executive Parkway San Ramon, Ca 94583

### ARCHITECT/ENGINEER:

Rodney Barnes Meridian Management LLC 785 Oak Grove Road E2 Suite 251 Concord, CA 94518 1 707.592.5924

### ZONING CONTACT

Matt Yergovich Vinculums Services 575 Lennon Lane Suite 125 Walnut Creek, CA 94598 T 415.596.3474 myergo@gmail.com

### LEASING CONTACT:

Matt Yergovich Vinculums Services 575 Lennon Lane Suite 125 Walnut Creek, CA 94598 T 415.596.3474 myergo@gmail.com

### CONSTRUCTION MANAGER:

Vinculums Services 575 Lennon Lane Suite 125 Walnut Creek, CA 94598

# **GENERAL NOTES**

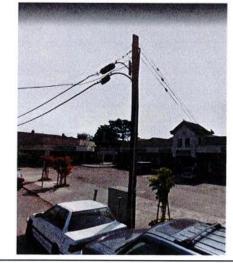
- THIS IS AN UNMANNED TELECOMMUNICATIONS FACILITY FOR THE AT&T WIRELESS NETWORK CONSISTING OF THE INSTALLATION AND OPERATION OF AN ANTENNA AND ASSOCIATED EQUIPMENT ON AN EXISTING METAL LIGHT POLE IN THE PUBLIC RIGHT-OF-WAY, THE FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION
- 2. A TECHNICIAN WILL VISIT THE SITE AS REQUIRED FOR ROUTINE MAINTENANCE. THE PROJECT WILL NOT RESULT IN ANY SIGNIFICANT DISTURBANCE OR EFFECT DRAINAGE, NO SANITARY SEWER SERVICE, POTABLE WATER, OR TRASH DISPOSAL IS REQUIRED AND NO COMMERCIAL
- CHANGES FROM THE APPROVED PLANS DURING THE COURSE OF CONSTRUCTION SHALL CAUSE CONSTRUCTION TO BE SUSPENDED UNTIL SUCH TIME AS THE PLANS CAN BE AMENDED

# 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 CODES
- 2016 CALIFORNIA BUILDING CODE
- 2016 CALIFORNIA MECHANICAL CODE
- 2016 CALIFORNIA PLUMBING CODE 2016 CALIFORNIA ELECTRIC CODE
- 2016 GREEN BUILDING CODE
- 2016 EDITION OF TITLE 24 ENERGY STANDARDS
- ANY LOCAL BUILDING CODE AMENDMENTS TO THE ABOVE
- CITY / COUNTY ORDINANCES
- CITY OF OAKLAND PUBLIC WORKS DEPARTMENT
- GENERAL ORDER 95 (JUNE 2009 EDITION)

### SITE IMAGE



# FROM AT&T WIRELESS OFFICE AT 5001 EXECUTIVE PARKWAY, SAN RAMON, CA

- Head north-east on Bishop Dr towards Sunset Dr
- Turn right onto Sunset Dr Use the right 2 lanes to turn right onto Bollinger Canyon Rd
- Use the right 2 lanes to merge onto I-680 N via the slip road to Sacramento Merge onto I-680 N
- Use the right 2 lanes to take exit 46A for State Route 24 towards
- Oakland/Lafayette Continue onto CA-24 W
- Keep left at the fork to stay on CA-24 W
- Take the Telegraph Avenue exit towards West Grand Avenue/Interstate 580
- Turn left onto Telegraph Ave Turn left onto 44th St

# DRIVING DIRECTIONS TITLE SHEET T.2 A.2 A.3 **ELEVATIONS** A.4 ELEVATIONS A.5 A.6

AT&T

5001 EXECUTIVE PARKWAY, SAN RAMON, CA 94583

CRAN-RSFR-SFOK7-011

PACE ID:

ROW AT 4390 TELEGRAPH AVE, OAKLAND, CA 94609

COUNTY: ALAMEDA

SITE TYPE: WOOD POLE

FA:14394424 HUB:20 USID:192910

VCA Bay Area

McDonald's

# GENERAL NOTES, LEGEND, ABBREVIATIONS OVERALL SITE PLAN POLE PLAN, EQUIPMENT ENLARGEMENTS **EQUIPMENT DETAILS EQUIPMENT DETAILS**

INDEX

# DRAWING SIGN-OFF

	Signature	Date
SITE ACQUISITION:		
PLANNING:		_
CONSTRUCTION:		_
MANAGEMENT:		_
SAT&T	Signature	Date
CONSTRUCTION:		
REAL ESTATE:		
RF ENGINEER:		2 1920112
EQUIPMENT ENGINEER:		-

### PROJECT DESCRIPTION

THIS IS AN UNMANNED TELECOMMUNICATIONS FACILITY FOR THE AT&T WIRELESS NETWORK CONSISTING OF THE INSTALLATION AND OPERATION OF AN ANTENNA AND ASSOCIATED EQUIPMENT ON AN EXISTING WOOD POLE IN THE PUBLIC RIGHT-OF-WAY.

### SCOPE OF WORK & SITE COMPLETION CHECKLIST:

OWNER:

- ANTENNA & ASSOCIATED EQUIPMENT BOXES: INSTALL A NEW TELECOMMUNICATION ANTENNA, NEW 7" BAYONET EXTENSION, (2) EQUIPMENT BOXES, NEW FIBER BOX, AND NEW DISCONNECT/BREAKER BOX ON AN EXISTING WOOD POLE. ALL POLE-MOUNTED EQUIPMENT TO BE INSTALLED ON A GO95 COMPLIANT
- DURABLE PAINT: ANTENNAS, MOUNTING BRACKETS, CABLING, AND RADIO RELAY UNITS TO BE PAINTED SHERWIN WILLIAMS MESA BROWN
- CABLING: CABLING TO BE INSTALLED IN A TIDY MANNER WITHOUT EXCESS CABLE LOOPS
- LOGO REMOVAL: ALL EQUIPMENT LOGOS, OTHER THAN THOSE REQUIRED BY REGULATION (E.G. NODE IDENTIFICATION), SHALL BE PAINTED OVER OR REMOVED, RAISED/DEPRESSED TEXT ON RRUS OR OTHER EQUIPMENT, IF PRESENT, TO BE SANDED OFF OR SIMILARLY REMOVED AND/OR FILLED
- SIGNAGE: FCC MANDATED RF WARNING SIGNAGE SHALL FACE CLIMBING SPACE, OPTIONAL SIGNAGE SHALL FACE OUT TO STREET WHEN PLACED IN FRONT OF OR NEAR A WINDOW, SIGNAGE SHALL FACE TOWARD BUILDING IF THERE IS NO WINDOW
- UTILITY LINES: PROPOSED UTILITY LINES BETWEEN EXISTING POINT OF CONNECTION TO BE IN CONDUIT ON

### SITE INFORMATION

OWNER:	AT&T	
APPLICANT:	AT&T 5001 EXECUTIVE PARKWAY SAN RAMON, CA 94583	
LATTITUDE:	37.8322600 (NAD 83)	
LONGITUDE:	-122.2633500 (NAD 83)	
GROUND ELEVATION:	95' AMSL	
ADJACENT APN#:	(IFO) 13-1098-33-4	
ZONING JURISDICTION:	CITY OF OAKLAND	
CURRENT ZONING:	PUBLIC ROW	
PROPOSED USE:	UNMANNED TELECOMMUNICATIONS FACILITY	

### DO NOT SCALE DRAWINGS

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





AT&T Wireless 5001 Executive Parkway San Ramon, CA 94583



Project Architect:



575 LENNON LANE SUITE 125 WALNUT CREEK, CA 94598 T 925.482.8500

90% Zoning Drawings

Drawing Phase:

CRAN-RSFR-SFOK7-011 PACE ID:

ROW AT 4390 TELEGRAPH AVE. OAKLAND, CA 94609 COUNTY: ALAMEDA

Professional Seal:

It is a violation of law for any person, unless they are acting under the direction of a licensed Professional Architect/Engineer, to alter this document.

