SAMPLE PERMIT APPLICATION

Department of Public Works
Encroachment Permit Application

CUPERTINO
10300 Torre Ave
Cupertino, CA 95014-3255
PH: (408) 777-3354
FX: (408) 777-3333

PERMIT # P2018-00231

Revised 9/2015

Location of Work: Public Right of Way Near 10465 S De Anza Blvd

Building Permit #: N/A

Type of Work: check all that apply

☐ Sidewalk ☐ Driveway Approach ☐ Curb & Gutter ☐ Street Light ☐ Curb Ramp

☐ Paving ☐ Utility Trench ☐ Monitoring Well ☐ Pool ☐ Fiber Cable ☐ News Rack

☒ Other: Install new Verizon Wireless small cell site on a Cupertino streetlight pole

PERMITTEE:

Name: Verizon Wireless (c/o Modus Inc)

Address: 240 Stockton St, 3rd Floor

San Francisco, CA 94108

Phone: 408-219-5442

Start Date: 6/12/18 (rough forecast)

# of Working days: 3

CONTRACTOR:

Name: Modus Inc

Address: 240 Stockton St 3rd Floor

San Francisco, CA 94108

24 hr. Contact: Cal Bordonaro

24 hr. Phone: 415-261-0000

Contractor's Lic. No. : C-997355

City Business Lic. No. : TBD (app filed)

ATTACH THE FOLLOWING TO APPLICATION:

1) Written Description of Work
2) Engineer's Cost Estimate
3) Detailed Traffic Control Plan including plan of existing pavement delineation (traffic stripes, pavement markings, and pavement markers) and signs
4) Project Plans and Specifications
5) Contractors Insurance Certificate (Insurance requirements listed on reverse)

Permittee Signature: K~B~ Date: 2/8/18

(CITY USE ONLY)

Expiration Date: 11/25/18

Permit Fee $ 1,500.00 Bond $ n/a Type of Bond: ☐ Cash ☐ Paper ☐ Certificate of Deposit

Receipt #: n/a

Bond Retention Schedule n/a

Approved By: JoAnne Johnson Date: 5/25/18

Inspected By: _____ Date: _____

SEE REVERSE FOR PERMIT CONDITIONS

SPECIAL CONDITIONS

[X] Work hours limited to Monday - Friday: [ ] 7:00 a.m. [X] 9:30 AM to [X] 3:30 PM [ ] 6:00 p.m.

[X] Work hours in pavement limited to: [ ] 8:00 a.m. [X] 9:30 AM to [X] 3:30 PM [ ] 4:30 p.m.

[X] Any violation of working hours shall result in "STOP WORK" notice

[X] Two lanes of traffic to be maintained at all times

[X] Permanent paving must be installed **WITHIN 5 WORKING DAYS** after completion

[X] Pavement delineation or signs damaged during construction shall be replaced in kind

[X] Pavment section shall match existing

[ ] Slurry Seal is required to match existing pavement

[ ] All Trenching shall be backfilled to a minimum of 95% relative compaction

[ ] Trench plates in the travel way shall be traffic rated, properly secured and shall be recessed upon request

[ ] If trench is 3' or less from Lip of Gutter, contractor shall repave to Lip of Gutter.

[ ] Jobsite shall be properly posted 48 hours in advance. Barricades must bear the name and phone number (24 hour number) of the contractor or utility performing work. All signs attached to barricades must show the days and dates when work will be performed. Parking may not be restricted on Saturday or Sunday.

[X] BMP Sheet Attached

[ ] Potholes and bore pits shall be filled to grade with cutback at end of each work day:

[ ] Other _____

_____

_____

General Conditions

1) The Public Works Inspector of the City of Cupertino, (408) 777-3104, shall be notified at least 48 hours prior to beginning work in the public Right-of-Way or requesting inspection of work. After the work is completed, notify the Public Works Inspector to schedule a final inspection.

2) A copy of this permit must be kept on the job site.

3) The applicant shall notify County Communications, (408) 299-2501, at least 24 hours prior to any work in the traveled way section of a street.

4) Permittee shall employ construction best management practices which will prevent pollutants such as mud, silt, chemical residue, and washings from concrete saw-cutting from entering storm drains. Brochures are available at the Public Works counter.

5) The applicant agrees that if the encroachment for which this permit is issued which shall at any time in the future interfere with the use, repair, improvement, widening, or change of grade of any street, roadway, highway, sidewalk, curb, drain, or Right-of-Way, applicant or his successor or assigns, shall within 14 days after receipt of written notice from the Director of Public Works to do so, at its own expense either remove such encroachment subject to approval from the Director, or relocate to a site which may be designated by the Director. Any encroachment removed by the City will not be replaced.

6) It is further agreed that, commencing with the performance of the Work by the Permittee or his contractor and continuing until the completion of the maintenance of the Work, the Permittee shall indemnify, hold harmless and defend the City from and against any or all loss, cost, expense, damage or liability, or claim thereof, occasioned by or in any way whatsoever arising out of the performance or nonperformance of the Work or the negligence or willful misconduct of the Permittee or the Permittee's agents, employees and independent contractors, except to the extent any of the foregoing is caused by the sole negligence or willfull misconduct of the City or the City's agents, employees and independent contractors.

7) Should the Permittee provide services which are subject to the City's Franchise ordinance, Permittee agrees to pay any applicable City franchise fee.

8) This encroachment permit shall be terminable at the sole discretion of the City upon 30 days written notice to the Permittee.

9) The applicant's contractor shall carry at all times commercial general liability insurance with a combined single limit of $1.0 million per occurrence; $2.0 million aggregate; and provide a Certificate of Insurance and Endorsement naming the City as Additional Insured. Insurers must be licensed to do business within the State of California and have a current Best's Guide Rating of A, Class VII or better or that is otherwise acceptable to the City.

10) All work within the public Right of Way must be completed by a contractor who holds a current Class A or appropriate Class C license and a current City of Cupertino business license.

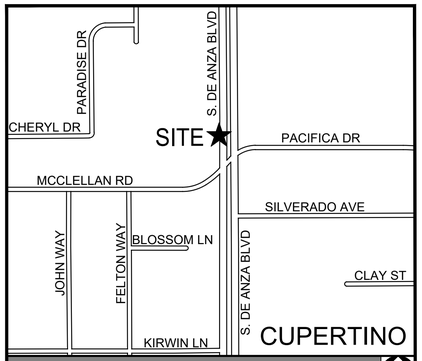
11) Permittee and Contractor shall comply with Chapter 11.32 of the Cupertino Municipal Code "Truck Traffic Routes". **No person shall operate or drive any truck that exceeds a gross weight of three tons between the hours of 7:00 a.m and 9:30 am or 2:00 p.m and 4:00 p.m. on the following roadway segments:**

a) any roadway which runs contiguous to and is within 500 feet of any public school grounds

b) McClellan Road, between Stelling Road and Bubb Road.

verizon

SITE NAME:	**SF_CUPER001**
SITE ID:	**CPSC001**
LOCATION CODE:	**417709**
ASSET ID:	**LTPL1004**
BADGE NUMBER:	**24431**
SERVICE ID:	**4993063026**
SITE ADDRESS:	**PUBLIC ROW ADJACENT TO 10465 S. DE ANZA BOULEVARD CUPERTINO, CA 95014**
COUNTY:	**SANTA CLARA COUNTY**
SITE TYPE:	**STEEL LIGHT POLE**



VICINITY MAP

DIRECTIONS FROM VERIZON WIRELESS OFFICE WALNUT CREEK, CA:

- HEAD NORTHEAST ON MITCHELL DR TOWARD OAK GROVE RD
- TURN LEFT ONTO OAK GROVE RD
- USE THE LEFT 2 LANES TO TURN LEFT ONTO TREAT BLVD
- TURN RIGHT ONTO N MAIN ST
- TURN RIGHT ONTO THE INTERSTATE 680 S RAMP TO OAKLAND/SAN JOSE
- MERGE ONTO I-680 S
- CONTINUE ONTO I-280 N
- USE THE 2ND FROM THE RIGHT LANE TO TAKE THE DE ANZA BOULEVARD EXIT
- USE THE LEFT 2 LANES TO TURN LEFT ONTO N DE ANZA BLVD

DRIVING DIRECTIONS

TITLE	SIGNATURE	DATE
VERIZON PM		
VERIZON CM		
VERIZON RF		
MODUS PM		
MODUS CM		
UTILITIES		
LANDLORD/ PROPERTY OWNER		

SIGNATURE BLOCK

PROJECT DESCRIPTION

THE PROJECT INVOLVES THE INSTALLATION OF AN UNMANNED WIRELESS TELECOMMUNICATION FACILITY CONSISTING OF AN ANTENNA AND ASSOCIATED EQUIPMENT ON A CITY OF CUPERTINO REPLACEMENT STEEL LIGHT POLE IN THE PUBLIC RIGHT OF WAY. EXISTING POLE AND FOUNDATION TO BE REMOVED AND REPLACED WITH NEW STEEL POLE AND CONCRETE FOUNDATION. EXISTING POLE FOUNDATION TO BE DEMOLISHED TO A MINIMUM DEPTH BELOW EXISTING GRADE AND ABANDONED IN PLACE.

GENERAL SCOPE OF WORK

☐ ANTENNA AND ASSOCIATED EQUIPMENT
INSTALL A NEW CYLINDRICAL ANTENNA AND EQUIPMENT ON A STEEL LIGHT POLE. INSTALLATION CONSISTS OF (1) NEW CYLINDRICAL ANTENNA CONCEALED WITHIN NEW CONCEALMENT SHROUD AT TOP OF LIGHT POLE, (2) NEW RRUS EQUIPMENT CABINETS AND (1) NEW LOAD CENTER/ DISCONNECT MOUNTED TO LIGHT POLE AND ASSOCIATED POWER, FIBER AND COAXIAL CABLES ROUTED WITHIN LIGHT POLE.

☐ PAINT
ALL NEW EQUIPMENT AND MOUNTING COMPONENTS SHALL BE PAINTED TO MATCH LIGHT POLE, INCLUDING ANTENNA SHROUD, MOUNTING BRACKETS, CABLE SHROUD/ SWEEP, RRUS UNITS, RRUS MOUNTING BRACKETS AND LOAD CENTER.

☐ CABLING
CABLING TO BE INSTALLED IN A TIGHT NEAT MANNER WITHOUT EXCESS CABLE LOOPS.

☐ SIGNAGE
FCC MANDATED RF NOTICE/ WARNING AND SHUT-DOWN SIGNAGE TO BE MOUNTED TO LIGHT POLE PER FCC REQUIREMENTS, THE CITY OF CUPERTINO REQUIREMENTS, THE CALIFORNIA PUBLIC UTILITIES COMMISION GENERAL ORDER 95 SECTION 94.5 AND PACIFIC GAS AND ELECTRIC REQUIREMENTS.

PROJECT DESCRIPTION

APPLICANT

VERIZON WIRELESS
2785 MITCHELL DRIVE, SUITE 9
WALNUT CREEK, CA 94598
CONTACT: JENNIFER HAAS
PHONE: (650) 759-1377
EMAIL: JENNIFER.HAAS@VERIZONWIRELESS.COM

AGENT

MODUS, INC.
240 STOCKTON STREET, 3RD FLOOR
SAN FRANCISCO, CA 94108
CONTACT: KEVIN BOWYER
PHONE: (408) 219-5442
EMAIL: KBOWYER@MODUS-CORP.COM

PROPERTY OWNER

CITY OF CUPERTINO
CUPERTINO CITY HALL
10300 TORRE AVENUE
CUPERTINO, CA 95014-3202
PHONE: (408) 777-3354
EMAIL: ENGINEERING@CUPERTINO.ORG

A.P.N.:	ROW ADJACENT TO 359-17-019
OCCUPANCY TYPE:	N/A-LIGHT POLE IN ROW
CONSTRUCTION TYPE:	TYPE V-B
ZONING JURISDICTION:	CITY OF CUPERTINO
ZONING DESIGNATION:	HE4
LATITUDE (NAD 83):	37° 18' 58.99" N
LONGITUDE (NAD 83):	122° 01' 57.00" W
GROUND ELEVATION:	±248.6 AMSL

PROJECT INFORMATION

SHEET NO.	SHEET TITLE	REV.
T-1	TITLE SHEET	3
T-2	SYMBOLS, ABBREVIATIONS	3
T-3	GENERAL NOTES	3
C-1	TOPOGRAPHIC SURVEY, EXISTING CONDITIONS	1
A-1	SITE PLAN, ENLARGED ANTENNA LAYOUT, ENLARGED EQUIPMENT LAYOUT	3
A-2.0	ELEVATIONS	3
A-2.1	ELEVATIONS	3
A-3	DETAILS	3
S-1	STRUCTURAL NOTES, DETAILS	3
S-2	DETAILS	3
EP-1	SINGLE LINE DIAGRAM, EQUIPMENT GROUNDING DIAGRAM	3
EP-2	UTILITY PLAN, CONDUIT SCHEDULE, CIRCUIT DIAGRAM	3
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SP-1	SPECIFICATIONS	3
SP-2	SPECIFICATIONS	3
SP-3	SPECIFICATIONS	3

SHEET INDEX

ARCHITECT
JAMES VACCARO ARCHITECT, INC.
411 DONDEE WAY, UNIT C
PACIFICA, CA 94044
CONTACT: JAMES VACCARO, AIA
CONTACT NUMBER: (415) 608-3670
FAX NUMBER: (415) 963-4471
EMAIL: JVACCARO@JVARCHITECT.COM

SURVEYOR
HAYES LAND SURVEYING AND MAPPING
2830 MADIGAN COURT
CONCORD, CA 94518
CONTACT: RICK HAYES
CONTACT NUMBER: (925) 798-3591
EMAIL: RKSEYAH@COMCAST.NET

STRUCTURAL ENGINEER
JEFFREY M. VAN DYKE, S.E.
1470 FELTA ROAD
HEALDSBURG, CA 95448
CONTACT NUMBER: (707) 696-3721
EMAIL:JEFFREY@STRUCTURALENGINEERINGCONSULTING.COM

AGENT PROJECT MANAGER
MODUS, INC.
240 STOCKTON STREET, 3RD FLOOR
SAN FRANCISCO, CA 94108
CONTACT: KEVIN BOWYER
PHONE: (408) 219-5442
EMAIL: KBOWYER@MODUS-CORP.COM

PROJECT TEAM

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

- 2016 CALIFORNIA ADMINISTRATIVE CODE, TITLE 24 PART 1
- 2016 CALIFORNIA BUILDING CODE, TITLE 24 PART 2
- 2016 CALIFORNIA ELECTRICAL CODE, TITLE 24 PART 3
- 2016 CALIFORNIA MECHANICAL CODE, TITLE 24 PART 4
- 2016 CALIFORNIA PLUMBING CODE, TITLE 24 PART 5
- 2016 CALIFORNIA ENERGY CODE, TITLE 24 PART 6
- 2016 CALIFORNIA FIRE CODE, TITLE 24 PART 9
- ANSI/TIA-222-G
- 2018 NFPA 101, LIFE SAFETY CODE
- 2017 NFPA 70, NATIONAL ELECTRICAL CODE
- 2016 NFPA 72, NATIONAL FIRE ALARM CODE
- 2016 NFPA 13, SPRINKLER CODE
- 2013 AASHTO LTS-6
- STATE OF CALIFORNIA GENERAL ORDER NO. 128
- CITY/ COUNTY ORDINANCES AND CODES

ACCESSIBILITY REQUIREMENTS: FACILITY IS UN-MANNED AND NOT FOR HUMAN HABITATION. DISABLED ACCESS NOT REQUIRED IN ACCORDANCE WITH CALIFORNIA CODE OF REGULATIONS TITLE 24, PART 2, VOL. 1, CHAPTER 11B, DIVISION 2, SECTION 11B-203.5.

CODE COMPLIANCE

JAMES VACCARO ARCHITECT, INC.
411 DONDEE WAY, UNIT C
PACIFICA | CA | 94044
415.608.3670 PHONE | 415.963.4471 FAX
INFO@JVARCHITECT.COM
WWW.JVARCHITECT.COM

CLIENT

MODUS, INC.
240 STOCKTON STREET, 3RD FLOOR
SAN FRANCISCO, CA 94108

verizon

VERIZON WIRELESS
2785 MITCHELL DRIVE, SUITE 9
WALNUT CREEK, CA 94598

CONSULTANTS

SF_CUPER001
CPSC001
PUBLIC ROW ADJACENT TO
10465 S. DE ANZA BOULEVARD
CUPERTINO, CA 95014
APN: PUBLIC ROW ADJACENT TO 359-17-019

LICENSED ARCHITECT
JAMES F. VACCARO
C-33251
07-31-2019
RENEWAL DATE
STATE OF CALIFORNIA

REV	DATE	ISSUE
1	10/18/2017	90% CONSTRUCTION
2	2/6/2018	100% CONSTRUCTION
3	3/26/2018	100% CONSTRUCTION REV.

SHEET TITLE

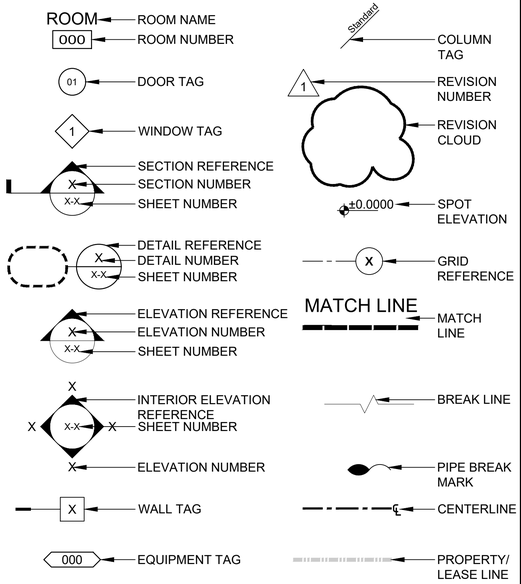
TITLE SHEET

SHEET NUMBER

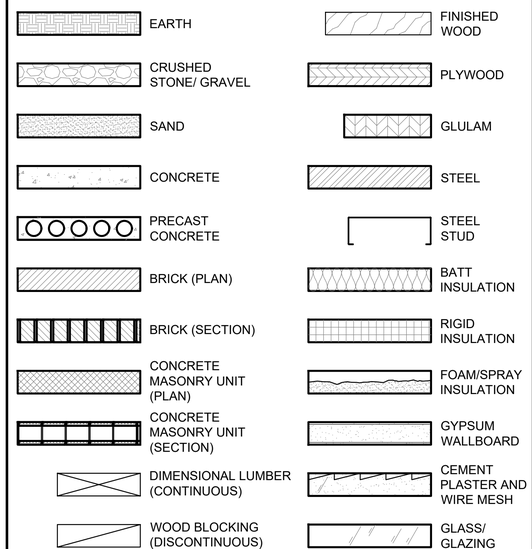
T-1

&	AND
"L"	ANGLE
@	AT
/	BY
℄	CENTERLINE
°	DEGREE
Ø	DIAMETER
=	EQUAL
(E)	EXISTING
'	FEET
"	INCH(ES)
(N)	NEW
#	NUMBER
/	PER
%	PERCENT
℔	PLATE
±	PLUS/ MINUS
AB	ANCHOR BOLT
AC	ALTERNATING CURRENT
AC	ASPHALTIC CONCRETE
A/C	AIR CONDITIONING
ACI	AMERICAN CONCRETE INSTITUTE
ACT	ACOUSTICAL CEILING TILE
ADA	AMERICANS WITH DISABILITIES ACT
ADJ	ADJACENT
ADMIN	ADMINISTRATION
A/E	ARCHITECT/ ENGINEER
AFF	ABOVE FINISHED FLOOR
AGL	ABOVE GROUND LEVEL
AHJ	AUTHORITY HAVING JURISDICTION
AIA	AMERICAN INSTITUTE OF ARCHITECTS
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION
ALT	ALTERNATE
ALUM	ALUMINUM
AMP	AMPERE
AMSL	ABOVE MEAN SEA LEVEL
ANOD	ANODIZE
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
ANT	ANTENNA
APA	AMERICAN PLYWOOD ASSOCIATION
APPROX	APPROXIMATE
ARCH	ARCHITECT
ASCE	AMERICAN SOCIETY OF CIVIL ENGINEERS
ASHRAE	AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR CONDITIONING ENGINEERS
ASI	ARCHITECT'S SUPPLEMENTAL INSTRUCTIONS
ASSN	ASSOCIATION
ASSY	ASSEMBLY
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
AUTO	AUTOMATIC
AVE	AVENUE
AVG	AVERAGE
AWG	AMERICAN WIRE GAUGE
AWS	AMERICAN WELDING SOCIETY
AZ	AZIMUTH
B/B	BACK TO BACK
BAT	BATTEN
BATT	BATTERY
BC	BETWEEN CENTERS
BC	BOLT CIRCLE
BD	BOARD
BDRY	BOUNDARY
BITUM	BITUMINOUS
BKG	BACKING
BLDG	BUILDING
BLK	BLOCK
BLKG	BLOCKING
BLT	BUILT
BLVD	BOULEVARD
BM	BEAM
BOT	BOTTOM
BRG	BEARING
BRKT	BRACKET
BSMT	BASEMENT
BTWN	BETWEEN
BUR	BUILT-UP ROOFING
BW	BOTH WAYS
C	CHANNEL
C TO C	CENTER TO CENTER
CAB	CABINET
CBC	CALIFORNIA BUILDING CODE
CCD	CONSTRUCTION CHANGE DIRECTIVE
CCW	COUNTERCLOCKWISE
CD	CONSTRUCTION DOCUMENTS
CD	CONSTRUCTION DRAWINGS
CEC	CALIFORNIA ELECTRICAL CODE
CEM PLAS	CEMENT PLASTER
CERT	CERTIFY
CFC	CALIFORNIA FIRE CODE
CF/CI	CONTRACTOR FURNISHED/ CONTRACTOR INSTALLED
CF/OI	CONTRACTOR FURNISHED/ OWNER INSTALLED
CFM	CUBIC FEET PER MINUTE
CHK	CHECK
CIR	CIRCLE
CJ	CONSTRUCTION JOINT
CJ	CONTROL JOINT
CL	CENTERLINE
CLASS	CLASSIFICATION
CLG	CEILING
CLR	CLEAR
CM	CONSTRUCTION MANAGER
CMC	CALIFORNIA MECHANICAL CODE
CMU	CONCRETE MASONRY UNIT
CO	COMPANY
COI	CERTIFICATE OF OCCUPANCY
COAX	COAXIAL CABLE
CONC	CONCRETE
COND	CONDITION
CONN	CONNECT
CONT	CONTINUOUS
COORD	COORDINATE
COR	CHANGE ORDER REQUEST
COOR	CORRIDOR
CPT	CARPET
CSI	CONSTRUCTION SPECIFICATIONS INSTITUTE
CSK	COUNTER SUNK
CSMT	CASEMENT
CT	CERAMIC TILE
CTG	COATING
CTR	CENTER
CTRL	CONTROL
CU	COPPER
CU YD	CUBIC YARD
CW	CLOCKWISE
CYL	CYLINDER
d	PENNY (NAIL)
D	DEPTH
DBL	DOUBLE
DC	DIRECT CURRENT
DEF	DEFINITION
DEG	DEGREE
DEMO	DEMOLITION (DEMOLISH)
DEPT	DEPARTMENT
DET	DETAIL
DF	DOUGLAS FIR
DIA	DIAMETER
DIAG	DIAGONAL
DIFF	DIFFERENCE
DIM	DIMENSION
DISC	DISCONNECT
DIST	DISTANCE
DIV	DIVISION
DL	DEAD LOAD
DMARC	DEMARCATION POINT
DN	DOWN
DR	DINING ROOM
DR	DOOR
DS	DOWNSPOUT
DWG	DRAWING
E	EAST
EA	EACH
EE	EACH END
EF	EACH FACE
EF	EXTERIOR FINISH
EFS	EXTERIOR FINISH SYSTEM
EGR	EMERGENCY GENERATOR RECEPTACLE
EIFS	EXTERIOR INSULATION AND FINISH SYSTEM
EJ	EXPANSION JOINT
EL	ELEVATION
ELAST	ELASTOMERIC
ELEC	ELECTRIC
ELEM	ELEMENT
EMF	ELECTROMAGNETIC FREQUENCY
ENGR	ENGINEER
EPA	ENVIRONMENTAL PROTECTION AGENCY
EPDM	ETHYLENE POLYSTYRENE BOARD
EQ	EQUAL
EQUIP	EQUIPMENT
EQUIV	EQUIVALENT
EW	EACH WAY
EXCL	EXCLUDE
EXP	EXPANSION
EXP	EXPOSED
EXT	EXTERIOR
EXT	EXTINGUISHER
F	FAHRENHEIT
FAB	FARICATE(D)
FAR	FLOOR AREA RATIO
FDTN	FOUNDATION
FE	FIRE EXTINGUISHER
FF	FINISH FACE
FF&E	FURNITURE, FIXTURE, AND EQUIPMENT
FH	FIRE HYDRANT
FIN	FINISH
FLASH	FLASHING
FLEX	FLEXIBLE
FLR	FLOOR
FLOUR	FLUORESCENT
FM	FACTORY MUTUAL
FO	FIELD ORDER
FO	FINISHED OPENING
FOC	FACE OF CONCRETE
FOF	FACE OF FINISH
FOS	FACE OF STUD
FOW	FACE OF WALL
FP	FIRE PROTECTION
FP	FIRE PROOF
FR	FIRE RATING
FR	FIRE RESISTANT
FRMG	FRAMING
FRP	FIBER REINFORCED PLASTIC
FRT	FIRE RETARDANT TREATED
FRWY	FREEWAY
FT	FEET
FT	FIRE TREATED
FT	FOOT
FT/ LB	FOOT/ POUND
FTG	FOOTING
FURN	FURNISH
FUT	FUTURE
GA	GAGE
GA	GYPSUM ASSOCIATION
GAL	GALLON
GALV	GALVANIZED
GB	GRAB BAR
GC	GENERAL CONTRACTOR
GEN	GENERATOR
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GLULAM	GLUED LAMINATED WOOD
GSB	GYPSUM SHEATHING BOARD
GSM	GALVANIZED SHEET METAL
GSM	GLOBAL SYSTEM FOR MOBILE COMMUNICATION
GUAR	GUARANTEE
GYP	GYPSUM
GYP BD	GYPSUM BOARD
GYP	GYPSUM PLASTER
HDG	HOT DIPPED GALVANIZED
HDW	HARDWARE
HEX	HEXAGONAL
HGR	HANGER
HLDN	HOLDDOWN
HM	HOLLOW METAL
HORIZ	HORIZONTAL
HS	HIGH STRENGTH
HT	HEIGHT
HVAC	HEATING, VENTILATING AND AIR CONDITIONING
HWY	HIGHWAY
HYD	HYDRANT
IAQ	INDOOR AIR QUALITY
IBC	INTERNATIONAL BUILDING CODE
ICC	INTERNATIONAL CODE COUNCIL
ID	IDENTIFICATION
ID	INSIDE DIAMETER
ID	INSIDE DIMENSION
IF	INSIDE FACE
IFS	INSIDE FACE OF STUD
ILLUM	ILLUMINATION
IMED	IMMEDIATE
IN	INCHES
INCAND	INCANDESCENT
INCL	INCLUDED
INFO	INFORMATION
INSUL	INSULATION
INT	INTERIOR
IR	INSIDE RADIUS
ISO	INTERNATIONAL STANDARDS CODE
ISO	ISOMETRIC
J-BOX	JUNCTION BOX
JST	JOIST
K	THOUSAND
KIP	THOUSAND POUNDS
KIT	KITCHEN
KO	KNOCKOUT
L	ANGLE
L	LENGTH
LAD	LADDER
LAG	LAG BOLT
LAM	LAMINATE
LAT	LATITUDE
LAV	LAVATORY
LB	LAG BOLT
LBS	POUND
LED	LIGHT EMITTING DIODE
LF	LINEAR FEET
LH	LEFT HAND
LHR	LEFT HAND REVERSE
LHS	LEFT HAND SIDE
LIN	LINEAR
LKNT	LOCKNUT
LKWASH	LOCKWASHER
LL	LIVE LOAD
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LN	LANE
LNG	LIQUID NATURAL GAS
LOC	LOCATION
LONG	LONGITUDINAL
LT	LIGHT
LTD	LIMITED
LTE	LONG TERM EVOLUTION
LTG	LIGHTING
LVD	LOUVERED
LVR	LOUVER
MAINT	MAINTENANCE
MAN	MANUAL
MATL	MATERIAL
MAX	MAXIMUM
MB	MACHINE BOLT
MC	MC CHANNEL
MDF	MEDIUM-DENSITY FIBREBOARD
MECH	MECHANICAL
MED	MEDIUM
MEMB	MEMBRANE
MFR	MANUFACTURER
MFR REC	MANUFACTURER'S RECOMMENDATION
MHZ	MEGAHERTZ
MID	MIDDLE
MIN	MINIMUM
MIRR	MIRROR
MISC	MISCELLANEOUS
MK	MARK
ML	METAL LATH
MLDG	MOLDING
MLWK	MILLWORK
MN	MAGNETIC NORTH
MOD	MODIFY
MOD BIT	MODIFIED BITUMEN
MR	MOISTURE RESISTANT
MS	MACHINE SCREW
MSB	MAIN SWITCHBOARD
MTD	MOUNTED
MTG	MEETING
MTG	MOUNTING
MTL	METAL
MULL	MULLION
MULT	MULTIPLE
MUT	MUNTIN
MW	MICROWAVE
N	NORTH
NA	NOT APPLICABLE
NC	NOISE CRITERIA
NEG	NEGATIVE
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NFRC	NATIONAL FENESTRATION RATING COUNCIL
NIC	NOT IN CONTRACT
NO	NUMBER
NOM	NOMINAL
NORM	NORMAL
NRC	NOISE REDUCTION COEFFICIENT
NRCA	NATIONAL ROOFING CONTRACTORS ASSOCIATION
NS	NO SCALE
NTP	NOTICE TO PROCEED
NTS	NOT TO SCALE
O/	OVER
O/O	OUT TO OUT
O	OXYGEN
OC	ON CENTER
OCC	OCCUPY
OD	OUTSIDE DIAMETER
OF	OUTSIDE FACE
OF/CI	OWNER FURNISHED/ CONTRACTOR INSTALLED
OF/OI	OWNER FURNISHED/ OWNER INSTALLED
OFS	OUTSIDE FACE OF STUDS
OPH	OPPOSITE HAND
OPNG	OPENING
OPP	OPPOSITE
OPT	OPTIONAL
OSHA	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
PAR	PARALLEL
PAR	PARAPET
PART	PARTIAL
PAT	PATTERN
PB	PANIC BAR
PB	PULL BOX
PED	PEDESTAL
PEN	PENETRATE
PERF	PERFORATED
PERIM	PERIMETER
PERM	PERMANENT
PERP	PERPENDICULAR
PH	PHASE
PKWY	PARKWAY
PL	PLATE
PL	PROPERTY LINE
PLAS	PLASTER
PLAS	PLASTIC
PLAT	PLATFORM
PLYWD	PLYWOOD
PN	PART NUMBER
PNL	PANEL
PO	PURCHASE ORDER
PPC	POWER PROTECTION CABINET
PREFAB	PREFABRICATE(D)
PRELIM	PRELIMINARY
PREP	PREPARATION
PREV	PREVIOUS
PROJ	PROJECT
PROP	PROPERTY
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PT	PAINT
PT	POST TENSIONED
PT	PRESSURE TREATED
PV	PHOTOVOLTAIC
PVC	POLYVINYL CHLORIDE (PLASTIC)
PWR	POWER
QC	QUALITY CONTROL
QTY	QUANTITY
QUAL	QUALITY
R	RADIUS
R	THERMAL RESISTANCE
RB	RUBBER BASE
RCP	REFLECTED CEILING PLAN
RD	ROAD
RD	ROOF DRAIN
REBAR	REINFORCING STEEL BARS
REC	RECESSED
RECD	RECEIVED
RECPT	RECEPTACLE
RECT	RECTANGLE
REF	REFERENCE
REINF	REINFORCE
REM	REMOVABLE
REQ	REQUIRE
REQD	REQUIRED
RESIL	RESILIENT
REV	REVISION
RF	RADIO FREQUENCY
RF	RESILIENT FLOORING
RFI	REQUEST FOR INFORMATION
RFP	REQUEST FOR PROPOSAL
RH	RIGHT HAND
RH	ROOF HATCH
RHR	RIGHT HAND REVERSE
RL	ROOF LEADER
RM	ROOM
RND	ROUND
RO	ROUGH OPENING
ROW	RIGHT OF WAY
RR	RAILROAD
RRU	REMOTE RADIO UNIT
RWD	REDWOOD
RWL	RAIN WATER LEADER
S	SOUTH
SCH	SCHEDULE
SD	SMOKE DETECTOR
SE	STRUCTURAL ENGINEER
SECT	SECTION
SEL	SELECT
SEP	SEPARATE
SF	SQUARE FOOT (FEET)
SHT	SHEET
SHTHG	SHEATHING
SIM	SIMILAR
SJ	SCORED JOINT
SK	SKETCH
SKLT	SKYLIGHT
SLNT	SEALANT
SLV	SLEEVE
SPEC	SPECIFICATION
SPKLR	SPRINKLER
SQ	SQUARE
SQ FT	SQUARE FOOT
SQ IN	SQUARE INCH
SS	STAINLESS STEEL
ST	STAIRS
ST	STREET
STC	SOUND TRANSMISSION CLASS
STD	STANDARD
STL	STEEL
STIF	STIFFENER
STOR	STORAGE
STR	STRAIGHT
STRUCT	STRUCTURAL
SUB	SUBSTITUTE
SUP	SUPPLEMENTARY
SURR	SURROUND
SUSP	SUSPEND
SYM	SYMBOL
SYMM	SYMMETRICAL
T	TREAD
T&B	TOP AND BOTTOM
T&G	TONGUE AND GROOVE
T&M	TIME AND MATERIALS
TB	THROUGH BOLT
TELCO	TELECOMMUNICATIONS COMPANY
TEMP	TEMPORARY
THERM	THERMAL
THK	THICKNESS
THRES	THRESHOLD
THRU	THROUGH
TMA	TOWER MOUNTED AMPLIFIER
TN	TRUE NORTH
TO	TOP OF
TOC	TOP OF CONCRETE
TOF	TOP OF FLOOR
TOF	TOP OF FOOTING
TOP	TOP OF PARAPET
TOPO	TOPOGRAPHY
TOS	TOP OF SLAB
TOW	TOP OF WALL
TRANS	TRANSPARENT
TRANS	TRANSFORMER
TS	TUBE STEEL
TYP	TYPICAL
U	HEAT TRANSFER COEFFICIENT
UG	UNDERGROUND
UL	UNDERWRITERS LABORATORIES
UMTS	UNIVERSAL MOBILE TELECOMMUNICATIONS SYSTEM
UNO	UNLESS NOTED OTHERWISE
UON	UNLESS OTHERWISE NOTED
UTIL	UTILITY
UV	ULTRAVIOLET
V	VOLT
VAR	VARIES
VCT	VINYL COMPOSITION TILE
VENT	VENTILATION
VERT	VERTICAL
VIF	VERIFY IN FIELD
VOC	VOLATILE ORGANIC COMPOUND
VOLT	VOLTAGE
W	WEST
W	WIDE
W/	WITH
W/O	WITHOUT
W/W	WALL TO WALL
WC	WATER CLOSET
WD	WOOD
WF BM	WIDE FLANGE BEAM
WL	WIND LOAD
WM	WIRE MESH
WO	WORK ORDER
WP	WATERPROOFING
WP	WEATHERPROOF
WPM	WATERPROOF MEMBRANE
WR	WATER REPELLENT
WR	WATER RESISTANT
WRB	WATER RESISTIVE BARRIER
WRM	WATER RESISTANT MEMBRANE
WT	WEIGHT
WWF	WELDED WIRE FABRIC
WWM	WELDED WIRE MESH
WWR	WELDED WIRE REINFORCEMENT
X BRACE	CROSS BRACE
XFMR	TRANSFORMER
YD	YARD

ABBREVIATIONS 3



GRAPHIC SYMBOLS 1



MATERIALS SYMBOLS 2

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LICENSED ARCHITECT
JAMES F. VACCARO
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07-31-2019
RENEWAL DATE
STATE OF CALIFORNIA

REV	DATE	ISSUE
1	10/18/2017	90% CONSTRUCTION
2	2/6/2018	100% CONSTRUCTION
3	3/26/2018	100% CONSTRUCTION REV.

SHEET TITLE

SYMBOLS, ABBREVIATIONS

SHEET NUMBER

T-2

GENERAL NOTES

1 General Notes

GENERAL NOTES

1. CONTRACTOR SHALL VERIFY AND COORDINATE ALL NEW AND EXISTING CONDITIONS AND DIMENSIONS AT JOB SITE FOR COMPARISON WITH DRAWINGS AND SPECIFICATIONS PRIOR TO BIDDING AND START OF CONSTRUCTION. IF ANY DISCREPANCIES, INCONSISTENCIES OR OMISSIONS ARE FOUND, THE ARCHITECT/ ENGINEER SHALL BE NOTIFIED, IN WRITING FOR CLARIFICATION PRIOR TO PROCEEDING WITH WORK.
2. DO NOT SCALE DRAWINGS. CONTRACTOR SHALL NOTIFY THE ARCHITECT/ ENGINEER FOR CLARIFICATIONS. ALL DIMENSIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR AND COORDINATED WITH ALL OF THE WORK OF ALL TRADES. IF DISCREPANCIES ARE FOUND, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT/ ENGINEER IN WRITING FOR CLARIFICATION BEFORE COMMENCEMENT OR RESUMPTION OF WORK.
3. ABBREVIATIONS THROUGHOUT THE PLANS ARE THOSE IN COMMON USE. NOTIFY THE ARCHITECT/ ENGINEER OF ANY ABBREVIATIONS IN QUESTION.
4. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. CONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS, AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK.
5. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE CODE AND REGULATIONS.
6. UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
7. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
8. IF THE SPECIFIED EQUIPMENT CANNOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION FOR APPROVAL BY THE ARCHITECT/ENGINEER.
9. LEGAL EXITS SHALL NOT BE BLOCKED AT ANYTIME.
10. TEMPORARY PEDESTRIAN PROTECTION SHALL BE PROVIDED AS REQUIRED BY LOCAL CODES.
11. THE ARCHITECT/ ENGINEER SHALL BE CONSULTED IN ANY/ ALL CASES WHERE CUTTING INTO AN EXISTING STRUCTURAL PORTION OF ANY STRUCTURE IS NECESSARY. PRIOR TO PROCEEDING WITH WORK.
12. CONTRACTOR SHALL VERIFY ACTUAL ROUTING OF CONDUIT, POWER AND FIBER CABLES. GROUND CABLES AS SHOWN. CONTRACTOR SHALL SHALL ADD NEW CONDUIT AS NECESSARY. CONTRACTOR SHALL CONFIRM THE ACTUAL ROUTING WITH THE CONSTRUCTION MANAGER.
13. THE CONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE OWNER.
14. CLEAN UP AND DISPOSAL-REMOVE DEBRIS, RUBBISH AND WASTE MATERIAL FROM THE OWNER'S PROPERTY TO A LAWFUL/ LEGAL DISPOSAL AREA AND PAY ALL HAULING AND DUMPING COSTS. CONFORM TO PERTAINING FEDERAL, STATE AND LOCAL LAWS, REGULATIONS AND ORDERS UPON COMPLETION OF WORK ALL CONSTRUCTION AREAS SHALL BE LEFT CLEAN AND FREE FROM DEBRIS. CLEAN ALL STAINS, PAINT SPOTS, DROPPINGS, AND OTHER BLEMISHES.
15. THE CONTRACTOR SHALL PROTECT ALL FINISH WORK AND SURFACES FROM DAMAGE DURING THE COURSE OF CONSTRUCTION AND SHALL REPLACE AND/ OR REPAIR ALL DAMAGED SURFACES CAUSED BY THE CONTRACTOR OR SUBCONTRACTOR PERSONNEL TO THE SATISFACTION OF THE OWNER.
16. PRIOR TO INSPECTION OF THE EXISTING FACILITY, THE CONTRACTOR MUST RECEIVE PERMISSION FOR SITE ACCESS FROM THE OWNER OR THE DESIGNATED REPRESENTATIVE.
17. WHEN IT IS NECESSARY TO INTERRUPT ANY EXISTING UTILITY SERVICE TO MAKE CORRECTIONS AND/ OR CONNECTION, A MINIMUM OF 48 HOURS ADVANCE NOTICE SHALL BE GIVEN TO THE OWNER. INTERRUPTIONS IN UTILITY SERVICES SHALL BE OF THE SHORTEST POSSIBLE DURATION AND SHALL BE APPROVED IN ADVANCE BY THE OWNER.
18. ALL CONTRACTORS PERFORMING WORK ON THE SITE SHALL BE RESPONSIBLE FOR INITIATING, MAINTAINING AND SUPERVISING A REASONABLE AND PRUDENT SAFETY PROGRAM INCLUDING BUT NOT LIMITED TO THE ISOLATION OF WORK AREAS AND THE PROMPT REMOVAL OF ANY DEBRIS OR TOOLS WHICH MAY ENDANGER THE PUBLIC OR WORKERS.
19. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING UTILITIES BELOW GRADE AND RELATED SERVICE CONNECTIONS WITH THE RESPECTIVE UTILITY COMPANIES.
20. THE CONTRACTOR SHALL COORDINATE THE REMOVAL, ABANDONMENT, AND/ OR RELOCATION OF EXISTING UTILITIES ABOVE OR BELOW GRADE WITH THE RESPECTIVE UTILITY COMPANIES.
21. THE CONTRACTOR SHALL PERFORM ALL WORK WITHIN PUBLIC RIGHTS-OF-WAY ACCORDING TO LOCAL JURISDICTIONAL STANDARDS AND SPECIFICATIONS. CONTRACTOR SHALL OBTAIN PERMITS FROM APPROPRIATE AGENCIES.
22. ALL CONCRETE REPAIR WORK SHALL BE DONE IN ACCORDANCE WITH AMERICAN CONCRETE INSTITUTE (ACI) 301.
23. ALL STRUCTURAL STEEL WORK SHALL BE DONE IN ACCORDANCE WITH AISC SPECIFICATIONS.
24. THE EXISTING SITE IS IN FULL OPERATION. ANY CONSTRUCTION WORK BY CONTRACTOR SHALL NOT DISRUPT THE EXISTING NORMAL OPERATION. ANY WORK MUST BE COORDINATED WITH THE OWNER. ALSO, WORK SHOULD BE SCHEDULED FOR AN APPROPRIATE WINDOW TO MINIMIZE DISTURBANCE.
25. THE ARCHITECT/ ENGINEER SHALL BE NOTIFIED IN WRITING OF ANY SUBSTITUTIONS, INCLUDING CHANGES IN PRODUCTS, MATERIALS, EQUIPMENT AND DETAILS OF CONSTRUCTIONS FROM THOSE SHOWN. THE SUBSTITUTIONS PROCEDURES PER SPECIFICATIONS SECTION 01 25 00 SHALL BE FOLLOWED. THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR PERFORMANCE AND ASSOCIATED COSTS FOR ANY SUBSTITUTION NOT APPROVED IN WRITING BY THE ARCHITECT/ ENGINEER PER SPECIFICATIONS SECTION 01 25 00.
26. PROVIDE A PORTABLE FIRE EXTINGUISHER WITH A RATING OF NOT LESS THAN 2-A OR 2-A/10-BC WITHIN 75 FEET TRAVEL DISTANCE TO ALL PORTIONS OF THE WORK AREA DURING CONSTRUCTION.
27. CONTRACTOR SHALL USE BEST MANAGEMENT PRACTICES TO PREVENT STORM WATER POLLUTION DURING CONSTRUCTION.
28. SHOP DRAWINGS SHALL BE SUBMITTED FOR ALL EQUIPMENT AND MATERIALS WHICH MUST INTERFACE AND COORDINATE WITH OTHERS, WHETHER DETAILED OR NOT.
31. THE CONTRACTOR SHALL OBTAIN OSHA PERMITS FOR ANY VERTICAL EXCAVATION OVER 5'-0" DEEP INTO WHICH PERSONS MUST DESCEND.
32. ALL DISSIMILAR METALLIC MATERIALS SHALL BE EFFECTIVELY ISOLATED FROM EACH OTHER TO PREVENT GALVANIC ACTION, WHETHER DETAILED OR NOT.
33. ALL WOOD IN CONTACT WITH MASONRY OR CONCRETE SHALL BE PRESSURE TREATED WITH AN APPROVED PRESERVATIVE.

2 Site Work Notes

SITE WORK NOTES

1. THE CONTRACTOR SHALL CONTACT UTILITY LOCATING SERVICES AND CONDUCT UNDERGROUND UTILITY LOCATING AND MAPPING PRIOR TO THE START OF CONSTRUCTION.
2. ALL EXISTING ACTIVE SEWER, WATER, GAS, ELECTRIC, AND OTHER UTILITIES WHERE ENCOUNTERED IN THE WORK, SHALL BE PROTECTED AT ALL TIMES, AND WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, SHALL BE RELOCATED AS DIRECTED BY CONSTRUCTION MANAGER ONLY UPON APPROVAL OF SPECIFIC UTILITY OWNER. EXTREME CAUTION SHOULD BE USED BY THE CONTRACTOR WHEN EXCAVATING OR DRILLING PIERS AROUND OR NEAR UTILITIES.
3. ALL SITE WORK SHALL BE AS INDICATED ON THE DRAWINGS AND PROJECT SPECIFICATIONS.
4. IF NECESSARY, RUBBISH, STUMPS, DEBRIS, STICKS, STONES AND OTHER REFUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF LEGALLY.
5. ALL EXISTING INACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE REMOVED AND/OR CAPPED, PLUGGED OR OTHERWISE DISCONTINUED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK, SUBJECT TO THE APPROVAL OF CONTRACTOR, OWNER AND/OR LOCAL UTILITIES.
6. CONTRACTOR SHALL DETERMINE THE ACCURATE LOCATION OF EXISTING UNDERGROUND FACILITIES PRIOR TO ANY EXCAVATION.
7. CONTRACTOR SHALL CEASE EXCAVATING IF UNIDENTIFIED UTILITIES ARE ENCOUNTERED.
8. CONTRACTOR SHALL IMMEDIATELY NOTIFY THE UTILITY OWNER OF EXCAVATION DAMAGE AND TAKE STEPS TO MITIGATE DAMAGE AND/ OR ASSIST WITH REPAIR.
9. CONTRACTOR SHALL PROVIDE ADEQUATE SHORING, BACKFILL AND OTHER PHYSICAL SUPPORT TO PROTECT UNDERGROUND UTILITIES.
10. CONTRACTOR SHALL MINIMIZE DISTURBANCE TO EXISTING SITE DURING CONSTRUCTION.
11. THE CONTRACTOR SHALL PROVIDE SITE SIGNAGE IN ACCORDANCE WITH VERIZON WIRELESS AND AUTHORITY HAVE JURISDICTION SPECIFICATIONS FOR SITE SIGNAGE.
12. CONTRACTOR SHALL MINIMIZE DISTURBANCE TO EXISTING SITE DURING CONSTRUCTION. EROSION CONTROL MEASURES, IF REQUIRED DURING CONSTRUCTION, SHALL BE IN CONFORMANCE WITH THE LOCAL GUIDELINES FOR EROSION AND SEDIMENT CONTROL.

3 Concrete Notes

CONCRETE NOTES

1. ALL POURED-IN-PLACE CONCRETE SHALL HAVE AN ULTIMATE COMPRESSIVE STRENGTH OF 3,000 PSI AT 28 DAYS, UNLESS OTHERWISE NOTED (DESIGN BASIS 2,500 PSI-NO SPECIAL INSPECTION REQUIRED). CEMENT TO BE TYPE II FROM TESTED STOCK PER ASTM C-150.
2. CONCRETE FORM TOLERANCES SHALL BE WITHIN THE STANDARDS SET BY THE AMERICAN CONCRETE INSTITUTE.
3. ALL REINFORCING STEEL, ANCHOR BOLTS, DOWELS AND OTHER INSERTS SHALL BE SECURED IN POSITION AND INSPECTED BY THE LOCAL BUILDING DEPARTMENT INSPECTOR PRIOR TO THE POURING OF ANY CONCRETE.
4. NO PIPES OR DUCTS SHALL BE PLACED IN STRUCTURAL CONCRETE UNLESS SPECIFICALLY DETAILED. REFER TO ARCHITECTURAL, MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS FOR LOCATIONS.
5. FORM EXPOSED CORNERS OF COLUMNS, BEAMS, WALLS, ETC. WITH 3/4 INCH CHAMFERS UNLESS DETAILED OTHERWISE.
6. PROVIDE LIGHT BROOM FINISH ON ALL EXPOSED CONCRETE UNLESS NOTED OTHERWISE.

4 Reinforcing Steel Notes

REINFORCING STEEL NOTES

1. REINFORCING STEEL SHALL CONFORM TO ASTM A-615 GRADE 60 U.O.N.
2. BARS SHALL BE CLEAN OF MUD, OIL OR OTHER COATINGS LIKELY TO IMPAIR BONDING.
3. ALL REINFORCING SHALL BE SECURED IN PLACE PRIOR TO PLACING CONCRETE OR GROUTING MASONRY.
4. REINFORCING STEEL SHALL BE SPLICED AS SHOWN OR NOTED. SPLICES AT OTHER LOCATIONS SHALL BE REVIEWED BY THE STRUCTURAL ENGINEER.

5 Steel Notes

STEEL NOTES

1. ALL STRUCTURAL AND MISCELLANEOUS STEEL SHALL CONFORM TO ASTM A-36 AND SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH A.I.S.C. SPECIFICATIONS FOR THE DESIGN FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS, LATEST ADDITION.
2. BOLTS SHALL CONFORM TO ASTM A307, UNLESS NOTED OTHERWISE.
3. PIPE STEEL SHALL CONFORM TO ASTM A-53, GRADE B.
4. PLATES SHALL CONFORM TO ASTM A-36.
5. ALL STEEL PERMANENTLY EXPOSED TO WEATHER, (INCLUDING NUTS, BOLTS, WASHERS) SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION.
6. INSTALLATION OF CONCRETE EXPANSION/WEDGE ANCHOR, SHALL BE PER MANUFACTURER'S WRITTEN RECOMMENDED PROCEDURE. THE BOLT, DOWEL OR ROD SHALL CONFORM TO MANUFACTURER'S RECOMMENDATION FOR EMBEDMENT DEPTH OR AS SHOWN ON THE DRAWINGS. NO REBAR SHALL BE CUT WITHOUT PRIOR CONTRACTOR APPROVAL WHEN DRILLING HOLES IN CONCRETE. SPECIAL INSPECTIONS, REQUIRED BY GOVERNING CODES, SHALL BE PERFORMED IN ORDER TO MAINTAIN MANUFACTURER'S MAXIMUM ALLOWABLE LOADS.

6 Welding Notes

WELDING NOTES

1. THE QUALITY OF MATERIALS AND THE FABRICATION OF ALL WELDED CONNECTIONS SHALL BE IN CONFORMANCE WITH THE AMERICAN WELDING SOCIETY'S STRUCTURAL WELDING CODE, AWS D1.1 LATEST EDITION.
2. SPECIAL INSPECTION OF WELDING PER SECTION 1704 IS REQUIRED. A QUALIFIED AND CERTIFIED INSPECTOR SHALL BE PRESENT DURING SHOP AND FIELD WELDING OPERATIONS UNLESS OTHERWISE NOTED AND SHALL INSPECT ALL THE WORK AS REQUIRED BY AWS D1.1, SECTION 6.
3. SPECIAL INSPECTION NEED NOT BE CONTINUOUS FOR THE FOLLOWING ITEMS, PROVIDED THE MATERIAL, QUALIFICATIONS OF WELDING PROCEDURES AND WELDERS ARE VERIFIED PRIOR TO THE START OF WORK; PERIODIC INSPECTIONS MAY BE MADE OF WORK IN PROGESS AND A VISUAL INSPECTION OF ALL WELDS IS STILL REQUIRED.
   1. SINGLE-PASS FILLET WELDS NOT EXCEEDING 5/16 INCH.
4. INSPECTORS SHALL POSSESS AND BE FAMILIAR WITH THE APPROVED WELDING PROCEDURE SPECIFICATIONS (WPS).
5. ALL WELDING SHALL BE DONE BY CERTIFIED WELDERS USING PRE-QUALIFIED WELDING PROCEDURES.
6. THE INSPECTOR SHALL CONFIRM THE QUALIFICATION OF WELDERS, THE USE OF AWS QUALIFIED PROCEDURES, THE MANUFACTURER'S RECOMMENDED USE OF AUTOMATIC EQUIPMENT AND THE PROPER USE OF PREHEAT, IF REQUIRED.

7 Painting Notes

PAINTING NOTES

1. EXTRA MATERIALS: DELIVER TO OWNER 1 QUART OF EACH COLOR AND TYPE OF FINISH COAT PAINT USED ON PROJECT, IN CONTAINERS, PROPERLY LABELED AND SEALED.
2. MANUFACTURER SHALL BE TNEMEC COMPANY INCORPORATED, UNLESS NOTED OTHERWISE.
3. MATERIAL COMPATIBILITY: PROVIDE MATERIALS THAT ARE COMPATIBLE WITH ONE ANOTHER AND WITH SUBSTRATES.
4. FOR EACH COAT IN A PAINT SYSTEM, PROVIDE PRODUCTS RECOMMENDED IN WRITING BY MANUFACTURERS OF TOPCOAT FOR USE IN PAINT SYSTEM AND ON SUBSTRATE INDICATED.
5. REMOVE HARDWARE, AND SIMILAR ITEMS THAT ARE NOT TO BE PAINTED. MASK ITEMS THAT CANNOT BE REMOVED. REINSTALL ITEMS IN EACH AREA AFTER PAINTING IS COMPLETE.
6. CLEAN AND PREPARE SURFACES IN AN AREA BEFORE BEGINNING PAINTING IN THAT AREA. SCHEDULE PAINTING SO CLEANING OPERATIONS WILL NOT DAMAGE NEWLY PAINTED SURFACES.
7. APPLY PAINTS ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS.
8. APPLY PAINTS TO PRODUCE SURFACE FILMS WITHOUT CLOUDINESS, SPOTTING, HOLIDAYS, LAPS, BRUSH MARKS, ROLLER TRACKING, RUNS, SAGS, ROPINESS, OR OTHER SURFACE IMPERFECTIONS. CUT IN SHARP LINES AND COLOR BREAKS.
9. IF UNDERCOATS OR OTHER CONDITIONS SHOW THROUGH TOPCOAT, APPLY ADDITIONAL COATS UNTIL CURED FILM HAS A UNIFORM PAINT FINISH, COLOR, AND APPEARANCE.
10. SEE SPECIFICATIONS SECTION 09 90 00 FOR PAINTING AND COATING SPECIFICATIONS.

8 Light Pole Notes

LIGHTING NOTES

1. LUMINAIRES, JUNCTION BOXES, 1-1/2" RIGID METAL CONDUIT, 1-1/2" PVC CONDUIT, AND POLES SHALL COMPLY WITH SECTION 86 OF THE CALTRANS STANDARD SPECIFICATIONS AND CITY OF CUPERTINO STANDARD DETAILS.
2. LUMINAIRES MAY BE CUT OFF, TYPE M-II OR M-III I.E.S. LIGHT DISTRIBUTION, UNLESS OTHERWISE NOTED. AT CUL-DE-SACS USE TYPE M-III OR BETTER, UNLESS OTHERWISE NOTED.
3. THE SERVICE SUPPLYING ELECTROLIER CIRCUIT SHALL BE FUSED AND GROUNDED IN ACCORDANCE WITH NATIONAL ELECTRICAL CODE AT THE FIRST JUNCTION BOX. AN ADDITIONAL FUSE IS REQUIRED AT EACH ELECTROLIER ON ANY UNGROUNDED CONDUCTOR. CONDUCTORS SHALL BE #8 THW UNLESS OTHERWISE NOTED AND ALL SERVICE SHALL BE 120 VOLT. PHOTO ELECTRIC UNIT CONTROL IS TO BE LOCATED AT THE LUMINAIRE UNLESS OTHERWISE NOTED.
4. THE CONTRACTOR SHALL OBTAIN A SERVICE POINT CONFIRMATION AND A CLEARANCE FROM THE CITY OF CUPERTINO PUBLIC WORKS DEPARTMENT PRIOR TO INSTALLING ANY FOUNDATIONS, POLES, CIRCUITS AND CONDUCTORS. UNDERGROUND SERVICE ALERT SHALL BE USED TO VERIFY LOCATION OF OTHER UNDERGROUND UTILITIES.
5. PRIOR TO PLACING ANY WORK OTHER THAN CURB AND GUTTER, THE CONTRACTOR SHALL SUPPLY THE CITY OF CUPERTINO PUBLIC WORKS DEPARTMENT WITH A PACIFIC GAS AND ELECTRIC COMPANY ELECTRICAL POWER DESIGN WITH ELECTRICAL SERVICE POINTS AND POLE NUMBERS.
6. A CITY OF CUPERTINO PUBLIC WORKS DEPARTMENT CONNECTION ORDER IS REQUIRED TO ENERGIZE ANY ELECTROLIER OR EQUIPMENT (PROVIDED BY THE CITY OF CUPERTINO AFTER COMPLETION AND INSPECTION FOR SUBMITTAL TO PACIFIC GAS AND ELECTRIC).
7. CONTACT PACIFIC GAS AND ELECTRIC FOR ADDITIONAL REQUIREMENTS AND CONTACT THE CITY OF CUPERTINO PUBLIC WORKS DEPARTMENT FOR INSPECTIONS OF FOUNDATIONS FORTY EIGHT HOURS PRIOR TO FOUNDATION POURING AND ELECTRICAL INSPECTIONS.
8. THE CONTRACTOR SHALL SUPPLY TO THE CITY OF CUPERTINO FOR APPROVAL, MANUFACTURER'S SUBMITTALS FOR ALL NEW LUMINAIRES.
9. ALL CONDUCTORS SHALL BE SIZED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE.
10. ALL OVERLOAD PROTECTION (FUSES) SHALL BE SIZED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE.
11. WHENEVER AN INSTALLATION IS NEAR ANY OVERHEAD WIRES/ CONDUCTORS, A CLEARANCE MUST BE OBTAINED FROM PACIFIC GAS AND ELECTRIC PRIOR TO INSTALLATION.

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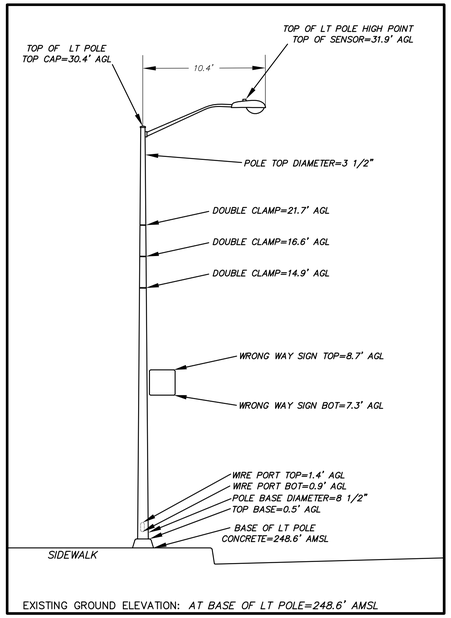
SHEET TITLE

GENERAL NOTES

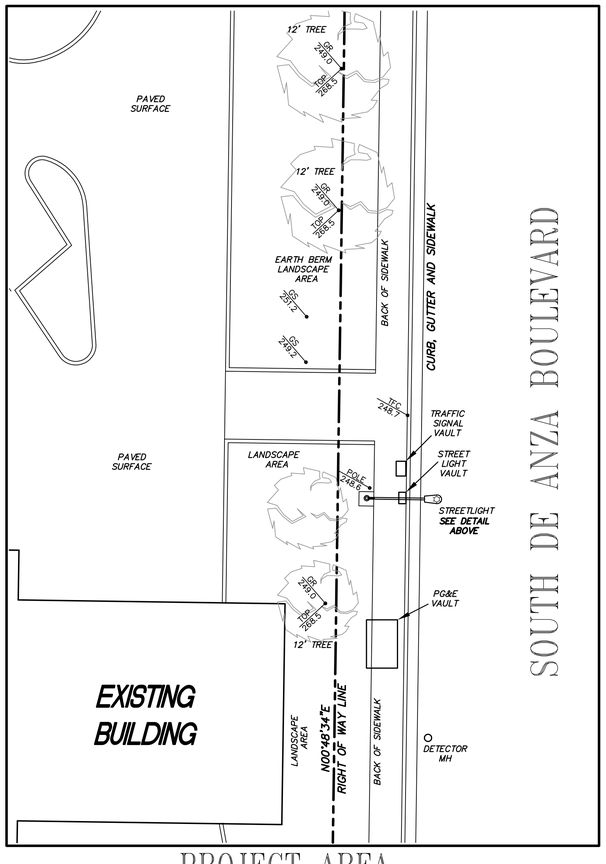
SHEET NUMBER

T-3



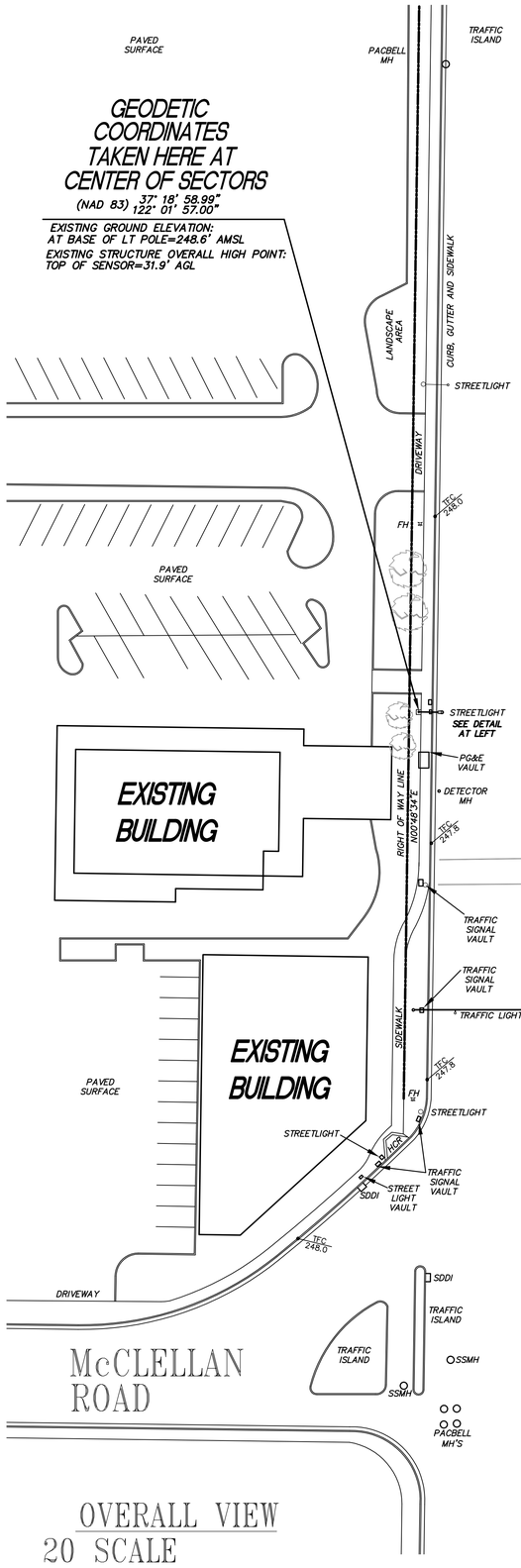
POLE DETAIL

5 SCALE 1"= 5'



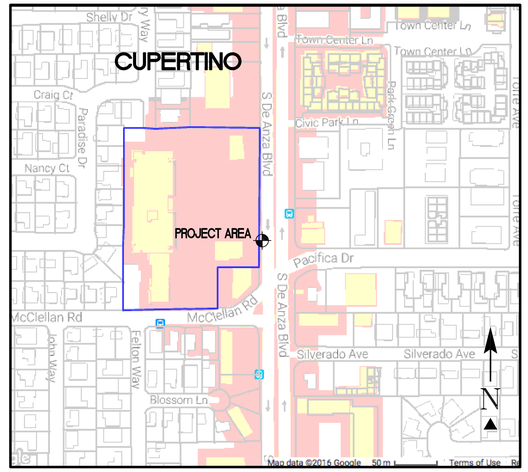
PROJECT AREA

10 SCALE



OVERALL VIEW

20 SCALE



VICINITY MAP

N.T.S.

PROPERTY INFORMATION

SF_CUPER001

SITE: CPSC001
10465 SOUTH DE ANZA BOULEVARD
CUPERTINO, CA 95014

BASIS OF BEARING

BEARINGS SHOWED HEREON ARE BASED UPON U.S. STATE PLANE NAD83 COORDINATE SYSTEM *STATE PLANE COORDINATE ZONE 3*, DETERMINED BY GPS OBSERVATIONS.

BENCHMARK

ELEVATION ESTABLISHED FROM GPS DERIVED ORTHOMETRIC HEIGHTS, APPLYING GEOID 99 SEPARATIONS, CONSTRAINING TO NGS CONTROL STATION 'LUTZ' ELEVATION=450.0' (NAVD88)

UTILITY NOTES

SURVEYOR DOES NOT GUARANTEE THAT ALL UTILITIES ARE SHOWN OR THEIR LOCATIONS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR AND DEVELOPER TO CONTACT U.S.A. AND ANY OTHER INVOLVED AGENCIES TO LOCATE ALL UTILITIES PRIOR TO CONSTRUCTION. REMOVAL, RELOCATION AND/ OR REPLACEMENT IS THE RESPONSIBILITY OF THE CONTRACTOR.

SURVEYOR'S NOTES

ALL EASEMENTS CONTAINED IN SAID TITLE REPORT AFFECTING THE IMMEDIATE AREA SURROUNDING THE LEASE HAVE BEEN PLOTTED. SURVEYOR HAS NOT PERFORMED A SEARCH OF PUBLIC RECORDS TO DETERMINE ANY DEFECT IN TITLE ISSUED.
THE BOUNDARY SHOWN HEREON IS PLOTTED FROM RECORD INFORMATION AND DOES NOT CONSTITUTE A BOUNDARY SURVEY OF THE PROPERTY.

LEGEND

DI	DRAIN INLET	WV	WATER CONTROL VALVE
TFC	TOP FACE OF CURB	FH	FIRE HYDRANT
R/W	RIGHT OF WAY		GUY CONDUCTOR
EP	EDGE OF PAVED		FOUND AS NOTED
DW	DRIVEWAY		POWER POLE
TOP	TOP OF SLOPE		LIGHT POLE
SW	SIDEWALK		ELECTRICAL TRANSFORMER
TP	TOP OF PARAPET	AC	AIR CONDITIONING UNIT
OH	OVERHANG		TELEPHONE PEDESTAL
FH	FIRE HYDRANT	TV	TELEPHONE VAULT
WV	WATER VALVE	T	TELEPHONE MANHOLE
MH	MANHOLE	GM	GAS VALVE
	GEODETIC COORDINATES		GAS METER
XXXX.X NG	SPOT ELEVATION		PROPERTY LINE
	DISH ANTENNA		CHAIN LINK FENCE

SURVEY DATE

8/15/16

GRAPHIC SCALE

10 0 5 10 20 40

(IN FEET)
1 inch = 10 ft.

ISSUE STATUS

REV.	DESCRIPTION	DATE
△	SITE PLAN	8/24/2016

HAYES
Land Surveying And Mapping
2330 MADIGAN COURT
CONCORD, CA 94518

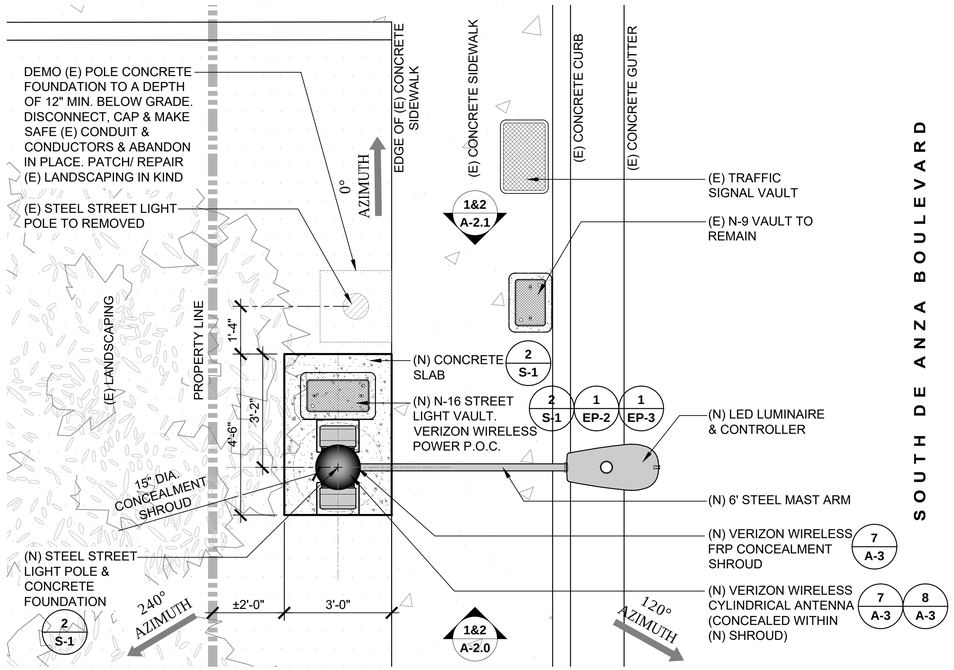
LICENSED LAND SURVEYOR TIMOTHY K. HAYES No. 7900 EXP. 12/31/17 STATE OF CALIFORNIA

verizon
2785 MITCHELL DRIVE
WALNUT CREEK, CA. 94598
OFFICE: 925-279-6000
(925) 279-6333

TOPOGRAPHIC SURVEY
EXISTING CONDITIONS

SF_CUPER001
CPSC001
10465 SOUTH DE ANZA BOULEVARD
CUPERTINO, CA 95014

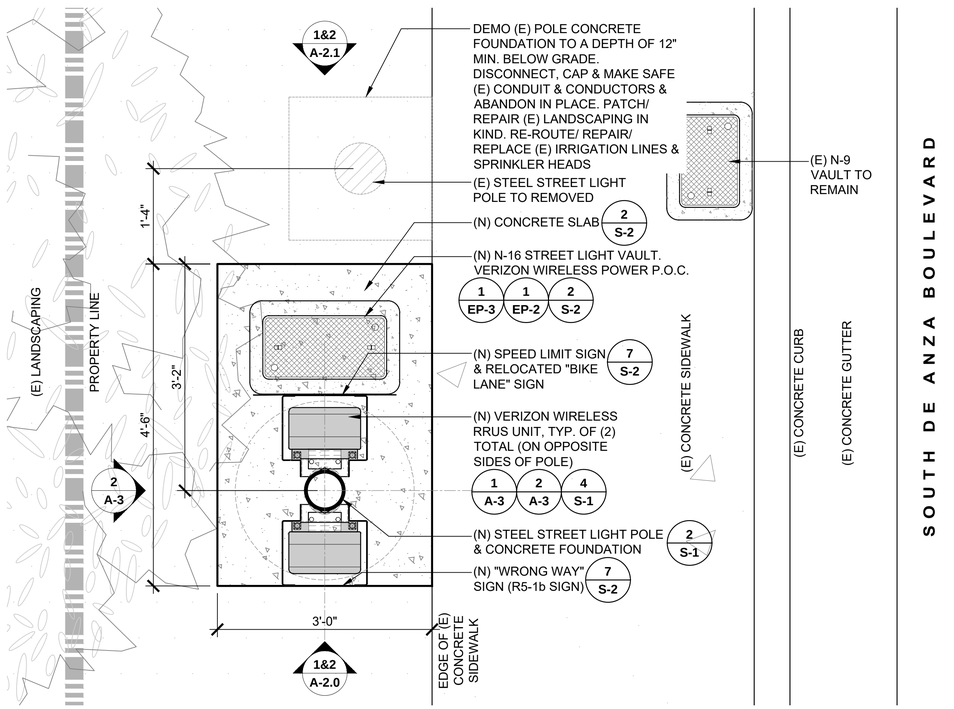
C-1
SHEET 1 of 1



ENLARGED ANTENNA LAYOUT

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

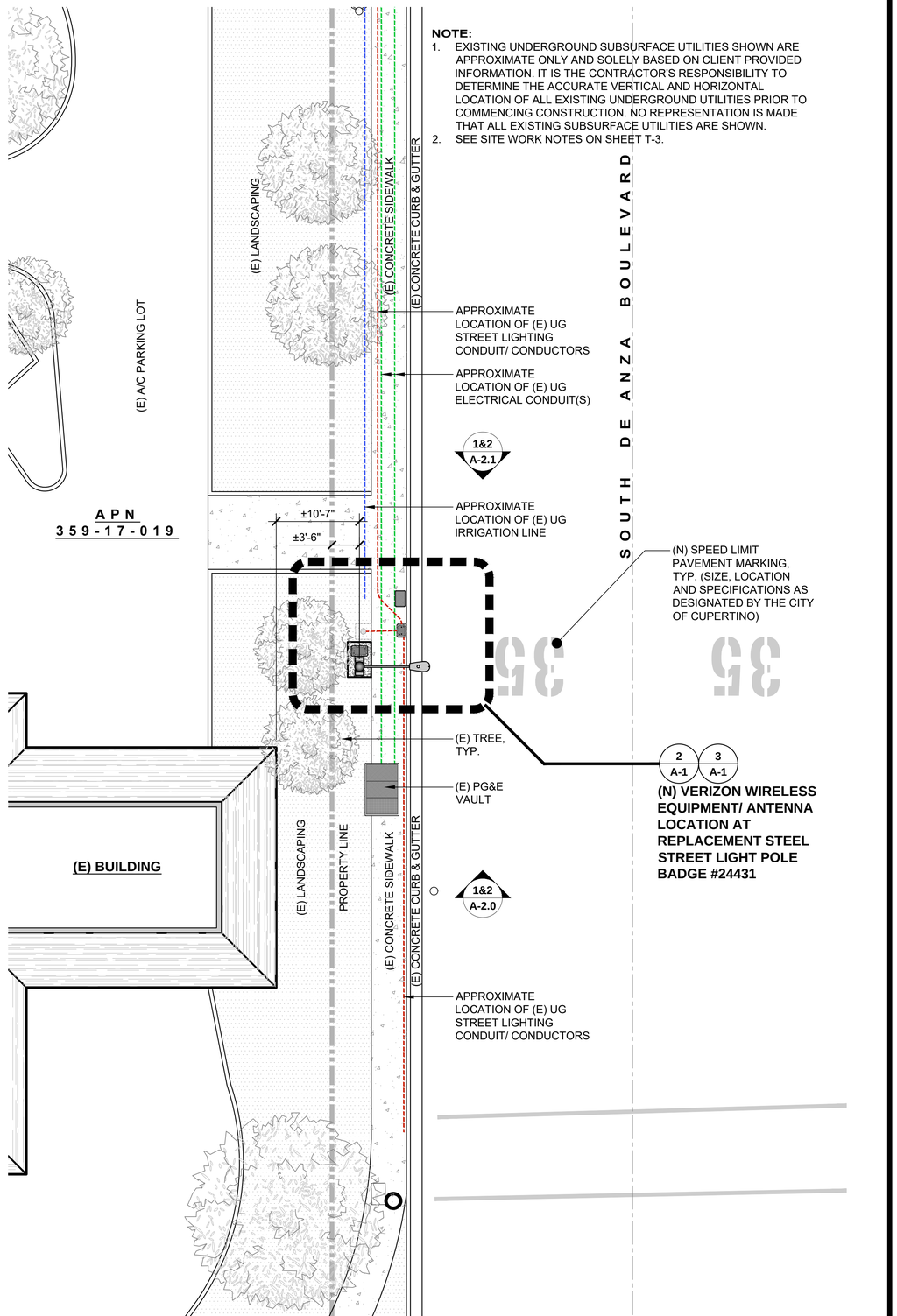
2



ENLARGED EQUIPMENT LAYOUT

SCALE: 1"=1'-0" (6" 1' 2')

3



SITE PLAN

SCALE: 1/8"=1'-0" (4' 8' 16')

1

JAMES VACCARO ARCHITECT, INC.
411 DONDEE WAY, UNIT C
PACIFICA | CA | 94044
415.608.3670 PHONE | 415.963.4471 FAX
INFO@JVARCHITECT.COM
WWW.JVARCHITECT.COM

CLIENT

MODUS, INC.
240 STOCKTON STREET, 3RD FLOOR
SAN FRANCISCO, CA 94108

verizon

VERIZON WIRELESS
2785 MITCHELL DRIVE, SUITE 9
WALNUT CREEK, CA 94598

CONSULTANTS

SF_CUPER001
CPSC001
PUBLIC ROW ADJACENT TO
10465 S. DE ANZA BOULEVARD
CUPERTINO, CA 95014
APN: PUBLIC ROW ADJACENT
TO 359-17-019

LICENSED ARCHITECT
JAMES F. VACCARO
C-33251
07-31-2019
RENEWAL DATE
STATE OF CALIFORNIA

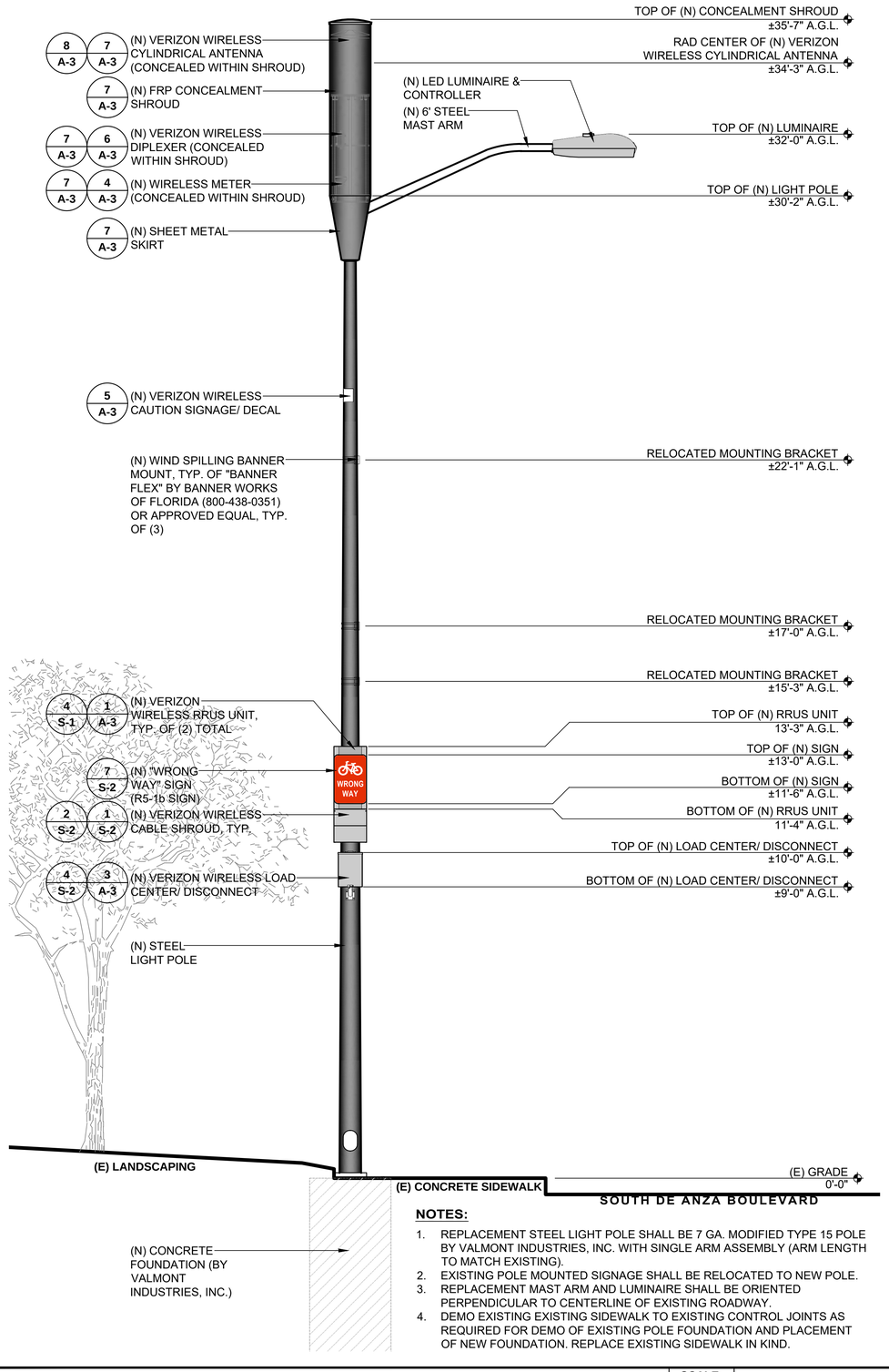
REV	DATE	ISSUE
1	10/18/2017	90% CONSTRUCTION
2	2/6/2018	100% CONSTRUCTION
3	3/26/2018	100% CONSTRUCTION REV.

SHEET TITLE

SITE PLAN, ENLARGED ANTENNA LAYOUT, ENLARGED EQUIPMENT LAYOUT

SHEET NUMBER

A-1

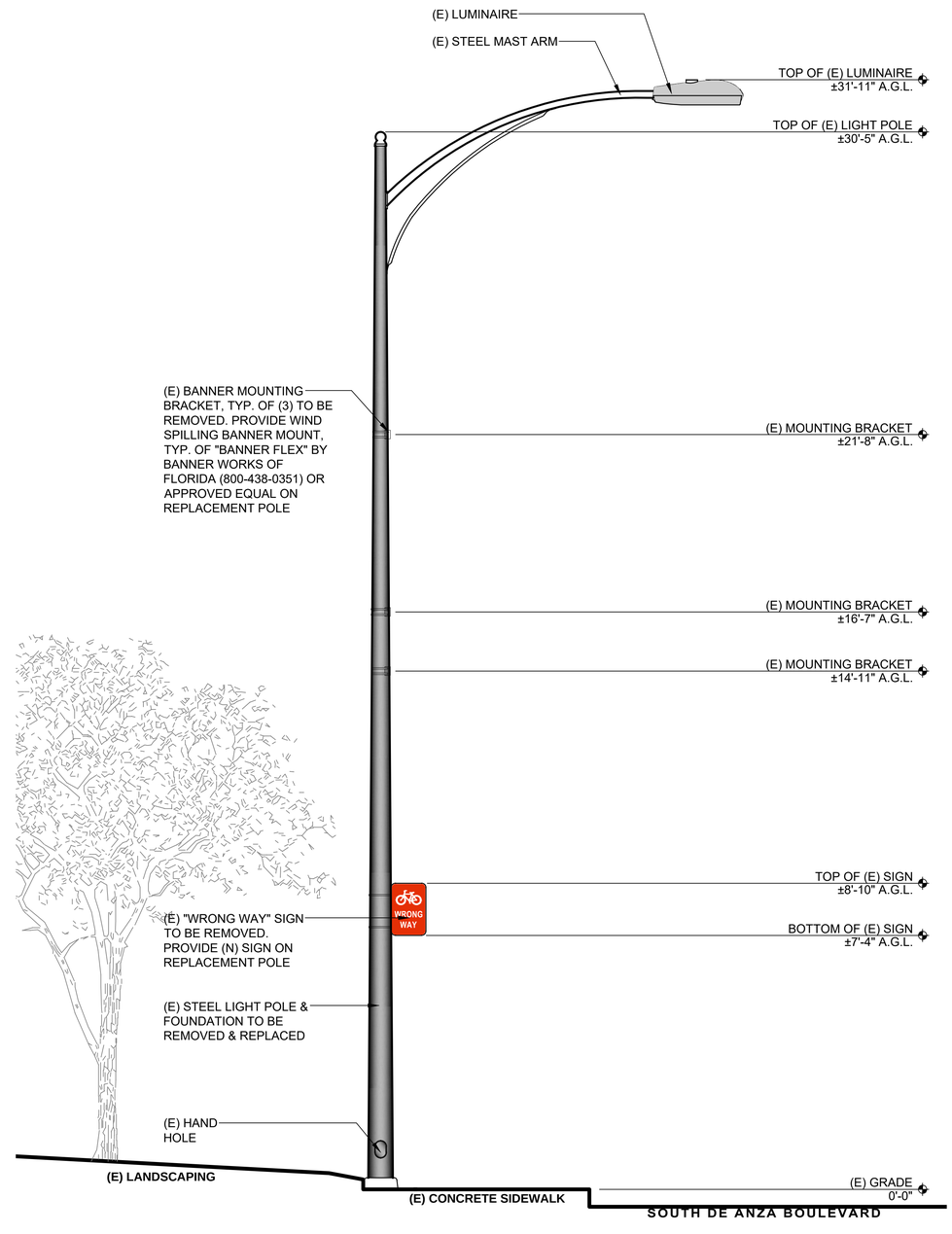


NOTES:

1. REPLACEMENT STEEL LIGHT POLE SHALL BE 7 GA. MODIFIED TYPE 15 POLE BY VALMONT INDUSTRIES, INC. WITH SINGLE ARM ASSEMBLY (ARM LENGTH TO MATCH EXISTING).
2. EXISTING POLE MOUNTED SIGNAGE SHALL BE RELOCATED TO NEW POLE.
3. REPLACEMENT MAST ARM AND LUMINAIRE SHALL BE ORIENTED PERPENDICULAR TO CENTERLINE OF EXISTING ROADWAY.
4. DEMO EXISTING EXISTING SIDEWALK TO EXISTING CONTROL JOINTS AS REQUIRED FOR DEMO OF EXISTING POLE FOUNDATION AND PLACEMENT OF NEW FOUNDATION. REPLACE EXISTING SIDEWALK IN KIND.