Rev. Date Description 09/27/17 Zoning Dwgs 90%

Project	l No.;	
Date:	09/27/17	Job No.:
Scale:	AS SHOWN	CAD File:
Design	ed By: JG	Checked: RE

TITLE SHEET

@ Meridian Management LLC, 2017

### GENERAL CONSTRUCTION NOTES

- PLANS ARE INTENDED TO BE DIAGRAMMATIC OUTLINE ONLY, UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
- 2. THE CONTRACTOR SHALL OBTAIN, IN WRITING, AUTHORIZATION TO PROCEED BEFORE STARTING WORK ON ANY ITEM NOT CLEARLY DEFINED OR IDENTIFIED BY THE CONTRACT DOCUMENTS
- CONTRACTOR SHALL CONTACT USA (UNDERGROUND SERVICE ALERT) AT (800) 227-2600, FOR UTILITY LOCATIONS, 48 HOURS BEFORE PROCEEDING WITH ANY EXCAVATION, SITE WORK OR CONSTRUCTION.
- THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS
  SPECIFICALLY INDICATED OTHERWISE, OR WHERE LOCAL CODES OR REGULATIONS TAKE PRECEDENCE.
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CBC / UBC'S REQUIREMENTS REGARDING EARTHQUAKE RESISTANCE, FOR, BUT NOT UMBED TO, PPINO, LIGHT FRUIRES, CELLING GRID, INTERIOR PARTITIONS, AND MECHANICAL EQUIPMENT, ALL WORK MUST COMPLY WITH LOCAL EARTHQUAKE CODES AND REQUIRINGNO.
- REPRESENTATIONS OF TRUE NORTH, OTHER THAN THOSE FOUND ON THE PLOT OF SURVEY DRAWINGS, SHALL NOT BE USED TO IDENTIFY OR ESTABLISH BEARING OF TRUE NORTH AT THE SITE. THE CONTRACTIOR SHALL BETY SOLETY ON THE PLOT OF SURVEY DRAWING AND ANY SURVEYORS AMERICAS AT THE SITE FOR THE STALL SHEMMEN OF THE NORTH AND HALL NOTEY HAR ARCHITECT, FERRER PRIOR TO PROCEEDING WITH THE WORK IF ANY DUCKEPANCY IS FOUND BETWEEN HIE VARIOUS ELEMENTS OF THE WORKING DRAWINGS AND THE TRANSPORT OF THE STALL SHEMMEN SHEMMEN AS DEPOSITED ON THE CHILD SURVEY. THE CONTRACTION SHALL ASSUME SOLE LIABILITY FOR ANY FALLUE TO NOTIFY THE ARCHITECT / ENGINEER.
- THE BUILDING DEPARTMENT ISSUING THE PERMIS SHALL BE NOTIFIED AT LEAST TWO WORKING DAYS PRIOR TO THE COMMENCEMENT OF WORK, OR AS OTHERWISE STIPULATED BY THE CODE ENFORCEMENT OFFICIAL HAVING JURISDICTION.
- 8. DO NOT EXCAVATE OR DISTURB BEYOND THE PROPERTY LINES OR LEASE LINES, UNLESS OTHERWISE NOTED.
- 9. ALL EXISTING UTILITIES, FACILITIES, CONDITIONS, AND THEIR DIMENSIONS SHOWN ON THE PLAN HAVE BEEN PLOTTED FROM AVAILABLE RECORDS. THE ARCHITECT FENGMER AND THE OWNER ASSUME NO RESPONSIBILITY WHATSOEVER AS TO THE SUFFICIENCY OR THE ACCURACY OF THE INFORMATION SHOWN ON THE PLANS. OR THE MAINNER OF THEIR REMOVAL OR ADJUSTMENT, CONTRACTORS SHALL BE REPROMISIBLE FOR DETERMINING EXACT LOCATION OF ALL EXISTING UTILITIES AND FACILITIES PRIOR TO START OF CONSTRUCTION. CONTRACTORS SHALL ALSO OBTAIN FROM EACH UTILITY COMPANY DETAILED INFORMATION RELATIVE TO WORKING SCHEDULES AND METHODS OF REMOVING OR ADJUSTMENT EXISTING UTILITIES.
- 10. CONTRACTOR SHALL VERIFY ALL EXISTING UTLITIES, BOTH HORIZONTAL AND VERTICALLY, PRIOR TO THE START OF CONSTRUCTION, ANY DISCREPANCES OR DOUBS AS TO THE INTERPRETATION OF PLANS SHOULD BE IMMEDIATELY REPORTED TO THE ARCHITECT / ENGINEER FOR RESOLUTION AND INSTRUCTION, AND INSTRUCTION, AND INSTRUCTION, AND INSTRUCTION AND INSTRUCTIO
- ALL PROPOSED AND EXISTING UTILITY STRUCTURES ON SITE AND IN AREAS TO BE DISTURBED BY CONSTRUCTION SHALL BE ADJUSTED TO FINISH ELEVATIONS PRIOR TO FINAL INSPECTION OF WORK.
- 12. ANY DRAIN AND/OR FIELD TILE ENCOUNTERED / DISTURBED DURING CONSTRUCTION SHALL BE RETURNED TO IT'S ORIGINAL CONDITION PRIOR IO COMPLETION OF WORK, SIZE, LOCATION AND TYPE OF ANY UNDERGROUND UTILITIES OR IMPROVEMENTS SHALL BE ACCURATELY NOTED AND PLACED ON "AS-BUILT" DRAWINGS BY GENERAL CONTRACTOR, AND ISSUED TO THE ARCHITECT / ENGINEER AT COMPLETION OF PROJECT.
- ALL TEMPORARY EXCAVATIONS FOR THE INSTALLATION OF FOUNDATIONS, UTILITIES, ETC., SHALL BE PROPERLY LAID BACK OR BRACED IN ACCORDANCE WITH CORRECT OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) REQUIREMENTS.
- 14. INCLUDE MISC. ITEMS PER AT&T WIRELESS SPECIFICATIONS

### GENERAL NOTES FOR EXISTING CELL SITES

- PRIOR TO THE SUBMISSION OF BIDS, THE BIDDING SUBCONTRACTOR SHALL VISIT THE CELL SITE TO FAMILIARIZE WITH THE EXISTING CONDIT AND TO CONFIRM THAT THE WORK CAN BE ACCOMPLISHED AS SHOWN ON THE CONSTRUCTION DRAWINGS. ANY DISCREPANCY FOUL SHALL BE BROUGHT TO THE ATTENTION OF CONTRACTOR.
- SUBCONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS PRIOR TO COMMENCING ANY WORK, ALL DIMENSIONS OF Existing construction shown on the drawings must be verified, subcontractor shall notify the contractor of any Discrepancies prior to ordering material or proceeding with construction.
- THE EXISTING CELL SITE 6 IN FULL COMMERCIAL OPERATION. ANY CONSTRUCTION WORK BY SUBCONTRACTOR SHALL NOT DISRUPT THE EXISTING NORMAL OPERATION. ANY WORK ON EXISTING FOUR HISTORY AND STATE WHITH CONTRACTOR. ALSO, WORK SHOULD BE SCHEDULED FOR AN APPROPRIATE MANITEMANCE WINDOW SUBJULTY IN LOW TRAFFIC PERSIONS AFTER MIDNICAL.
- SINCE THE CELL SITE IS ACTIVE, ALL SAFETY PRECAUTIONS MUST BE TAKEN WHEN WORKING AROUND HIGH LEVELS OF ELECTROMAGINI RADMITION. EQUIPMENT SHOULD BE SHUTDOWN PRIOR TO PERFORMING ANY WORK THAT COULD EXPOSE THE WORKERS TO DANGES PERSONAL REPROSURE MORNIORS ARE ADVISED TO BE WORKED TO ALERT OF ANY DANGEROUS EXPOSURE LEVELS.
- SUBCONTRACTOR SHALL DETERMINE ACTUAL ROUTING OF CONDUIT, POWER AND TI. CABLES, GROUNDING CABLES AS SHOWN ON THE POWER, GROUNDING AND TELCO PLAN DRAWING, SUBCONTRACTOR SHALL UTILIZE EXISTING TRAYS AND/OR SHALL ADD PROPOSED TRAYS AS NECESSAR'S, SUBCONTRACTOR SHALL CONTRACTOR.
- SUBCONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY. ANTENNAS REMOVED SHALL BE RETURNED TO THE OWNER'S DESIGNATED LOCATION.

- SUBCONTRACTOR'S WORK SHALL COMPLY WITH ALL APPLICABLE NATIONAL, STATE, AND LOCAL CODES AS ADOPTED BY THE LOCAL AUTHORITY HAVING JURISDICTION (AHJ) FOR THE LOCATION.
- THE EDITION OF THE AHJ ADOPTED CODES AND STANDARDS IN EFFECT ON THE DATE OF CONTRACT AWARD SHALL GOVERN THE DESIGN.
- 3. SUBCONTRACTOR'S WORK SHALL COMPLY WITH THE LATEST EDITION OF THE FOLLOWING STANDARDS:
- AMERICAN CONCRETE INSTITUTE (ACI) 318, BULDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE
   AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC), MARIUAL OF STEEL CONSTRUCTION, ASD, NINTH EDITION
   TELECOMMUNICATIONS INDUSTRY ASSOCIATION (TIA) 222-F, STRUCTURAL STANDARD FOR STRUCTURAL ANTENNA TOWER AND ANTENNA
  SUPPORTING STRUCTURES

SUFFORING SERUCTURES

- INSTITUTE FOR ELECTRICAL AND ELECTRONICS ENGINEERS (IEEE) BI. GUIDE FOR MEASURING EARTH RESIDITITY, GROUND IMPEDIANCE, AND EARTH SUBFACE FORTENITIALS OF A GROUND SYSTEM EEE 1100 (1999) RECOMMENDED PRACTICE FOR POWERING AND GROUNDING OF ELECTRICAL EQUIPMENT.