PROPOSED SOUTH ELEVATION

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



EXISTING SOUTH ELEVATION

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

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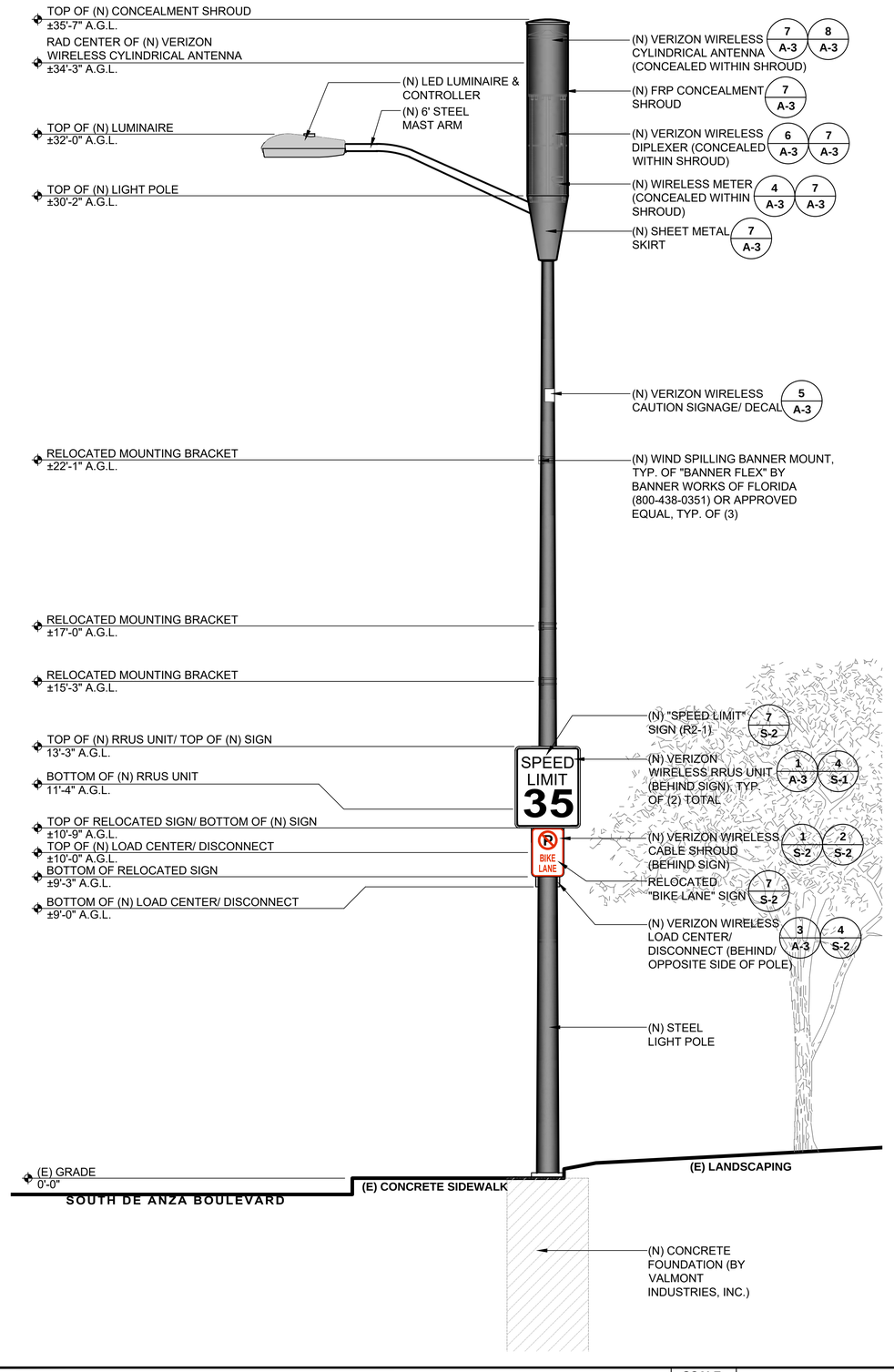
SHEET TITLE

ELEVATIONS

SHEET NUMBER

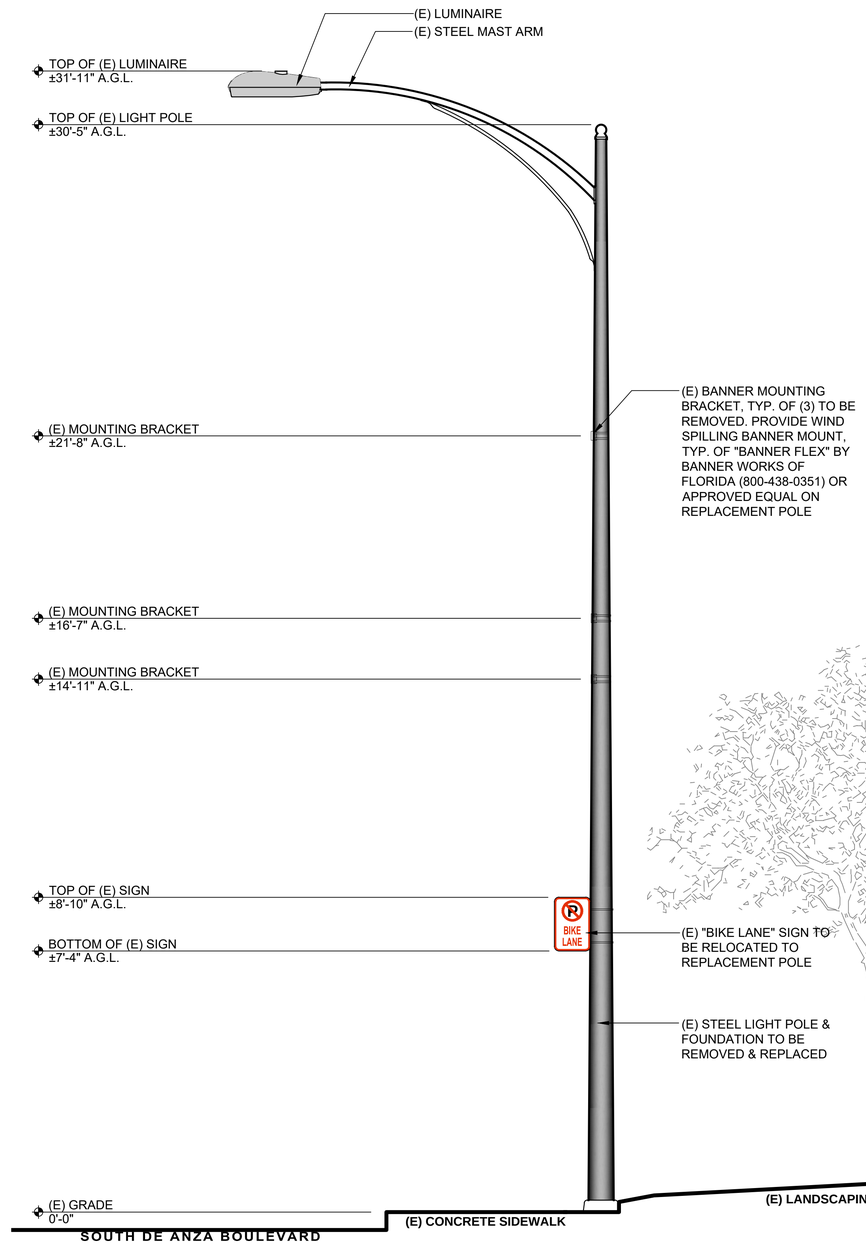
A-2.0



PROPOSED NORTH ELEVATION

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

2



EXISTING NORTH ELEVATION

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

1

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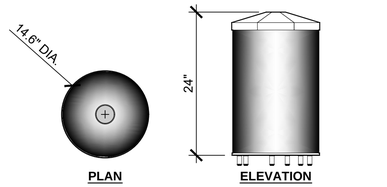
SHEET TITLE

ELEVATIONS

SHEET NUMBER

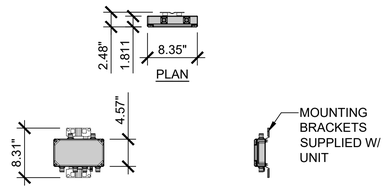
A-2.1



CYLINDER ANTENNA DIMENSIONS	
DIAMETER	±14.6"
HEIGHT	±24"
CYLINDER ANTENNA WEIGHT	
ANTENNA WEIGHT	±27 LBS.

CYLINDER ANTENNA

SCALE: N.T.S | 8

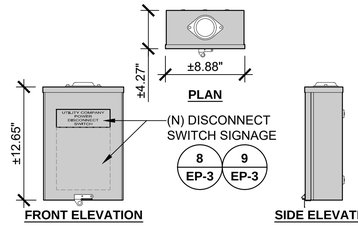


CBC1923T-4310 DIPLEXER DIMENSIONS	
HEIGHT	±4.57"
WIDTH	±8.35"
DEPTH	±2.48"
CBC1923T-4310 DIPLEXER WEIGHT	
DIPLEXER	±5 LBS.

NOTES:
1. COMMSCOPE PART# E11F13P06
2. ALL CONNECTORS SHALL BE WEATHERPROOFED.
3. INSTALL IN STRICT ACCORDANCE WITH COMMSCOPE INSTALLATION MANUAL.

DIPLEXER

SCALE: N.T.S | 6

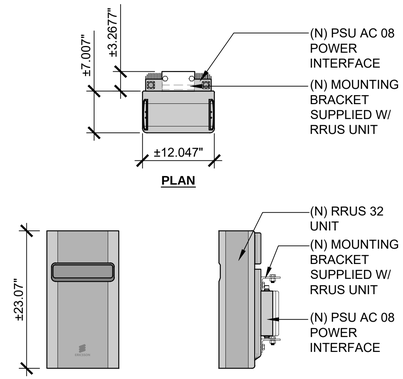


SQUARE D QO612L100RB LOAD CENTER DIMENSIONS	
HEIGHT	±12.65"
WIDTH	±8.88"
DEPTH	±4.27"
SQUARE D QO612L100RB LOAD CENTER WEIGHT	
WEIGHT	±10 LBS.

NOTES:
1. SQUARE D PART# Q0612L100RB.
2. NEMA 3R OUTDOOR RATED, 100 A, 120/240 VOLT, 1 PHASE LOAD CENTER.
3. INSTALL IN STRICT ACCORDANCE WITH SQUARE D/ SCHNEIDER ELECTRIC INSTALLATION MANUAL.

DIST. PANEL/ DISCONNECT

SCALE: N.T.S | 3

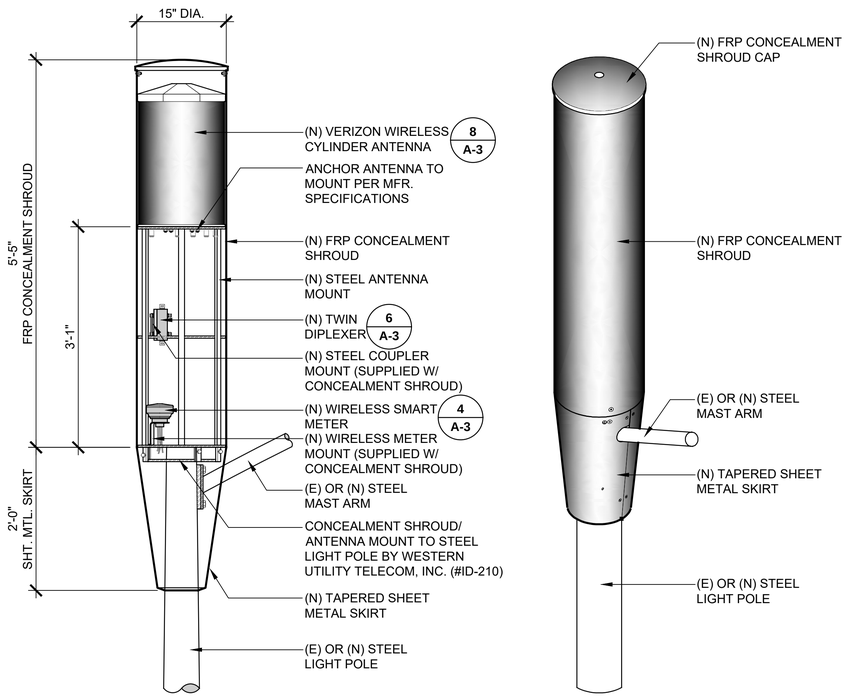


RRUS 32 UNIT DIMENSIONS	
HEIGHT W/ HANDLES	±27.165"
HEIGHT W/O HANDLES	±23.07"
WIDTH	±12.047"
DEPTH	±7.007"
RRUS 32 UNIT WEIGHT	
UNIT W/ PSU AC 08	±65 LBS.
RRUS 32 UNIT CLEARANCE REQUIREMENTS	
ABOVE/ BELOW	16" MIN.

NOTES:
1. ERICSSON PART# RRUS 32
2. ALL CONNECTORS SHALL BE WEATHERPROOFED.
3. INSTALL IN STRICT ACCORDANCE WITH ERICSSON INSTALLATION MANUAL.
4. PAINT SOLAR SHIELD & ALL MOUNTING COMPONENTS TO MATCH POLE.
5. RRUS HANDLES TO BE REMOVED PRIOR TO INSTALLATION.

RRUS 32 UNIT

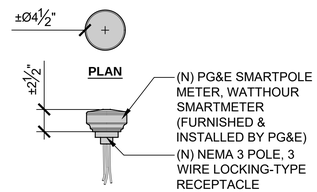
SCALE: N.T.S | 1



NOTES:
1. NEW FRP CONCEALMENT SHROUD, GALVANIZED SHEET METAL SKIRT, ANTENNA/ LIGHT POLE MOUNT AND MOUNTING COMPONENTS BY WESTERN UTILITY/ TELECOM, INC. (PHONE: 503-587-0101) (ID#210).
2. FRP CONCEALMENT SHROUD MOUNT TO LIGHT POLE BY WESTERN UTILITY/ TELECOM, INC.
3. PAINT NEW FRP SHROUD AND EXPOSED MOUNTING COMPONENTS TO MATCH LIGHT POLE.
4. POWDER COAT NEW GALVANIZED SHEET METAL SKIRT AND EXPOSED MOUNTING COMPONENTS TO MATCH LIGHT POLE.
5. GROUND NEW ANTENNA PER MANUFACTURER'S SPECIFICATIONS.

CONCEALMENT SHROUD

SCALE: N.T.S | 7

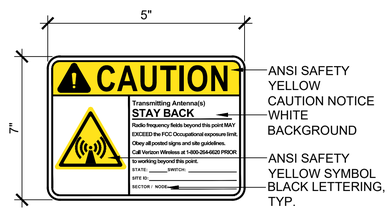


PG&E SMARTPOLE METER DIMENSIONS	
DIAMETER	±4.5"
HEIGHT	±2.5"
PG&E SMARTPOLE METER WEIGHT	
WEIGHT	±3 LBS.

NOTES:
1. PG&E CODE# M241490.
2. PG&E TO PERFORM RF SIGNAL TEST.
3. INSTALL IN STRICT ACCORDANCE WITH PG&E UTILITY BULLETIN FOR SMARTPOLE METER SERVICE.

WIRELESS METER

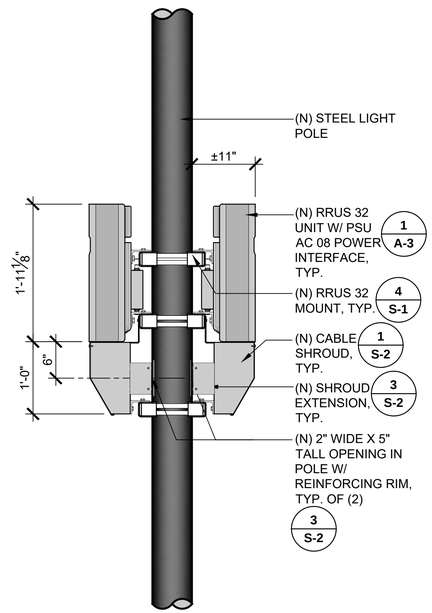
SCALE: N.T.S | 4



NOTES:
1. OUTDOOR RATED SELF ADHESIVE VINYL DECAL WITH UV, CHEMICAL, ABRASION AND MOISTURE RESISTANCE.
2. POST SIGN/ DECAL 9'-0" BELOW BOTTOM OF NEW ANTENNA.
3. CONTRACTOR TO CONFIRM SPECIFIC SIGN REQUIREMENTS WITH VERIZON WIRELESS, THE CITY OF CUPERTINO, FCC AND AUTHORITIES HAVING JURISDICTION PRIOR TO FABRICATION.
4. SIGN SHALL LIST/ DISPLAY OWNERSHIP COMPANY'S NAME, CONTACT NUMBER AND SPECIFIC SITE IDENTIFICATION.
5. SIGN COLORS, SYMBOLS AND LAYOUT SHALL CONFORM TO ANSI Z535.1, ANSI Z535.2 AND ANSI C95.2-2007.

SIGNAGE/ DECAL

SCALE: N.T.S | 5



NOTES:
1. PRIME AND PAINT RRUS 32 UNITS, CABLE SHROUDS, TUBE ASSEMBLY AND MOUNTING COMPONENTS TO MATCH LIGHT POLE.
2. SEE SPECIFICATIONS SECTION 09 90 00 FOR PAINTING AND COATING SPECIFICATIONS.

RRUS UNIT MOUNT ELEV.

SCALE: N.T.S | 2

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CLIENT

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SAN FRANCISCO, CA 94108

verizon

VERIZON WIRELESS
2785 MITCHELL DRIVE, SUITE 9
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CONSULTANTS

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SHEET TITLE

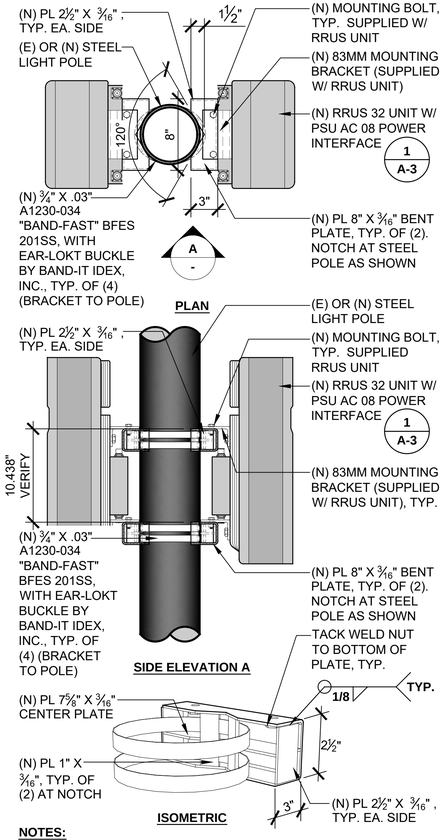
DETAILS

SHEET NUMBER

A-3

NOT USED

SCALE: N.T.S | 3

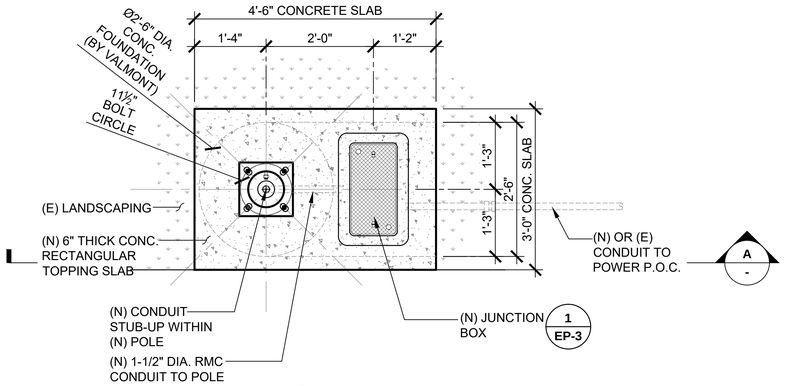


NOTES:

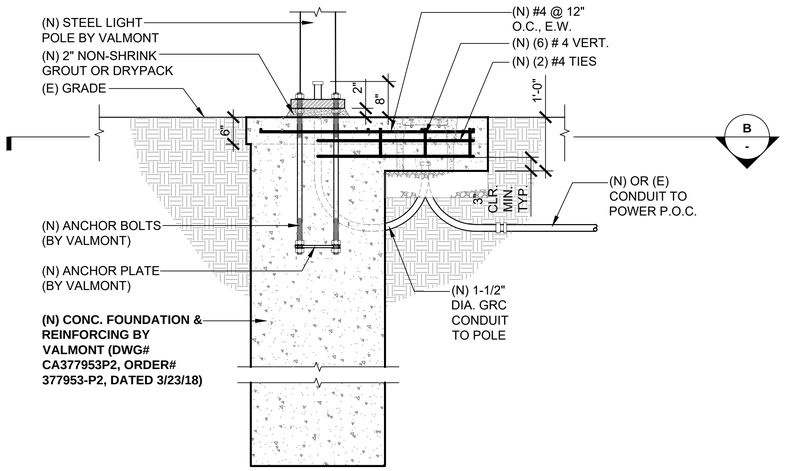
1. HOT-DIP GALVANIZE ALL STEEL COMPONENTS AFTER FABRICATION.
2. PROVIDE STEEL SHOP DRAWING FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.
3. PROVIDE MOCK-UP FOR REVIEW AND APPROVAL TO ENSURE PROPER CLEARANCE FOR PSU AC08 UNIT.
4. PRIME AND PAINT MOUNTING COMPONENTS WITH TNEMEC EXTERIOR PAINT COATING TO MATCH POLE.
5. WELD ALL STEEL PLATE COMPONENTS WITH ⅛" FILLET WELDS.

RRUS 32 MOUNTING

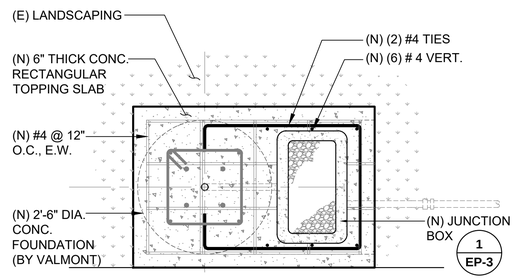
SCALE: N.T.S | 4



PLAN



SECTION A



SECTION B

NOTES:

1. DEMO EXISTING SIDEWALK TO EXISTING CONTROL JOINTS AS REQUIRED FOR DEMO OF EXISTING AND PLACEMENT OF NEW FOUNDATION AND TOPPING SLAB. REPLACE EXISTING SIDEWALK IN KIND.
2. PROTECT EXISTING CONCRETE CURB IN PLACE.
3. ANCHOR BOLTS AND RACEWAYS SHALL BE SECURED IN PLACE PRIOR TO PLACEMENT OF CONCRETE.
4. USE POLE MANUFACTURER PROVIDED TEMPLATE FOR PLACEMENT OF ANCHOR BOLTS. REMOVE ALL GREASE, OIL, DIRT AND CONTAMINANTS FROM ANCHOR BOLTS WITH SUITABLE SOLVENT. CENTER ANCHOR BOLT GROUP ON CONCRETE FOUNDATION. PLACE ANCHOR BOLTS IN A PLUMB POSITION. POINT HOOKS TOWARD THE CENTER OF THE FOUNDATION. VERIFY REQUIRED ANCHOR BOLT PROJECTION.
5. CABLE TRENCHES AND FOUNDATION SHALL BE BACK FILLED AND COMPACTED PRIOR TO ERECTION OF NEW LIGHT POLE.
6. THE FOUNDATION SHALL CURE A MINIMUM OF (7) DAYS PRIOR TO INSTALLATION OF POLE.

LIGHT POLE FOUNDATION TOPPING SLAB

SCALE: N.T.S | 2

Structural Notes

GENERAL NOTES

1. APPLICABLE CODES: 2016 CALIFORNIA BUILDING CODE (CBC), 2013 AASHTO LTS-6, TIA 222, REVISION G.
2. ALL WORK SHALL CONFORM TO THE LATEST EDITION OF THE CALIFORNIA BUILDING CODE, APPLICABLE AUTHORITY HAVING JURISDICTION CODES, AND REQUIREMENTS OF THE CITY OF CUPERTINO DEPARTMENT OF PUBLIC WORKS.
3. THE CITY OF CUPERTINO DEPARTMENT OF PUBLIC WORKS SHALL BE NOTIFIED PRIOR TO STARTING ANY WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING THESE AGENCIES INFORMED OF THEIR SCHEDULE.
4. GENERAL CONTRACTOR SHALL COMPARE STRUCTURAL DRAWINGS WITH DRAWINGS OF OTHER DISCIPLINES WITH REFERENCE TO MATERIALS, LAYOUT, DIMENSIONS AND ELEVATIONS BEFORE STARTING WORK, AND ANY DISCREPANCIES SHALL BE REPORTED TO THE ARCHITECT AND ENGINEER FOR DIRECTION.
5. THE DRAWINGS SHALL NOT BE SCALED. ALL WORK SHALL BE GOVERNED BY EXISTING FIELD DIMENSIONS. THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS SHOWN AND BRING DISCREPANCIES TO THE ATTENTION OF THE ARCHITECT AND ENGINEER PRIOR TO PROCEEDING WITH THE WORK.
6. DETAILS OF CONSTRUCTION NOT INDICATED OR NOTED SHALL BE CONSIDERED OF THE SAME CHARACTER SHOWN FOR SIMILAR OR EXISTING CONSTRUCTION.
7. THE CONTRACTOR SHALL LOCATE AND PROTECT ALL EXISTING UTILITY LINES AND CONNECTIONS INCLUDING SEWER, WATER, GAS, AND ELECTRIC SERVICES BEFORE AND DURING THE WORK.
8. CONTRACTOR SHALL COORDINATE THEIR WORK WITH CITY REQUIREMENTS.
9. DESIGN DATA:
   DESIGN CODES: 2016 CBC, TIA 222 REVISION G, 2013 AASHTO LTS-6
   SEISMIC IMPORTANCE FACTOR Ip = 1.0
   OCCUPANCY CATEGORY = II
   MAPPED SPECTRAL RESPONSE:
   ACCELERATIONS
   S_s = 1.945g S_1 = 0.717g
   SITE CLASS = D
   SITE COEFFICIENT Fa = 1.00
   SITE COEFFICIENT Fv = 1.50
   WIND SPEED = 100 MPH (3-SECOND GUSTS) PER 2013 AASHTO LTS-6
10. CONTRACTOR SHALL SUBMIT STEEL SHOP DRAWINGS FOR REVIEW PRIOR TO FABRICATION.

CONCRETE NOTES

1. CONCRETE SHALL DEVELOP A MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS OF 3,000 PSI. DESIGN BASED ON 2,500 PSI (NO SPECIAL INSPECTION REQUIRED).
2. SLUMPS SHALL BE NOT LESS THAN 2" AND NOT EXCEED 4".
3. CONCRETE SHALL BE PLACED IN A CONTINUOUS OPERATION UNTIL THE SECTION IS COMPLETED BETWEEN PREDETERMINED CONSTRUCTION JOINTS. CONCRETE SHALL BE OF A CONSISTENCY TO PERMIT PLACING COMPLETELY AROUND REINFORCING BARS AND AGAINST FORMS.
4. EXPOSED SURFACES OF CONCRETE SHALL BE KEPT MOIST OR CURED BY PROTECTIVE COVERINGS APPLIED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
5. FORMS SHALL BE TIGHT, CLEAN AND WETTED BEFORE PLACING CONCRETE.

REINFORCING STEEL NOTES

1. REINFORCING SHALL BE IN ACCORDANCE WITH ASTM A615, GRADE 40 FOR #4 AND SMALLER, GRADE 60 FOR #5 AND LARGER. TIE WIRES TO BE 18 GA, OR HEAVIER, BLACK ANNEALED.
2. REINFORCING BARS SHALL BE FREE FROM LOOSE RUST OR ANY OTHER COATING WHICH WILL REDUCE BOND.
3. REINFORCING BARS SHALL NOT BE BENT OR STRAIGHTENED IN A MANNER WHICH WILL DAMAGE THE MATERIAL, AND SHALL BE ACCURATELY PLACED AND POSITIVELY SECURED.
4. MORTAR BLOCKS OR OTHER APPROVED METHOD OF SUPPORT SHALL BE USED AT SLABS-ON-GRADE.

STRUCTURAL STEEL NOTES

1. MATERIALS:

ALL STRUCTURAL STEEL	ASTM A36, U.O.N.
STEEL PIPE	ASTM A53, GRADE B
TUBE STEEL	ASTM A500, GRADE B
ANCHOR BOLTS	ASTM F1554, GRADE 55
MACHINE BOLTS	ASTM A307
HEXAGON NUTS	ASTM A194 2H OR ASTM A563 DH
WASHERS	ASTM F436

2. ALL STEEL SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH THE AISC STANDARDS BY A LICENSED FABRICATOR EMPLOYING CERTIFIED WELDERS.
3. WELDING SHALL CONFORM TO APPLICABLE SECTIONS OF LATEST AWS STRUCTURAL WELDING CODE AND SHALL BE DONE BY CERTIFIED WELDERS.
4. STEEL FABRICATOR SHALL OBTAIN THE ENGINEER'S APPROVAL OF SHOP DRAWINGS PRIOR TO FABRICATION.
5. ALL STRUCTURAL STEEL EXPOSED TO WEATHER SHALL BE HOT DIPPED GALVANIZED AFTER FABRICATION.
6. SUPPLY AND INSTALL FASTENERS, FRAMING MEMBERS AND ANCHORS REQUIRED FOR MOUNTING AND ATTACHMENT OF EQUIPMENT.

REINFORCING RIM WELDING NOTES

1. WELDING SHALL BE PERFORMED BY AN AWS CERTIFIED WELDER. ALL WORK SHALL BE IN CONFORMANCE WITH THE AMERICAN WELDING SOCIETY'S STRUCTURAL WELDING CODE, AWS D1.1 LATEST EDITION.
2. PREPARE POLE SURFACE. GRIND SURFACE TO BE WELDED WITH A SILICON CARBIDE WHEEL PRIOR TO WELDING TO REMOVE GALVANIZING WHICH MAY OTHERWISE BE CONSUMED IN THE WELD METAL. APPLY ANTI-SPLATTER COMPOUND AFTER GRINDING.
3. MINIMIZE TEMPERATURE RISE ON THE INSIDE SURFACE OF THE LIGHT POLE AND VOLATILIZE ANY REMAINING ZINC WITHIN THE BASE METAL WITH MINIMUM SPLATTER.
4. APPLY GALV-A-STICK ZINC COATING TO ALL UNPROTECTED SURFACES, UPON COMPLETION OF WELDING. APPLY SECOND COAT LAYER OF COLD GALVANIZING SPRAY COMPOUND CONTAINING A MINIMUM ZINC CONTENT OF 95%. APPLY A FINAL COAT OF TNEMEC EXTERIOR PAINT COATING TO MATCH POLE.

STRUCTURAL NOTES

1

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TO 359-17-019

REGISTERED PROFESSIONAL ENGINEER
JEFFREY M. VAN DYKE
S 3983
EXP. 3/31/20
STRUCTURAL
STATE OF CALIFORNIA

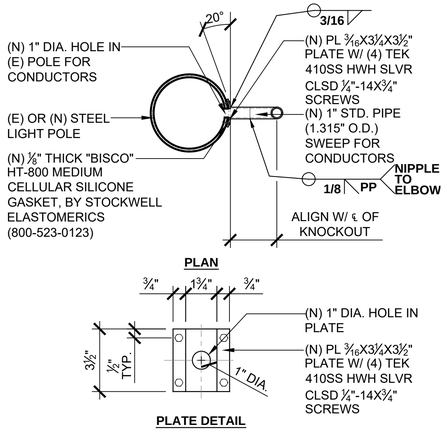
REV	DATE	ISSUE
1	10/18/2017	90% CONSTRUCTION
2	2/6/2018	100% CONSTRUCTION
3	3/26/2018	100% CONSTRUCTION REV.

SHEET TITLE

STRUCTURAL NOTES, DETAILS

SHEET NUMBER

S-1

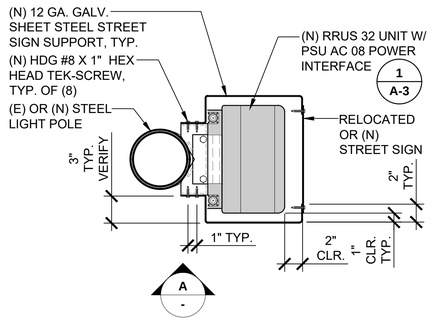


PLAN

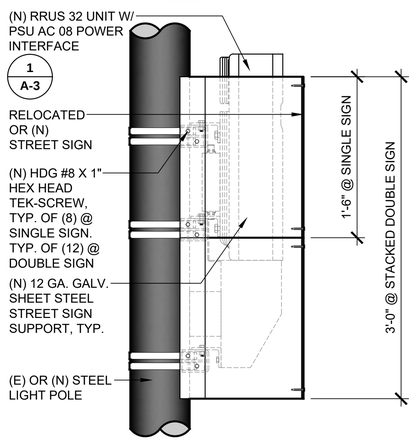
PLATE DETAIL

SWEEP SECTION

SCALE: N.T.S | 6



PLAN

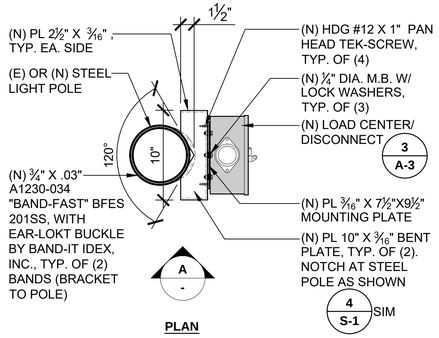


SIDE ELEVATION A

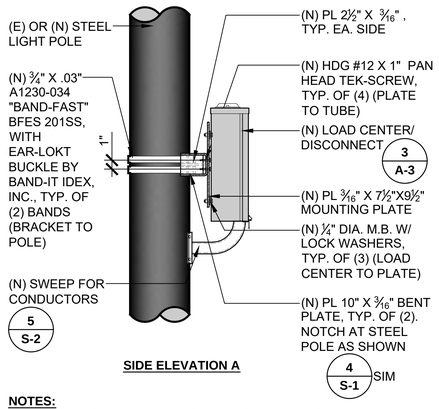
NOTES:
1. HOT-DIP GALVANIZE ALL STEEL COMPONENTS AFTER FABRICATION.
2. PROVIDE STEEL SHOP DRAWING FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.
3. PROVIDE MOCK-UP FOR REVIEW AND APPROVAL TO ENSURE PROPER CLEARANCES FROM RRUS UNIT.
4. PRIME AND PAINT MOUNTING COMPONENTS WITH TNEMEC EXTERIOR PAINT COATING TO MATCH POLE.

SIGNAGE MOUNT

SCALE: N.T.S | 7



PLAN

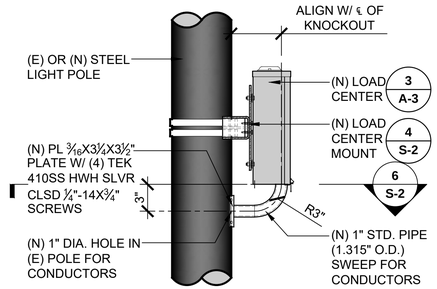


SIDE ELEVATION A

NOTES:
1. HOT-DIP GALVANIZE ALL STEEL COMPONENTS AFTER FABRICATION.
2. PROVIDE STEEL SHOP DRAWING FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.
3. PROVIDE MOCK-UP FOR REVIEW AND APPROVAL TO ENSURE PROPER CLEARANCE FOR LOAD CENTER.
4. PRIME AND PAINT MOUNTING COMPONENTS WITH TNEMEC EXTERIOR PAINT COATING TO MATCH POLE.

LOAD CENTER MOUNT

SCALE: N.T.S | 4

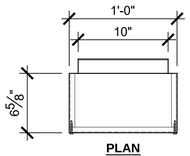


SIDE ELEVATION

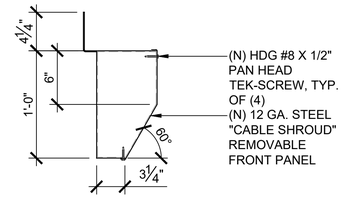
NOTES:
1. HOT-DIP GALVANIZE ALL STEEL COMPONENTS AFTER FABRICATION.
2. PROVIDE STEEL SHOP DRAWING FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.
3. PROVIDE MOCK-UP FOR REVIEW AND APPROVAL TO ENSURE PROPER ALIGNMENT WITH LOAD CENTER KNOCKOUT.
4. PRIME AND PAINT COMPONENTS WITH TNEMEC EXTERIOR PAINT COATING TO MATCH POLE.

CONDUCTOR SWEEP

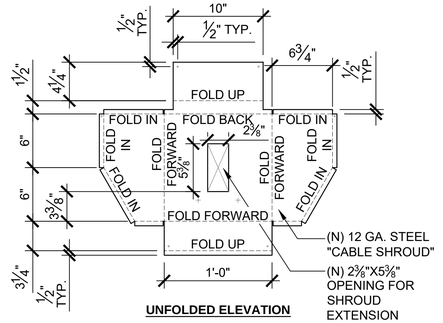
SCALE: N.T.S | 5



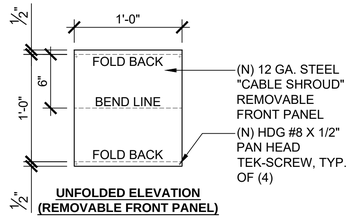
PLAN



SIDE ELEVATION



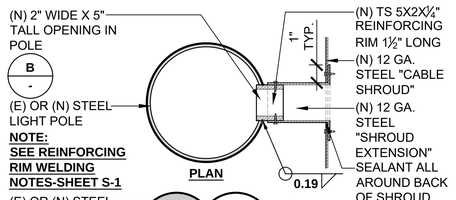
UNFOLDED ELEVATION



UNFOLDED ELEVATION (REMOVABLE FRONT PANEL)

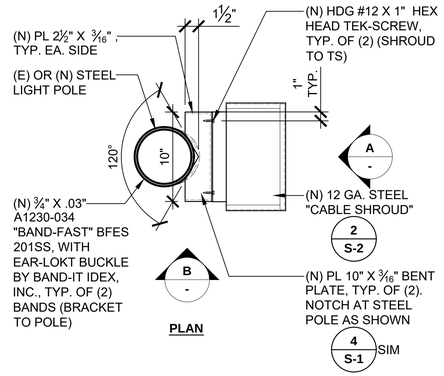
CABLE SHROUD

SCALE: N.T.S | 2

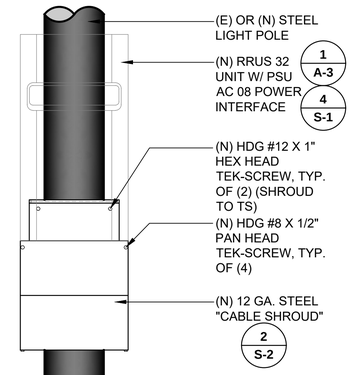


REINFORCING RIM

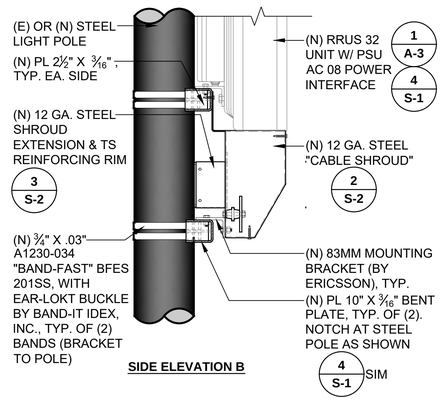
SCALE: N.T.S | 3



PLAN



FRONT ELEVATION A



SIDE ELEVATION B

NOTES:
1. HOT-DIP GALVANIZE ALL STEEL COMPONENTS AFTER FABRICATION.
2. PROVIDE STEEL SHOP DRAWING FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.
3. PROVIDE MOCK-UP FOR REVIEW AND APPROVAL TO ENSURE PROPER FIT/ ALIGNMENT WITH RRUS UNIT ABOVE.
4. PRIME AND PAINT MOUNTING COMPONENTS WITH TNEMEC EXTERIOR PAINT COATING TO MATCH POLE.
5. SEE REINFORCING RIM NOTES SHEET S-1.

CABLE SHROUD MOUNT

SCALE: N.T.S | 1

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TO 359-17-019

REGISTERED PROFESSIONAL ENGINEER JEFFREY M. VAN DYKE S 3983 EXP. 2/31/20 STRUCTURAL STATE OF CALIFORNIA

REV	DATE	ISSUE
1	10/18/2017	90% CONSTRUCTION
2	2/6/2018	100% CONSTRUCTION
3	3/26/2018	100% CONSTRUCTION REV.

SHEET TITLE

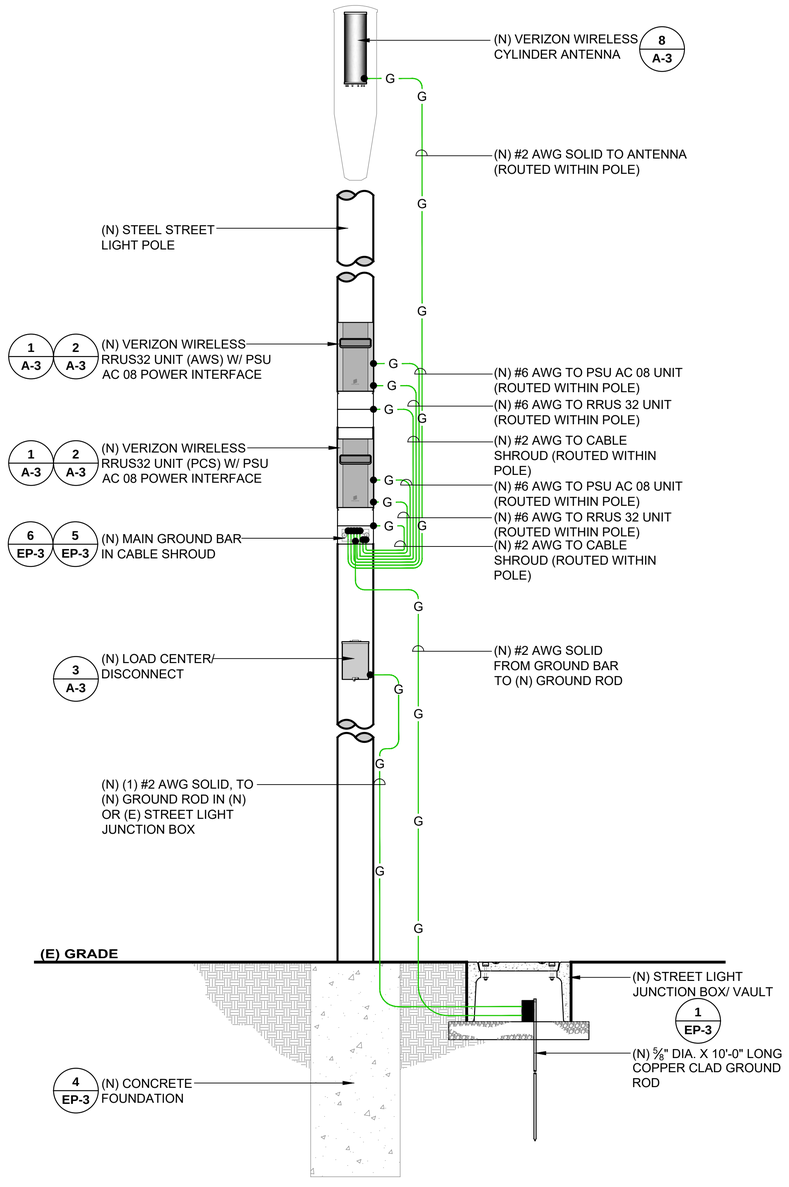
DETAILS

SHEET NUMBER

S-2

NOTES:

1. ALL GROUND ELECTRODE SYSTEMS SHALL BE BONDED TOGETHER, AT OR BELOW GRADE, BY TWO OR MORE COPPER BONDING CONDUCTORS IN ACCORDANCE WITH THE CEC.
2. PERFORM IEEE FALL-OF-POTENTIAL RESISTANCE TO EARTH TESTING (PER IEEE 1100 AND 81) FOR NEW GROUND ELECTRODE SYSTEM. PROVIDE SUPPLEMENTAL GROUND ELECTRODES AS NEEDED TO ACHIEVE A TEST RESULT OF 5 OHMS OR LESS.
3. EACH RRU UNIT AND PSC AC UNIT SHALL BE DIRECTLY CONNECTED TO THE GROUND BAR WITH GREEN INSULATED SUPPLEMENTAL EQUIPMENT GROUND WIRES, 6 AWG COPPER OR LARGER.
4. EXOTHERMIC WELDS SHALL BE USED FOR ALL GROUNDING CONNECTIONS BELOW GRADE.
5. APPROVED ANTIOXIDANT COATINGS (I.E., CONDUCTIVE GEL OR PASTE) SHALL BE USED ON ALL COMPRESSION AND BOLTED GROUND CONNECTIONS.
6. GROUND CONDUCTORS SHALL NOT BE ROUTED THROUGH METALLIC OBJECTS THAT FORM A RING AROUND THE CONDUCTOR, SUCH AS METALLIC CONDUITS, METAL SUPPORT CLIPS OR SLEEVES. WHEN IT IS REQUIRED TO BE HOUSED IN CONDUIT TO MEET CODE REQUIREMENTS OR LOCAL CONDITIONS, NON-METALLIC MATERIAL SUCH AS PVC CONDUIT SHALL BE USED.

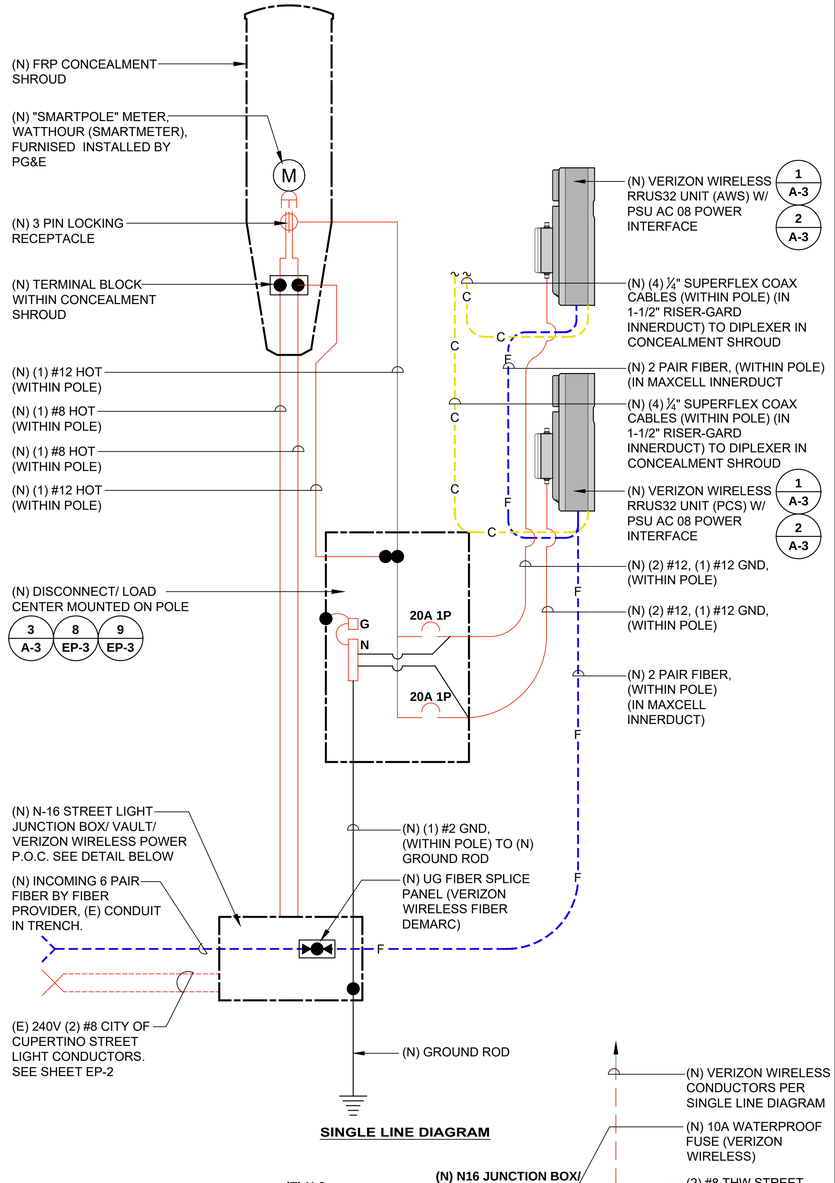


EQUIPMENT GROUNDING DIAGRAM

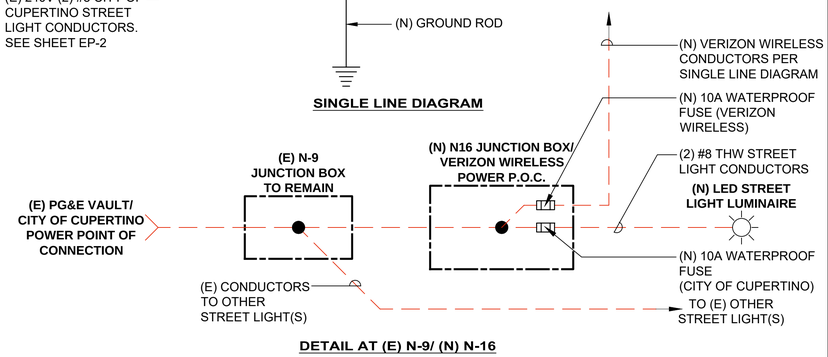
SCALE: N.T.S | 2

NOTES:

1. PROVIDE ELECTRICAL SERVICE EQUIPMENT WITH FAULT CURRENT RATINGS GREATER THAN THE AVAILABLE FAULT CURRENT FROM THE POWER UTILITY.
2. ALL SERVICE EQUIPMENT AND INSTALLATION SHALL COMPLY WITH THE PREVAILING LATEST EDITION OF THE CALIFORNIA ELECTRICAL CODE, 2017 NFPA 70, AUTHORITY HAVING JURISDICTION AND UTILITY COMPANY.
3. CONDUCTORS SHALL BE SPLICED IN ACCORDANCE WITH STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION STANDARD PLAN ES-13, COMPRESSION CONNECTOR AND WATERPROOF.



SINGLE LINE DIAGRAM



DETAIL AT (E) N-9/ (N) N-16

SINGLE LINE DIAGRAM

SCALE: N.T.S | 1

SHEET NOTES

1. COMPLY WITH GOVERNING CODES AND REGULATIONS OF AUTHORITIES HAVING JURISDICTION. PROVIDE PRODUCTS OF ACCEPTABLE MANUFACTURERS WHICH HAVE BEEN IN SATISFACTORY USE IN SIMILAR SERVICE FOR THREE YEARS. USE EXPERIENCED INSTALLERS. DELIVER, HANDLE, AND STORE MATERIALS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
2. COORDINATE WITH UTILITY COMPANY FOR SITE SPECIFIC WORK AND MATERIAL REQUIREMENTS PRIOR TO START OF CONSTRUCTION.
3. PROVIDE ALL CONDUIT, PULL ROPES, PULL BOXES, CONCRETE ENCASEMENT(IF REQUIRED), BARRIERS, POLE RISERS, TRENCHING, BACKFILL, AS REQUIRED PER SITE SPECIFIC REQUIREMENTS.
4. OBTAIN PERMITS FROM AUTHORITIES HAVING JURISDICTION REQUIRED TO PERFORM THE WORK, PRIOR TO START OF CONSTRUCTION.
5. NOTIFY CONSTRUCTION MANAGER OF EXISTING CONDITIONS DIFFERING FROM THOSE INDICATED.
6. PROVIDE SERVICE ENTRANCE EQUIPMENT WITH FAULT CURRENT RATINGS GREATER THAN THE AVAILABLE FAULT CURRENT FROM THE POWER UTILITY PROVIDER.
7. REVIEW AND INSPECT EXISTING CONDITIONS, GROUNDING SYSTEM AND LIGHTING PROTECTION SYSTEM FOR COMPLIANCE WITH THE AUTHORITY HAVING JURISDICTION. REPORT ANY ADVERSE FINDINGS TO THE CONSTRUCTION MANAGER PRIOR TO PROCEEDING.
8. PERFORM IEEE FALL-OF-POTENTIAL RESISTANCE TO EARTH TESTING FOR NEW GROUND ELECTRODE SYSTEMS. PROVIDE SUPPLEMENTAL GROUND ELECTRODES AS REQUIRED TO ACHIEVE A TEST RESULT OF 5 OHMS OR LESS.
9. ANTIOXIDANT COATINGS SHALL BE USED ON ALL COMPRESSION AND BOLTED GROUND CONNECTIONS.
10. ALL WIRING METHODS SHALL CONFORM TO THE LATEST EDITION OF THE CALIFORNIA ELECTRICAL CODE (CEC) AND UTILITY COMPANY REQUIREMENTS AND AUTHORITIES HAVING JURISDICTION.
11. ALL BENDS AND/ OR OFFSETS SHALL BE MADE WITH FACTORY SECTIONS USING APPROVED COUPLERS PER CEC REQUIREMENTS.
12. ALL EMPTY CONDUITS SHALL HAVE A ¼" POLYPROPYLENE PULL ROPE PROVIDED INSIDE AND SEALED WITH A DUCT SEAL ON BOTH ENDS OF THE CONDUIT.
13. THE ENDS OF ALL CONDUITS INSTALLED SHALL BE SEALED WITH A DUCT SEAL.
14. PROVIDE NEW METER AND DISCONNECT PER UTILITY COMPANY REQUIREMENTS.

SYMBOL LEGEND

SYMBOL	NOTES
F	FIBER OPTICAL CABLE
G	COPPER GROUND WIRE
	BRANCH CIRCUIT UNDERGROUND
	BRANCH CIRCUIT ABOVE GRADE
	CONDUIT TURNED UP
	CONDUIT TURNED DOWN
	CONDUIT STUBBED OUT
	CIRCUIT BREAKER
	FUSE
	SPLICED WIRES
F	FIBER OPTIC SPLICE PANEL
M	METER SOCKET PER UTILITY PROVIDER REQUIREMENTS
	GROUND ROD
	MECHANICAL GROUND CONNECTION
	EXOTHERMIC WELD

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LICENSED ARCHITECT
JAMES F. VACCARO
C-33251
07-31-2019
RENEWAL DATE
STATE OF CALIFORNIA

REV	DATE	ISSUE
1	10/18/2017	90% CONSTRUCTION
2	2/6/2018	100% CONSTRUCTION
3	3/26/2018	100% CONSTRUCTION REV.

SHEET TITLE

SINGLE LINE DIAGRAM, EQUIPMENT GROUNDING DIAGRAM

SHEET NUMBER

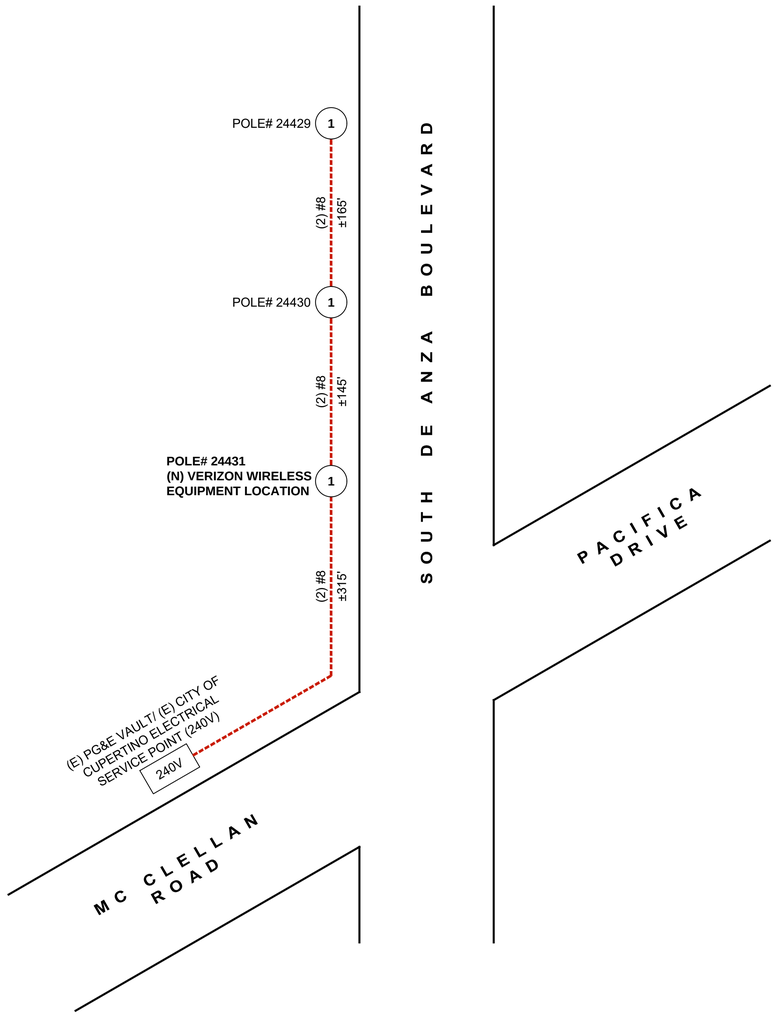
EP-1

CONDUIT SCHEDULE

MARK	CONDUIT SIZE	WIRES
SCHEDULE A	(N) 1½" DIA.	(E) CITY: (2) #8 VERIZON: (N) 2X FIBER, (2) #2 GND
SCHEDULE B	(N) 1½" DIA.	(E) CITY: (2) #8
SCHEDULE C	(E) 1½" DIA.	(E) CITY: (2) #8
SCHEDULE D	(E) 1½" DIA.	(E) CITY: (2) #8
SCHEDULE E	(E) 1½" DIA.	(E) CITY: (2) #8

CONDUIT SCHEDULE

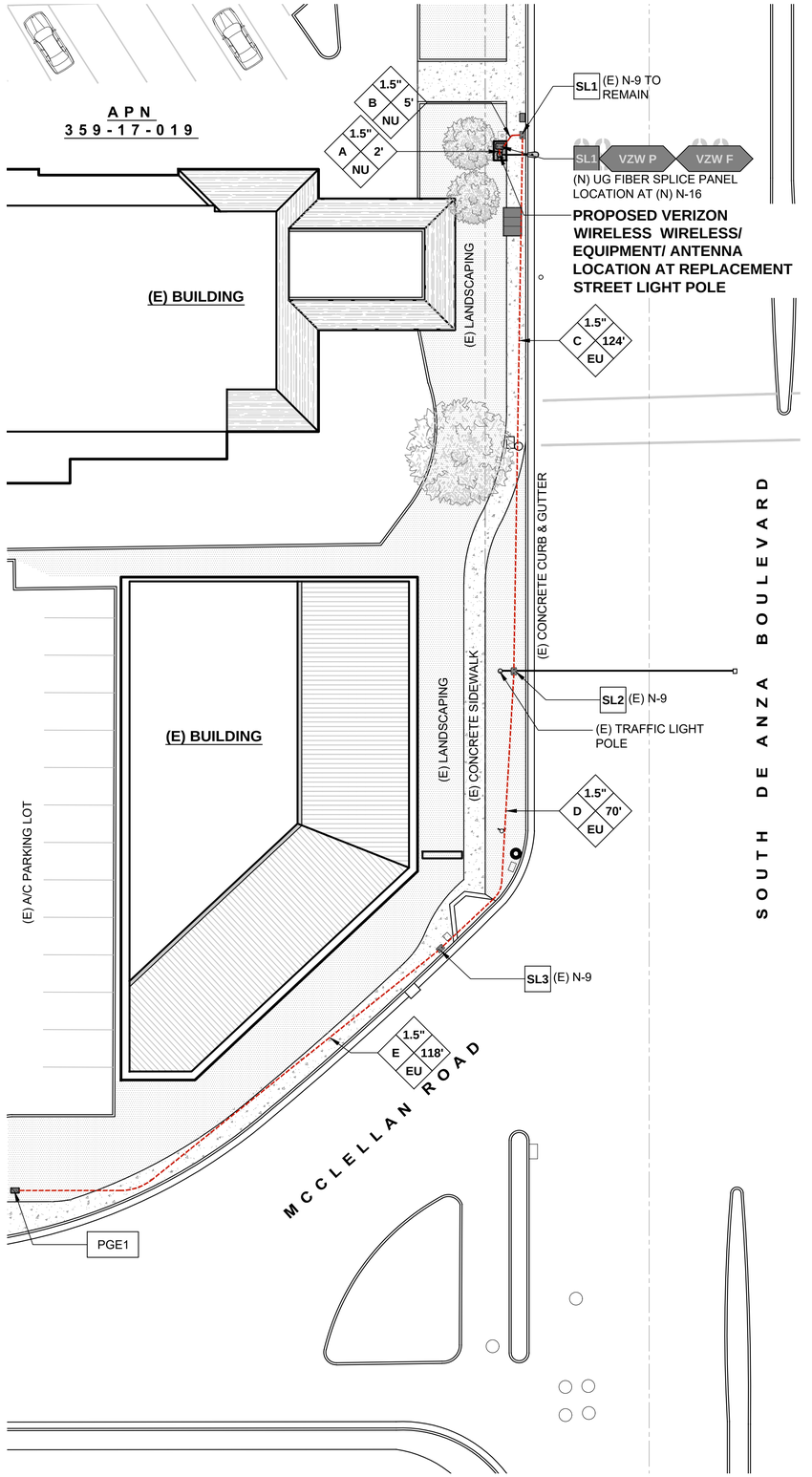
SCALE: N.T.S | 2



SERVICE POINT LOCATION	CIRCUIT #	BREAKER SIZE	POLE ID	CELLULAR EQUIPMENT WATTAGE	EXISTING LUMINAIRE	AMPERAGE		VOLTAGE DROP	
						EXISTING	PROPOSED	EXISTING	PROPOSED
S DE ANZA BLVD & MC CLELLAN RD	1	N/A	24429		120 W ID	1.8	8.3	0.69%	2.83%
			24430		120 W ID				
			24431	1560	120 W ID				

CIRCUIT DIAGRAM

SCALE: N.T.S | 3



UTILITY PLAN

SCALE: 1/16"=1'-0" | 8' 16' 32' | 1

SHEET NOTES

1. COMPLY WITH GOVERNING CODES AND REGULATIONS OF AUTHORITIES HAVING JURISDICTION. PROVIDE PRODUCTS OF ACCEPTABLE MANUFACTURERS WHICH HAVE BEEN IN SATISFACTORY USE IN SIMILAR SERVICE FOR THREE YEARS. USE EXPERIENCED INSTALLERS.
2. OBTAIN PERMITS FROM AUTHORITIES HAVING JURISDICTION REQUIRED TO PERFORM THE WORK, PRIOR TO START OF CONSTRUCTION.
3. NOTIFY CONSTRUCTION MANAGER OF EXISTING CONDITIONS DIFFERING FROM THOSE INDICATED.
4. PROVIDE SERVICE ENTRANCE EQUIPMENT WITH FAULT CURRENT RATINGS GREATER THAN THE AVAILABLE FAULT CURRENT FROM THE POWER UTILITY PROVIDER.
5. REVIEW AND INSPECT EXISTING CONDITIONS, GROUNDING SYSTEM AND LIGHTING PROTECTION SYSTEM FOR COMPLIANCE WITH THE AUTHORITY HAVING JURISDICTION. REPORT ANY ADVERSE FINDINGS TO THE CONSTRUCTION MANAGER PRIOR TO PROCEEDING.
6. EXISTING UNDERGROUND WIRING, CONDUIT AND FUSE INFORMATION SHOWN IS BASED ON CLIENT PROVIDED INFORMATION AND BEST PRESENT KNOWLEDGE OF EXISTING CONDITIONS. WHERE CONDITIONS ARE UNCOVERED DURING CONSTRUCTION THAT DIFFER FROM WHAT IS SHOWN OR THAT REQUIRE MODIFICATION OF DETAILING SHOWN, SUCH DISCREPANCIES SHALL BE CALLED TO THE ATTENTION OF THE ARCHITECT PRIOR TO PROCEEDING WITH THE WORK.
7. ALL WIRING METHODS SHALL CONFORM TO THE LATEST EDITION OF THE CALIFORNIA ELECTRICAL CODE (CEC), NFPA 70 AND APPLICABLE SECTIONS OF THE CITY OF CUPERTINO DEPARTMENT OF PUBLIC WORKS STANDARDS.
8. A CITY OF CUPERTINO PUBLIC WORKS DEPARTMENT CONNECTION ORDER IS REQUIRED TO ENERGIZE ANY ELECTROLIER OR EQUIPMENT (PROVIDED BY THE CITY OF CUPERTINO AFTER COMPLETION AND INSPECTION FOR SUBMITTAL TO PACIFIC GAS AND ELECTRIC).
9. CONTACT PACIFIC GAS AND ELECTRIC FOR ADDITIONAL REQUIREMENTS AND CONTACT THE CITY OF CUPERTINO PUBLIC WORKS DEPARTMENT FOR INSPECTIONS OF FOUNDATIONS FORTY EIGHT HOURS PRIOR TO FOUNDATION POURING AND ELECTRICAL INSPECTIONS.
10. THE CONTRACTOR SHALL SUPPLY TO THE CITY OF CUPERTINO FOR APPROVAL, MANUFACTURER'S SUBMITTALS FOR ALL NEW LUMINAIRES.
11. ALL CONDUCTORS SHALL BE SIZED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE.
12. ALL OVERLOAD PROTECTION (FUSES) SHALL BE SIZED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE.
13. WHENEVER AN INSTALLATION IS NEAR ANY OVERHEAD WIRES/ CONDUCTORS, A CLEARANCE MUST BE OBTAINED FROM PACIFIC GAS AND ELECTRIC PRIOR TO INSTALLATION.

SHEET LEGEND

SYMBOL	NOTES
X / A / XX' / U	CONDUIT DIAMETER CONDUIT APPROXIMATE LENGTH IN LINEAR FEET CONDUIT SCHEDULE MARK EXISTING, NEW, UNDEGROUND, SURFACE MOUNTED (E-EXISTING, N-NEW, U-UNDERGROUND, S-SURFACE MOUNTED)
SL#	EXISTING N-9 BOX (STREET LIGHT VAULT)/ NUMBER
SL#	NEW N-16 BOX (STREET LIGHT VAULT)/ NUMBER/ NEW VERIZON WIRELESS FIBER SPLICE PANEL LOCATION
PGE1	EXISTING PG&E VAULT/ EXISTING CITY OF CUPERTINO POWER POINT OF CONNECTION
	EXISTING OR NEW CONDUIT ROUTE
VZW P	VERIZON WIRELESS POWER POINT OF CONNECTION
VZW F	VERIZON WIRELESS FIBER DEMARC/ SPLICE PANEL / POINT OF CONNECTION

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SAN FRANCISCO, CA 94108

verizon

VERIZON WIRELESS
2785 MITCHELL DRIVE, SUITE 9
WALNUT CREEK, CA 94598

CONSULTANTS

SF_CUPER001
CPSC001
PUBLIC ROW ADJACENT TO
10465 S. DE ANZA BOULEVARD
CUPERTINO, CA 95014
APN: PUBLIC ROW ADJACENT
TO 359-17-019

LICENSED ARCHITECT
JAMES F. VACCARO
C-33251
07-31-2019
RENEWAL DATE
STATE OF CALIFORNIA

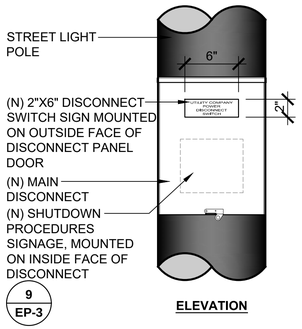
REV	DATE	ISSUE
1	10/18/2017	90% CONSTRUCTION
2	2/6/2018	100% CONSTRUCTION
3	3/26/2018	100% CONSTRUCTION REV.

SHEET TITLE

UTILITY PLAN, CONDUIT SCHEDULE, CIRCUIT DIAGRAM

SHEET NUMBER

EP-2



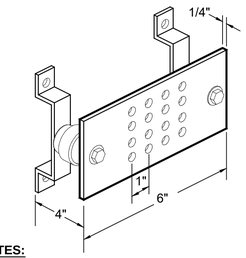
ELEVATION

NOTES:

1. DISCONNECT SWITCH SIGN SHALL READ "UTILITY COMPANY POWER DISCONNECT SWITCH" IN ½" HEIGHT TEXT, WITH WHITE BACKGROUND AND BLACK LETTERING.
2. SIGN SHALL BE OUTDOOR RATED WITH UV PROTECTION.
3. SEE SPECIFICATIONS SECTION 26 05 00 FOR COMMON WORK RESULTS FOR ELECTRICAL.

SHUT-DOWN SIGNAGE

SCALE: N.T.S | 8

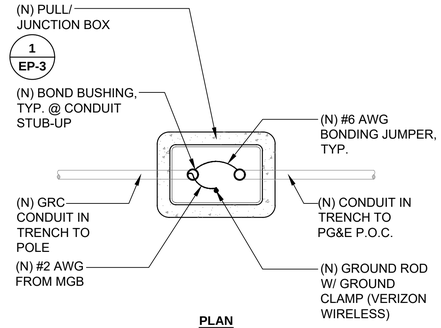


NOTES:

1. ¼"X4"X6" COPPER GROUND BAR, TYP. OF SITE PRO 1 #MG40616 WITH INSULATORS AND BRACKETS AS REQUIRED OR APPROVED EQUAL.
2. PROVIDE TAMPER RESISTANT GROUND BAR MOUNTING HARDWARE.
3. APPROVED ANTIOXIDANT COATINGS (I.E., CONDUCTIVE GEL OR PASTE) SHALL BE USED ON ALL COMPRESSION AND BOLTED GROUND CONNECTIONS.

GROUND BAR

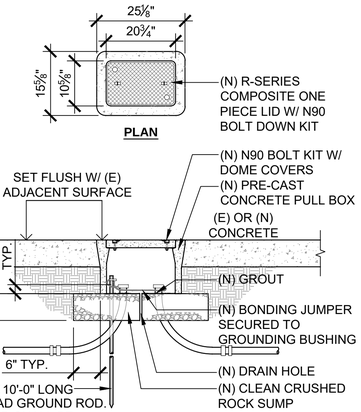
SCALE: N.T.S | 5



PLAN

GROUNDING AT PULL BOX

SCALE: N.T.S | 3



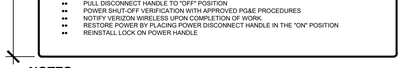
SECTION

NOTES:

1. PULL/ JUNCTION BOX SHALL BE "CHRISTY" N16, WITH ONE PIECE COMPOSITE LID AND N90 SS BOLT KIT AS MANUFACTURED BY OLDCASTLE ENCLOSURE SOLUTIONS (800-486-7070).
2. LID SHALL BE MARKED "STREET LIGHTING ".
3. TOP OF VAULT SHALL BE SET FLUSH WITH SURROUNDING ADJACENT SURFACE.
4. VERIFY LOCATIONS OF ALL EXISTING UTILITIES BELOW GRADE VIA UNDERGROUND SERVICE LOCATOR PRIOR TO ANY EXCAVATION.
5. UTILITY VAULT SHALL NOT BE INSTALLED WITHIN THE BOUNDARIES OF NEW OR EXISTING CURB RAMPS.
6. PATCH/ REPAIR ADJACENT SURFACES TO CONDITION EXISTING PRIOR TO WORK.
7. ALL CONCRETE REPAIR WORK SHALL BE DONE IN ACCORDANCE WITH THE AMERICAN CONCRETE INSTITUTE (ACI) 301.

JUNCTION/ PULL BOX

SCALE: N.T.S | 1

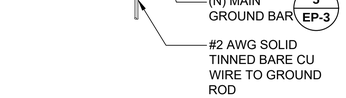


NOTES:

1. SIGN SHALL BE MOUNTED ON INSIDE FACE OF POWER MAIN DISCONNECT SWITCH IN ¾" HEIGHT TEXT, WITH WHITE BACKGROUND AND BLACK LETTERING.
2. SIGN SHALL BE OUTDOOR RATED.
3. SEE SPECIFICATIONS SECTION 26 05 00 FOR COMMON WORK RESULTS FOR ELECTRICAL.

SHUT-DOWN SIGNAGE

SCALE: N.T.S | 9

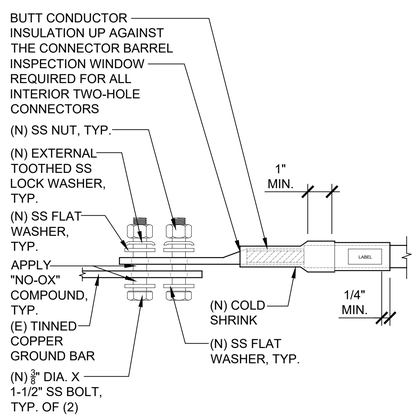


NOTES:

1. APPLY "NO-OX" OXIDE INHIBITOR AGENT TO LUG AND BAR CONTACT SURFACE.

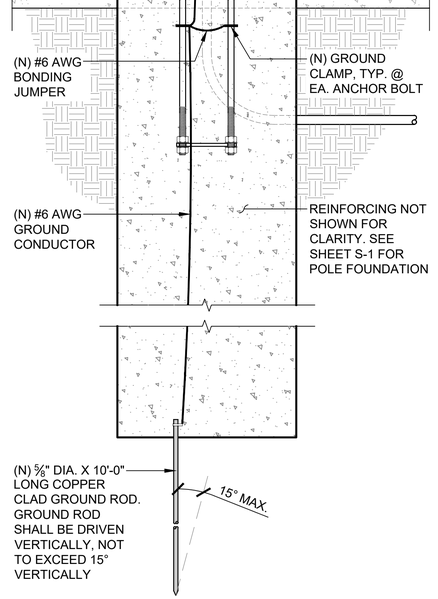
GROUND CONNECTION

SCALE: N.T.S | 6



TWO-HOLE GROUND LUG

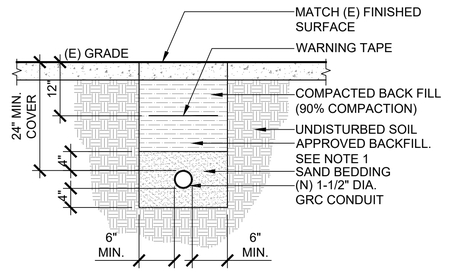
SCALE: N.T.S | 7



SECTION

GROUNDING AT POLE

SCALE: N.T.S | 4



SECTION

NOTES:

1. TRENCH BACKFILL: CLASS II OR CLASS III AGGREGATE BASE AT 90% COMPACTION. NATIVE MATERIALS MAY BE USED AS BACKFILL WITH WRITTEN CONSENT OF A/E. NATIVE BACKFILL COMPACTION SHALL BE 90%. CONTRACTOR SHALL VERIFY SUITABILITY OF NATIVE BACKFILL PRIOR TO START OF CONSTRUCTION.
2. VERIFY LOCATIONS OF ALL EXISTING UTILITIES BELOW GRADE VIA UNDERGROUND SERVICE LOCATOR PRIOR TO ANY EXCAVATION.
3. ADJUST LOCATION OF TRENCH AS REQUIRED PER RESULTS OF UNDERGROUND SERVICE LOCATOR RESULTS TO AVOID CONFLICT WITH EXISTING UTILITIES.
4. PATCH/ REPAIR ADJACENT SURFACES TO CONDITION EXISTING PRIOR TO WORK.
5. ALL CONCRETE REPAIR WORK SHALL BE DONE IN ACCORDANCE WITH THE AMERICAN CONCRETE INSTITUTE (ACI) 301.

UTILITY TRENCH

SCALE: N.T.S | 2

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APN: PUBLIC ROW ADJACENT
TO 359-17-019

LICENSED ARCHITECT
JAMES F. VACCARO
C-33251
07-31-2019
RENEWAL DATE
STATE OF CALIFORNIA

REV	DATE	ISSUE
1	10/18/2017	90% CONSTRUCTION
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SHEET TITLE

DETAILS

SHEET NUMBER

EP-3

SPECIFICATIONS

1 Division 1 General Requirements

SECTION 01 10 00 SUMMARY

PART 1 - GENERAL

1.1 SUMMARY

A. Project Summary: Project consists of installation of two new RRUS units, one load center distribution panel, one antenna and concealment cylinder and applicable utilities on a replacement City of Cupertino Street Light Pole in the Public Right of Way. Coaxial, Fiber and power lines to be routed internally within existing pole. Applicable required site/ FCC/ warning signage to be mounted to existing pole.

B. Permits and Fees: Obtain and pay for permits from authorities having jurisdiction, fees, and utility company charges required to perform the work, prior to start of construction.

C. Codes: Comply with applicable codes and regulations of authorities having jurisdiction.

D. Dimensions: Verify dimensions indicated on drawings with field measurements prior to fabrication or ordering of materials. Do not scale drawings.

E. Existing Conditions: Notify Construction Manager of existing conditions differing from those indicated on the drawings. Do not remove or alter structural components without prior written approval.

F. Coordination:

1. **Coordinate the work of all trades.**
2. **Verify location of utilities and existing conditions.**

G. Installation Requirements, General:

1. **Inspect substrates and report unsatisfactory conditions in writing.**
2. **Do not proceed until unsatisfactory conditions have been corrected.**
3. **Take field measurements prior to fabrication.**
4. **Install materials in accordance with manufacturer's instructions and approved submittals.**

1.2 DEFINITIONS:

A. THE CONTRACT DOCUMENTS: The Contract Documents consist of the Agreement between the Company and the Contractor and consist of the Agreement, Conditions of the Contract, Drawings, Specifications, Addenda, and other documents listed in the agreement and modifications issued after the execution of the contract.

B. THE CONTRACT: The Contract Documents that form the Contract for Construction. the Contract Documents shall not be construed to create a contractual relationship of any kind between the Contractor and the Architect or the Architect's consultants, between the Company and a subcontractor, between the Company and the Architect or the Architect's consultants or between any person or entities other than the Company and the Contractor.

C. THE WORK: The construction and services required by the Contract Documents, and includes all other labor, materials, equipment and services provided or to be provided by the Contractor to fulfill the Contractor's obligations.

D. THE DRAWINGS: The Drawings are graphical and pictorial portions of the Contract Documents showing the design, location and dimensions of the work.

E. THE SPECIFICATIONS: The Specifications are that portion of the Contract Documents consisting of the written requirements for materials, equipment, systems, standards and workmanship for the work and performance of related services.

F. THE COMPANY: Verizon Wireless

G. ARCHITECT/ ENGINEER: synonymous with Architect & Engineer and "A&E". The Design Professional having responsibility for the design.

H. CONTRACTOR: The Contractor is the person or entity identified as such in the agreement that shall perform and accomplish the work in accordance with the contract documents. the Contractor shall be lawfully licensed in the jurisdiction where the project is located.

I. THIRD PARTY VENDOR OR AGENCY: A Vendor or Agency engaged separately by the Company, A&E, or Contractor to provide materials, test, inspections or to accomplish specific tasks related to related to the work.

J. CFCI: Company furnished, Contractor installed.

K. CONSTRUCTION MANAGER: Company's principal Agent in respect to the work. all project related communication and shall flow through Company's designated Construction Manager.

L. MATCH EXISTING: Match existing as acceptable to the Company and Owner.

M. PROVIDE: Furnish and install, complete with all necessary accessories, ready for intended use. Pay for all related costs.

1.3 INTENT:

A. Drawings and specifications are intended to provide the basis for proper completion of the work suitable for the intended use of the Company. Anything not expressly set forth but which is reasonable implied or necessary for proper performance of the project shall be included.

1.4 WRITING STYLE:

A. Specification are written in the imperative mode. Except where specifically intended otherwise, the subject of all imperative statements is the Contractor. For example, "Provide" means "Contractor shall provide and install".

1.5 CORRELATION OF THE CONTRACT DOCUMENTS:

A. The Contract Documents are complementary, and what is required by one shall be binding as if required by all. Any discrepancies or conflicts shall be brought to the attention of the Construction Manager appointed to manage the project for the Company, in the form of a request for information (RFI), prior to the commencement of work.

1.6 SITE FAMILIARITY:

A. The Contractor shall before commencing each portion of the work, carefully study and compare the various contract documents, as well as the information furnished by the Company, shall take field measurements of any existing conditions related to the work, and shall observe any conditions at the site affecting it. The Contractor shall promptly report any errors, inconsistencies or omissions discovered.

1.7 POINT OF CONTACT:

A. Communication between the Contractor and the Company shall flow through the company's Construction Manager appointed to manage the project for the Company.

1.8 SUPERVISION AND CONSTRUCTION PROCEDURES:

A. The Contractor shall supervise and direct the work. The Contractor shall be solely responsible for construction means, methods, techniques, sequences and procedures and for coordinating all portions of the work under the Contract, unless the Contract Documents give other specific instructions. The Contractor shall be fully and solely responsible for the jobsite safety.

1.9 WORK RESTRICTIONS

A. CONTRACTOR'S USE OF PREMISES: During construction, Contractor will have limited use of site indicated. Contractor's use of premises is limited only by the company's right to perform work or employ other contractors on portions of project and as follows:

1. **LIMITS: Limit site disturbance, including earthwork, clearing of vegetation, staging, storage of materials and equipment, waste storage and temporary facilities to the Company's lease parcel, unless otherwise permitted by the contract documents.**
2. **DRIVEWAYS, WALKWAYS, AND ENTRANCES: Keep driveways and entrances serving premises clear and available to Owner, Owner's employees, and emergency vehicles at all times. do not use these areas for parking or storage of materials.**

PART 2 - PRODUCTS (NOT USED)
PART 3 - EXECUTION (NOT USED)

END OF SECTION 01 10 00

SECTION 01 25 00 SUBSTITUTION PROCEDURES

PART 1 - GENERAL

1.1 SUBSTITUTION PROCEDURES

A. Substitutions include changes in products, materials, equipment, and methods of construction from those required by the Contract Documents and proposed by Contractor.

B. Substitution Requests: Submit three copies of each request for consideration. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.

1. **Submit requests within 3 days after the Notice of Award.**
2. **Identify product to be replaced and show compliance with requirements for substitutions. Include a detailed comparison of significant qualities of proposed substitution with those of the Work specified, a list of changes needed to other parts of the Work required to accommodate proposed substitution, and any proposed changes in the Contract Sum or the Contract Time should the substitution be accepted.**

C. Architect will review proposed substitutions and notify Contractor of their acceptance or rejection. If necessary, Architect will request additional information or documentation for evaluation.

1. **Architect will notify Contractor of acceptance or rejection of proposed substitution within seven days of receipt of request, or seven days of receipt of additional information or documentation, whichever is later.**

D. Do not submit unapproved substitutions on Shop Drawings or other submittals.

PART 2 - PRODUCTS (Not Used)
PART 3 - EXECUTION (Not Used)

END OF SECTION 01 25 00

SECTION 01 30 00 ADMINISTRATIVE REQUIREMENTS

PART 1 - GENERAL

1.1 PROJECT MANAGEMENT AND COORDINATION

A. Subcontract List: Submit a written summary identifying individuals or firms proposed for each portion of the Work.

B. Key Personnel Names: Within 3 days of starting construction operations, submit a list of key personnel assignments, including superintendent and other personnel in attendance at Project site. List e-mail addresses and telephone numbers.

C. Coordinate construction operations included in different Sections of the Specifications to ensure efficient and orderly installation of each part of the Work.

D. Requests for Information (RFIs): On discovery of the need for additional information or interpretation of the Contract Documents, Contractor shall prepare and submit an RFI. Use forms acceptable to Architect and The Company.

E. Schedule and conduct progress meetings at Project site at intervals designated by the Construction Manager. Notify Construction Manager and Architect of meeting dates and times. Require attendance of each subcontractor or other entity concerned with current progress or involved in planning, coordination, or performance of future activities.

1.2 SUBMITTAL ADMINISTRATIVE REQUIREMENTS

A. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.

1. **Submit PDF electronic copy of each action submittal via email to Construction Manager and Architect.**
2. **Submit PDF electronic copy of each informational submittal via email to Construction Manager and Architect.**
3. **Architect will return submittals, without review received from sources other than Contractor or Construction Manager.**

B. Identify deviations from the Contract Documents on submittals.

PART 2 - PRODUCTS

2.1 SUBMITTAL PROCEDURES

A. General Submittal Procedure Requirements: Prepare and submit submittals required by individual Specification Sections.

4. **Submit electronic submittals via email as PDF electronic files.**
   a. **Architect will return annotated file. Annotate and retain one copy of file as an electronic Project record document file.**

2.2 ACTION SUBMITTALS

A. Submit PDF electronic files of each submittal via email to Construction Manager and Architect unless otherwise indicated.

B. Product Data: Mark each copy to show applicable products and options. Include the following:

1. **Manufacturer's written recommendations, product specifications, and installation instructions.**
2. **Compliance with specified standards and requirements.**

C. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data. Submit on sheets at least 8-1/2 by 11 inches but no larger than 30 by 42 inches. Include the following:

1. **Dimensions and identification of products.**
2. **Fabrication and installation drawings and roughing-in and setting diagrams.**
3. **Notation of coordination requirements.**
4. **Notation of dimensions established by field measurement.**

D. Samples: Submit Samples for review of kind, color, pattern, and texture and for a comparison of these characteristics between submittal and actual component as delivered and installed. Include name of manufacturer and product name on label.

2.3 INFORMATIONAL SUBMITTALS

A. Informational Submittals: Submit PDF electronic file of each submittal unless otherwise indicated.

B. Qualification Data: Include lists of completed projects with project names and addresses, names and addresses of architects and owners, and other information specified.

C. Product Certificates: Prepare written statements on manufacturer's letterhead certifying that product complies with requirements in the Contract Documents.

2.4 DELEGATED DESIGN SERVICES

A. Performance and Design Criteria: Where professional design services or certifications by a design professional are specifically required of Contractor by the Contract Documents, provide products and systems complying with specific performance and design criteria indicated.

1. **If criteria indicated are not sufficient to perform services or certification required, submit a written request for additional information to Construction Manager.**

B. Delegated-Design Submittal: In addition to Shop Drawings, Product Data, and other required submittals, submit three copies of a statement, signed and sealed by the responsible design professional, for each product and system specifically assigned to Contractor to be designed or certified by a design professional.

1. **Indicate that products and systems comply with performance and design criteria in the Contract Documents. Include list of codes, loads, and other factors used in performing these services.**

PART 3 - EXECUTION

3.1 SUBMITTAL REVIEW

A. Review each submittal and check for coordination with other Work of the Contract and for compliance with the Contract Documents. Note corrections and field dimensions. Mark with approval stamp before submitting to Construction Manager.

B. Architect will review each action submittal, make marks to indicate corrections or modifications required, will stamp each submittal with an action stamp, and will mark stamp appropriately to indicate action.

C. Informational Submittals: Architect will review each submittal and will not return it, or will return it if it does not comply with requirements. Architect will forward each submittal to appropriate party.

D. Submittals not required by the Contract Documents may not be reviewed and may be discarded.

END OF SECTION 01 30 00

SECTION 01 40 00 QUALITY REQUIREMENTS

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

A. Testing and inspecting services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with the Contract Document requirements.

B. Referenced Standards: If compliance with two or more standards is specified and the standards establish different or conflicting requirements, comply with the most stringent requirement. Refer uncertainties to Architect for a decision.

C. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum. The actual installation may exceed the minimum within reasonable limits. Indicated numeric values are minimum or maximum, as appropriate, for the context of requirements. Refer uncertainties to Architect for a decision.

D. Test and Inspection Reports: Prepare and submit certified written reports specified in other Sections. Include the following:

1. **Date of issue.**
2. **Project title and number.**
3. **Name, address, and telephone number of testing agency.**
4. **Dates and locations of samples and tests or inspections.**
5. **Names of individuals making tests and inspections.**
6. **Description of the Work and test and inspection method.**
7. **Identification of product and Specification Section.**
8. **Complete test or inspection data.**
9. **Complete test or inspection data.**
10. **Test and inspection results and an interpretation of test results.**
11. **Record of temperature and weather conditions at time of sample taking and testing and inspecting.**
12. **Comments or professional opinion on whether tested or inspected Work complies with the Contract Document requirements.**
13. **Name and signature of laboratory inspector.**
14. **Recommendations on retesting and reinspecting.**

E. Permits, Licenses, and Certificates: For Company's records, submit copies of permits, licenses, certifications, inspection reports, notices, receipts for fee payments, and similar documents, established for compliance with standards and regulations bearing on performance of the Work.

F. Professional Engineer Qualifications: A professional engineer who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing engineering services of the kind indicated.

G. Testing Agency Qualifications: An independent agency with the experience and capability to conduct testing and inspecting indicated; and where required by authorities having jurisdiction, that is acceptable to authorities.

H. Retesting/Reinspecting: Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including retesting and reinspecting, for construction that replaced Work that failed to comply with the Contract Documents.

I. Testing Agency Responsibilities: Cooperate with Architect and Contractor in performance of duties. Provide qualified personnel to perform required tests and inspections.

1. **Notify Architect and Contractor of irregularities or deficiencies in the Work observed during performance of its services.**
2. **Do not release, revoke, alter, or increase requirements of the Contract Documents or approve or accept any portion of the Work.**
3. **Do not perform any duties of Contractor.**

J. Associated Services: Cooperate with testing agencies and provide reasonable auxiliary services as requested. Provide the following:

1. **Access to the Work.**
2. **Incidental labor and facilities necessary to facilitate tests and inspections.**
3. **Adequate quantities of representative samples of materials that require testing and inspecting. Assist agency in obtaining samples.**
4. **Facilities for storage and field curing of test samples.**
5. **Security and protection for samples and for testing and inspecting equipment.**

K. Coordination: Coordinate sequence of activities to accommodate required quality-assurance and -control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspecting.

1. **Schedule times for tests, inspections, obtaining samples, and similar activities.**

L. Special Tests and Inspections: Engage a qualified testing agency to conduct special tests and inspections required by authorities having jurisdiction.

PART 2 - PRODUCTS (Not Used)
PART 3 - EXECUTION

3.1 REPAIR AND PROTECTION

A. General: On completion of testing, inspecting, sample taking, and similar services, repair damaged construction and restore substrates and finishes.

B. Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality-control services.

END OF SECTION 01 40 00

SECTION 01 42 00 REFERENCES

PART 1 - GENERAL

1.1 GENERAL REQUIREMENTS

A. Publication Dates: Comply with standards in effect as of date of the Contract documents unless otherwise indicated.

B. Abbreviations and Acronyms: Where abbreviations and acronyms are used in specifications or other contract documents, they shall mean the recognized name of the entities in the following list. names are subject to change and are believed to be accurate and up-to-date as of the date of the contract documents.

AA	**Aluminum Association, Inc. (the)**
AASHTO	**American Association of State Highway and Transportation Officials**
ACI	**American Concrete Institute**
AI	**Asphalt Institute**
AIA	**American Institute of Architects (the)**
AISC	**American Institute of Steel Construction**
AISI	**American Iron and Steel Institute**
ANSI	**American National Standards Institute**
APA	**Architectural Precast Association**
ASCE	**American Society of Civil Engineers**
ASCE/SEI	**American Society of Civil Engineers/Structural Engineering Institute(see ASCE)**
ASTM	**American Society For Testing and Materials International**
AWS	**American Welding Society**
CSI	**Construction Specifications Institute (the)**
ICBO	**International Conference of Building Officials**
ICEA	**Insulated Cable Engineers Association, Inc.**
IEEE	**Institute of Electrical and Electronics Engineers, Inc. (the)**
IESNA	**Illuminating Engineering Society of North American**
ISO	**International Organization for Standardization Available from ANSI**
ITU	**International Telecommunication Union**
LPI	**Lightning Protection Institute**
MCA	**Metal Construction Association**
MPI	**Master Painters Institute**
NCTA	**National Cable & Telecommunications Association**
NECA	**National Electrical Contractors Association**
NEMA	**National Electrical Manufacturers Association**
NFPA	**NFPA(National Fire Protection Association)**
SAE	**SAE International**
SCTE	**Society of Cable Telecommunications Engineers**
SEI/ASCE	**Structural Engineering Institute/American Society of Civil Engineers(see ASCE)**
SMACNA	**Sheet Metal and Air Conditioning Contractors' National Association**
SSPC	**The Society for Protective Coatings**
TIA/EIA	**Telecommunications Industry Association/Electronic Industries Alliance**
UL	**Underwriters Laboratories Inc**

PART 2 - PRODUCTS (NOT USED)
PART 3 - EXECUTION (NOT USED)

END OF SECTION 01 42 00

SECTION 01 60 00 PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

A. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.

B. Comparable Product Requests: Submit request for consideration of each comparable product. Identify product or fabrication or installation method to be replaced.

1. **Show compliance with requirements for comparable product requests.**
2. **Architect will review the proposed product and notify Contractor of its acceptance or rejection.**

C. Basis-of-Design Product Specification Submittal: Show compliance with requirements.

D. Compatibility of Options: If Contractor is given option of selecting between two or more products, select product compatible with products previously selected.

E. Deliver, store, and handle products using means and methods that will prevent damage, deterioration, and loss, including theft. Comply with manufacturer's written instructions.

1. **Schedule delivery to minimize storage at Project site and to prevent overcrowding of construction spaces.**
2. **Deliver products to Project site in manufacturer's original sealed container or packaging, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.**
3. **Inspect products on delivery to ensure compliance with the Contract Documents and to ensure that products are undamaged and properly protected.**
4. **Store materials in a manner that will not endanger Project structure or the Public.**
5. **Store products that are subject to damage by the elements, under cover in a weathertight enclosure above ground, with ventilation adequate to prevent condensation.**

F. Warranties specified in other Sections shall be in addition to, and run concurrent with, other warranties required by the Contract Documents. Manufacturer's disclaimers and limitations on product warranties do not relieve Contractor of obligations under requirements of the Contract Documents.

PART 2 - PRODUCTS

2.1 PRODUCT SELECTION PROCEDURES

A. Provide products that comply with the Contract Documents, are undamaged, and, unless otherwise indicated, are new at the time of installation.

1. **Provide products complete with accessories, trim, finish, and other devices and components needed for a complete installation and the intended use and effect.**
2. **Where products are accompanied by the term "as selected," Architect will make selection.**
3. **Descriptive, performance, and reference standard requirements in the Specifications establish salient characteristics of products.**

B. Where the following headings are used to list products or manufacturers, the Contractor's options for product selection are as follows:

1. **Products:**
   a. **Where requirements include "one of the following," provide one of the products listed that complies with requirements.**
   b. **Where requirements do not include "one of the following," provide one of the products listed that complies with requirements or a comparable product.**
2. **Manufacturers:**
   a. **Where requirements include "one of the following," provide a product that complies with requirements by one of the listed manufacturers.**
   b. **Where requirements do not include "one of the following," provide a product that complies with requirements by one of the listed manufacturers or another manufacturer.**

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APN: PUBLIC ROW ADJACENT
TO 359-17-019

LICENSED ARCHITECT
JAMES F. VACCARO
C-33251
07-31-2019
RENEWAL DATE
STATE OF CALIFORNIA

REV	DATE	ISSUE
1	10/18/2017	90% CONSTRUCTION
2	2/6/2018	100% CONSTRUCTION
3	3/26/2018	100% CONSTRUCTION REV.

SHEET TITLE

SPECIFICATIONS

SHEET NUMBER

SP-1

SPECIFICATIONS

1 General Requirements Continued

3. Basis-of-Design Product: Provide the product named, or indicated on the Drawings, or a comparable product by one of the listed manufacturers.

C. Where Specifications require "match Architect's sample," provide a product that complies with requirements and matches Architect's sample. Architect's decision will be final on whether a proposed product matches.

D. Where Specifications include the phrase "as selected by Architect from manufacturer's full range" or similar phrase, select a product that complies with requirements. Architect will select color, gloss, pattern, density, or texture from manufacturer's product line that includes both standard and premium items.

2.2 COMPARABLE PRODUCTS

A. Architect will consider Contractor's request for comparable product when the following conditions are satisfied:

1. Evidence that the proposed product does not require revisions to the Contract Documents, that it is consistent with the Contract Documents and will produce the indicated results, and that it is compatible with other portions of the Work.
2. Detailed comparison of significant qualities of proposed product with those named in the Specifications.
3. List of similar installations for completed projects, if requested.
4. Samples, if requested.

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 60 00

SECTION 01 70 00 EXECUTION AND CLOSEOUT REQUIREMENTS

PART 1 - GENERAL

1.1 EXECUTION REQUIREMENTS

A. Manufacturer's Installation Instructions: Obtain and maintain on-site manufacturer's written recommendations and instructions for installation of products and equipment.

1.2 CLOSEOUT SUBMITTALS

A. Contractor's List of Incomplete Items: Initial submittal at Substantial Completion.

B. Certified List of Incomplete Items: Final submittal at Final Completion.

C. Record Drawings: Submit one set of marked-up record prints.

D. Record Product Data: Submit one paper copy of each submittal.

1.3 SUBSTANTIAL COMPLETION PROCEDURES

A. Prepare a list of items to be completed and corrected (punch list), the value of items on the list, and reasons why the Work is not complete.

B. Submittals Prior to Substantial Completion: Before requesting Substantial Completion inspection, complete the following:

1. Obtain and submit releases from authorities having jurisdiction permitting Company unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
2. Submit closeout submittals specified in other sections, including project record documents, operation and maintenance manuals, similar final record information, warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
3. Submit maintenance material submittals specified in other sections, including tools, spare parts, extra materials, and similar items, and deliver to location designated by Construction Manager.
4. Submit changeover information related to Company's occupancy, use, operation, and maintenance.

C. Procedures Prior to Substantial Completion: Before requesting Substantial Completion inspection, complete the following:

1. Advise Company of pending insurance changeover requirements.
2. Make final changeover of any permanent locks and deliver keys to Company.
3. Complete startup and testing of systems and equipment.
4. Perform preventive maintenance on equipment used prior to Substantial Completion.
5. Advise Company of any changeover in utilities.
6. Participate with Company in conducting inspection and walkthrough.
7. Remove temporary facilities and controls.
8. Complete final cleaning requirements, including touchup painting.
9. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.

D. Inspection: Submit a written request for inspection for Substantial Completion. On receipt of request, Construction Manager will proceed with inspection or advise Contractor of unfulfilled requirements.

1.4 FINAL COMPLETION PROCEDURES

A. Submittals Prior to Final Completion: Before requesting inspection for determining final completion, complete the following:

1. Submit certified copy of Substantial Completion inspection list of items to be completed or corrected (punch list). Certified copy of the list shall state that each item has been completed or otherwise resolved.
2. Certificate of Insurance: Submit evidence of final, continuing insurance coverage complying with insurance requirements.

B. Submit a written request for final inspection for acceptance. On receipt of request, Construction Manager will either proceed with inspection or notify Contractor of unfulfilled requirements.

1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.

PART 2 - PRODUCTS

2.1 MATERIALS

A. In-Place Materials: Use materials for patching identical to in-place materials. For exposed surfaces, use materials that visually match in-place adjacent surfaces to the fullest extent possible.

B. Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.

1. Use cleaning products that comply with Green Seal's GS-37, or if GS-37 is not applicable, use products that comply with the California Code of Regulations maximum allowable VOC levels.

2.2 RECORD DRAWINGS

A. Record Prints: Maintain a set of prints of the Contract Drawings and Shop Drawings, incorporating new and revised drawings as modifications are issued. Mark to show actual installation where installation varies from that shown originally. Accurately record information in an acceptable drawing technique.

1. Identify and date each record Drawing; include the designation "PROJECT RECORD DRAWING" in a prominent location.

PART 3 - EXECUTION

3.1 EXAMINATION AND PREPARATION

A. Existing Conditions: The existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before beginning sitework, investigate and verify the existence and location of underground utilities, mechanical and electrical systems, and other construction affecting the Work.

B. Before proceeding with each component of the Work, examine substrates, areas, and conditions, with Installer or Applicator present where indicated, for compliance with requirements for installation tolerances and other conditions affecting performance.

1. Verify compatibility with and suitability of substrates.
2. Examine roughing-in for electrical systems.

C. Proceed with installation only after unsatisfactory conditions have been corrected.

D. Take field measurements as required to fit the Work properly. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication.

E. Verify space requirements and dimensions of items shown diagrammatically on Drawings.

3.2 CONSTRUCTION LAYOUT AND FIELD ENGINEERING

A. Before proceeding to lay out the Work, verify layout information shown on Drawings, in relation to the property survey and existing benchmarks.

3.3 INSTALLATION

A. Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.

1. Make vertical work plumb and make horizontal work level.
2. Conceal pipes, ducts, and wiring in finished areas unless otherwise indicated.
3. Maintain minimum headroom clearance of 96 inches in occupied spaces and 90 inches in unoccupied spaces.

B. Comply with manufacturer's written instructions and recommendations.

C. Conduct construction operations so no part of the Work is subjected to damaging operations or loading in excess of that expected during normal conditions.

D. Templates: Obtain and distribute to the parties involved templates for work specified to be factory prepared and field installed.

E. Attachment: Provide blocking and attachment plates and anchors and fasteners of adequate size and number to securely anchor each component in place. Where size and type of attachments are not indicated, verify size and type required for load conditions.

1. Mounting Heights: Where mounting heights are not indicated, mount components at heights directed by Construction Manager.

F. Joints: Make joints of uniform width. Where joint locations in exposed work are not indicated, arrange joints for the best visual effect. Fit exposed connections together to form hairline joints.

G. Use products, cleaners, and installation materials that are not considered hazardous.

3.4 CUTTING AND PATCHING

A. Provide temporary support of work to be cut.

B. Protection: Protect in-place construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of Project that might be exposed during cutting and patching operations.

C. Where existing services/systems are required to be removed, relocated, or abandoned, bypass such services/systems before cutting to prevent interruption to occupied areas.

D. Cutting: Cut in-place construction using methods least likely to damage elements retained or adjoining construction.

1. Cut holes and slots neatly to minimum size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.

E. Patch with durable seams that are as invisible as possible. Provide materials and comply with installation requirements specified in other Sections.

1. Restore exposed finishes of patched areas and extend finish restoration into adjoining construction in a manner that will minimize evidence of patching and refinishing.
2. Where patching occurs in a painted surface, prepare substrate and apply primer and intermediate paint coats appropriate for substrate over the patch, and apply final paint coat over entire unbroken surface containing the patch. Provide additional coats until patch blends with adjacent surfaces.

3.5 CLEANING

A. Clean Project site and work areas daily, including common areas. Dispose of materials lawfully.

1. Remove liquid spills promptly.
2. Where dust would impair proper execution of the Work, broom-clean or vacuum the entire work area, as appropriate.
3. Remove debris from concealed spaces before enclosing the space.

B. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion:

1. Clean Project site, yard, and grounds, in areas disturbed by construction activities. Sweep paved areas; remove stains, spills, and foreign deposits.
2. Sweep paved areas broom clean. Remove spills, stains, and other foreign deposits.
3. Remove labels that are not permanent.
4. Clean exposed finishes to a dust-free condition, free of stains, films, and foreign substances.
5. Wipe surfaces of mechanical and electrical equipment. Remove excess lubrication and foreign substances.

END OF SECTION 01 70 00

2 Division 2 Existing Conditions

SECTION 02 30 00 SUBSURFACE INVESTIGATION

PART 1- GENERAL

1.1 SUMMARY

A. Information: Information on the Drawings and in the specifications relating to subsurface conditions and existing utilities and structures is from information available from sources available to the Company's consultants. Such information is furnished only for the information and convenience of the Contractor, and the accuracy or completeness of this information is not guaranteed.

PART 2 PRODUCTS - (Not Used)
PART 3 EXECUTION - (Not Used)

END OF SECTION 02 30 00

SECTION 02 41 19 SELECTIVE DEMOLITION

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

A. Items indicated to be removed and salvaged remain The Owner's property. Carefully detach from existing construction, in a manner to prevent damage, and deliver to Owner. Include fasteners or brackets.

B. Predemolition Photographs: Show existing conditions of adjoining construction and site improvements. Submit before Work begins.

C. It is not expected that hazardous materials will be encountered in the Work. If hazardous materials are encountered, do not disturb; immediately notify Construction Manager. Hazardous materials will be removed by Owner under a separate contract.

PART 2 - PRODUCTS

2.1 PEFORMANCE REQUIREMENTS

A. Regulatory Requirements: Comply with EPA regulations and with hauling and disposal regulations of authorities having jurisdiction.

B. Standards: Comply with ANSI/ASSE A10.6 and NFPA 241.

PART 3 - EXECUTION

3.1 DEMOLITION

A. Maintain services/systems indicated to remain and protect them against damage during selective demolition operations. Before proceeding with demolition, provide temporary services/systems that bypass area of selective demolition and that maintain continuity of services/systems.

B. Locate, identify, shut off, disconnect, and seal or cap off indicated utility services and mechanical/electrical systems serving areas to be selectively demolished.

C. Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.

D. Protect existing finish work that is to remain.

E. Provide and maintain shoring, bracing, and structural supports as required to preserve stability and prevent movement, settlement, or collapse of construction and finishes to remain, and to prevent unexpected or uncontrolled movement or collapse of construction being demolished.

F. Provide temporary weather protection to prevent water leakage and damage to structure.

G. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction.

H. Remove demolition waste materials from Project site and legally dispose of them in an EPA-approved landfill. Do not burn demolished materials.

I. Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations. Return adjacent areas to condition existing before selective demolition operations began.

END OF SECTION 02 41 19

3 Division 3 Concrete

SECTION 03 30 00 CAST-IN-PLACE CONCRETE

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

A. Submittals: concrete mix designs and submittals required by ACI 301.

B. Ready-Mixed Concrete Producer Qualifications: ASTM C 94/C 94M.

PART 2 - PRODUCTS

2.1 PEFORMANCE REQUIREMENTS

A. Comply with ACI 301, "Specification for Structural Concrete," and with ACI 117, "Specifications for Tolerances for Concrete Construction and Materials."

2.2 MATERIALS

A. Reinforcing Bars: ASTM A 615/A 615M, Grade 60, deformed.

B. Plain Steel Wire: ASTM A 82, as drawn.

C. Portland Cement: ASTM C 150, Type I or II.

D. Fly Ash: ASTM C 618, Class C or F.

E. Ground Granulated Blast-Furnace Slag: ASTM C 989, Grade 100 or 120.

F. Aggregates: ASTM C 33, Class 3S.

1. Maximum Coarse-Aggregate Size: 1-1/2 inches nominal.

G. Air-Entraining Admixture: ASTM C 260.

H. Chemical Admixtures: ASTM C 494, water reducing. Do not use calcium chloride or admixtures containing calcium chloride.

I. Moisture-Retaining Cover: ASTM C 171, polyethylene film or white burlap-polyethylene sheet.

J. Joint-Filler Strips: ASTM D 1751, asphalt-saturated cellulosic fiber, or ASTM D 1752, cork or self-expanding cork.

2.3 CONCRETE MIXTURES

I. Prepare design mixtures, proportioned according to ACI 301.

J. Normal-Weight Concrete:

1. Minimum Compressive Strength: As Specified in Drawings.
2. Maximum Water-Cementitious Materials Ratio: 0.50.
3. Slump Limit: 4 inches.
4. Air Content: Maintain within range permitted by ACI 301. Do not allow air content of floor slabs to receive troweled finishes to exceed 3 percent.

C. Measure, batch, mix, and deliver concrete according to ASTM C 94/C 94M.

1. When air temperature is above 90 deg F, reduce mixing and delivery time to 60 minutes.

PART 3 - EXECUTION

3.1 CONCRETING

A. Construct formwork according to ACI 301 and maintain tolerances and surface irregularities within ACI 347R limits of Class A, 1/8 inch for concrete exposed to view and Class B, 1/4 inch for other concrete surfaces.

B. Comply with CRSI's "Manual of Standard Practice" for fabricating, placing, and supporting reinforcement.

C. Install construction, isolation, and contraction joints where indicated. Install full-depth joint-filler strips at isolation joints.

D. Place concrete in a continuous operation and consolidate using mechanical vibrating equipment.

E. Protect concrete from physical damage, premature drying, and reduced strength due to hot or cold weather during mixing, placing, and curing.

F. Formed Surface Finish: Smooth-formed finish for concrete exposed to view, coated, or covered by waterproofing or other direct-applied material; rough-formed finish elsewhere.

G. Slab Finishes: Comply with ACI 302.1R for screeding, restraightening, and finishing operations for concrete surfaces. Do not wet concrete surfaces.

I. Cure formed surfaces by moisture curing for at least seven days.

J. Begin curing concrete slabs after finishing. Keep concrete continuously moist for at least seven days.

L. Engage a testing agency to perform field tests and to submit test reports.

M. Protect concrete from damage. Repair and patch defective areas.

END OF SECTION 03 30 00

DIVISION 4-NOT USED

5 Division 5 Metals

SECTION 05 50 00 METAL FABRICATIONS

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

A. Submittals: Shop Drawings.

PART 2 - PRODUCTS

2.1 METALS

A. Steel Plates, Shapes, and Bars: ASTM A 36/A 36M.

B. Steel Tubing: ASTM A 500.

C. Steel Pipe: ASTM A 53, standard weight (Schedule 40).

2.2 GROUT

A. Nonshrink, Nonmetallic Grout: ASTM C 1107; recommended by manufacturer for exterior applications.

2.3 FABRICATION

A. General: Shear and punch metals cleanly and accurately. Remove burrs and ease exposed edges. Form bent-metal corners to smallest radius possible without impairing work.

B. Welding: Weld corners and seams continuously. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals. At exposed connections, finish welds and surfaces smooth with contour of welded surface matching those adjacent.

2.4 STEEL AND IRON FINISHES

A. Hot-dip galvanize steel fabrications at exterior locations.

B. Prepare uncoated ferrous metal surfaces to comply with SSPC-SP 3, "Power Tool Cleaning," and paint with a fast-curing, lead- and chromate-free, universal modified-alkyd primer complying with MPI#79.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Provide anchorage devices and fasteners where needed to secure items to in-place construction.

B. Perform cutting, drilling, and fitting required for installing miscellaneous metal fabrications. Set metal fabrication accurately in location, alignment, and elevation; with edges and surfaces level, plumb, true, and free of rack.

C. Fit exposed connections accurately together to form hairline joints or, where indicated, with uniform reveals and spaces for sealants and joint fillers.

D. Coat concealed surfaces of aluminum that will come into contact with grout, concrete, masonry, wood, or dissimilar metals with a heavy coat of bituminous paint.

END OF SECTION 05 50 00

DIVISIONS 6 THROUGH 8-NOT USED

9 Division 9 Finishes

SECTION 09 90 00 PAINTING AND COATING

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

A. Submittals:

1. Product Data.

B. Extra Materials: Deliver to Company 1 quart of each color and type of finish coat paint used on project, in containers, properly labeled and sealed.

PART 2 - PRODUCTS

2.1 PAINT

A. Manufacturer-unless noted or otherwise in drawings or directed by Construction Manager:

1. Tnemec Company Incorporated
2. Sherwin-Williams Company (The)

B. Material Compatibility: Provide materials that are compatible with one another and with substrates.

1. For each coat in a paint system, provide products recommended in writing by manufacturers of topcoat for use in paint system and on substrate indicated.

C. Colors: as noted/ designated in drawings.

PART 3 - EXECUTION

3.1 PREPARATION

A. Comply with recommendations in MPI's "MPI Architectural Painting Specification Manual" applicable to substrates indicated.

B. Remove hardware and similar items that are not to be painted. Mask items that cannot be removed. reinstall items in each area after painting is complete.

C. Clean and Prepare surfaces in an area before beginning painting in that area. schedule painting so cleaning operations will not damage newly painted surfaces.

3.2 APPLICATION

A. Comply with recommendations in MPI's "MPI Architectural Painting Specification Manual" applicable to substrates indicated.

B. Paint exposed surfaces as designated/ noted in drawings.

C. Apply paints according to manufacturer's written instructions.

D. Apply paints to produce surface films without cloudiness, spotting, holidays, laps, brush marks, roller tracking, runs, sags, ropiness, or other surface imperfections. cut in sharp lines and color breaks.

1. If undercoats or other conditions show through topcoat, apply additional coats until cured film has a uniform paint finish, color, and appearance.

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SHEET TITLE

SPECIFICATIONS

SHEET NUMBER

SP-2

SPECIFICATIONS

9 Finishes Continued

3.3 EXTERIOR PAINT APPLICATION SCHEDULE, UNLESS NOTED OTHERWISE IN DRAWINGS

A. Antenna/ Radome Concealment:

1. DTM Acrylic Coating #B66 W100-Series (Finish), over DTM Bonding Primer #B66A50 (4.5-12.0 wet mils/ 2.0-5.0 dry mils).

B. Load Center, Disconnect:

1. Pro Industrial Water Based Alkyd Urethane #B53W01251 (Finish), over Macropoxy 646 (Prime-2 coats).

C. RRU Units:

1. Pro Industrial Water Based Alkyd Urethane #B53W01251 (Finish), over Macropoxy 646 (Prime-2 coats).

D. Steel (Cable Shroud, Tube Assembly, Cable Sweep, Load Center/ RRU mounting components):

1. Tnemec UVX Series 750 (2.5 to 5.0 mils DFT) (Finish), Over Hi-Build Epoxoline II Series V69 (4.0 to 6.0 mils DFT) (Intermediate), Over Tneme-Zinc Series 90-97 (2.5 mils to 3.5 mils) (Prime) (9.0-14.5 total DFT).

E. Stainless Steel Banding:

1. Tnemec Flouronar Series 1071V (semi-gloss) (2.0 to 3.0 mils DFT) (Finish), Over Endur-Shield Series 1075 (2.0 to 3.0 mils DFT) (Intermediate), Over Hi-Build Epoxoline II Series V69 (2.0 to 3.0 mils DFT) (Prime).

END OF SECTION 09 90 00

10 Division 10 Specialties

SECTION 10 14 00 SIGNAGE

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

A. Submittals: Product Data.

PART 2 - PRODUCTS

2.1 SIGNS, GENERAL

A. Regulatory Requirements: Comply with NFPA, FCC, ANSI and authority having jurisdiction.

2.2 PANEL SIGNS

Basis-of-Design Product: Product indicated on drawings, Project specific RF/ EMF report and Requirements of Authority Having Jurisdiction.

2.3 MATERIALS

A. Applied Vinyl: die-cut characters from vinyl film of nominal thickness of 3 mils with pressure-sensitive adhesive backing, suitable for exterior applications.

B. Electrical Components, devices, and accessories: listed and labeled as defined in nfpa 70, by a testing agency acceptable to authorities having jurisdiction, and marked for intended location and application.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Locate signs where indicated or directed. Install signs level, plumb, and at heights indicated, with sign surfaces free from distortion and other defects in appearance.

END OF SECTION 10 14 00

DIVISIONS 11 THROUGH 25-NOT USED

26 Division 26 Electrical

SECTION 26 05 00 COMMON WORK RESULTS FOR ELECTRICAL

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

A. Submittals:

1. Product Data.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

B. Comply with NFPA 70.

2.2 RACEWAYS

A. Raceways:

1. EMT: ANSI C80.3 and UL 797.
2. IMC: ANSI C80.6, zinc-coated steel, with threaded fittings.
3. GRC: ANSI C80.1 and UL 6, hot-dip galvanized.
4. LFMC: UL 360, zinc-coated, flexible steel with sunlight-resistant and mineral-oil-resistant plastic jacket.
5. RNC: UL 621 and NEMA TC 2, Type EPC-40-PVC, with NEMA TC3 fittings.
6. Raceway Fittings: Specifically designed for raceway type used in Project.

B. Handholes and Boxes for Exterior Underground Wiring:

1. Polymer-Concrete Handholes and Boxes with Polymer-Concrete Cover: Molded of sand and aggregate, bound together with polymer resin, and reinforced with steel, fiberglass, or a combination of the two.
2. Comply with SCTE 77.
3. Configuration: Designed for flush burial with open bottom unless otherwise indicated.
4. Cover: Weatherproof, secured by tamper-resistant locking devices and having structural load rating consistent with enclosure and handhole location.
5. Cover Finish: Nonskid finish shall have a minimum coefficient of friction of 0.50.
6. Cover Legend: Molded lettering, "STREET LIGHTING".

2.3 CONDUCTORS AND CABLES

A. Conductors:

1. Comply with NEMA WC70.
2. Conductors, No. 10 AWG and Smaller: Solid or stranded copper.
3. Conductors, Larger Than No. 10 AWG: Stranded copper.
4. Insulation: Thermoplastic, Type THHN-THWN or XHHW.
5. Wire Connectors and Splices: Units of size, ampacity rating, material, type, and class suitable for service indicated.

B. Cable Type NM-B and Type NMC-B Cable: Comply with UL 719 with Type THHN/THWN conductors complying with UL 83.

C. Cable Type SEU: Comply with UL 854 with Type THHN/THWN conductors complying with UL 83 or Type XHHW-2 conductors complying with UL 44.

D. Cable Type UF-B: Comply with UL 493 with Type THHN/THWN conductors complying with UL 83.

2.4 GROUNDING MATERIALS

A. Conductors: Solid for No. 8 AWG and smaller, and stranded for No. 6 AWG and larger unless otherwise indicated.

1. Insulated Conductors: tinned-copper wire or cable insulated for 600 V unless otherwise required by applicable Code or authorities having jurisdiction.
2. Bare, Solid-Copper Conductors: Comply with ASTM B 3.
3. Bare, Stranded-Copper Conductors: Comply with ASTM B 8.

B. Ground Rods: Copper-clad steel, sectional type; 5/8 by 120 inches in diameter.

C. Bolted Connectors for Conductors and Pipes: Copper or copper alloy, bolted pressure-type, with at least two bolts with clamp-type pipe connectors sized for pipe.

D. Welded Connectors: Exothermic-welding kits of types recommended by kit manufacturer for materials being joined and installation conditions.

2.5 ELECTRICAL IDENTIFICATION MATERIALS

A. Raceway Identification Materials: Self-adhesive, color-coding vinyl tape; flexible, preprinted, self-adhesive vinyl.

B. Conductor Identification Materials: Color-Coding Conductor Tape: Self-adhesive vinyl tape 1 to 2 inches wide.

C. Underground-Line Warning Tape: Permanent, bright-colored, continuous-printed, polyethylene tape with continuous metallic strip or core.

D. Tape Markers for Wire: Vinyl or vinyl-cloth, self-adhesive, wraparound type with circuit identification legend machine printed by thermal transfer or equivalent process.

E. Self-Adhesive Warning Labels: Factory printed, multicolor, pressure-sensitive adhesive labels, configured for display on front cover, door, or other access to equipment unless otherwise indicated.

2.6 SUPPORT AND ANCHORAGE COMPONENTS

A. Raceway and Cable Supports: As described in NECA 1.

B. Conduit and Cable Support Devices: Steel and malleable-iron hangers, clamps, and fittings.

2.7 SLEEVES FOR RACEWAYS AND CABLES

A. Steel Pipe Sleeves: ASTM A 53/A 53M, Type E, Grade B, Schedule 40, galvanized steel, plain ends.

2.8 GROUT

A. Nonmetallic, Shrinkage-Resistant Grout: ASTM C 1107, factory-packaged, nonmetallic aggregate grout, noncorrosive, nonstaining.

PART 3 - EXECUTION

3.1 GENERAL ELECTRICAL EQUIPMENT INSTALLATION REQUIREMENTS

A. Install electrical equipment to provide for ease of disconnecting the equipment with minimum interference to other installations.

B. Install electrical equipment to allow right of way for piping and conduit installed at required slope.

C. Install electrical equipment to ensure that connecting raceways, cables, wireways, cable trays, and busways are clear of obstructions and of the working and access space of other equipment.

D. Install required supporting devices and set sleeves in cast-in-place concrete, masonry walls, and other structural components as they are constructed.

E. Comply with NECA 1.

3.2 RACEWAY AND CABLE INSTALLATION

A. Outdoor Raceways Applications:

1. Exposed or Concealed: IMC.
2. Underground, Single Run: GRC.
3. Boxes and Enclosures: Metallic, NEMA 250, Type 3R or Type 4.

B. Install pull wires in empty raceways.

3.3 WIRING METHODS

A. Service Entrance: Type THHN-THWN, single conductors in raceway.

B. Exposed Feeders, Branch Circuits, and Class 1 Control Circuits, Including in Crawlspaces: Type THHN-THWN, single conductors in raceway.

C. Feeders and Branch Circuits Concealed in Ceilings, Walls, Partitions, and Crawlspaces: Type THHN-THWN, single conductors in raceway.

D. Feeders and Branch Circuits Concealed in Concrete, below Slabs-on-Grade, and underground: Type THHN-THWN, single conductors in raceway.

3.4 GROUNDING

A. Underground Grounding Conductors: Install bare copper conductor. Bury at least 24 inches below grade.

B. Pipe and Equipment Grounding Conductor Terminations: Bolted.

C. Underground Connections: Welded.

D. Connections to Structural Steel: Bolted.

E. Install grounding conductors routed along shortest and straightest paths possible unless otherwise indicated or required by Code. Avoid obstructing access or placing conductors where they may be subjected to strain, impact, or damage.

F. Install ground rods driven into ground until tops are 2 inches below final grade, or 4 inches above.

G. Protect ground rods passing through concrete with a double wrapping of pressure-sensitive insulating tape.

H. Make connections without exposing steel or damaging coating if any.

I. Install bonding straps and jumpers in locations accessible for inspection and maintenance, except where routed through short lengths of conduit.

J. Bond straps directly to basic structure, taking care not to penetrate any adjacent parts.

K. Bond to equipment mounted on vibration isolation hangers and supports so vibration is not transmitted to rigidly mounted equipment.

L. Test completed grounding system at each location where a maximum ground-resistance level is specified, at service disconnect enclosure grounding terminal, and at ground test wells.

1. Measure ground resistance not less than two full days after last trace of precipitation and without soil being moistened by any means other than natural drainage or seepage and without chemical treatment or other artificial means of reducing natural ground resistance.
2. Perform tests by fall-of-potential method according to IEEE 81.
3. Report measured ground resistances that exceeds 5 ohms.
4. Excessive Ground Resistance: If resistance to ground exceeds specified values, notify Construction Manager promptly and include recommendations to reduce ground resistance.

3.5 IDENTIFICATION

A. Power-Circuit Conductor Identification: For No. 3 AWG conductors and larger, at each location where observable, identify phase using color-coding conductor tape.

B. Locations of Underground Lines: Identify with underground-line warning tape for power, lighting, communication, and control wiring.

C. Warning Labels for Enclosures for Power and Lighting: Comply with 29 CFR 1910.145; identify system voltage with black letters on an orange background. Apply to exterior of door, cover, or other access.

D. Verify identity of each item before installing identification products.

E. Install identification materials and devices at locations for most convenient viewing without interference with operation and maintenance of equipment.

F. Install system identification color banding for raceways and cables at 50-foot maximum intervals in straight runs, and at 25-foot maximum intervals in congested areas.

G. Color-Coding for Phase Identification, 600 V and Less: Ungrounded service feeder and branch-circuit conductors.

1. Colors for 208/120-V Circuits:
   a. Phase A: Black.
   b. Phase B: Red.
   c. Phase C: Blue.
2. Field-Applied, Color-Coding Conductor Tape: Apply in half-lapped turns for a minimum distance of 6 inches from terminal points.

H. Underground-Line Warning Tape: Continuous underground-line warning tape directly above line at 6 to 8 inches below finished grade.

3.6 SLEEVE AND SLEEVE-SEALS INSTALLATION

A. Concrete Slabs and Walls: Install sleeves for penetrations unless core-drilled holes or formed openings are used. Install sleeves during erection of slabs and walls.

B. Cut sleeves to length for mounting flush with both wall surfaces.

C. Size pipe sleeves to provide 1/4-inch annular clear space between sleeve and cable unless sleeve seal is to be installed or unless seismic criteria require different clearance.

END OF SECTION 26 05 00

SECTION 26 56 13 LIGHTING POLES AND STANDARDS

PART 1 - GENERAL

1.1 DESCRIPTION

This section specifies the furnishing, installation, and connection of exterior luminaires, poles, and supports.

1.2 RELATED WORK

A. Section 26 05 00, COMMON WORK RESULTS FOR ELECTRICAL.

1.3 SUBMITTALS

A. Shop Drawings:

1. Clearly present sufficient information to determine compliance with drawings and specifications.

1.4 DELIVERY, STORAGE, AND HANDLING

Provide manufacturer's standard provisions for protecting pole finishes during transport, storage, and installation. Do not store poles on ground. Store poles so they are at least 12 inches above ground level and growing vegetation. Do not remove factory-applied pole wrappings until just before installing pole.

PART 2 - PRODUCTS

2.1 MATERIALS AND EQUIPMENT

Materials and equipment shall be in accordance with NEC, UL, ANSI, and as shown on the drawings and specified.

2.2 POLES

A. General:

1. Poles shall be 7 guage round tapered steel Modified Type 15, as manufactured by Valmont and as shown on the drawings. Finish shall be hot-dip galvanized to ASTM A123.
2. Poles shall be anchor-bolt type designed for use with underground supply conductors. Poles shall have handhole having a minimum clear opening of 2.5 x 5 inches. Handhole covers shall be secured by stainless steel captive screws.
3. Provide a steel-grounding stud opposite handhole openings, designed to prevent electrolysis when used with copper wire.
4. Hardware and Accessories: All necessary hardware and specified accessories shall be the product of the pole manufacturer.

B. Types:

1. Steel: Provide round tapered steel pole conforming to ASTM A595. Pole shall be hot-dip galvanized confirming to ASTM A123.

2.3 FOUNDATIONS FOR POLES

A. Foundations shall be cast-in-place concrete, having 4,000 psi minimum 28-day compressive strength.

B. Place concrete in spirally-wrapped treated paper forms for round foundations, and construct forms for square foundations.

C. Anchor bolt assemblies and reinforcing of concrete foundations shall be as shown on the drawings. Anchor bolts shall be in a welded cage or properly positioned by the tiewire to stirrups.

D. Prior to concrete pour, install conduits per Section 26 05 00.

2.4 LUMINAIRES

A. Per UL 1598 and NEMA C136.17. Luminaires shall be weatherproof, heavy duty, outdoor types designed for efficient light utilization, adequate dissipation of lamp and ballast heat, and safe cleaning and relamping.

B. Light distribution pattern types shall be as approved by The City of Cupertino Department of Public .

C. Incorporate ballasts in the luminaire housing.

D. Lenses shall be frame-mounted, heat-resistant, borosilicate glass, with prismatic refractors, unless otherwise specified by The City of Cupertino Department of Public Works. Use heat and aging-resistant, resilient gaskets to seal and cushion lenses and refractors in luminaire doors.

E. Lamp sockets for high intensity discharge (H.I.D) fixture shall have locking-type porcelain enclosures in conformance to the applicable requirements of ANSI C81.61 and UL 496.

F. Pre-wire internal components to terminal strips at the factory.

G. Bracket-mounted luminaires shall have leveling provisions and clamp-type adjustable slip-fitters with locking screws.

H. Materials shall be rustproof. Latches and fittings shall be non-ferrous metal.

I. Provide manufacturer's standard finish.

J. Luminaires shall carry factory labels, showing complete, specific lamp and ballast information.

2.5 LAMPS

A. Install the proper lamps in luminaire installed.

B. Lamps shall be general-service, outdoor lighting types.

C. High-Pressure Sodium (HPS) Lamps: NEMA C78.42, CRI 21 (minimum), wattage as indicated. Lamps shall have minimum average rated life of 24,000 hours.

D. LED sources shall meet the following requirements:

1. Operating temperature rating shall be between -40˚ F and 120˚ F.
2. Correlated Color Temperature (CCT): as specified by The City of Cupertino.
3. Color Rendering Index (CRI): As specified by The City of Cupertino.

2.6 HIGH INTENSITY DISCHARGE BALLASTS

A. Per NEMA C82.4 and UL 1029. Ballasts shall be encapsulated single-lamp, copper-wound, constant-wattage autotransformer type, designed to operate on the voltage system to which they are connected, and capable of open-circuit operation without reducing lamp life.

B. Ballasts shall have individual overcurrent protection in each ungrounded supply conductor.

C. Ballast shall have an allowable line voltage variations of 10%, with a maximum 20% lamp wattage regulation spread.

D. Power factor shall be not less than 90%.

E. Ballast shall have a minimum starting temperature of -22˚ F, and a normal ambient operating temperature of 104˚ F.

2.7 LED drivers

A. LED drivers shall meet the following requirements:

1. Drivers shall have a minimum efficiency of 85%.
2. Starting Temperature: -40˚ F.
3. Input Voltage: 120 to 480 (±10%) V.
4. Power Supplies: Class I or II output.
5. Surge Protection: The system must survive 250 repetitive strikes of "C Low" (C Low: 6kV/1.2 x 50 µs, 10kA/8 x 20 µs) waveforms at 1-minute intervals with less than 10% degradation in clamping voltage. "C Low" waveforms are as defined in IEEE/ASNI C62.41.2-2002, Scenario 1 Location Category C.
6. Power Factor (PF): ≥ 0.90.
7. Total Harmonic Distortion (THD): ≤ 20%.
8. Comply with FCC Title 47 CFR Part 18 Non-consumer RFI/EMI Standards.
9. Drivers shall be reduction of hazardous substances (ROHS)-compliant.

2.8 EXISTING LIGHTING SYSTEMS

A. For modifications or additions to existing lighting systems, the new components shall be compatible with the existing systems.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Install lighting in accordance with the NEC, as shown on the drawings, and in accordance with manufacturer's recommendations.

B. Pole Foundations:

1. Excavate only as necessary to provide sufficient working clearance for installation of forms and proper use of tamper to the full depth of the excavation. Prevent surface water from flowing into the excavation. Thoroughly compact backfill with compacting arranged to prevent pressure between conductor, jacket, or sheath, and the end of conduit.
2. Set anchor bolts according to anchor-bolt templates furnished by the pole manufacturer.
3. Install poles as necessary to provide a permanent vertical position with the bracket arm in proper position for luminaire location.
4. After the poles have been installed, shimmed, and plumbed, grout the spaces between the pole bases and the concrete base with non-shrink concrete grout material. Provide a plastic or copper tube, of not less than 0.375 in inside diameter through the grout, tight to the top of the concrete base to prevent moisture weeping from the interior of the pole.

C. Install lamps in each luminaire.

D. Adjust luminaires that require field adjustment or aiming.

3.2 GROUNDING

Ground noncurrent-carrying parts of equipment, including metal poles, luminaires, mounting arms, brackets, and metallic enclosures, as specified by The City of Cupertino. Where copper grounding conductor is connected to a metal other than copper, provide specially-treated or lined connectors suitable and listed for this purpose.

3.3 Acceptance Checks and Tests

Verify operation after installing luminaires and energizing circuits.

END OF SECTION 26 56 13

27 Division 27 Communications

SECTION 27 05 00 COMMON WORK RESULTS FOR COMMUNICATIONS

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

A. Submittals: Product Data.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Comply with NFPA 70.

2.2 PATHWAYS

A. General: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application. Comply with TIA-569-B.

B. Metal Conduits and Fittings:

1. GRC: ANSI C80.1 and UL 6, hot-dip galvanized.
2. Raceway Fittings: Specifically designed for raceway type used in Project.

C. Nonmetallic Conduits and Fittings:

1. RNC: Type EPC-40-PVC, complying with NEMA TC 2 and UL 651 unless otherwise indicated.
2. Continuous HDPE: Comply with UL 651B.
3. Fittings for RNC: Comply with NEMA TC 3; match to conduit or tubing type and material.

D. Optical-Fiber and Communication Cable Pathways and Fittings: Comply with UL 2024; flexible-type pathway, approved for plenum or general-use installation unless otherwise indicated.

E. Handholes and Boxes for Exterior Underground Wiring

1. Polymer-Concrete Handholes and Boxes with Polymer-Concrete Cover: Molded of sand and aggregate, bound together with polymer resin, and reinforced with steel, fiberglass, or a combination of the two.
2. Comply with SCTE 77.
3. Configuration: Designed for flush burial with open bottom unless otherwise indicated.
4. Cover: Weatherproof, secured by tamper-resistant locking devices and having structural load rating consistent with enclosure and handhole location.
5. Cover Legend: Molded lettering, "COMMUNICATIONS."

2.3 RACEWAY IDENTIFICATION MATERIALS

A. Snap-around, color-coding bands; flexible, preprinted, color-coded acrylic.

PART 3 - EXECUTION

3.1 GENERAL COMMUNICATION EQUIPMENT INSTALLATION REQUIREMENTS

A. Install communication equipment to provide for ease of disconnecting the equipment with minimum interference to other installations.

B. Install communication equipment to allow right of way for piping and conduit installed at required slope.

C. Install communication equipment to ensure that connecting pathways and cables are clear of obstructions and of the working and access space of other equipment.

D. Install required supporting devices and set sleeves in cast-in-place concrete, masonry walls, and other structural components as they are constructed.

E. Install sleeve and sleeve seals of type and number required for sealing communication service penetrations of exterior walls.

3.2 PATHWAY AND CABLE INSTALLATION

A. General: Comply with NECA 1, NECA 101, and TIA-569-B for installation requirements.

B. Outdoor Pathways Applications:

1. Exposed: GRC.
2. Concealed Aboveground: GRC.
3. Underground, Single Run: RNC, Type EPC-40-PVC, direct buried.
4. Boxes and Enclosures: NEMA 250, Type 3R.

C. Minimum Raceway Size: 3/4-inch trade size. Minimum size for optical-fiber cables is 1 inch.

D. Conceal raceways and cables, unless otherwise indicated.

E. Install pull wires in empty raceways.

3.3 GROUNDING

A. Install grounding according to BICSI TDMM, "Grounding, Bonding, and Electrical Protection" Chapter.

B. Comply with J-STD-607-A.

END OF SECTION 27 05 00

DIVISIONS 28 THROUGH 48-NOT USED

JAMES VACCARO ARCHITECT, INC.
411 DONDEE WAY, UNIT C
PACIFICA | CA | 94044
415.608.3670 PHONE | 415.963.4471 FAX
INFO@JVARCHITECT.COM
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CLIENT

MODUS, INC.
240 STOCKTON STREET, 3RD FLOOR
SAN FRANCISCO, CA 94108

verizon

VERIZON WIRELESS
2785 MITCHELL DRIVE, SUITE 9
WALNUT CREEK, CA 94598

CONSULTANTS

SF_CUPER001
CPSC001
PUBLIC ROW ADJACENT TO
10465 S. DE ANZA BOULEVARD
CUPERTINO, CA 95014
APN: PUBLIC ROW ADJACENT
TO 359-17-019

LICENSED ARCHITECT
JAMES F. VACCARO
C-33251
07-31-2019
RENEWAL DATE
STATE OF CALIFORNIA

REV	DATE	ISSUE
1	10/18/2017	90% CONSTRUCTION
2	2/6/2018	100% CONSTRUCTION
3	3/26/2018	100% CONSTRUCTION REV.

SHEET TITLE

SPECIFICATIONS

SHEET NUMBER

SP-3

TRAFFIC CONTROL NOTES

1. ALL DELINEATORS SHALL BE EQUIPPED WITH REFLECTORS AT NIGHT TIME.

2. ALL TRAFFIC CONTROL DEVICES, STRIPES, MARKINGS, LEGENDS AND RAISED PAVEMENT MARKERS SHALL CONFORM TO THE LATEST EDITIONS OF THE FOLLOWING: A) CA MUTCD, B) STATE OF CALIFORNIA STANDARD SPECIFICATIONS, C) SPECIAL PROVISIONS, AND D) STANDARD PLANS.

3. THE CONTRACTOR PERFORMING THE WORK ON A PUBLIC STREET SHALL ASSUME RESPONSIBILITY AS FOLLOWS: A) INSTALL AND MAINTAIN THE TRAFFIC CONTROL DEVICES AS SHOWN HEREIN, B) ANY ADDITIONAL TRAFFIC CONTROL DEVICES THAT MAY BE REQUIRED TO INSURE THE SAFE MOVEMENT OF TRAFFIC AND PEDESTRIANS THROUGH OR AROUND THE WORK AREA, AND C) PROVIDE MAXIMUM PROTECTION AND SAFETY TO CONSTRUCTION WORKERS.

4. THE CITY OR COUNTY OF RECORD AS WELL AS CALTRANS RESERVE THE RIGHT TO OBSERVE THESE TRAFFIC CONTROL PLANS IN USE. THEY HAVE THE AUTHORITY TO MAKE ANY NECESSARY CHANGES AS FIELD CONDITIONS WARRANT. ANY CHANGES SHALL SUPERSEDE THESE PLANS. THE EXACT LOCATION OF ALL EQUIPMENT AND TRAFFIC CONTROL DEVICES SHALL BE DETERMINED BY THE ENGINEER.

5. ALL SIGNS, DELINEATORS, BARRICADES, ETC. AND THEIR INSTALLATION SHALL CONFORM TO THE LATEST EDITIONS OF THE: A) CA. MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, B) THE STATE OF CALIFORNIA STANDARD SPECIFICATIONS, C) SPECIAL PROVISIONS, AND D) STANDARD PLANS.

6. IN ORDER TO PRESERVE THEIR APPEARANCE AND CONTINUITY, ALL TRAFFIC CONTROL DEVICES SHALL BE KEPT IN THEIR PROPER POSITION AT ALL TIMES AND SHALL BE REPAIRED, REPLACED OR CLEANED AS NECESSARY, AND AS DIRECTED BY THE ENGINEER

7. ALL TRAFFIC LANES SHALL HAVE A MINIMUM OF 5 FEET CLEARANCE FROM OPEN EXCAVATIONS AND MINIMUM OF 2 FEET FROM VERTICAL OBSTRUCTIONS.

8. THE CONTRACTOR SHALL PROVIDE FLAGGERS AS DEEMED NECESSARY BY THE ENGINEER, COUNTY INSPECTOR, OR CALTRANS PERMIT INSPECTOR.

9. ALL ADVANCED WARNING SIGNS SHALL BE EQUIPPED WITH FLAGS.

10. NOT USED.

11. PLACE ADDITIONAL SIGNS AS FOLLOWS: A) "LANE CLOSED", (C30) ON THE TYPE II BARRICADES AT 100 FOOT INTERVALS THROUGHOUT EXTENDED WORK AREAS IN EACH LANE THAT IS CLOSED AND B) "OPEN TRENCH" (C27) WHENEVER AN OPEN EXCAVATION AREA EXISTS ADJACENT TO THE TRAVELED WAY.

12. ALL TEMPORARY TRAFFIC CONTROL DEVICES SHALL BE REMOVED FOLLOWING COMPLETION OF EACH CONSTRUCTION STAGE AND THE PERMANENT TRAFFIC CONTROL DEVICES SHALL BE RESTORED BY THE CONTRACTOR UPON COMPLETION OF WORK.

13. THE CONTRACTOR SHALL REPLACE AND/OR REPAIR ALL DAMAGED STRIPING AT THE END OF EACH WORKING DAY.

14. THE CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF THE AMERICAN DISABILITY ACT AS RELATED TO PEDESTRIAN ACCESS AND SHALL MAINTAIN PEDESTRIAN ACCESS AT ALL TIMES PER ADA REQUIREMENTS. ANY SIDEWALK CLOSURE AND/OR DETOUR SHALL COMPLY WITH THE WATCH STANDARDS AND MUST OBTAIN APPROVAL FROM THE CITY OR COUNTY OF RECORD.

15. THE CONTRACTOR SHALL COVER OR REMOVE ALL CONFLICTING SIGNS.

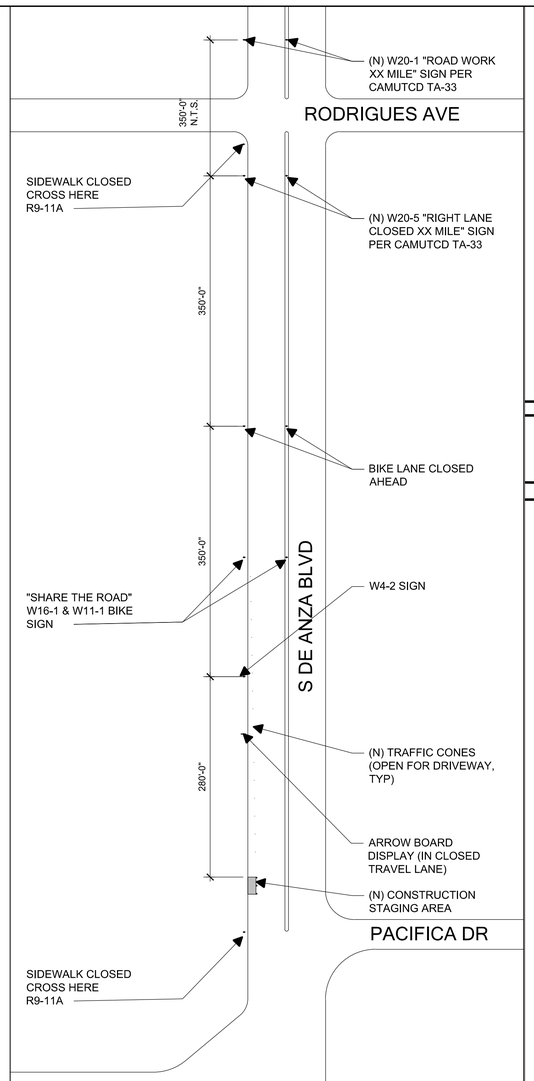
16. THE CONTRACTOR SHALL POST "SYMBOLS" UNEVEN LANES, "STEEL PLATES AHEAD" OR "BUMP" SIGNS FOR PAVEMENT SURFACE DISRUPTIONS OF $\frac{1}{2}$" OR GREATER. PAVEMENT DISRUPTIONS FOR 1" OR GREATER SHALL HAVE A BEVELED EDGE OF FOUR (4) HORIZONTAL TO ONE (1) VERTICAL.

17. BEFORE PLATE BRIDGING, THE CONTRACTOR SHALL INSTALL "CAUTION STEEL PLATES ADHEAD" AND/OR "ROUGH ROAD SIGNS.

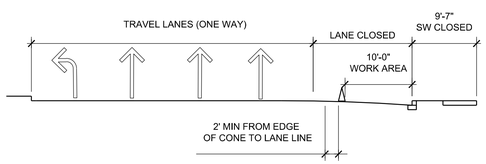
18. THE RESIDENTS AND BUSINESSES SHALL BE NOTIFIED OF THE DATES & TIMES OF CONSTRUCTION TWO (2) WEEKS PRIOR TO THE WORK START DATE.

TRAFFIC SYMBOL LEGEND

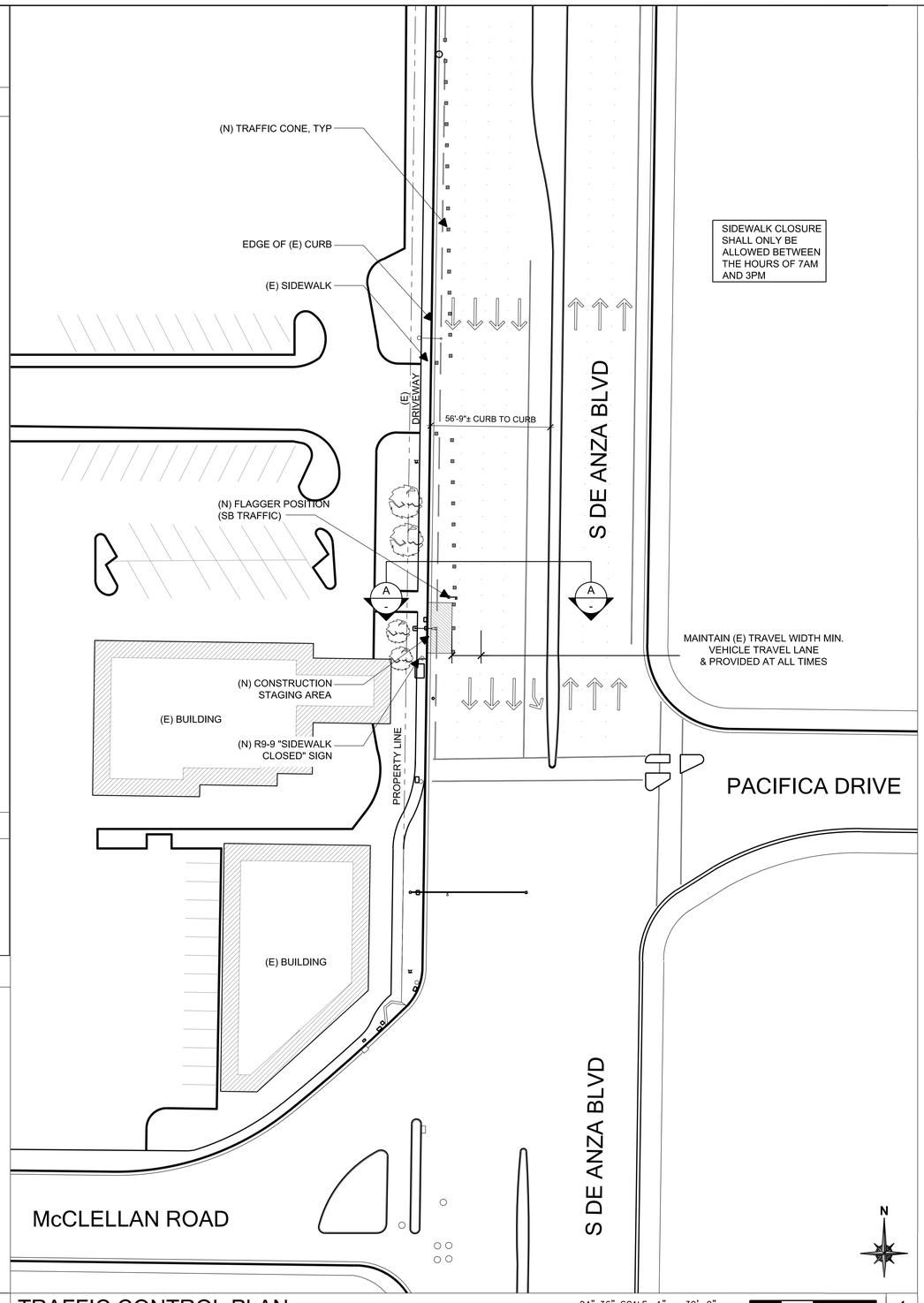
- TRAFFIC CONE (SPACING 20' O.C.)
- TRAFFIC SIGN
- LANE DIRECTION
- STAGING AREA
- FLAGGER



OVERALL SITE PLAN | SCALE 1"=100'-0" | 3



SECTION A-A | SCALE 3/32"=1'-0" | 2



TRAFFIC CONTROL PLAN | 24"x36" SCALE: 1" = 30'-0" | 11"x17" SCALE: 1" = 60'-0" | 30' 15' 0 30' | 1

verizon

2785 MITCHELL DRIVE, SUITE 9
WALNUT CREEK, CA 94598

MODUS

240 STOCKTON ST., 3RD FLOOR
SAN FRANCISCO, CA 94108

COMMSENSE

2930 DOMINGO AVE, SUITE 150
BERKELEY, CA 94705

DRAWN BY:	SH
CHECKED BY:	JB

REV	DATE	DESCRIPTION
0	01/18/19	90% CD
1	03/20/18	100% CD

REGISTERED PROFESSIONAL ENGINEER
LEWIS JAMES BURROWS
NO. C64533
Exp 6/30/19
CIVIL
STATE OF CALIFORNIA

SF_CUPER001

10465 S. DE ANZA BLVD
CUPERTINO, CA 95014

TRAFFIC CONTROL PLAN

TC-1

R1-2 (B/W)
(48"X30")

R3-1
(24"X24")

R3-2
(24"X24")

R5-1
(30"X30")

W1-3 (B/O)
(RIGHT/LEFT)
(30"X30")

W1-4 (B/O)
(RIGHT/LEFT)
(30"X30")

W20-3 (B/O)
(XXX FT/AHEAD)
(36"X36")

W20-1 (B/O)
(XXX FT/AHEAD)
(36"X36")

W20-5 (B/O)
(XXX FT/AHEAD)
(36"X36")

R3-7 (B/W)
(RIGHT/LEFT)
(30"X30")

R11-4 (B/W)
(RIGHT/LEFT)
(60"X30")

W11-1

W4-7 (B/O)
(RIGHT/LEFT)
(36"X36")

W4-2 (B/O)
(RIGHT/LEFT)
(36"X36")

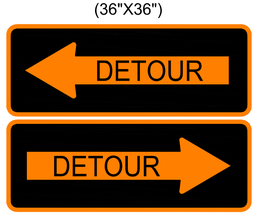
C9A (CA) (B/O)
(36"X36")

W3-4 (B/O)
(36"X36")

R4-7 (B/W)
(24"X30")

R4-8 (B/W)
(24"X30")

W16-1



M4-10 (B/O)
(RIGHT/LEFT)
(48"X18")

M4-9 (B/O)
(RIGHT/LEFT)
(30"X24")

SC3 (CA) (B/O)
(36"X12")

M4-8a (B/O)
(24"X18")

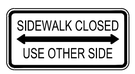
R3-7bP
(24"x12")

W21-7
(18"X12")

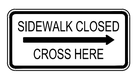
W21-7

W21-1

R9-9 (B/W)
(24"X12")



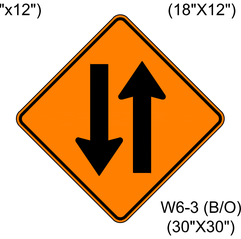
R9-10 (B/W)
(24"X12")



R9-11 (B/W)
(24"X12")

R9-11a (B/W)
(24"X12")

W1-6 (B/O)
(48"X24")



W6-3 (B/O)
(30"X30")

G20-2 (B/O)
(36"X18")

verizon

2785 MITCHELL DRIVE, SUITE 9
WALNUT CREEK, CA 94598

MODUS

240 STOCKTON ST., 3RD FLOOR
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2930 DOMINGO AVE, SUITE 150
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NO. C64533
Exp 9/30/19
CIVIL
STATE OF CALIFORNIA

SF_CUPER001

10465 S. DE ANZA BLVD
CUPERTINO, CA 95014

TRAFFIC CONTROL SIGNS

TC-2

view from S De Anza Blvd looking north at site

SF Cuper001
10465 S De Anza Blvd, Cupertino, CA
Photosims Produced on 4-2-2018

Existing

Proposed

AdvanceSim
Photo Simulation Solutions
Contact (925) 202-8507

Existing

Proposed

view from S De Anza Blvd looking south at site

SF Cuper001
10465 S De Anza Blvd, Cupertino, CA
Photosims Produced on 4-2-2018

AdvanceSim
Photo Simulation Solutions
Contact (925) 202-8507

Radio Frequency - Electromagnetic Energy (RF-EME) Jurisdictional Report

Site No. CPSC001
SF_CUPER001
10465 S. De Anza Boulevard
Cupertino, California 95014
Santa Clara County
37° 18' 58.99" N, -122° 1' 57.00" W NAD83

EBI Project No. 6218000319
January 23, 2018

Prepared for:

Verizon Wireless
c/o Modus, LLC
240 Stockton Street
San Francisco, CA 94108

Prepared by:

EBI Consulting
environmental | engineering | due diligence

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APPENDICES

EXECUTIVE SUMMARY

Purpose of Report

EnviroBusiness Inc. (dba EBI Consulting) has been contracted by Verizon Wireless to conduct radio frequency electromagnetic (RF-EME) modeling for Verizon Site CPSC001 located at 10465 S. De Anza Boulevard in Cupertino, California to determine RF-EME exposure levels from proposed Verizon wireless communications equipment at this site. As described in greater detail in Section 2.0 of this report, the Federal Communications Commission (FCC) has developed Maximum Permissible Exposure (MPE) Limits for general public exposures and occupational exposures. This report summarizes the results of RF-EME modeling in relation to relevant FCC RF-EME compliance standards for limiting human exposure to RF-EME fields.

Statement of Compliance

A site is considered out of compliance with FCC regulations if there are areas that exceed the FCC exposure limits and there are no RF hazard mitigation measures in place. Any carrier which has an installation that contributes more than 5% of the applicable MPE must participate in mitigating these RF hazards.

As presented in the sections below, based on worst-case predictive modeling, there are no modeled areas on any accessible ground-level walking/working surface related to the proposed antennas that exceed the FCC's occupational or general public exposure limits at this site. Additionally, there are areas where workers who may be elevated above the ground may be exposed to power densities greater than the occupational limits. Therefore, workers should be informed about the presence and locations of antennas and their associated fields.

At the nearest walking/working surfaces to the Verizon antennas, the maximum power density generated by the Verizon antennas is approximately **51.50** percent of the FCC's general public limit (**10.30** percent of the FCC's occupational limit).

The composite exposure level from all carriers on this site is approximately **51.50** percent of the FCC's general public limit (**10.30** percent of the FCC's occupational limit) at the nearest walking/working surface to each antenna.

Recommended control measures are outlined in Section 5.0 and within a Site Safety Plan (attached); this plan includes instructions to shut down and lockout/tagout this wireless equipment in accordance with Verizon's standard operating protocol.

1.0 INTRODUCTION

Radio frequency waves are electromagnetic waves from the portion of the electromagnetic spectrum at frequencies lower than visible light and microwaves. The wavelengths of radio waves range from thousands of meters to around 30 centimeters. These wavelengths correspond to frequencies as low as 3 cycles per seconds (or hertz [Hz]) to as high as one gigahertz (one billion cycles per second).

Personal Communication (PCS) facilities used by Verizon in this area operate within a frequency range of 1900-2100 MHz. Facilities typically consist of: 1) electronic transceivers (the radios or cabinets) connected to wired telephone lines; and 2) antennas that send the wireless signals created by the transceivers to be received by individual subscriber units (PCS telephones). Transceivers are typically connected to antennas by coaxial cables.

Because of the short wavelength of PCS services, the antennas require line-of-site paths for good propagation, and are typically installed a distance above ground level. Antennas are constructed to concentrate energy towards the horizon, with as little energy as possible scattered towards the ground or the sky. This design, combined with the low power of PCS facilities, generally results in no possibility for exposure to approach Maximum Permissible Exposure (MPE) levels, with the exception of in areas in the immediate vicinity of the antennas.

MPE limits do not represent levels where a health risk exists, since they are designed to provide a substantial margin of safety. 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.

2.0 SITE DESCRIPTION

This project site includes one (1) wireless telecommunication antenna (at three sector locations) on a light pole located at 10465 S. De Anza Boulevard in Cupertino, California.

Verizon Antenna Information (proposed Configuration)									
Antenna # and Model	Frequency (MHz)	# of Transmitters	Transmit Power (Watts)	Azimuth	Gain (dBd)	Feet above Ground (CL)	X	Y	Z (feet)
A1 Amphenol CUUT360X06F56	1900 2100	2 2	48.7 53.8	0°	7.65	34.3	30	30	33.3
B1 Amphenol CUUT360X06F56	1900 2100	2 2	48.7 53.8	120°	7.65	34.3	30	30	33.3
C1 Amphenol CUUT360X06F56	1900 2100	2 2	48.7 53.8	240°	7.65	34.3	30	30	33.3

The FCC guidelines incorporate two separate tiers of exposure limits that are based upon occupational/controlled exposure limits (for workers) and general population/uncontrolled exposure limits for members of the general public that may be exposed to antenna fields. While access to this site is considered uncontrolled, the analysis has considered exposures with respect to both controlled and uncontrolled limits as an untrained worker may access adjacent rooftop locations. Additional

information regarding controlled/uncontrolled exposure limits is provided in Section 3.0. Appendix B presents a site safety plan that provides a plan view of the light pole with antenna locations.

3.0 FEDERAL COMMUNICATIONS COMMISSION (FCC) REQUIREMENTS

The FCC has established Maximum Permissible Exposure (MPE) limits for human exposure to Radiofrequency Electromagnetic (RF-EME) energy fields, based on exposure limits recommended by the National Council on Radiation Protection and Measurements (NCRP) and, over a wide range of frequencies, the exposure limits developed by the Institute of Electrical and Electronics Engineers, Inc. (IEEE) and adopted by the American National Standards Institute (ANSI) to replace the 1982 ANSI guidelines. Limits for localized absorption are based on recommendations of both ANSI/IEEE and NCRP.

The FCC guidelines incorporate two separate tiers of exposure limits that are based upon occupational/controlled exposure limits (for workers) and general public/uncontrolled exposure limits for members of the general public.

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 public/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 public/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 would always be considered under this category when exposure is not employment-related, for example, in the case of a telecommunications tower that exposes persons in a nearby residential area.

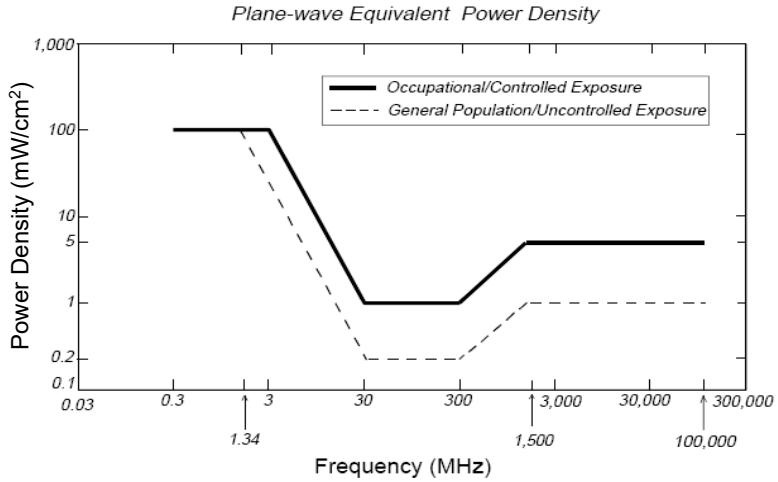
Table 1 and Figure 1 (below), which are included within the FCC's OET Bulletin 65, summarize the MPE limits for RF emissions. These limits are designed to provide a substantial margin of safety. They vary by frequency to take into account the different types of equipment that may be in operation at a particular facility and are "time-averaged" limits to reflect different durations resulting from controlled and uncontrolled exposures.

The FCC's MPEs are measured in terms of power (mW) over a unit surface area (cm^2). Known as the power density, the FCC has established an occupational MPE of 5 milliwatts per square centimeter (mW/cm^2) and an uncontrolled MPE of 1 $mW/cm2$ for equipment operating in the 1900 MHz frequency range. For the Verizon equipment operating at 700 MHz or 850 MHz, the FCC's occupational MPE is 2.83 mW/cm^2 and an uncontrolled MPE of 0.57 mW/cm^2. These limits are considered protective of these populations.

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
300-1,500	--	--	f/300	6
1,500-100,000	--	--	5	6
(B) Limits for General Public/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
300-1,500	--	--	f/1,500	30
1,500-100,000	--	--	1.0	30

f = Frequency in (MHz)
* Plane-wave equivalent power density

Figure 1. FCC Limits for Maximum Permissible Exposure (MPE)



Based on the above, the most restrictive thresholds for exposures of unlimited duration to RF energy for several personal wireless services are summarized below:

Personal Wireless Service	Approximate Frequency	Occupational MPE	Public MPE
Personal Communication (PCS)	1,950 MHz	5.00 mW/cm^2	1.00 mW/cm^2
Cellular Telephone	870 MHz	2.90 mW/cm^2	0.58 mW/cm^2
Specialized Mobile Radio	855 MHz	2.85 mW/cm^2	0.57 mW/cm^2
Most Restrictive Freq, Range	30-300 MHz	1.00 mW/cm^2	0.20 mW/cm^2

MPE limits are designed to provide a substantial margin of safety. 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.

Personal Communication (PCS) facilities used by Verizon in this area operate within a frequency range of 1900-2100 MHz. Facilities typically consist of: 1) electronic transceivers (the radios or cabinets) connected to wired telephone lines; and 2) antennas that send the wireless signals created by the transceivers to be received by individual subscriber units (PCS telephones). Transceivers are typically connected to antennas by coaxial cables.

Because of the short wavelength of PCS services, the antennas require line-of-site paths for good propagation, and are typically installed above ground level. Antennas are constructed to concentrate energy towards the horizon, with as little energy as possible scattered towards the ground or the sky. This design, combined with the low power of PCS facilities, generally results in no possibility for exposure to approach Maximum Permissible Exposure (MPE) levels, with the exception of areas directly in front of the antennas.

4.0 WORST-CASE PREDICTIVE MODELING

EBI has performed theoretical modeling using RoofView® software to estimate the worst-case power density at the site ground-level and nearby rooftops resulting from operation of the antennas. RoofView® is a widely-used predictive modeling program that has been developed by Richard Tell Associates to predict both near field and far field RF power density values for roof-top and tower telecommunications sites produced by vertical collinear antennas that are typically used in the cellular, PCS, paging and other communications services. The models utilize several operational specifications for different types of antennas to produce a plot of spatially-averaged power densities that can be expressed as a percentage of the applicable exposure limit.

The modeling is based on worst-case assumptions for the number of antennas and transmitter power. The modeling assumes a maximum 4-4-4 radio configuration for Sectors A, B and C, with a power level of 46.9 dbM (48.7 watts) per transmitter for the 1900 frequency and 47.3 dbM (53.8 watts) per transitter for the 2100 frequency, in order to provide a worst-case evaluation of predicted MPE levels. The assumptions used in the modeling are based upon information provided by Verizon, and information gathered from other sources. The parameters used for the modeling are summarized in the RoofView® export files presented in Appendix C.

There are no other wireless carriers with equipment installed at this site.

Based on worst-case predictive modeling, there are no modeled areas on any accessible ground-level walking/working surface related to the proposed Verizon antennas that exceed the FCC's occupational or general public exposure limits at this site. At the nearest walking/working surfaces to the Verizon antennas, the maximum power density generated by the Verizon antennas is approximately 51.50 percent of the FCC's general public limit (10.30 percent of the FCC's occupational limit). The composite exposure level from all carriers on this site is approximately 51.50 percent of the FCC's general public limit (10.30 percent of the FCC's occupational limit) at the nearest walking/working surface to each antenna.

The Site Safety Plan also presents areas where Verizon Wireless antennas contribute greater than 5% of the applicable MPE limit for a site. A site is considered out of compliance with FCC regulations if there are areas that exceed the FCC exposure limits and there are no RF hazard mitigation measures in place. Any carrier which has an installation that contributes more than 5% of the applicable MPE must participate in mitigating these RF hazards.

The inputs used in the modeling are summarized in the RoofView® export file presented in Appendix C. A graphical representation of the RoofView® modeling results is presented in Appendix B. It should be noted that RoofView is not suitable for modeling microwave dish antennas; however, these units are designed for point-to-point operations at the elevations of the installed equipment rather than ground level coverage.

5.0 MITIGATION/SITE CONTROL OPTIONS

EBI's modeling indicates that there are no areas in front of the Verizon antennas that exceed the FCC standards for occupational or general public exposure. All exposures above the FCC's safe limits require that individuals be elevated above the ground. In order to alert people accessing the light pole at ground level, yellow CAUTION signs are recommended for installation 9 feet below the antenna (24 feet above the ground). These signs must be placed in a conspicuous manner so that they are visible to any person approaching the light pole from any direction.

There are no barriers recommended on this site.

These protocols and recommended control measures have been summarized and included with a graphic representation of the antennas and associated signage and control areas in a RF-EME Site Safety Plan, which is included as Appendix B. Individuals and workers accessing the roof should be provided with a copy of the attached Site Safety Plan, made aware of the posted signage, and signify their understanding of the Site Safety Plan.

Implementation of the signage recommended in the Site Safety Plan and in this report will bring this site into compliance with the FCC's rules and regulations.

6.0 SUMMARY AND CONCLUSIONS

EBI has prepared a Radiofrequency – Electromagnetic Energy (RF-EME) Compliance Report for telecommunications equipment installed by Verizon Site Number CPSC001 located at 10465 S. De Anza Boulevard in Cupertino, California to determine worst-case predicted RF-EME exposure levels from wireless communications equipment installed at this site. This report summarizes the results of RF-EME modeling in relation to relevant Federal Communications Commission (FCC) RF-EME compliance standards for limiting human exposure to RF-EME fields.

As presented in the sections above, based on the FCC criteria, there are no modeled areas on any accessible ground-level walking/working surface related to the proposed antennas that exceed the FCC's occupational or general public exposure limits at this site. Workers should be informed about the presence and locations of antennas and their associated fields. Recommended control measures are outlined in Section 5.0 and within a Site Safety Plan (attached); this plan includes procedures to shut down and lockout/tagout this wireless equipment in accordance with Verizon's standard operating protocol.

7.0 LIMITATIONS

This report was prepared for the use of Verizon Wireless. It was performed in accordance with generally accepted practices of other consultants undertaking similar studies at the same time and in the same locale under like circumstances. The conclusions provided by EBI are based solely on the information provided by the client. The observations in this report are valid on the date of the investigation. Any additional information that becomes available concerning the site should be provided to EBI so that our conclusions may be revised and modified, if necessary. This report has been prepared in accordance with Standard Conditions for Engagement and authorized proposal, both of which are integral parts of this report. No other warranty, expressed or implied, is made.

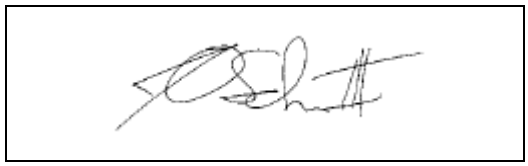
Appendix A

Certifications

Preparer Certification

I, Jos Schorr, state that:

- I am an employee of EnviroBusiness Inc. (d/b/a EBI Consulting), which provides RF-EME safety and compliance services to the wireless communications industry.
- I have successfully completed RF-EME safety training, and I am aware of the potential hazards from RF-EME and would be classified "occupational" under the FCC regulations.
- I am fully aware of and familiar with the Rules and Regulations of both the Federal Communications Commissions (FCC) and the Occupational Safety and Health Administration (OSHA) with regard to Human Exposure to Radio Frequency Radiation.
- I have reviewed the data provided by the client and incorporated it into this Site Compliance Report such that the information contained in this report is true and accurate to the best of my knowledge.



Reviewed and Approved by:

sealed 24jan2018

Michael McGuire
Electrical Engineer

Note that EBI's scope of work is limited to an evaluation of the Radio Frequency – Electromagnetic Energy (RF-EME) field generated by the antennas and broadcast equipment noted in this report. The engineering and design of the structure, as well as the impact of the antennas and broadcast equipment on the structural integrity of the structure, are specifically excluded from EBI's scope of work.