- EREC 62.41, RECOMMENDED PRACTICES ON SURGE VOLTAGES IN LOW VOLTAGE AC POWER CIRCUITS (FOR LOCATION CATEGORY)

- HIGH SYSTEM EXPOSURE\*) MENDED PRACTICES ON SURGE VOLTAGES IN LOW VOLTAGE AC POWER CIRCUITS (FOR LOCATION CATEGORY "C3" AND

- 5. TIA 607 COMMERCIAL BUILDING GROUNDING AND BONDING REQUIREMENTS FOR TELECOMMUNICATIONS TELCORDIA GR-63 NETWORK EQUIPMENT-BUILDING SYSTEM (NEBS): PHYSICAL PROTECTION TELCORDIA GR-347 CENTRAL OFFICE POWER WIRING TELCORDIA GR-1375 CENTRAL OFFICE POWER WIRING TELCORDIA GR-1303 COATALL CARE CONNECTIONS
- 6. ANY AND ALL OTHER LOCAL & STATE LAWS AND REGULATIONS
- FOR ANY CONFLICTS BETWEEN SECTIONS OF LISTED CODES AND STANDARDS REGARDING MATERIAL, METHODS OF CONSTRUCTION, OR OTHER REQUIREMENTS, THE MOST RESTRICTIVE SHALL GOVERN, WHERE THERE IS CONFLICT BETWEEN A GENERAL REQUIREMENT AND A SPECIFIC REQUIREMENT, THE SPECIFIC REQUIREMENT SHALL GOVERN

### GENERAL TRENCHING NOTES

- MAINTAIN 40" MINIMUM COVER FOR ALL ELECTRICAL CONDUITS.

  MAINTAIN 30" MINIMUM COVER FOR ALL TELECOMMUNICATIONS CONDUITS.

  MINIMUM T"SAND SHADING BELOW CONDUITS, AND 6" COVERNIG ON TOP OF CONDUITS REQUIRED.

  ALL ELECTRICAL CONDUITS FROM POWER COMPANY FROM ANY POLE. TRANSFORMER OR OTHER LOCATIONS WILL BE SLURRY BACKFILLED.

  IN STREET SLURRY TO GRADE AND MILL DOWN 1-1/2" FOR ACC CAP.
- IN DRT SURRY 18" FROM GRADE AND FILL 95% COMPACTION IN A TIVE SOIL FOR BALANCE WARNING TAPE TO BE PLACED IN TRENCH 12" ABOVE ALL CONDUITS AND #18 WARNING TAPE ABOVE RING.

### GENERAL GROUNDING NOTES

- 5/8" x 8" ROD, CAD WELD BELOW GRADE
  GROUND TESTED AT 5 OIMS OR LESS.
  # 55 GROUND AND BOND WESE
  GROUNDS 3" FROM POLE.
  PLACE 3 # 10 GA WIRES FROM TESCO BREAKER TO PBMD OR STRONG BOX.
  WOOD MCCDING, STAPLED FURTH 3" AND AT EACH END.

### GENERAL CONDUIT NOTES

- ALL CONDUITS WILL BE MANDRELED AND EQUIPPED WITH 3/8" PULL ROPE. SCHEDULE 40 CONDUIT FOR UNDERGROUND USE. SCHEDULE BO CONDUIT FOR RISER USE. SCHEDULE BO CONDUIT FOR RISER USE. 2" GALVANIZED STEEL CONDUIT FOR ANY CONDUIT UNDER 3", STUB UP 10" THEN CONVERT TO SCHEDULE BO. CONVERT A" CONDUIT TO 3" AT BASE OF POLE.
- CONTRACTOR TO STUB UP POLE 10" w/ 3" POWER CONDUIT, POWER COMPANY TO CONVERT FROM 3" STUB SCHEDULE 80 TO 2"
- CHEDULE 80 FROM TOP OF STUB UP

### TYPICAL R.O.W. POLE CONSTRUCTION NOTES

- CABLE NOT TO IMPEDE IS CLEAR SPACE OF POLE FACE.
  ALL CLIMS SIPPS NEXT TO CONDUIT SHALL HAVE EXTENDED SIEPS.
  NO BOLT THERADS TO PROTRUDE MODE THAN 1-1/2"
  ALL HOLES IN POLE LEFT FROM REARRANGEMENT OF CLIMB SIEPS TO BE FILLED.
  90° SHORT SWEEPS UNDER ANTENNA ARM. ALL CABLES MUST TRANSITION ON THE INSIDE OR BOTTOM OF THE ARM (NO CABLE ON TOP OF ARM).
  USE 90° CONNECTOR AT CABLE CONNECTION FOR OWN DOWN ANTENNAS.
  USE CABLE CLAMPS TO SECURE CABLE TO ARMS. PLACE 2" ATA! I WRELESS CABLE LD. TAGS ON BOTH SIDES OF ARMS.
  USE 1/2" DIAL CABLE ON ANTENNAS UNESS ON THERWISE SPECES.
  PLACE GPS ON ARM OF SOUTHERN SKY EXPOSURE AT MINIMUM 6" FROM TRANSMIT ANTENNA WHICH IS 24" AWAY FROM CENTER OF POLE.

- ILL VOID AROUND CABLES AT CONDUIT OPENING WITH FOAM SEALANT TO PREVENT WATER INTRUSION

**GENERAL NOTES** 

PROPOSED ANTENNA GROUT OR PLASTER ---- TELCO RUN 5/8" X 10"-0" .CU. GND ROD IN TEST WELL 30' MIN. BELOW GRADE. 42 EXISTING ANTENNA (E) BRICK -----T/E ------ POWER/TELCO RUN CHEMICAL GROUND ROD  $\otimes$ GROUND ROD (E) MASONRY (XIT GROUND ROD) G - GROUNDING CONDUCTOR GROUND BUS BAR CONCRETE CADWELD CONNECTION SINININI S EARTH — — — GROUNDING CONDUCTOR MECHANICAL CONNECTION  $\otimes$ GROUND ACCESS WELL — — CONDUIT UNDERGROUND HALO GROUND CONNECTION CAB.
CANT.
CB.
CKT.
CLG.
CLG.
CONC.
CONC.
CONST.
CONT.
d WITH THE TAXABLE PARTY OF THE P PLYWOOD E ELECTRIC BOX SAND FUSE, SIZE AND TYPE AS INDICATED. T TELEPHONE BOX  $\sim$ WOOD CONT. SAFETY SWITCH, 2P-240V-60A W/60A FUSES, NEMA 3R ENCLOSURE, SQ D CATALOG NO, H222NRB (M) UTILITY METER BASE **☆** LIGHT POLE WOOD BLOCKING  $\Box$ H MANUAL TRANSFER SWITCH, 2P-240V-200A, NO FUSE, 0 STEEL STEEL TRANSFORMER FND, MONUMENT DBL.
DEM.
DEPT.
D.F.
DIA.
DIAG
DIM.
DWG
DWL
EA.
EGR. LIGHTING FIXTURE, FLUORESCENT, 10,94" x 4'-0", 2/40W - - CENTERLINE 4 EOHSPOT ELEVATION URFACE MOUNTING TYPE, HUBBELL LIGHTING CATALOG T STEPDOWN TRANSFORMER #WSW232T PROPERTY/LEASE LINE LIGHTING FIXTURE, FLUORESCENT, 10.94" x 8'-0", 2/95W Δ SET POINT -0 $\Theta$ SURFACE MOUNTING TYPE, HUBBELL LIGHTING CATALOG RECEPTACLE, 2P-3W-125V-15A, DUPLEX, MATCH LINE #TWSM232T GROUND TYPE. HUBBEL CATALOG #5362 1 REVISION LIGHTING FIXTURE, HIGH PRESSURE SODIUM, 1/70W, WALL Н WORK POINT MOUNTING TYPE, HUBBELL LIGHTING CATALOG #NRG-307 S TOGGLE SWITCH, 1P-125V-15A OR 1/50W, HUBBELL LIGHTING CATALOG #NRG-121 (x) GRID REFERENCE GROUND CONDUCTOR EXIT SIGN. THERMOPLASTIC LED. SINGLE FACE. UNIVERSAL  $S_{wp}$ HO MOUNTING, W/BATTERY PACK, HUBBELL LIGHTING CATALOG TOGGLE SWITCH, 1P-120V-15A, "WP" (X-X) - - A - - COAXIAL CABLE DETAIL REFERENCE IONIZATION SMOKE DETECTOR W/ALARM HORN & AUXILIARY CONTACT, 120 VAC. GENTEX PART NO. 7100F COMBINATION, EXIT SIGN & EMERGENCY LIGHTING. EXIT (S) - -o/u- -OVERHEAD SERVICE CONDUCTORS HUBBELL LIGHTING CATALOG #PRC (X-X) ELEVATION REFERENCE -X - X- CHAIN LINK FENCING EMERGENCY LIGHTING, 2/50W, HUBBELL LIGHTING CATALOG 0 (X) LIGHTING FIXTURE, INCANDESCENT, 1/100W, WALL MOUNTING TYPE, HUBBELL LIGHTING CATALOG SECTION REFERENCE Ю PROPOSED POLE MOUNTED XFMER #BRH-100-04-1 -OHP -OVERHEAD POWER LINE LIGHTING FIXTURE, HALOGEN, QUARTZ, 1/300W, HUBBELL **B** Δ (E) POLE MOUNTED YEMP LIGHTING CATALOG #QL-505 F POWER RUN PROPOSED PAD MOUNTED XFMER SHTING FIXTURE, 1/175W. METAL HALIDE, HUBBELL CAT HO 5/8" X 10"-0" .CU. GND ROD 30" MIN. BELOW GRADE. (E) PAD MOUNTED XFMER

ANCHOR BOLT ABOVE ANTENNA CABLE COVER ASSEMBLY HEIGHT SOLATED COPPER GROUND BUS INCH(ES) INTERIOR A.B.
ABV.
ACCA
ACCA
ACCA
A.F.F.
A.F.G.
ALUM.
ALI.
ANT.
ANT.
ANT.
ANT.
BD.
BLKG.
BLKG.
BM.
BRKR.
BRKR. ADDITIONAL ABOVE FINISHED FLOOR ABOVE FINISHED GRADE AMPERE INTERRUPTING CAPACITY POUND(S) LAG BOLTS LINEAR FEET (FOOT) WIRE GAUGE EQUIDORY HALING
BRANCH
BREAKER
BRANCH
BREAKER
BASE IRANGMED COPPER V
BASE IRANGMED COPPER V
BASE IRANGMED COMPER
COMMUNICATION
C BOUNDARY NAILING AL TRANSFER SWITCH NATIONAL ELECTRICAL MANUFACTURERS ASSOC. NUMBER NOT TO SCALE AST CONCRETE DNAL COMMUNICATION SERVICES REFERENCE REINFORCEMENTING) REQUIRED RIGID GALVANIZED STEEL SENCY GENERATOR RECEPTACLE N BARE COPPER SWITCH
TELEPHONE
TELEPHONE
TEMPORARY
THICKINESS)
TOE NAIL
TOP OF CURB
TOP OF CURB
TOP OF FUNDATION
TOP OF PLATE [PARAPET]
TOP OF SPECIAL
TOP OF WALL
TYPICAL VOLT VOLT ALTERNATING CURRENT H (CABINET) UND FAULT CIRCUIT INTERRUPTER
LAMINATED BEAM GLOBAL POSITIONING SYSTEM ARD DRAWN COPPER WIRE

AT&T Wireless 5001 Executive Parkway San Ramon, CA 94583



idion Management LLC 5 Oak Grave Road E2

Project Architect:



575 LENNON LANE SUITE 125 WALNUT CREEK, CA 94598 T 925.482.8500

Site Agent:

90% Zoning Drawings

Drawing Phase:

CRAN-RSFR-SFOK7-011 PACE ID: ROW AT 4390 TELEGRAPH AVE, OAKLAND, CA 94609 COUNTY: ALAMEDA

Site Name:

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Date	Description
09/27/17	Zoning Dwgs 90%

Project No.:

Date: 09/27/17 Job No.:

Scale: AS SHOWN CAD File:

Designed By: JG Checked:

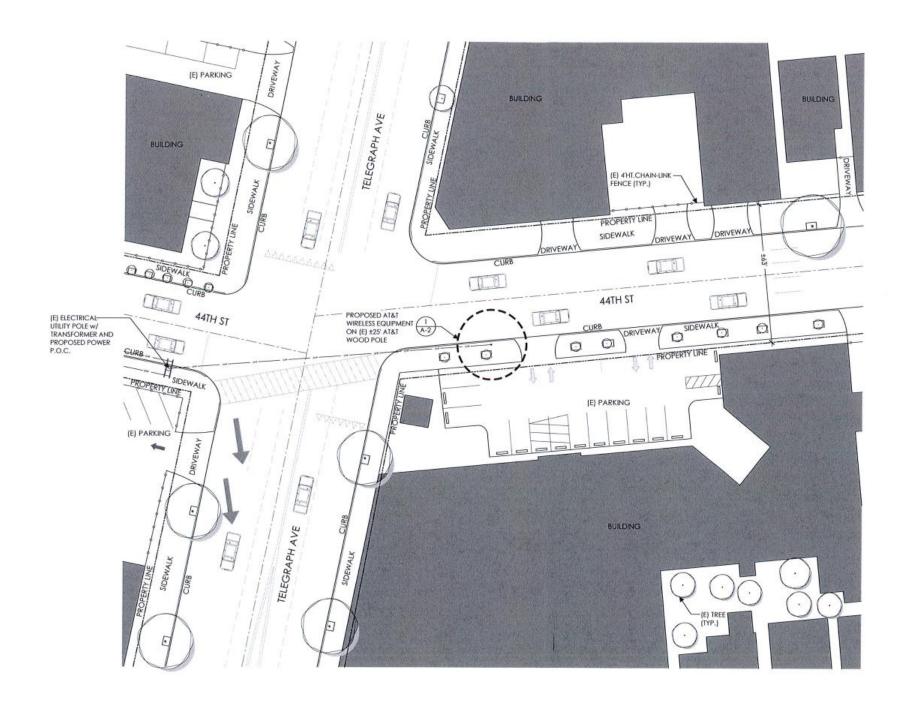
**GENERAL NOTES** LEGEND **ABBREVIATIONS** 

Sheet No.:

Metidian Management LLC, 2017

LEGEND

**ABBREVIATIONS** 



NOTE:
THIS SITE PLAN WAS GENERATED WITHOUT THE USE OF A SURVEY, PROPERTY LINES, RIGHT-OF-WAYS, POWER & TELCO UTILITY POINT CONNECTIONS/ROUTES AND EASEMENTS SHOWN ON THESE PLANS ARE ESTIMATED. ALL ITEMS AND DIMENSIONS SHOULD BE VERIFIED IN THE FIELD.

UNDERGROUND UTILITIES NOTE:
THE LOCATIONS AND EXISTENCE OF ANY UNDERGROUND PIPES, STRUCTURES, OR CONDUITS SHOWN ON THIS PLAN WERE OBTAINED BY A SEARCH OF AVAILABLE RECORDS. THERE MAY BE EXISTING UTILITIES OTHER THAN THOSE SHOWN ON THIS PLAN. THE CONTRACTOR IS REQUIRED TO TAKE PRECAUTIONARY MEASURES TO PROTECT THE UTILITY LINES SHOWN AND ANY OTHER LINES NOT SHOWN ON THIS PLAN.





5001 Executive Parkway San Ramon, CA 94583



785 Ook Grave Road E2 Concord. CA 94518 707.592.5924

Project Architect:



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Rev. Date Description 09/27/17 Zoning Dwgs 90%

Project No.:

Date: 09/27/17 Job No.:

Scale: AS SHOWN CAD File:

Designed By: JG Checked: RB

OVERALL SITE PLAN

20' 10' 0 10' 20'

- (N) AT&T EQUIPMENT TO BE MOUNTED IN THE 9:00 QUADRANT
- CLIMBING SPACE BETWEEN 12:00 & 3:00 POLE STEPS REQUIRED FROM 8.5' TO COMMUNICATIONS ZONE PER GO95
- STEPS SHOULD BE USABLE WHEN INSTALLED WITHIN CLIMBING SPACE

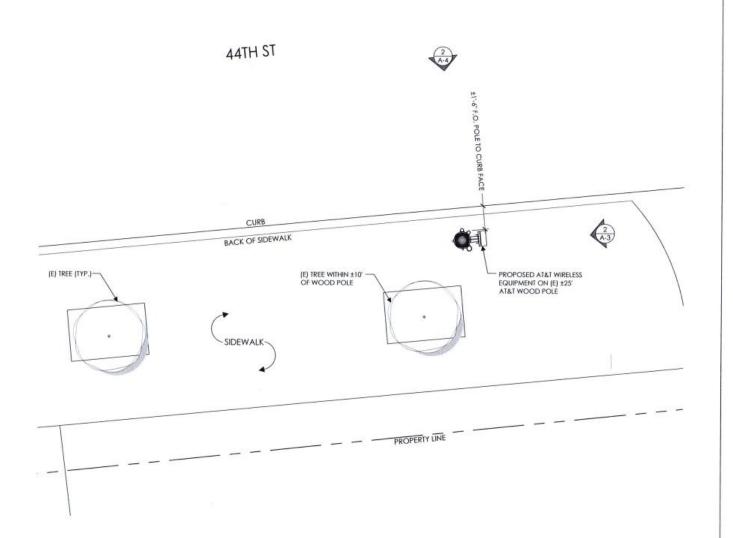
### EQUIPMENT SYSTEM:

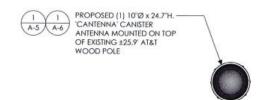
ALL NEW COMPONENTS NOT SHOP PAINTED SHOULD BE FIELD PAINTED SHERWIN WILLIAMS MESA BROWN

# NEW CONDUIT FOR POWER/TELCO:

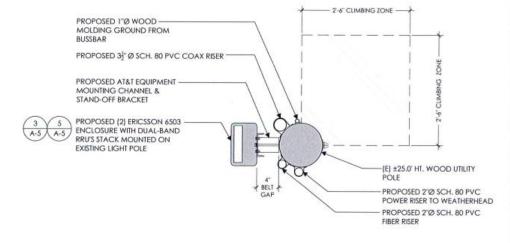
- (1) 2" CONDUIT FOR POWER (1) 2" CONDUIT FOR FIBER

- (1) 3½" CONDUIT FOR COAX (1) 1" WOOD MOLDING FOR GROUND

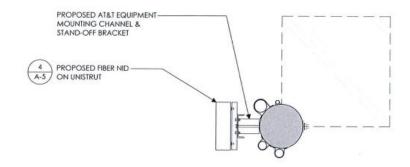




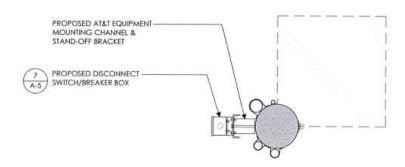
### A. SECTION (CANISTER ANTENNA)



### B. SECTION (RRUS)



### C. SECTION (FIBER)



D. SECTION (DISCONNECT SWITCH/BREAKER BOX)

AT&T Wireless 5001 Executive Parkway San Ramon, CA 94583



Project Architect:



575 LENNON LANE SUITE 125 WALNUT CREEK, CA 94598 T 925.482.8500

Site Agent:

90% Zoning Drawings

(E) LIGHT POLE Drawing Phase:

CRAN-RSFR-SFOK7-011 PACE ID: ROW AT 4390 TELEGRAPH AVE, OAKLAND, CA 94609 COUNTY: ALAMEDA

Professional Seal:

It is a violation of law for any person, unless they are acting under the direction of a licensed Professional Architect/Engineer, to alter this document.