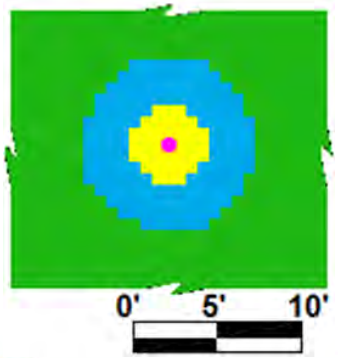
Appendix B

Radio Frequency Electromagnetic Energy

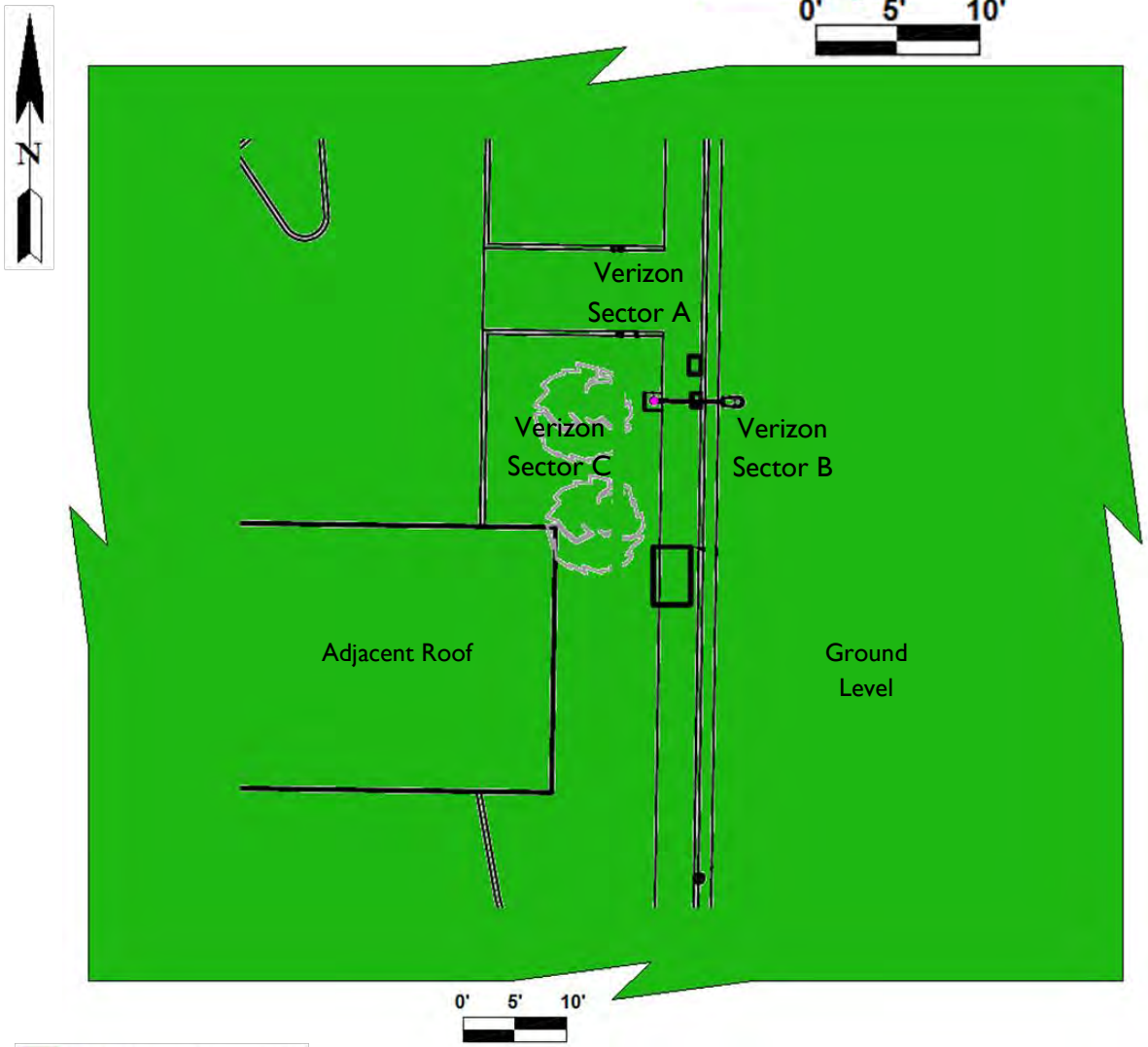
Safety / Signage Plans

% FCC Public Exposure Limit
Exposure Level ≥ 5,000
500 < Exposure Level ≤ 5,000
100 < Exposure Level ≤ 500
Exposure Level ≤ 100

Antenna Face View



Elevation View



Verizon Antennas

Roofview: Composite Exposure Levels

Facility Operator: Verizon Wireless

Site Name: SF_CUPER001

Verizon Site Number: CPSC001

Report Date: 01-23-18

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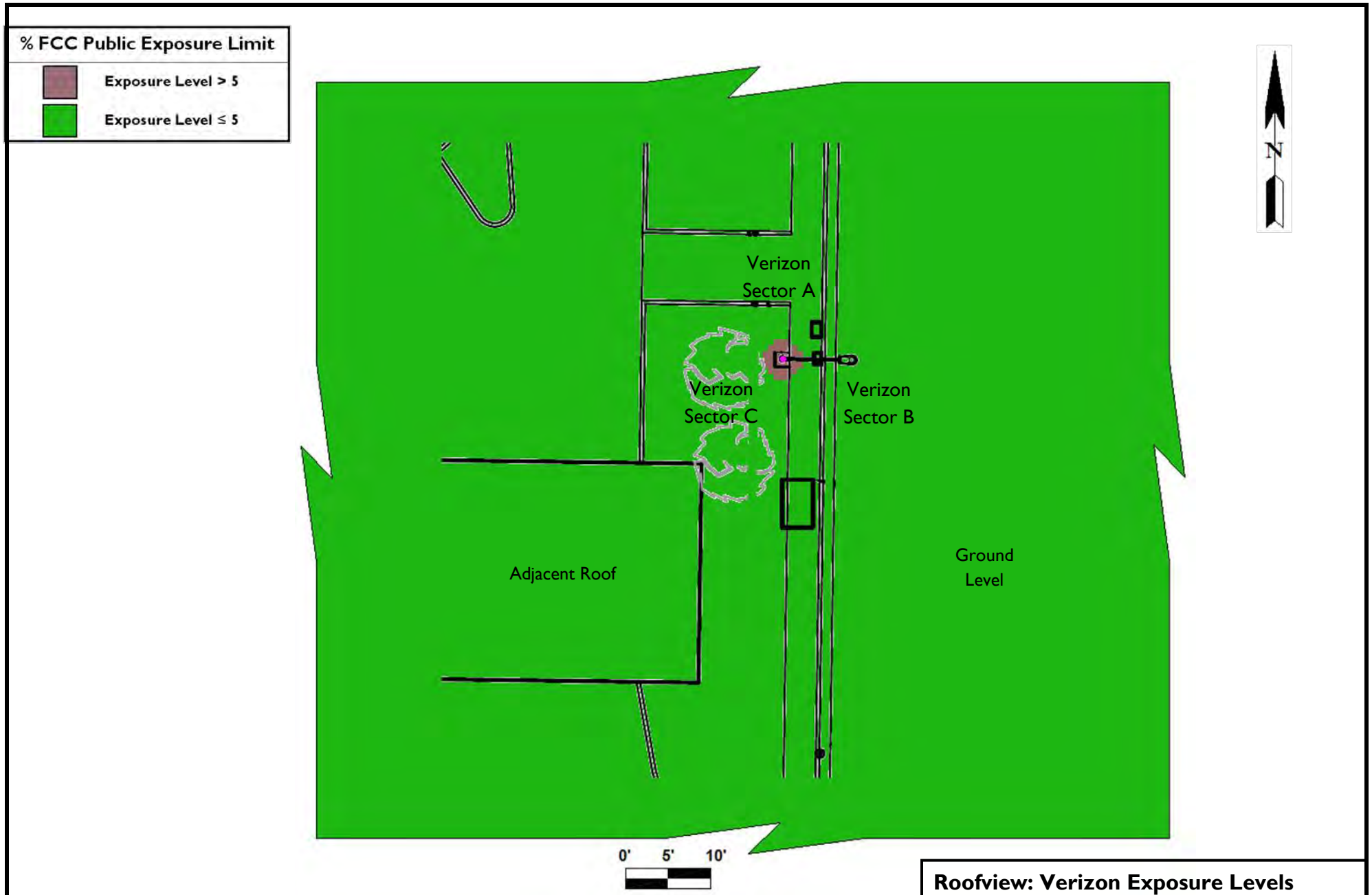


Roofview: Verizon Exposure Levels

Facility Operator: Verizon Wireless

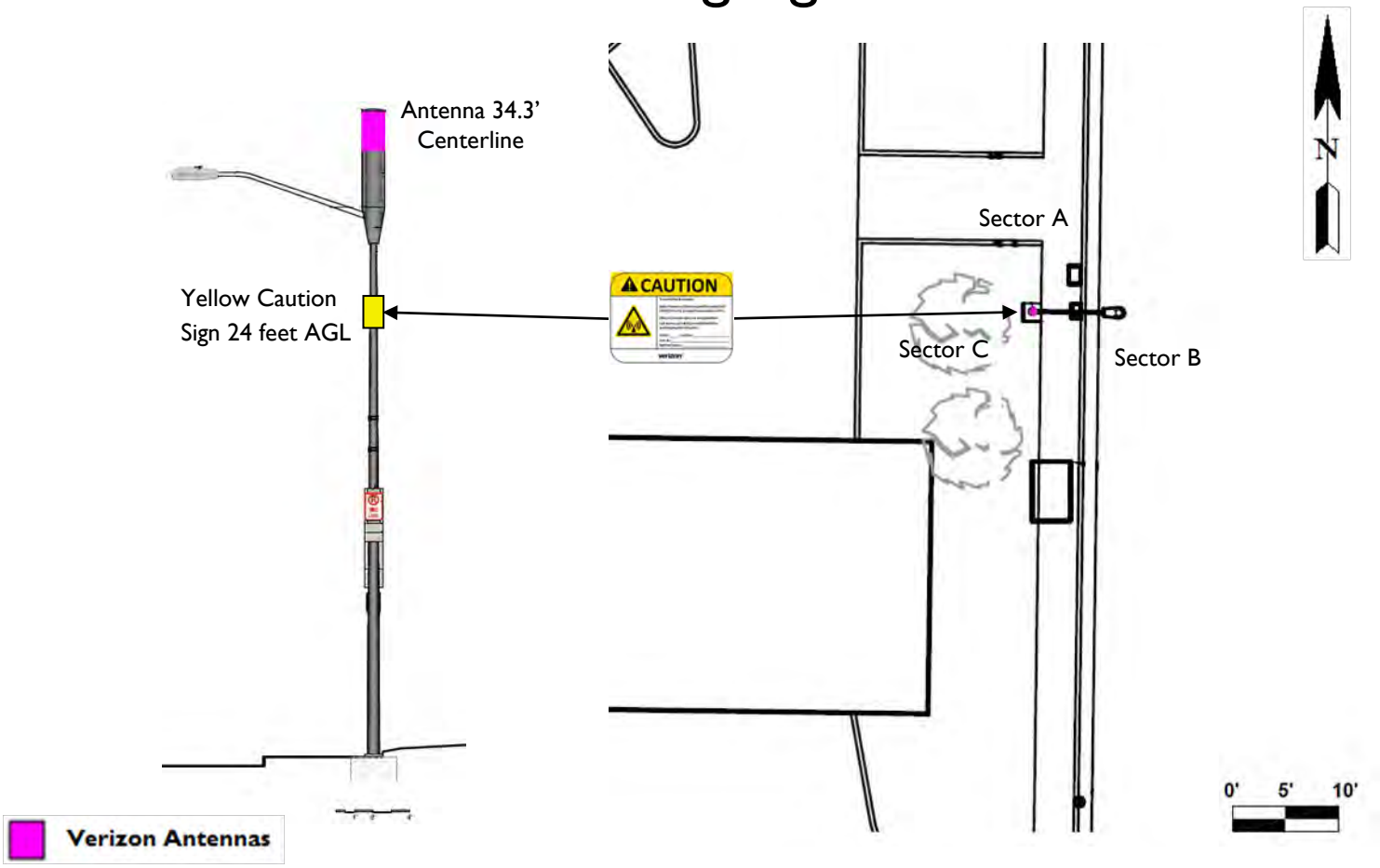
Site Name: SF_CUPER001

Verizon Site Number: CPSC001

Report Date: 01-23-18

EBI Consulting
environmental | engineering | due diligence

Verizon Signage Plan



Sign Image	Description	Posting Instructions	Required Signage
	**Notice To Workers** Informational sign, used to notify workers that there are active antennas installed and provide guidelines for working in RF environments.	Not required	Not required
	**NOC Information Sign** Informational sign with NOC Phone Number and Base Transceiver Station (BTS) Number	Not required	Not required
	**Blue Notice Sign** Used to alert individuals that they are entering an area where the power density emitted from transmitting antennas exceeds the FCC's maximum permissible exposure limit for the general public but is less than the occupational exposure limit.	Not required	Not required
	**Yellow Caution Sign** Used to alert individuals that they are entering an area where the power density emitted from transmitting antennas may exceed the FCC's maximum permissible exposure limit for the general public and the occupational exposure limit.	Securely post on opposite sides of the light pole in a manner conspicuous to all individuals entering thereon as indicated in the signage plan.	2 signs on opposite sides of the pole 9 feet below the antenna (24 feet above ground level)
	**Red Warning Sign** Used to alert individuals that they are entering an area where the power density emitted from the transmitting is substantially above the FCC's maximum permissible limit for occupational exposure (greater than ten times the Occupational limit).	Not required	Not required

Appendix C

Roofview® Export File

StartMapDefinition

Roof Max Y	Roof Max X	Map Max Y	Map Max X	Y Offset	X Offset	Number of envelope		List Of Area
60	60	80	90	20	20	1	$AE$141:$	$AE$141:$CL$200	$AE$141:$

StartSettingsData

Standard	Method	Uptime	Scale Factc	Low Thr	Low Color	Mid Thr	Mid Color	Hi Thr	Hi Color	Over Color	Ap Ht Mult	Ap Ht Method
4	2	1	1	100	1	500	4	5000	2	3	1.5	1

StartAntennaData It is advisable to provide an ID (ant 1) for all antennas

ID	Name	(MHz) Freq	Trans Power	Trans Count	Coax Len	Coax Type	Other Loss	Input Power	Calc Power	Mfg	Model	(ft) X	(ft) Y	(ft) Z	Type	(ft) Aper	dBd Gain	BWdth Pt Dir	Uptime Profile	ON flag
VZW A1	LTE	1900	48.677	2					97.354	Amphenol	CUUT360X(	30	30	33.25		2	7.65	120;0		ON•
VZW A1	LTE	2100	53.831	2					107.662	Amphenol	CUUT360X(	30	30	33.25		2	7.65	120;0		ON•
VZW B1	LTE	1900	48.677	2					97.354	Amphenol	CUUT360X(	30	30	33.25		2	7.65	120;120		ON•
VZW B1	LTE	2100	53.831	2					107.662	Amphenol	CUUT360X(	30	30	33.25		2	7.65	120;120		ON•
VZW C1	LTE	1900	48.677	2					97.354	Amphenol	CUUT360X(	30	30	33.25		2	7.65	120;240		ON•
VZW C1	LTE	2100	53.831	2					107.662	Amphenol	CUUT360X(	30	30	33.25		2	7.65	120;240		ON•

StartSymbolData

Sym	Map Mark	Roof X	Roof Y	Map Label	Description (notes for this table only)
Sym		5	35	AC Unit	Sample symbols
Sym		14	5	Roof Access	
Sym		45	5	AC Unit	
Sym		45	20	Ladder	

Structural Calculations

Equipment Installation
VERIZON SF_CUPER001 10465 SOUTH DE ANZA BLVD
10465 South De Anza Boulevard
Cupertino, CA 95014

Client: James Vaccaro, AIA
Date: February 2018
Project: 536

Sheet Index

Jeffrey M. Van Dyke, S.E.
1470 Felta Road, Healdsburg, CA 95448
jeffrey@structuralengineeringconsulting.com
(707) 696-3721

PROJECT DESCRIPTION

A new telecommunications antenna is to be placed atop a new tapered steel City of Cupertino Department of Public Works street light pole. An antenna mount connects the antenna, a cylindrical radome shroud, and tapered sheet steel skirt to the top of the pole. Design of these elements and their anchorage are by others. The gravity, wind, and seismic affects of these elements on the pole and foundation are considered herein.

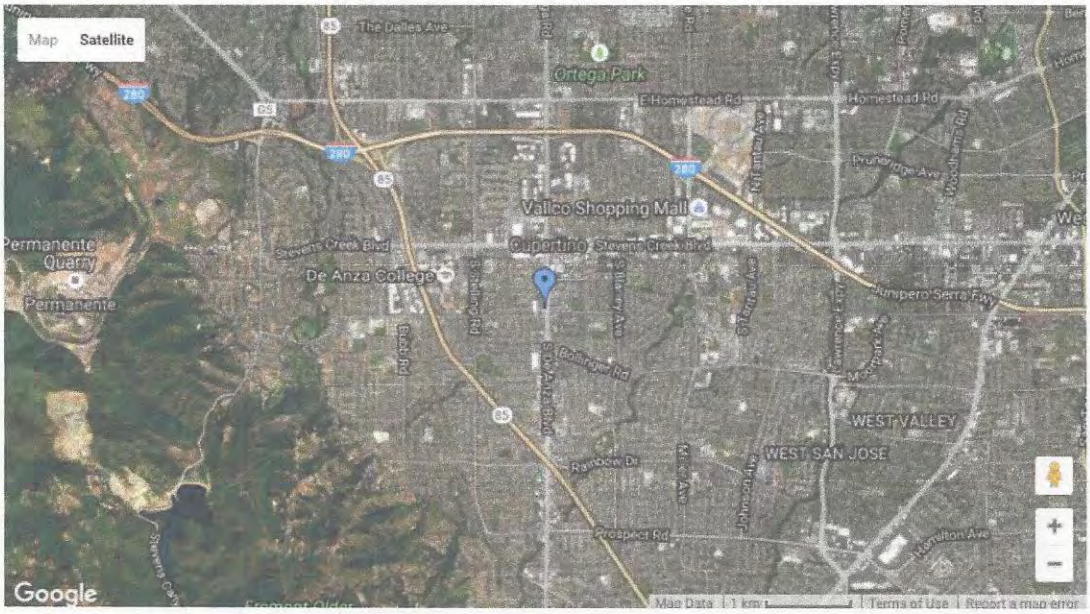
Two new remote radio units are to be anchored to the pole with fabricated steel and strap assemblies. Fabricated sheet steel cable shrouds feed each radio unit, and are also attached to the pole with fabricated steel and strap assemblies. A small power interface cabinet is to be mounted similarly below the RRUS units.

These calculations consider loading on signage and other appurtenances. They address the anchorage of new equipment noted above and specify supports for an existing or future single banner where occurs. Additionally, these calculations verify pole, pole anchorage, and new reinforced concrete pier foundation adequacy.

DESIGN CRITERIA

- TIA-222G "Structural Standards for Antenna Supporting Structures and Antennas"
- 2013 AASHTO LTS-6

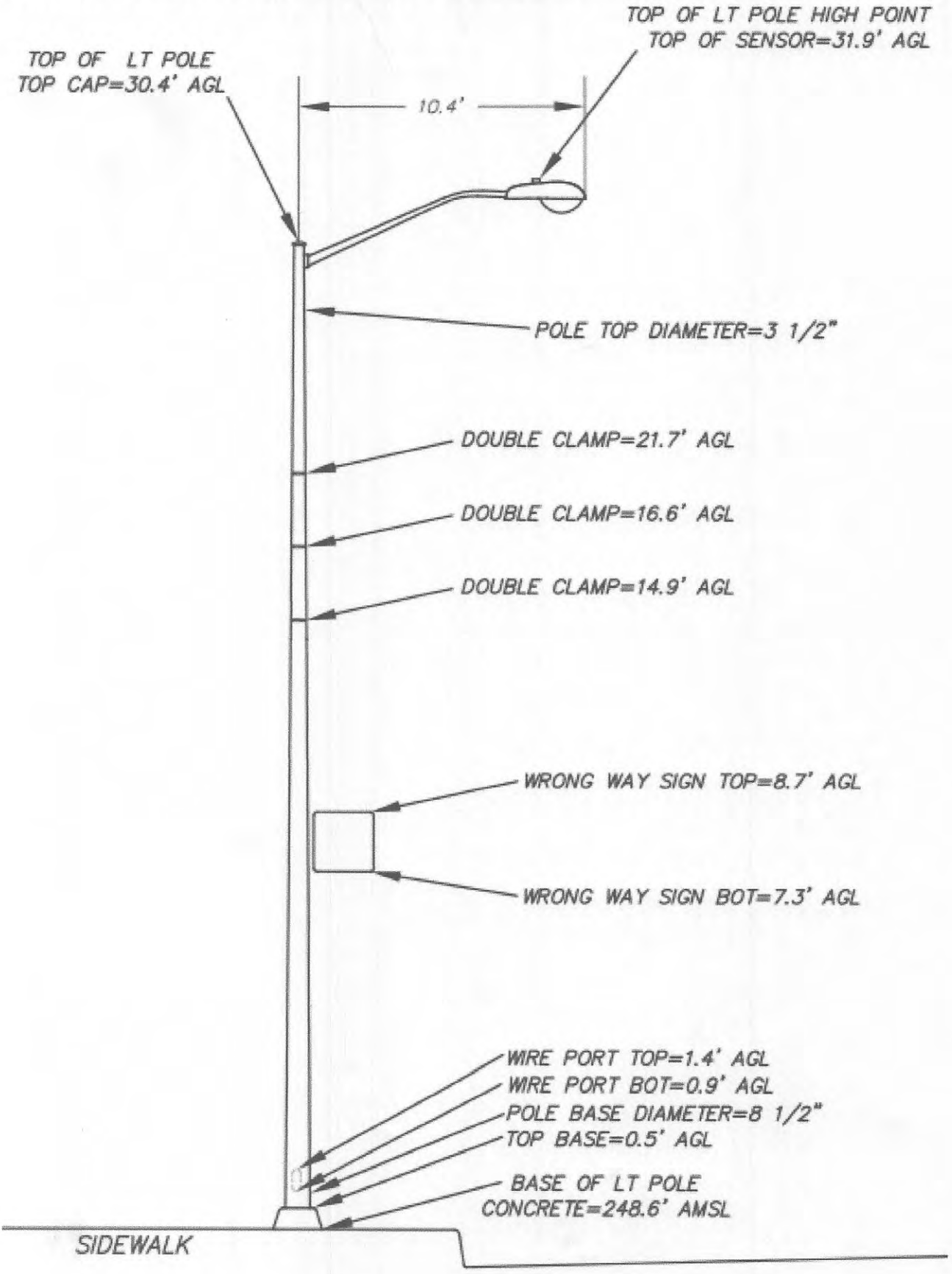
VERIZON SF_CUPER001 10465 SOUTH DE ANZA BLVD



PROJECT LOCATION: 10465 South De Anza Blvd, Cupertino, CA 95014
LATITUDE= 37.316385
LONGITUDE= -122.032501
WIND EXPOSURE: B
SITE CLASS: D

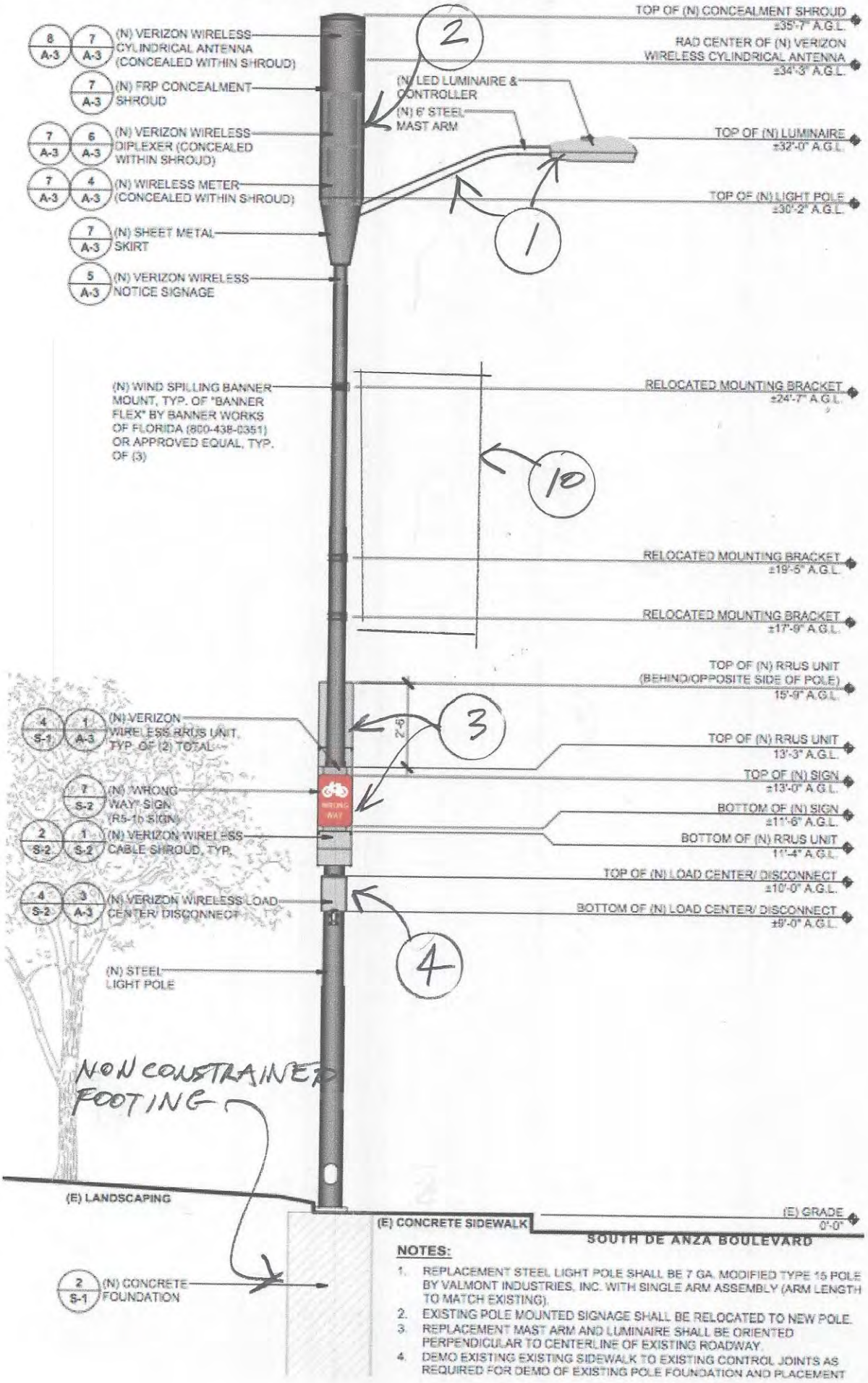
S_S= 1.945g	S_{MS}= 1.945g	S_{DS}= 1.296g
S_1= 0.717g	S_{M1}= 1.075g	S_{D1}= 0.717g

VERIZON SF_CUPER001 10465 SOUTH DE ANZA BLVD



EXISTING GROUND ELEVATION: *AT BASE OF LT POLE=248.6' AMSL*

VERIZON SF_CUPER001 10465 SOUTH DE ANZA BLVD



NOTES:

1. REPLACEMENT STEEL LIGHT POLE SHALL BE 7 GA. MODIFIED TYPE 15 POLE BY VALMONT INDUSTRIES, INC. WITH SINGLE ARM ASSEMBLY (ARM LENGTH TO MATCH EXISTING).
2. EXISTING POLE MOUNTED SIGNAGE SHALL BE RELOCATED TO NEW POLE.
3. REPLACEMENT MAST ARM AND LUMINAIRE SHALL BE ORIENTED PERPENDICULAR TO CENTERLINE OF EXISTING ROADWAY.
4. DEMO EXISTING EXISTING SIDEWALK TO EXISTING CONTROL JOINTS AS REQUIRED FOR DEMO OF EXISTING POLE FOUNDATION AND PLACEMENT

APPURTENANCE DATA

NOTE[2]	DESCRIPTION	C_A	A_A (SF)
①	MAST/LUMINAIRE	0.82	3.0
②	ANTENNA RADOME/SKIRT	0.82	9.4
③	(2) RRUS/CABLE SHROUD	1.20	3.0 EA
④	LOAD CENTER	1.20	1.0
⑤	1.5 SF MAX. SIGN	1.40	1.5
⑥	2.5 SF MAX. SIGN	1.40	2.5
⑦	4.0 SF MAX. SIGN	1.20	4.0
⑧	6.0 SF MAX. SIGN	1.20	6.0
⑨	8.0 SF MAX. SIGN	1.20	8.0
⑩	19.5 SF BANNER	0.60[1]	19.5

1 USE WIND SPILLING BANNER SYSTEM
2 SEE p. 5/14, POLE ELEVATION.

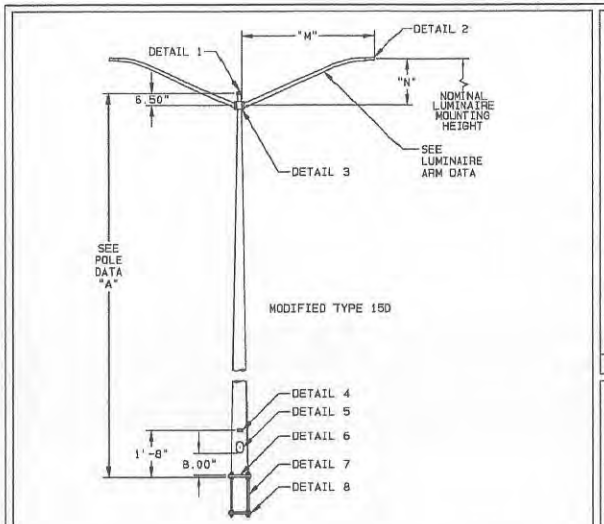
REUSE OF EXISTING APPURTENANCES

- REMOVE & REINSTALL SIGNS ETC. FOR REUSE WHERE A NEW POLE IS SPECIFIED. WHERE POLE IS TO BE REUSED, PROTECT IN PLACE
- REPLACE DAMAGED OR CORRODED ELEMENTS IN KIND.

NEW POLE/MAST/LUMINIARE

PROVIDE NEW 7 GAGE (0.179 inch WALL THICKNESS) TAPERED STEEL 8" POLE W/ BASE PLATE AND MAST ARM BY VALMONT (SEE NEXT SHEET)

DESIGN SPREADSHEET, p. 13/14, SHOWS BENDING AND AXIAL STRESSES TO FALL INTO ALLOWABLE LIMITS.



DESIGN CRITERIA

2001 AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS. FATIGUE LOADS SPECIFIED IN CHAPTER 11 ARE NOT INCLUDED IN THIS DESIGN.

WIND VELOCITY:

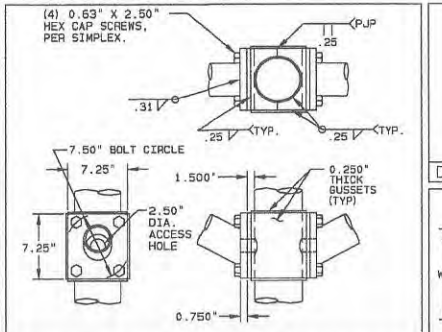
100 MPH ISOTACH

LOADING CRITERIA (EACH LUMINAIRE ARM)

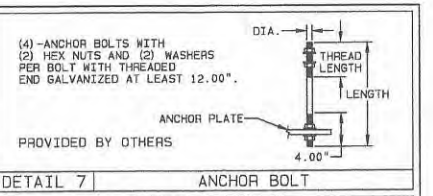
MAXIMUM FIXTURE EPA = 3.30 FT^2

MAXIMUM FIXTURE WEIGHT = 55.0 LBS

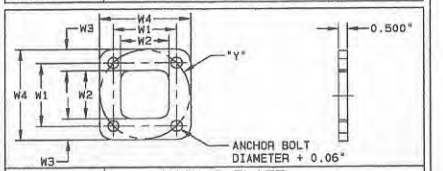
DESIGN/LOADING CRITERIA



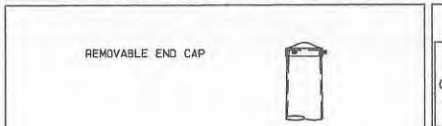
DETAIL 3 | LUMINAIRE ARM ATTACHMENT



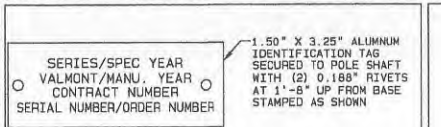
DETAIL 7 | ANCHOR BOLT



DETAIL 8 | ANCHOR PLATE



DETAIL 1 | POLE TOP



DETAIL 4 | POLE I.D. TAG

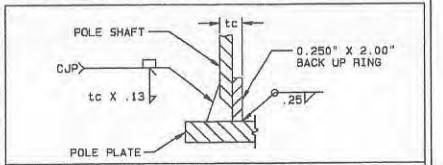


PLATE WELD DETAIL

MATERIAL DATA

COMPONENT	ASTM DESIGNATION	MIN. YIELD (KSI)
TAPERED TUBES	A595 GR. A	55
BASE PLATE	A572 GR.50	50
SIMPLEX PLATES	A572 GR.50	50
GUSSETS	A572 GR.50	50
LUM. CONN.BOLTS	A325	--
PIPE / TUBING	A501, A513, A618 A500 GR. B OR C	36
ANCHOR BOLTS	F1554 GR.55	55
HARDWARE COATING	HOT DIP ZINC	--

FINISH DATA

SYSTEM: GALVANIZED - NO AEROSOL REPAIR

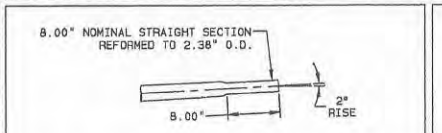
BASE COAT: HOT-DIP GALVANIZED TO ASTM A123

PRIME COAT: NONE

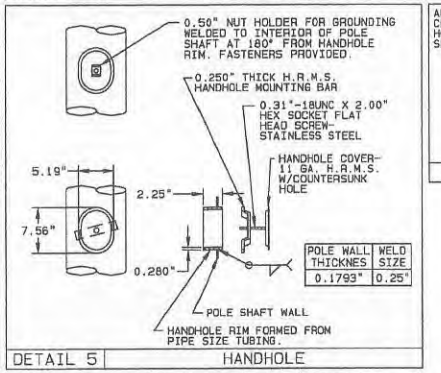
FINISH COAT: NONE

COLOR: NONE

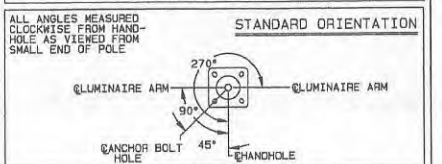
SPEC: F-544



DETAIL 2 | LUMINAIRE ARM END



DETAIL 5 | HANDHOLE



RADIAL INDEX

LUMINAIRE ARM DATA

PROJECTED LENGTH "M" (FT)	RISE "N" (FT)	ARM BASE DIA. (IN)	THICKNESS (IN)	NOMINAL LUMINAIRE MTG. HEIGHT
6.33	2.00	3.36	0.119	31.50
8.33	2.50	3.65	0.119	32.00
10.33	3.25	3.95	0.119	32.75
12.33	4.25	4.27	0.119	33.75
15.33	4.75	4.68	0.119	34.25

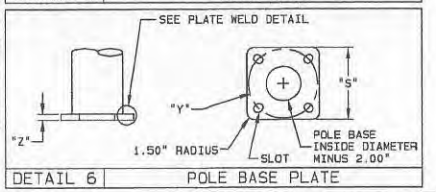
ALTHOUGH RARE, VIBRATIONS SEVERE ENOUGH TO CAUSE DAMAGE CAN OCCASIONALLY OCCUR IN STRUCTURES OF ALL TYPES. BECAUSE THEY ARE INFLUENCED BY MANY INTERACTING VARIABLES, VIBRATIONS ARE GENERALLY UNPREDICTABLE. THE USER'S MAINTENANCE PROGRAM SHOULD INCLUDE OBSERVATION FOR EXCESSIVE VIBRATION AND EXAMINATION FOR ANY STRUCTURAL DAMAGE OR BOLT LOOSENING. THE VALMONT WARRANTY SPECIFICALLY EXCLUDES FATIGUE FAILURE OR SIMILAR PHENOMENA RESULTING FROM INDUCED VIBRATION, HARMONIC OSCILLATION OR RESONANCE ASSOCIATED WITH MOVEMENT OF AIR CURRENTS AROUND THE PRODUCT.

VIBRATION DISCLAIMER

POLE DATA

POLE TYPE	POLE TUBE				POLE BASE					ANCHOR BOLT			ANCHOR PLATE			
	LENGTH "A" (FT)	BASE DIA (IN)	TOP DIA. (IN)	THICKNESS (IN)	SQUARE "S" (IN)	BOLT CIRCLE "Y" (IN)	THK. "Z" (IN)	SLOT (IN)	BOLT CIRCLE RANGE (IN)	DIA. (IN)	LENGTH (IN)	THREAD LENGTH (IN)	W1 (IN)	W2 (IN)	W3 (IN)	W4 (IN)
MODIFIED 15D	30.00	8.00	3.80	0.179	12.00	11.50	2.000	1.38 X 1.94	11.00 - 12.00	1.25	42.00	10.00	DESIGNED/PROVIDED BY OTHERS			

7GA.



DETAIL 6 | POLE BASE PLATE

TITLE: CITY OF CUPERTINO STREET LIGHTING POLES
MODIFIED TYPE 15D POLES SLOTTED BASEPLATE

valmont
Valley, NE 68064
(402) 359-2201

PAGE NUMBER: 2 OF 2

DRAWING NUMBER: DB01149

REV:

NEW ANTENNA/RADOME/SKIRT

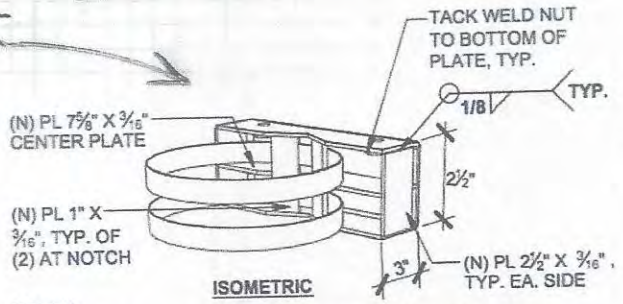
THE DESIGN OF THESE ELEMENTS, AND THEIR ATTACHMENT TO THE POLE, ARE BY OTHERS

NEW RRUS, CABLE SHROUD, AND LOAD CENTER ANCHORAGE TO POLE

PROVIDE 3/16" STEEL ASSEMBLY WITH ¼" FILLET WELDS, W/2 - ¾x0.03 STAINLESS BANDS TO POLE.

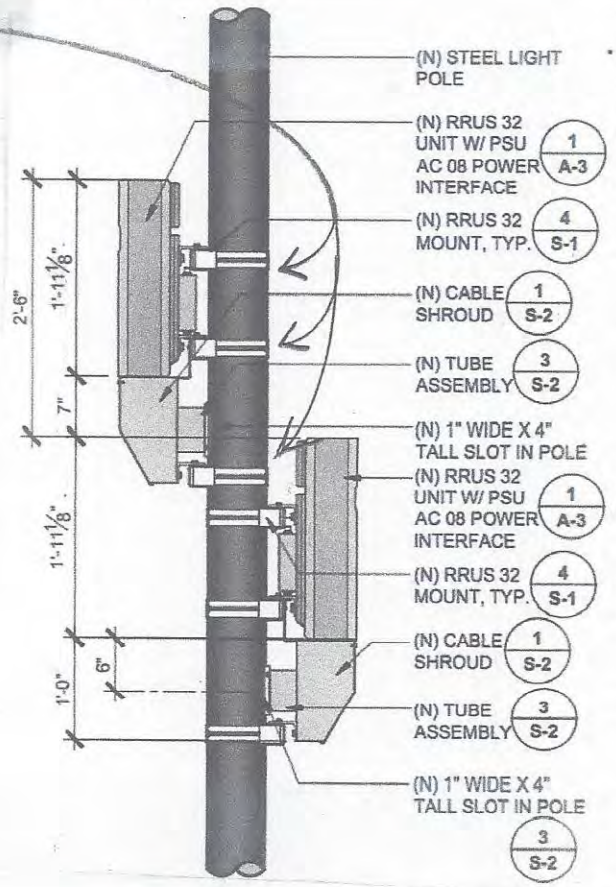
USE 2 ANCHORAGE ASSEMBLIES AT EACH RRUS UNIT, AND 1 AT CABLE SHROUD

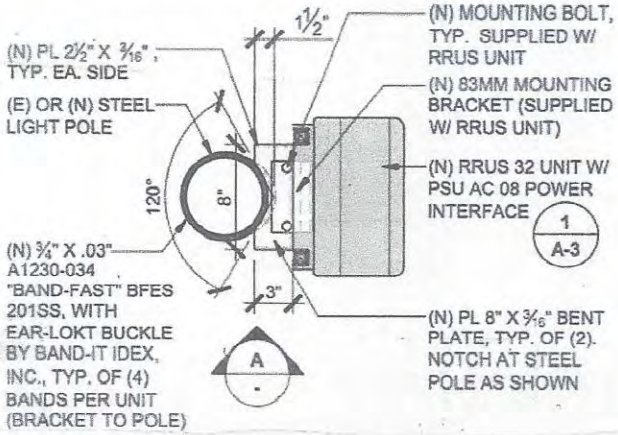
SEE NEXT SHT FOR CABLE SHROUD AND ACCESS SLOT IN POLE.



NOTES:

1. HOT-DIP GALVANIZE ALL STEEL COMPONENTS AFTER FABRICATION.
2. PROVIDE STEEL SHOP DRAWING FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.
3. PROVIDE MOCK-UP FOR REVIEW AND APPROVAL TO ENSURE PROPER CLEARANCE FOR PSU AC08 UNIT.
4. PRIME AND PAINT MOUNTING COMPONENTS WITH TNEMEC EXTERIOR PAINT COATING TO MATCH POLE.
5. WELD ALL STEEL PLATE COMPONENTS WITH ⅛" FILLET WELDS.



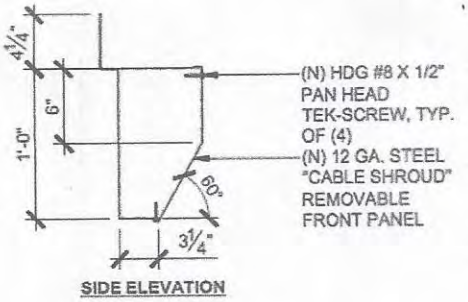


NEW GSM CABLE SHROUD

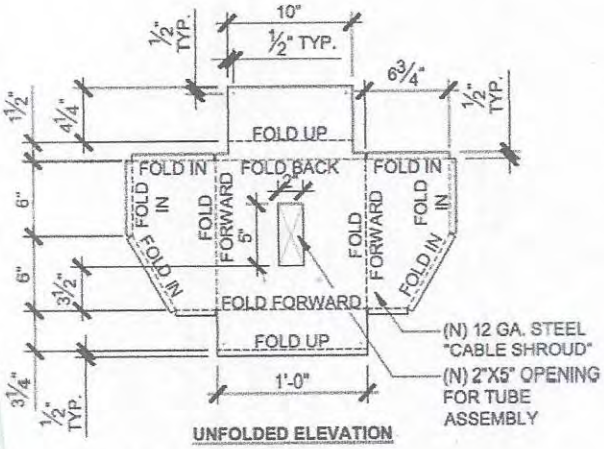
FABRICATE 12 GA GALV SHEET METAL SHROUD FOR FOR ALL CONDUCTORS TO AND FROM RRUS

ANCHOR TO POLE @ BOTTOM, AND TO RRUS MOUNTING CLAMP ABOVE

(SEE p 9/14)



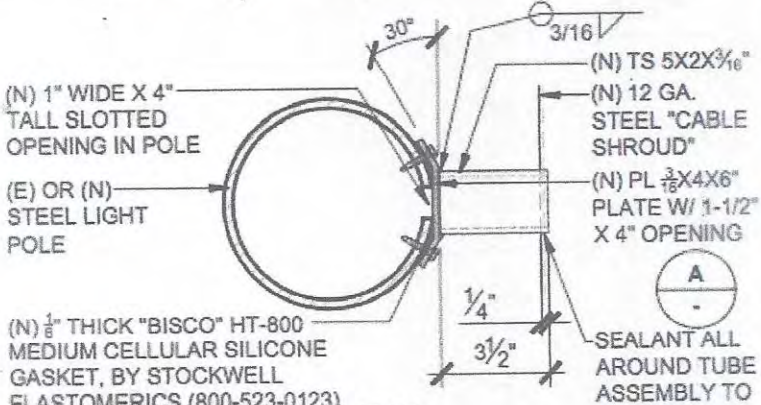
SIDE ELEVATION



UNFOLDED ELEVATION

CONDUCTOR ACCESS TUBE

ELEMENTS & CONNECTIONS ok by insp. ✓



PLAN

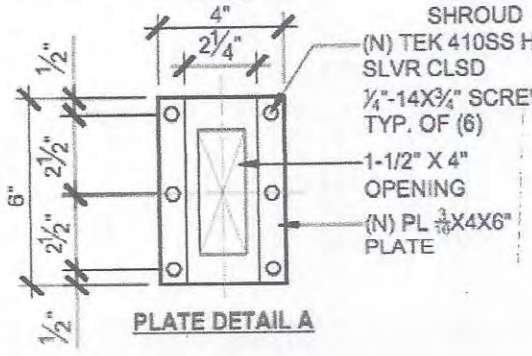
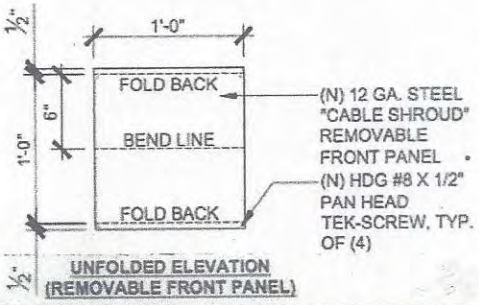


PLATE DETAIL A



UNFOLDED ELEVATION (REMOVABLE FRONT PANEL)

SLOT IN (N) POLE

$M = 9.95$ k' (@ 10' AGL)

$S_{10} = 5.04$ (4.25" ϕ)

$f_b = \frac{9.95 \times 12}{5.04} = 24$ ksi

12 GA, 4" HIGH x 3" WIDE SEGMENTS, FIXED/FIXED NOT ASSUMING CURVED CROSSECT.

$KL/r = 0.5(4)/0.052$

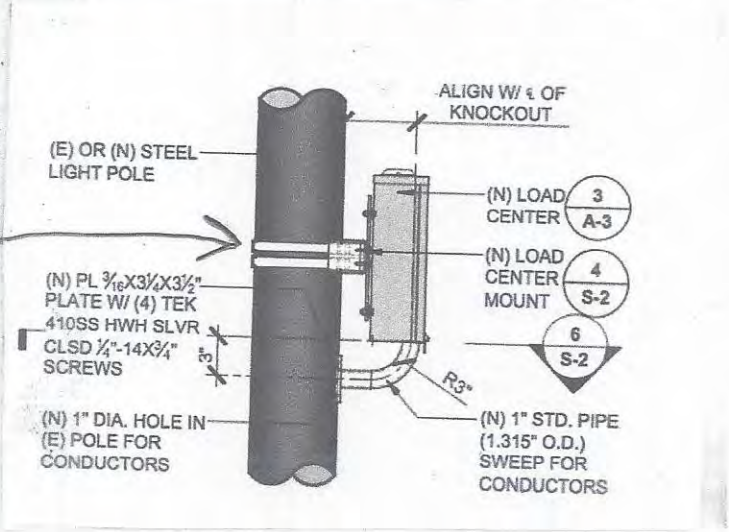
$= 38.4$ ∴ $F_a = 26$ ksi

SLOT ok ✓ 724 ✓

NEW LOAD CENTER AND CABLE SWEEP AND SHEET STEEL SIGN SUPPORTS

S.A.D. FOR CABINET INFO., BY OTHERS

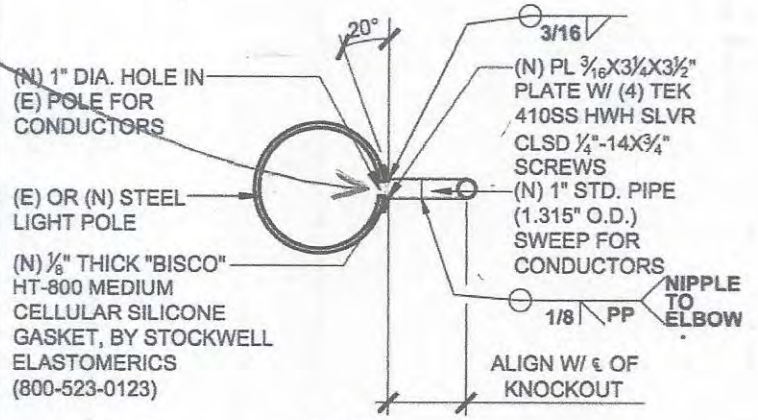
ANCHOR TO POLE W/ ANCHORAGE ASSY. PER PREVIOUS EXC. USE 10" LONG MOUNT.



PROVIDE 1" ϕ HOLE IN POLE FOR CONDUCTORS.

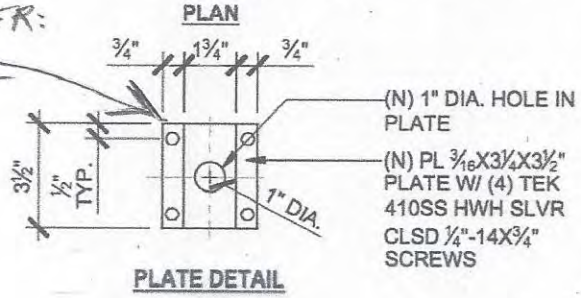
ok by insp.

IF FIELD DRILLED, TREAT W/ PROTECTION PER ARCH'L DWGS.

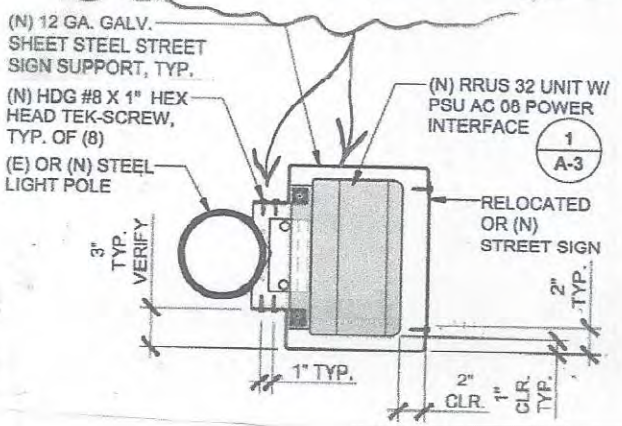


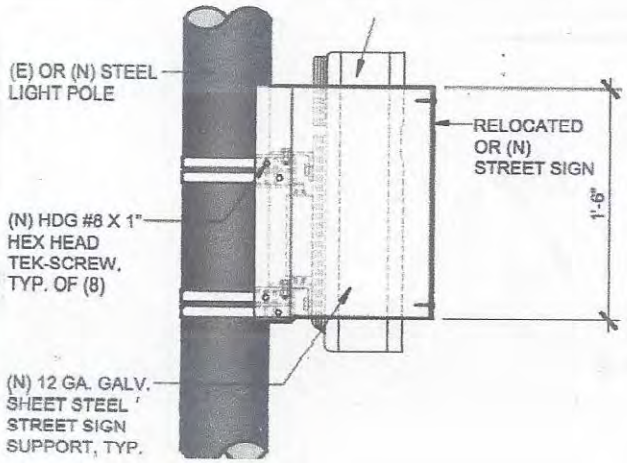
PROVIDE SCREW-ON SWEEP ASSEMBLY WITH GASKET PER ARCH DWGS.

CLIMBER: SKY 200# ok by insp.



USE 12 GA STEEL SIGN SUPPORTS PER ARCH DWGS. W/ 8-#8 SCREWS TO MOUNTS





Design Wind Loads on Antenna Supporting Structures
TIA 222 REVISION G & 2013 AASHTO LTS-6

PROJECT: **VERIZON SF_CUPER001 10465 SOUTH DE ANZA BLVD**
10465 South De Anza Boulevard
Cupertino, CA 95014

Tapered Steel Light Pole

h =	30.00 ft	Pole Height	Properties of section at pole base	D =	8.00 in
Db =	8.00 in	Diameter at base		A =	4.50
Dt =	3.80 in	Diameter at top		t =	0.179 in
t =	0.179 in	Wall Thickness		S =	8.41 in3
wp=	525 #	pole weight		I =	33.65 in4

Appurtenences	EA	unit wt	C_A	A_A	C_AA_A	y	C_AA_Ay	wty
1 MAST/LUMINAIRE	1	80	0.82	3.00	2.45	32.00	78.5	2560
2 ANTENNA RADOME/SKIRT	1	70	0.82	9.37	7.66	32.50	249.1	2275
3 RRUS/CABLE SHROUD	2	45	1.20	3.00	7.20	13.00	93.6	1170
4 LOAD CENTER	1	25	1.20	1.00	1.20	9.50	11.4	238
5 1.5 SF MAX SIGN	0	3	1.40	1.50	0.00	1.00	0.0	0
6 2.5 SF MAX SIGN	0	5	1.40	2.50	0.00	1.00	0.0	0
7 4.0 SF MAX SIGN	0	8	1.20	4.00	0.00	1.00	0.0	0
8 6.0 SF MAX SIGN	0	16	1.20	6.00	0.00	1.00	0.0	0
9 8.0 SF MAX SIGN	0	24	1.20	8.00	0.00	11.50	0.0	0
10 19.5 SF BANNER	1	30	0.60	19.50	11.70	21.00	245.7	630
11 MISC.	0	100	1.80	6.00	0.00	1.00	0.0	0
	wa=	295		$(EPA)_A$ =	30.22		678.3	6873

TIA 222 Wind on Pole — Section 2.6.9.1

F_{st} =	195 lb	Design Wind Force on Pole $= q_zG_H(EPA)_sN$		
q_z =	9.74 psf	Velocity Pressure $= 0.00256K_zK_{zt}K_dV^2I$	Section 2.6.9.6	
z =	13.22 ft	Height of Pole Centroid	alpha =	7
WIND EXP =	B	Wind Exposure Category	Zg =	1200
G_H =	1.1	Gust Effect Factor	Section 2.6.7.3	
K_z =	0.554	Velocity Pressure Coefficient	Section 2.6.5.2	
K_{zt} =	1.00	Topographic Factor	Section 2.6.6.4	
K_d =	0.95	Wind Direction Probability Factc	Table 2-2	
V =	85 mph	Basic Wind Speed		
I =	1.00	Importance Factor	Table 2-3	
$(EPA)_s$ =	18.20	Effective Proj. Area of Structure $= C_fA_D$	Section 2.6.9.1.2	
C_f =	1.234	Force Coefficient (32<C<64)	Table 2-7	
C =	31.12	$= (IK_{zt}K_z)^{1/2}VD$	Table 2-7	
D avg =	5.90 in			
A_D =	14.75 sf	Projected Area of Pole		

TIA 222 Wind on Appurtenances

F_A =	324 lb	Design Wind Force on Appurter $= q_zG_H(EPA)_A$	Section 2.6.9.2
y_{res} =	22.45 ft	Height of Resultant of Wind on Appurtenances	

AASHTO LTS-6 WIND on Pole and Appurtenances

Fw = 958 lb

Kz =	1.00	below 32.8ft	
G =	1.14		
V =	90	mph	
Ir =	1.00	50 yr, non-hurricane	
CaAa =	40.54	(EPA)a+(EPA)s	

Height and Magnitude of Resultant of Critical Lateral Forces on Pole and Appurtenances

F_w =	519	lb	**TIA 222 WIND**	Section 2.6.9	
	958	lb	**AASHTO LTS-6 WIND**		
Fp =	0.63	Wp	= Sds/(R/I)		SEISMIC
=	514	lb	**SEISMIC**	R =	2.00
	958	#	CRITICAL LATERAL FORCE	I =	1.00
	19.65	ft	RESULTANT HEIGHT	Sds =	1.25268
	18.83	ft lb	**DESIGN BASE MOMENT**	Fa =	1.00
				Ss =	1.90

Pole Stress and Bolt Tension

WT=	820	#		
fa=	0.18	ksi	axial	
M=	18.83	ft k		
fb=	26.86	ksi	bending	
f=	27.05	ksi	total stress	
D/t=	45		width/thickness ratio of pole	
non-compact limit	60		=3300/Fy	
Fb'=	48.28	ksi	allowable stress	OK
Bolt Circle Diameter =	11.50	in		
Dist btwn bolt pairs =	8.13	in		
T=	13.90	k	tension force per bolt	
	20.88	k	allowable bolt tension	OK

Foundation Adequacy

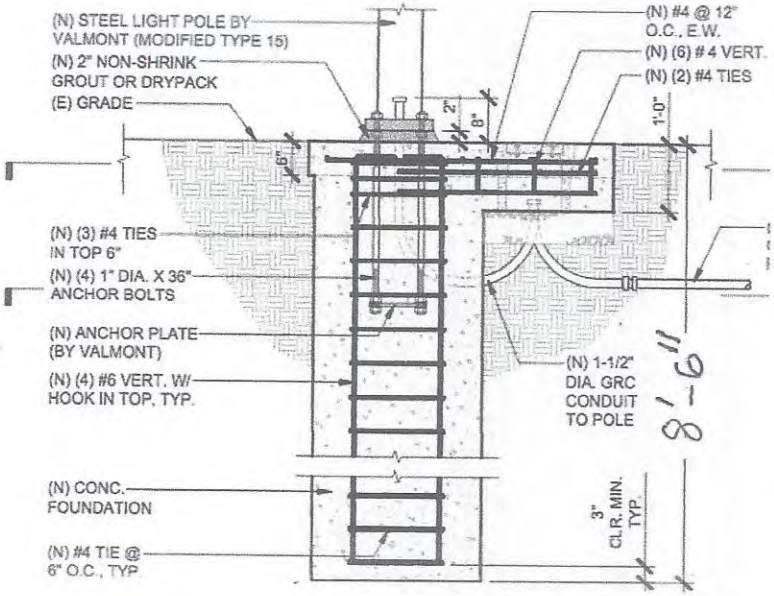
b =	2.5	ft	Diameter or width of footing	
d =	8.5	ft	Depth of footing	
Lateral Soil pressure allowed =	150	psf/ft		
S1 =	425	psf		
S3 =	1275	psf		
A =	2.11			
d (NON) =	7.86	ft	Required	OK for nonconstrained footing
d (CON) =	5.01	ft	Required	OK for constrained footing

NEW REINFORCED CONCRETE PIER FOOTING

PROVIDE 2'-6"ø x 6'-6" DEEP PIER FTG, W/ 4-#6 VERT AND #4 TIES @ 12", CAST IN AN ADJACENT JUNCTION BOX.

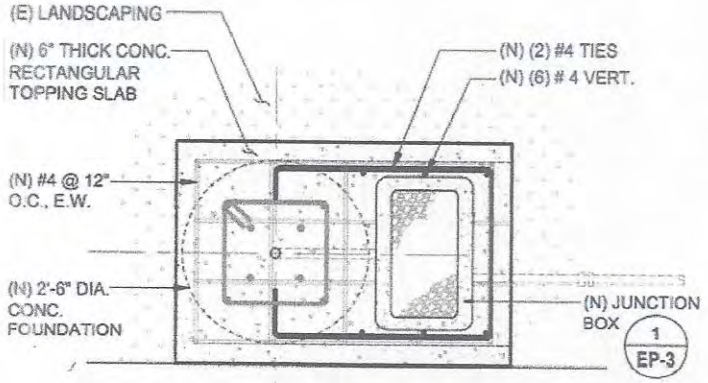
PROVIDE 4-1"ø x 36" x 4" A.B. DOUBLE NUTS, DRYPACK

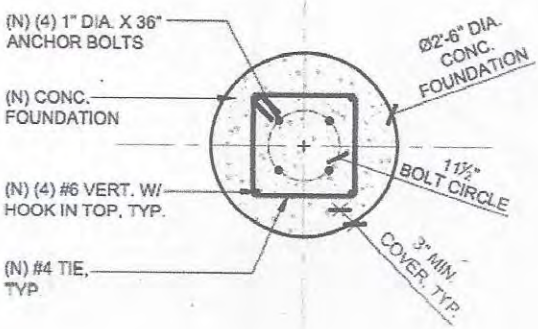
ABANDON (E) FTG IN PLACE, CAST (N) FTG ADJACENT (S.A.D.), REPLACE SIDEWALK, ETC.



CONCRETE FLEXURAL DESIGN

As=	0.872	in2
b=	19	in
d=	19	in
f'c=	2.5	ksi
fy=	60	ksi
M=	45	k-ft
Load Factor	1.6	
Mu=	864	k-in
phi=	0.9	
fy/0.85f'cb=	1.486	
Mu/phify=	16.000	





Radio Frequency - Electromagnetic Energy (RF-EME) Jurisdictional Report

Site No. CPSC001
SF_CUPER001
10465 S. De Anza Boulevard
Cupertino, California 95014
Santa Clara County
37° 18' 58.99" N, -122° 1' 57.00" W NAD83

EBI Project No. 62180000319
March 9, 2018

Prepared for:

Verizon Wireless
c/o Modus, LLC
240 Stockton Street, 3rd Floor
San Francisco, CA 94108

Prepared by:

EBI Consulting
environmental | engineering | due diligence

TABLE OF CONTENTS

APPENDICES

EXECUTIVE SUMMARY

Purpose of Report

EnviroBusiness Inc. (dba EBI Consulting) has been contracted by Verizon Wireless to conduct radio frequency electromagnetic (RF-EME) modeling for Verizon Site CPSC001 located at 10465 S. De Anza Boulevard in Cupertino, California to determine RF-EME exposure levels from proposed Verizon wireless communications equipment at this site. As described in greater detail in Section 2.0 of this report, the Federal Communications Commission (FCC) has developed Maximum Permissible Exposure (MPE) Limits for general public exposures and occupational exposures. This report summarizes the results of RF-EME modeling in relation to relevant FCC RF-EME compliance standards for limiting human exposure to RF-EME fields.

Statement of Compliance

A site is considered out of compliance with FCC regulations if there are areas that exceed the FCC exposure limits and there are no RF hazard mitigation measures in place. Any carrier which has an installation that contributes more than 5% of the applicable MPE must participate in mitigating these RF hazards.

As presented in the sections below, based on worst-case predictive modeling, there are no modeled areas on any accessible ground-level walking/working surface related to the proposed antennas that exceed the FCC's occupational or general public exposure limits at this site. Additionally, there are areas where workers who may be elevated above the ground may be exposed to power densities greater than the occupational limits. Therefore, workers should be informed about the presence and locations of antennas and their associated fields.

At the nearest walking/working surfaces to the Verizon antennas, the maximum power density generated by the Verizon antennas is approximately **51.50** percent of the FCC's general public limit (**10.30** percent of the FCC's occupational limit).

The composite exposure level from all carriers on this site is approximately **51.50** percent of the FCC's general public limit (**10.30** percent of the FCC's occupational limit) at the nearest walking/working surface to each antenna.

Recommended control measures are outlined in Section 5.0 and within a Site Safety Plan (attached); this plan includes instructions to shut down and lockout/tagout this wireless equipment in accordance with Verizon's standard operating protocol.

1.0 INTRODUCTION

Radio frequency waves are electromagnetic waves from the portion of the electromagnetic spectrum at frequencies lower than visible light and microwaves. The wavelengths of radio waves range from thousands of meters to around 30 centimeters. These wavelengths correspond to frequencies as low as 3 cycles per seconds (or hertz [Hz]) to as high as one gigahertz (one billion cycles per second).

Personal Communication (PCS) facilities used by Verizon in this area operate within a frequency range of 1900-2100 MHz. Facilities typically consist of: 1) electronic transceivers (the radios or cabinets) connected to wired telephone lines; and 2) antennas that send the wireless signals created by the transceivers to be received by individual subscriber units (PCS telephones). Transceivers are typically connected to antennas by coaxial cables.

Because of the short wavelength of PCS services, the antennas require line-of-site paths for good propagation, and are typically installed a distance above ground level. Antennas are constructed to concentrate energy towards the horizon, with as little energy as possible scattered towards the ground or the sky. This design, combined with the low power of PCS facilities, generally results in no possibility for exposure to approach Maximum Permissible Exposure (MPE) levels, with the exception of in areas in the immediate vicinity of the antennas.

MPE limits do not represent levels where a health risk exists, since they are designed to provide a substantial margin of safety. 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.

2.0 SITE DESCRIPTION

This project site includes one (1) wireless telecommunication antenna (at three sector locations) on a light pole located at 10465 S. De Anza Boulevard in Cupertino, California.

Verizon Antenna Information (proposed Configuration)									
Antenna # and Model	Frequency (MHz)	# of Transmitters	Transmit Power (Watts)	Azimuth	Gain (dBd)	Feet above Ground (CL)	X	Y	Z (feet)
A1 Amphenol CUUT360X06F56	1900 2100	2 2	48.7 53.8	0°	7.65	34.3	30	30	33.3
B1 Amphenol CUUT360X06F56	1900 2100	2 2	48.7 53.8	120°	7.65	34.3	30	30	33.3
C1 Amphenol CUUT360X06F56	1900 2100	2 2	48.7 53.8	240°	7.65	34.3	30	30	33.3

The FCC guidelines incorporate two separate tiers of exposure limits that are based upon occupational/controlled exposure limits (for workers) and general population/uncontrolled exposure limits for members of the general public that may be exposed to antenna fields. While access to this site is considered uncontrolled, the analysis has considered exposures with respect to both controlled and uncontrolled limits as an untrained worker may access adjacent rooftop locations. Additional

information regarding controlled/uncontrolled exposure limits is provided in Section 3.0. Appendix B presents a site safety plan that provides a plan view of the light pole with antenna locations.

3.0 FEDERAL COMMUNICATIONS COMMISSION (FCC) REQUIREMENTS

The FCC has established Maximum Permissible Exposure (MPE) limits for human exposure to Radiofrequency Electromagnetic (RF-EME) energy fields, based on exposure limits recommended by the National Council on Radiation Protection and Measurements (NCRP) and, over a wide range of frequencies, the exposure limits developed by the Institute of Electrical and Electronics Engineers, Inc. (IEEE) and adopted by the American National Standards Institute (ANSI) to replace the 1982 ANSI guidelines. Limits for localized absorption are based on recommendations of both ANSI/IEEE and NCRP.

The FCC guidelines incorporate two separate tiers of exposure limits that are based upon occupational/controlled exposure limits (for workers) and general public/uncontrolled exposure limits for members of the general public.

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 public/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 public/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 would always be considered under this category when exposure is not employment-related, for example, in the case of a telecommunications tower that exposes persons in a nearby residential area.

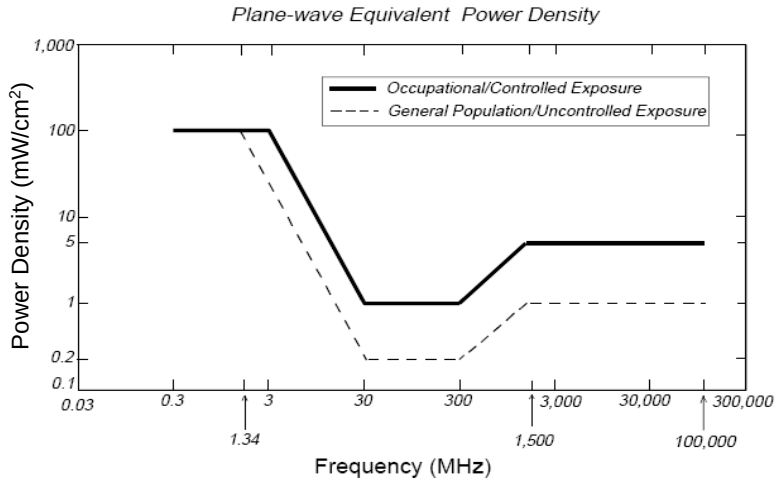
Table 1 and Figure 1 (below), which are included within the FCC's OET Bulletin 65, summarize the MPE limits for RF emissions. These limits are designed to provide a substantial margin of safety. They vary by frequency to take into account the different types of equipment that may be in operation at a particular facility and are "time-averaged" limits to reflect different durations resulting from controlled and uncontrolled exposures.

The FCC's MPEs are measured in terms of power (mW) over a unit surface area (cm^2). Known as the power density, the FCC has established an occupational MPE of 5 milliwatts per square centimeter (mW/cm^2) and an uncontrolled MPE of 1 mW/cm2 for equipment operating in the 1900 MHz frequency range. For the Verizon equipment operating at 700 MHz or 850 MHz, the FCC's occupational MPE is 2.83 mW/cm^2 and an uncontrolled MPE of 0.57 mW/cm^2. These limits are considered protective of these populations.

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
300-1,500	--	--	f/300	6
1,500-100,000	--	--	5	6
(B) Limits for General Public/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
300-1,500	--	--	f/1,500	30
1,500-100,000	--	--	1.0	30

f = Frequency in (MHz)
* Plane-wave equivalent power density

Figure 1. FCC Limits for Maximum Permissible Exposure (MPE)



Based on the above, the most restrictive thresholds for exposures of unlimited duration to RF energy for several personal wireless services are summarized below:

Personal Wireless Service	Approximate Frequency	Occupational MPE	Public MPE
Personal Communication (PCS)	1,950 MHz	5.00 mW/cm^2	1.00 mW/cm^2
Cellular Telephone	870 MHz	2.90 mW/cm^2	0.58 mW/cm^2
Specialized Mobile Radio	855 MHz	2.85 mW/cm^2	0.57 mW/cm^2
Most Restrictive Freq, Range	30-300 MHz	1.00 mW/cm^2	0.20 mW/cm^2

MPE limits are designed to provide a substantial margin of safety. 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.

Personal Communication (PCS) facilities used by Verizon in this area operate within a frequency range of 1900-2100 MHz. Facilities typically consist of: 1) electronic transceivers (the radios or cabinets) connected to wired telephone lines; and 2) antennas that send the wireless signals created by the transceivers to be received by individual subscriber units (PCS telephones). Transceivers are typically connected to antennas by coaxial cables.

Because of the short wavelength of PCS services, the antennas require line-of-site paths for good propagation, and are typically installed above ground level. Antennas are constructed to concentrate energy towards the horizon, with as little energy as possible scattered towards the ground or the sky. This design, combined with the low power of PCS facilities, generally results in no possibility for exposure to approach Maximum Permissible Exposure (MPE) levels, with the exception of areas directly in front of the antennas.

4.0 WORST-CASE PREDICTIVE MODELING

EBI has performed theoretical modeling using RoofView® software to estimate the worst-case power density at the site ground-level and nearby rooftops resulting from operation of the antennas. RoofView® is a widely-used predictive modeling program that has been developed by Richard Tell Associates to predict both near field and far field RF power density values for roof-top and tower telecommunications sites produced by vertical collinear antennas that are typically used in the cellular, PCS, paging and other communications services. The models utilize several operational specifications for different types of antennas to produce a plot of spatially-averaged power densities that can be expressed as a percentage of the applicable exposure limit.

The modeling is based on worst-case assumptions for the number of antennas and transmitter power. The modeling assumes a maximum 4-4-4 radio configuration for Sectors A, B and C, with a power level of 46.9 dbM (48.7 watts) per transmitter for the 1900 frequency and 47.3 dbM (53.8 watts) per transitter for the 2100 frequency, in order to provide a worst-case evaluation of predicted MPE levels. The assumptions used in the modeling are based upon information provided by Verizon, and information gathered from other sources. The parameters used for the modeling are summarized in the RoofView® export files presented in Appendix C.

There are no other wireless carriers with equipment installed at this site.

Based on worst-case predictive modeling, there are no modeled areas on any accessible ground-level walking/working surface related to the proposed Verizon antennas that exceed the FCC's occupational or general public exposure limits at this site. At the nearest walking/working surfaces to the Verizon antennas, the maximum power density generated by the Verizon antennas is approximately 51.50 percent of the FCC's general public limit (10.30 percent of the FCC's occupational limit). The composite exposure level from all carriers on this site is approximately 51.50 percent of the FCC's general public limit (10.30 percent of the FCC's occupational limit) at the nearest walking/working surface to each antenna.

The Site Safety Plan also presents areas where Verizon Wireless antennas contribute greater than 5% of the applicable MPE limit for a site. A site is considered out of compliance with FCC regulations if there are areas that exceed the FCC exposure limits and there are no RF hazard mitigation measures in place. Any carrier which has an installation that contributes more than 5% of the applicable MPE must participate in mitigating these RF hazards.

The inputs used in the modeling are summarized in the RoofView® export file presented in Appendix C. A graphical representation of the RoofView® modeling results is presented in Appendix B. It should be noted that RoofView is not suitable for modeling microwave dish antennas; however, these units are designed for point-to-point operations at the elevations of the installed equipment rather than ground level coverage.

5.0 MITIGATION/SITE CONTROL OPTIONS

EBI's modeling indicates that there are no areas in front of the Verizon antennas that exceed the FCC standards for occupational or general public exposure. All exposures above the FCC's safe limits require that individuals be elevated above the ground. In order to alert people accessing the light pole at ground level, yellow CAUTION signs are recommended for installation 9 feet below the antenna (24 feet above the ground). These signs must be placed in a conspicuous manner so that they are visible to any person approaching the light pole from any direction.

There are no barriers recommended on this site.

These protocols and recommended control measures have been summarized and included with a graphic representation of the antennas and associated signage and control areas in a RF-EME Site Safety Plan, which is included as Appendix B. Individuals and workers accessing the light pole should be provided with a copy of the attached Site Safety Plan, made aware of the posted signage, and signify their understanding of the Site Safety Plan.

Implementation of the signage recommended in the Site Safety Plan and in this report will bring this site into compliance with the FCC's rules and regulations.

6.0 SUMMARY AND CONCLUSIONS

EBI has prepared a Radiofrequency – Electromagnetic Energy (RF-EME) Compliance Report for telecommunications equipment installed by Verizon Site Number CPSC001 located at 10465 S. De Anza Boulevard in Cupertino, California to determine worst-case predicted RF-EME exposure levels from wireless communications equipment installed at this site. This report summarizes the results of RF-EME modeling in relation to relevant Federal Communications Commission (FCC) RF-EME compliance standards for limiting human exposure to RF-EME fields.

As presented in the sections above, based on the FCC criteria, there are no modeled areas on any accessible ground-level walking/working surface related to the proposed antennas that exceed the FCC's occupational or general public exposure limits at this site. Workers should be informed about the presence and locations of antennas and their associated fields. Recommended control measures are outlined in Section 5.0 and within a Site Safety Plan (attached); this plan includes procedures to shut down and lockout/tagout this wireless equipment in accordance with Verizon's standard operating protocol.

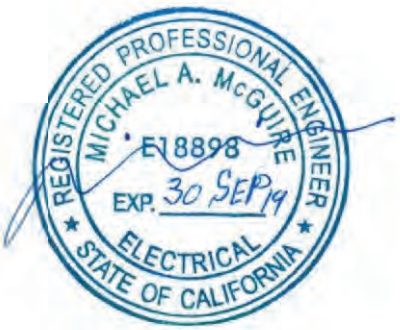
7.0 LIMITATIONS

This report was prepared for the use of Verizon Wireless. It was performed in accordance with generally accepted practices of other consultants undertaking similar studies at the same time and in the same locale under like circumstances. The conclusions provided by EBI are based solely on the information provided by the client. The observations in this report are valid on the date of the investigation. Any additional information that becomes available concerning the site should be provided to EBI so that our conclusions may be revised and modified, if necessary. This report has been prepared in accordance with Standard Conditions for Engagement and authorized proposal, both of which are integral parts of this report. No other warranty, expressed or implied, is made.

Appendix A

Certifications

Reviewed and Approved by:



sealed 24jan2018

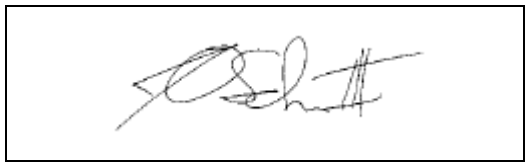
Michael McGuire
Electrical Engineer

Note that EBI's scope of work is limited to an evaluation of the Radio Frequency – Electromagnetic Energy (RF-EME) field generated by the antennas and broadcast equipment noted in this report. The engineering and design of the structure, as well as the impact of the antennas and broadcast equipment on the structural integrity of the structure, are specifically excluded from EBI's scope of work.

Preparer Certification

I, Jos Schorr, state that:

- I am an employee of EnviroBusiness Inc. (d/b/a EBI Consulting), which provides RF-EME safety and compliance services to the wireless communications industry.
- I have successfully completed RF-EME safety training, and I am aware of the potential hazards from RF-EME and would be classified "occupational" under the FCC regulations.
- I am fully aware of and familiar with the Rules and Regulations of both the Federal Communications Commissions (FCC) and the Occupational Safety and Health Administration (OSHA) with regard to Human Exposure to Radio Frequency Radiation.
- I have reviewed the data provided by the client and incorporated it into this Site Compliance Report such that the information contained in this report is true and accurate to the best of my knowledge.



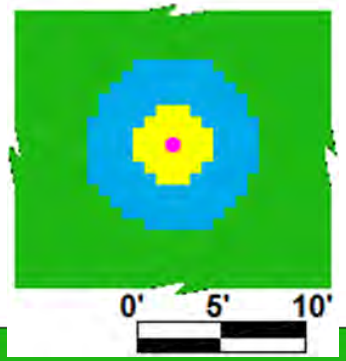
Appendix B

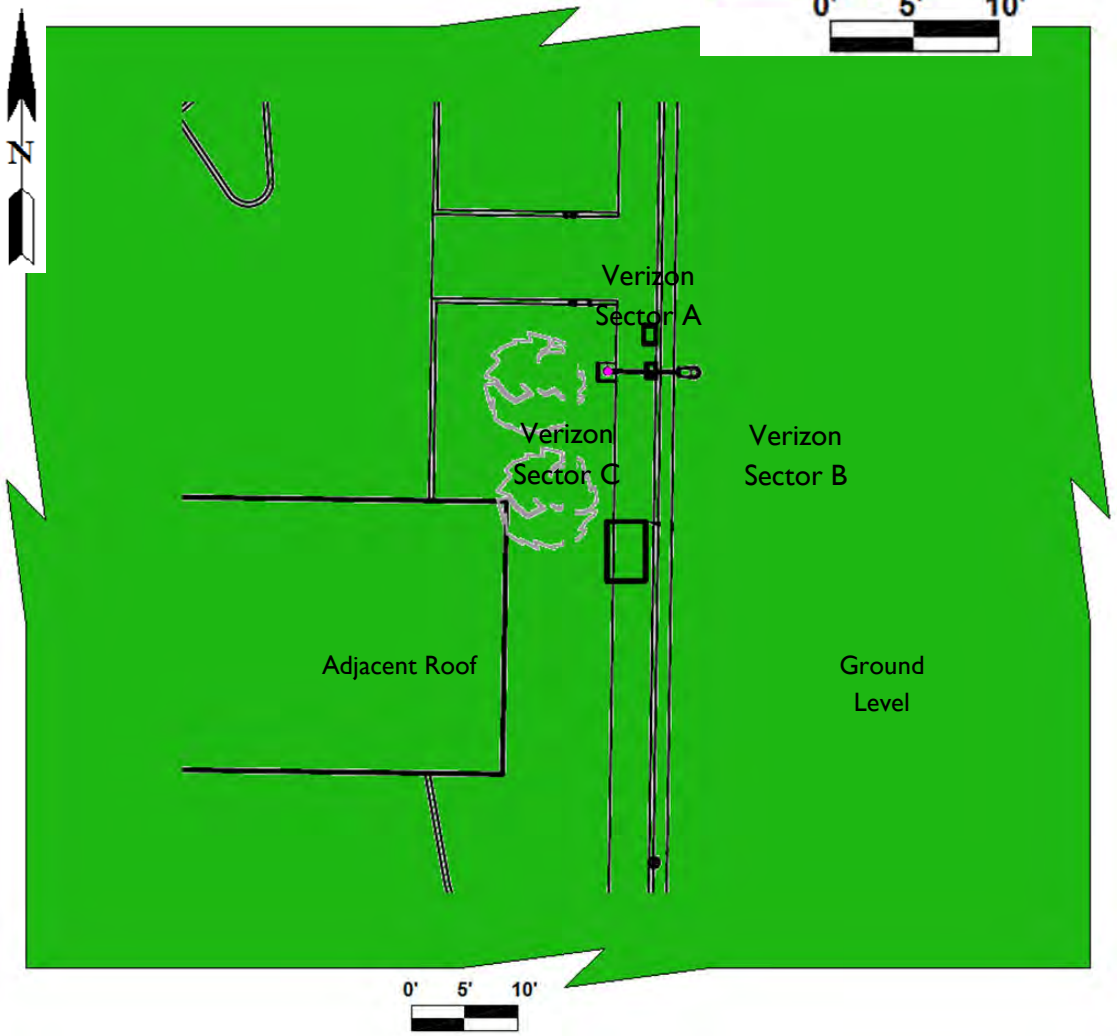
Radio Frequency Electromagnetic Energy

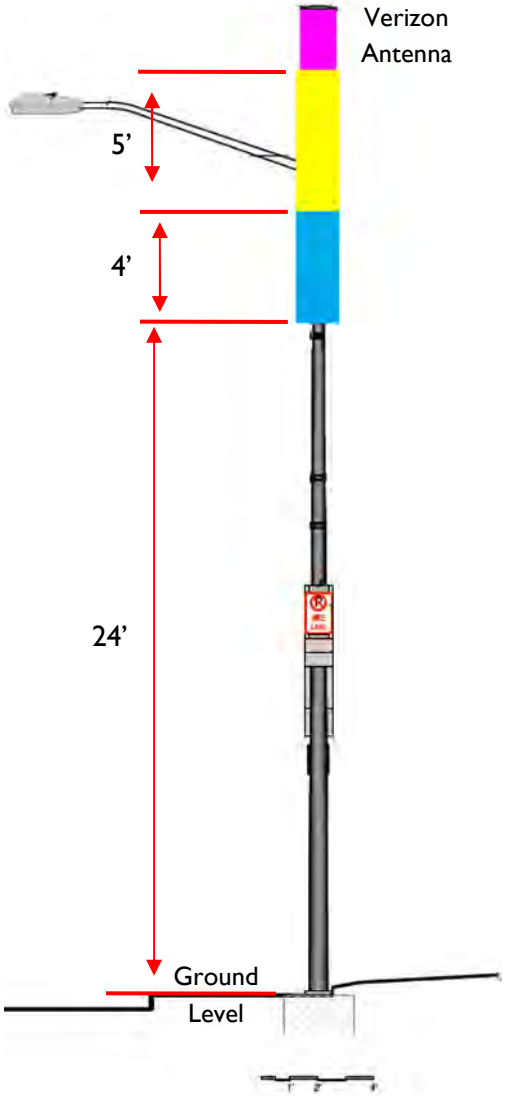
Safety / Signage Plans

% FCC Public Exposure Limit	
	Exposure Level ≥ 5,000
	500 < Exposure Level ≤ 5,000
	100 < Exposure Level ≤ 500
	Exposure Level ≤ 100

Antenna Face View







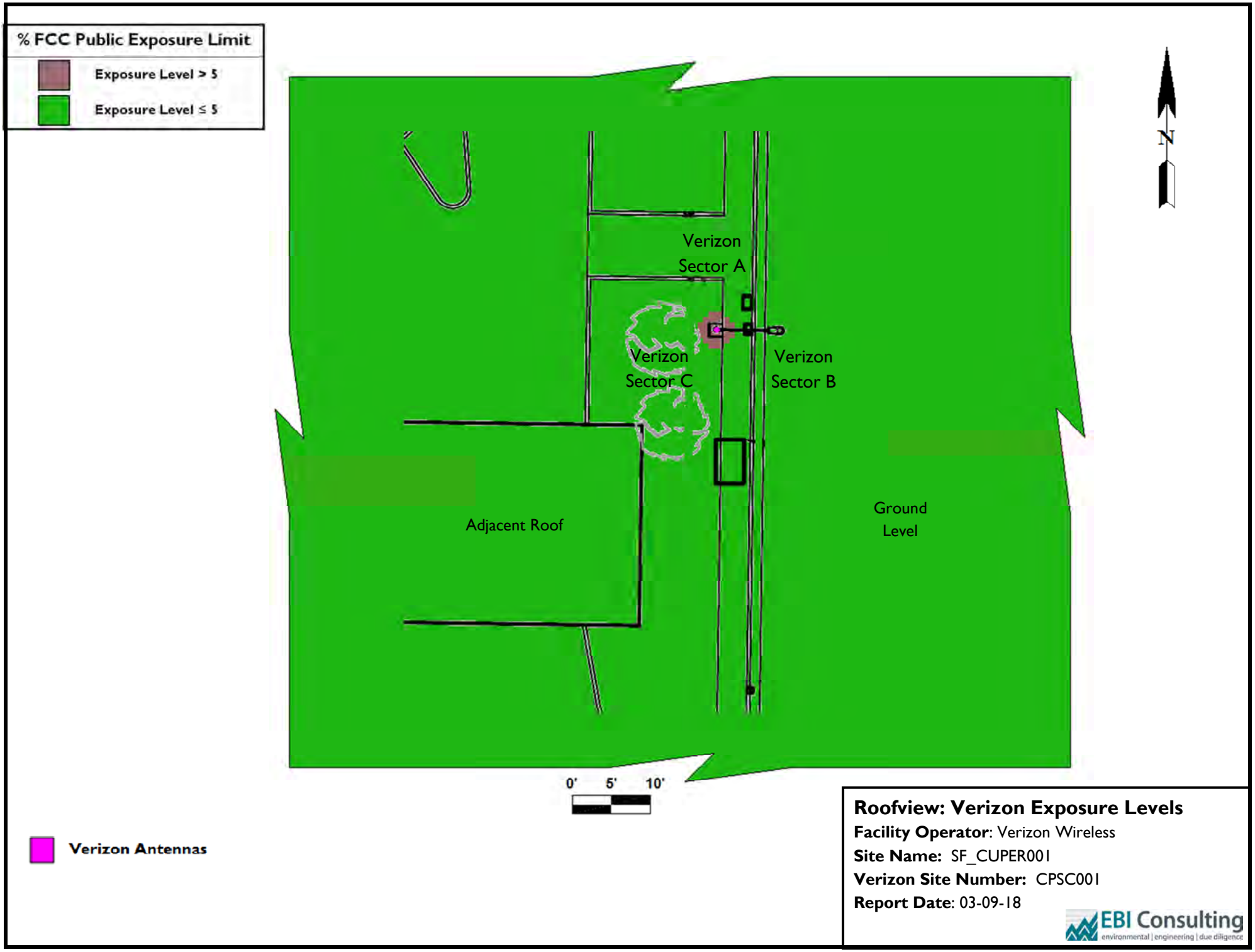
Elevation View

Verizon Antennas

Roofview: Composite Exposure Levels

Facility Operator: Verizon Wireless
Site Name: SF_CUPER001
Verizon Site Number: CPSC001
Report Date: 03-09-18

EBI Consulting
environmental | engineering | due diligence



Roofview: Verizon Exposure Levels

Facility Operator: Verizon Wireless

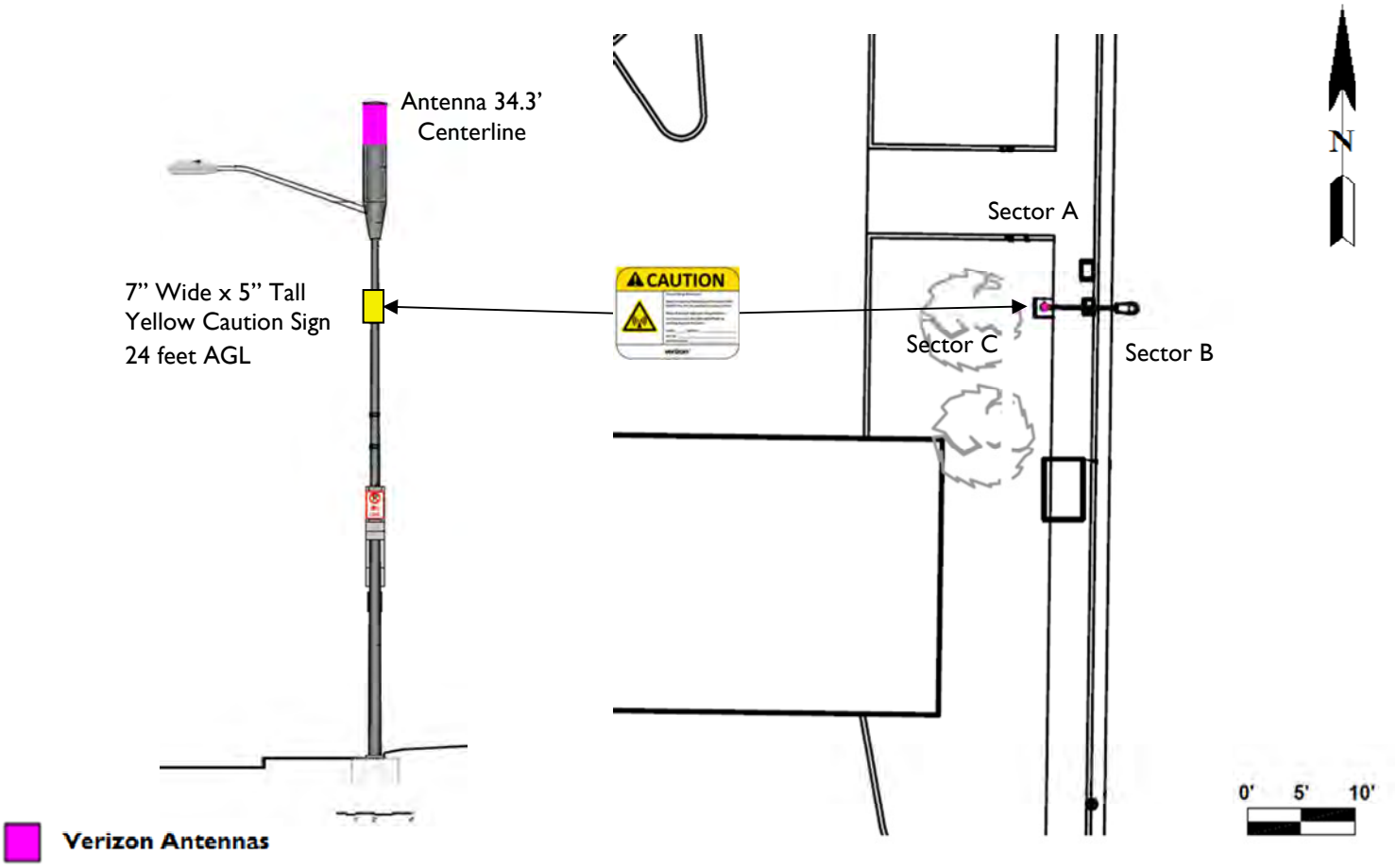
Site Name: SF_CUPER001

Verizon Site Number: CPSC001

Report Date: 03-09-18

EBI Consulting
environmental | engineering | due diligence

Verizon Signage Plan



Sign Image	Description	Posting Instructions	Required Signage
	**Notice To Workers** Informational sign, used to notify workers that there are active antennas installed and provide guidelines for working in RF environments.	Not required	Not required
	**NOC Information Sign** Informational sign with NOC Phone Number and Base Transceiver Station (BTS) Number	Not required	Not required
	**Blue Notice Sign** Used to alert individuals that they are entering an area where the power density emitted from transmitting antennas exceeds the FCC's maximum permissible exposure limit for the general public but is less than the occupational exposure limit.	Not required	Not required
	**Yellow Caution Sign** Used to alert individuals that they are entering an area where the power density emitted from transmitting antennas may exceed the FCC's maximum permissible exposure limit for the general public and the occupational exposure limit.	Securely post on opposite sides of the light pole in a manner conspicuous to all individuals entering thereon as indicated in the signage plan.	2 signs on opposite sides of the pole 9 feet below the antenna (24 feet above ground level. Install 7" wide x 5" tall CAUTION sign.
	**Red Warning Sign** Used to alert individuals that they are entering an area where the power density emitted from the transmitting is substantially above the FCC's maximum permissible limit for occupational exposure (greater than ten times the Occupational limit).	Not required	Not required

Appendix C

Roofview® Export File

Map, Settings, Antenna, and Symbol Data Table .. Exported from workbook -> RoofView 4.15.xls
Done on 1/23/2018 at 11:09:36 AM.
Use this format to prepare other data sets for the RoofView workbook file.
You may use as many rows in this TOP header as you wish.
The critical point are the cells in COLUMN ONE that read 'Start...' (eg. StartMapDefinition)
If used, these (4) headers are required to be spelled exactly, as one word (eg. StartMapDefinition)
The very next row will be considered the start of that data block.
The first row of the data block can be a header (as shown below), but this is optional.
When building a text file for import, Add the Map info first, then the Antenna data, followed by the symbol data.
All rows above the first marker line 'Start...' will be ignored, no matter how many there are.
This area is for you use for documentation.
End of help comments.