Description Rev. Date 09/27/17 Zoning Dwgs 90%

Project No.:

Date: 09/27/17 Job No.: Scale: AS SHOWN CAD File:

Designed By: JG Checked: RB

POLE PLAN EQUIPMENT **ENLARGEMENTS** 

POLE PLAN ENLARGEMENT

16' 8' 0 8' 16'

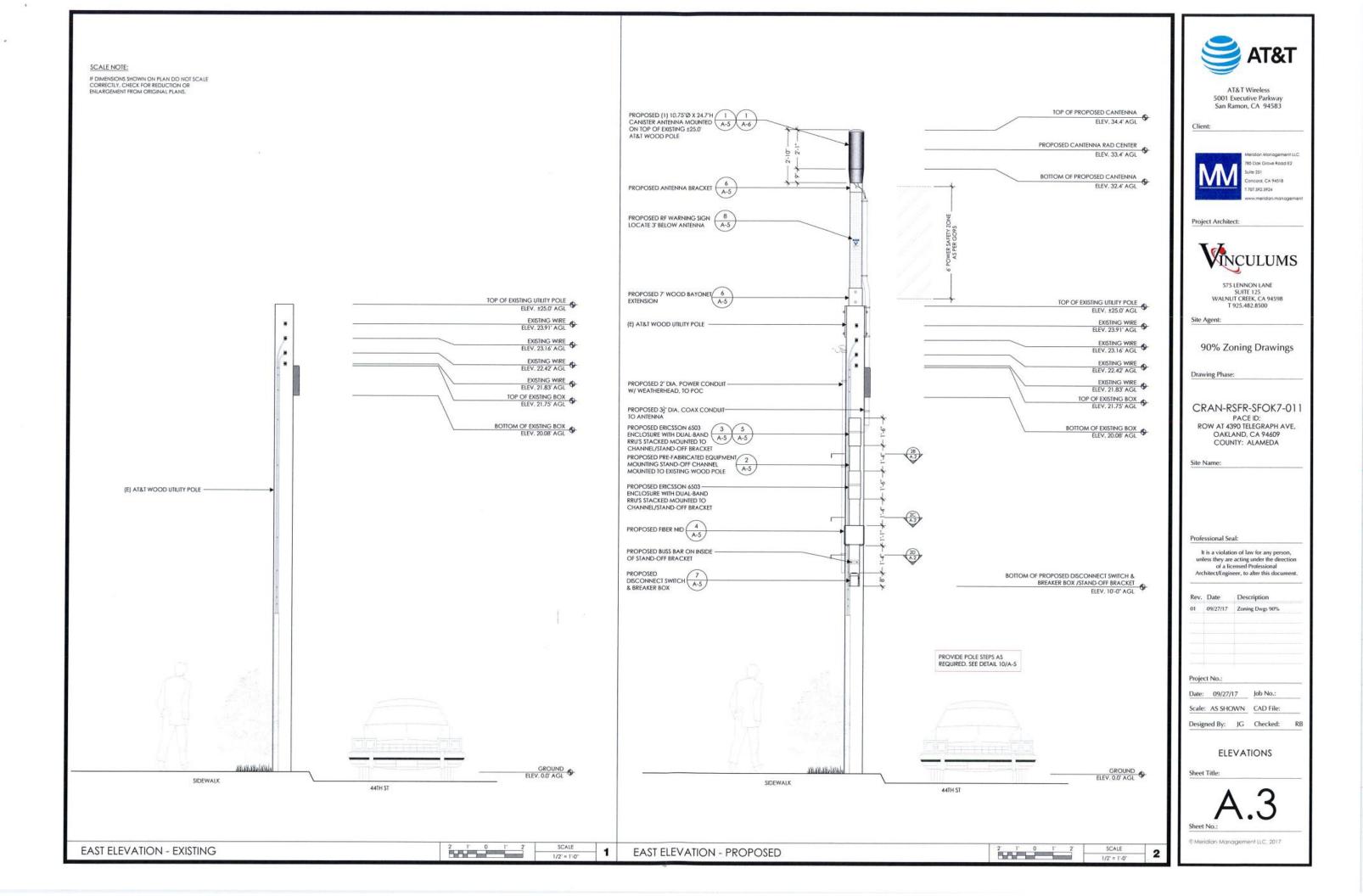
SCALE 3/8" = 1"-0"

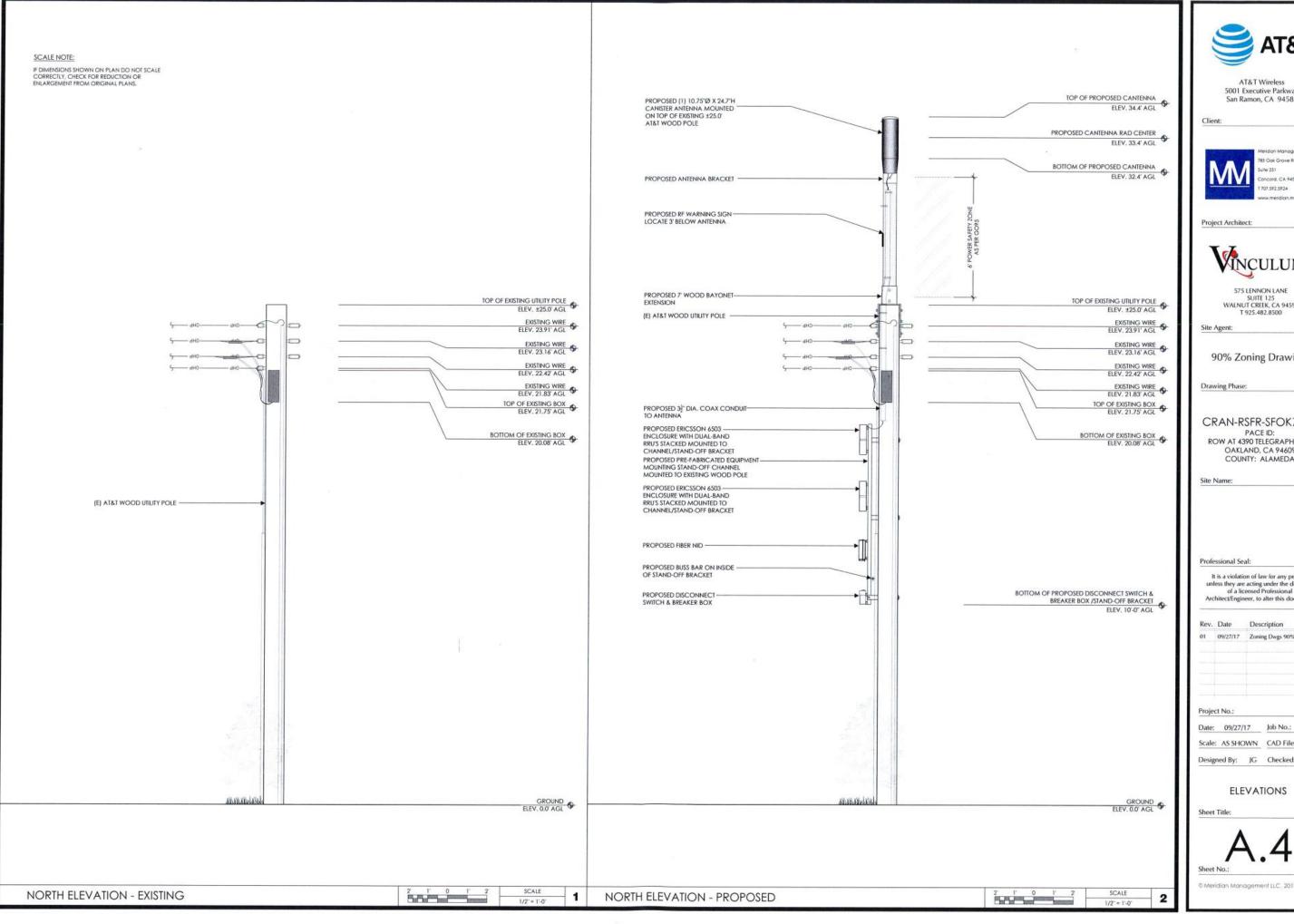
NORTH

POLE PLAN ENLARGEMENTS

6 0 6

SCALE 1" = 1'-0"







AT&T Wireless 5001 Executive Parkway San Ramon, CA 94583



785 Oak Grove Road E2 Concord, CA 94518 707.592.5924



575 LENNON LANE SUITE 125 WALNUT CREEK, CA 94598 T 925.482.8500

90% Zoning Drawings

CRAN-RSFR-SFOK7-011 PACE ID: ROW AT 4390 TELEGRAPH AVE, OAKLAND, CA 94609 COUNTY: ALAMEDA

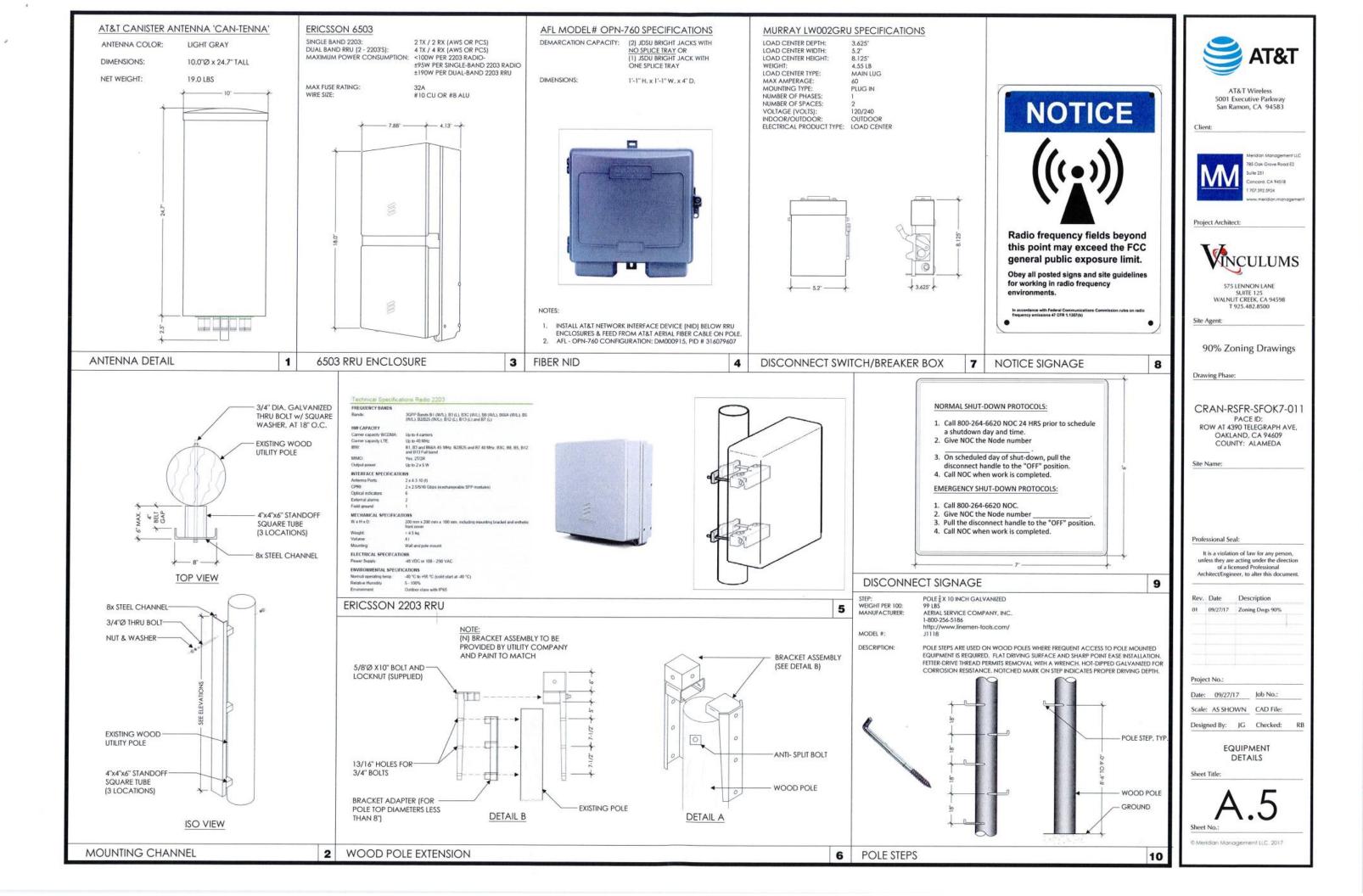
It is a violation of law for any person, unless they are acting under the direction of a licensed Professional Architect/Engineer, to alter this document.

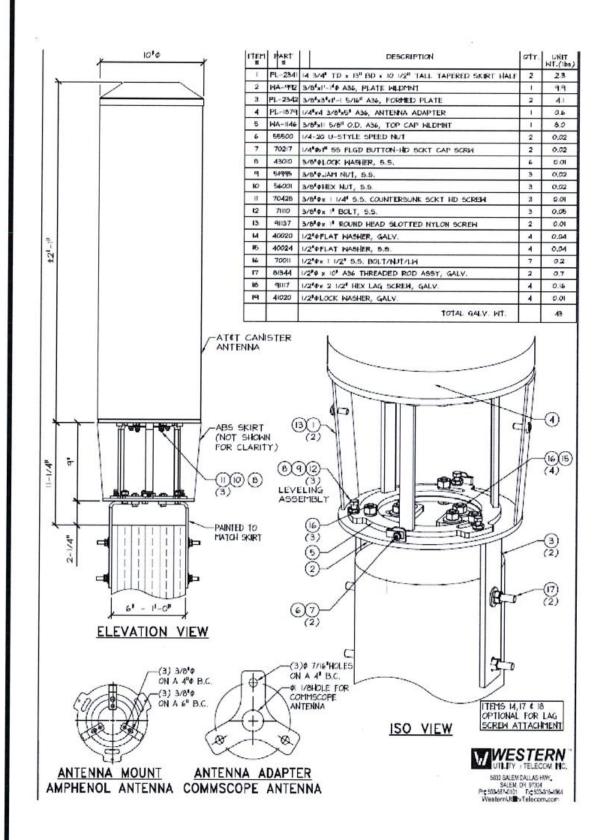
Description

Scale: AS SHOWN CAD File:

Designed By: JG Checked: RB

ELEVATIONS







AT&T Wireless 5001 Executive Parkway San Ramon, CA 94583



oncord, CA 94518 707.592.5924

Project Architect:



575 LENNON LANE SUITE 125 WALNUT CREEK, CA 94598 T 925.482.8500

90% Zoning Drawings

Drawing Phase:

CRAN-RSFR-SFOK7-011 PACE ID: ROW AT 4390 TELEGRAPH AVE, OAKLAND, CA 94609 COUNTY: ALAMEDA

unless they are acting under the direction of a licensed Professional Architect/Engineer, to alter this document.

Rev. Date Description 09/27/17 Zoning Dwgs 90%

Project No.:

Date: 09/27/17 Job No.:

Scale: AS SHOWN CAD File:

Designed By: JG Checked: RB

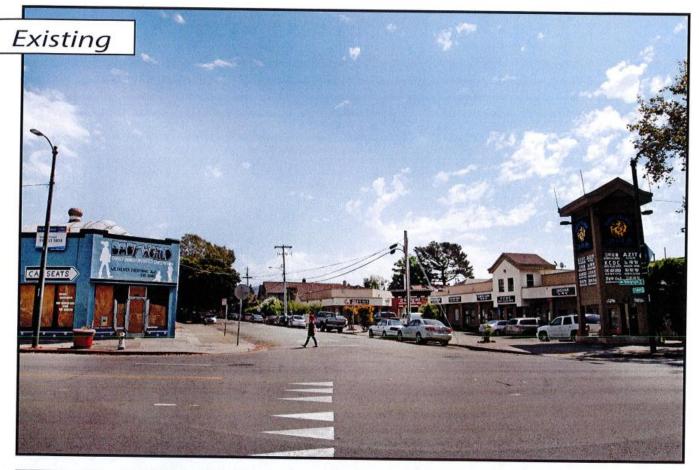
EQUIPMENT **DETAILS** 

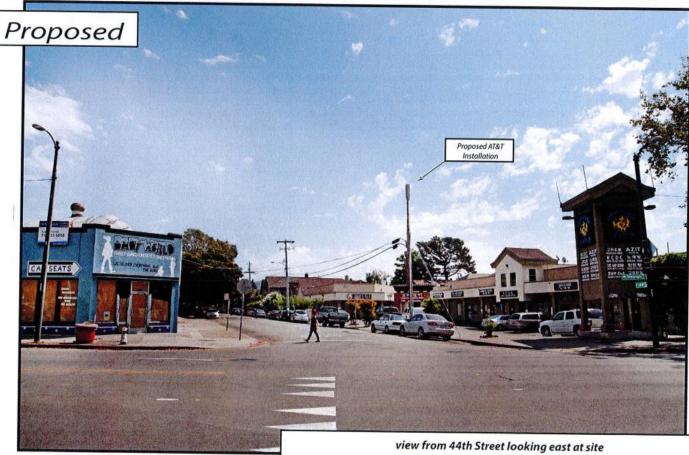
POLE TOP MOUNT W/ SKIRT ASSEMBLY DETAIL

1

NOT USED

2





Advance Simple Photo Simulation Solutions Contact (925) 202-8507

**AT&T** Wireless

CRAN-RSFR-SFOK7-011 4390 Telegraph Avenue, Oakland, CA Photosims Produced on 9-29-2017 view from 44th Street looking southwest at site