You can place as much text here as you wish as long as you don't place it below
the Start Map Definition row below the blue line.
You may insert more rows using the Insert menu.
Should you need additional lines to document your project, simply insert additional rows
by highlighting the row number adjacent to the blue line below and then clicking on the Insert menu
and selecting rows.

StartMapDefinition

Roof Max X	Roof Max Y	Map Max X	Map Max Y	X Offset	Y Offset	Number of envelope		List Of Areas
60	60	80	90	20	20	1	$AE$141:$	$AE$141:$CL$200

StartSettingsData

Standard	Method	Uptime	Scale Facto	Low Thr	Low Color	Mid Thr	Mid Color	Hi Thr	Hi Color	Over Color	Ap Ht Mult	Ap Ht Method
4	2	1	1	100	1	500	4	5000	2	3	1.5	1

StartAntennaData It is advisable to provide an ID (ant 1) for all antennas

ID	Name	Freq (MHz)	Trans Power	Trans Count	Coax Len	Coax Type	Other Loss	Input Power	Calc Power	Mfg	Model	X (ft)	Y (ft)	Z (ft)	Type	Aper (ft)	Gain dBd	Pt Dir BWdth	Profile Uptime	flag ON
VZW A1	LTE	1900	48.677	2					97.354	Amphenol	CUUT360X(	30	30	33.25		2	7.65	120;0		ON•
VZW A1	LTE	2100	53.831	2					107.662	Amphenol	CUUT360X(	30	30	33.25		2	7.65	120;0		ON•
VZW B1	LTE	1900	48.677	2					97.354	Amphenol	CUUT360X(	30	30	33.25		2	7.65	120;120		ON•
VZW B1	LTE	2100	53.831	2					107.662	Amphenol	CUUT360X(	30	30	33.25		2	7.65	120;120		ON•
VZW C1	LTE	1900	48.677	2					97.354	Amphenol	CUUT360X(	30	30	33.25		2	7.65	120;240		ON•
VZW C1	LTE	2100	53.831	2					107.662	Amphenol	CUUT360X(	30	30	33.25		2	7.65	120;240		ON•

StartSymbolData

Sym	Map Marke	Roof X	Roof Y	Map Label	Description (notes for this table only)
Sym		5	35	AC Unit	Sample symbols
Sym		14	5	Roof Access	
Sym		45	5	AC Unit	
Sym		45	20	Ladder	

PERMIT SUBMITTAL NOTICE

Verizon Site Number: SF_CUPER001

Verizon Wireless, in partnership with the City of Cupertino, is happy to announce that it will soon be improving coverage and data capacity to its network in your neighborhood. The improved wireless coverage will help accommodate the growing number of wireless calls and data use on the Verizon Wireless network. The Verizon Wireless small cell site will greatly enhance service capacity with the most aesthetically discrete technology available today.

In order to make these upgrades, Verizon Wireless is proposing a small cell on a streetlight pole located in the public right of way near the intersection of S De Anza Blvd & McClellan Rd. The major components of the proposed installation include the following:

- Removing the existing steel streetlight pole and replacing with a new steel streetlight pole similar in size
- Installing (1) canister antenna on top of the streetlight pole
- Installing (2) small remote radio units (RRUs) on the side of the streetlight pole

Included in this letter are the following documents:

- Map showing the proposed project location
- Photo simulations showing the before and after view of the proposed project

Part of the permitting process through the City of Cupertino Department of Public Works (DPW) involves notifying residents located within 300' of the proposed project site about the installation. Residents are invited to contact Verizon Wireless, within 14 days of the postmarked date on the envelope, with any questions or concerns regarding this installation. All inquiries will be logged and shared with the City of Cupertino Public Works Department prior to issuance of any permits for this work.

After construction is completed, Verizon will perform on site testing to ensure the small cell is operating within FCC standards for Radio Frequency Emissions. Residents within 100' of the site will be notified of the date of the testing and may request, in advance that Verizon Wireless perform tests on their property at that time.

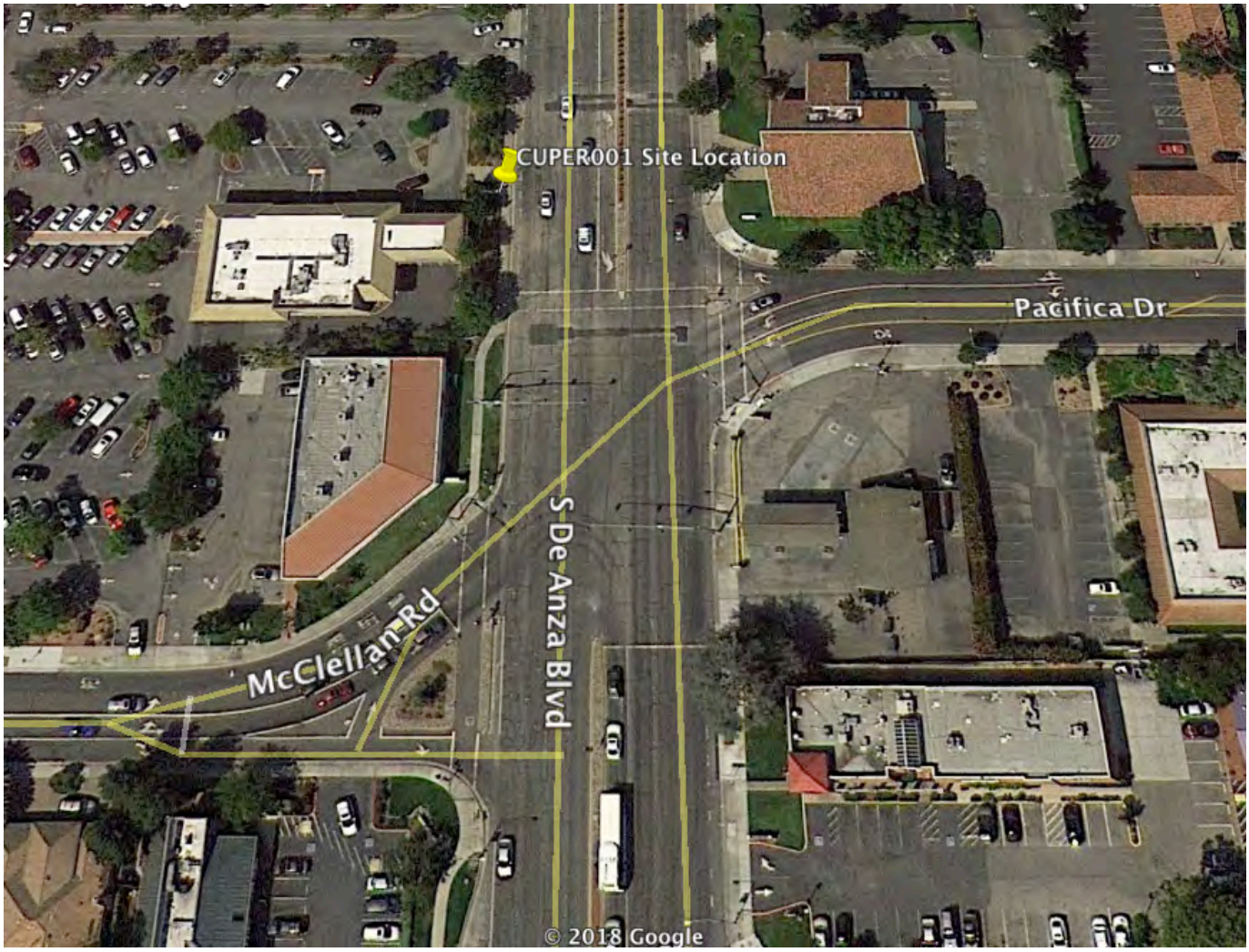
For further information, and answers to frequently asked questions, please check the FAQ on Small Cell Facilities provided on the City of Cupertino website here:
http://www.cupertino.org/home/showdocument?id=19317

Contact Information:

Modus Representing Verizon Wireless:
Kevin Bowyer
Phone: (415) 989-1102
Email: kbowyer@modus-corp.com

verizon

Location of Installation on City Streetlight



Existing

Proposed

view from S De Anza Blvd looking south at site

SF Cuper001
10465 S De Anza Blvd, Cupertino, CA
Photosims Produced on 4-2-2018

AdvanceSim
Photo Simulation Solutions
Contact (925) 202-8507

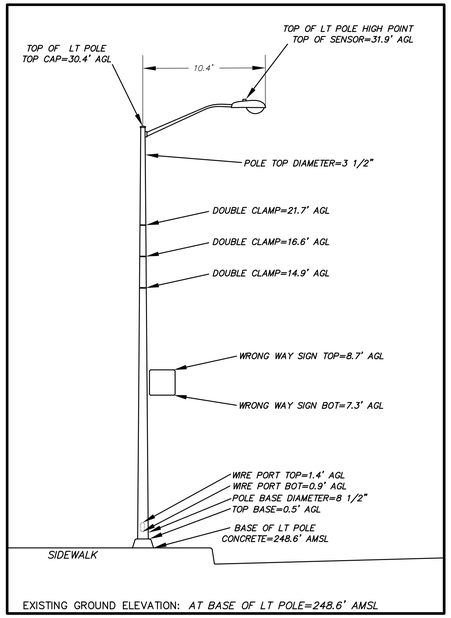
view from S De Anza Blvd looking north at site

SF Cuper001
10465 S De Anza Blvd, Cupertino, CA
Photosims Produced on 4-2-2018

Existing

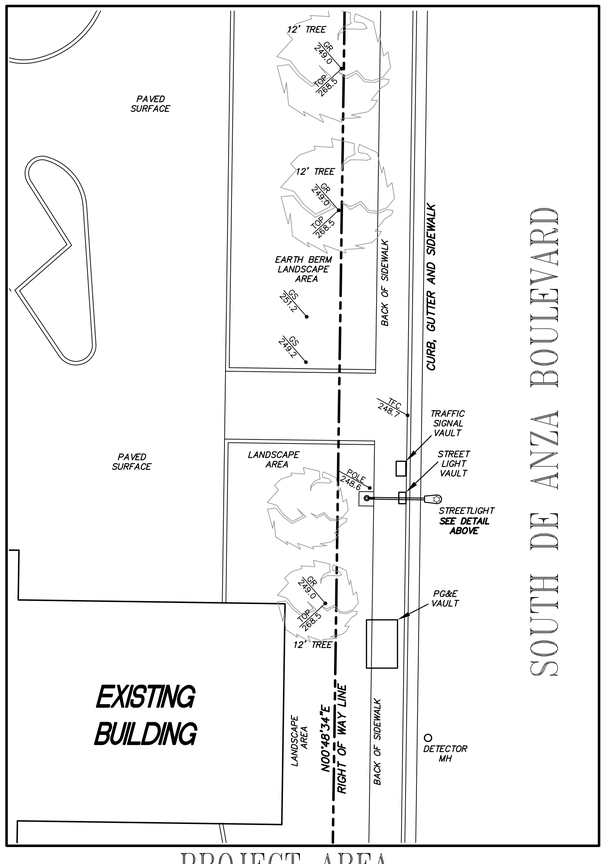
Proposed

AdvanceSim
Photo Simulation Solutions
Contact (925) 202-8507



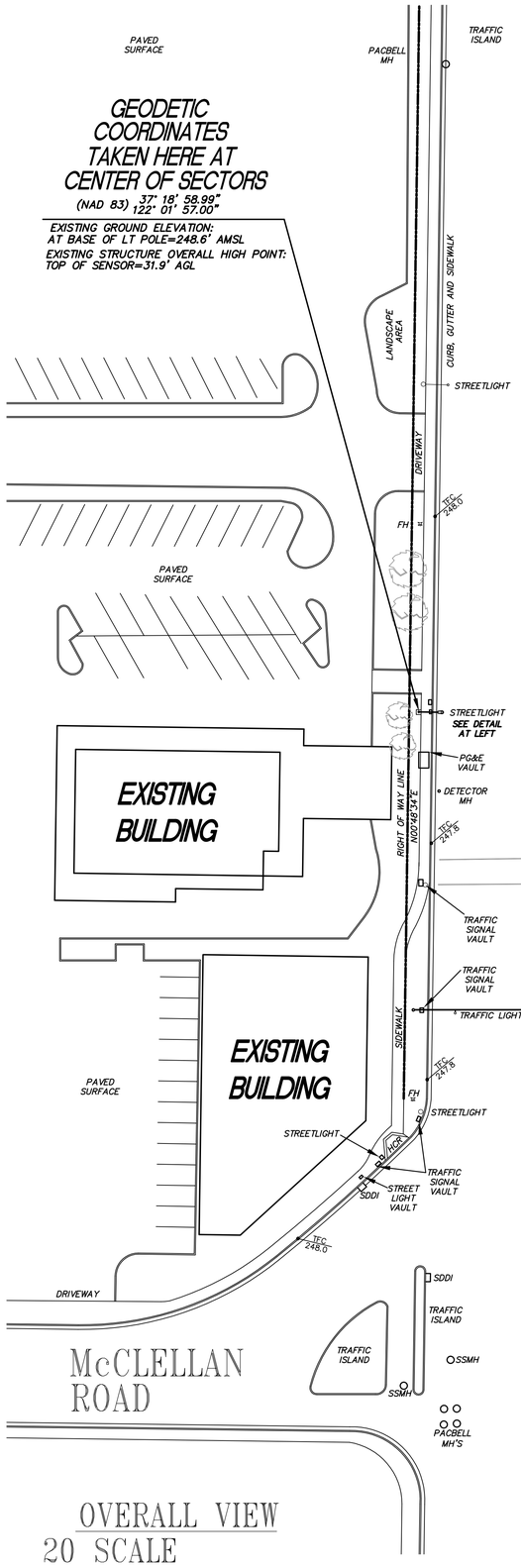
POLE DETAIL

5 SCALE 1"= 5'



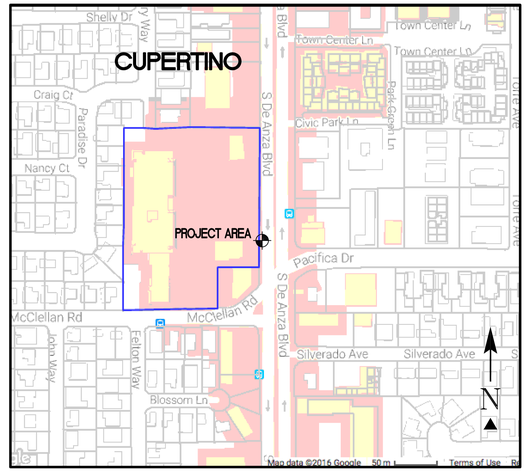
PROJECT AREA

10 SCALE



OVERALL VIEW

20 SCALE



VICINITY MAP

N.T.S.

PROPERTY INFORMATION

SF_CUPER001

SITE: CPSC001
10465 SOUTH DE ANZA BOULEVARD
CUPERTINO, CA 95014

BASIS OF BEARING

BEARINGS SHOWED HEREON ARE BASED UPON U.S. STATE PLANE NAD83 COORDINATE SYSTEM *STATE PLANE COORDINATE ZONE 3*, DETERMINED BY GPS OBSERVATIONS.

BENCHMARK

ELEVATION ESTABLISHED FROM GPS DERIVED ORTHOMETRIC HEIGHTS, APPLYING GEOID 99 SEPARATIONS, CONSTRAINING TO NGS CONTROL STATION 'LUTZ' ELEVATION=450.0' (NAVD88)

UTILITY NOTES

SURVEYOR DOES NOT GUARANTEE THAT ALL UTILITIES ARE SHOWN OR THEIR LOCATIONS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR AND DEVELOPER TO CONTACT U.S.A. AND ANY OTHER INVOLVED AGENCIES TO LOCATE ALL UTILITIES PRIOR TO CONSTRUCTION. REMOVAL, RELOCATION AND/ OR REPLACEMENT IS THE RESPONSIBILITY OF THE CONTRACTOR.

SURVEYOR'S NOTES

ALL EASEMENTS CONTAINED IN SAID TITLE REPORT AFFECTING THE IMMEDIATE AREA SURROUNDING THE LEASE HAVE BEEN PLOTTED. SURVEYOR HAS NOT PERFORMED A SEARCH OF PUBLIC RECORDS TO DETERMINE ANY DEFECT IN TITLE ISSUED.
THE BOUNDARY SHOWN HEREON IS PLOTTED FROM RECORD INFORMATION AND DOES NOT CONSTITUTE A BOUNDARY SURVEY OF THE PROPERTY.

LEGEND

DI	DRAIN INLET	WV	WATER CONTROL VALVE
TFC	TOP FACE OF CURB	FH	FIRE HYDRANT
R/W	RIGHT OF WAY		GUY CONDUCTOR
EP	EDGE OF PAVED		FOUND AS NOTED
DW	DRIVEWAY		POWER POLE
TOP	TOP OF SLOPE		LIGHT POLE
SW	SIDEWALK		ELECTRICAL TRANSFORMER
TP	TOP OF PARAPET	AC	AIR CONDITIONING UNIT
OH	OVERHANG		TELEPHONE PEDESTAL
FH	FIRE HYDRANT	TV	TELEPHONE VAULT
WV	WATER VALVE	T	TELEPHONE MANHOLE
MH	MANHOLE	GM	GAS VALVE
	GEODETIC COORDINATES		GAS METER
XXXX.X NG	SPOT ELEVATION		PROPERTY LINE
	DISH ANTENNA		CHAIN LINK FENCE

SURVEY DATE

8/15/16

GRAPHIC SCALE

10 0 5 10 20 40

(IN FEET)
1 inch = 10 ft.

ISSUE STATUS

REV.	DESCRIPTION	DATE
△	SITE PLAN	8/24/2016

HAYES
Land Surveying And Mapping
2330 MADIGAN COURT
CONCORD, CA 94518

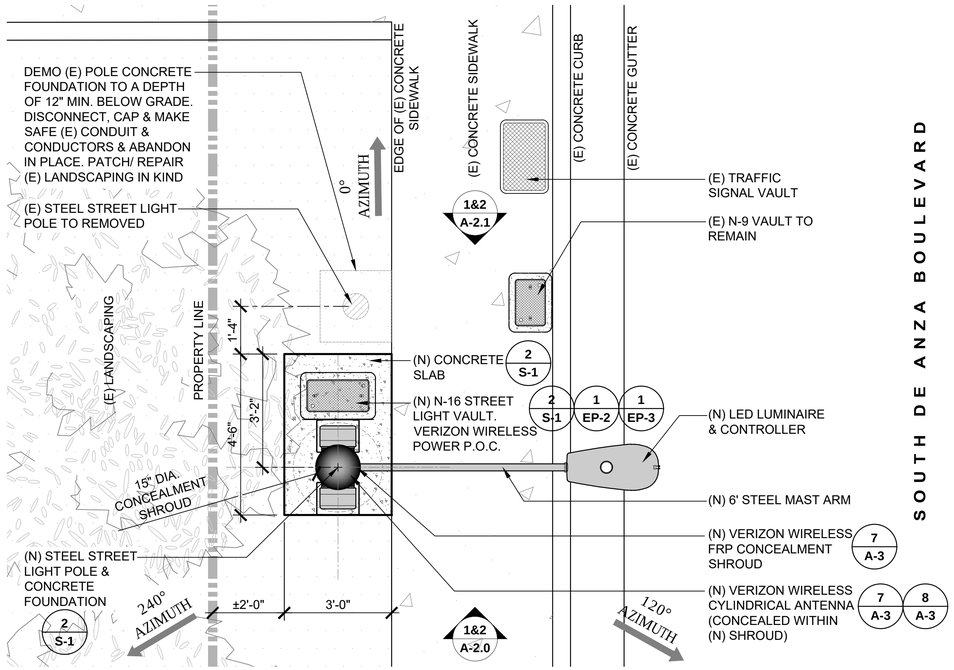
LICENSED LAND SURVEYOR TIMOTHY K. HAYES No. 7900 EXP. 12/31/17 STATE OF CALIFORNIA

verizon
2785 MITCHELL DRIVE
WALNUT CREEK, CA. 94598
OFFICE: 925-279-6000
(925) 279-6333

TOPOGRAPHIC SURVEY
EXISTING CONDITIONS

SF_CUPER001
CPSC001
10465 SOUTH DE ANZA BOULEVARD
CUPERTINO, CA 95014

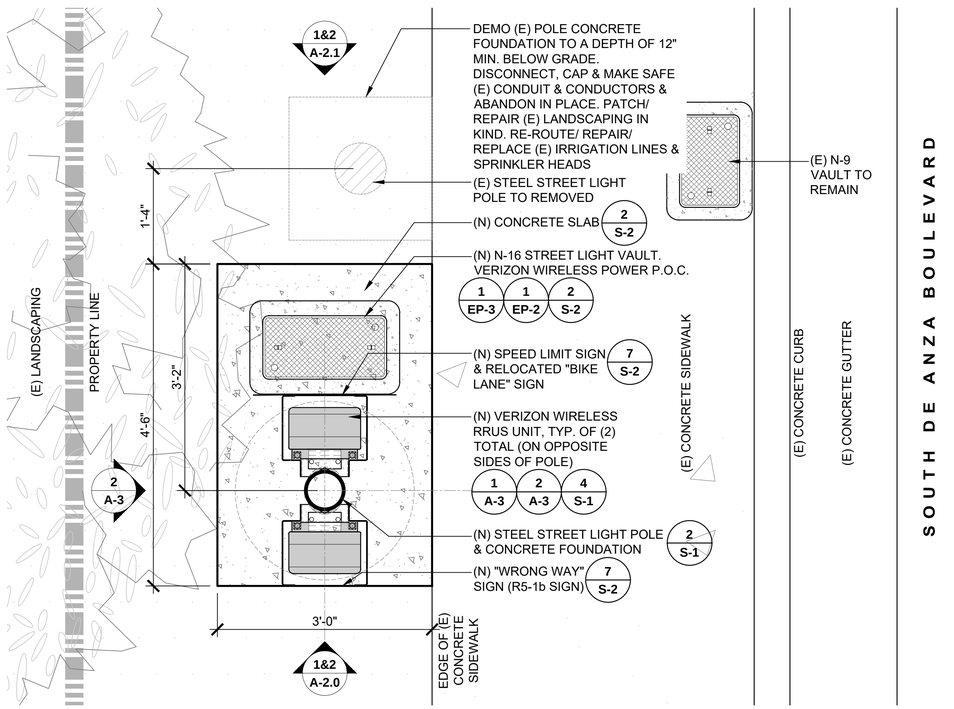
C-1
SHEET 1 of 1



ENLARGED ANTENNA LAYOUT

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

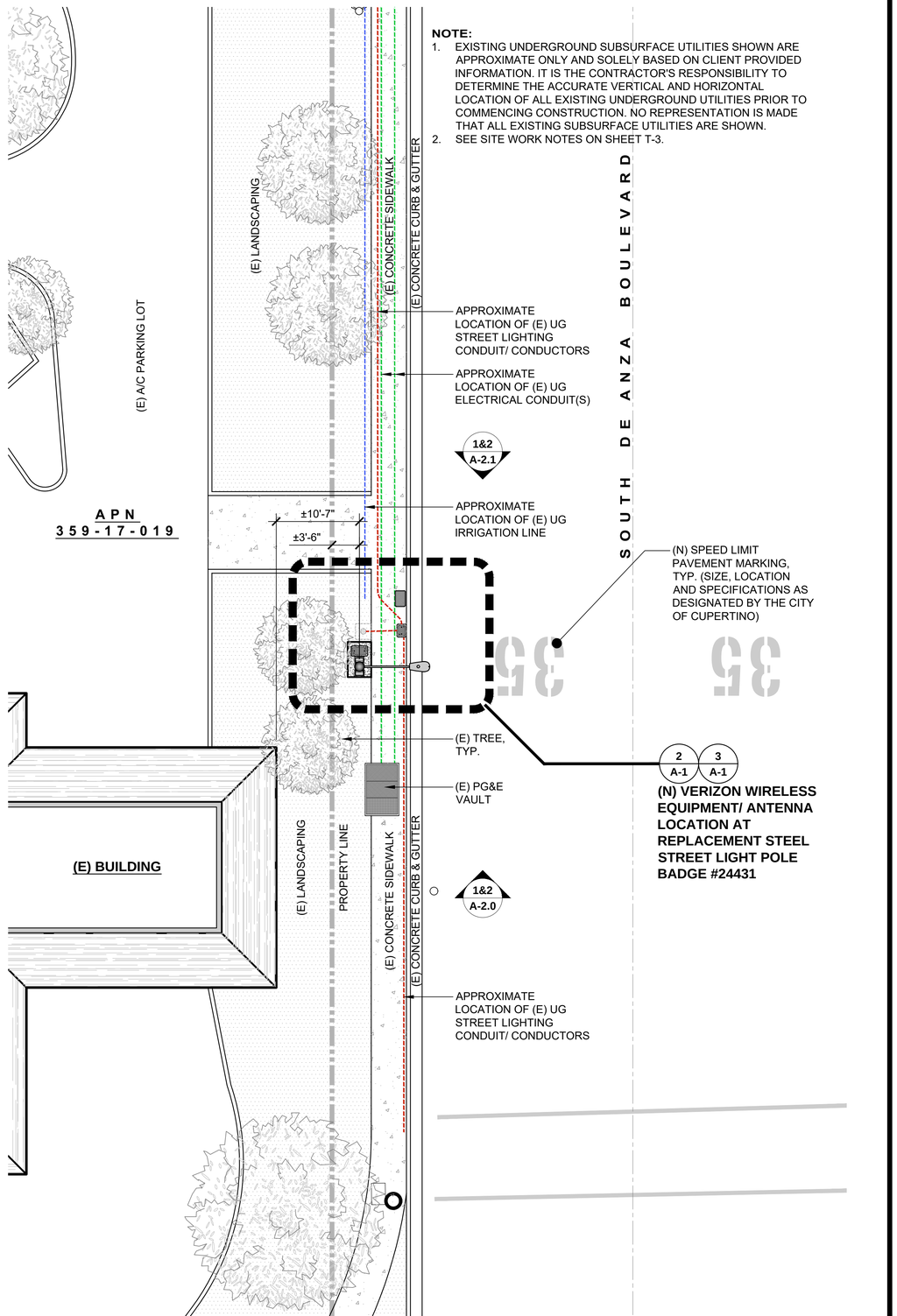
2



ENLARGED EQUIPMENT LAYOUT

SCALE: 1"=1'-0" (6" 1' 2')

3



SITE PLAN

SCALE: 1/8"=1'-0" (4' 8' 16')

1

JAMES VACCARO ARCHITECT, INC.
411 DONDEE WAY, UNIT C
PACIFICA | CA | 94044
415.608.3670 PHONE | 415.963.4471 FAX
INFO@JVARCHITECT.COM
WWW.JVARCHITECT.COM

CLIENT

MODUS, INC.
240 STOCKTON STREET, 3RD FLOOR
SAN FRANCISCO, CA 94108

verizon

VERIZON WIRELESS
2785 MITCHELL DRIVE, SUITE 9
WALNUT CREEK, CA 94598

CONSULTANTS

SF_CUPER001
CPSC001
PUBLIC ROW ADJACENT TO
10465 S. DE ANZA BOULEVARD
CUPERTINO, CA 95014
APN: PUBLIC ROW ADJACENT
TO 359-17-019

LICENSED ARCHITECT
JAMES F. VACCARO
C-33251
07-31-2019
RENEWAL DATE
STATE OF CALIFORNIA

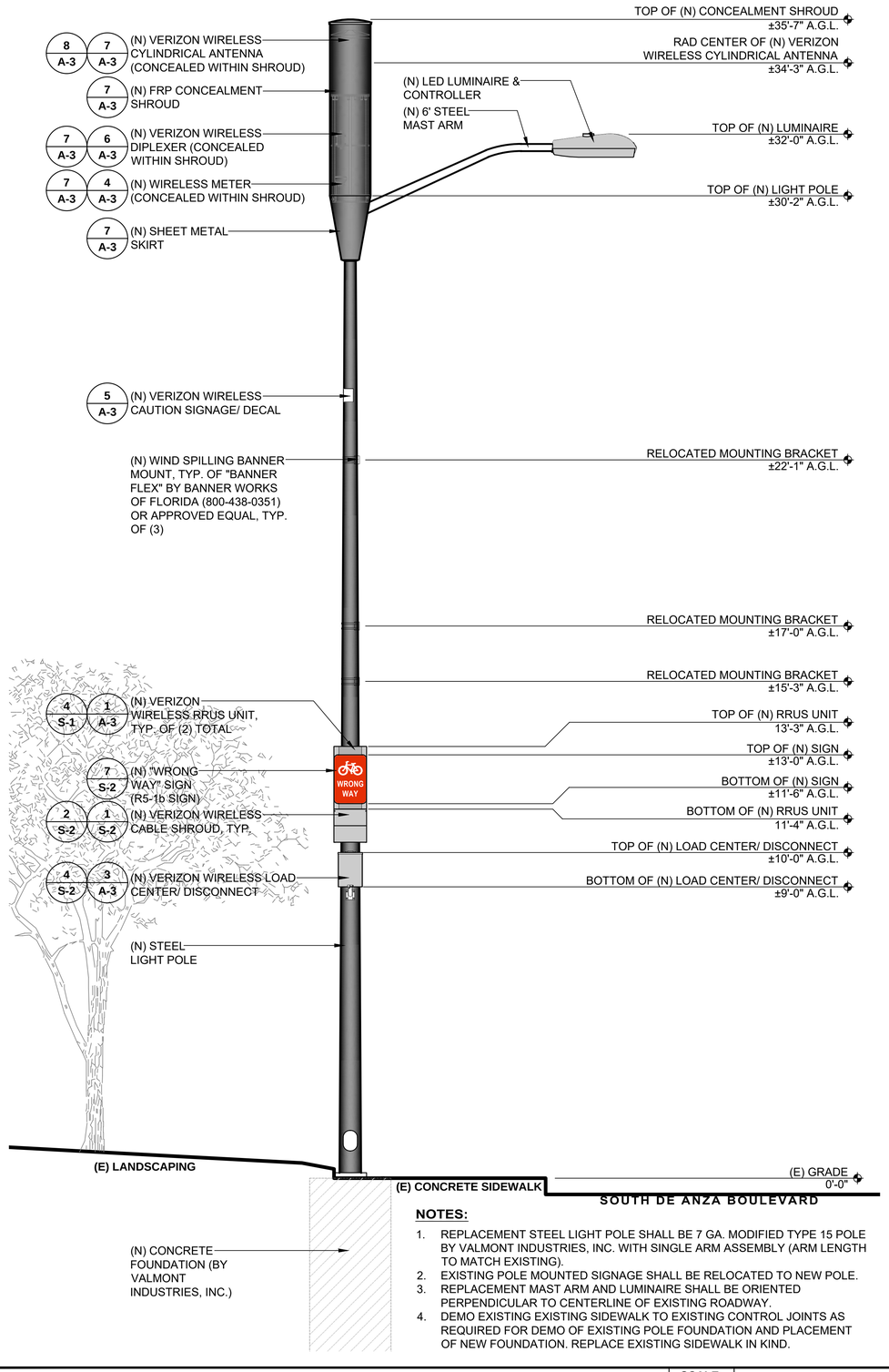
REV	DATE	ISSUE
1	10/18/2017	90% CONSTRUCTION
2	2/6/2018	100% CONSTRUCTION
3	3/26/2018	100% CONSTRUCTION REV.

SHEET TITLE

SITE PLAN, ENLARGED ANTENNA LAYOUT, ENLARGED EQUIPMENT LAYOUT

SHEET NUMBER

A-1

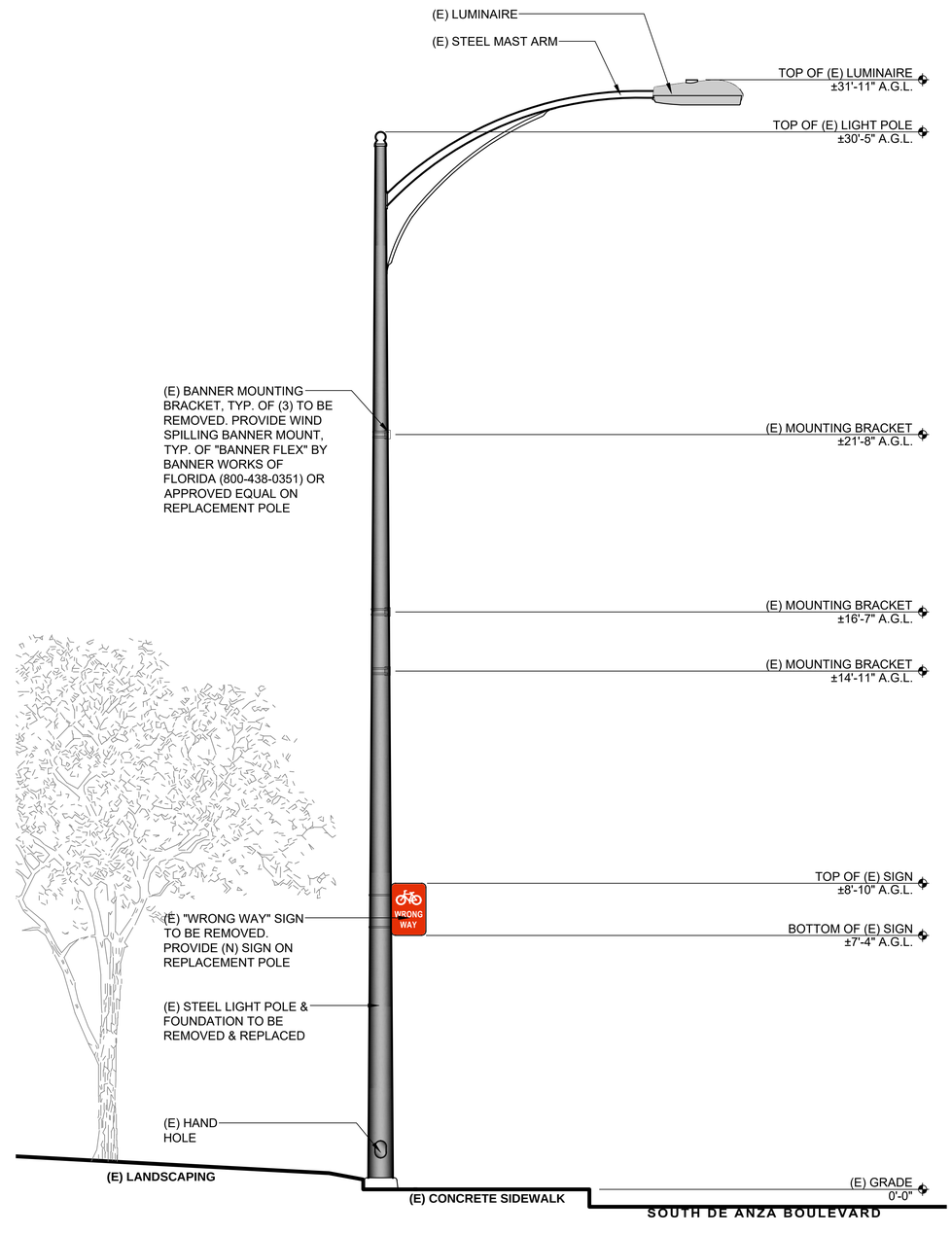


NOTES:

1. REPLACEMENT STEEL LIGHT POLE SHALL BE 7 GA. MODIFIED TYPE 15 POLE BY VALMONT INDUSTRIES, INC. WITH SINGLE ARM ASSEMBLY (ARM LENGTH TO MATCH EXISTING).
2. EXISTING POLE MOUNTED SIGNAGE SHALL BE RELOCATED TO NEW POLE.
3. REPLACEMENT MAST ARM AND LUMINAIRE SHALL BE ORIENTED PERPENDICULAR TO CENTERLINE OF EXISTING ROADWAY.
4. DEMO EXISTING EXISTING SIDEWALK TO EXISTING CONTROL JOINTS AS REQUIRED FOR DEMO OF EXISTING POLE FOUNDATION AND PLACEMENT OF NEW FOUNDATION. REPLACE EXISTING SIDEWALK IN KIND.

PROPOSED SOUTH ELEVATION

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



EXISTING SOUTH ELEVATION

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

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verizon

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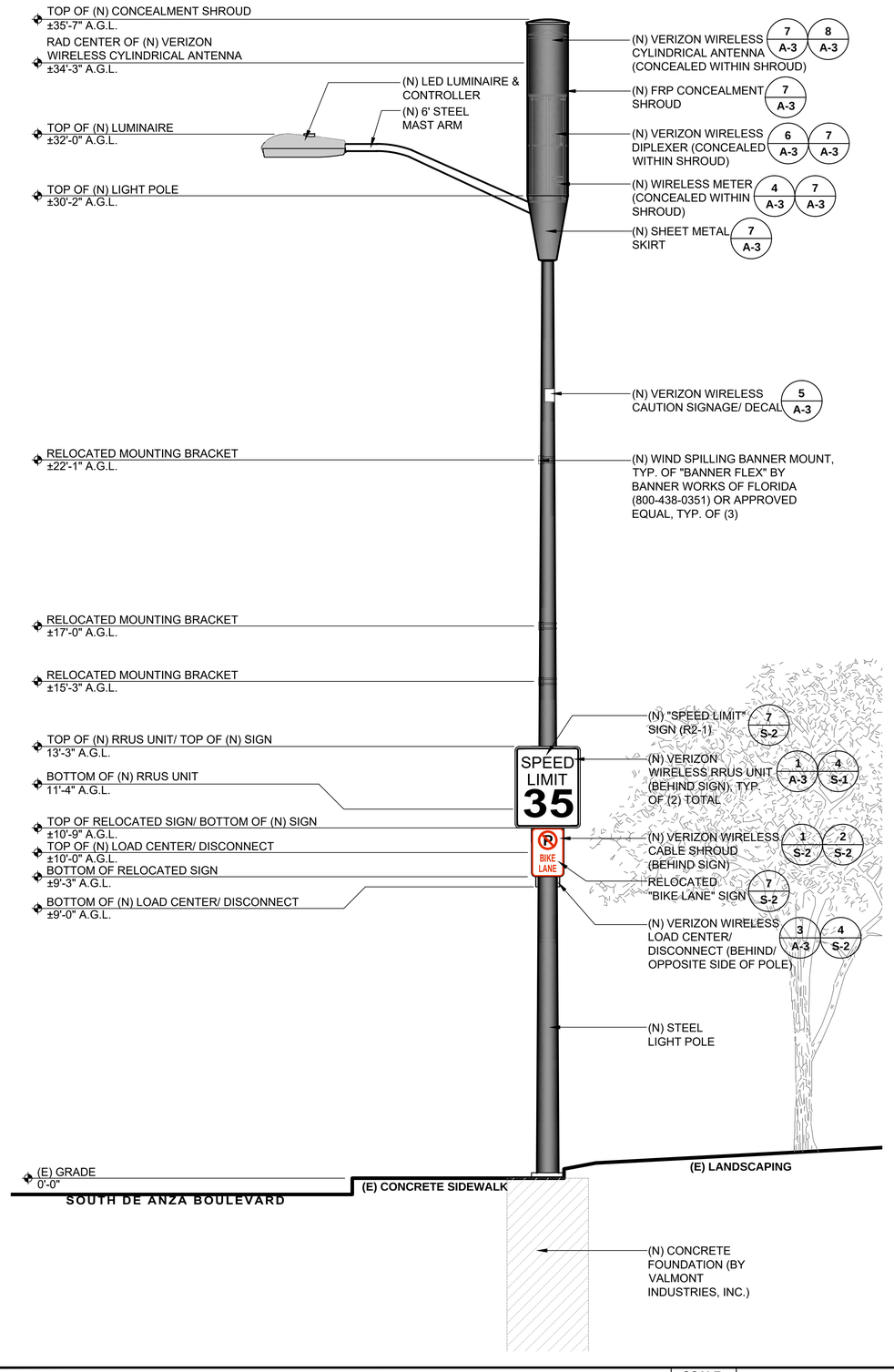
SHEET TITLE

ELEVATIONS

SHEET NUMBER

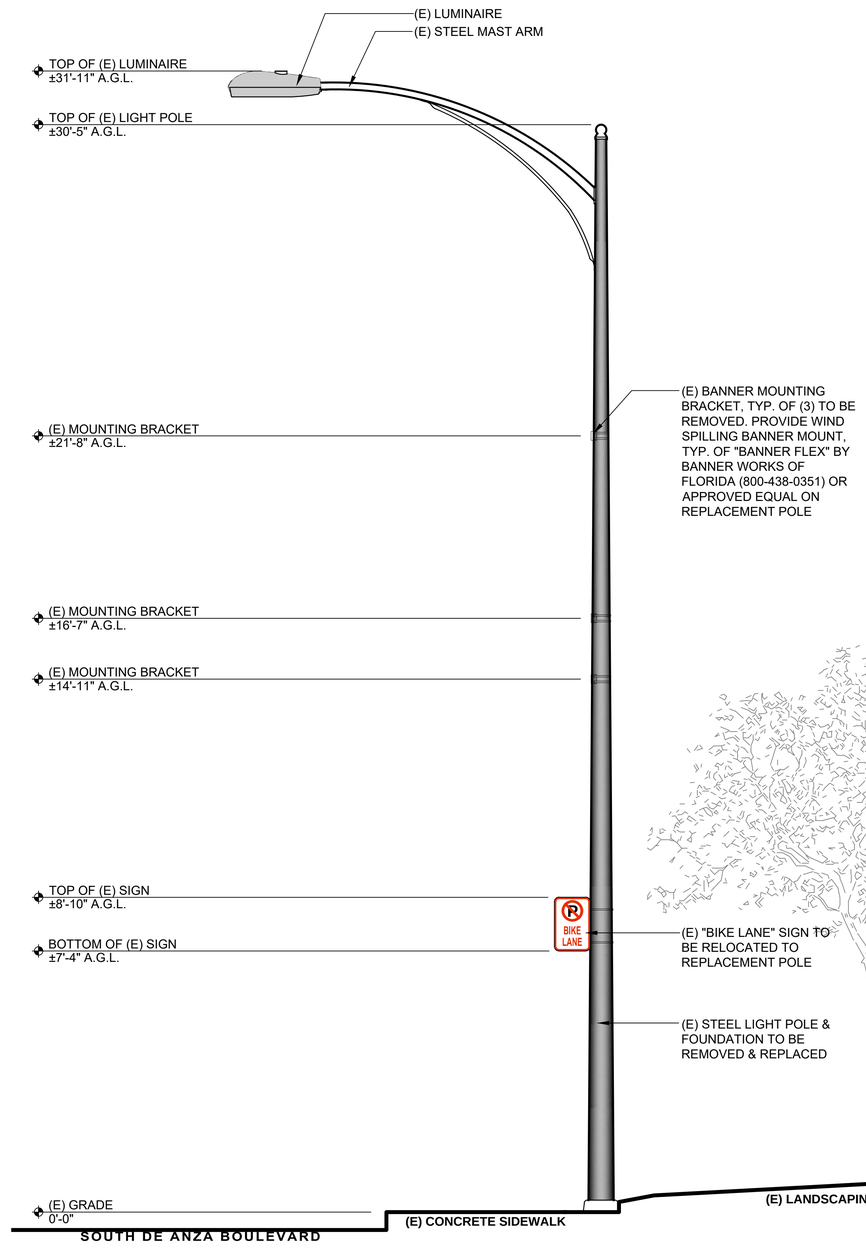
A-2.0



PROPOSED NORTH ELEVATION

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

2



EXISTING NORTH ELEVATION

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

1

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verizon

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CUPERTINO, CA 95014
APN: PUBLIC ROW ADJACENT
TO 359-17-019

LICENSED ARCHITECT
JAMES F. VACCARO
C-33251
07-31-2019
RENEWAL DATE
STATE OF CALIFORNIA

REV	DATE	ISSUE
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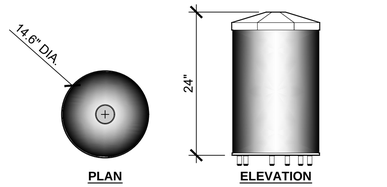
SHEET TITLE

ELEVATIONS

SHEET NUMBER

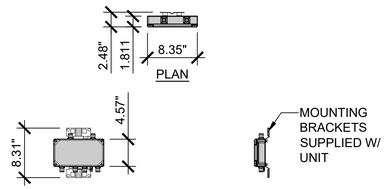
A-2.1



CYLINDER ANTENNA DIMENSIONS	
DIAMETER	±14.6"
HEIGHT	±24"
CYLINDER ANTENNA WEIGHT	
ANTENNA WEIGHT	±27 LBS.

CYLINDER ANTENNA

SCALE: N.T.S | 8

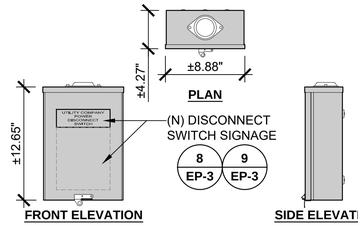


CBC1923T-4310 DIPLEXER DIMENSIONS	
HEIGHT	±4.57"
WIDTH	±8.35"
DEPTH	±2.48"
CBC1923T-4310 DIPLEXER WEIGHT	
DIPLEXER	±5 LBS.

NOTES:
1. COMMSCOPE PART# E11F13P06
2. ALL CONNECTORS SHALL BE WEATHERPROOFED.
3. INSTALL IN STRICT ACCORDANCE WITH COMMSCOPE INSTALLATION MANUAL.

DIPLEXER

SCALE: N.T.S | 6

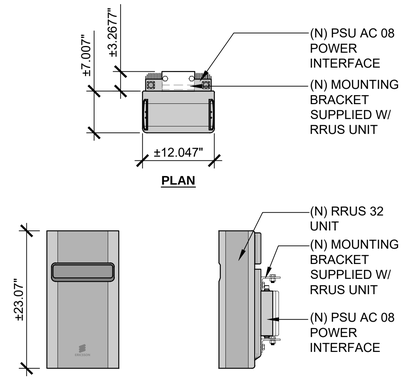


SQUARE D QO612L100RB LOAD CENTER DIMENSIONS	
HEIGHT	±12.65"
WIDTH	±8.88"
DEPTH	±4.27"
SQUARE D QO612L100RB LOAD CENTER WEIGHT	
WEIGHT	±10 LBS.

NOTES:
1. SQUARE D PART# Q0612L100RB.
2. NEMA 3R OUTDOOR RATED, 100 A, 120/240 VOLT, 1 PHASE LOAD CENTER.
3. INSTALL IN STRICT ACCORDANCE WITH SQUARE D/ SCHNEIDER ELECTRIC INSTALLATION MANUAL.

DIST. PANEL/ DISCONNECT

SCALE: N.T.S | 3

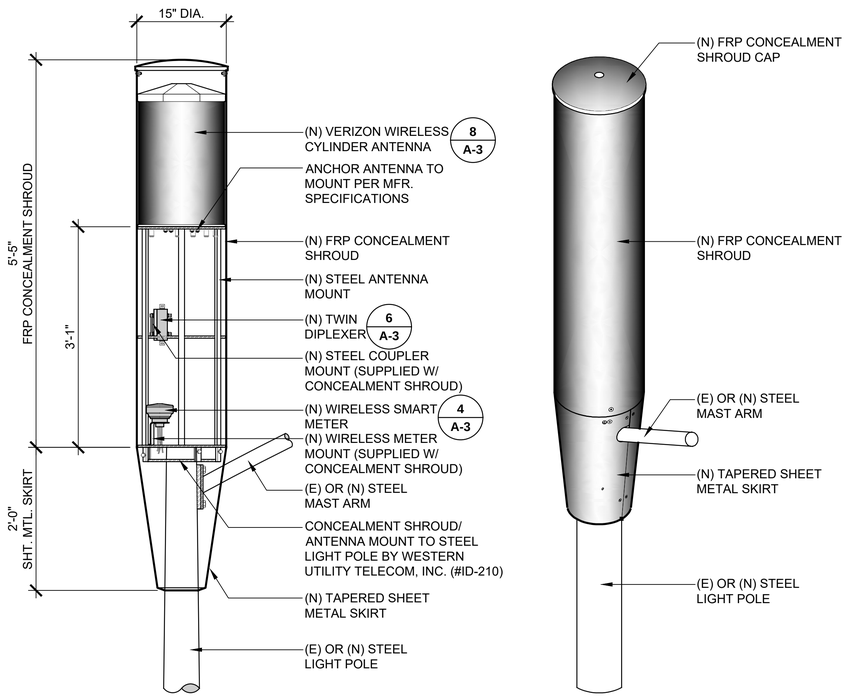


RRUS 32 UNIT DIMENSIONS	
HEIGHT W/ HANDLES	±27.165"
HEIGHT W/O HANDLES	±23.07"
WIDTH	±12.047"
DEPTH	±7.007"
RRUS 32 UNIT WEIGHT	
UNIT W/ PSU AC 08	±65 LBS.
RRUS 32 UNIT CLEARANCE REQUIREMENTS	
ABOVE/ BELOW	16" MIN.

NOTES:
1. ERICSSON PART# RRUS 32
2. ALL CONNECTORS SHALL BE WEATHERPROOFED.
3. INSTALL IN STRICT ACCORDANCE WITH ERICSSON INSTALLATION MANUAL.
4. PAINT SOLAR SHIELD & ALL MOUNTING COMPONENTS TO MATCH POLE.
5. RRUS HANDLES TO BE REMOVED PRIOR TO INSTALLATION.

RRUS 32 UNIT

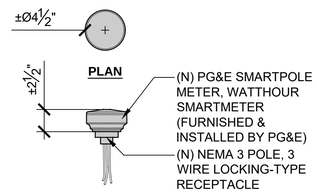
SCALE: N.T.S | 1



NOTES:
1. NEW FRP CONCEALMENT SHROUD, GALVANIZED SHEET METAL SKIRT, ANTENNA/ LIGHT POLE MOUNT AND MOUNTING COMPONENTS BY WESTERN UTILITY/ TELECOM, INC. (PHONE: 503-587-0101) (ID#210).
2. FRP CONCEALMENT SHROUD MOUNT TO LIGHT POLE BY WESTERN UTILITY/ TELECOM, INC.
3. PAINT NEW FRP SHROUD AND EXPOSED MOUNTING COMPONENTS TO MATCH LIGHT POLE.
4. POWDER COAT NEW GALVANIZED SHEET METAL SKIRT AND EXPOSED MOUNTING COMPONENTS TO MATCH LIGHT POLE.
5. GROUND NEW ANTENNA PER MANUFACTURER'S SPECIFICATIONS.

CONCEALMENT SHROUD

SCALE: N.T.S | 7

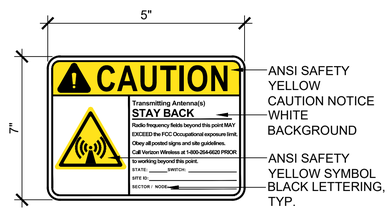


PG&E SMARTPOLE METER DIMENSIONS	
DIAMETER	±4.5"
HEIGHT	±2.5"
PG&E SMARTPOLE METER WEIGHT	
WEIGHT	±3 LBS.

NOTES:
1. PG&E CODE# M241490.
2. PG&E TO PERFORM RF SIGNAL TEST.
3. INSTALL IN STRICT ACCORDANCE WITH PG&E UTILITY BULLETIN FOR SMARTPOLE METER SERVICE.

WIRELESS METER

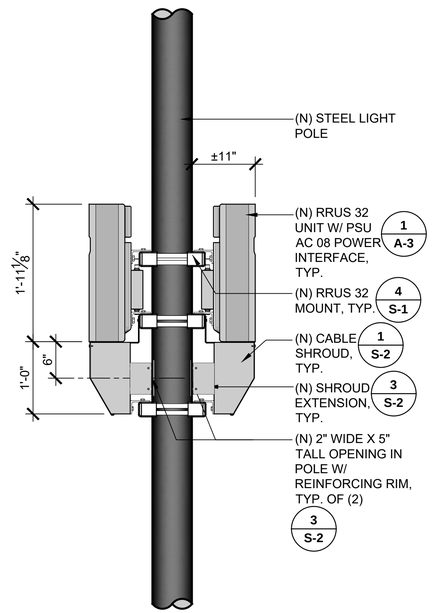
SCALE: N.T.S | 4



NOTES:
1. OUTDOOR RATED SELF ADHESIVE VINYL DECAL WITH UV, CHEMICAL, ABRASION AND MOISTURE RESISTANCE.
2. POST SIGN/ DECAL 9'-0" BELOW BOTTOM OF NEW ANTENNA.
3. CONTRACTOR TO CONFIRM SPECIFIC SIGN REQUIREMENTS WITH VERIZON WIRELESS, THE CITY OF CUPERTINO, FCC AND AUTHORITIES HAVING JURISDICTION PRIOR TO FABRICATION.
4. SIGN SHALL LIST/ DISPLAY OWNERSHIP COMPANY'S NAME, CONTACT NUMBER AND SPECIFIC SITE IDENTIFICATION.
5. SIGN COLORS, SYMBOLS AND LAYOUT SHALL CONFORM TO ANSI Z535.1, ANSI Z535.2 AND ANSI C95.2-2007.

SIGNAGE/ DECAL

SCALE: N.T.S | 5



NOTES:
1. PRIME AND PAINT RRUS 32 UNITS, CABLE SHROUDS, TUBE ASSEMBLY AND MOUNTING COMPONENTS TO MATCH LIGHT POLE.
2. SEE SPECIFICATIONS SECTION 09 90 00 FOR PAINTING AND COATING SPECIFICATIONS.

RRUS UNIT MOUNT ELEV.

SCALE: N.T.S | 2

JAMES VACCARO ARCHITECT, INC.
411 DONDEE WAY, UNIT C
PACIFICA | CA | 94044
415.608.3670 PHONE | 415.963.4471 FAX
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WWW.JVARCHITECT.COM

CLIENT

MODUS, INC.
240 STOCKTON STREET, 3RD FLOOR
SAN FRANCISCO, CA 94108

verizon

VERIZON WIRELESS
2785 MITCHELL DRIVE, SUITE 9
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CONSULTANTS

SF_CUPER001
CPSC001
PUBLIC ROW ADJACENT TO
10465 S. DE ANZA BOULEVARD
CUPERTINO, CA 95014
APN: PUBLIC ROW ADJACENT
TO 359-17-019

LICENSED ARCHITECT
JAMES F. VACCARO
C-33251
07-31-2019
RENEWAL DATE
STATE OF CALIFORNIA

REV	DATE	ISSUE
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SHEET TITLE

DETAILS

SHEET NUMBER

A-3

BIGGS CARDOSA
ASSOCIATES INC
STRUCTURAL ENGINEERS

865 The Alameda
San Jose, CA 95126-3133
Telephone 408-296-5515
Facsimile 408-296-8114

June 22, 2018
2018170

Modus Inc.
240 Stockton Street, 3rd Floor
San Francisco, CA 94108

Attention: Zachary Mann

Subject: Special Inspections and Materials Testing – **Final Report**
Verizon – Light Pole
SF_CUPER001
Adjacent to 10465 S. De Anza Boulevard
Cupertino, CA
Permit # P2018–00231

Gentlemen:

In accordance with Section 1704.2.4 of the California Building Code and as specified in the structural contract drawings, Biggs Cardosa Associates, Inc. has performed the following special inspections.

- Shop welding of structural steel

The completed inspections were performed under the supervision of the undersigned Registered Engineer. Based both upon inspections performed and our substantiating reports, it is our professional judgement that, to the best of our knowledge, the inspected work was performed in accordance with the applicable workmanship provisions of the California Building Code and the approved plans and specifications.

Should you have any questions, please do not hesitate to call.

Sincerely,

BIGGS CARDOSA
ASSOCIATES, INC.

Mark A. Cardosa
Vice President

cc: Building Division, City of Cupertino

M:\2018\170\Insp\Sp Insp Ltr VZW CUP 001.doc

INSPECTIONS, Inc.
CONSTRUCTION INSPECTION SPECIALISTS
690 SUNOL ST., BLDG. H • SAN JOSE, CA 95126
(408) 288-8460

DSA File #
DSA Appl. #
OSHPD #

SPECIAL INSPECTOR DAILY REPORT

City of: Cupertino
Date/Day: Mon 6/18/18
Project Name: Verizon #1
Project No.:
Address: 10465 S. De Anza blvd
Permit No.: 2018-00231

Inspection Coverage:
- ☐ Continuous
- ☒ Periodic
- ☐ Concrete
- ☐ Masonry
- ☐ Reinforcing Steel
- ☐ Post Tension Concrete
- ☐ Fire Proofing
- ☐ Other
- ☒ Welding
- ☒ Shop
- ☐ Field

Inspections Made:
Verified Welders Qualifications (1) Name - 0082
FCAW process with E71T-11 electrode
Joint prep. fitup. preheat & WPS's
Inspected SPF welds at reinforcing
rod to light pole

Tests Made: Visual

Items Requiring Correction, Corrections of Previously Listed Items, Previously Listed Uncorrected Items:
0

Changes to Approved Plans Authorized by Architect or Engineer:
0

Comments: Satisfactory per SE plans Δ3 5/26/18
3/5.2 and AWS D1.1

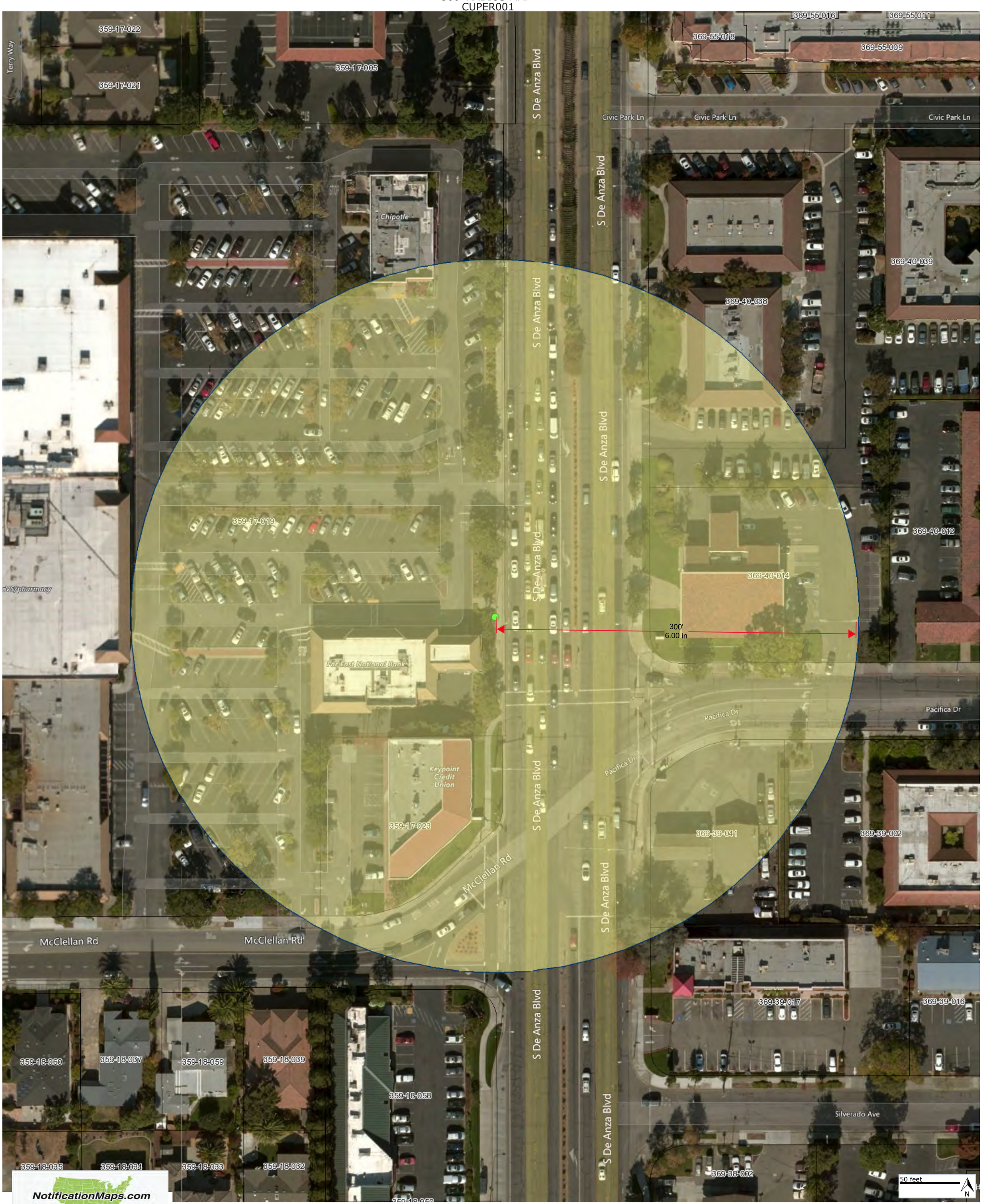
To the best of my knowledge, work inspected was in accordance with the building department approved design drawings, specifications and applicable workmanship provisions of the C.B.C except as noted above.

Signed:
Print Full Name: Mark Cotter

AWS® Mark C. Cotter
CWI 13052251
QC1 EXP. 5/1/2019

Certification Date: 5/19
Certification Number: 13052251

300' RADIUS MAP
CUPER001



NotificationMaps.com

Radius Maps Owner and Occupant Lists Mailing Services

866.752.6266 toll free
949.613.8341 fax
sales@notificationmaps.com

Mailing Address Only:
668 N Coast Hwy #401
Laguna Beach, CA 92651

www.notificationmaps.com

APN	TYPE	NAME	ADDRESS	CITY	STATE	ZIP
359-17-019	OWNER	BDC HAYWARD LP	1556 PARKSIDE DR	WALNUT CREEK	CA	94596
359-17-019	BUSINESS OWNER	BUSINESS OWNER	10385 S DE ANZA BLVD	CUPERTINO	CA	95014-3009
359-17-019	BUSINESS OWNER	BUSINESS OWNER	10425 S DE ANZA BLVD	CUPERTINO	CA	95014-3011
359-17-019	BUSINESS OWNER	BUSINESS OWNER	10465 S DE ANZA BLVD	CUPERTINO	CA	95014-3011
359-17-019	BUSINESS OWNER	BUSINESS OWNER	10455 S DE ANZA BLVD	CUPERTINO	CA	95014-3011
359-17-019	BUSINESS OWNER	BUSINESS OWNER	10457 S DE ANZA BLVD	CUPERTINO	CA	95014-3011
359-17-019	BUSINESS OWNER	BUSINESS OWNER	10467 S DE ANZA BLVD	CUPERTINO	CA	95014-3011
359-17-019	BUSINESS OWNER	BUSINESS OWNER	10475 S DE ANZA BLVD	CUPERTINO	CA	95014-3011
359-17-019	BUSINESS OWNER	BUSINESS OWNER	10477 S DE ANZA BLVD	CUPERTINO	CA	95014-3011
359-17-019	BUSINESS OWNER	BUSINESS OWNER	10477 B S DE ANZA BLVD	CUPERTINO	CA	95014-3011
359-17-019	BUSINESS OWNER	BUSINESS OWNER	10487 S DE ANZA BLVD	CUPERTINO	CA	95014-3011
359-17-019	BUSINESS OWNER	BUSINESS OWNER	10493 S DE ANZA BLVD	CUPERTINO	CA	95014-3011
359-17-023	OWNER	BDC ATWATER SHOPS LP	1556 PARKSIDE DR	WALNUT CREEK	CA	94596-3556
359-17-023	BUSINESS OWNER	BUSINESS OWNER	10497 S DE ANZA BLVD	CUPERTINO	CA	95014-3011
359-17-023	BUSINESS OWNER	BUSINESS OWNER	10495 S DE ANZA BLVD STE A	CUPERTINO	CA	95014-3034
359-17-023	BUSINESS OWNER	BUSINESS OWNER	10495 S DE ANZA BLVD STE C	CUPERTINO	CA	95014-3034
369-39-002	OWNER	PETRI GEORGENE	34 W SANTA CLARA ST	SAN JOSE	CA	95113-1806
369-39-002	BUSINESS OWNER	BUSINESS OWNER	20480 PACIFICA DR STE B	CUPERTINO	CA	95014-3015
369-39-002	BUSINESS OWNER	BUSINESS OWNER	20480 PACIFICA DR STE F	CUPERTINO	CA	95014-3015
369-39-002	BUSINESS OWNER	BUSINESS OWNER	20480 PACIFICA DR STE C	CUPERTINO	CA	95014-3015
369-39-002	BUSINESS OWNER	BUSINESS OWNER	20480 PACIFICA DR STE A	CUPERTINO	CA	95014-3015
369-39-002	BUSINESS OWNER	BUSINESS OWNER	20480 PACIFICA DR STE E1	CUPERTINO	CA	95014-3015
369-39-002	BUSINESS OWNER	BUSINESS OWNER	20480 PACIFICA DR STE E2	CUPERTINO	CA	95014-3015
369-39-002	BUSINESS OWNER	BUSINESS OWNER	20480 PACIFICA DR STE G	CUPERTINO	CA	95014-3015
369-39-002	BUSINESS OWNER	BUSINESS OWNER	20480 PACIFICA DR STE D	CUPERTINO	CA	95014-3015
369-39-017	OWNER	HARMAN-MANAGERS INVESTMENT INC	5544 S GREEN ST	SALT LAKE CITY	UT	84123-5798
369-39-017	BUSINESS OWNER	BUSINESS OWNER	10520 S DE ANZA BLVD STE B	CUPERTINO	CA	95014-3036
369-39-017	BUSINESS OWNER	BUSINESS OWNER	10520 S DE ANZA BLVD STE A	CUPERTINO	CA	95014-3036
369-39-017	BUSINESS OWNER	BUSINESS OWNER	10520 S DE ANZA BLVD FRNT	CUPERTINO	CA	95014-3036
369-39-041	OWNER	LIAONING BENEFIT PETROLEUM US CORPORATION	1625 THE ALAMEDA STE 202	SAN JOSE	CA	95126-2223
369-39-041	BUSINESS OWNER	BUSINESS OWNER	10490 S DE ANZA BLVD	CUPERTINO	CA	95014-3020
369-40-014	OWNER	BANK CATHAY	77 N BROADWAY	LOS ANGELES	CA	90012
369-40-014	BUSINESS OWNER	BUSINESS OWNER	10480 S DE ANZA BLVD	CUPERTINO	CA	95014-3012
369-40-038	OWNER	WU YE MING	20710 SCOFIELD DR	CUPERTINO	CA	95014-2962
369-40-038	BUSINESS OWNER	BUSINESS OWNER	10420 S DE ANZA BLVD	CUPERTINO	CA	95014-3012
369-40-038	BUSINESS OWNER	BUSINESS OWNER	10440 S DE ANZA BLVD STE D4	CUPERTINO	CA	95014-3018
369-40-038	BUSINESS OWNER	BUSINESS OWNER	10440 S DE ANZA BLVD STE D1	CUPERTINO	CA	95014-3018
369-40-038	BUSINESS OWNER	BUSINESS OWNER	10440 S DE ANZA BLVD STE D6	CUPERTINO	CA	95014-3018
369-40-039	OWNER	DE ANZA MEDICAL LLC	5674 SONOMA DR STE A	PLEASANTON	CA	94566-8102
369-40-039	BUSINESS OWNER	BUSINESS OWNER	10430 S DE ANZA BLVD STE 100	CUPERTINO	CA	95014-3098
369-40-039	BUSINESS OWNER	BUSINESS OWNER	10430 S DE ANZA BLVD STE 110	CUPERTINO	CA	95014-3024
369-40-039	BUSINESS OWNER	BUSINESS OWNER	10430 S DE ANZA BLVD STE 120	CUPERTINO	CA	95014-3024
369-40-039	BUSINESS OWNER	BUSINESS OWNER	10430 S DE ANZA BLVD STE 130	CUPERTINO	CA	95014-3025
369-40-039	BUSINESS OWNER	BUSINESS OWNER	10430 S DE ANZA BLVD STE 140	CUPERTINO	CA	95014-3024
369-40-039	BUSINESS OWNER	BUSINESS OWNER	10430 S DE ANZA BLVD STE 150	CUPERTINO	CA	95014-3024
369-40-039	BUSINESS OWNER	BUSINESS OWNER	10430 S DE ANZA BLVD STE 160	CUPERTINO	CA	95014-3000
369-40-039	BUSINESS OWNER	BUSINESS OWNER	10430 S DE ANZA BLVD STE 170	CUPERTINO	CA	95014-3000
369-40-039	BUSINESS OWNER	BUSINESS OWNER	10430 S DE ANZA BLVD STE 175	CUPERTINO	CA	95014-3000
369-40-039	BUSINESS OWNER	BUSINESS OWNER	10430 S DE ANZA BLVD STE 185	CUPERTINO	CA	95014-3006
369-40-039	BUSINESS OWNER	BUSINESS OWNER	10430 S DE ANZA BLVD STE 195	CUPERTINO	CA	95014-3006
369-40-039	BUSINESS OWNER	BUSINESS OWNER	10430 S DE ANZA BLVD STE 200	CUPERTINO	CA	95014-3006
369-40-039	BUSINESS OWNER	BUSINESS OWNER	10430 S DE ANZA BLVD STE 210	CUPERTINO	CA	95014-3022
369-40-039	BUSINESS OWNER	BUSINESS OWNER	10430 S DE ANZA BLVD STE 220	CUPERTINO	CA	95014-3022
369-40-039	BUSINESS OWNER	BUSINESS OWNER	10430 S DE ANZA BLVD STE 230	CUPERTINO	CA	95014-3022
369-40-039	BUSINESS OWNER	BUSINESS OWNER	10430 S DE ANZA BLVD STE 260	CUPERTINO	CA	95014-3025
369-40-039	BUSINESS OWNER	BUSINESS OWNER	10430 S DE ANZA BLVD STE 270	CUPERTINO	CA	95014-3025
369-40-039	BUSINESS OWNER	BUSINESS OWNER	10430 S DE ANZA BLVD STE 275	CUPERTINO	CA	95014-3025
369-40-039	BUSINESS OWNER	BUSINESS OWNER	10430 S DE ANZA BLVD STE 280	CUPERTINO	CA	95014-3025
369-40-039	BUSINESS OWNER	BUSINESS OWNER	10430 S DE ANZA BLVD STE 290	CUPERTINO	CA	95014-3025

STATE OF CALIFORNIA)
)
COUNTY OF ORANGE)

DECLARATION OF MAILING RE: PERMIT SUBMITTAL NOTICE

I, __Norah Jaffan _____, do hereby declare as follows:

1. I am a _Project Manager of NotificationMaps.com. I am over 18 years of age and I am a resident of the County of Orange, State of California.

2. On April 11, 2018 I caused to be mailed and/or distributed a copy of "PERMIT SUBMITTAL NOTICE" to the following location(s) within the 300 foot boundaries of the proposed site :

a. See Attached Map
See Attached Mailing List
See Attached Notice

b. 10465 S De Anza Blvd

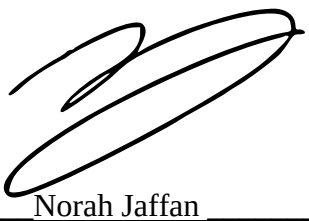
c. See Attached Envelope

d.

3. The attached list was prepared using the latest available data per the County Assesor's Office.

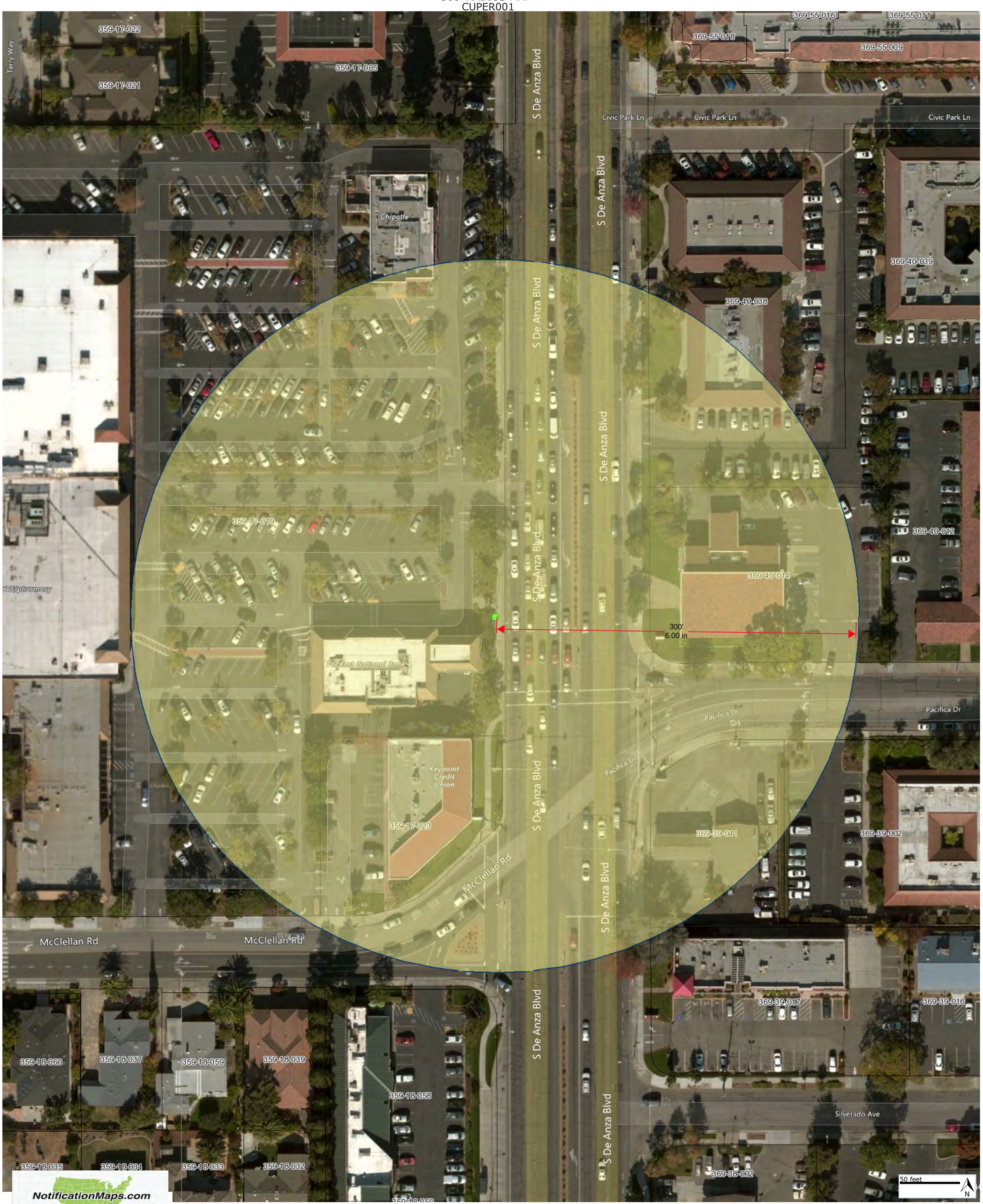
I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Executed 04/11/2018 at County of Orange, California.