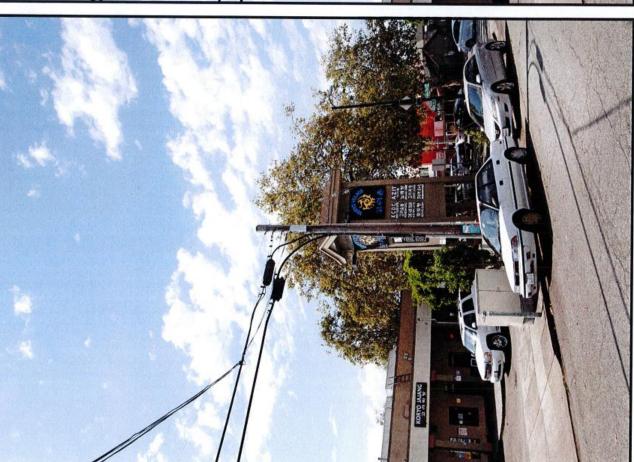
CRAN-RSFR-SFOK7-011

AT&T Wireless

Existing

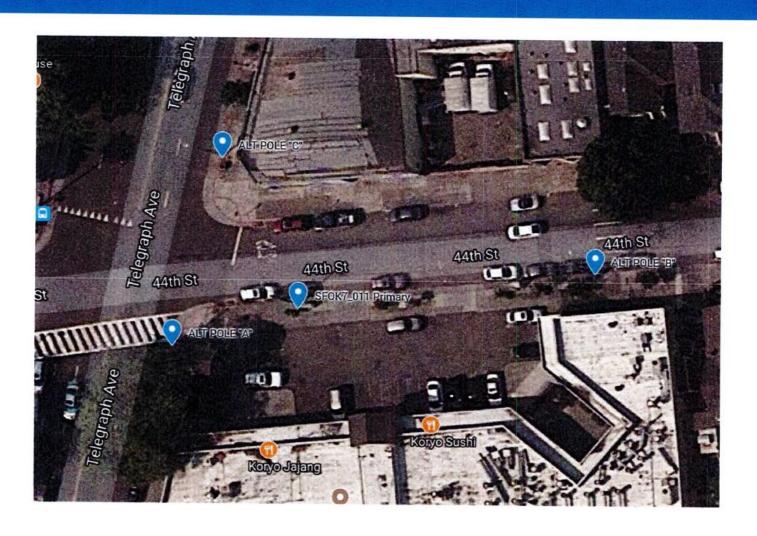
4390 Telegraph Avenue, Oakland, CA Photosims Produced on 9-29-2017







# **ALTERNATIVE SITE ANALYSIS SFOK7\_011**

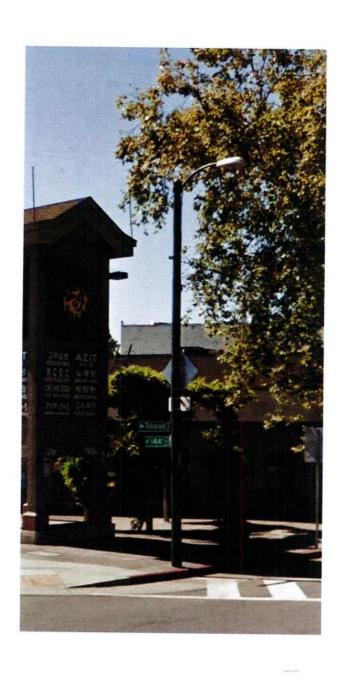




# AT&T PROPOSED LOCATION

SFOK7\_011 4390 Telegraph Ave., Oakland, CA 94609 APN: 13-1098-33-4 37.8322600, -122.2633500

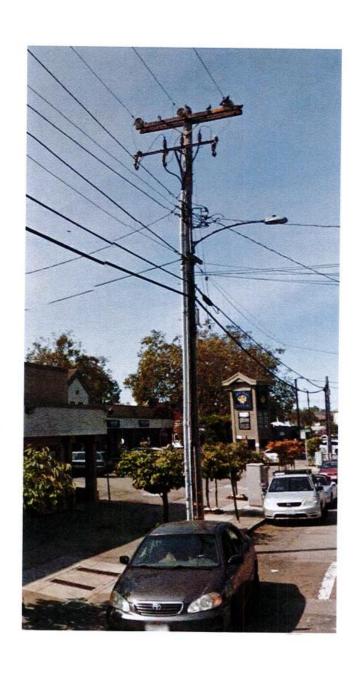
The project is located in an area with both existing residential & commercial structures. AT&T considered alternate utility poles immediately adjacent but none were desirable from a service coverage need, CPUC standards, PG&E standards, or an aesthetics perspective. The proposed project is in an underserved area.



# **ALTERNATIVE POLE "A"**

PG&E Wood Utility Pole 4390 Telegraph Ave., Oakland, CA 94609 37.832213, -122.263541

Findings: Metal streetlight is viable alternative.



# **ALTERNATIVE POLE "B"**

PG&E Wood Utility Pole 4390 Telegraph Ave., Oakland, CA 94609 37.832304, -122.262899

Findings: PG&E wood utility poles with primary risers are precluded from attachment.



# **ALTERNATIVE POLE "C"**

PG&E Wood Utility Pole 4400 Telegraph Ave, Oakland, CA 94609 37.832443, -122.263467

Findings: Metal streetlight is viable alternative.

# ALTERNATIVE DESIGN ANALYSIS

SFOK7\_011

APN:

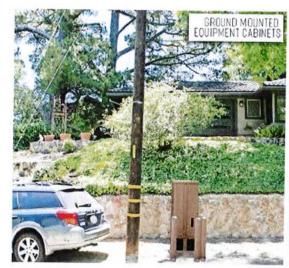
13-1098-33-4

LAT/LONG:

37.8322600, -122.2633500

The project is located in an area with existing commercial structures. AT&T considered alternative monopole designs (see below) in this area but none of these designs are as desirable from a planning perspective or from an aesthetics perspective to minimize visual impacts. The proposed project is in an underserved area.

# Alternative light pole designs considered







# AT&T Mobility • Proposed Small Cell (No. CRAN-RSFR-SFOK7-011) 4390 Telegraph Avenue • Oakland, California

# Statement of Hammett & Edison, Inc., Consulting Engineers

The firm of Hammett & Edison, Inc., Consulting Engineers, has been retained on behalf of AT&T Mobility, a personal wireless telecommunications carrier, to evaluate its small cell (No. CRAN-RSFR-SFOK7-011) proposed to be sited in Oakland, California, for compliance with appropriate guidelines limiting human exposure to radio frequency ("RF") electromagnetic fields.

# **Executive Summary**

AT&T proposes to install an omnidirectional cylindrical antenna on a utility pole sited in the public right-of-way at 4390 Telegraph Avenue in Oakland. The proposed operation will comply with the FCC guidelines limiting public exposure to RF energy.

# **Prevailing Exposure Standards**

The U.S. Congress requires that the Federal Communications Commission ("FCC") evaluate its actions for possible significant impact on the environment. A summary of the FCC's exposure limits is shown in Figure 1. These limits apply for continuous exposures and are intended to provide a prudent margin of safety for all persons, regardless of age, gender, size, or health. The most restrictive FCC limit for exposures of unlimited duration to radio frequency energy for several personal wireless services are as follows:

Wireless Service	Frequency Band	Occupational Limit	Public Limit
Microwave (Point-to-Point)	5,000-80,000 MHz	5.00 mW/cm <sup>2</sup>	1.00 mW/cm <sup>2</sup>
BRS (Broadband Radio)	2,600	5.00	1.00
AWS (Advanced Wireless)	2,100	5.00	1.00
PCS (Personal Communication)	1,950	5.00	1.00
Cellular	870	2.90	0.58
SMR (Specialized Mobile Radi	o) 855	2.85	0.57
700 MHz	700	2.35	0.47
[most restrictive frequency rang	ge] 30–300	1.00	0.20

Power line frequencies (60 Hz) are well below the applicable range of these standards, and there is considered to be no compounding effect from simultaneous exposure to power line and radio frequency fields.

# **General Facility Requirements**

Small cells typically consist of two distinct parts: the electronic transceivers (also called "radios") that are connected to the traditional wired telephone lines, and the passive antennas that send the wireless signals created by the radios out to be received by individual subscriber units. The transceivers are typically mounted on the support pole or placed in a cabinet at ground level, and they are connected to the antennas by coaxial cables. Because of the short wavelength of the frequencies assigned by the



# AT&T Mobility • Proposed Small Cell (No. CRAN-RSFR-SFOK7-011) 4390 Telegraph Avenue • Oakland, California

FCC for wireless services, the antennas require line-of-sight paths for their signals to propagate well and so are installed at some height above ground. The antennas are designed to concentrate their energy toward the horizon, with very little energy wasted toward the sky or the ground. This means that it is generally not possible for exposure conditions to approach the maximum permissible exposure limits without being physically very near the antennas.

# Computer Modeling Method

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

# Site and Facility Description

Based upon information provided by AT&T, including drawings by Meridian Management LLC, dated September 27, 2017, it is proposed to install one KMW Model FLT-OM10H2, 2-foot tall, omnidirectional cylindrical antenna, on top of an existing utility pole sited in the public right-of-way on the south side of 44th Street, just east of Telegraph Avenue, next to the parking lot for the building at 4390 Telegraph Avenue. The antenna would employ 2° downtilt and would be mounted at an effective height of about 33½ feet above ground. The maximum effective radiated power in any direction would be 100 watts for PCS service. There are reported no other wireless telecommunications base stations at this site or nearby.