By: 

___Norah Jaffan _____ _____
[Please Print Name]

300' RADIUS MAP
CUPER001



NotificationMaps.com

Radius Maps Owner and Occupant Lists Mailing Services

866.752.6266 toll free
949.613.8341 fax
sales@notificationmaps.com

Mailing Address Only:
668 N Coast Hwy #401
Laguna Beach, CA 92651

www.notificationmaps.com

APN	TYPE	NAME	ADDRESS	CITY	STATE	ZIP
359-17-019	OWNER	BDC HAYWARD LP	1556 PARKSIDE DR	WALNUT CREEK	CA	94596
359-17-019	BUSINESS OWNER	BUSINESS OWNER	10385 S DE ANZA BLVD	CUPERTINO	CA	95014-3009
359-17-019	BUSINESS OWNER	BUSINESS OWNER	10425 S DE ANZA BLVD	CUPERTINO	CA	95014-3011
359-17-019	BUSINESS OWNER	BUSINESS OWNER	10465 S DE ANZA BLVD	CUPERTINO	CA	95014-3011
359-17-019	BUSINESS OWNER	BUSINESS OWNER	10455 S DE ANZA BLVD	CUPERTINO	CA	95014-3011
359-17-019	BUSINESS OWNER	BUSINESS OWNER	10457 S DE ANZA BLVD	CUPERTINO	CA	95014-3011
359-17-019	BUSINESS OWNER	BUSINESS OWNER	10467 S DE ANZA BLVD	CUPERTINO	CA	95014-3011
359-17-019	BUSINESS OWNER	BUSINESS OWNER	10475 S DE ANZA BLVD	CUPERTINO	CA	95014-3011
359-17-019	BUSINESS OWNER	BUSINESS OWNER	10477 S DE ANZA BLVD	CUPERTINO	CA	95014-3011
359-17-019	BUSINESS OWNER	BUSINESS OWNER	10477 B S DE ANZA BLVD	CUPERTINO	CA	95014-3011
359-17-019	BUSINESS OWNER	BUSINESS OWNER	10487 S DE ANZA BLVD	CUPERTINO	CA	95014-3011
359-17-019	BUSINESS OWNER	BUSINESS OWNER	10493 S DE ANZA BLVD	CUPERTINO	CA	95014-3011
359-17-023	OWNER	BDC ATWATER SHOPS LP	1556 PARKSIDE DR	WALNUT CREEK	CA	94596-3556
359-17-023	BUSINESS OWNER	BUSINESS OWNER	10497 S DE ANZA BLVD	CUPERTINO	CA	95014-3011
359-17-023	BUSINESS OWNER	BUSINESS OWNER	10495 S DE ANZA BLVD STE A	CUPERTINO	CA	95014-3034
359-17-023	BUSINESS OWNER	BUSINESS OWNER	10495 S DE ANZA BLVD STE C	CUPERTINO	CA	95014-3034
369-39-002	OWNER	PETRI GEORGENE	34 W SANTA CLARA ST	SAN JOSE	CA	95113-1806
369-39-002	BUSINESS OWNER	BUSINESS OWNER	20480 PACIFICA DR STE B	CUPERTINO	CA	95014-3015
369-39-002	BUSINESS OWNER	BUSINESS OWNER	20480 PACIFICA DR STE F	CUPERTINO	CA	95014-3015
369-39-002	BUSINESS OWNER	BUSINESS OWNER	20480 PACIFICA DR STE C	CUPERTINO	CA	95014-3015
369-39-002	BUSINESS OWNER	BUSINESS OWNER	20480 PACIFICA DR STE A	CUPERTINO	CA	95014-3015
369-39-002	BUSINESS OWNER	BUSINESS OWNER	20480 PACIFICA DR STE E1	CUPERTINO	CA	95014-3015
369-39-002	BUSINESS OWNER	BUSINESS OWNER	20480 PACIFICA DR STE E2	CUPERTINO	CA	95014-3015
369-39-002	BUSINESS OWNER	BUSINESS OWNER	20480 PACIFICA DR STE G	CUPERTINO	CA	95014-3015
369-39-002	BUSINESS OWNER	BUSINESS OWNER	20480 PACIFICA DR STE D	CUPERTINO	CA	95014-3015
369-39-017	OWNER	HARMAN-MANAGERS INVESTMENT INC	5544 S GREEN ST	SALT LAKE CITY	UT	84123-5798
369-39-017	BUSINESS OWNER	BUSINESS OWNER	10520 S DE ANZA BLVD STE B	CUPERTINO	CA	95014-3036
369-39-017	BUSINESS OWNER	BUSINESS OWNER	10520 S DE ANZA BLVD STE A	CUPERTINO	CA	95014-3036
369-39-017	BUSINESS OWNER	BUSINESS OWNER	10520 S DE ANZA BLVD FRNT	CUPERTINO	CA	95014-3036
369-39-041	OWNER	LIAONING BENEFIT PETROLEUM US CORPORATION	1625 THE ALAMEDA STE 202	SAN JOSE	CA	95126-2223
369-39-041	BUSINESS OWNER	BUSINESS OWNER	10490 S DE ANZA BLVD	CUPERTINO	CA	95014-3020
369-40-014	OWNER	BANK CATHAY	77 N BROADWAY	LOS ANGELES	CA	90012
369-40-014	BUSINESS OWNER	BUSINESS OWNER	10480 S DE ANZA BLVD	CUPERTINO	CA	95014-3012
369-40-038	OWNER	WU YE MING	20710 SCOFIELD DR	CUPERTINO	CA	95014-2962
369-40-038	BUSINESS OWNER	BUSINESS OWNER	10420 S DE ANZA BLVD	CUPERTINO	CA	95014-3012
369-40-038	BUSINESS OWNER	BUSINESS OWNER	10440 S DE ANZA BLVD STE D4	CUPERTINO	CA	95014-3018
369-40-038	BUSINESS OWNER	BUSINESS OWNER	10440 S DE ANZA BLVD STE D1	CUPERTINO	CA	95014-3018
369-40-038	BUSINESS OWNER	BUSINESS OWNER	10440 S DE ANZA BLVD STE D6	CUPERTINO	CA	95014-3018
369-40-039	OWNER	DE ANZA MEDICAL LLC	5674 SONOMA DR STE A	PLEASANTON	CA	94566-8102
369-40-039	BUSINESS OWNER	BUSINESS OWNER	10430 S DE ANZA BLVD STE 100	CUPERTINO	CA	95014-3098
369-40-039	BUSINESS OWNER	BUSINESS OWNER	10430 S DE ANZA BLVD STE 110	CUPERTINO	CA	95014-3024
369-40-039	BUSINESS OWNER	BUSINESS OWNER	10430 S DE ANZA BLVD STE 120	CUPERTINO	CA	95014-3024
369-40-039	BUSINESS OWNER	BUSINESS OWNER	10430 S DE ANZA BLVD STE 130	CUPERTINO	CA	95014-3025
369-40-039	BUSINESS OWNER	BUSINESS OWNER	10430 S DE ANZA BLVD STE 140	CUPERTINO	CA	95014-3024
369-40-039	BUSINESS OWNER	BUSINESS OWNER	10430 S DE ANZA BLVD STE 150	CUPERTINO	CA	95014-3024
369-40-039	BUSINESS OWNER	BUSINESS OWNER	10430 S DE ANZA BLVD STE 160	CUPERTINO	CA	95014-3000
369-40-039	BUSINESS OWNER	BUSINESS OWNER	10430 S DE ANZA BLVD STE 170	CUPERTINO	CA	95014-3000
369-40-039	BUSINESS OWNER	BUSINESS OWNER	10430 S DE ANZA BLVD STE 175	CUPERTINO	CA	95014-3000
369-40-039	BUSINESS OWNER	BUSINESS OWNER	10430 S DE ANZA BLVD STE 185	CUPERTINO	CA	95014-3006
369-40-039	BUSINESS OWNER	BUSINESS OWNER	10430 S DE ANZA BLVD STE 195	CUPERTINO	CA	95014-3006
369-40-039	BUSINESS OWNER	BUSINESS OWNER	10430 S DE ANZA BLVD STE 200	CUPERTINO	CA	95014-3006
369-40-039	BUSINESS OWNER	BUSINESS OWNER	10430 S DE ANZA BLVD STE 210	CUPERTINO	CA	95014-3022
369-40-039	BUSINESS OWNER	BUSINESS OWNER	10430 S DE ANZA BLVD STE 220	CUPERTINO	CA	95014-3022
369-40-039	BUSINESS OWNER	BUSINESS OWNER	10430 S DE ANZA BLVD STE 230	CUPERTINO	CA	95014-3022
369-40-039	BUSINESS OWNER	BUSINESS OWNER	10430 S DE ANZA BLVD STE 260	CUPERTINO	CA	95014-3025
369-40-039	BUSINESS OWNER	BUSINESS OWNER	10430 S DE ANZA BLVD STE 270	CUPERTINO	CA	95014-3025
369-40-039	BUSINESS OWNER	BUSINESS OWNER	10430 S DE ANZA BLVD STE 275	CUPERTINO	CA	95014-3025
369-40-039	BUSINESS OWNER	BUSINESS OWNER	10430 S DE ANZA BLVD STE 280	CUPERTINO	CA	95014-3025

APN	TYPE	NAME	ADDRESS	CITY	STATE	ZIP
369-40-039	BUSINESS OWNER	BUSINESS OWNER	10430 S DE ANZA BLVD STE 290	CUPERTINO	CA	95014-3025

PERMIT SUBMITTAL NOTICE

Verizon Site Number: SF_CUPER001

Verizon Wireless, in partnership with the City of Cupertino, is happy to announce that it will soon be improving coverage and data capacity to its network in your neighborhood. The improved wireless coverage will help accommodate the growing number of wireless calls and data use on the Verizon Wireless network. The Verizon Wireless small cell site will greatly enhance service capacity with the most aesthetically discrete technology available today.

In order to make these upgrades, Verizon Wireless is proposing a small cell on a streetlight pole located in the public right of way near the intersection of S De Anza Blvd & McClellan Rd. The major components of the proposed installation include the following:

- Removing the existing steel streetlight pole and replacing with a new steel streetlight pole similar in size
- Installing (1) canister antenna on top of the streetlight pole
- Installing (2) small remote radio units (RRUs) on the side of the streetlight pole

Included in this letter are the following documents:

- Map showing the proposed project location
- Photo simulations showing the before and after view of the proposed project

Part of the permitting process through the City of Cupertino Department of Public Works (DPW) involves notifying residents located within 300' of the proposed project site about the installation. Residents are invited to contact Verizon Wireless, within 14 days of the postmarked date on the envelope, with any questions or concerns regarding this installation. All inquiries will be logged and shared with the City of Cupertino Public Works Department prior to issuance of any permits for this work.

After construction is completed, Verizon will perform on site testing to ensure the small cell is operating within FCC standards for Radio Frequency Emissions. Residents within 100' of the site will be notified of the date of the testing and may request, in advance that Verizon Wireless perform tests on their property at that time.

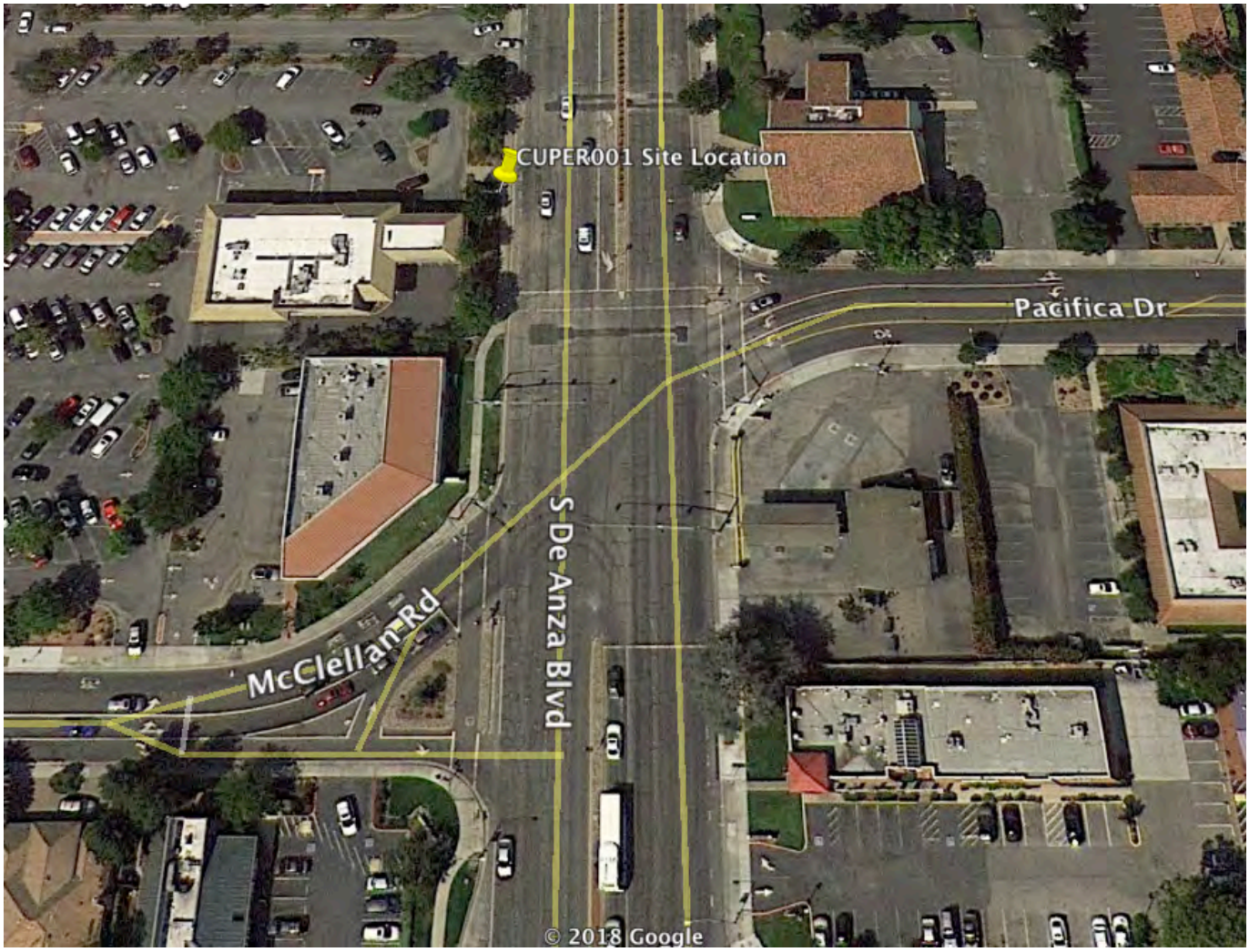
For further information, and answers to frequently asked questions, please check the FAQ on Small Cell Facilities provided on the City of Cupertino website here:
http://www.cupertino.org/home/showdocument?id=19317

Contact Information:

Modus Representing Verizon Wireless:
Kevin Bowyer
Phone: (415) 989-1102
Email: kbowyer@modus-corp.com

verizon

Location of Installation on City Streetlight



Existing

Proposed

view from S De Anza Blvd looking south at site

SF Cuper001
10465 S De Anza Blvd, Cupertino, CA
Photosims Produced on 4-2-2018

AdvanceSim
Photo Simulation Solutions
Contact (925) 202-8507

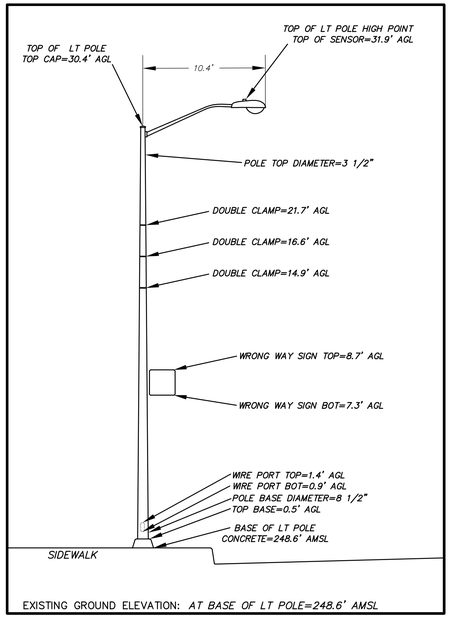
view from S De Anza Blvd looking north at site

SF Cuper001
10465 S De Anza Blvd, Cupertino, CA
Photosims Produced on 4-2-2018

Existing

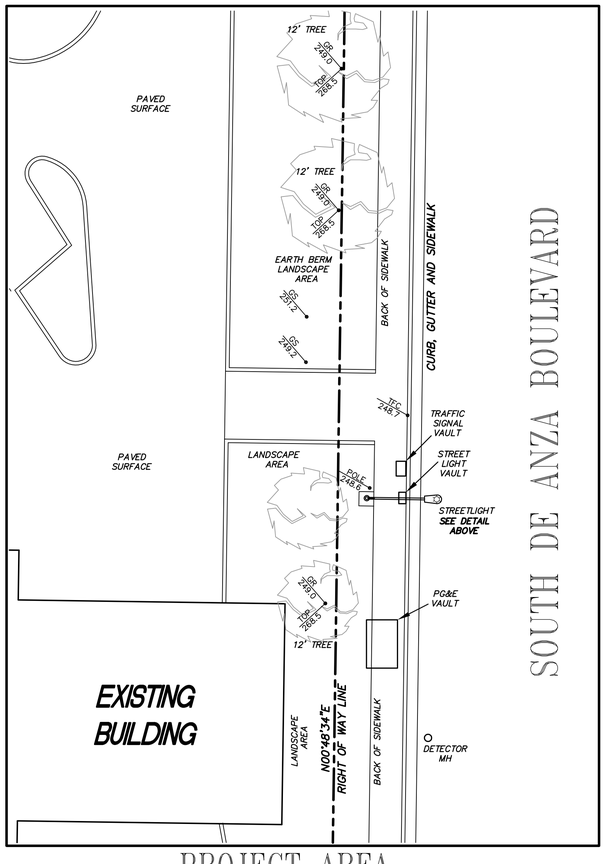
Proposed

AdvanceSim
Photo Simulation Solutions
Contact (925) 202-8507



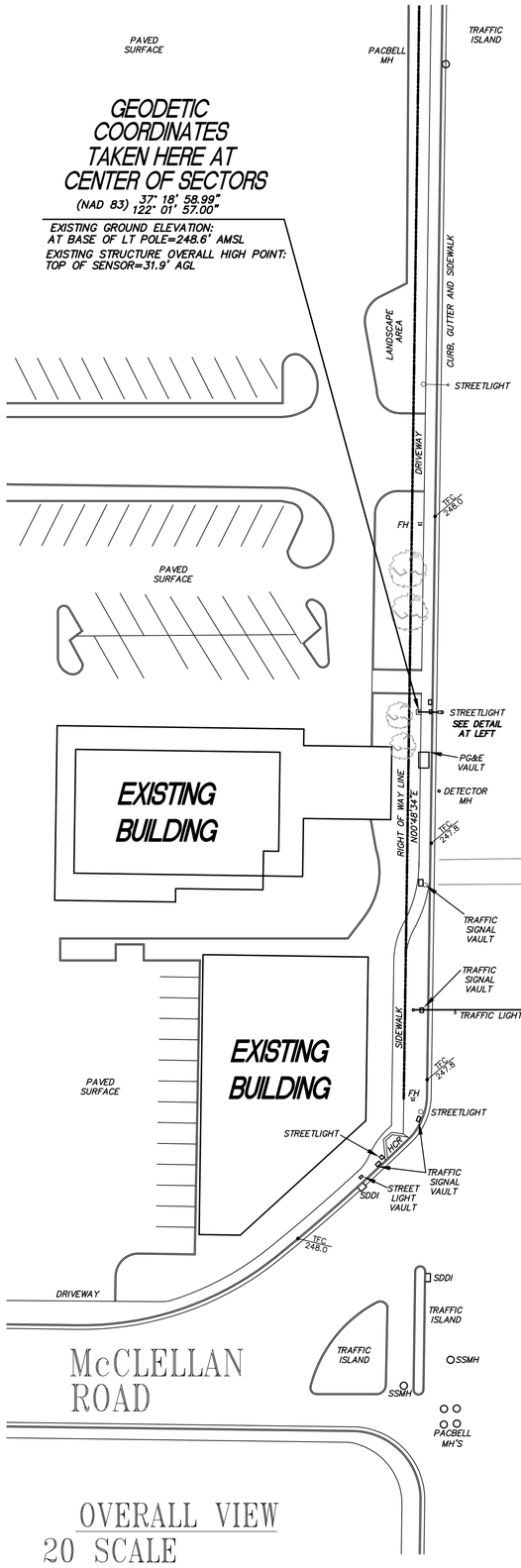
POLE DETAIL

5 SCALE 1"= 5'



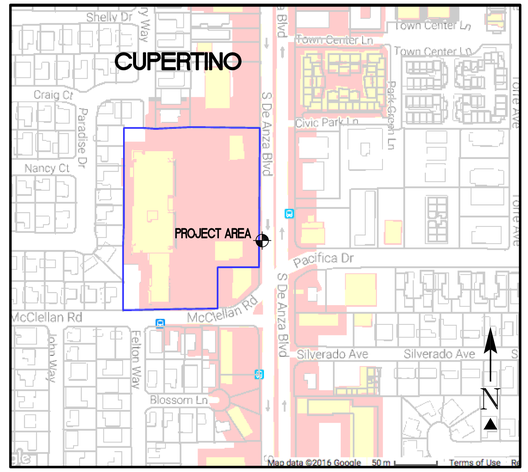
PROJECT AREA

10 SCALE



OVERALL VIEW

20 SCALE



VICINITY MAP

N.T.S.

PROPERTY INFORMATION

SF_CUPER001

SITE: CPSC001
10465 SOUTH DE ANZA BOULEVARD
CUPERTINO, CA 95014

BASIS OF BEARING

BEARINGS SHOWED HEREON ARE BASED UPON U.S. STATE PLANE NAD83 COORDINATE SYSTEM *STATE PLANE COORDINATE ZONE 3*, DETERMINED BY GPS OBSERVATIONS.

BENCHMARK

ELEVATION ESTABLISHED FROM GPS DERIVED ORTHOMETRIC HEIGHTS, APPLYING GEOID 99 SEPARATIONS, CONSTRAINING TO NGS CONTROL STATION 'LUTZ' ELEVATION=450.0' (NAVD88)

UTILITY NOTES

SURVEYOR DOES NOT GUARANTEE THAT ALL UTILITIES ARE SHOWN OR THEIR LOCATIONS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR AND DEVELOPER TO CONTACT U.S.A. AND ANY OTHER INVOLVED AGENCIES TO LOCATE ALL UTILITIES PRIOR TO CONSTRUCTION. REMOVAL, RELOCATION AND/ OR REPLACEMENT IS THE RESPONSIBILITY OF THE CONTRACTOR.

SURVEYOR'S NOTES

ALL EASEMENTS CONTAINED IN SAID TITLE REPORT AFFECTING THE IMMEDIATE AREA SURROUNDING THE LEASE HAVE BEEN PLOTTED. SURVEYOR HAS NOT PERFORMED A SEARCH OF PUBLIC RECORDS TO DETERMINE ANY DEFECT IN TITLE ISSUED.
THE BOUNDARY SHOWN HEREON IS PLOTTED FROM RECORD INFORMATION AND DOES NOT CONSTITUTE A BOUNDARY SURVEY OF THE PROPERTY.

LEGEND

DI	DRAIN INLET	WV	WATER CONTROL VALVE
TFC	TOP FACE OF CURB	FH	FIRE HYDRANT
R/W	RIGHT OF WAY		GUY CONDUCTOR
EP	EDGE OF PAVED		FOUND AS NOTED
DW	DRIVEWAY		POWER POLE
TOP	TOP OF SLOPE		LIGHT POLE
SW	SIDEWALK		ELECTRICAL TRANSFORMER
TP	TOP OF PARAPET	AC	AIR CONDITIONING UNIT
OH	OVERHANG		TELEPHONE PEDESTAL
FH	FIRE HYDRANT	TV	TELEPHONE VAULT
WV	WATER VALVE	T	TELEPHONE MANHOLE
MH	MANHOLE	GM	GAS VALVE
	GEODETIC COORDINATES		GAS METER
XXXX.X NG	SPOT ELEVATION		PROPERTY LINE
	DISH ANTENNA		CHAIN LINK FENCE

SURVEY DATE

8/15/16

GRAPHIC SCALE

10 0 5 10 20 40

(IN FEET)
1 inch = 10 ft.

ISSUE STATUS

REV.	DESCRIPTION	DATE
△	SITE PLAN	8/24/2016

HAYES
Land Surveying And Mapping
2330 MADIGAN COURT
CONCORD, CA 94518

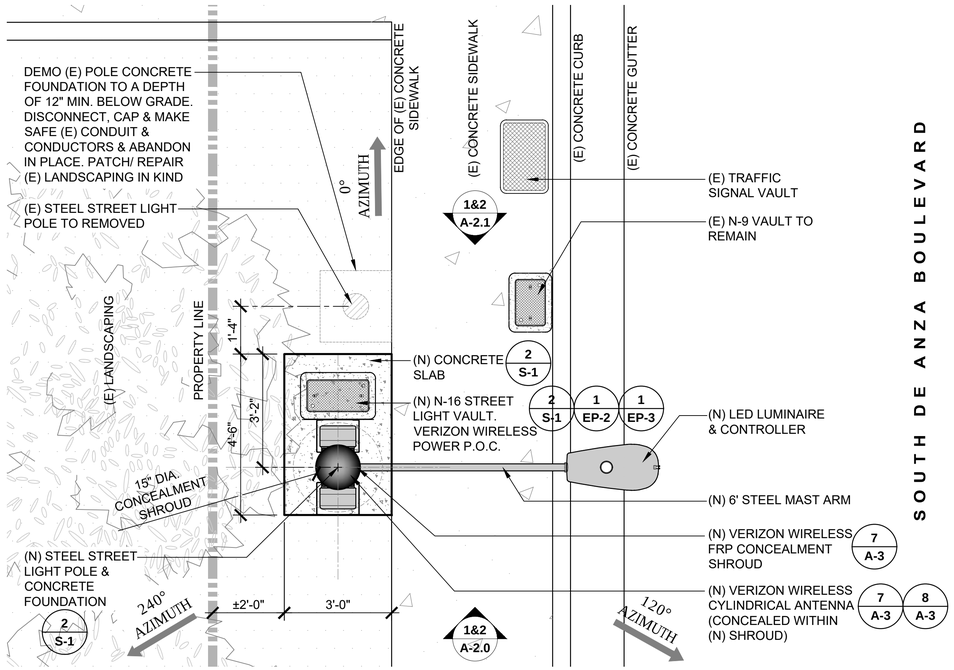
LICENSED LAND SURVEYOR TIMOTHY K. HAYES No. 7900 EXP. 12/31/17 STATE OF CALIFORNIA

verizon
2785 MITCHELL DRIVE
WALNUT CREEK, CA. 94598
OFFICE: 925-279-6000
(925) 279-6333

TOPOGRAPHIC SURVEY
EXISTING CONDITIONS

SF_CUPER001
CPSC001
10465 SOUTH DE ANZA BOULEVARD
CUPERTINO, CA 95014

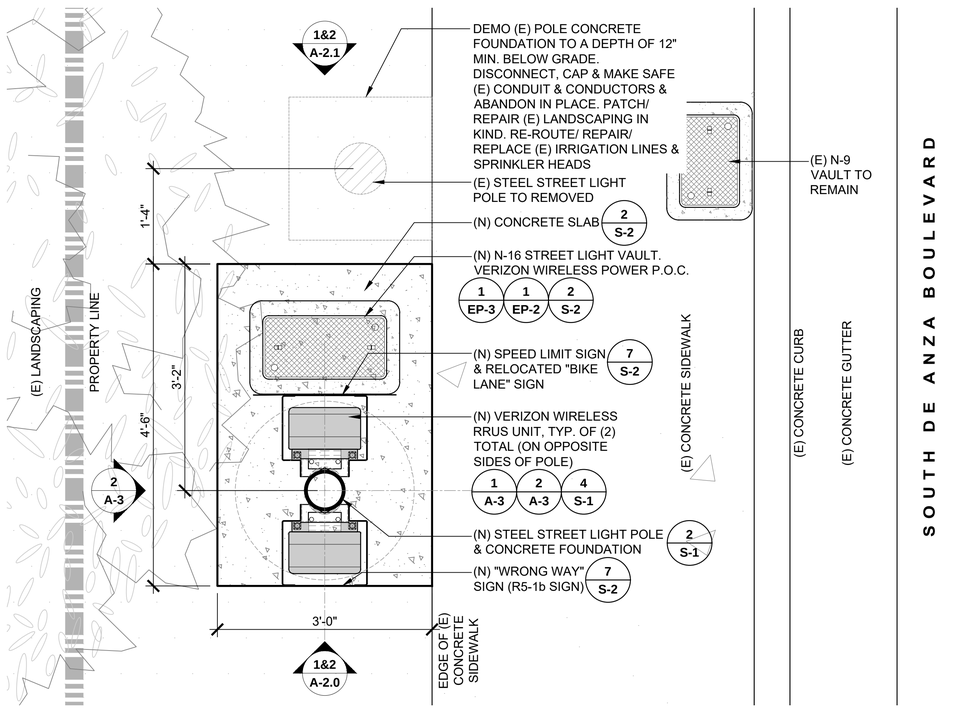
C-1
SHEET 1 of 1



ENLARGED ANTENNA LAYOUT

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

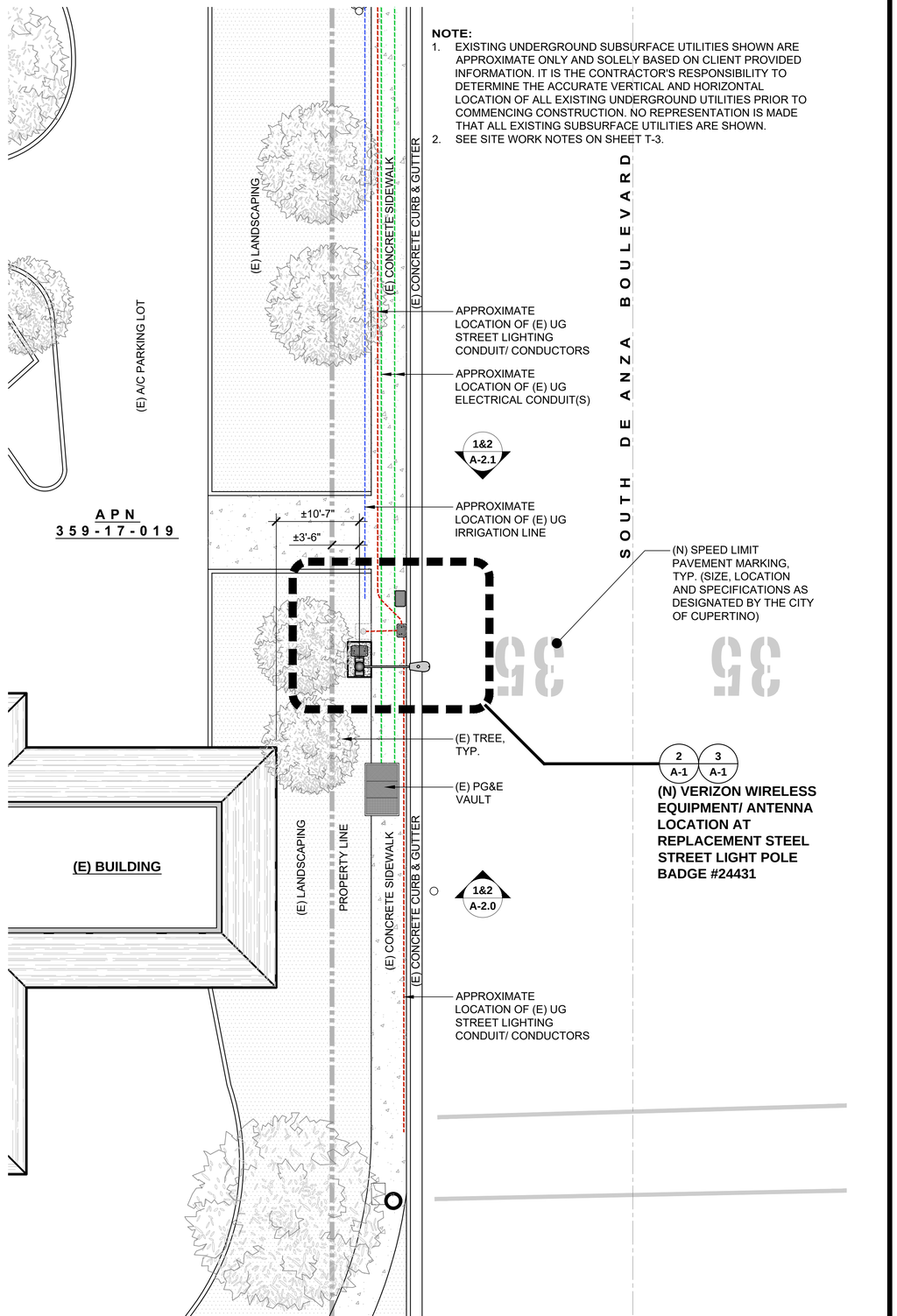
2



ENLARGED EQUIPMENT LAYOUT

SCALE: 1"=1'-0" (6" 1' 2')

3



SITE PLAN

SCALE: 1/8"=1'-0" (4' 8' 16')

1

JAMES VACCARO ARCHITECT, INC.
411 DONDEE WAY, UNIT C
PACIFICA | CA | 94044
415.608.3670 PHONE | 415.963.4471 FAX
INFO@JVARCHITECT.COM
WWW.JVARCHITECT.COM

CLIENT

MODUS, INC.
240 STOCKTON STREET, 3RD FLOOR
SAN FRANCISCO, CA 94108

verizon

VERIZON WIRELESS
2785 MITCHELL DRIVE, SUITE 9
WALNUT CREEK, CA 94598

CONSULTANTS

SF_CUPER001
CPSC001
PUBLIC ROW ADJACENT TO
10465 S. DE ANZA BOULEVARD
CUPERTINO, CA 95014
APN: PUBLIC ROW ADJACENT
TO 359-17-019

LICENSED ARCHITECT
JAMES F. VACCARO
C-33251
07-31-2019
RENEWAL DATE
STATE OF CALIFORNIA

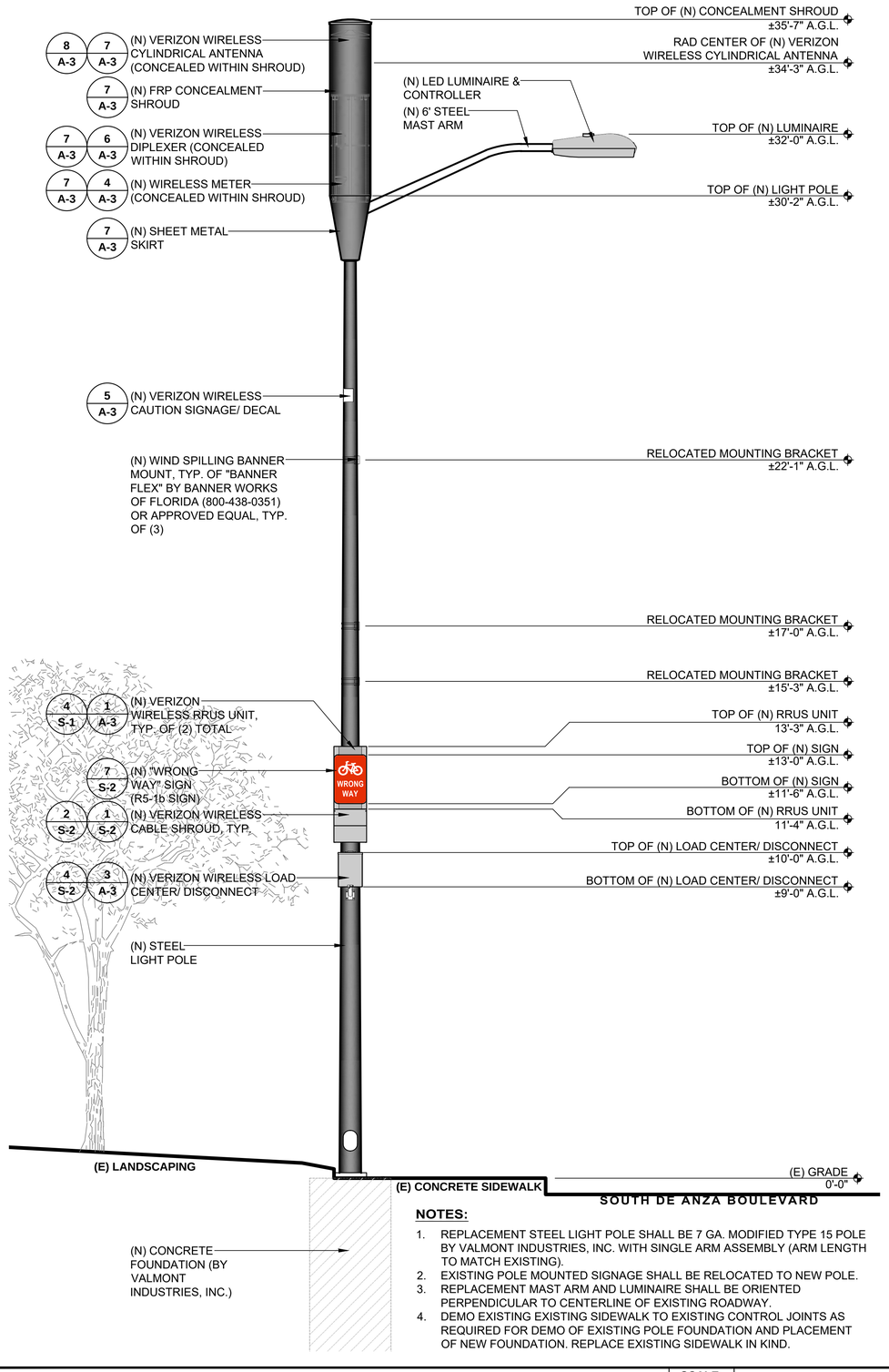
REV	DATE	ISSUE
1	10/18/2017	90% CONSTRUCTION
2	2/6/2018	100% CONSTRUCTION
3	3/26/2018	100% CONSTRUCTION REV.

SHEET TITLE

SITE PLAN, ENLARGED ANTENNA LAYOUT, ENLARGED EQUIPMENT LAYOUT

SHEET NUMBER

A-1

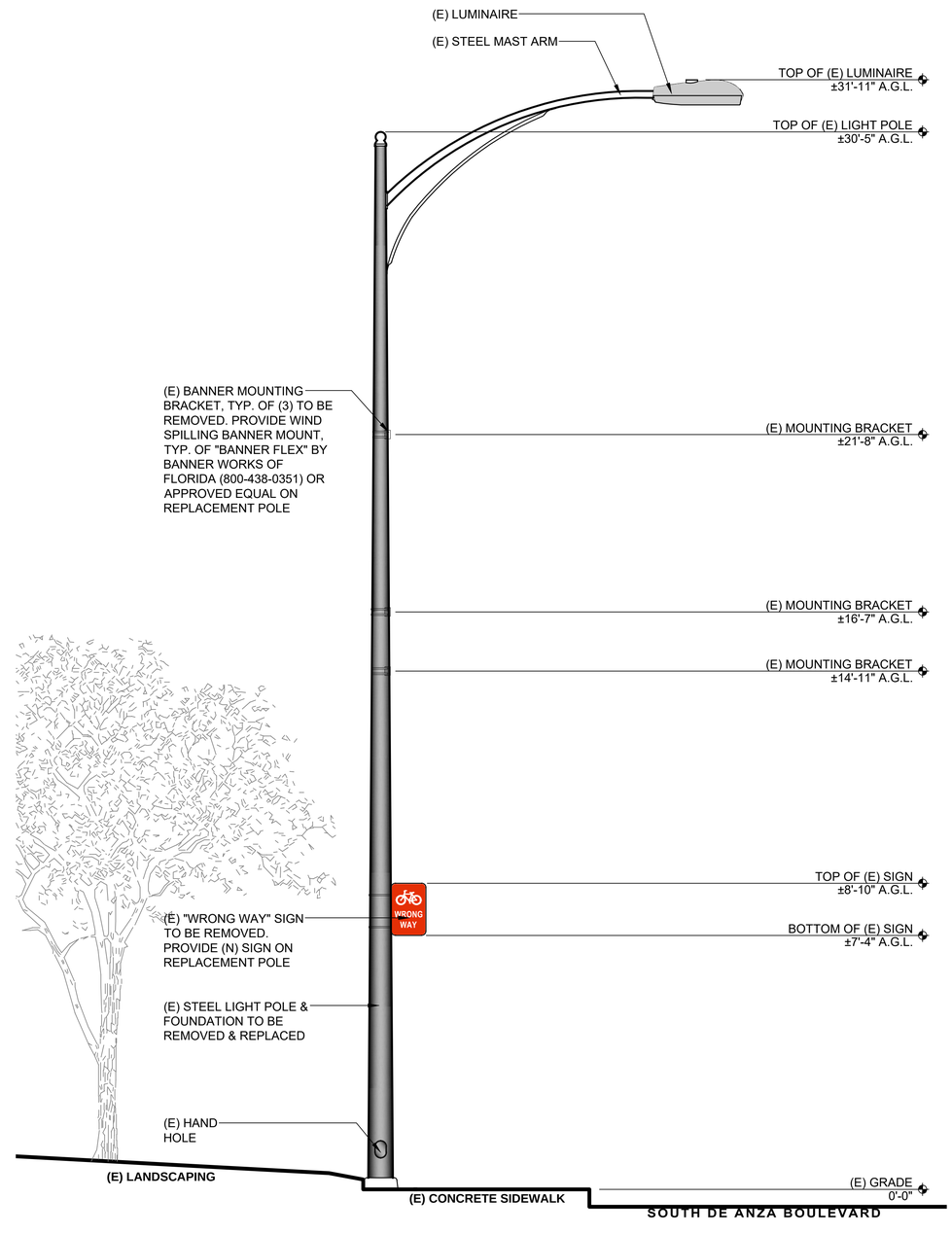


NOTES:

1. REPLACEMENT STEEL LIGHT POLE SHALL BE 7 GA. MODIFIED TYPE 15 POLE BY VALMONT INDUSTRIES, INC. WITH SINGLE ARM ASSEMBLY (ARM LENGTH TO MATCH EXISTING).
2. EXISTING POLE MOUNTED SIGNAGE SHALL BE RELOCATED TO NEW POLE.
3. REPLACEMENT MAST ARM AND LUMINAIRE SHALL BE ORIENTED PERPENDICULAR TO CENTERLINE OF EXISTING ROADWAY.
4. DEMO EXISTING EXISTING SIDEWALK TO EXISTING CONTROL JOINTS AS REQUIRED FOR DEMO OF EXISTING POLE FOUNDATION AND PLACEMENT OF NEW FOUNDATION. REPLACE EXISTING SIDEWALK IN KIND.

PROPOSED SOUTH ELEVATION

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



EXISTING SOUTH ELEVATION

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

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verizon

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APN: PUBLIC ROW ADJACENT
TO 359-17-019

LICENSED ARCHITECT
JAMES F. VACCARO
C-33251
07-31-2019
RENEWAL DATE
STATE OF CALIFORNIA

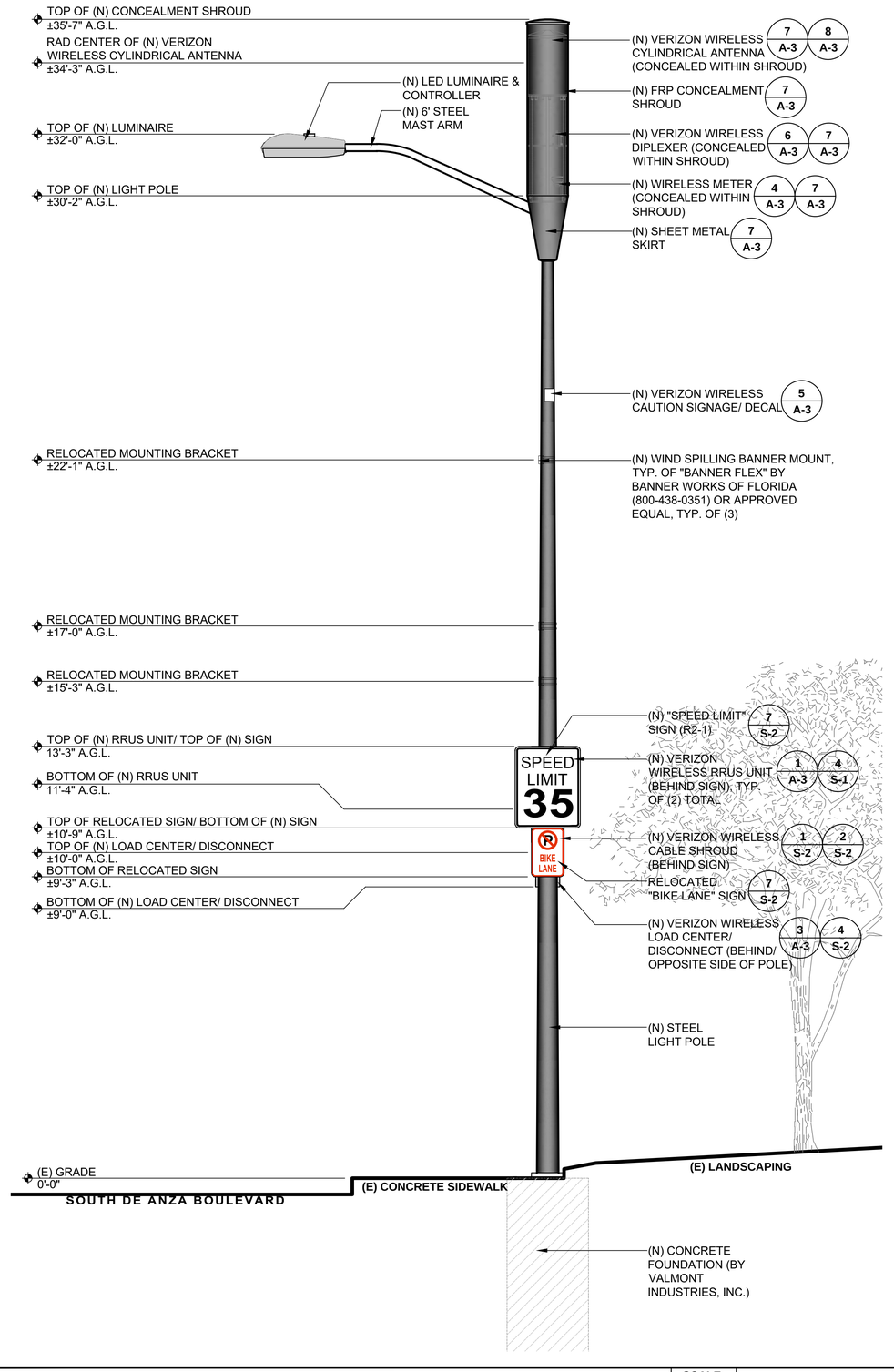
REV	DATE	ISSUE
1	10/18/2017	90% CONSTRUCTION
2	2/6/2018	100% CONSTRUCTION
3	3/26/2018	100% CONSTRUCTION REV.

SHEET TITLE

ELEVATIONS

SHEET NUMBER

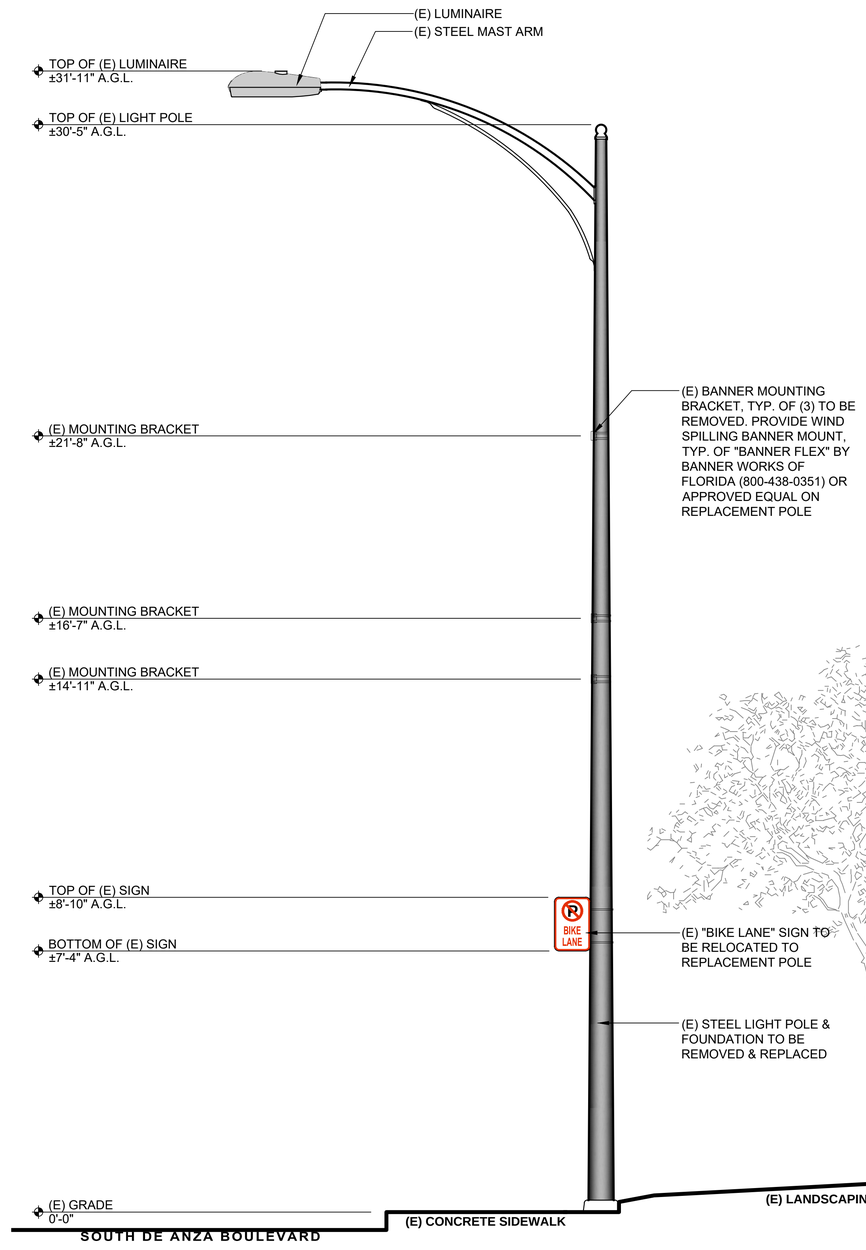
A-2.0



PROPOSED NORTH ELEVATION

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

2



EXISTING NORTH ELEVATION

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

1

JAMES VACCARO ARCHITECT, INC.
411 DONDEE WAY, UNIT C
PACIFICA | CA | 94044
415.608.3670 PHONE | 415.963.4471 FAX
INFO@JVARCHITECT.COM
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CLIENT

MODUS, INC.
240 STOCKTON STREET, 3RD FLOOR
SAN FRANCISCO, CA 94108

verizon

VERIZON WIRELESS
2785 MITCHELL DRIVE, SUITE 9
WALNUT CREEK, CA 94598

CONSULTANTS

SF_CUPER001
CPSC001
PUBLIC ROW ADJACENT TO
10465 S. DE ANZA BOULEVARD
CUPERTINO, CA 95014
APN: PUBLIC ROW ADJACENT
TO 359-17-019

LICENSED ARCHITECT
JAMES F. VACCARO
C-33251
07-31-2019
RENEWAL DATE
STATE OF CALIFORNIA

REV	DATE	ISSUE
1	10/18/2017	90% CONSTRUCTION
2	2/6/2018	100% CONSTRUCTION
3	3/26/2018	100% CONSTRUCTION REV.

SHEET TITLE

ELEVATIONS

SHEET NUMBER

A-2.1

Statement of Hammett & Edison, Inc., Consulting Engineers

The firm of Hammett & Edison, Inc., Consulting Engineers, has been retained on behalf of Verizon Wireless, a personal wireless telecommunications carrier, to evaluate the small cell located at 10465 South De Anza Boulevard in Cupertino, California, compliance with appropriate guidelines limiting human exposure to radio frequency ("RF") electromagnetic fields.

Executive Summary

Verizon had installed a cylindrical antenna above the light pole sited in the public right-of-way near 10465 South De Anza Boulevard in Cupertino. All exposure levels under the existing conditions for anyone in publicly accessible areas nearby were well below the federal standard.

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 limit for exposures of unlimited duration at several wireless service bands are as follows:

Wireless Service Band	Transmit Frequency	"Uncontrolled" Public Limit	Occupational Limit (5 times Public)
Microwave (point-to-point)	1–80 GHz	1.0 mW/cm^2	5.0 mW/cm^2
Millimeter-wave	24–47	1.0	5.0
Part 15 (WiFi & other unlicensed)	2–6	1.0	5.0
BRS (Broadband Radio)	2,490 MHz	1.0	5.0
WCS (Wireless Communication)	2,305	1.0	5.0
AWS (Advanced Wireless)	2,110	1.0	5.0
PCS (Personal Communication)	1,930	1.0	5.0
Cellular	869	0.58	2.9
SMR (Specialized Mobile Radio)	854	0.57	2.85
700 MHz	716	0.48	2.4
[most restrictive frequency range]	30–300	0.20	1.0

General Facility Requirements

Small cells typically consist of two distinct parts: the electronic transceivers (also called "radios" or "channels") that are connected to the traditional wired telephone lines, and the passive antennas that send the wireless signals created by the radios out to be received by individual subscriber units. The radios 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 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.

Site Description

The site was visited by Mr. Scott Walthard, a qualified field technician employed by Hammett & Edison, Inc., during normal business hours on July 16, 2019, a non-holiday weekday. Verizon had installed a small cylindrical antenna about three stories above ground on top of the light pole located in the public right-of-way on the west side of South De Anza Boulevard, in front of the bank building located at 10465 South De Anza Boulevard, at least 14 feet away. There were observed no other wireless telecommunications base stations located at or next to the site. There were no residences located within 100 feet of the site.

Measurement Results

The measurement equipment used was a Narda Type NBM-520 Broadband Field Meter with Type EA-5091 Isotropic Electric Field Probe (Serial No. 01035) and a Wandel & Goltermann Type EMR-300 Radiation Meter with Type 18 Isotropic Electric Field Probe (Serial No. C-0010). The meters and probes were under current calibration by the manufacturers. Measurements were made from a bucket-truck at the antenna, as well as at ground near the site. At each test point, the measurement results were compared with applicable FCC standards. The maximum power density level observed beyond 1 foot from the antenna was less than the applicable public limit. The maximum power density level observed for a person at ground near the site was 0.00052 mW/cm^2, which is 0.26% of the most restrictive public limit. The three-dimensional perimeter of RF power density levels equal to the FCC standard for uncontrolled areas did not extend into any uncontrolled areas.

No Recommended Compliance Measures

Access to the antenna was restricted by its mounting location and height. Since exposure levels in publicly accessible areas were found to be below the applicable public limit, no other access controls or signs are required to meet FCC public guidelines. The operation can be considered intrinsically compliant with the FCC occupational guidelines. An explanatory sign was posted on the pole below the antenna.

Conclusion

Based upon the information and analysis above, it is the undersigned's professional opinion that this Verizon Wireless small cell, as installed and operating at the time of the measurements, complies with the FCC standards for limiting public exposure in uncontrolled areas to radio frequency energy and, therefore, does not for this reason cause a significant impact on the environment.

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, 2021. This work has been carried out under his direction, and all statements are true and correct of his own knowledge except, where noted, when data has been supplied by others, which data he believes to be correct.

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

July 31, 2019

Comment on Acoustic Noise

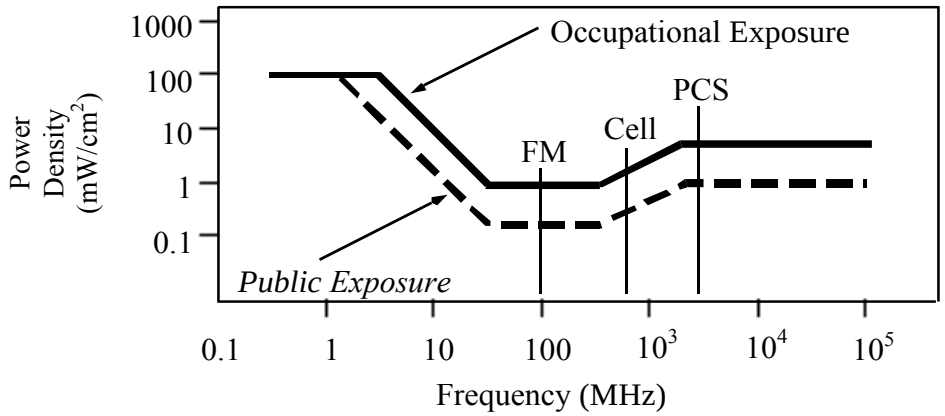
As noted for similar Verizon facilities at other locations in Cupertino, no noise was perceptible from the equipment inside the pedestal at the base of the pole.

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



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

R.O.W AT 10465 S. DE ANZA BLVD - CUPER 001

ENCROACHMENT AGREEMENT

This Encroachment Agreement ("Encroachment Agreement"), made this 29 day of MAY, 2018 ("Effective Date") between the City of Cupertino, a political subdivision of the State of California, hereinafter designated "Licensor" and GTE Mobilnet of California Limited Partnership, d/b/a Verizon Wireless, with its principal offices at c/o Verizon Wireless, 180 Washington Valley Road, Bedminster, New Jersey 07921, hereinafter designated "Licensee":

1. Encroachment Agreement. This is an Encroachment Agreement as referenced in that certain Small Cell License Agreement between Licensor and Licensee dated May 16, 2017 ("Agreement"). This Encroachment Agreement shall serve as an encroachment license. All of the terms and conditions of the Agreement are incorporated hereby by reference and made a part hereof without the necessity of repeating or attaching the Agreement. In the event of a contradiction, modification or inconsistency between the terms of the Agreement and this Encroachment Agreement, the terms of the Encroachment Agreement shall govern. Capitalized terms used in this Encroachment Agreement shall have the same meaning described for them in the Agreement unless otherwise indicated herein.

2. Project Description and Locations. Licensee shall have the right to use the ROW for a Small Cell at the designated areas in the ROW as further described in Attachment 1 attached hereto (the "Licensed Area").

3. Equipment. The Small Cell to be installed at the Licensed Area is described in Attachment 1 attached hereto.

4. Term. The term of this Encroachment Agreement shall be as set forth in Section 2 of the Agreement.

5. Fees. The initial Rent for the term of this Encroachment Agreement shall be $1,500.00, as determined in accordance with Paragraph 5.1 of the Agreement, as adjusted by Paragraph 5.2.

6. Commencement Date. The first day of the month following the date Licensee has Commenced Installation of its Equipment at the Licensed Area.

7. Approvals/Fiber. It is understood and agreed that Licensee's ability to use the Licensed Area is contingent upon its obtaining all of the certificates, permits and other approvals (collectively the "Governmental Approvals") that may be required by any Federal, State or Local authorities, as well as a satisfactory fiber and electrical connection which will permit Licensee use of the Licensed Area as set forth above. In the event that (i) any of such applications for such Governmental Approvals should be finally rejected; (ii) any Governmental Approval issued to Licensee is canceled, expires, lapses, or is otherwise withdrawn or terminated by governmental authority; (iii) Licensee determines that such Governmental Approvals may not be obtained in a timely manner; (iv) Licensee determines that it will be unable to obtain in a satisfactory manner, or maintain any fiber or power connection; or (v) Licensee determines that the Licensed Area is no longer technically compatible for its use, Licensee shall have the right to terminate this Encroachment Agreement. Notice of Licensee's exercise of its right to terminate shall be given to Licensee in writing by certified

mail, return receipt requested, and shall be effective upon the mailing of such notice by Licensee, or upon such later date as designated by Licensee. All rentals paid to said termination date shall be retained by Licensor. Upon such termination, this Encroachment Agreement shall be of no further force or effect except to the extent of the representations, warranties and indemnities made by each party to the other hereunder. Otherwise, Licensee shall have no further obligations for the payment of Rent to Licensor.

8. Miscellaneous.

[Signature page follows]

EXECUTED to be effective as of the date shown above.

LICENSOR:

City of Cupertino, a political
subdivision of the State of California

By: _____
Name: CHAD MOSLEY
Title: CITY ENGINEER

ATTEST:

_____
5-29-18, Clerk

APPROVED AS TO FORM
CITY ATTORNEY'S OFFICE

BY: _____
~~Randolph Hom~~
City Attorney acting

LICENSEE:

GTE MOBILNET OF CALIFORNIA
LIMITED PARTNERSHIP,
D/B/A VERIZON WIRELESS

by Cellco Partnership,
its General Partner

By: Scott Stewart 5/7/18

Name: SCOTT STEWART

Title: Director - Network

Exhibits:
Attachment 1

Attachment 1

Licensed Area

See attached.

verizon

SITE NAME:	**SF_CUPER001**
SITE ID:	**CPSC001**
LOCATION CODE:	**417709**
ASSET ID:	**LTPL1004**
BADGE NUMBER:	**24431**
SERVICE ID:	**4993063026**
SITE ADDRESS:	**PUBLIC ROW ADJACENT TO 10465 S. DE ANZA BOULEVARD CUPERTINO, CA 95014**
COUNTY:	**SANTA CLARA COUNTY**
SITE TYPE:	**STEEL LIGHT POLE**

VICINITY MAP

DIRECTIONS FROM VERIZON WIRELESS OFFICE WALNUT CREEK, CA:

- HEAD NORTHEAST ON MITCHELL DR TOWARD OAK GROVE RD
- TURN LEFT ONTO OAK GROVE RD
- USE THE LEFT 2 LANES TO TURN LEFT ONTO TREAT BLVD
- TURN RIGHT ONTO N MAIN ST
- TURN RIGHT ONTO THE INTERSTATE 680 S RAMP TO OAKLAND/SAN JOSE
- MERGE ONTO I-680 S
- CONTINUE ONTO I-280 N
- USE THE 2ND FROM THE RIGHT LANE TO TAKE THE DE ANZA BOULEVARD EXIT
- USE THE LEFT 2 LANES TO TURN LEFT ONTO N DE ANZA BLVD

DRIVING DIRECTIONS

TITLE	SIGNATURE	DATE
VERIZON PM		
VERIZON CM		
VERIZON RF		
MODUS PM		
MODUS CM		
UTILITIES		
LANDLORD/ PROPERTY OWNER		

SIGNATURE BLOCK

PROJECT DESCRIPTION

THE PROJECT INVOLVES THE INSTALLATION OF AN UNMANNED WIRELESS TELECOMMUNICATION FACILITY CONSISTING OF AN ANTENNA AND ASSOCIATED EQUIPMENT ON A CITY OF CUPERTINO REPLACEMENT STEEL LIGHT POLE IN THE PUBLIC RIGHT OF WAY. EXISTING POLE AND FOUNDATION TO BE REMOVED AND REPLACED WITH NEW STEEL POLE AND CONCRETE FOUNDATION. EXISTING POLE FOUNDATION TO BE DEMOLISHED TO A MINIMUM DEPTH BELOW EXISTING GRADE AND ABANDONED IN PLACE.

GENERAL SCOPE OF WORK

- ☐ ANTENNA AND ASSOCIATED EQUIPMENT
  INSTALL A NEW CYLINDRICAL ANTENNA AND EQUIPMENT ON A STEEL LIGHT POLE. INSTALLATION CONSISTS OF (1) NEW CYLINDRICAL ANTENNA CONCEALED WITHIN NEW CONCEALMENT SHROUD AT TOP OF LIGHT POLE, (2) NEW RRUS EQUIPMENT CABINETS AND (1) NEW LOAD CENTER/ DISCONNECT MOUNTED TO LIGHT POLE AND ASSOCIATED POWER, FIBER AND COAXIAL CABLES ROUTED WITHIN LIGHT POLE.
- ☐ PAINT
  ALL NEW EQUIPMENT AND MOUNTING COMPONENTS SHALL BE PAINTED TO MATCH LIGHT POLE, INCLUDING ANTENNA SHROUD, MOUNTING BRACKETS, CABLE SHROUD/ SWEEP, RRUS UNITS, RRUS MOUNTING BRACKETS AND LOAD CENTER.
- ☐ CABLING
  CABLING TO BE INSTALLED IN A TIGHT NEAT MANNER WITHOUT EXCESS CABLE LOOPS.
- ☐ SIGNAGE
  FCC MANDATED RF NOTICE/ WARNING AND SHUT-DOWN SIGNAGE TO BE MOUNTED TO LIGHT POLE PER FCC REQUIREMENTS, THE CITY OF CUPERTINO REQUIREMENTS, THE CALIFORNIA PUBLIC UTILITIES COMMISION GENERAL ORDER 95 SECTION 94.5 AND PACIFIC GAS AND ELECTRIC REQUIREMENTS.

PROJECT DESCRIPTION

APPLICANT
VERIZON WIRELESS
2785 MITCHELL DRIVE, SUITE 9
WALNUT CREEK, CA 94598
CONTACT: JENNIFER HAAS
PHONE: (650) 759-1377
EMAIL: JENNIFER.HAAS@VERIZONWIRELESS.COM

AGENT
MODUS, INC.
240 STOCKTON STREET, 3RD FLOOR
SAN FRANCISCO, CA 94108
CONTACT: KEVIN BOWYER
PHONE: (408) 219-5442
EMAIL: KBOWYER@MODUS-CORP.COM

PROPERTY OWNER
CITY OF CUPERTINO
CUPERTINO CITY HALL
10300 TORRE AVENUE
CUPERTINO, CA 95014-3202
PHONE: (408) 777-3354
EMAIL: ENGINEERING@CUPERTINO.ORG

A.P.N.:	ROW ADJACENT TO 359-17-019
OCCUPANCY TYPE:	N/A-LIGHT POLE IN ROW
CONSTRUCTION TYPE:	TYPE V-B
ZONING JURISDICTION:	CITY OF CUPERTINO
ZONING DESIGNATION:	HE4
LATITUDE (NAD 83):	37° 18' 58.99" N
LONGITUDE (NAD 83):	122° 01' 57.00" W
GROUND ELEVATION:	±248.6 AMSL

PROJECT INFORMATION

SHEET NO.	SHEET TITLE	REV.
T-1	TITLE SHEET	3
T-2	SYMBOLS, ABBREVIATIONS	3
T-3	GENERAL NOTES	3
C-1	TOPOGRAPHIC SURVEY, EXISTING CONDITIONS	1
A-1	SITE PLAN, ENLARGED ANTENNA LAYOUT, ENLARGED EQUIPMENT LAYOUT	3
A-2.0	ELEVATIONS	3
A-2.1	ELEVATIONS	3
A-3	DETAILS	3
S-1	STRUCTURAL NOTES, DETAILS	3
S-2	DETAILS	3
EP-1	SINGLE LINE DIAGRAM, EQUIPMENT GROUNDING DIAGRAM	3
EP-2	UTILITY PLAN, CONDUIT SCHEDULE, CIRCUIT DIAGRAM	3
EP-3	DETAILS	3
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SP-2	SPECIFICATIONS	3
SP-3	SPECIFICATIONS	3

SHEET INDEX

ARCHITECT
JAMES VACCARO ARCHITECT, INC.
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FAX NUMBER: (415) 963-4471
EMAIL: JVACCARO@JVARCHITECT.COM

SURVEYOR
HAYES LAND SURVEYING AND MAPPING
2630 MADIGAN COURT
CONCORD, CA 94518
CONTACT: RICK HAYES
CONTACT NUMBER: (925) 798-3591
EMAIL: RKSEYAH@COMCAST.NET

STRUCTURAL ENGINEER
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1470 FELTA ROAD
HEALDSBURG, CA 95448
CONTACT NUMBER: (707) 696-3721
EMAIL: JEFFREY@STRUCTURALENGINEERINGCONSULTING.COM

AGENT PROJECT MANAGER
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240 STOCKTON STREET, 3RD FLOOR
SAN FRANCISCO, CA 94108
CONTACT: KEVIN BOWYER
PHONE: (408) 219-5442
EMAIL: KBOWYER@MODUS-CORP.COM

PROJECT TEAM

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

- 2016 CALIFORNIA ADMINISTRATIVE CODE, TITLE 24 PART 1
- 2016 CALIFORNIA BUILDING CODE, TITLE 24 PART 2
- 2016 CALIFORNIA ELECTRICAL CODE, TITLE 24 PART 3
- 2016 CALIFORNIA MECHANICAL CODE, TITLE 24 PART 4
- 2016 CALIFORNIA PLUMBING CODE, TITLE 24 PART 5
- 2016 CALIFORNIA ENERGY CODE, TITLE 24 PART 6
- 2016 CALIFORNIA FIRE CODE, TITLE 24 PART 9
- ANSI/TIA-222-G
- 2016 NFPA 101, LIFE SAFETY CODE
- 2017 NFPA 70, NATIONAL ELECTRICAL CODE
- 2016 NFPA 72, NATIONAL FIRE ALARM CODE
- 2016 NFPA 13, SPRINKLER CODE
- 2013 AASHTO LTS-6
- STATE OF CALIFORNIA GENERAL ORDER NO. 128
- CITY/ COUNTY ORDINANCES AND CODES

ACCESSIBILITY REQUIREMENTS: FACILITY IS UN-MANNED AND NOT FOR HUMAN HABITATION. DISABLED ACCESS NOT REQUIRED IN ACCORDANCE WITH CALIFORNIA CODE OF REGULATIONS TITLE 24, PART 2, VOL. 1, CHAPTER 11B, DIVISION 2, SECTION 11B-203.5.

CODE COMPLIANCE

JAMES VACCARO ARCHITECT, INC.
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verizon

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SHEET TITLE

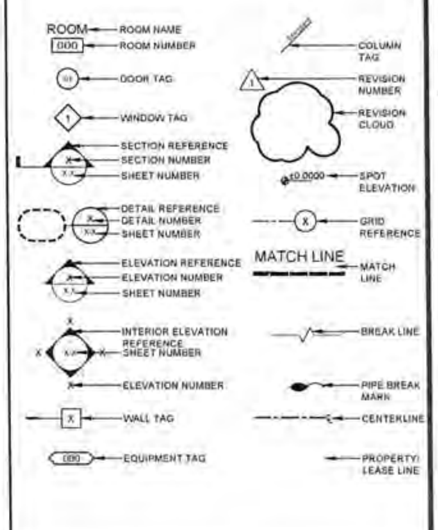
TITLE SHEET

SHEET NUMBER

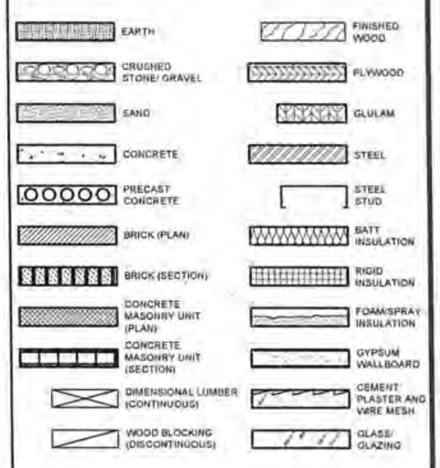
T-1

ABBREVIATIONS 3

&	AND
"L"	ANGLE
@	AT
/	BY
℄	CENTERLINE
°	DEGREES
Ø	DIAMETER
=	EQUAL
(E)	EXISTING
'	FEET
"	INCH(ES)
(N)	NEW
#	NUMBER
/	PER
%	PERCENT
℘	PLATE
±	PLUS/ MINUS
AB	ANCHOR BOLT
AC	ALTERNATING CURRENT
AC	ASPHALTIC CONCRETE
A/C	AIR CONDITIONING
ACI	AMERICAN CONCRETE INSTITUTE
ACT	ACOUSTICAL CEILING TILE
ADA	AMERICANS WITH DISABILITIES ACT
ADJ	ADJACENT
ADMIN	ADMINISTRATION
A/E	ARCHITECT/ ENGINEER
AFF	ABOVE FINISHED FLOOR
AGL	ABOVE GROUND LEVEL
AHJ	AUTHORITY HAVING JURISDICTION
AIA	AMERICAN INSTITUTE OF ARCHITECTS
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION
ALT	ALTERNATE
ALUM	ALUMINUM
AMP	AMPERE
AMSL	ABOVE MEAN SEA LEVEL
ANOD	ANODIZE
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
ANT	ANTENNA
APA	AMERICAN PLYWOOD ASSOCIATION
APPROX	APPROXIMATE
ARCH	ARCHITECT
ASCE	AMERICAN SOCIETY OF CIVIL ENGINEERS
ASHRAE	AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR CONDITIONING ENGINEERS
ASI	ARCHITECT'S SUPPLEMENTAL INSTRUCTIONS
ASSN	ASSOCIATION
ASSY	ASSEMBLY
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
AUTO	AUTOMATIC
AVE	AVENUE
AVG	AVERAGE
AWG	AMERICAN WIRE GAUGE
AWS	AMERICAN WELDING SOCIETY
AZ	AZIMUTH
B/B	BACK TO BACK
BAT	BATTEN
BATT	BATTERY
BC	BETWEEN CENTERS
BC	BOLT CIRCLE
BD	BOARD
BDRY	BOUNDARY
BITUM	BITUMINOUS
BKG	BACKING
BLDG	BUILDING
BLK	BLOCK
BLKG	BLOCKING
BLT	BUILT
BLVD	BOULEVARD
BM	BEAM
BOT	BOTTOM
BRG	BEARING
BRKT	BRACKET
BSMT	BASEMENT
BTWN	BETWEEN
BUR	BUILT-UP ROOFING
BW	BOTH WAYS
C	CHANNEL
C TO C	CENTER TO CENTER
CAB	CABINET
CBC	CALIFORNIA BUILDING CODE
CCD	CONSTRUCTION CHANGE DIRECTIVE
CCW	COUNTERCLOCKWISE
CD	CONSTRUCTION DOCUMENTS
CD	CONSTRUCTION DRAWINGS
CEC	CALIFORNIA ELECTRICAL CODE
CEM PLAS	CEMENT PLASTER
CERT	CERTIFY
CFC	CALIFORNIA FIRE CODE
CF/CI	CONTRACTOR FURNISHED/ CONTRACTOR INSTALLED
CF/OI	CONTRACTOR FURNISHED/ OWNER INSTALLED
CFM	CUBIC FEET PER MINUTE
CHK	CHECK
CIR	CIRCLE
CJ	CONSTRUCTION JOINT
CJ	CONTROL JOINT
CL	CENTERLINE
CLASS	CLASSIFICATION
CLG	CEILING
CLR	CLEAR
CM	CONSTRUCTION MANAGER
CMC	CALIFORNIA MECHANICAL CODE
CMU	CONCRETE MASONRY UNIT
CO	COMPANY
COI	CERTIFICATE OF OCCUPANCY
COAX	COAXIAL CABLE
CONC	CONCRETE
COND	CONDITION
CONN	CONNECT
CONT	CONTINUOUS
COORD	COORDINATE
COR	CHANGE ORDER REQUEST
CCOR	CORRIDOR
CPT	CARPET
CSI	CONSTRUCTION SPECIFICATIONS INSTITUTE
CSK	COUNTER SUNK
CSMT	CASEMENT
CT	CERAMIC TILE
CTG	COATING
CTR	CENTER
CTRL	CONTROL
CU	COPPER
CU YD	CUBIC YARD
CW	CLOCKWISE
CYL	CYLINDER
d	PENNY (NAIL)
D	DEPTH
DBL	DOUBLE
DC	DIRECT CURRENT
DEF	DEFINITION
DEG	DEGREE
DEMO	DEMOLITION (DEMOLISH)
DEPT	DEPARTMENT
DET	DETAIL
DF	DOUGLAS FIR
DIA	DIAMETER
DIAG	DIAGONAL
DIFF	DIFFERENCE
DIM	DIMENSION
DISC	DISCONNECT
DIST	DISTANCE
DIV	DIVISION
DL	DEAD LOAD
DMARC	DEMARCATION POINT
DN	DOWN
DR	DINING ROOM
DR	DOOR
DS	DOWNSPOUT
DWG	DRAWING
E	EAST
EA	EACH
EE	EACH END
EF	EACH FACE
EF	EXTERIOR FINISH
EFS	EXTERIOR FINISH SYSTEM
EGR	EMERGENCY GENERATOR RECEPTACLE
EIFS	EXTERIOR INSULATION AND FINISH SYSTEM
EJ	EXPANSION JOINT
EL	ELEVATION
ELAST	ELASTOMERIC
ELEC	ELECTRIC
ELEM	ELEMENT
EMF	ELECTROMAGNETIC FREQUENCY
ENGR	ENGINEER
EPA	ENVIRONMENTAL PROTECTION AGENCY
EPDM	ETHYLENE POLYSTYRENE BOARD
EQ	EQUAL
EQUIP	EQUIPMENT
EQUIV	EQUIVALENT
EW	EACH WAY
EXCL	EXCLUDE
EXP	EXPANSION
EXP	EXPOSED
EXT	EXTERIOR
EXT	EXTINGUISHER
F	FAHRENHEIT
FAB	FABRICATE(D)
FAR	FLOOR AREA RATIO
FDTN	FOUNDATION
FE	FIRE EXTINGUISHER
FF	FINISH FACE
FF&E	FURNITURE, FIXTURE, AND EQUIPMENT
FH	FIRE HYDRANT
FIN	FINISH
FLASH	FLASHING
FLEX	FLEXIBLE
FLR	FLOOR
FLOUR	FLUORESCENT
FM	FACTORY MUTUAL
FO	FIELD ORDER
FO	FINISHED OPENING
FOC	FACE OF CONCRETE
FOF	FACE OF FINISH
FOS	FACE OF STUD
FOW	FACE OF WALL
FP	FIRE PROTECTION
FP	FIRE PROOF
FR	FIRE RATING
FR	FIRE RESISTANT
FRMG	FRAMING
FRP	FIBER REINFORCED PLASTIC
FRT	FIRE RETARDANT TREATED
FRWY	FREEWAY
FT	FEET
FT	FIRE TREATED
FT	FOOT
FT/ LB	FOOT/ POUND
FTG	FOOTING
FURN	FURNISH
FUT	FUTURE
GA	GAGE
GA	GYPSUM ASSOCIATION
GAL	GALLON
GALV	GALVANIZED
GB	GRAB BAR
GC	GENERAL CONTRACTOR
GEN	GENERATOR
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GLULAM	GLUED LAMINATED WOOD
GSB	GYPSUM SHEATHING BOARD
GSM	GALVANIZED SHEET METAL
GSM	GLOBAL SYSTEM FOR MOBILE COMMUNICATION
GUAR	GUARANTEE
GYP	GYPSUM
GYP BD	GYPSUM BOARD
GYP	GYPSUM PLASTER
HDG	HOT DIPPED GALVANIZED
HDW	HARDWARE
HEX	HEXAGONAL
HGR	HANGER
HLDN	HOLDDOWN
HM	HOLLOW METAL
HORIZ	HORIZONTAL
HS	HIGH STRENGTH
HT	HEIGHT
HVAC	HEATING, VENTILATING AND AIR CONDITIONING
HWY	HIGHWAY
HYD	HYDRANT
IAQ	INDOOR AIR QUALITY
IBC	INTERNATIONAL BUILDING CODE
ICC	INTERNATIONAL CODE COUNCIL
ID	IDENTIFICATION
ID	INSIDE DIAMETER
ID	INSIDE DIMENSION
IF	INSIDE FACE
IFS	INSIDE FACE OF STUD
ILLUM	ILLUMINATION
IMED	IMMEDIATE
IN	INCHES
INCAND	INCANDESCENT
INCL	INCLUDED
INFO	INFORMATION
INSUL	INSULATION
INT	INTERIOR
IR	INSIDE RADIUS
ISO	INTERNATIONAL STANDARDS CODE
ISO	ISOMETRIC
J-BOX	JUNCTION BOX
JST	JOIST
K	THOUSAND
KIP	THOUSAND POUNDS
KIT	KITCHEN
KO	KNOCKOUT
L	ANGLE
L	LENGTH
LAD	LADDER
LAG	LAG BOLT
LAM	LAMINATE
LAT	LATITUDE
LAV	LAVATORY
LB	LAG BOLT
LBS	POUND
LED	LIGHT EMITTING DIODE
LF	LINEAR FEET
LH	LEFT HAND
LHR	LEFT HAND REVERSE
LHS	LEFT HAND SIDE
LIN	LINEAR
LKNT	LOCKNUT
LKWASH	LOCKWASHER
LL	LIVE LOAD
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LN	LANE
LNG	LIQUID NATURAL GAS
LOC	LOCATION
LONG	LONGITUDINAL
LT	LIGHT
LTD	LIMITED
LTE	LONG TERM EVOLUTION
LTG	LIGHTING
LVD	LOUVERED
LVR	LOUVER
MAINT	MAINTENANCE
MAN	MANUAL
MATL	MATERIAL
MAX	MAXIMUM
MB	MACHINE BOLT
MC	MC CHANNEL
MDF	MEDIUM-DENSITY FIBREBOARD
MECH	MECHANICAL
MED	MEDIUM
MEMB	MEMBRANE
MFR	MANUFACTURER
MFR REC	MANUFACTURER'S RECOMMENDATION
MHZ	MEGAHERTZ
MID	MIDDLE
MIN	MINIMUM
MIRR	MIRROR
MISC	MISCELLANEOUS
MK	MARK
ML	METAL LATH
MLDG	MOLDING
MLWK	MILLWORK
MN	MAGNETIC NORTH
MOD	MODIFY
MOD BIT	MODIFIED BITUMEN
MR	MOISTURE RESISTANT
MS	MACHINE SCREW
MSB	MAIN SWITCHBOARD
MTD	MOUNTED
MTG	MEETING
MTG	MOUNTING
MTL	METAL
MULL	MULLION
MULT	MULTIPLE
MUT	MUNTIN
MW	MICROWAVE
N	NORTH
NA	NOT APPLICABLE
NC	NOISE CRITERIA
NEG	NEGATIVE
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NFRC	NATIONAL FENESTRATION RATING COUNCIL
NIC	NOT IN CONTRACT
NO	NUMBER
NOM	NOMINAL
NORM	NORMAL
NRC	NOISE REDUCTION COEFFICIENT
NRCA	NATIONAL ROOFING CONTRACTORS ASSOCIATION
NS	NO SCALE
NTP	NOTICE TO PROCEED
NTS	NOT TO SCALE
O/	OVER
O/O	OUT TO OUT
O	OXYGEN
OC	ON CENTER
OCC	OCCUPY
OD	OUTSIDE DIAMETER
OF	OUTSIDE FACE
OF/CI	OWNER FURNISHED/ CONTRACTOR INSTALLED
OF/OI	OWNER FURNISHED/ OWNER INSTALLED
OFS	OUTSIDE FACE OF STUDS
OPH	OPPOSITE HAND
OPNG	OPENING
OPP	OPPOSITE
OPT	OPTIONAL
OSHA	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
PAR	PARALLEL
PAR	PARAPET
PART	PARTIAL
PAT	PATTERN
PB	PANIC BAR
PB	PULL BOX
PED	PEDESTAL
PEN	PENETRATE
PERF	PERFORATED
PERIM	PERIMETER
PERM	PERMANENT
PERP	PERPENDICULAR
PH	PHASE
PKWY	PARKWAY
PL	PLATE
PL	PROPERTY LINE
PLAS	PLASTER
PLAS	PLASTIC
PLAT	PLATFORM
PLYWD	PLYWOOD
PN	PART NUMBER
PNL	PANEL
PO	PURCHASE ORDER
PPC	POWER PROTECTION CABINET
PREFAB	PREFABRICATE(D)
PRELIM	PRELIMINARY
PREP	PREPARATION
PREV	PREVIOUS
PROJ	PROJECT
PROP	PROPERTY
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PT	PAINT
PT	POST TENSIONED
PT	PRESSURE TREATED
PV	PHOTOVOLTAIC
PVC	POLYVINYL CHLORIDE (PLASTIC)
PWR	POWER
QC	QUALITY CONTROL
QTY	QUANTITY
QUAL	QUALITY
R	RADIUS
R	THERMAL RESISTANCE
RB	RUBBER BASE
RCP	REFLECTED CEILING PLAN
RD	ROAD
RD	ROOF DRAIN
REBAR	REINFORCING STEEL BARS
REC	RECESSED
RECD	RECEIVED
RECPT	RECEPTACLE
RECT	RECTANGLE
REF	REFERENCE
REINF	REINFORCE
REM	REMOVABLE
REQ	REQUIRE
REQD	REQUIRED
RESIL	RESILIENT
REV	REVISION
RF	RADIO FREQUENCY
RF	RESILIENT FLOORING
RFI	REQUEST FOR INFORMATION
RFP	REQUEST FOR PROPOSAL
RH	RIGHT HAND
RH	ROOF HATCH
RHR	RIGHT HAND REVERSE
RL	ROOF LEADER
RM	ROOM
RND	ROUND
RO	ROUGH OPENING
ROW	RIGHT OF WAY
RR	RAILROAD
RRU	REMOTE RADIO UNIT
RWD	REDWOOD
RWL	RAIN WATER LEADER
S	SOUTH
SCH	SCHEDULE
SD	SMOKE DETECTOR
SE	STRUCTURAL ENGINEER
SECT	SECTION
SEL	SELECT
SEP	SEPARATE
SF	SQUARE FOOT (FEET)
SHT	SHEET
SHTHG	SHEATHING
SIM	SIMILAR
SJ	SCORED JOINT
SK	SKETCH
SKLT	SKYLIGHT
SLNT	SEALANT
SLV	SLEEVE
SPEC	SPECIFICATION
SPKLR	SPRINKLER
SQ	SQUARE
SQ FT	SQUARE FOOT
SQ IN	SQUARE INCH
SS	STAINLESS STEEL
ST	STAIRS
ST	STREET
STC	SOUND TRANSMISSION CLASS
STD	STANDARD
STL	STEEL
STIF	STIFFENER
STOR	STORAGE
STR	STRAIGHT
STRUCT	STRUCTURAL
SUB	SUBSTITUTE
SUP	SUPPLEMENTARY
SURR	SURROUND
SUSP	SUSPEND
SYM	SYMBOL
SYMM	SYMMETRICAL
T	TREAD
T&B	TOP AND BOTTOM
T&G	TONGUE AND GROOVE
T&M	TIME AND MATERIALS
TB	THROUGH BOLT
TELCO	TELECOMMUNICATIONS COMPANY
TEMP	TEMPORARY
THERM	THERMAL
THK	THICKNESS
THRES	THRESHOLD
THRU	THROUGH
TMA	TOWER MOUNTED AMPLIFIER
TN	TRUE NORTH
TO	TOP OF
TOC	TOP OF CONCRETE
TOF	TOP OF FLOOR
TOF	TOP OF FOOTING
TOP	TOP OF PARAPET
TOPO	TOPOGRAPHY
TOS	TOP OF SLAB
TOW	TOP OF WALL
TRANS	TRANSPARENT
TRANS	TRANSFORMER
TS	TUBE STEEL
TYP	TYPICAL
U	HEAT TRANSFER COEFFICIENT
UG	UNDERGROUND
UL	UNDERWRITERS LABORATORIES
UMTS	UNIVERSAL MOBILE TELECOMMUNICATIONS SYSTEM
UNO	UNLESS NOTED OTHERWISE
UON	UNLESS OTHERWISE NOTED
UTIL	UTILITY
UV	ULTRAVIOLET
V	VOLT
VAR	VARIES
VCT	VINYL COMPOSITION TILE
VENT	VENTILATION
VERT	VERTICAL
VIF	VERIFY IN FIELD
VOC	VOLATILE ORGANIC COMPOUND
VOLT	VOLTAGE
W	WEST
W	WIDE
W/	WITH
W/O	WITHOUT
W/W	WALL TO WALL
WC	WATER CLOSET
WD	WOOD
WF BM	WIDE FLANGE BEAM
WL	WIND LOAD
WM	WIRE MESH
WO	WORK ORDER
WP	WATERPROOFING
WP	WEATHERPROOF
WPM	WATERPROOF MEMBRANE
WR	WATER REPELLENT
WR	WATER RESISTANT
WRB	WATER RESISTIVE BARRIER
WRM	WATER RESISTANT MEMBRANE
WT	WEIGHT
WWF	WELDED WIRE FABRIC
WWM	WELDED WIRE MESH
WWR	WELDED WIRE REINFORCEMENT
X BRACE	CROSS BRACE
XFMR	TRANSFORMER
YD	YARD



GRAPHIC SYMBOLS 1



MATERIALS SYMBOLS 2

JAMES VACCARO ARCHITECT, INC.