# Study Results

For a person anywhere at ground, the maximum RF exposure level due to the proposed AT&T operation is calculated to be 0.0017 mW/cm<sup>2</sup>, which is 0.17% of the applicable public exposure limit. The maximum calculated level at the second-floor elevation of any nearby building is 0.10% of the public exposure limit. It should be noted that these results include several "worst-case" assumptions and therefore are expected to overstate actual power density levels from the proposed operation.

# No Recommended Mitigation Measures

Due to its mounting location and height, the AT&T antenna would not be accessible to the general public, and so no mitigation measures are necessary to comply with the FCC public exposure



# AT&T Mobility • Proposed Small Cell (No. CRAN-RSFR-SFOK7-011) 4390 Telegraph Avenue • Oakland, California

guidelines. The occupational limit is calculated to extend 4 inches from the antenna and, due to this short distance, the proposed operation is considered intrinsically compliant with that limit.

# Conclusion

Based on the information and analysis above, it is the undersigned's professional opinion that operation of the small cell proposed by AT&T Mobility, at 4390 Telegraph Avenue in Oakland, California, will comply with the prevailing standards for limiting public exposure to radio frequency energy and, therefore, will not for this reason cause a significant impact on the environment. The highest calculated level in publicly accessible areas is much less than the prevailing standards allow for exposures of unlimited duration. This finding is consistent with measurements of actual exposure conditions taken at other operating small cells.

# **Authorship**

The undersigned author of this statement is a qualified Professional Engineer, holding California Registration Nos. E-13026 and M-20676, which expire on June 30, 2019. This work has been carried out under his direction, and all statements are true and correct of his own knowledge except, where noted, when data has been supplied by others, which data he believes to be correct.

November 3, 2017



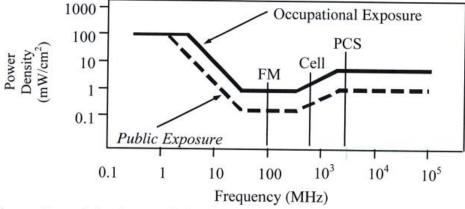
William F. Hammett, P.E. 707/996-5200

# **FCC Radio Frequency Protection Guide**

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

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

Frequency	Electro	omagnetic F	ields (f is fi	requency of	emission in	ı MHz)	
Applicable Range (MHz)	Ele Field S	ctric Strength /m)	Magnetic Field Strength (A/m)		Equivalent Far-Field Power Density (mW/cm <sup>2</sup> )		
0.3 - 1.34	614	614	1.63	1.63	100	100	
1.34 - 3.0	614	823.8/f	1.63	2.19/f	100	$180/f^2$	
3.0 - 30	1842/ f	823.8/f	4.89/ f	2.19/f	900/ f <sup>2</sup>	180/f²	
30 - 300	61.4	27.5	0.163	0.0729	1.0	0.2	
300 - 1,500	3.54 <b>√</b> f	1.59√f	$\sqrt{f}/106$	$\sqrt{f/238}$	f/300	f/1500	
1,500 - 100,000	137	61.4	0.364	0.163	5.0	1.0	



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



HAMMETT & EDISON, INC.

# RFR.CALC<sup>™</sup> Calculation Methodology

# Assessment by Calculation of Compliance with FCC Exposure Guidelines

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

# Near Field.

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

For a panel or whip antenna, power density 
$$S = \frac{180}{\theta_{BW}} \times \frac{0.1 \times P_{net}}{\pi \times D \times h}$$
, in mW/cm<sup>2</sup>,

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

where  $\theta_{BW}$  = half-power beamwidth of the antenna, in degrees, and

 $P_{net}$  = net power input to the antenna, in watts,

D = distance from antenna, in meters,

h = aperture height of the antenna, in meters, and

 $\eta$  = aperture efficiency (unitless, typically 0.5-0.8).

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

# Far Field.

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

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

where ERP = total ERP (all polarizations), in kilowatts,

RFF = relative field factor at the direction to the actual point of calculation, and

D = distance from the center of radiation to the point of calculation, in meters.

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





# **Utility Contact System Search**

The Utility Contact System (UCS) is the Communications Division's database for the primary regulatory contact for each telephone corporation operating in California. The Communications Division sends important for primary regulatory notices to the regulatory contact for each telephone corporation via e-mail, so it is important for primary regulatory contacts to update their UCS record if their e-mail address changes.

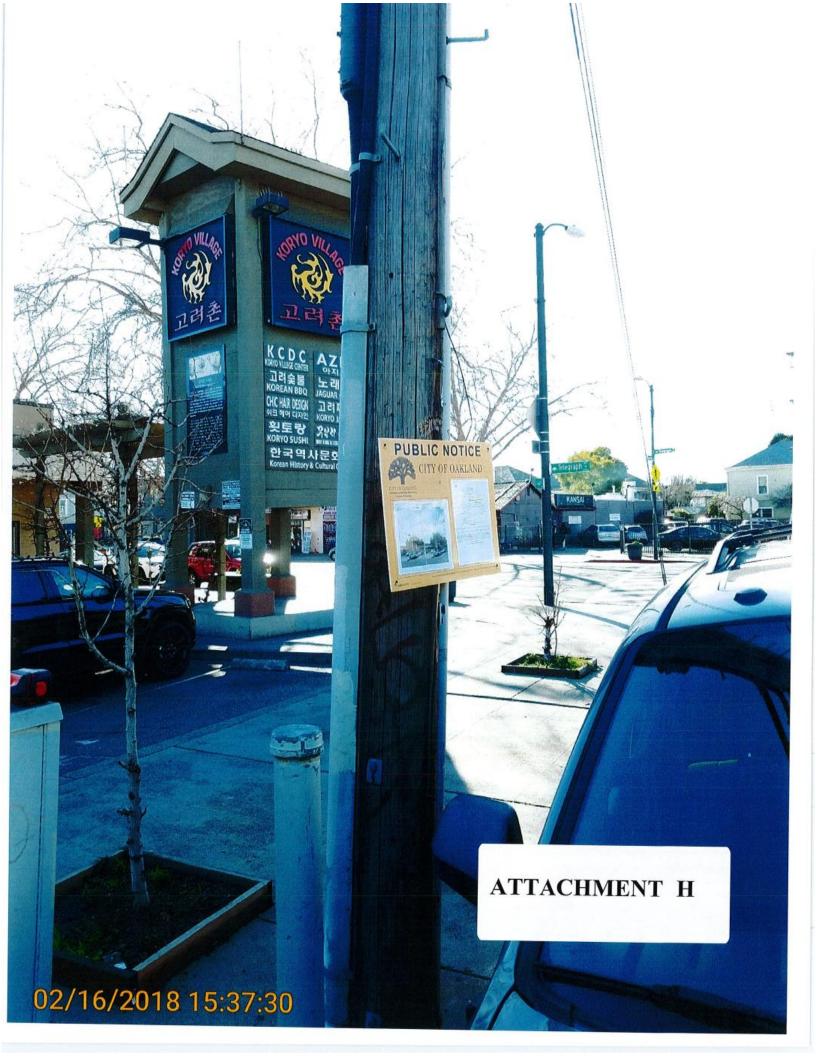
Telephone corporations may update UCS contact information using the form on the following page: Carrier Reporting Requirements

A description of the different utility types (granted authorities) are listed on the following page: <u>Utility Type Descriptions</u>

Search Utility Name		S	earch Utility Numbe	r 3060			Search Clea	ar		
Utility Name A	Alias (DBA Name)	Utility Number	Street Address	City	State	Zip	Phone Number	Email	Utility Type	CPCN App
New Cingular Wireless Pcs, LLC	CINGULAR WIRELESS	3060	430 BUSH STREET	SAN FRANCISCO	CA	94108	(415) 778-1299	att-regulatory-ca@att.com	CEC CEC	12-21-1995
New Cingular Wireless Pcs, LLC	CINGULAR WIRELESS	3060	7405 GREENHAVEN DRIVE	SACRAMENTO	CA	95831	(800) 498-1912	west.region.oopsac@awsmail.att.com	CEC	12-21-1995
New Cingular Wireless Pcs, LLC	CINGULAR WIRELESS	3060	11760 US HIGHWAY ONE, WEST TOWER	NORTH PALM BEACH	FL	33048	770-240-8849		CEC	12-21-1995

Save Search Results as CSV Spreadsheet

Comments & Feedback





# AT&T OPEN HOUSE



AT&T is improving wireless service in Oakland!

We will soon be proposing state-of the-art small cell wireless facilities including antennas, attached to existing utility poles and light poles.

Want to learn more?

Please join us for an open house showcasing AT&T's network, designs, permitting and radio frequency engineering.

Tuesday, January 30th, 2018
Open House–Stop by anytime between 6pm–8pm
Light refreshments served
Temescal Oakland Public Library
5205 Telegraph Ave., Oakland, CA 94609

If you have any questions, please feel free to contact:
oaklandoutreach@vinculums.com
(925) 482-8550



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We will soon be proposing state-of the-art small cell wireless facilities including antennas, attached to existing utility poles and light poles.

# Want to learn more?

Please join us for an open house showcasing AT&T's network, designs, permitting and radio frequency engineering.

Monday, January 8th, 2018
Open House–Stop by anytime between 6 –8PM
Light refreshments served
Preservation Park - Nile Hall
1233 Preservation Park Way, Oakland, CA 94612

If you have any questions, please feel free to contact:
oaklandoutreach@vinculums.com
(925) 482-8550

# Map data ©2018 Google AT&T Oakland Small Cell Master Plan Map