CLIENT

MODUS, INC.

VERIZON WIRELESS

CONSULTANTS

SF_CUPER001
CPSC001
PUBLIC ROW ADJACENT TO
10465 S. DE ANZA BOULEVARD
CUPERTINO, CA 95014
APN: PUBLIC ROW ADJACENT TO 359-17-019

REV	DATE	ISSUE
1	10/18/2017	90% CONSTRUCTION
2	2/6/2018	100% CONSTRUCTION
3	3/26/2018	100% CONSTRUCTION REV

SHEET TITLE

SYMBOLS, ABBREVIATIONS

SHEET NUMBER

T-2

GENERAL NOTES

1 General Notes

GENERAL NOTES

1. CONTRACTOR SHALL VERIFY AND COORDINATE ALL NEW AND EXISTING CONDITIONS AND DIMENSIONS AT JOB SITE FOR COMPARISON WITH DRAWINGS AND SPECIFICATIONS PRIOR TO BIDDING AND START OF CONSTRUCTION. IF ANY DISCREPANCIES, INCONSISTENCIES OR OMISSIONS ARE FOUND, THE ARCHITECT/ ENGINEER SHALL BE NOTIFIED, IN WRITING FOR CLARIFICATION PRIOR TO PROCEEDING WITH WORK.
2. DO NOT SCALE DRAWINGS. CONTRACTOR SHALL NOTIFY THE ARCHITECT/ ENGINEER FOR CLARIFICATIONS. ALL DIMENSIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR AND COORDINATED WITH ALL OF THE WORK OF ALL TRADES. IF DISCREPANCIES ARE FOUND, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT/ ENGINEER IN WRITING FOR CLARIFICATION BEFORE COMMENCEMENT OR RESUMPTION OF WORK.
3. ABBREVIATIONS THROUGHOUT THE PLANS ARE THOSE IN COMMON USE. NOTIFY THE ARCHITECT/ ENGINEER OF ANY ABBREVIATIONS IN QUESTION.
4. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. CONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS, AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK.
5. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE CODE AND REGULATIONS.
6. UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
7. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
8. IF THE SPECIFIED EQUIPMENT CANNOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION FOR APPROVAL BY THE ARCHITECT/ENGINEER.
9. LEGAL EXITS SHALL NOT BE BLOCKED AT ANYTIME.
10. TEMPORARY PEDESTRIAN PROTECTION SHALL BE PROVIDED AS REQUIRED BY LOCAL CODES.
11. THE ARCHITECT/ ENGINEER SHALL BE CONSULTED IN ANY/ ALL CASES WHERE CUTTING INTO AN EXISTING STRUCTURAL PORTION OF ANY STRUCTURE IS NECESSARY, PRIOR TO PROCEEDING WITH WORK.
12. CONTRACTOR SHALL VERIFY ACTUAL ROUTING OF CONDUIT, POWER AND FIBER CABLES, GROUND CABLES AS SHOWN. CONTRACTOR SHALL SHALL ADD NEW CONDUIT AS NECESSARY. CONTRACTOR SHALL CONFIRM THE ACTUAL ROUTING WITH THE CONSTRUCTION MANAGER.
13. THE CONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES, ANY DAMAGED PART SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE OWNER.
14. CLEAN UP AND DISPOSAL-REMOVE DEBRIS, RUBBISH AND WASTE MATERIAL FROM THE OWNER'S PROPERTY TO A LAWFUL/ LEGAL DISPOSAL AREA AND PAY ALL HAULING AND DUMPING COSTS. CONFORM TO PERTAINING FEDERAL, STATE AND LOCAL LAWS, REGULATIONS AND ORDERS UPON COMPLETION OF WORK ALL CONSTRUCTION AREAS SHALL BE LEFT CLEAN AND FREE FROM DEBRIS, CLEAN ALL STAINS, PAINT SPOTS, DROPPINGS, AND OTHER BLEMISHES.
15. THE CONTRACTOR SHALL PROTECT ALL FINISH WORK AND SURFACES FROM DAMAGE DURING THE COURSE OF CONSTRUCTION AND SHALL REPLACE AND/ OR REPAIR ALL DAMAGED SURFACES CAUSED BY THE CONTRACTOR OR SUBCONTRACTOR PERSONNEL TO THE SATISFACTION OF THE OWNER.
16. PRIOR TO INSPECTION OF THE EXISTING FACILITY, THE CONTRACTOR MUST RECEIVE PERMISSION FOR SITE ACCESS FROM THE OWNER OR THE DESIGNATED REPRESENTATIVE.
17. WHEN IT IS NECESSARY TO INTERRUPT ANY EXISTING UTILITY SERVICE TO MAKE CORRECTIONS AND/ OR CONNECTION, A MINIMUM OF 48 HOURS ADVANCE NOTICE SHALL BE GIVEN TO THE OWNER. INTERRUPTIONS IN UTILITY SERVICES SHALL BE OF THE SHORTEST POSSIBLE DURATION AND SHALL BE APPROVED IN ADVANCE BY THE OWNER.
18. ALL CONTRACTORS PERFORMING WORK ON THE SITE SHALL BE RESPONSIBLE FOR INITIATING, MAINTAINING AND SUPERVISING A REASONABLE AND PRUDENT SAFETY PROGRAM INCLUDING, BUT NOT LIMITED TO THE ISOLATION OF WORK AREAS AND THE PROMPT REMOVAL OF ANY DEBRIS OR TOOLS WHICH MAY ENDANGER THE PUBLIC OR WORKERS.
19. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING UTILITIES BELOW GRADE AND RELATED SERVICE CONNECTIONS WITH THE RESPECTIVE UTILITY COMPANIES.
20. THE CONTRACTOR SHALL COORDINATE THE REMOVAL, ABANDONMENT, AND/ OR RELOCATION OF EXISTING UTILITIES ABOVE OR BELOW GRADE WITH THE RESPECTIVE UTILITY COMPANIES.
21. THE CONTRACTOR SHALL PERFORM ALL WORK WITHIN PUBLIC RIGHTS-OF-WAY ACCORDING TO LOCAL JURISDICTIONAL STANDARDS AND SPECIFICATIONS. CONTRACTOR SHALL OBTAIN PERMITS FROM APPROPRIATE AGENCIES.
22. ALL CONCRETE REPAIR WORK SHALL BE DONE IN ACCORDANCE WITH AMERICAN CONCRETE INSTITUTE (ACI) 301.
23. ALL STRUCTURAL STEEL WORK SHALL BE DONE IN ACCORDANCE WITH AISC SPECIFICATIONS.
24. THE EXISTING SITE IS IN FULL OPERATION. ANY CONSTRUCTION WORK BY CONTRACTOR SHALL NOT DISRUPT THE EXISTING NORMAL OPERATION. ANY WORK MUST BE COORDINATED WITH OWNER. ALSO, WORK SHOULD BE SCHEDULED FOR AN APPROPRIATE WINDOW TO MINIMIZE DISTURBANCE.
25. THE ARCHITECT/ ENGINEER SHALL BE NOTIFIED IN WRITING OF ANY SUBSTITUTIONS, INCLUDING CHANGES IN PRODUCTS, MATERIALS, EQUIPMENT AND DETAILS OF CONSTRUCTIONS FROM THOSE SHOWN. THE SUBSTITUTIONS PROCEDURES PER SPECIFICATIONS SECTION 01 25 00 SHALL BE FOLLOWED. THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR PERFORMANCE AND ASSOCIATED COSTS FOR ANY SUBSTITUTION NOT APPROVED IN WRITING BY THE ARCHITECT/ ENGINEER PER SPECIFICATIONS SECTION 01 25 00.
26. PROVIDE A PORTABLE FIRE EXTINGUISHER WITH A RATING OF NOT LESS THAN 2-A OR 2-A:10-BC WITHIN 75 FEET TRAVEL DISTANCE TO ALL PORTIONS OF THE WORK AREA DURING CONSTRUCTION.
27. CONTRACTOR SHALL USE BEST MANAGEMENT PRACTICES TO PREVENT STORM WATER POLLUTION DURING CONSTRUCTION.
28. SHOP DRAWINGS SHALL BE SUBMITTED FOR ALL EQUIPMENT AND MATERIALS WHICH MUST INTERFACE AND COORDINATE WITH OTHERS, WHETHER DETAILED OR NOT.
31. THE CONTRACTOR SHALL OBTAIN OSHA PERMITS FOR ANY VERTICAL EXCAVATION OVER 5'-0" DEEP INTO WHICH PERSONS MUST DESCEND.
32. ALL DISSIMILAR METALLIC MATERIALS SHALL BE EFFECTIVELY ISOLATED FROM EACH OTHER TO PREVENT GALVANIC ACTION, WHETHER DETAILED OR NOT.
33. ALL WOOD IN CONTACT WITH MASONRY OR CONCRETE SHALL BE PRESSURE TREATED WITH AN APPROVED PRESERVATIVE.

2 Site Work Notes

SITE WORK NOTES

1. THE CONTRACTOR SHALL CONTACT UTILITY LOCATING SERVICES AND CONDUCT UNDERGROUND UTILITY LOCATING AND MAPPING PRIOR TO THE START OF CONSTRUCTION.
2. ALL EXISTING ACTIVE SEWER, WATER, GAS, ELECTRIC, AND OTHER UTILITIES WHERE ENCOUNTERED IN THE WORK, SHALL BE PROTECTED AT ALL TIMES, AND WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, SHALL BE RELOCATED AS DIRECTED BY CONSTRUCTION MANAGER ONLY UPON APPROVAL OF SPECIFIC UTILITY OWNER. EXTREME CAUTION SHOULD BE USED BY THE CONTRACTOR WHEN EXCAVATING OR DRILLING PIERS AROUND OR NEAR UTILITIES.
3. ALL SITE WORK SHALL BE AS INDICATED ON THE DRAWINGS AND PROJECT SPECIFICATIONS.
4. IF NECESSARY, RUBBISH, STUMPS, DEBRIS, STICKS, STONES AND OTHER REFUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF LEGALLY.
5. ALL EXISTING INACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE REMOVED AND/OR CAPPED, PLUGGED OR OTHERWISE DISCONTINUED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK, SUBJECT TO THE APPROVAL OF CONTRACTOR, OWNER AND/OR LOCAL UTILITIES.
6. CONTRACTOR SHALL DETERMINE THE ACCURATE LOCATION OF EXISTING UNDERGROUND FACILITIES PRIOR TO ANY EXCAVATION.
7. CONTRACTOR SHALL CEASE EXCAVATING IF UNIDENTIFIED UTILITIES ARE ENCOUNTERED.
8. CONTRACTOR SHALL IMMEDIATELY NOTIFY THE UTILITY OWNER OF EXCAVATION DAMAGE AND TAKE STEPS TO MITIGATE DAMAGE AND/ OR ASSIST WITH REPAIR.
9. CONTRACTOR SHALL PROVIDE ADEQUATE SHORING, BACKFILL AND OTHER PHYSICAL SUPPORT TO PROTECT UNDERGROUND UTILITIES.
10. CONTRACTOR SHALL MINIMIZE DISTURBANCE TO EXISTING SITE DURING CONSTRUCTION.
11. THE CONTRACTOR SHALL PROVIDE SITE SIGNAGE IN ACCORDANCE WITH VERIZON WIRELESS AND AUTHORITY HAVE JURISDICTION SPECIFICATIONS FOR SITE SIGNAGE.
12. CONTRACTOR SHALL MINIMIZE DISTURBANCE TO EXISTING SITE DURING CONSTRUCTION EROSION CONTROL MEASURES, IF REQUIRED DURING CONSTRUCTION, SHALL BE IN CONFORMANCE WITH THE LOCAL GUIDELINES FOR EROSION AND SEDIMENT CONTROL.

3 Concrete Notes

CONCRETE NOTES

1. ALL POURED-IN-PLACE CONCRETE SHALL HAVE AN ULTIMATE COMPRESSIVE STRENGTH OF 3,000 PSI AT 28 DAYS, UNLESS OTHERWISE NOTED (DESIGN BASIS 2,500 PSI-NO SPECIAL INSPECTION REQUIRED). CEMENT TO BE TYPE II FROM TESTED STOCK PER ASTM C-150.
2. CONCRETE FORM TOLERANCES SHALL BE WITHIN THE STANDARDS SET BY THE AMERICAN CONCRETE INSTITUTE.
3. ALL REINFORCING STEEL, ANCHOR BOLTS, DOWELS AND OTHER INSERTS SHALL BE SECURED IN POSITION AND INSPECTED BY THE LOCAL BUILDING DEPARTMENT INSPECTOR PRIOR TO THE POURING OF ANY CONCRETE.
4. NO PIPES OR DUCTS SHALL BE PLACED IN STRUCTURAL CONCRETE UNLESS SPECIFICALLY DETAILED. REFER TO ARCHITECTURAL, MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS FOR LOCATIONS.
5. FORM EXPOSED CORNERS OF COLUMNS, BEAMS, WALLS, ETC. WITH 3/4 INCH CHAMFERS UNLESS DETAILED OTHERWISE.
6. PROVIDE LIGHT BROOM FINISH ON ALL EXPOSED CONCRETE UNLESS NOTED OTHERWISE.

4 Reinforcing Steel Notes

REINFORCING STEEL NOTES

1. REINFORCING STEEL SHALL CONFORM TO ASTM A-615 GRADE 60 U.O.N.
2. BARS SHALL BE CLEAN OF MUD, OIL OR OTHER COATINGS LIKELY TO IMPAIR BONDING.
3. ALL REINFORCING SHALL BE SECURED IN PLACE PRIOR TO PLACING CONCRETE OR GROUTING MASONRY.
4. REINFORCING STEEL SHALL BE SPLICED AS SHOWN OR NOTED. SPLICES AT OTHER LOCATIONS SHALL BE REVIEWED BY THE STRUCTURAL ENGINEER.

5 Steel Notes

STEEL NOTES

1. ALL STRUCTURAL AND MISCELLANEOUS STEEL SHALL CONFORM TO ASTM A-36 AND SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH A.I.S.C. SPECIFICATIONS FOR THE DESIGN FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS, LATEST ADDITION.
2. BOLTS SHALL CONFORM TO ASTM A307, UNLESS NOTED OTHERWISE.
3. PIPE STEEL SHALL CONFORM TO ASTM A-53, GRADE B.
4. PLATES SHALL CONFORM TO ASTM A-36.
5. ALL STEEL PERMANENTLY EXPOSED TO WEATHER, (INCLUDING NUTS, BOLTS, WASHERS) SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION.
6. INSTALLATION OF CONCRETE EXPANSION/WEDGE ANCHOR, SHALL BE PER MANUFACTURER'S WRITTEN RECOMMENDED PROCEDURE. THE BOLT, DOWEL OR ROD SHALL CONFORM TO MANUFACTURER'S RECOMMENDATION FOR EMBEDMENT DEPTH OR AS SHOWN ON THE DRAWINGS. NO REBAR SHALL BE CUT WITHOUT PRIOR CONTRACTOR APPROVAL WHEN DRILLING HOLES IN CONCRETE. SPECIAL INSPECTIONS, REQUIRED BY GOVERNING CODES, SHALL BE PERFORMED IN ORDER TO MAINTAIN MANUFACTURER'S MAXIMUM ALLOWABLE LOADS.

6 Welding Notes

WELDING NOTES

1. THE QUALITY OF MATERIALS AND THE FABRICATION OF ALL WELDED CONNECTIONS SHALL BE IN CONFORMANCE WITH THE AMERICAN WELDING SOCIETY'S STRUCTURAL WELDING CODE, AWS D1.1 LATEST EDITION.
2. SPECIAL INSPECTION OF WELDING PER SECTION 1704 IS REQUIRED. A QUALIFIED AND CERTIFIED INSPECTOR SHALL BE PRESENT DURING SHOP AND FIELD WELDING OPERATIONS UNLESS OTHERWISE NOTED AND SHALL INSPECT ALL THE WORK AS REQUIRED BY AWS D1.1, SECTION 6.
3. SPECIAL INSPECTION NEED NOT BE CONTINUOUS FOR THE FOLLOWING ITEMS, PROVIDED THE MATERIAL, QUALIFICATIONS OF WELDING PROCEDURES AND WELDERS ARE VERIFIED PRIOR TO THE START OF WORK; PERIODIC INSPECTIONS MAY BE MADE OF WORK IN PROGRESS AND A VISUAL INSPECTION OF ALL WELDS IS STILL REQUIRED.
   1. SINGLE-PASS FILLET WELDS NOT EXCEEDING 5/16 INCH.
4. INSPECTORS SHALL POSSESS AND BE FAMILIAR WITH THE APPROVED WELDING PROCEDURE SPECIFICATIONS (WPS).
5. ALL WELDING SHALL BE DONE BY CERTIFIED WELDERS USING PRE-QUALIFIED WELDING PROCEDURES.
6. THE INSPECTOR SHALL CONFIRM THE QUALIFICATION OF WELDERS. THE USE OF AWS QUALIFIED PROCEDURES, THE MANUFACTURER'S RECOMMENDED USE OF AUTOMATIC EQUIPMENT AND THE PROPER USE OF PREHEAT, IF REQUIRED.

7 Painting Notes

PAINTING NOTES

1. EXTRA MATERIALS: DELIVER TO OWNER 1 QUART OF EACH COLOR AND TYPE OF FINISH COAT PAINT USED ON PROJECT, IN CONTAINERS PROPERLY LABELED AND SEALED.
2. MANUFACTURER SHALL BE TNEMEC COMPANY INCORPORATED, UNLESS NOTED OTHERWISE.
3. MATERIAL COMPATIBILITY: PROVIDE MATERIALS THAT ARE COMPATIBLE WITH ONE ANOTHER AND WITH SUBSTRATES.
4. FOR EACH COAT IN A PAINT SYSTEM, PROVIDE PRODUCTS RECOMMENDED IN WRITING BY MANUFACTURERS OF TOPCOAT FOR USE IN PAINT SYSTEM AND ON SUBSTRATE INDICATED.
5. REMOVE HARDWARE, AND SIMILAR ITEMS THAT ARE NOT TO BE PAINTED. MASK ITEMS THAT CANNOT BE REMOVED. REINSTALL ITEMS IN EACH AREA AFTER PAINTING IS COMPLETE.
6. CLEAN AND PREPARE SURFACES IN AN AREA BEFORE BEGINNING PAINTING IN THAT AREA. SCHEDULE PAINTING SO CLEANING OPERATIONS WILL NOT DAMAGE NEWLY PAINTED SURFACES.
7. APPLY PAINTS ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS.
8. APPLY PAINTS TO PRODUCE SURFACE FILMS WITHOUT CLOUDINESS, SPOTTING, HOLIDAYS, LAPS, BRUSH MARKS, ROLLER TRACKING, RUNS, SAGS, ROPINESS, OR OTHER SURFACE IMPERFECTIONS. CUT-IN SHARP LINES AND COLOR BREAKS.
9. IF UNDERCOATS OR OTHER CONDITIONS SHOW THROUGH TOPCOAT, APPLY ADDITIONAL COATS UNTIL CURED FILM HAS A UNIFORM PAINT FINISH, COLOR, AND APPEARANCE.
10. SEE SPECIFICATIONS SECTION 09 90 00 FOR PAINTING AND COATING SPECIFICATIONS.

8 Light Pole Notes

LIGHTING NOTES

1. LUMINAIRES, JUNCTION BOXES, 1-1/2" RIGID METAL CONDUIT, 1-1/2" PVC CONDUIT, AND POLES SHALL COMPLY WITH SECTION 86 OF THE CALTRANS STANDARD SPECIFICATIONS AND CITY OF CUPERTINO STANDARD DETAILS.
2. LUMINAIRES MAY BE CUT OFF, TYPE M-II OR M-III I.E.S. LIGHT DISTRIBUTION, UNLESS OTHERWISE NOTED. AT CUL-DE-SACS USE TYPE M-III OR BETTER, UNLESS OTHERWISE NOTED.
3. THE SERVICE SUPPLYING ELECTROLIER CIRCUIT SHALL BE FUSED AND GROUNDED IN ACCORDANCE WITH NATIONAL ELECTRICAL CODE AT THE FIRST JUNCTION BOX. AN ADDITIONAL FUSE IS REQUIRED AT EACH ELECTROLIER ON ANY UNGROUNDED CONDUCTOR. CONDUCTORS SHALL BE #8 THW UNLESS OTHERWISE NOTED AND ALL SERVICE SHALL BE 120 VOLT. PHOTO ELECTRIC UNIT CONTROL IS TO BE LOCATED AT THE LUMINAIRE UNLESS OTHERWISE NOTED.
4. THE CONTRACTOR SHALL OBTAIN A SERVICE POINT CONFIRMATION AND A CLEARANCE FROM THE CITY OF CUPERTINO PUBLIC WORKS DEPARTMENT PRIOR TO INSTALLING ANY FOUNDATIONS, POLES, CIRCUITS AND CONDUCTORS. UNDERGROUND SERVICE ALERT SHALL BE USED TO VERIFY LOCATION OF OTHER UNDERGROUND UTILITIES.
5. PRIOR TO PLACING ANY WORK OTHER THAN CURB AND GUTTER, THE CONTRACTOR SHALL SUPPLY THE CITY OF CUPERTINO PUBLIC WORKS DEPARTMENT WITH A PACIFIC GAS AND ELECTRIC COMPANY ELECTRICAL POWER DESIGN WITH ELECTRICAL SERVICE POINTS AND POLE NUMBERS.
6. A CITY OF CUPERTINO PUBLIC WORKS DEPARTMENT CONNECTION ORDER IS REQUIRED TO ENERGIZE ANY ELECTROLIER OR EQUIPMENT (PROVIDED BY THE CITY OF CUPERTINO AFTER COMPLETION AND INSPECTION FOR SUBMITTAL TO PACIFIC GAS AND ELECTRIC).
7. CONTACT PACIFIC GAS AND ELECTRIC FOR ADDITIONAL REQUIREMENTS AND CONTACT THE CITY OF CUPERTINO PUBLIC WORKS DEPARTMENT FOR INSPECTIONS OF FOUNDATIONS FORTY EIGHT HOURS PRIOR TO FOUNDATION POURING AND ELECTRICAL INSPECTIONS.
8. THE CONTRACTOR SHALL SUPPLY TO THE CITY OF CUPERTINO FOR APPROVAL, MANUFACTURER'S SUBMITTALS FOR ALL NEW LUMINAIRES.
9. ALL CONDUCTORS SHALL BE SIZED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE.
10. ALL OVERLOAD PROTECTION (FUSES) SHALL BE SIZED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE.
11. WHENEVER AN INSTALLATION IS NEAR ANY OVERHEAD WIRES/ CONDUCTORS, A CLEARANCE MUST BE OBTAINED FROM PACIFIC GAS AND ELECTRIC PRIOR TO INSTALLATION.

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CLIENT

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SAN FRANCISCO, CA 94108

verizon

VERIZON WIRELESS
2785 MITCHELL DRIVE, SUITE 9
WALNUT CREEK, CA 94598

CONSULTANTS

SF_CUPER001
CPSC001
PUBLIC ROW ADJACENT TO
10455 S. DE ANZA BOULEVARD
CUPERTINO, CA 95014
APN: PUBLIC ROW ADJACENT
TO 359-17-019

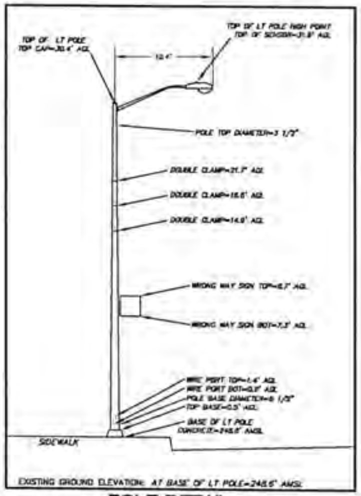
REV	DATE	ISSUE
1	10/16/2017	90% CONSTRUCTION
2	2/6/2018	100% CONSTRUCTION
3	3/26/2018	100% CONSTRUCTION REV.

SHEET TITLE

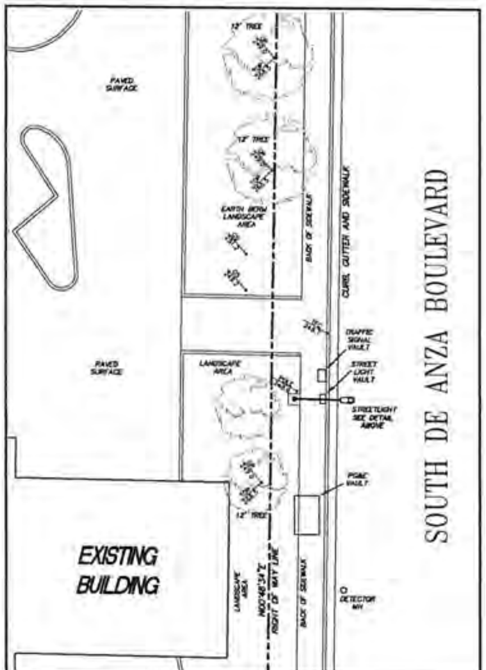
GENERAL NOTES

SHEET NUMBER

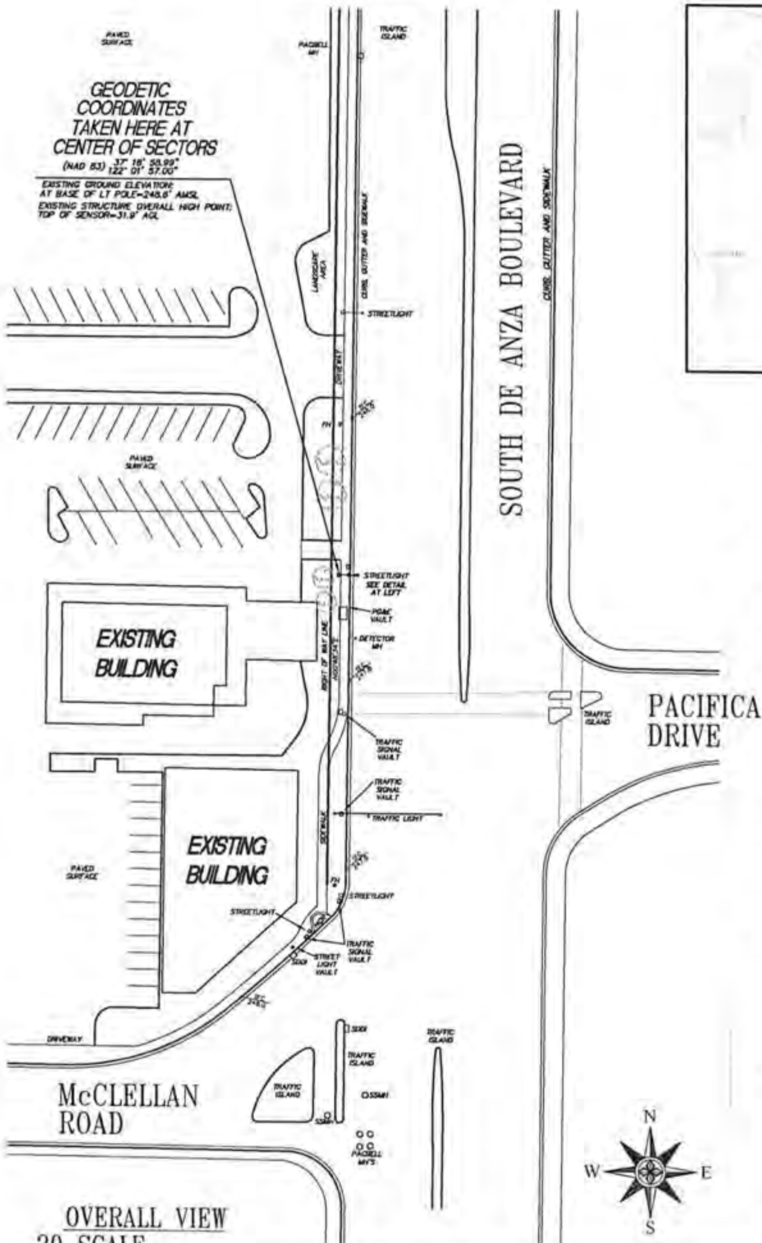
T-3



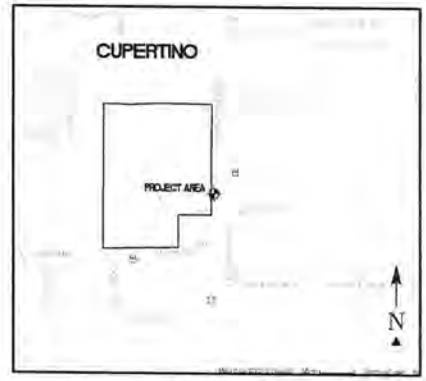
POLE DETAIL
5 SCALE 1"= 5'



PROJECT AREA
10 SCALE



OVERALL VIEW
20 SCALE



VICINITY MAP
N.T.S.

PROPERTY INFORMATION

SF_CUPER001

SITE: CPSC001
10465 SOUTH DE ANZA BOULEVARD
CUPERTINO, CA 95014

BASIS OF BEARING
BEARINGS SHOWED HEREON ARE BASED UPON U.S. STATE PLANE NAD83 COORDINATE SYSTEM STATE PLANE COORDINATE ZONE 3, DETERMINED BY GPS OBSERVATIONS.

BENCHMARK
ELEVATION ESTABLISHED FROM GPS DERIVED ORTHOMETRIC HEIGHTS, APPLYING GEOID 99 SEPARATIONS, CONSTRAINING TO NGS CONTROL STATION 'LUTZ' ELEVATION=450.0' (NAVD88)

UTILITY NOTES
SURVEYOR DOES NOT GUARANTEE THAT ALL UTILITIES ARE SHOWN OR THEIR LOCATIONS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR AND DEVELOPER TO CONTACT U.S.A. AND ANY OTHER INVOLVED AGENCIES TO LOCATE ALL UTILITIES PRIOR TO CONSTRUCTION. REMOVAL, RELOCATION AND/ OR REPLACEMENT IS THE RESPONSIBILITY OF THE CONTRACTOR.

SURVEYOR'S NOTES
ALL EASEMENTS CONTAINED IN SAID TITLE REPORT AFFECTING THE IMMEDIATE AREA SURROUNDING THE LEASE HAVE BEEN PLOTTED. SURVEYOR HAS NOT PERFORMED A SEARCH OF PUBLIC RECORDS TO DETERMINE ANY DEFECT IN TITLE ISSUED.
THE BOUNDARY SHOWN HEREON IS PLOTTED FROM RECORD INFORMATION AND DOES NOT CONSTITUTE A BOUNDARY SURVEY OF THE PROPERTY.

LEGEND

DI	DRAIN INLET		WATER CONTROL VALVE
TFC	TOP FACE OF CURB		FIRE HYDRANT
R/W	RIGHT OF WAY		GUY CONDUCTOR
EP	EDGE OF PAVED		FOUND AS NOTED
DW	DRIVEWAY		POWER POLE
TOP	TOP OF SLOPE		LIGHT POLE
SW	SIDEWALK		ELECTRICAL TRANSFORMER
TP	TOP OF PARAPET		AIR CONDITIONING UNIT
OH	OVERHANG		TELEPHONE PEDESTAL
FH	FIRE HYDRANT		TELEPHONE VAULT
WV	WATER VALVE		TELEPHONE MANHOLE
MH	MANHOLE		GAS VALVE
	GEODETIC COORDINATES		GAS METER
	SPOT ELEVATION		PROPERTY LINE
	DISH ANTENNA		CHAIN LINK FENCE

SURVEY DATE
8/15/16

GRAPHIC SCALE
(IN FEET)
1 inch = 10 ft.

ISSUE STATUS

△	DATE	DESCRIPTION	REV.
	8/24/2016	SITE PLAN	

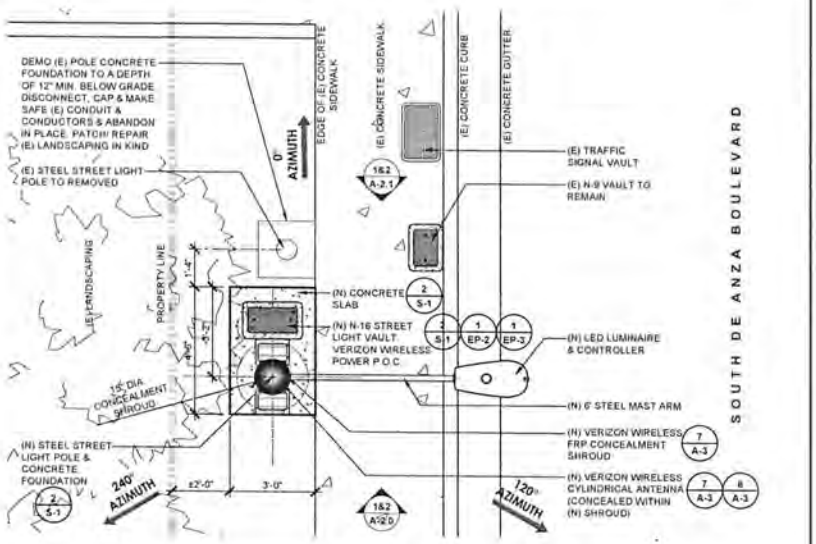
HAYES
Land Surveying And Mapping
2230 MADIGAN COURT
CONCORD, CA 94519

verizon✓
2785 MITCHELL DRIVE
WALNUT CREEK, CA 94598
OFFICE: 925-279-6000
(925) 279-6333

TOPOGRAPHIC SURVEY
EXISTING CONDITIONS

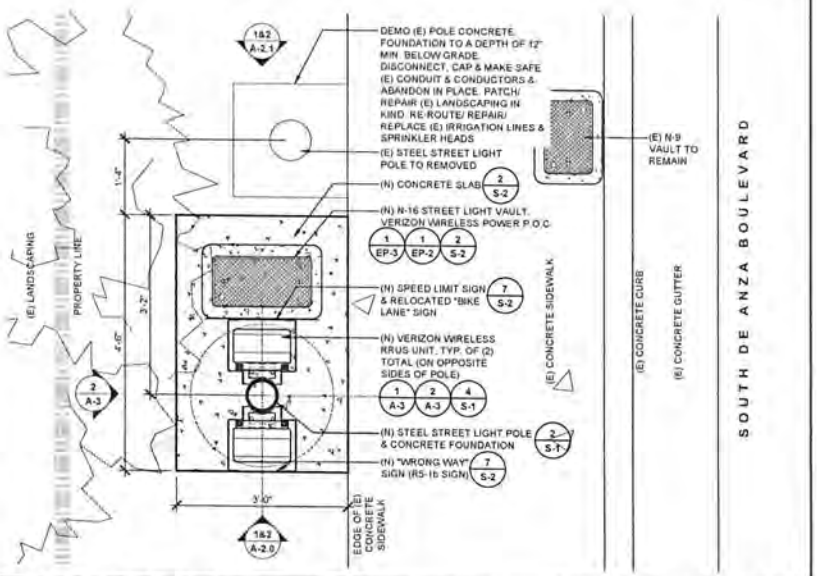
SF_CUPER001
CPSC001
10465 SOUTH DE ANZA BOULEVARD
CUPERTINO, CA 95014

C-1
SHEET 1 of 1



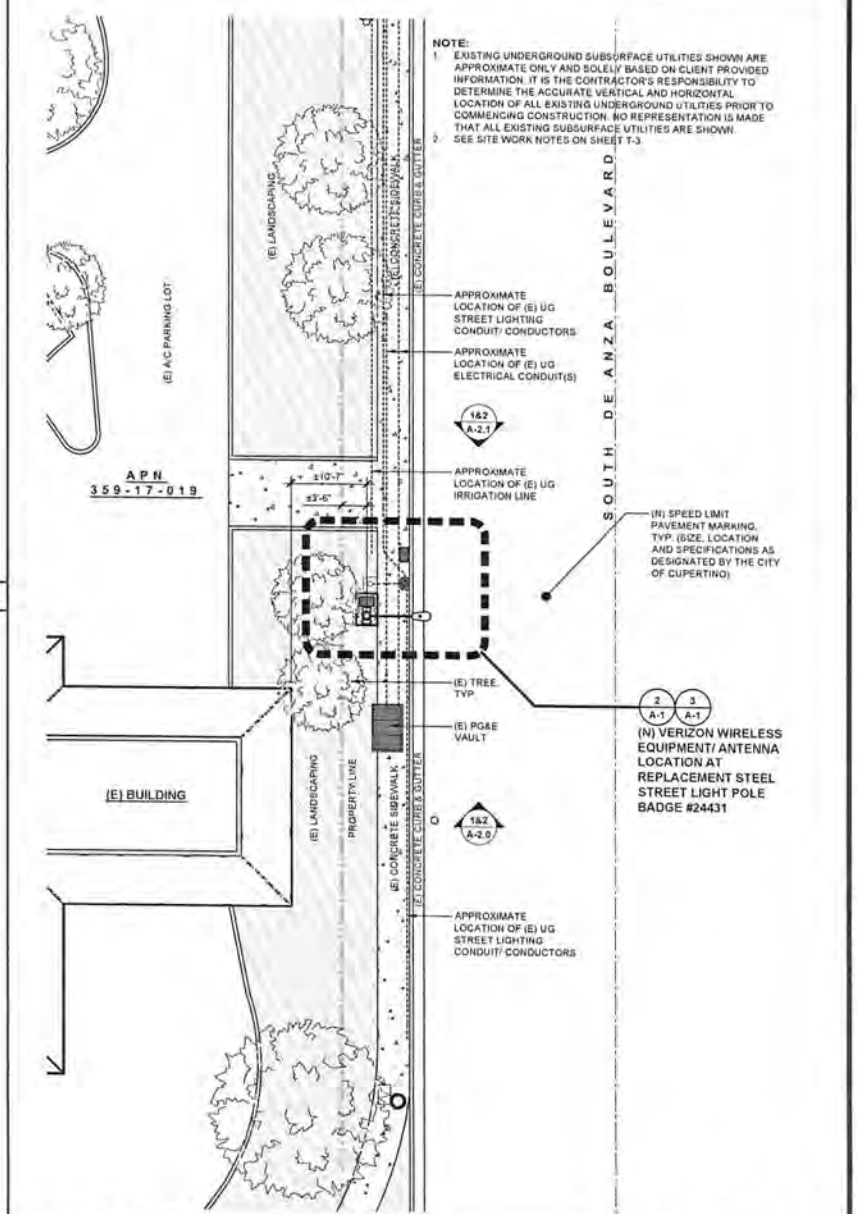
ENLARGED ANTENNA LAYOUT

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



ENLARGED EQUIPMENT LAYOUT

SCALE: 1"=1'-0" 3



SITE PLAN

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

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VERIZON WIRELESS
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CONSULTANTS

SF_CUPER001
CPSC001
PUBLIC ROW ADJACENT TO 10465 S. DE ANZA BOULEVARD CUPERTINO, CA 95014
APN: PUBLIC ROW ADJACENT TO 359-17-019

JAMES VACCARO C-32251 RENEWAL 08.31.2019 LICENSED ARCHITECT STATE OF CALIFORNIA

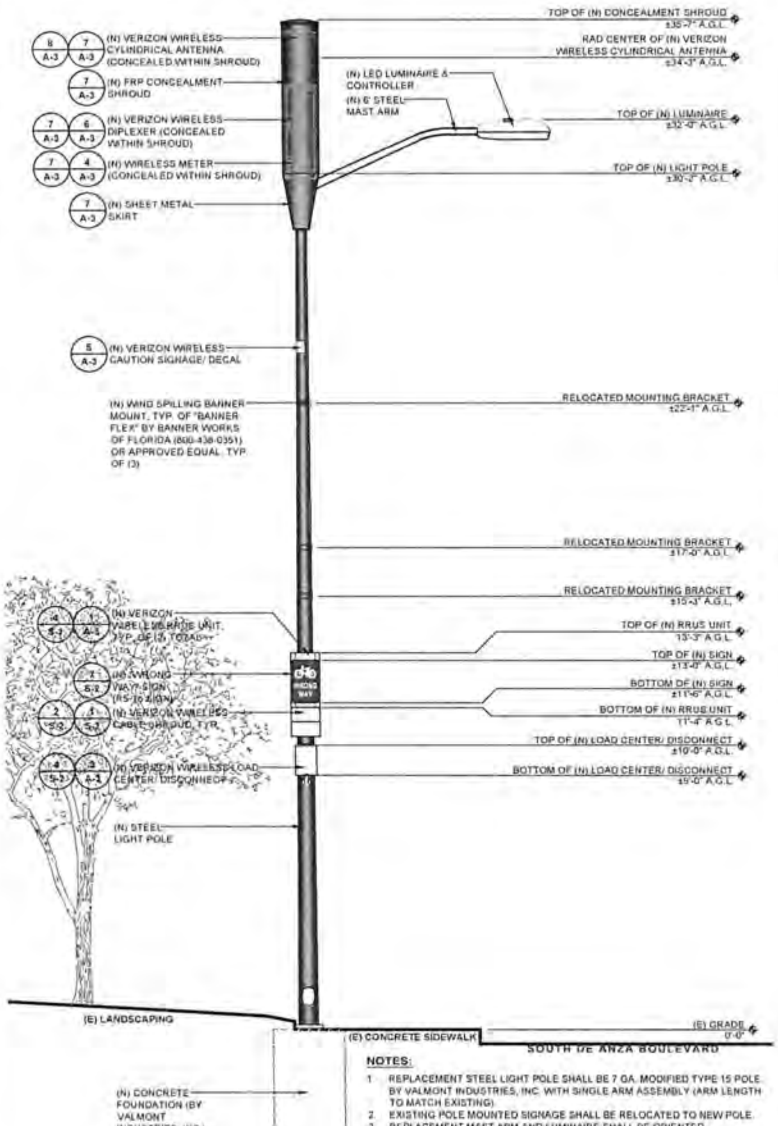
REV	DATE	ISSUE
1	10/18/2017	90% CONSTRUCTION
2	2/6/2018	100% CONSTRUCTION
3	3/26/2018	100% CONSTRUCTION REV

SHEET TITLE

SITE PLAN, ENLARGED ANTENNA LAYOUT, ENLARGED EQUIPMENT LAYOUT

SHEET NUMBER

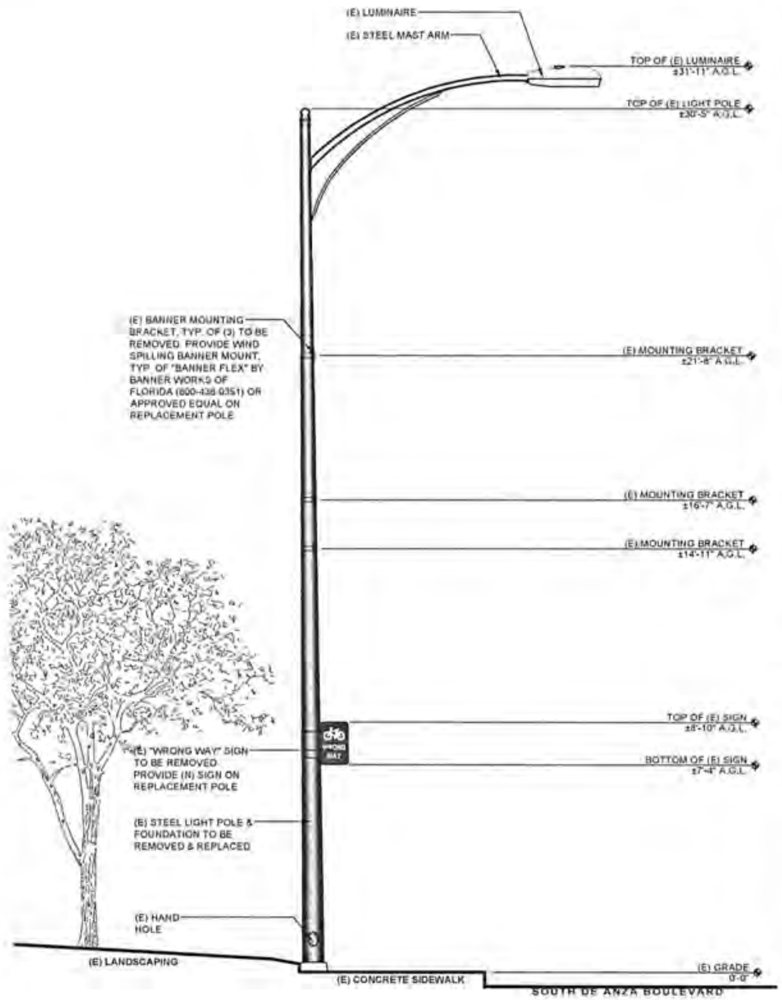
A-1



NOTES:

1. REPLACEMENT STEEL LIGHT POLE SHALL BE 7 GA. MODIFIED TYPE 15 POLE BY VALMONT INDUSTRIES, INC. WITH SINGLE ARM ASSEMBLY (ARM LENGTH TO MATCH EXISTING).
2. EXISTING POLE MOUNTED SIGNAGE SHALL BE RELOCATED TO NEW POLE.
3. REPLACEMENT MAST ARM AND LUMINAIRE SHALL BE ORIENTED PERPENDICULAR TO CENTERLINE OF EXISTING ROADWAY.
4. DEMO EXISTING EXISTING SIDEWALK TO EXISTING CONTROL JOINTS AS REQUIRED FOR DEMO OF EXISTING POLE FOUNDATION AND PLACEMENT OF NEW FOUNDATION. REPLACE EXISTING SIDEWALK IN KIND.

PROPOSED SOUTH ELEVATION — SCALE: 1/2"=1'-0" — 2



EXISTING SOUTH ELEVATION — SCALE: 1/2"=1'-0" — 1

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VERIZON WIRELESS

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_CPSC001

PUBLIC ROW ADJACENT TO 10465 S. DE ANZA BOULEVARD CUPERTINO, CA 95014
APN: PUBLIC ROW ADJACENT TO 359-17-019

REV	DATE	ISSUE
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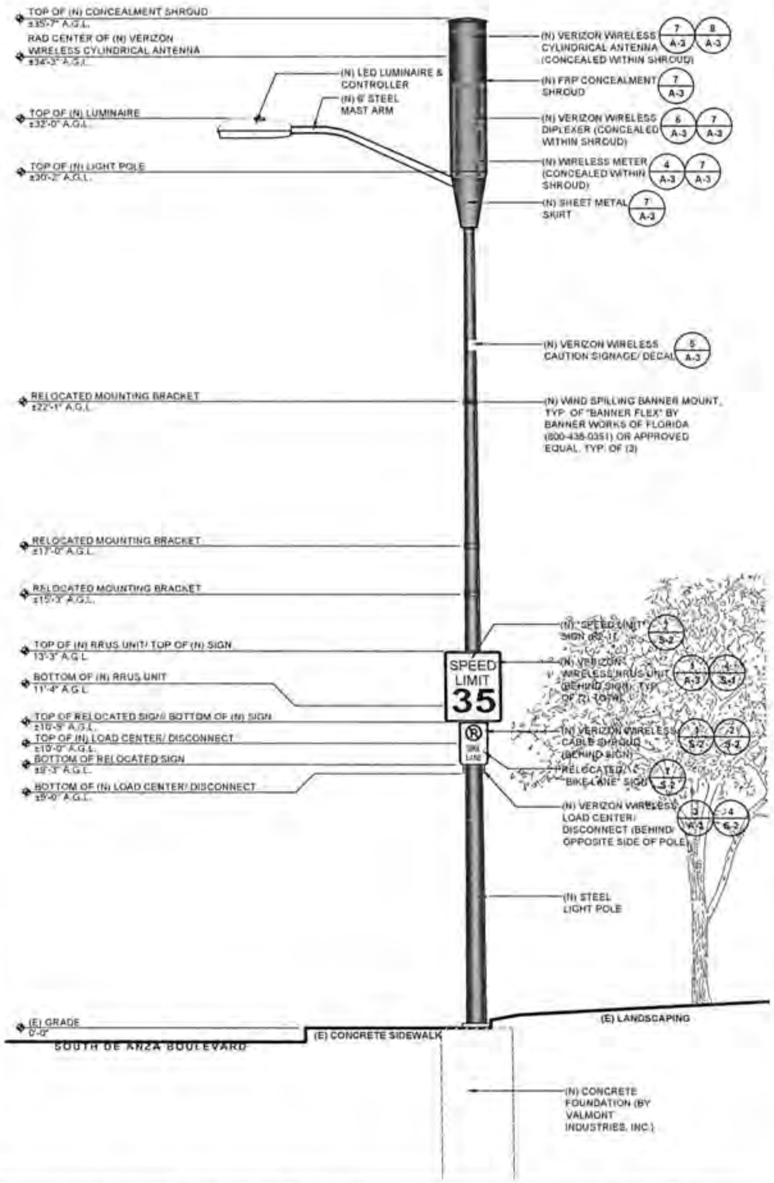
2	2/6/2018	100% CONSTRUCTION
3	3/26/2018	100% CONSTRUCTION REV.

SHEET TITLE

ELEVATIONS

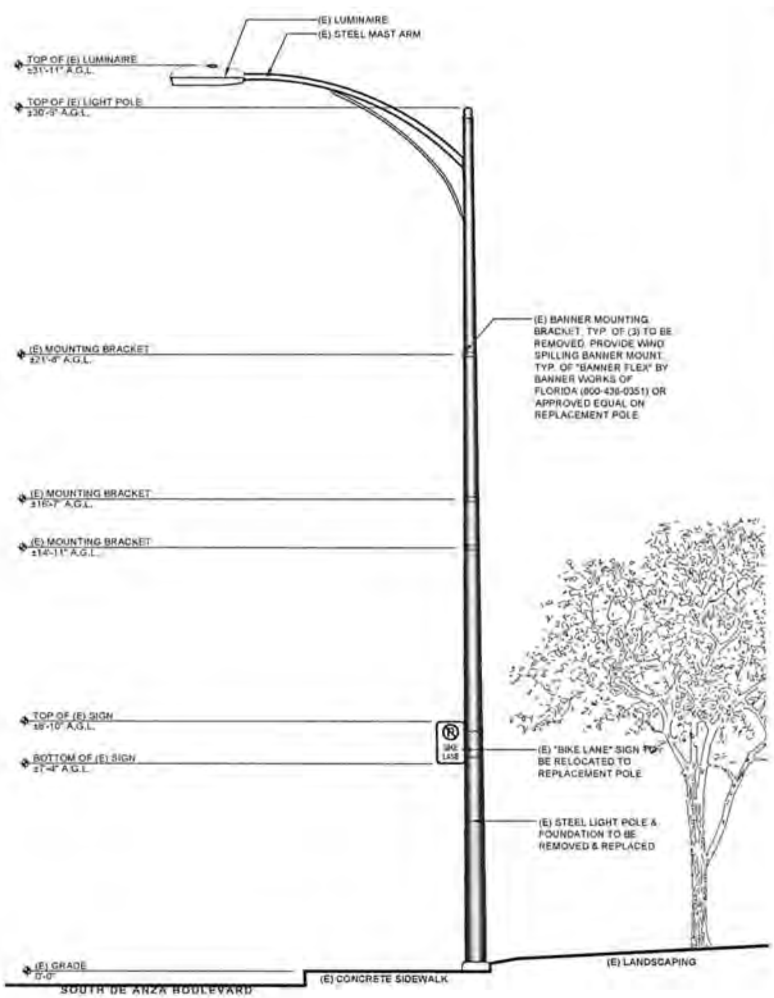
SHEET NUMBER

A-2.0



PROPOSED NORTH ELEVATION

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



EXISTING NORTH ELEVATION

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

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CUPERTINO, CA 95014
APN: PUBLIC ROW ADJACENT TO 359-17-019

REV	DATE	ISSUE
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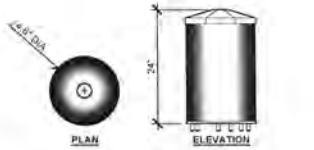
SHEET TITLE

ELEVATIONS

SHEET NUMBER

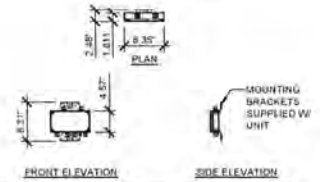
A-2.1



CYLINDER ANTENNA DIMENSIONS	
DIAMETER	±14.0"
HEIGHT	±24"
CYLINDER ANTENNA WEIGHT	
ANTENNA WEIGHT	±27 LBS.

CYLINDER ANTENNA

SCALE: N.T.S | 8

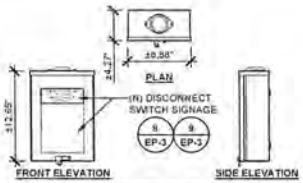


CBC1923T-4310 DIPLEXER DIMENSIONS	
HEIGHT	±4.57"
WIDTH	±8.35"
DEPTH	±2.48"
CBC1923T-4310 DIPLEXER WEIGHT	
DIPLEXER	±5 LBS.

NOTES:
1. COMMSCOPE PART# E11F13P06
2. ALL CONNECTORS SHALL BE WEATHERPROOFED.
3. INSTALL IN STRICT ACCORDANCE WITH COMMSCOPE INSTALLATION MANUAL.

DIPLEXER

SCALE: N.T.S | 6

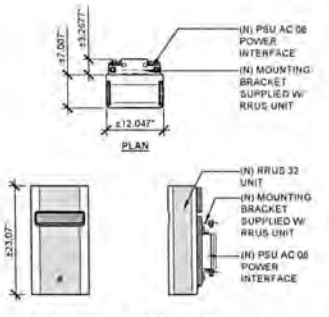


SQUARE D QO612L100RB LOAD CENTER DIMENSIONS	
HEIGHT	±12.65"
WIDTH	±8.58"
DEPTH	±4.27"
SQUARE D QO612L100RB LOAD CENTER WEIGHT	
WEIGHT	±10 LBS.

NOTES:
1. SQUARE D PART# QO612L100RB
2. NEMA 3R OUTDOOR RATED, 100 A, 120/240 VOLT, 1 PHASE LOAD CENTER.
3. INSTALL IN STRICT ACCORDANCE WITH SQUARE D/ SCHNEIDER ELECTRIC INSTALLATION MANUAL.

DIST. PANEL/ DISCONNECT

SCALE: N.T.S | 3

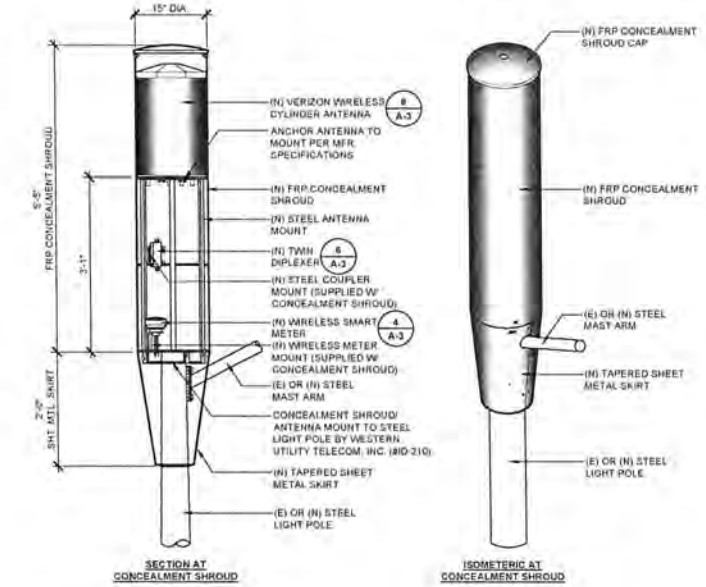


RRUS 32 UNIT DIMENSIONS	
HEIGHT W/ HANDLES	±27.165"
HEIGHT W/O HANDLES	±27.07"
WIDTH	±12.047"
DEPTH	±7.007"
RRUS 32 UNIT WEIGHT	
UNIT W/ PSU AC 08	±65 LBS.
RRUS 32 UNIT CLEARANCE REQUIREMENTS	
ABOVE/ BELOW	16" MIN.

NOTES:
1. ERICSSON PART# RRUS 32
2. ALL CONNECTORS SHALL BE WEATHERPROOFED.
3. INSTALL IN STRICT ACCORDANCE WITH ERICSSON INSTALLATION MANUAL.
4. PAINT SOLAR SHIELD & ALL MOUNTING COMPONENTS TO MATCH POLE.
5. RRUS HANDLES TO BE REMOVED PRIOR TO INSTALLATION.

RRUS 32 UNIT

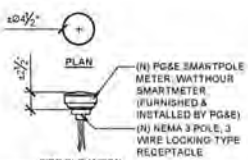
SCALE: N.T.S | 1



NOTES:
1. NEW FRP CONCEALMENT SHROUD, GALVANIZED SHEET METAL SKIRT, ANTENNA/ LIGHT POLE MOUNT AND MOUNTING COMPONENTS BY WESTERN UTILITY/ TELECOM, INC. (PHONE: 503-587-0101) ((ID#210).
2. FRP CONCEALMENT SHROUD MOUNT TO LIGHT POLE BY WESTERN UTILITY/ TELECOM, INC.
3. PAINT NEW FRP SHROUD AND EXPOSED MOUNTING COMPONENTS TO MATCH LIGHT POLE.
4. POWDER COAT NEW GALVANIZED SHEET METAL SKIRT AND EXPOSED MOUNTING COMPONENTS TO MATCH LIGHT POLE.
5. GROUND NEW ANTENNA PER MANUFACTURER'S SPECIFICATIONS.

CONCEALMENT SHROUD

SCALE: N.T.S | 7

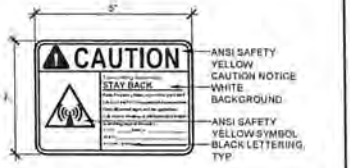


PG&E SMARTPOLE METER DIMENSIONS	
DIAMETER	±4.5"
HEIGHT	±2.5"
PG&E SMARTPOLE METER WEIGHT	
WEIGHT	±3 LBS.

NOTES:
1. PG&E CODE# M241490.
2. PG&E TO PERFORM RF SIGNAL TEST.
3. INSTALL IN STRICT ACCORDANCE WITH PG&E UTILITY BULLETIN FOR SMARTPOLE METER SERVICE.

WIRELESS METER

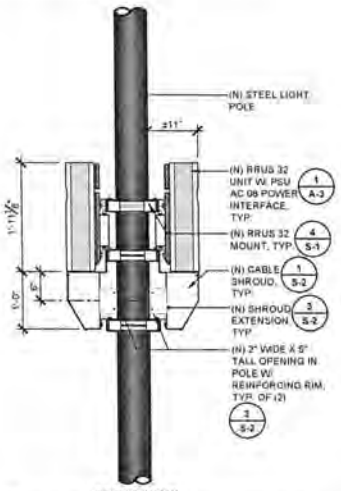
SCALE: N.T.S | 4



NOTES:
1. OUTDOOR RATED SELF ADHESIVE VINYL DECAL WITH UV, CHEMICAL, ABRASION AND MOISTURE RESISTANCE.
2. POST SIGN/ DECAL 9'-0" BELOW BOTTOM OF NEW ANTENNA.
3. CONTRACTOR TO CONFIRM SPECIFIC SIGN REQUIREMENTS WITH VERIZON WIRELESS, THE CITY OF CUPERTINO, FCC AND AUTHORITIES HAVING JURISDICTION PRIOR TO FABRICATION.
4. SIGN SHALL LIST/ DISPLAY OWNERSHIP COMPANY'S NAME, CONTACT NUMBER AND SPECIFIC SITE IDENTIFICATION.
5. SIGN COLORS, SYMBOLS AND LAYOUT SHALL CONFORM TO ANSI Z535.1, ANSI Z535.2 AND ANSI D95.2-2007.

SIGNAGE/ DECAL

SCALE: N.T.S | 5



NOTES:
1. PRIME AND PAINT RRUS 32 UNITS, CABLE SHROUDS, TUBE ASSEMBLY AND MOUNTING COMPONENTS TO MATCH LIGHT POLE.
2. SEE SPECIFICATIONS SECTION 09 90 00 FOR PAINTING AND COATING SPECIFICATIONS.

RRUS UNIT MOUNT ELEV.

SCALE: N.T.S | 2

JAMES VACCARO ARCHITECT, INC.
[illegible]
CLIENT
MODUS, INC.
CONSULTANTS
verizon
VERIZON WIRELESS

SF_CUPER001
CPSC001
PUBLIC ROW ADJACENT TO
10465 S. DE ANZA BOULEVARD
CUPERTINO, CA 95014
APN: PUBLIC ROW ADJACENT TO 359-17-019

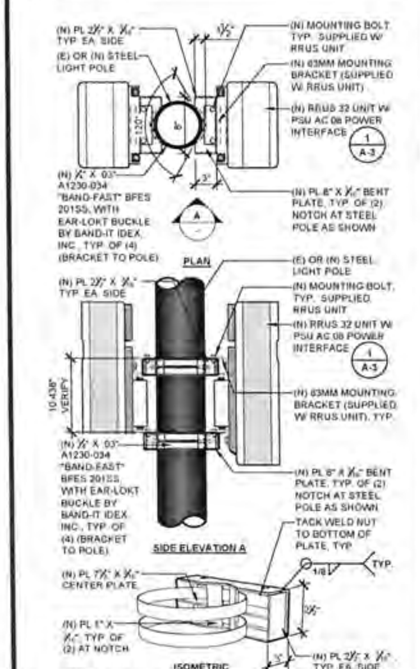
REV	DATE	ISSUE
1	10/18/2017	90% CONSTRUCTION
2	2/6/2018	100% CONSTRUCTION
3	3/26/2018	100% CONSTRUCTION REV.

SHEET TITLE
DETAILS

SHEET NUMBER
A-3

NOT USED

SCALE: N.T.S | 3

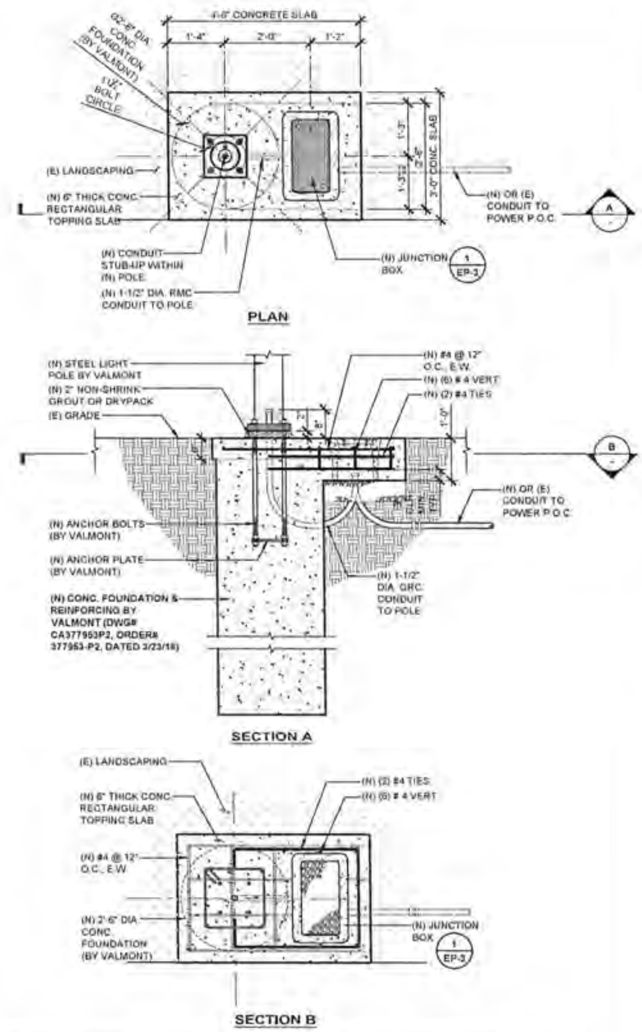


NOTES:

1. HOT-DIP GALVANIZE ALL STEEL COMPONENTS AFTER FABRICATION.
2. PROVIDE STEEL SHOP DRAWING FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.
3. PROVIDE MOCK-UP FOR REVIEW AND APPROVAL TO ENSURE PROPER CLEARANCE FOR PSU AC08 UNIT.
4. PRIME AND PAINT MOUNTING COMPONENTS WITH THEMEC EXTERIOR PAINT COATING TO MATCH POLE.
5. WELD ALL STEEL PLATE COMPONENTS WITH ¼" FILLET WELDS.

RRUS 32 MOUNTING

SCALE: N.T.S | 4



NOTES:

1. DEMO EXISTING SIDEWALK TO EXISTING CONTROL JOINTS AS REQUIRED FOR DEMO OF EXISTING AND PLACEMENT OF NEW FOUNDATION AND TOPPING SLAB. REPLACE EXISTING SIDEWALK IN KIND.
2. PROTECT EXISTING CONCRETE CURB IN PLACE.
3. ANCHOR BOLTS AND RACEWAYS SHALL BE SECURED IN PLACE PRIOR TO PLACEMENT OF CONCRETE.
4. USE POLE MANUFACTURER PROVIDED TEMPLATE FOR PLACEMENT OF ANCHOR BOLTS. REMOVE ALL GREASE, OIL, DIRT AND CONTAMINANTS FROM ANCHOR BOLTS WITH SUITABLE SOLVENT. CENTER ANCHOR BOLT GROUP ON CONCRETE FOUNDATION. PLACE ANCHOR BOLTS IN A PLUMB POSITION. POINT HOOKS TOWARD THE CENTER OF THE FOUNDATION. VERIFY REQUIRED ANCHOR BOLT PROJECTION.
5. CABLE TRENCHES AND FOUNDATION SHALL BE BACK FILLED AND COMPACTED PRIOR TO ERECTION OF NEW LIGHT POLE.
6. THE FOUNDATION SHALL CURE A MINIMUM OF (7) DAYS PRIOR TO INSTALLATION OF POLE.

LIGHT POLE FOUNDATION TOPPING SLAB

SCALE: N.T.S | 2

Structural Notes

GENERAL NOTES

1. APPLICABLE CODES: 2016 CALIFORNIA BUILDING CODE (CBC), 2013 AASHTO LTS-6, TIA 222, REVISION G.
2. ALL WORK SHALL CONFORM TO THE LATEST EDITION OF THE CALIFORNIA BUILDING CODE, APPLICABLE AUTHORITY HAVING JURISDICTION CODES, AND REQUIREMENTS OF THE CITY OF CUPERTINO DEPARTMENT OF PUBLIC WORKS.
3. THE CITY OF CUPERTINO DEPARTMENT OF PUBLIC WORKS SHALL BE NOTIFIED PRIOR TO STARTING ANY WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING THESE AGENCIES INFORMED OF THEIR SCHEDULE.
4. GENERAL CONTRACTOR SHALL COMPARE STRUCTURAL DRAWINGS WITH DRAWINGS OF OTHER DISCIPLINES WITH REFERENCE TO MATERIALS, LAYOUT, DIMENSIONS AND ELEVATIONS BEFORE STARTING WORK, AND ANY DISCREPANCIES SHALL BE REPORTED TO THE ARCHITECT AND ENGINEER FOR DIRECTION.
5. THE DRAWINGS SHALL NOT BE SCALED. ALL WORK SHALL BE GOVERNED BY EXISTING FIELD DIMENSIONS. THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS SHOWN AND BRING DISCREPANCIES TO THE ATTENTION OF THE ARCHITECT AND ENGINEER PRIOR TO PROCEEDING WITH THE WORK.
6. DETAILS OF CONSTRUCTION NOT INDICATED OR NOTED SHALL BE CONSIDERED OF THE SAME CHARACTER SHOWN FOR SIMILAR OR EXISTING CONSTRUCTION.
7. THE CONTRACTOR SHALL LOCATE AND PROTECT ALL EXISTING UTILITY LINES AND CONNECTIONS INCLUDING SEWER, WATER, GAS, AND ELECTRIC SERVICES BEFORE AND DURING THE WORK.
8. CONTRACTOR SHALL COORDINATE THEIR WORK WITH CITY REQUIREMENTS.
9. DESIGN DATA:
   DESIGN CODES: 2016 CBC, TIA 222 REVISION G, 2013 AASHTO LTS-6
   SEISMIC IMPORTANCE FACTOR Ip = 1.0
   OCCUPANCY CATEGORY = II
   MAPPED SPECTRAL RESPONSE:
   ACCELERATIONS
   S_s = 1.945g S_1 = 0.717g
   SITE CLASS = D
   SITE COEFFICIENT Fa = 1.00
   SITE COEFFICIENT Fv = 1.50
   WIND SPEED = 100 MPH (3-SECOND GUSTS) PER 2013 AASHTO LTS-6
10. CONTRACTOR SHALL SUBMIT STEEL SHOP DRAWINGS FOR REVIEW PRIOR TO FABRICATION.

CONCRETE NOTES

1. CONCRETE SHALL DEVELOP A MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS OF 3,000 PSI. DESIGN BASED ON 2,500 PSI (NO SPECIAL INSPECTION REQUIRED).
2. SLUMPS SHALL BE NOT LESS THAN 2" AND NOT EXCEED 4".
3. CONCRETE SHALL BE PLACED IN A CONTINUOUS OPERATION UNTIL THE SECTION IS COMPLETED BETWEEN PREDETERMINED CONSTRUCTION JOINTS. CONCRETE SHALL BE OF A CONSISTENCY TO PERMIT PLACING COMPLETELY AROUND REINFORCING BARS AND AGAINST FORMS.
4. EXPOSED SURFACES OF CONCRETE SHALL BE KEPT MOIST OR CURED BY PROTECTIVE COVERINGS APPLIED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
5. FORMS SHALL BE TIGHT, CLEAN AND WETTED BEFORE PLACING CONCRETE.

REINFORCING STEEL NOTES

1. REINFORCING SHALL BE IN ACCORDANCE WITH ASTM A615, GRADE 40 FOR #4 AND SMALLER, GRADE 60 FOR #5 AND LARGER. TIE WIRES TO BE 18 GA. OR HEAVIER, BLACK ANNEALED.
2. REINFORCING BARS SHALL BE FREE FROM LOOSE RUST OR ANY OTHER COATING WHICH WILL REDUCE BOND.
3. REINFORCING BARS SHALL NOT BE BENT OR STRAIGHTENED IN A MANNER WHICH WILL DAMAGE THE MATERIAL, AND SHALL BE ACCURATELY PLACED AND POSITIVELY SECURED.
4. MORTAR BLOCKS OR OTHER APPROVED METHOD OF SUPPORT SHALL BE USED AT SLABS-ON-GRADE.

STRUCTURAL STEEL NOTES

1. MATERIALS:

ALL STRUCTURAL STEEL	ASTM A36, U.O.N.
STEEL PIPE	ASTM A53, GRADE B
TUBE STEEL	ASTM A500, GRADE B
ANCHOR BOLTS	ASTM F1554, GRADE 55
MACHINE BOLTS	ASTM A307
HEXAGON NUTS	ASTM A194 2H OR ASTM A563 DH
WASHERS	ASTM F436

2. ALL STEEL SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH THE AISC STANDARDS BY A LICENSED FABRICATOR EMPLOYING CERTIFIED WELDERS.
3. WELDING SHALL CONFORM TO APPLICABLE SECTIONS OF LATEST AWS STRUCTURAL WELDING CODE AND SHALL BE DONE BY CERTIFIED WELDERS.
4. STEEL FABRICATOR SHALL OBTAIN THE ENGINEER'S APPROVAL OF SHOP DRAWINGS PRIOR TO FABRICATION.
5. ALL STRUCTURAL STEEL EXPOSED TO WEATHER SHALL BE HOT DIPPED GALVANIZED AFTER FABRICATION.
6. SUPPLY AND INSTALL FASTENERS, FRAMING MEMBERS AND ANCHORS REQUIRED FOR MOUNTING AND ATTACHMENT OF EQUIPMENT.

REINFORCING RIM WELDING NOTES

1. WELDING SHALL BE PERFORMED BY AN AWS CERTIFIED WELDER. ALL WORK SHALL BE IN CONFORMANCE WITH THE AMERICAN WELDING SOCIETY'S STRUCTURAL WELDING CODE, AWS D1.1 LATEST EDITION.
2. PREPARE POLE SURFACE. GRIND SURFACE TO BE WELDED WITH A SILICON CARBIDE WHEEL PRIOR TO WELDING TO REMOVE GALVANIZING WHICH MAY OTHERWISE BE CONSUMED IN THE WELD METAL. APPLY ANTI-SPLATTER COMPOUND AFTER GRINDING.
3. MINIMIZE TEMPERATURE RISE ON THE INSIDE SURFACE OF THE LIGHT POLE AND VOLATILIZE ANY REMAINING ZINC WITHIN THE BASE METAL WITH MINIMUM SPLATTER.
4. APPLY GALV-A-STICK ZINC COATING TO ALL UNPROTECTED SURFACES. UPON COMPLETION OF WELDING, APPLY SECOND COAT LAYER OF COLD GALVANIZING SPRAY COMPOUND CONTAINING A MINIMUM ZINC CONTENT OF 95%. APPLY A FINAL COAT OF THEMEC EXTERIOR PAINT COATING TO MATCH POLE.

STRUCTURAL NOTES

1

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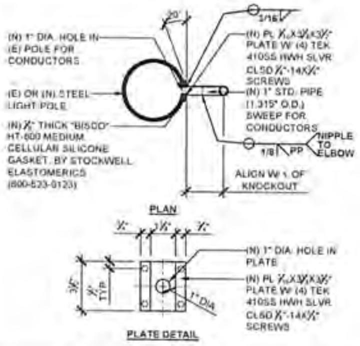
REV	DATE	ISSUE
1	10/18/2017	90% CONSTRUCTION
2	2/6/2018	100% CONSTRUCTION
3	3/26/2018	100% CONSTRUCTION REV

SHEET TITLE

STRUCTURAL NOTES, DETAILS

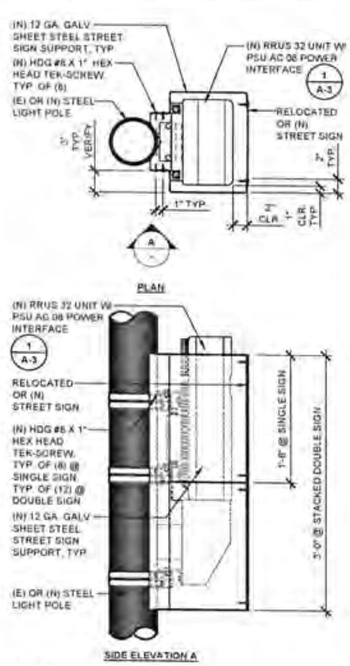
SHEET NUMBER

S-1



SWEEP SECTION

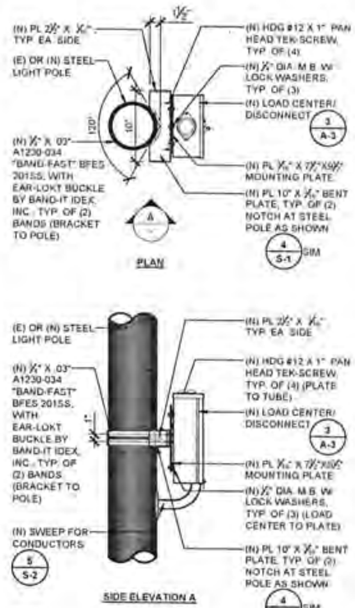
SCALE: N.T.S 6



NOTES:
1. HOT-DIP GALVANIZE ALL STEEL COMPONENTS AFTER FABRICATION.
2. PROVIDE STEEL SHOP DRAWING FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.
3. PROVIDE MOCK-UP FOR REVIEW AND APPROVAL TO ENSURE PROPER CLEARANCES FROM RRUS UNIT.
4. PRIME AND PAINT MOUNTING COMPONENTS WITH TNEMEC EXTERIOR PAINT COATING TO MATCH POLE.

SIGNAGE MOUNT

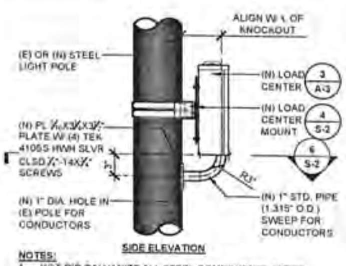
SCALE: N.T.S 7



NOTES:
1. HOT-DIP GALVANIZE ALL STEEL COMPONENTS AFTER FABRICATION.
2. PROVIDE STEEL SHOP DRAWING FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.
3. PROVIDE MOCK-UP FOR REVIEW AND APPROVAL TO ENSURE PROPER CLEARANCE FOR LOAD CENTER.
4. PRIME AND PAINT MOUNTING COMPONENTS WITH TNEMEC EXTERIOR PAINT COATING TO MATCH POLE.

LOAD CENTER MOUNT

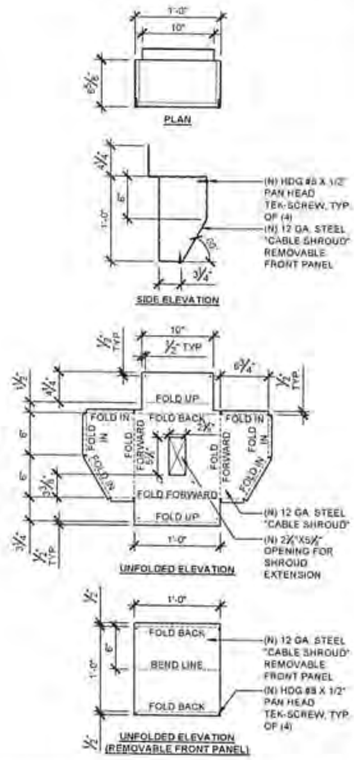
SCALE: N.T.S 4



NOTES:
1. HOT-DIP GALVANIZE ALL STEEL COMPONENTS AFTER FABRICATION.
2. PROVIDE STEEL SHOP DRAWING FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.
3. PROVIDE MOCK-UP FOR REVIEW AND APPROVAL TO ENSURE PROPER ALIGNMENT WITH LOAD CENTER KNOCKOUT.
4. PRIME AND PAINT COMPONENTS WITH TNEMEC EXTERIOR PAINT COATING TO MATCH POLE.

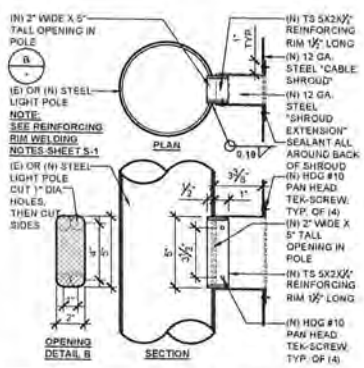
CONDUCTOR SWEEP

SCALE: N.T.S 5



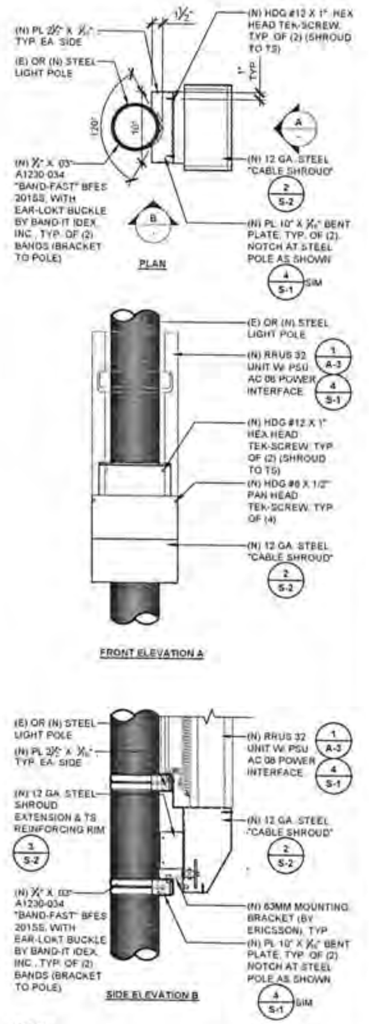
CABLE SHROUD

SCALE: N.T.S 2



REINFORCING RIM

SCALE: N.T.S 3



NOTES:
1. HOT-DIP GALVANIZE ALL STEEL COMPONENTS AFTER FABRICATION.
2. PROVIDE STEEL SHOP DRAWING FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.
3. PROVIDE MOCK-UP FOR REVIEW AND APPROVAL TO ENSURE PROPER FIT/ ALIGNMENT WITH RRUS UNIT ABOVE.
4. PRIME AND PAINT MOUNTING COMPONENTS WITH TNEMEC EXTERIOR PAINT COATING TO MATCH POLE.
5. SEE REINFORCING RIM NOTES SHEET S-1.

CABLE SHROUD MOUNT

SCALE: N.T.S 1

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SHEET TITLE:

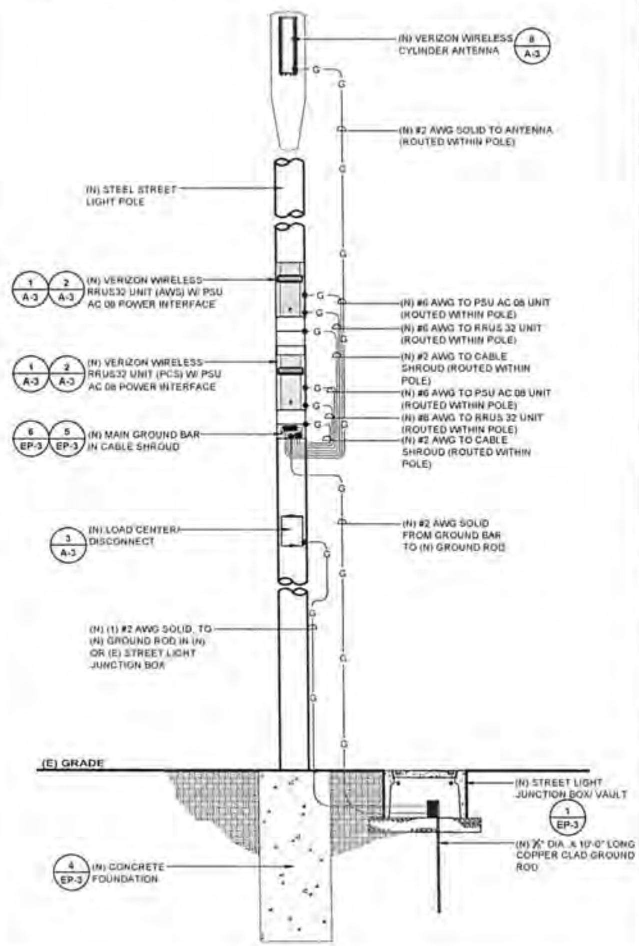
DETAILS

SHEET NUMBER:

S-2

NOTES:

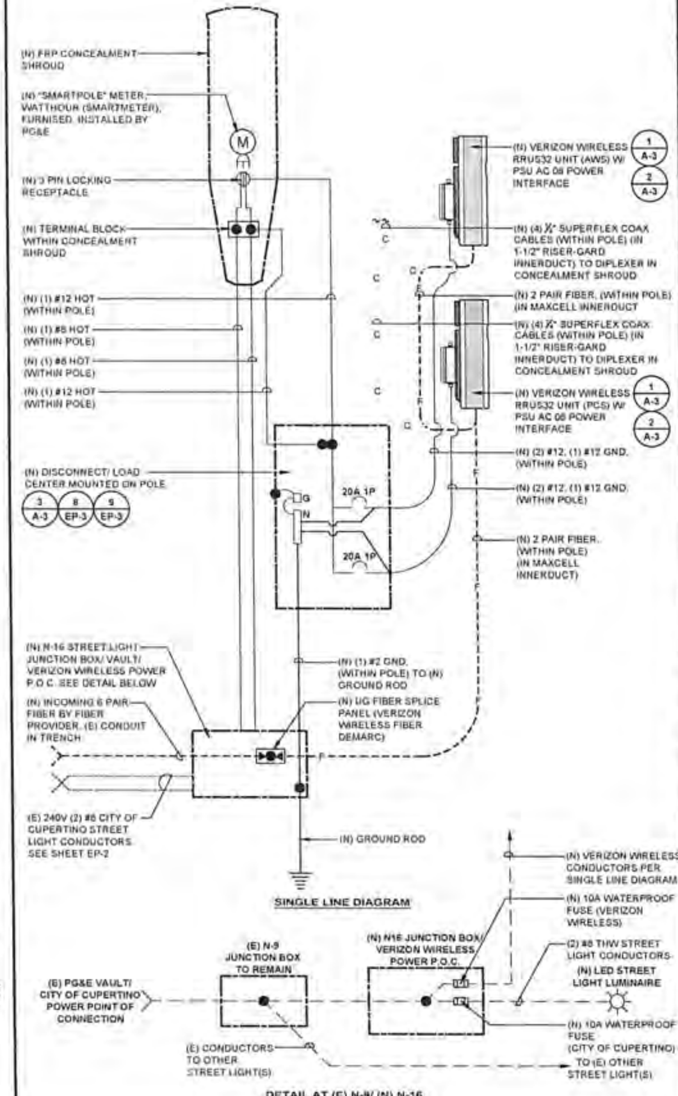
1. ALL GROUND ELECTRODE SYSTEMS SHALL BE BONDED TOGETHER, AT OR BELOW GRADE, BY TWO OR MORE COPPER BONDING CONDUCTORS IN ACCORDANCE WITH THE CEC.
2. PERFORM IEEE FALL-OF-POTENTIAL RESISTANCE TO EARTH TESTING (PER IEEE 1100 AND 81) FOR NEW GROUND ELECTRODE SYSTEM. PROVIDE SUPPLEMENTAL GROUND ELECTRODES AS NEEDED TO ACHIEVE A TEST RESULT OF 5 OHMS OR LESS.
3. EACH RRU UNIT AND PSC AC UNIT SHALL BE DIRECTLY CONNECTED TO THE GROUND BAR WITH GREEN INSULATED SUPPLEMENTAL EQUIPMENT GROUND WIRES, 6 AWG COPPER OR LARGER.
4. EXOTHERMIC WELDS SHALL BE USED FOR ALL GROUNDING CONNECTIONS BELOW GRADE.
5. APPROVED ANTIOXIDANT COATINGS (I.E., CONDUCTIVE GEL OR PASTE) SHALL BE USED ON ALL COMPRESSION AND BOLTED GROUND CONNECTIONS.
6. GROUND CONDUCTORS SHALL NOT BE ROUTED THROUGH METALLIC OBJECTS THAT FORM A RING AROUND THE CONDUCTOR, SUCH AS METALLIC CONDUITS, METAL SUPPORT CLIPS OR SLEEVES. WHEN IT IS REQUIRED TO BE HOUSED IN CONDUIT TO MEET CODE REQUIREMENTS OR LOCAL CONDITIONS, NON-METALLIC MATERIAL SUCH AS PVC CONDUIT SHALL BE USED.



EQUIPMENT GROUNDING DIAGRAM — SCALE: N.T.S. — 2

NOTES:

1. PROVIDE ELECTRICAL SERVICE EQUIPMENT WITH FAULT CURRENT RATINGS GREATER THAN THE AVAILABLE FAULT CURRENT FROM THE POWER UTILITY.
2. ALL SERVICE EQUIPMENT AND INSTALLATION SHALL COMPLY WITH THE PREVAILING LATEST EDITION OF THE CALIFORNIA ELECTRICAL CODE, 2017 NFPA 70, AUTHORITY HAVING JURISDICTION AND UTILITY COMPANY.
3. CONDUCTORS SHALL BE SPLICED IN ACCORDANCE WITH STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION STANDARD PLAN ES-13, COMPRESSION CONNECTOR AND WATERPROOF.



SINGLE LINE DIAGRAM — SCALE: N.T.S. — 1

SHEET NOTES

1. COMPLY WITH GOVERNING CODES AND REGULATIONS OF AUTHORITIES HAVING JURISDICTION. PROVIDE PRODUCTS OF ACCEPTABLE MANUFACTURERS WHICH HAVE BEEN IN SATISFACTORY USE IN SIMILAR SERVICE FOR THREE YEARS. USE EXPERIENCED INSTALLERS. DELIVER, HANDLE, AND STORE MATERIALS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
2. COORDINATE WITH UTILITY COMPANY FOR SITE SPECIFIC WORK AND MATERIAL REQUIREMENTS PRIOR TO START OF CONSTRUCTION.
3. PROVIDE ALL CONDUIT, PULL ROPES, PULL BOXES, CONCRETE ENCASEMENT(IF REQUIRED), BARRIERS, POLE RISERS, TRENCHING, BACKFILL, AS REQUIRED PER SITE SPECIFIC REQUIREMENTS.
4. OBTAIN PERMITS FROM AUTHORITIES HAVING JURISDICTION REQUIRED TO PERFORM THE WORK, PRIOR TO START OF CONSTRUCTION.
5. NOTIFY CONSTRUCTION MANAGER OF EXISTING CONDITIONS DIFFERING FROM THOSE INDICATED.
6. PROVIDE SERVICE ENTRANCE EQUIPMENT WITH FAULT CURRENT RATINGS GREATER THAN THE AVAILABLE FAULT CURRENT FROM THE POWER UTILITY PROVIDER.
7. REVIEW AND INSPECT EXISTING CONDITIONS, GROUNDING SYSTEM AND LIGHTING PROTECTION SYSTEM FOR COMPLIANCE WITH THE AUTHORITY HAVING JURISDICTION. REPORT ANY ADVERSE FINDINGS TO THE CONSTRUCTION MANAGER PRIOR TO PROCEEDING.
8. PERFORM IEEE FALL-OF-POTENTIAL RESISTANCE TO EARTH TESTING FOR NEW GROUND ELECTRODE SYSTEMS. PROVIDE SUPPLEMENTAL GROUND ELECTRODES AS REQUIRED TO ACHIEVE A TEST RESULT OF 5 OHMS OR LESS.
9. ANTIOXIDANT COATINGS SHALL BE USED ON ALL COMPRESSION AND BOLTED GROUND CONNECTIONS.
10. ALL WIRING METHODS SHALL CONFORM TO THE LATEST EDITION OF THE CALIFORNIA ELECTRICAL CODE (CEC) AND UTILITY COMPANY REQUIREMENTS AND AUTHORITIES HAVING JURISDICTION.
11. ALL BENDS AND/ OR OFFSETS SHALL BE MADE WITH FACTORY SECTIONS USING APPROVED COUPLERS PER CEC REQUIREMENTS.
12. ALL EMPTY CONDUITS SHALL HAVE A ¼" POLYPROPYLENE PULL ROPE PROVIDED INSIDE AND SEALED WITH A DUCT SEAL ON BOTH ENDS OF THE CONDUIT.
13. THE ENDS OF ALL CONDUITS INSTALLED SHALL BE SEALED WITH A DUCT SEAL.
14. PROVIDE NEW METER AND DISCONNECT PER UTILITY COMPANY REQUIREMENTS.

SYMBOL LEGEND

SYMBOL	NOTES
	FIBER OPTICAL CABLE
G	COPPER GROUND WIRE
	BRANCH CIRCUIT UNDERGROUND
	BRANCH CIRCUIT ABOVE GRADE
	CONDUIT TURNED UP
	CONDUIT TURNED DOWN
	CONDUIT STUBBED OUT
	CIRCUIT BREAKER
	FUSE
	SPLICED WIRES
	FIBER OPTIC SPLICE PANEL
M	METER SOCKET PER UTILITY PROVIDER REQUIREMENTS
	GROUND ROD
	MECHANICAL GROUND CONNECTION
	EXOTHERMIC WELD

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SHEET TITLE:

SINGLE LINE DIAGRAM, EQUIPMENT GROUNDING DIAGRAM

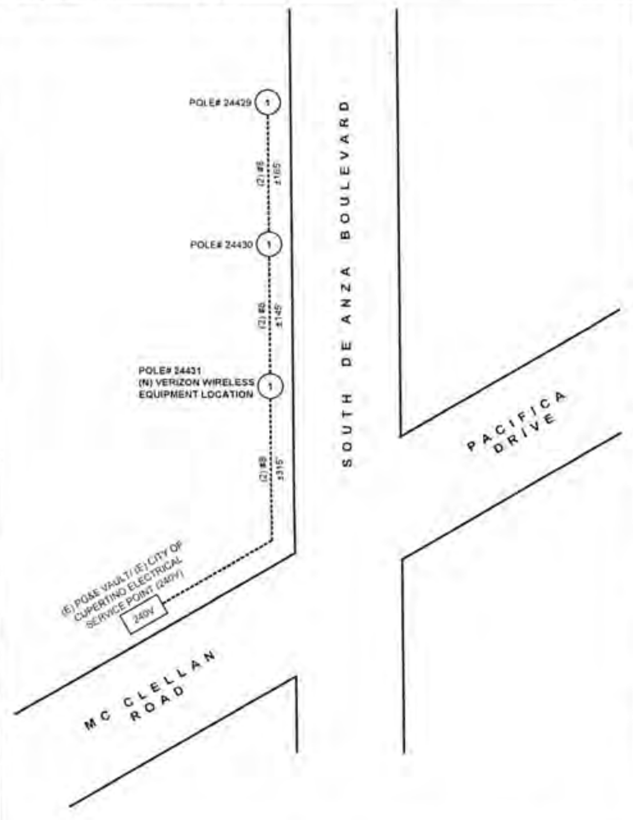
SHEET NUMBER:

EP-1

CONDUIT SCHEDULE

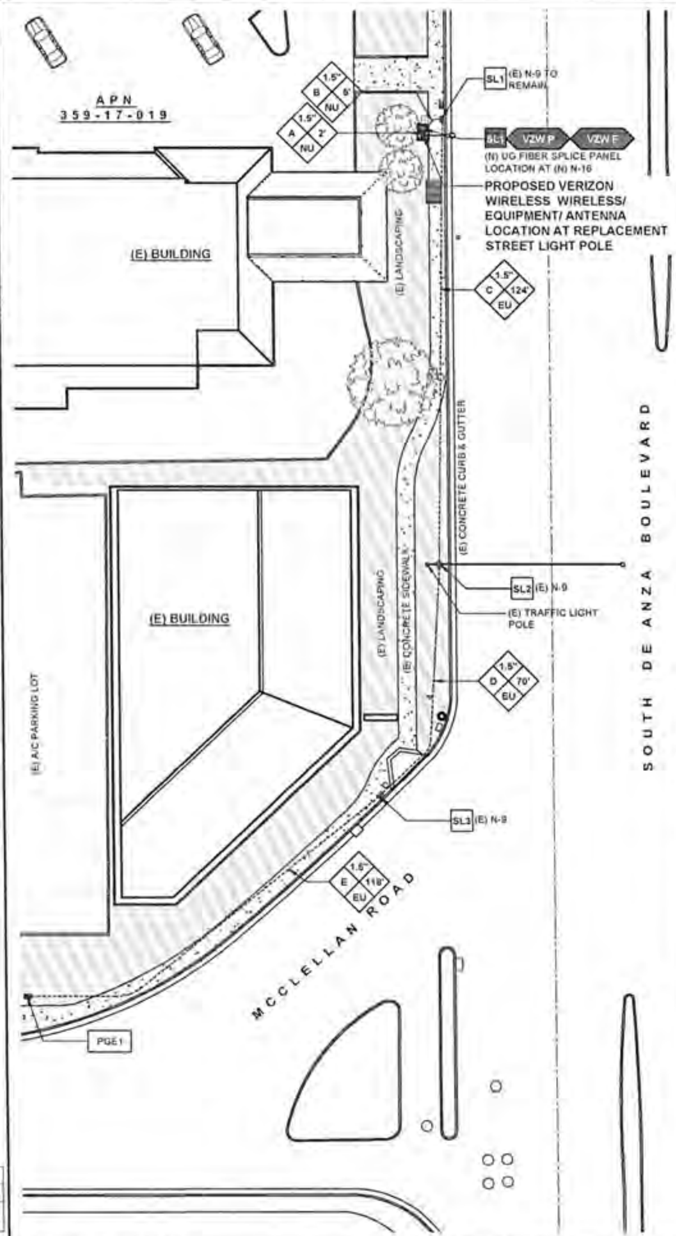
MARK	CONDUIT SIZE	WIRES
SCHEDULE A	(N) 1½" DIA	(E) CITY: (2) #6 VERIZON: (N) 2X FIBER, (2) #2 GND
SCHEDULE B	(N) 1½" DIA	(E) CITY: (2) #6
SCHEDULE C	(E) 1½" DIA	(E) CITY: (2) #6
SCHEDULE D	(E) 1½" DIA	(E) CITY: (2) #6
SCHEDULE E	(E) 1½" DIA	(E) CITY: (2) #6

CONDUIT SCHEDULE
SCALE: N.T.S 2



SERVICE POINT LOCATION	CIRCUIT #	BREAKER SIZE	POLE ID	CELLULAR EQUIPMENT WATTAGE	EXISTING LUMINAIRE	AMPERAGE EXISTING	AMPERAGE PROPOSED	VOLTAGE DROP EXISTING	VOLTAGE DROP PROPOSED
[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

CIRCUIT DIAGRAM
SCALE: N.T.S 3



UTILITY PLAN
SCALE: 1/16"=1'-0" 1

SHEET NOTES

1. COMPLY WITH GOVERNING CODES AND REGULATIONS OF AUTHORITIES HAVING JURISDICTION. PROVIDE PRODUCTS OF ACCEPTABLE MANUFACTURERS WHICH HAVE BEEN IN SATISFACTORY USE IN SIMILAR SERVICE FOR THREE YEARS. USE EXPERIENCED INSTALLERS.
2. OBTAIN PERMITS FROM AUTHORITIES HAVING JURISDICTION REQUIRED TO PERFORM THE WORK, PRIOR TO START OF CONSTRUCTION.
3. NOTIFY CONSTRUCTION MANAGER OF EXISTING CONDITIONS DIFFERING FROM THOSE INDICATED.
4. PROVIDE SERVICE ENTRANCE EQUIPMENT WITH FAULT CURRENT RATINGS GREATER THAN THE AVAILABLE FAULT CURRENT FROM THE POWER UTILITY PROVIDER.
5. REVIEW AND INSPECT EXISTING CONDITIONS, GROUNDING SYSTEM AND LIGHTING PROTECTION SYSTEM FOR COMPLIANCE WITH THE AUTHORITY HAVING JURISDICTION. REPORT ANY ADVERSE FINDINGS TO THE CONSTRUCTION MANAGER PRIOR TO PROCEEDING.
6. EXISTING UNDERGROUND WIRING, CONDUIT AND FUSE INFORMATION SHOWN IS BASED ON CLIENT PROVIDED INFORMATION AND BEST PRESENT KNOWLEDGE OF EXISTING CONDITIONS. WHERE CONDITIONS ARE UNCOVERED DURING CONSTRUCTION THAT DIFFER FROM WHAT IS SHOWN OR THAT REQUIRE MODIFICATION OF DETAILING SHOWN, SUCH DISCREPANCIES SHALL BE CALLED TO THE ATTENTION OF THE ARCHITECT PRIOR TO PROCEEDING WITH THE WORK.
7. ALL WIRING METHODS SHALL CONFORM TO THE LATEST EDITION OF THE CALIFORNIA ELECTRICAL CODE (CEC), NFPA 70 AND APPLICABLE SECTIONS OF THE CITY OF CUPERTINO DEPARTMENT OF PUBLIC WORKS STANDARDS.
8. A CITY OF CUPERTINO PUBLIC WORKS DEPARTMENT CONNECTION ORDER IS REQUIRED TO ENERGIZE ANY ELECTROLIER OR EQUIPMENT (PROVIDED BY THE CITY OF CUPERTINO AFTER COMPLETION AND INSPECTION FOR SUBMITTAL TO PACIFIC GAS AND ELECTRIC).
9. CONTACT PACIFIC GAS AND ELECTRIC FOR ADDITIONAL REQUIREMENTS AND CONTACT THE CITY OF CUPERTINO PUBLIC WORKS DEPARTMENT FOR INSPECTIONS OF FOUNDATIONS FORTY EIGHT HOURS PRIOR TO FOUNDATION POURING AND ELECTRICAL INSPECTIONS.
10. THE CONTRACTOR SHALL SUPPLY TO THE CITY OF CUPERTINO FOR APPROVAL, MANUFACTURER'S SUBMITTALS FOR ALL NEW LUMINAIRES.
11. ALL CONDUCTORS SHALL BE SIZED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE.
12. ALL OVERLOAD PROTECTION (FUSES) SHALL BE SIZED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE.
13. WHENEVER AN INSTALLATION IS NEAR ANY OVERHEAD WIRES/ CONDUCTORS, A CLEARANCE MUST BE OBTAINED FROM PACIFIC GAS AND ELECTRIC PRIOR TO INSTALLATION.

SHEET LEGEND

SYMBOL	NOTES
A / X / XX' / U	CONDUIT DIAMETER CONDUIT APPROXIMATE LENGTH IN LINEAR FEET CONDUIT SCHEDULE MARK EXISTING, NEW, UNDEGROUND, SURFACE MOUNTED (E-EXISTING, N-NEW, U-UNDERGROUND, S-SURFACE MOUNTED)
SL#	EXISTING N-9 BOX (STREET LIGHT VAULT)/ NUMBER
SL#	NEW N-16 BOX (STREET LIGHT VAULT)/ NUMBER/ NEW VERIZON WIRELESS FIBER SPLICE PANEL LOCATION
PGE1	EXISTING PG&E VAULT/ EXISTING CITY OF CUPERTINO POWER POINT OF CONNECTION
------------	EXISTING OR NEW CONDUIT ROUTE
VZW P	VERIZON WIRELESS POWER POINT OF CONNECTION
VZW F	VERIZON WIRELESS FIBER DEMARC/ SPLICE PANEL / POINT OF CONNECTION

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CLIENT

MODUS, INC.
[illegible] STOCKTON STREET, [illegible] FLOOR
SAN FRANCISCO, CA [illegible]

verizon

VERIZON WIRELESS
[illegible] MITCHELL DRIVE, SUITE [illegible]
WALNUT CREEK, CA [illegible]

CONSULTANTS

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LICENSED ARCHITECT
JAMES P. VACCARO
C-33251
STATE OF CALIFORNIA

REV	DATE	ISSUE
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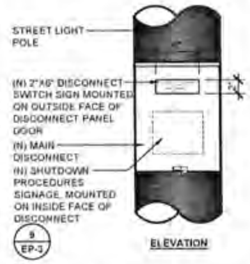
3	3/26/2018	100% CONSTRUCTION REV

SHEET TITLE

UTILITY PLAN, CONDUIT SCHEDULE, CIRCUIT DIAGRAM

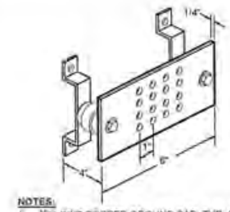
SHEET NUMBER

EP-2



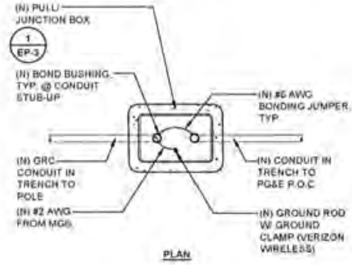
NOTES:
1. DISCONNECT SWITCH SIGN SHALL READ "UTILITY COMPANY POWER DISCONNECT SWITCH" IN ½" HEIGHT TEXT, WITH WHITE BACKGROUND AND BLACK LETTERING.
2. SIGN SHALL BE OUTDOOR RATED WITH UV PROTECTION.
3. SEE SPECIFICATIONS SECTION 26 05 00 FOR COMMON WORK RESULTS FOR ELECTRICAL.

SHUT-DOWN SIGNAGE
SCALE: N.T.S. 8

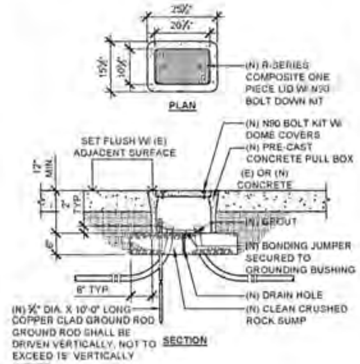


NOTES:
1. ¼"X4"X6" COPPER GROUND BAR, TYP. OF SITE PRO 1 #MG40616 WITH INSULATORS AND BRACKETS AS REQUIRED OR APPROVED EQUAL.
2. PROVIDE TAMPER RESISTANT GROUND BAR MOUNTING HARDWARE.
3. APPROVED ANTIOXIDANT COATINGS (I.E., CONDUCTIVE GEL OR PASTE) SHALL BE USED ON ALL COMPRESSION AND BOLTED GROUND CONNECTIONS.

GROUND BAR
SCALE: N.T.S. 5



GROUNDING AT PULL BOX
SCALE: N.T.S. 3

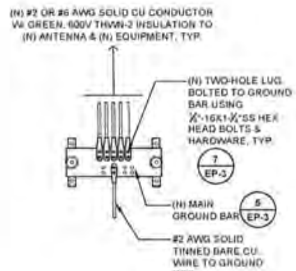


NOTES:
1. PULL/ JUNCTION BOX SHALL BE "CHRISTY" N16, WITH ONE PIECE COMPOSITE LID AND N90 SS BOLT KIT AS MANUFACTURED BY OLDCASTLE ENCLOSURE SOLUTIONS (800-456-7070).
2. LID SHALL BE MARKED "STREET LIGHTING."
3. TOP OF VAULT SHALL BE SET FLUSH WITH SURROUNDING ADJACENT SURFACE.
4. VERIFY LOCATIONS OF ALL EXISTING UTILITIES BELOW GRADE VIA UNDERGROUND SERVICE LOCATOR PRIOR TO ANY EXCAVATION.
5. UTILITY VAULT SHALL NOT BE INSTALLED WITHIN THE BOUNDARIES OF NEW OR EXISTING CURB RAMPS.
6. PATCH/ REPAIR ADJACENT SURFACES TO CONDITION EXISTING PRIOR TO WORK.
7. ALL CONCRETE REPAIR WORK SHALL BE DONE IN ACCORDANCE WITH THE AMERICAN CONCRETE INSTITUTE (ACI) 301.

JUNCTION/ PULL BOX
SCALE: N.T.S. 1

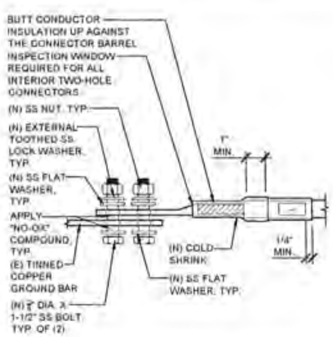
NOTES:
1. SIGN SHALL BE MOUNTED ON INSIDE FACE OF POWER MAIN DISCONNECT SWITCH IN ½" HEIGHT TEXT, WITH WHITE BACKGROUND AND BLACK LETTERING.
2. SIGN SHALL BE OUTDOOR RATED.
3. SEE SPECIFICATIONS SECTION 26 05 00 FOR COMMON WORK RESULTS FOR ELECTRICAL.

SHUT-DOWN SIGNAGE
SCALE: N.T.S. 9

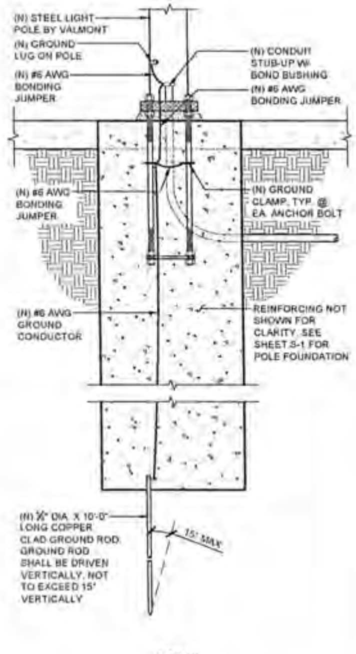


NOTES:
1. APPLY "NO-OX" OXIDE INHIBITOR AGENT TO LUG AND BAR CONTACT SURFACE.

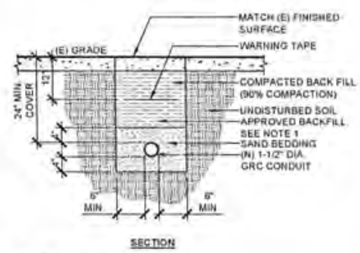
GROUND CONNECTION
SCALE: N.T.S. 6



TWO-HOLE GROUND LUG
SCALE: N.T.S. 7



GROUNDING AT POLE
SCALE: N.T.S. 4



NOTES:
1. TRENCH BACKFILL: CLASS II OR CLASS III AGGREGATE BASE AT 90% COMPACTION. NATIVE MATERIALS MAY BE USED AS BACKFILL WITH WRITTEN CONSENT OF A/E. NATIVE BACKFILL COMPACTION SHALL BE 90%. CONTRACTOR SHALL VERIFY SUITABILITY OF NATIVE BACKFILL PRIOR TO START OF CONSTRUCTION.
2. VERIFY LOCATIONS OF ALL EXISTING UTILITIES BELOW GRADE VIA UNDERGROUND SERVICE LOCATOR PRIOR TO ANY EXCAVATION.
3. ADJUST LOCATION OF TRENCH AS REQUIRED PER RESULTS OF UNDERGROUND SERVICE LOCATOR RESULTS TO AVOID CONFLICT WITH EXISTING UTILITIES.
4. PATCH/ REPAIR ADJACENT SURFACES TO CONDITION EXISTING PRIOR TO WORK.
5. ALL CONCRETE REPAIR WORK SHALL BE DONE IN ACCORDANCE WITH THE AMERICAN CONCRETE INSTITUTE (ACI) 301.

UTILITY TRENCH
SCALE: N.T.S. 2

JAMES VACCARO ARCHITECT, INC.

CLIENT

MODUS, INC.

VERIZON WIRELESS

CONSULTANTS

SF_CUPER001
CPSC001
PUBLIC ROW ADJACENT TO
10465 S. DE ANZA BOULEVARD
CUPERTINO, CA 95014
APN: PUBLIC ROW ADJACENT
TO 359-17-019

REV	DATE	ISSUE
1	10/18/2017	90% CONSTRUCTION
2	2/6/2018	100% CONSTRUCTION
3	3/26/2018	100% CONSTRUCTION REV

SHEET TITLE

DETAILS

SHEET NUMBER

EP-3

SPECIFICATIONS

1 Division 1 General Requirements

SECTION 01 10 00 SUMMARY

PART 1 - GENERAL

1.1 SUMMARY

A. Project Summary: Project consists of installation of two new RRUS units, one load center distribution panel, one antenna and concealment cylinder and applicable utilities on a replacement City of Cupertino Street Light Pole in the Public Right of Way. Coaxial, Fiber and power lines to be routed internally within existing pole. Applicable required site/ FCC/ warning signage to be mounted to existing pole.

B. Permits and Fees: Obtain and pay for permits from authorities having jurisdiction, fees, and utility company charges required to perform the work...prior to start of construction.

C. Codes: Comply with applicable codes and regulations of authorities having jurisdiction.

D. Dimensions: Verify dimensions indicated on drawings with field measurements prior to fabrication or ordering of materials. Do not scale drawings.

E. Existing Conditions: Notify Construction Manager of existing conditions differing from those indicated on the drawings. Do not remove or alter structural components without prior written approval.

F. Coordination:
1. Coordinate the work of all trades.
2. Verify location of utilities and existing conditions.

G. Installation Requirements, General:
1. Inspect substrates and report unsatisfactory conditions in writing.
2. Do not proceed until unsatisfactory conditions have been corrected.
3. Take field measurements prior to fabrication.
4. Install materials in accordance with manufacturer's instructions and approved submittals.

1.2 DEFINITIONS

A. THE CONTRACT DOCUMENTS: The Contract Documents consist of the Agreement between the Company and the Contractor and consist of the Agreement, Conditions of the Contract, Drawings, Specifications, Addenda, and other documents listed in the agreement and modifications issued after the execution of the contract.

B. THE CONTRACT: The Contract Documents that form the Contract for Construction. the Contract Documents shall not be construed to create a contractual relationship of any kind between the Contractor and the Architect or the Architect's consultants, between the Company and a subcontractor, between the Company and the Architect or the Architect's consultants or between any person or entities other than the Company and the Contractor.

C. THE WORK: The construction and services required by the Contract Documents, and includes all other labor, materials, equipment and services provided or to be provided by the Contractor to fulfill the Contractor's obligations.

D. THE DRAWINGS: The Drawings are graphical and pictorial portions of the Contract Documents showing the design, location and dimensions of the work.

E. THE SPECIFICATIONS: The Specifications are that portion of the Contract Documents consisting of the written requirements for materials, equipment, systems, standards and workmanship for the work and performance of related services.

F. THE COMPANY: Verizon Wireless.

G. ARCHITECT/ ENGINEER: synonymous with Architect & Engineer and "A&E". The Design Professional having responsibility for the design.

H. CONTRACTOR: The Contractor is the person or entity identified as such in the agreement that shall perform and accomplish the work in accordance with the contract documents. the Contractor shall be lawfully licensed in the jurisdiction where the project is located.

I. THIRD PARTY VENDOR OR AGENCY: A Vendor or Agency engaged separately by the Company, A&E, or Contractor to provide materials, test, inspections or to accomplish specific tasks related to related to the work.

J. CFCI: Company furnished, Contractor installed.

K. CONSTRUCTION MANAGER: Company's principal Agent in respect to the work. all project related communication and shall flow through Company's designated Construction Manager.

L. MATCH EXISTING: Match existing as acceptable to the Company and Owner.

M. PROVIDE: Furnish and install, complete with all necessary accessories, ready for intended use. Pay for all related costs.

1.3 INTENT

A. Drawings and specifications are intended to provide the basis for proper completion of the work suitable for the intended use of the Company. Anything not expressly set forth but which is reasonable implied or necessary for proper performance of the project shall be included.

1.4 WRITING STYLE

A. Specification are written in the imperative mode. Except where specifically intended otherwise, the subject of all imperative statements is the Contractor. For example, "Provide" means "Contractor shall provide and install".

1.5 CORRELATION OF THE CONTRACT DOCUMENTS

A. The Contract Documents are complementary, and what is required by one shall be binding as if required by all. Any discrepancies or conflicts shall be brought to the attention of the Construction Manager appointed to manage the project for the Company, in the form of a request for information (RFI), prior to the commencement of work.

1.6 SITE FAMILIARITY

A. The Contractor shall before commencing each portion of the work, carefully study and compare the various contract documents, as well as the information furnished by the Company, shall take field measurements of any existing conditions related to the work, and shall observe any conditions at the site affecting it. The Contractor shall promptly report any errors, inconsistencies or omissions discovered.

1.7 POINT OF CONTACT

A. Communication between the Contractor and the Company shall flow through the Company's Construction Manager appointed to manage the project for the Company.

1.8 SUPERVISION AND CONSTRUCTION PROCEDURES

A. The Contractor shall supervise and direct the work. The Contractor shall be solely responsible for construction means, methods, techniques, sequences and procedures and for coordinating all portions of the work under the Contract, unless the Contract Documents give other specific instructions. The Contractor shall be fully and solely responsible for the jobsite safety.

1.9 WORK RESTRICTIONS

A. CONTRACTOR'S USE OF PREMISES: During construction, Contractor will have limited use of site indicated. Contractor's use of premises is limited only by the company's right to perform work or employ other contractors on portions of project and as follows:
1. LIMITS: Limit site disturbance, including earthwork, clearing of vegetation, staging, storage of materials and equipment, waste storage and temporary facilities to the Company's lease parcel, unless otherwise permitted by the contract documents.
2. DRIVEWAYS, WALKWAYS, AND ENTRANCES: Keep driveways and entrances serving premises clear and available to Owner, Owner's employees, and emergency vehicles at all times. do not use these areas for parking or storage of materials.

PART 2 - PRODUCTS (NOT USED)
PART 3 - EXECUTION (NOT USED)

END OF SECTION 01 10 00

SECTION 01 25 00 SUBSTITUTION PROCEDURES

PART 1 - GENERAL

1.1 SUBSTITUTION PROCEDURES

A. Substitutions include changes in products, materials, equipment, and methods of construction from those required by the Contract Documents and proposed by Contractor.

B. Substitution Requests: Submit three copies of each request for consideration. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.
1. Submit requests within 3 days after the Notice of Award.
2. Identify product to be replaced and show compliance with requirements for substitutions. Include a detailed comparison of significant qualities of proposed substitution with those of the Work specified, a list of changes needed to other parts of the Work required to accommodate proposed substitution, and any proposed changes in the Contract Sum or the Contract Time should the substitution be accepted.

C. Architect will review proposed substitutions and notify Contractor of their acceptance or rejection. If necessary, Architect will request additional information or documentation for evaluation.
1. Architect will notify Contractor of acceptance or rejection of proposed substitution within seven days of receipt of request, or seven days of receipt of additional information or documentation, whichever is later.

D. Do not submit unapproved substitutions on Shop Drawings or other submittals.

PART 2 - PRODUCTS (Not Used)
PART 3 - EXECUTION (Not Used)

END OF SECTION 01 25 00

SECTION 01 30 00 ADMINISTRATIVE REQUIREMENTS

PART 1 - GENERAL

1.1 PROJECT MANAGEMENT AND COORDINATION

A. Subcontract List: Submit a written summary identifying individuals or firms proposed for each portion of the Work.

B. Key Personnel Names: Within 3 days of starting construction operations, submit a list of key personnel assignments, including superintendent and other personnel in attendance at Project site. List e-mail addresses and telephone numbers.

C. Coordinate construction operations included in different Sections of the Specifications to ensure efficient and orderly installation of each part of the Work.

D. Requests for Information (RFIs): On discovery of the need for additional information or interpretation of the Contract Documents, Contractor shall prepare and submit an RFI. Use forms acceptable to Architect and The Company.

E. Schedule and conduct progress meetings at Project site at intervals designated by the Construction Manager. Notify Construction Manager and Architect of meeting dates and times. Require attendance of each subcontractor or other entity concerned with current progress or involved in planning, coordination, or performance of future activities.

1.2 SUBMITTAL ADMINISTRATIVE REQUIREMENTS

A. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
1. Submit PDF electronic copy of each action submittal via email to Construction Manager and Architect.
2. Submit PDF electronic copy of each informational submittal via email to Construction Manager and Architect.
3. Architect will return submittals, without review received from sources other than Contractor or Construction Manager.

B. Identify deviations from the Contract Documents on submittals.

PART 2 - PRODUCTS

2.1 SUBMITTAL PROCEDURES

A. General Submittal Procedure Requirements: Prepare and submit submittals required by individual Specification Sections.
1. Submit electronic submittals via email as PDF electronic files.
a. Architect will return annotated file. Annotate and retain one copy of file as an electronic Project record document file.

2.2 ACTION SUBMITTALS

A. Submit PDF electronic files of each submittal via email to Construction Manager and Architect unless otherwise indicated.

B. Product Data: Mark each copy to show applicable products and options. Include the following:
1. Manufacturer's written recommendations, product specifications, and installation instructions.
2. Compliance with specified standards and requirements.

C. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data. Submit on sheets at least 8-1/2 by 11 inches but no larger than 30 by 42 inches. Include the following:
1. Dimensions and identification of products.
2. Fabrication and installation drawings and roughing-in and setting diagrams.
3. Notation of coordination requirements.
4. Notation of dimensions established by field measurement.

D. Samples: Submit Samples for review of kind, color, pattern, and texture and for a comparison of these characteristics between submittal and actual component as delivered and installed. Include name of manufacturer and product name on label.

2.3 INFORMATIONAL SUBMITTALS

A. Informational Submittals: Submit PDF electronic file of each submittal unless otherwise indicated.

B. Qualification Data: Include lists of completed projects with project names and addresses, names and addresses of architects and owners, and other information specified.

C. Product Certificates: Prepare written statements on manufacturer's letterhead certifying that product complies with requirements in the Contract Documents.

2.4 DELEGATED DESIGN SERVICES

A. Performance and Design Criteria: Where professional design services or certifications by a design professional are specifically required of Contractor by the Contract Documents, provide products and systems complying with specific performance and design criteria indicated.
1. If criteria indicated are not sufficient to perform services or certification required, submit a written request for additional information to Construction Manager.

B. Delegated-Design Submittal: In addition to Shop Drawings, Product Data, and other required submittals, submit three copies of a statement, signed and sealed by the responsible design professional, for each product and system specifically assigned to Contractor to be designed or certified by a design professional.
1. Indicate that products and systems comply with performance and design criteria in the Contract Documents. Include list of codes, loads, and other factors used in performing these services.

PART 3 - EXECUTION

3.1 SUBMITTAL REVIEW

A. Review each submittal and check for coordination with other Work of the Contract and for compliance with the Contract Documents. Note corrections and field dimensions. Mark with approval stamp before submitting to Construction Manager.

B. Architect will review each action submittal, make marks to indicate corrections or modifications required, will stamp each submittal with an action stamp, and will mark stamp appropriately to indicate action.

C. Informational Submittals: Architect will review each submittal and will not return it, or will return it if it does not comply with requirements. Architect will forward each submittal to appropriate party.

D. Submittals not required by the Contract Documents may not be reviewed and may be discarded.

END OF SECTION 01 30 00

SECTION 01 40 00 QUALITY REQUIREMENTS

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

A. Testing and inspecting services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with the Contract Document requirements.

B. Referenced Standards: If compliance with two or more standards is specified and the standards establish different or conflicting requirements, comply with the most stringent requirement. Refer uncertainties to Architect for a decision.

C. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum. The actual installation may exceed the minimum within reasonable limits. Indicated numeric values are minimum or maximum, as appropriate, for the context of requirements. Refer uncertainties to Architect for a decision.

D. Test and Inspection Reports: Prepare and submit certified written reports specified in other Sections. Include the following:
1. Date of issue.
2. Project title and number.
3. Name, address, and telephone number of testing agency.
4. Dates and locations of samples and tests or inspections.
5. Names of individuals making tests and inspections.
6. Description of the Work and test and inspection method.
7. Identification of product and Specification Section.
8. Complete test or inspection data.
9. Complete test or inspection data.
10. Test and inspection results and an interpretation of test results.
11. Record of temperature and weather conditions at time of sample taking and testing and inspecting.
12. Comments or professional opinion on whether tested or inspected Work complies with the Contract Document requirements.
13. Name and signature of laboratory inspector.
14. Recommendations on retesting and reinspecting.

E. Permits, Licenses, and Certificates: For Company's records, submit copies of permits, licenses, certifications, inspection reports, notices, receipts for fee payments, and similar documents, established for compliance with standards and regulations bearing on performance of the Work.

F. Professional Engineer Qualifications: A professional engineer who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing engineering services of the kind indicated.

G. Testing Agency Qualifications: An independent agency with the experience and capability to conduct testing and inspecting indicated, and where required by authorities having jurisdiction, that is acceptable to authorities.

H. Retesting/Reinspecting: Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including retesting and reinspecting, for construction that replaced Work that failed to comply with the Contract Documents.

I. Testing Agency Responsibilities: Cooperate with Architect and Contractor in performance of duties. Provide qualified personnel to perform required tests and inspections.
1. Notify Architect and Contractor of irregularities or deficiencies in the Work observed during performance of its services.
2. Do not release, revoke, alter, or increase requirements of the Contract Documents or approve or accept any portion of the Work.
3. Do not perform any duties of Contractor.

J. Associated Services: Cooperate with testing agencies and provide reasonable auxiliary services as requested. Provide the following:
1. Access to the Work.
2. Incidental labor and facilities necessary to facilitate tests and inspections.
3. Adequate quantities of representative samples of materials that require testing and inspecting. Assist agency in obtaining samples.
4. Facilities for storage and field curing of test samples.
5. Security and protection for samples and for testing and inspecting equipment.

K. Coordination: Coordinate sequence of activities to accommodate required quality-assurance and -control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspecting.
1. Schedule times for tests, inspections, obtaining samples, and similar activities.

L. Special Tests and Inspections: Engage a qualified testing agency to conduct special tests and inspections required by authorities having jurisdiction.

PART 2 - PRODUCTS (Not Used)
PART 3 - EXECUTION

3.1 REPAIR AND PROTECTION

A. General: On completion of testing, inspecting, sample taking, and similar services, repair damaged construction and restore substrates and finishes.

B. Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality-control services.

END OF SECTION 01 40 00

SECTION 01 42 00 REFERENCES

PART 1 - GENERAL

1.1 GENERAL REQUIREMENTS

A. Publication Dates: Comply with standards in effect as of date of the Contract documents unless otherwise indicated.

B. Abbreviations and Acronyms: Where abbreviations and acronyms are used in specifications or other contract documents, they shall mean the recognized name of the entities in the following list. names are subject to change and are believed to be accurate and up-to-date as of the date of the contract documents.

AA	Aluminum Association, Inc. (the)
AASHTO	American Association of State Highway and Transportation Officials
ACI	American Concrete Institute
AI	Asphalt Institute
AIA	American Institute of Architects (the)
AISC	American Institute of Steel Construction
AISI	American Iron and Steel Institute
ANSI	American National Standards Institute
APA	Architectural Precast Association
ASCE	American Society of Civil Engineers
ASCE/SEI	American Society of Civil Engineers/Structural Engineering Institute(see ASCE)
ASTM	American Society For Testing and Materials International
AWS	American Welding Society
CSI	Construction Specifications Institute (the)
ICBO	International Conference of Building Officials
ICEA	Insulated Cable Engineers Association, Inc
IEEE	Institute of Electrical and Electronics Engineers, Inc. (the)
IESNA	Illuminating Engineering Society of North American
ISO	International Organization for Standardization Available from ANSI
ITU	International Telecommunication Union
LPI	Lightning Protection Institute
MCA	Metal Construction Association
MPI	Master Painters Institute
NCTA	National Cable & Telecommunications Association
NECA	National Electrical Contractors Association
NEMA	National Electrical Manufacturers Association
NFPA	NFPA(National Fire Protection Association)
SAE	SAE International
SCTE	Society of Cable Telecommunications Engineers
SEI/ASCE	Structural Engineering Institute/American Society of Civil Engineers(see ASCE)
SMACNA	Sheet Metal and Air Conditioning Contractors' National Association
SSPC	The Society for Protective Coatings
TIA/EIA	Telecommunications Industry Association/Electronic Industries Alliance
UL	Underwriters Laboratories Inc

PART 2 - PRODUCTS (NOT USED)
PART 3 - EXECUTION (NOT USED)

END OF SECTION 01 42 00

SECTION 01 60 00 PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

A. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.

B. Comparable Product Requests: Submit request for consideration of each comparable product. Identify product or fabrication or installation method to be replaced.
1. Show compliance with requirements for comparable product requests.
2. Architect will review the proposed product and notify Contractor of its acceptance or rejection.

C. Basis-of-Design Product Specification Submittal: Show compliance with requirements.

D. Compatibility of Options: If Contractor is given option in selecting between two or more products, select product compatible with products previously selected.

E. Deliver, store, and handle products using means and methods that will prevent damage, deterioration, and loss, including theft. Comply with manufacturer's written instructions.
1. Schedule delivery to minimize storage at Project site and to prevent overcrowding of construction spaces.
2. Deliver products to Project site in manufacturer's original sealed container or packaging, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
3. Inspect products on delivery to ensure compliance with the Contract Documents and to ensure that products are undamaged and properly protected.
4. Store materials in a manner that will not endanger Project structure or the Public.
5. Store products that are subject to damage by the elements under cover in a weathertight enclosure above ground, with ventilation adequate to prevent condensation.

F. Warranties specified in other Sections shall be in addition to, and run concurrent with, other warranties required by the Contract Documents. Manufacturer's disclaimers and limitations on product warranties do not relieve Contractor of obligations under requirements of the Contract Documents.

PART 2 - PRODUCTS

2.1 PRODUCT SELECTION PROCEDURES

A. Provide products that comply with the Contract Documents, are undamaged, and, unless otherwise indicated, are new at the time of installation.
1. Provide products complete with accessories, trim, finish, and other devices and components needed for a complete installation and the intended use and effect.
2. Where products are accompanied by the term "as selected," Architect will make selection.
3. Descriptive, performance, and reference standard requirements in the Specifications establish salient characteristics of products.

B. Where the following headings are used to list products or manufacturers, the Contractor's options for product selection are as follows:
1. Products:
a. Where requirements include "one of the following," provide one of the products listed that complies with requirements.
b. Where requirements do not include "one of the following," provide one of the products listed that complies with requirements or a comparable product.
2. Manufacturers:
a. Where requirements include "one of the following," provide a product that complies with requirements by one of the listed manufacturers.
b. Where requirements do not include "one of the following," provide a product that complies with requirements by one of the listed manufacturers or another manufacturer.

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CUPERTINO, CA 95014
APN: PUBLIC ROW ADJACENT TO 359-17-019

LICENSED ARCHITECT · JAMES F. VACCARO · C-33251 · STATE OF CALIFORNIA

REV	DATE	ISSUE
1	10/18/2017	90% CONSTRUCTION
2	2/6/2018	100% CONSTRUCTION
3	3/26/2018	100% CONSTRUCTION REV

SHEET TITLE

SPECIFICATIONS

SHEET NUMBER

SP-1

SPECIFICATIONS

1 General Requirements Continued

B. Basis-of-Design Product: Provide the product named, or indicated on the Drawings, or a comparable product by one of the listed manufacturers.

C. Where Specifications require "match Architect's sample," provide a product that complies with requirements and matches Architect's sample. Architect's decision will be final on whether a proposed product matches.

D. Where Specifications include the phrase "as selected by Architect from manufacturer's full range" or similar phrase, select a product that complies with requirements. Architect will select color, gloss, pattern, density, or texture from manufacturer's product line that includes both standard and premium items.

2.2 COMPARABLE PRODUCTS

A. Architect will consider Contractor's request for comparable product when the following conditions are satisfied:

1. Evidence that the proposed product does not require revisions to the Contract Documents, that it is consistent with the Contract Documents and will produce the indicated results, and that it is compatible with other portions of the Work.
2. Detailed comparison of significant qualities of proposed product with those named in the Specifications.
3. List of similar installations for completed projects, if requested.
4. Samples, if requested.

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 60 00

SECTION 01 70 00 EXECUTION AND CLOSEOUT REQUIREMENTS

PART 1 - GENERAL

1.1 EXECUTION REQUIREMENTS

A. Manufacturer's installation instructions: Obtain and maintain on-site manufacturer's written recommendations and instructions for installation of products and equipment.

1.2 CLOSEOUT SUBMITTALS

A. Contractor's List of Incomplete Items: Initial submittal at Substantial Completion.

B. Certified List of Incomplete Items: Final submittal at Final Completion.

C. Record Drawings: Submit one set of marked-up record prints.

D. Record Product Data: Submit one paper copy of each submittal.

1.3 SUBSTANTIAL COMPLETION PROCEDURES

A. Prepare a list of items to be completed and corrected (punch list), the value of items on the list, and reasons why the Work is not complete.

B. Submittals Prior to Substantial Completion: Before requesting Substantial Completion inspection, complete the following:

1. Obtain and submit releases from authorities having jurisdiction permitting Company unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
2. Submit closeout submittals specified in other sections, including project record documents, operation and maintenance manuals, similar final record information, warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
3. Submit maintenance material submittals specified in other sections, including tools, spare parts, extra materials, and similar items, and deliver to location designated by Construction Manager.
4. Submit changeover information related to Company's occupancy, use, operation, and maintenance.

C. Procedures Prior to Substantial Completion: Before requesting Substantial Completion inspection, complete the following:

1. Advise Company of pending insurance changeover requirements.
2. Make final changeover of any permanent locks and deliver keys to Company.
3. Complete startup and testing of systems and equipment.
4. Perform preventive maintenance on equipment used prior to Substantial Completion.
5. Advise Company of any changeover in utilities.
6. Participate with Company in conducting inspection and walkthrough.
7. Remove temporary facilities and controls.
8. Complete final cleaning requirements, including touchup painting.
9. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.

D. Inspection: Submit a written request for inspection for Substantial Completion. On receipt of request, Construction Manager will proceed with inspection or advise Contractor of unfulfilled requirements.

1.4 FINAL COMPLETION PROCEDURES

A. Submittals Prior to Final Completion: Before requesting inspection for determining final completion, complete the following:

1. Submit certified copy of Substantial Completion inspection list of items to be completed or corrected (punch list). Certified copy of the list shall state that each item has been completed or otherwise resolved.
2. Certificate of Insurance: Submit evidence of final, continuing insurance coverage complying with insurance requirements.

B. Submit a written request for final inspection for acceptance. On receipt of request, Construction Manager will either proceed with inspection or notify Contractor of unfulfilled requirements.

1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.

PART 2 - PRODUCTS

2.1 MATERIALS

A. In-Place Materials: Use materials for patching identical to in-place materials. For exposed surfaces, use materials that visually match in-place adjacent surfaces to the fullest extent possible.

B. Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.

1. Use cleaning products that comply with Green Seal's GS-37, or if GS-37 is not applicable, use products that comply with the California Code of Regulations maximum allowable VOC levels.

2.2 RECORD DRAWINGS

A. Record Prints: Maintain a set of prints of the Contract Drawings and Shop Drawings, incorporating new and revised drawings as modifications are issued. Mark to show actual installation where installation varies from that shown originally. Accurately record information in an acceptable drawing technique.

1. Identify and date each record Drawing; include the designation "PROJECT RECORD DRAWING" in a prominent location.

PART 3 - EXECUTION

3.1 EXAMINATION AND PREPARATION

A. Existing Conditions: The existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before beginning sitework, investigate and verify the existence and location of underground utilities, mechanical and electrical systems, and other construction affecting the Work.

B. Before proceeding with each component of the Work, examine substrates, areas, and conditions, with Installer or Applicator present where indicated, for compliance with requirements for installation tolerances and other conditions affecting performance.

1. Verify compatibility with and suitability of substrates.
2. Examine roughing-in for electrical systems.

C. Proceed with installation only after unsatisfactory conditions have been corrected.

D. Take field measurements as required to fit the Work properly. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication.

E. Verify space requirements and dimensions of items shown diagrammatically on Drawings.

3.2 CONSTRUCTION LAYOUT AND FIELD ENGINEERING

A. Before proceeding to lay out the Work, verify layout information shown on Drawings, in relation to the property survey and existing benchmarks.

3.3 INSTALLATION

A. Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.

1. Make vertical work plumb and make horizontal work level.
2. Conceal pipes, ducts, and wiring in finished areas unless otherwise indicated.
3. Maintain minimum headroom clearance of 96 inches in occupied spaces and 90 inches in unoccupied spaces.

B. Comply with manufacturer's written instructions and recommendations.

C. Conduct construction operations so no part of the Work is subjected to damaging operations or loading in excess of that expected during normal conditions.

D. Templates: Obtain and distribute to the parties involved templates for work specified to be factory prepared and field installed.

E. Attachment: Provide blocking and attachment plates and anchors and fasteners of adequate size and number to securely anchor each component in place. Where size and type of attachments are not indicated, verify size and type required for load conditions.

1. Mounting Heights: Where mounting heights are not indicated, mount components at heights directed by Construction Manager.

F. Joints: Make joints of uniform width. Where joint locations in exposed work are not indicated, arrange joints for the best visual effect. Fit exposed connections together to form hairline joints.

G. Use products, cleaners, and installation materials that are not considered hazardous.

3.4 CUTTING AND PATCHING

A. Provide temporary support of work to be cut.

B. Protection: Protect in-place construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of Project that might be exposed during cutting and patching operations.

C. Where existing services/systems are required to be removed, relocated, or abandoned, bypass such services/systems before cutting to prevent interruption to occupied areas.

D. Cutting: Cut in-place construction using methods least likely to damage elements retained or adjoining construction.

1. Cut holes and slots neatly to minimum size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.

E. Patch with durable seams that are as invisible as possible. Provide materials and comply with installation requirements specified in other Sections.

1. Restore exposed finishes of patched areas and extend finish restoration into adjoining construction in a manner that will minimize evidence of patching and refinishing.
2. Where patching occurs in a painted surface, prepare substrate and apply primer and intermediate paint coats appropriate for substrate over the patch, and apply final paint coat over entire unbroken surface containing the patch. Provide additional coats until patch blends with adjacent surfaces.

3.5 CLEANING

A. Clean Project site and work areas daily, including common areas. Dispose of materials lawfully.

1. Remove liquid spills promptly.
2. Where dust would impair proper execution of the Work, broom-clean or vacuum the entire work area, as appropriate.
3. Remove debris from concealed spaces before enclosing the space.

B. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion:

1. Clean Project site, yard, and grounds, in areas disturbed by construction activities. Sweep paved areas; remove stains, spills, and foreign deposits.
2. Sweep paved areas broom clean. Remove spills, stains, and other foreign deposits.
3. Remove labels that are not permanent.
4. Clean exposed finishes to a dust-free condition, free of stains, films, and foreign substances.
5. Wipe surfaces of mechanical and electrical equipment. Remove excess lubrication and foreign substances.

END OF SECTION 01 70 00

2 Division 2 Existing Conditions

SECTION 02 30 00 SUBSURFACE INVESTIGATION

PART 1 - GENERAL

1.1 SUMMARY

A. Information: Information on the Drawings and in the specifications relating to subsurface conditions and existing utilities and structures is from information available from sources available to the Company's consultants. Such information is furnished only for the information and convenience of the Contractor, and the accuracy or completeness of this information is not guaranteed.

PART 2 PRODUCTS - (Not Used)

PART 3 EXECUTION - (Not Used)

END OF SECTION 02 30 00

SECTION 02 41 19 SELECTIVE DEMOLITION

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

A. Items indicated to be removed and salvaged remain The Owner's property. Carefully detach from existing construction, in a manner to prevent damage, and deliver to Owner. Include fasteners or brackets.

B. Predemolition Photographs: Show existing conditions of adjoining construction and site improvements. Submit before Work begins.

C. It is not expected that hazardous materials will be encountered in the Work. If hazardous materials are encountered, do not disturb; immediately notify Construction Manager. Hazardous materials will be removed by Owner under a separate contract.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Regulatory Requirements: Comply with EPA regulations and with hauling and disposal regulations of authorities having jurisdiction.

B. Standards: Comply with ANSI/ASSE A10.6 and NFPA 241.

PART 3 - EXECUTION

3.1 DEMOLITION

A. Maintain services/systems indicated to remain and protect them against damage during selective demolition operations. Before proceeding with demolition, provide temporary services/systems that bypass area of selective demolition and that maintain continuity of services/systems.

B. Locate, identify, shut off, disconnect, and seal or cap off indicated utility services and mechanical/electrical systems serving areas to be selectively demolished.

C. Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.

D. Protect existing finish work that is to remain.

E. Provide and maintain shoring, bracing, and structural supports as required to preserve stability and prevent movement, settlement, or collapse of construction and finishes to remain, and to prevent unexpected or uncontrolled movement or collapse of construction being demolished.

F. Provide temporary weather protection to prevent water leakage and damage to structure.

G. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction.

H. Remove demolition waste materials from Project site and legally dispose of them in an EPA-approved landfill. Do not burn demolished materials.

I. Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations. Return adjacent areas to condition existing before selective demolition operations began.

END OF SECTION 02 41 19

3 Division 3 Concrete

SECTION 03 30 00 CAST-IN-PLACE CONCRETE

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

A. Submittals: concrete mix designs and submittals required by ACI 301.

B. Ready-Mixed Concrete Producer Qualifications: ASTM C 94/C 94M.

PART 2 - PRODUCTS

2.1 PEFORMANCE REQUIREMENTS

A. Comply with ACI 301, "Specification for Structural Concrete," and with ACI 117, "Specifications for Tolerances for Concrete Construction and Materials."

2.2 MATERIALS

A. Reinforcing Bars: ASTM A 615/A 615M, Grade 60, deformed.

B. Plain Steel Wire: ASTM A 82, as drawn.

C. Portland Cement: ASTM C 150, Type I or II.

D. Fly Ash: ASTM C 618, Class C or F.

E. Ground Granulated Blast-Furnace Slag: ASTM C 989, Grade 100 or 120.

F. Aggregates: ASTM C 33, Class 3S.

1. Maximum Coarse-Aggregate Size: 1-1/2 inches nominal.

G. Air-Entraining Admixture: ASTM C 260.

H. Chemical Admixtures: ASTM C 494, water reducing. Do not use calcium chloride or admixtures containing calcium chloride.

I. Moisture-Retaining Cover: ASTM C 171, polyethylene film or white burlap-polyethylene sheet.

J. Joint-Filler Strips: ASTM D 1751, asphalt-saturated cellulosic fiber, or ASTM D 1752, cork or self-expanding cork.

2.3 CONCRETE MIXTURES

I. Prepare design mixtures, proportioned according to ACI 301.

J. Normal-Weight Concrete:

1. Minimum Compressive Strength: As Specified in Drawings.
2. Maximum Water-Cementitious Materials Ratio: 0.50.
3. Slump Limit: 4 inches.
4. Air Content: Maintain within range permitted by ACI 301. Do not allow air content of floor slabs to receive troweled finishes to exceed 3 percent.

C. Measure, batch, mix, and deliver concrete according to ASTM C 94/C 94M.

1. When air temperature is above 90 deg F, reduce mixing and delivery time to 60 minutes.

PART 3 - EXECUTION

3.1 CONCRETING

A. Construct formwork according to ACI 301 and maintain tolerances and surface irregularities within ACI 347R limits of Class A, 1/8 inch for concrete exposed to view and Class B, 1/4 inch for other concrete surfaces.

B. Comply with CRSI's "Manual of Standard Practice" for fabricating, placing, and supporting reinforcement.

C. Install construction, isolation, and contraction joints where indicated. Install full-depth joint-filler strips at isolation joints.

D. Place concrete in a continuous operation and consolidate using mechanical vibrating equipment.

E. Protect concrete from physical damage, premature drying, and reduced strength due to hot or cold weather during mixing, placing, and curing.

F. Formed Surface Finish: Smooth-formed finish for concrete exposed to view, coated, or covered by waterproofing or other direct-applied material; rough-formed finish elsewhere.

G. Slab Finishes: Comply with ACI 302.1R for screeding, restraightening, and finishing operations for concrete surfaces. Do not wet concrete surfaces.

I. Cure formed surfaces by moisture curing for at least seven days.

J. Begin curing concrete slabs after finishing. Keep concrete continuously moist for at least seven days.

L. Engage a testing agency to perform field tests and to submit test reports.

M. Protect concrete from damage. Repair and patch defective areas.

END OF SECTION 03 30 00

DIVISION 4-NOT USED

5 Division 5 Metals

SECTION 05 50 00 METAL FABRICATIONS

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

A. Submittals: Shop Drawings.

PART 2 - PRODUCTS

2.1 METALS

A. Steel Plates, Shapes, and Bars: ASTM A 36/A 36M.

B. Steel Tubing: ASTM A 500.

C. Steel Pipe: ASTM A 53, standard weight (Schedule 40).

2.2 GROUT

A. Nonshrink, Nonmetallic Grout: ASTM C 1107, recommended by manufacturer for exterior applications.

2.3 FABRICATION

A. General: Shear and punch metals cleanly and accurately. Remove burrs and ease exposed edges. Form bent-metal corners to smallest radius possible without impairing work.

B. Welding: Weld corners and seams continuously. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals. At exposed connections, finish welds and surfaces smooth with contour of welded surface matching those adjacent.

2.4 STEEL AND IRON FINISHES

A. Hot-dip galvanize steel fabrications at exterior locations.

B. Prepare uncoated ferrous metal surfaces to comply with SSPC-SP 3, "Power Tool Cleaning," and paint with a fast-curing, lead- and chromate-free, universal modified-alkyd primer complying with MPI#79.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Provide anchorage devices and fasteners where needed to secure items to in-place construction.

B. Perform cutting, drilling, and fitting required for installing miscellaneous metal fabrications. Set metal fabrication accurately in location, alignment, and elevation, with edges and surfaces level, plumb, true, and free of rack.

C. Fit exposed connections accurately together to form hairline joints or, where indicated, with uniform reveals and spaces for sealants and joint fillers.

D. Coat concealed surfaces of aluminum that will come into contact with grout, concrete, masonry, wood, or dissimilar metals with a heavy coat of bituminous paint.

END OF SECTION 05 50 00

DIVISIONS 6 THROUGH 8-NOT USED

9 Division 9 Finishes

SECTION 09 90 00 PAINTING AND COATING

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

A. Submittals:

1. Product Data.

B. Extra Materials: Deliver to Company 1 quart of each color and type of finish coat paint used on project, in containers, properly labeled and sealed.

PART 2 - PRODUCTS

2.1 PAINT

A. Manufacturers unless noted or otherwise in drawings or directed by Construction Manager:

1. Tnemec Company Incorporated.
2. Sherwin-Williams Company (The).

B. Material Compatibility: Provide materials that are compatible with one another and with substrates.

1. For each coat in a paint system, provide products recommended in writing by manufacturers of topcoat for use in paint system and on substrate indicated.

C. Colors: as noted/ designated in drawings.

PART 3 - EXECUTION

3.1 PREPARATION

A. Comply with recommendations in MPI's "MPI Architectural Painting Specification Manual" applicable to substrates indicated.

B. Remove hardware and similar items that are not to be painted. Mask items that cannot be removed; reinstall items in each area after painting is complete.

C. Clean and Prepare surfaces in an area before beginning painting in that area. Schedule painting so cleaning operations will not damage newly painted surfaces.

3.2 APPLICATION

A. Comply with recommendations in MPI's "MPI Architectural Painting Specification Manual" applicable to substrates indicated.

B. Paint exposed surfaces as designated/ noted in drawings.

C. Apply paints according to manufacturer's written instructions.

D. Apply paints to produce surface films without cloudiness, spotting, holidays, laps, brush marks, roller tracking, runs, sags, ropiness, or other surface imperfections. Cut in sharp lines and color breaks.

1. If undercoats or other conditions show through topcoat, apply additional coats until cured film has a uniform paint finish, color, and appearance.

JAMES VACCARO ARCHITECT, INC.

CLIENT

MODUS, INC.

verizon

VERIZON WIRELESS

CONSULTANTS

SF_CUPER001
CPSC001

PUBLIC ROW ADJACENT TO
10465 S. DE ANZA BOULEVARD
CUPERTINO, CA 95014
APN: PUBLIC ROW ADJACENT
TO 359-17-019

REV	DATE	ISSUE
1	10/18/2017	90% CONSTRUCTION
2	2/6/2018	100% CONSTRUCTION
3	3/26/2018	100% CONSTRUCTION REV

SHEET TITLE

SPECIFICATIONS

SHEET NUMBER

SP-2

SPECIFICATIONS

9 Finishes Continued

3.3 EXTERIOR PAINT APPLICATION SCHEDULE, UNLESS NOTED OTHERWISE IN DRAWINGS

A. Antenna/ Radome Concealment:
1. DTM Acrylic Coating #B66 W100-Series (Finish), over DTM Bonding Primer #B66A50 (4.5-12.0 wet mils/ 2.0-5.0 dry mils)

B. Load Center, Disconnect:
1. Pro Industrial Water Based Alkyd Urethane #B53W01251 (Finish), over Macropoxy 646 (Prime-2 coats)

C. RRU Units:
1. Pro Industrial Water Based Alkyd Urethane #B53W01251 (Finish), over Macropoxy 646 (Prime-2 coats)

D. Steel (Cable Shroud, Tube Assembly, Cable Sweep, Load Center/ RRU mounting components):
1. Tnemec UVX Series 750 (2.5 to 5.0 mils DFT) (Finish), Over Hi-Build Epoxoline II Series V69 (4.0 to 6.0 mils DFT) (Intermediate), Over Tneme-Zinc Series 90-97 (2.5 mils to 3.5 mils) (Prime) (9.0-14.5 total DFT)

E. Stainless Steel Banding:
1. Tnemec Fluoronar Series 1071V (semi-gloss) (2.0 to 3.0 mils DFT) (Finish), Over Endur-Shield Series 1075 (2.0 to 3.0 mils DFT) (Intermediate), Over Hi-Build Epoxoline II Series V69 (2.0 to 3.0 mils DFT) (Prime)

END OF SECTION 09 90 00

10 Division 10 Specialties

SECTION 10 14 00 SIGNAGE

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

A. Submittals: Product Data.

PART 2 - PRODUCTS

2.1 SIGNS, GENERAL

A. Regulatory Requirements: Comply with NFPA, FCC, ANSI and authority having jurisdiction.

2.2 PANEL SIGNS

Basis-of-Design Product: Product indicated on Drawings. Project specific RF/ EMF report and Requirements of Authority Having Jurisdiction.

2.3 MATERIALS

A. Applied vinyl: die-cut characters from vinyl film of nominal thickness of 3 mils with pressure-sensitive adhesive backing, suitable for exterior applications.

B. Electrical Components, devices, and accessories: listed and labeled as defined in NFPA 70, by a testing agency acceptable to authorities having jurisdiction, and marked for intended location and application.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Locate signs where indicated or directed. Install signs level, plumb, and at heights indicated, with sign surfaces free from distortion and other defects in appearance.

END OF SECTION 10 14 00

DIVISIONS 11 THROUGH 25-NOT USED

26 Division 26 Electrical

SECTION 26 05 00 COMMON WORK RESULTS FOR ELECTRICAL

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

A. Submittals:
1. Product Data.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

B. Comply with NFPA 70.

2.2 RACEWAYS

A. Raceways:
1. EMT: ANSI C80.3 and UL 797.
2. IMC: ANSI C80.6, zinc-coated steel, with threaded fittings.
3. GRC: ANSI C80.1 and UL 6, hot-dip galvanized.
4. LFMC: UL 360, zinc-coated, flexible steel with sunlight-resistant and mineral-oil-resistant plastic jacket.
5. RNC: UL 651 and NEMA TC 2, Type EPC-40-PVC, with NEMA TC3 fittings.
6. Raceway Fittings: Specifically designed for raceway type used in Project.

B. Handholes and Boxes for Exterior Underground Wiring:
1. Polymer-Concrete Handholes and Boxes with Polymer-Concrete Cover: Molded of sand and aggregate, bound together with polymer resin, and reinforced with steel, fiberglass, or a combination of the two.
2. Comply with SCTE 77.
3. Configuration: Designed for flush burial with open bottom unless otherwise indicated.
4. Cover: Weatherproof, secured by tamper-resistant locking devices and having structural load rating consistent with enclosure and handhole location.
5. Cover Finish: Nonskid finish shall have a minimum coefficient of friction of 0.50.
6. Cover Legend: Molded lettering, "STREET LIGHTING".

2.3 CONDUCTORS AND CABLES

A. Conductors:
1. Comply with NEMA WC70.
2. Conductors, No. 10 AWG and Smaller: Solid or stranded copper.
3. Conductors, Larger Than No. 10 AWG: Stranded copper.
4. Insulation: Thermoplastic, Type THHN-THWN or XHHW.
5. Wire Connectors and Splices: Units of size, ampacity rating, material, type, and class suitable for service indicated.

B. Cable Type NM-B and Type NMC-B Cable: Comply with UL 719 with Type THHN/THWN conductors complying with UL 83.

C. Cable Type SEU: Comply with UL 854 with Type THHN/THWN conductors complying with UL 83 or Type XHHW-2 conductors complying with UL 44.

D. Cable Type UF-B: Comply with UL 493 with Type THHN/THWN conductors complying with UL 83.

2.4 GROUNDING MATERIALS

A. Conductors: Solid for No. 8 AWG and smaller, and stranded for No. 6 AWG and larger unless otherwise indicated.
1. Insulated Conductors: tinned-copper wire or cable insulated for 600 V unless otherwise required by applicable Code or authorities having jurisdiction.
2. Bare, Solid-Copper Conductors: Comply with ASTM B 3.
3. Bare, Stranded-Copper Conductors: Comply with ASTM B 8.

B. Ground Rods: Copper-clad steel, sectional type; 5/8 by 120 inches in diameter.

C. Bolted Connectors for Conductors and Pipes: Copper or copper alloy, bolted pressure-type, with at least two bolts with clamp-type pipe connectors sized for pipe.

D. Welded Connectors: Exothermic-welding kits of types recommended by kit manufacturer for materials being joined and installation conditions.

2.5 ELECTRICAL IDENTIFICATION MATERIALS

A. Raceway Identification Materials: Self-adhesive color-coding vinyl tape; flexible, preprinted, self-adhesive vinyl.

B. Conductor Identification Materials: Color-Coding Conductor Tape: Self-adhesive vinyl tape 1 to 2 inches wide.

C. Underground-Line Warning Tape: Permanent, bright-colored, continuous-printed, polyethylene tape with continuous metallic strip or core.

D. Tape Markers for Wire: Vinyl or vinyl-cloth, self-adhesive, wraparound type with circuit identification legend machine printed by thermal transfer or equivalent process.

E. Self-Adhesive Warning Labels: Factory printed, multicolor, pressure-sensitive adhesive labels, configured for display on front cover, door, or other access to equipment unless otherwise indicated.

2.6 SUPPORT AND ANCHORAGE COMPONENTS

A. Raceway and Cable Supports: As described in NECA 1.

B. Conduit and Cable Support Devices: Steel and malleable-iron hangers, clamps, and fittings.

2.7 SLEEVES FOR RACEWAYS AND CABLES

A. Steel Pipe Sleeves: ASTM A 53/A 53M, Type E, Grade B, Schedule 40, galvanized steel, plain ends.

2.8 GROUT

A. Nonmetallic, Shrinkage-Resistant Grout: ASTM C 1107, factory-packaged, nonmetallic aggregate grout, noncorrosive, nonstaining.

PART 3 - EXECUTION

3.1 GENERAL ELECTRICAL EQUIPMENT INSTALLATION REQUIREMENTS

A. Install electrical equipment to provide for ease of disconnecting the equipment with minimum interference to other installations.

B. Install electrical equipment to allow right of way for piping and conduit installed at required slope.

C. Install electrical equipment to ensure that connecting raceways, cables, wireways, cable trays, and busways are clear of obstructions and of the working and access space of other equipment.

D. Install required supporting devices and set sleeves in cast-in-place concrete, masonry walls, and other structural components as they are constructed.

E. Comply with NECA 1.

3.2 RACEWAY AND CABLE INSTALLATION

A. Outdoor Raceways Applications:
1. Exposed or Concealed: IMC.
2. Underground, Single Run: GRC.
3. Boxes and Enclosures: Metallic, NEMA 250, Type 3R or Type 4.

B. Install pull wires in empty raceways.

3.3 WIRING METHODS

A. Service Entrance: Type THHN-THWN, single conductors in raceway.

B. Exposed Feeders, Branch Circuits, and Class 1 Control Circuits, Including in Crawlspaces: Type THHN-THWN, single conductors in raceway.

C. Feeders and Branch Circuits Concealed in Ceilings, Walls, Partitions, and Crawlspaces: Type THHN-THWN, single conductors in raceway.

D. Feeders and Branch Circuits Concealed in Concrete, below Slabs-on-Grade, and underground: Type THHN-THWN, single conductors in raceway.

3.4 GROUNDING

A. Underground Grounding Conductors: Install bare copper conductor. Bury at least 24 inches below grade.

B. Pipe and Equipment Grounding Conductor Terminations: Bolted.

C. Underground Connections: Welded.

D. Connections to Structural Steel: Bolted.

E. Install grounding conductors routed along shortest and straightest paths possible unless otherwise indicated or required by Code. Avoid obstructing access or placing conductors where they may be subjected to strain, impact, or damage.

F. Install ground rods driven into ground until tops are 2 inches below final grade, or 4 inches above.

G. Protect ground rods passing through concrete with a double wrapping of pressure-sensitive insulating tape.

H. Make connections without exposing steel or damaging coating if any.

I. Install bonding straps and jumpers in locations accessible for inspection and maintenance, except where routed through short lengths of conduit.

J. Bond straps directly to basic structure, taking care not to penetrate any adjacent parts.

K. Bond to equipment mounted on vibration isolation hangers and supports so vibration is not transmitted to rigidly mounted equipment.

L. Test completed grounding system at each location where a maximum ground-resistance level is specified, at service disconnect enclosure grounding terminal, and at ground test wells.
1. Measure ground resistance not less than two full days after last trace of precipitation and without soil being moistened by any means other than natural drainage or seepage and without chemical treatment or other artificial means of reducing natural ground resistance.
2. Perform tests by fall-of-potential method according to IEEE 81.
3. Report measured ground resistances that exceeds 5 ohms.
4. Excessive Ground Resistance: If resistance to ground exceeds specified values, notify Construction Manager promptly and include recommendations to reduce ground resistance.

3.5 IDENTIFICATION

A. Power-Circuit Conductor Identification: For No. 3 AWG conductors and larger, at each location where observable, identify phase using color-coding conductor tape.

B. Locations of Underground Lines: Identify with underground-line warning tape for power, lighting, communication, and control wiring.

C. Warning Labels for Enclosures for Power and Lighting: Comply with 29 CFR 1910.145; identify system voltage with black letters on an orange background. Apply to exterior of door, cover, or other access.

D. Verify identity of each item before installing identification products.

E. Install identification materials and devices at locations for most convenient viewing without interference with operation and maintenance of equipment.

F. Install system identification color banding for raceways and cables at 50-foot maximum intervals in straight runs, and at 25-foot maximum intervals in congested areas.

G. Color-Coding for Phase Identification, 600 V and Less: Ungrounded service feeder and branch-circuit conductors:
1. Colors for 208/120-V Circuits:
a. Phase A: Black.
b. Phase B: Red.
c. Phase C: Blue.
2. Field-Applied, Color-Coding Conductor Tape: Apply in half-lapped turns for a minimum distance of 6 inches from terminal points.

H. Underground-Line Warning Tape: Continuous underground-line warning tape directly above line at 6 to 8 inches below finished grade.

3.6 SLEEVE AND SLEEVE-SEALS INSTALLATION

A. Concrete Slabs and Walls: Install sleeves for penetrations unless core-drilled holes or formed openings are used. Install sleeves during erection of slabs and walls.

B. Cut sleeves to length for mounting flush with both wall surfaces.

C. Size pipe sleeves to provide 1/4-inch annular clear space between sleeve and cable unless sleeve seal is to be installed or unless seismic criteria require different clearance.

END OF SECTION 26 05 00

SECTION 26 56 13 LIGHTING POLES AND STANDARDS

PART 1 - GENERAL

1.1 DESCRIPTION

This section specifies the furnishing, installation, and connection of exterior luminaires, poles, and supports.

1.2 RELATED WORK

A. Section 26 05 00, COMMON WORK RESULTS FOR ELECTRICAL.

1.3 SUBMITTALS

A. Shop Drawings:
1. Clearly present sufficient information to determine compliance with drawings and specifications.

1.4 DELIVERY, STORAGE, AND HANDLING

Provide manufacturer's standard provisions for protecting pole finishes during transport, storage, and installation. Do not store poles on ground. Store poles so they are at least 12 inches above ground level and growing vegetation. Do not remove factory-applied pole wrappings until just before installing pole.

PART 2 — PRODUCTS

2.1 MATERIALS AND EQUIPMENT

Materials and equipment shall be in accordance with NEC, UL, ANSI, and as shown on the drawings and specified.

2.2 POLES

A. General:
1. Poles shall be 7 guage round tapered steel Modified Type 15, as manufactured by Valmont and as shown on the drawings. Finish shall be hot-dip galvanized to ASTM A123.
2. Poles shall be anchor-bolt type designed for use with underground supply conductors. Poles shall have handhole having a minimum clear opening of 2.5 x 5 inches. Handhole covers shall be secured by stainless steel captive screws.
3. Provide a steel-grounding stud opposite handhole openings, designed to prevent electrolysis when used with copper wire.
4. Hardware and Accessories: All necessary hardware and specified accessories shall be the product of the pole manufacturer.

B. Types:
1. Steel: Provide round tapered steel pole conforming to ASTM A595. Pole shall be hot-dip galvanized conforming to ASTM A123.

2.3 FOUNDATIONS FOR POLES

A. Foundations shall be cast-in-place concrete, having 4,000 psi minimum 28-day compressive strength.

B. Place concrete in spirally-wrapped treated paper forms for round foundations, and construct forms for square foundations.

C. Anchor bolt assemblies and reinforcing of concrete foundations shall be as shown on the drawings. Anchor bolts shall be in a welded cage or properly positioned by the tiewire to stirrups.

D. Prior to concrete pour, install conduits per Section 26 05 00.

2.4 LUMINAIRES

A. Per UL 1598 and NEMA C136.17. Luminaires shall be weatherproof, heavy duty, outdoor types designed for efficient light utilization, adequate dissipation of lamp and ballast heat, and safe cleaning and relamping.

B. Light distribution pattern types shall be as approved by The City of Cupertino Department of Public.

C. Incorporate ballasts in the luminaire housing.

D. Lenses shall be frame-mounted, heat-resistant, borosilicate glass, with prismatic refractors, unless otherwise specified by The City of Cupertino Department of Public Works. Use heat and aging-resistant, resilient gaskets to seal and cushion lenses and refractors in luminaire doors.

E. Lamp sockets for high intensity discharge (H.I.D) fixture shall have locking-type porcelain enclosures in conformance to the applicable requirements of ANSI C81.61 and UL 496.

F. Pre-wire internal components to terminal strips at the factory.

G. Bracket-mounted luminaires shall have leveling provisions and clamp-type adjustable slip-fitters with locking screws.

H. Materials shall be rustproof. Latches and fittings shall be non-ferrous metal.

I. Provide manufacturer's standard finish.

J. Luminaires shall carry factory labels, showing complete, specific lamp and ballast information.

2.5 LAMPS

A. Install the proper lamps in luminaire installed.

B. Lamps shall be general-service, outdoor lighting types.

C. High-Pressure Sodium (HPS) Lamps: NEMA C78.42, CRI 21 (minimum), wattage as indicated. Lamps shall have minimum average rated life of 24,000 hours.

D. LED sources shall meet the following requirements:
1. Operating temperature rating shall be between -40 F and 120 F.
2. Correlated Color Temperature (CCT), as specified by The City of Cupertino.
3. Color Rendering Index (CRI): As specified by The City of Cupertino.

2.6 HIGH INTENSITY DISCHARGE BALLASTS

A. Per NEMA C82.4 and UL 1029. Ballasts shall be encapsulated single-lamp, copper-wound, constant-wattage autotransformer type, designed to operate on the voltage system to which they are connected, and capable of open-circuit operation without reducing lamp life.

B. Ballasts shall have individual overcurrent protection in each ungrounded supply conductor.

C. Ballast shall have an allowable line voltage variations of 10%, with a maximum 20% lamp wattage regulation spread.

D. Power factor shall be not less than 90%.

E. Ballast shall have a minimum starting temperature of -22 F, and a normal ambient operating temperature of 104 F.

2.7 LED drivers

A. LED drivers shall meet the following requirements:
1. Drivers shall have a minimum efficiency of 85%.
2. Starting Temperature: -40° F.
3. Input Voltage: 120 to 480 (±10%) V.
4. Power Supplies: Class I or II output.
5. Surge Protection: The system must survive 250 repetitive strikes of "C Low" (C Low: 6kV/1.2 x 50 μs, 10kA/8 x 20 μs) waveforms at 1-minute intervals with less than 10% degradation in clamping voltage. "C Low" waveforms are as defined in IEEE/ANSI C62.41.2-2002, Scenario 1 Location Category C.
6. Power Factor (PF): ≥ 0.90.
7. Total Harmonic Distortion (THD): ≤ 20%.
8. Comply with FCC Title 47 CFR Part 18 Non-consumer RFI/EMI Standards.
9. Drivers shall be reduction of hazardous substances (ROHS)-compliant.

2.8 EXISTING LIGHTING SYSTEMS

A. For modifications or additions to existing lighting systems, the new components shall be compatible with the existing systems.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Install lighting in accordance with the NEC, as shown on the drawings, and in accordance with manufacturer's recommendations.

B. Pole Foundations:
1. Excavate only as necessary to provide sufficient working clearance for installation of forms and proper use of tamper to the full depth of the excavation. Prevent surface water from flowing into the excavation. Thoroughly compact backfill with compacting arranged to prevent pressure between conductor, jacket, or sheath, and the end of conduit.
2. Set anchor bolts according to anchor-bolt templates furnished by the pole manufacturer.
3. Install poles as necessary to provide a permanent vertical position with the bracket arm in proper position for luminaire location.
4. After the poles have been installed, shimmed, and plumbed, grout the spaces between the pole bases and the concrete base with non-shrink concrete grout material. Provide a plastic or copper tube, of not less than 0.375 in inside diameter through the grout, tight to the top of the concrete base to prevent moisture weeping from the interior of the pole.

C. Install lamps in each luminaire.

D. Adjust luminaires that require field adjustment or aiming.

3.2 GROUNDING

Ground noncurrent-carrying parts of equipment, including metal poles, luminaires, mounting arms, brackets, and metallic enclosures, as specified by The City of Cupertino. Where copper grounding conductor is connected to a metal other than copper, provide specially-treated or lined connectors suitable and listed for this purpose.

3.3 Acceptance Checks and Tests

Verify operation after installing luminaires and energizing circuits.

END OF SECTION 26 56 13

27 Division 27 Communications

SECTION 27 05 00 COMMON WORK RESULTS FOR COMMUNICATIONS

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

A. Submittals: Product Data.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Comply with NFPA 70.

2.2 PATHWAYS

A. General: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application. Comply with TIA-569-B.

B. Metal Conduits and Fittings:
1. GRC: ANSI C80.1 and UL 6, hot-dip galvanized.
2. Raceway Fittings: Specifically designed for raceway type used in Project.

C. Nonmetallic Conduits and Fittings:
1. RNC: Type EPC-40-PVC, complying with NEMA TC 2 and UL 651 unless otherwise indicated.
2. Continuous HDPE: Comply with UL 651B.
3. Fittings for RNC: Comply with NEMA TC 3; match to conduit or tubing type and material.

D. Optical-Fiber and Communication Cable Pathways and Fittings: Comply with UL 2024; flexible-type pathway, approved for plenum or general-use installation unless otherwise indicated.

E. Handholes and Boxes for Exterior Underground Wiring:
1. Polymer-Concrete Handholes and Boxes with Polymer-Concrete Cover: Molded of sand and aggregate, bound together with polymer resin, and reinforced with steel, fiberglass, or a combination of the two.
2. Comply with SCTE 77.
3. Configuration: Designed for flush burial with open bottom unless otherwise indicated.
4. Cover: Weatherproof, secured by tamper-resistant locking devices and having structural load rating consistent with enclosure and handhole location.
5. Cover Legend: Molded lettering, "COMMUNICATIONS."

2.3 RACEWAY IDENTIFICATION MATERIALS

A. Snap-around, color-coding bands: flexible, preprinted, color-coded acrylic.

PART 3 - EXECUTION

3.1 GENERAL COMMUNICATION EQUIPMENT INSTALLATION REQUIREMENTS

A. Install communication equipment to provide for ease of disconnecting the equipment with minimum interference to other installations.

B. Install communication equipment to allow right of way for piping and conduit installed at required slope.

C. Install communication equipment to ensure that connecting pathways and cables are clear of obstructions and of the working and access space of other equipment.

D. Install required supporting devices and set sleeves in cast-in-place concrete, masonry walls, and other structural components as they are constructed.

E. Install sleeve and sleeve seals of type and number required for sealing communication service penetrations at exterior walls.

3.2 PATHWAY AND CABLE INSTALLATION

A. General: Comply with NECA 1, NECA 101, and TIA-569-B for installation requirements.

B. Outdoor Pathways Applications:
1. Exposed: GRC.
2. Concealed Aboveground: GRC.
3. Underground, Single Run: RNC, Type EPC-40-PVC, direct buried.
4. Boxes and Enclosures: NEMA 250, Type 3R.

C. Minimum Raceway Size: 3/4-inch trade size. Minimum size for optical-fiber cables is 1 inch.

D. Conceal raceways and cables, unless otherwise indicated.

E. Install pull wires in empty raceways.

3.3 GROUNDING

A. Install grounding according to BICSI TDMM, "Grounding, Bonding, and Electrical Protection" Chapter.

B. Comply with J-STD-607-A.

END OF SECTION 27 05 00

DIVISIONS 28 THROUGH 48-NOT USED

JAMES VACCARO ARCHITECT, INC.
411 DONDEE WAY UNIT C
PACIFICA, CA 94044
415-408-3470 PHONE | 415-...
INFO@JVARCHITECT.COM
WWW.JVARCHITECT.COM

CLIENT

MODUS, INC.
240 STOCKTON STREET, 3RD FLOOR
SAN FRANCISCO, CA 94108

verizon

VERIZON WIRELESS
2785 MITCHELL DRIVE, SUITE 9
WALNUT CREEK, CA 94598

CONSULTANTS

SF_CUPER001
CPSC001
PUBLIC ROW ADJACENT TO
10465 S. DE ANZA BOULEVARD
CUPERTINO, CA 95014
APN: PUBLIC ROW ADJACENT
TO 359-17-019

LICENSED ARCHITECT
JAMES P. VACCARO
C-32251
STATE OF CALIFORNIA

REV	DATE	ISSUE
1	10/18/2017	90% CONSTRUCTION
2	2/6/2018	100% CONSTRUCTION
3	3/26/2018	100% CONSTRUCTION REV.

SHEET TITLE

SPECIFICATIONS

SHEET NUMBER

SP-3

CITY OF CUPERTINO

City of Cupertino
General Notes for Temporary Traffic Control (TTC) Plan

As of September 26, 2006, the California Manual on Uniform Traffic Control Devices (MUTCD) has been combined with the Federal Highway Administration (FHWA) MUTCD 2003 and the California Supplement (May 20, 2004). Chapter 6, of the *California MUTCD* covers TTC typical setups and the use within public right-of-way.

As a traffic control practitioners, the City expects the Contractor to design and provide a TTC plan with high-level warning devices, channeling cones, flashing arrow boards, and signing and be able to install these items as shown on the approved plan. In addition, it is acceptable to contract a responsible signing and striping company for TTC designing and all updates, which complies with the *California MUTCD.*

1. Twenty-four (24) hours prior to setting up any TTC zone, the Contractor **SHALL** call the Public Works Inspector for **proper signing and setup approval.** The set up shall match the approved TTC or a ***"STOP WORK"*** notice will be issued. The Inspector's number is 408.777.3104.

2. Signs used for stationary or temporary traffic control zone, may be fabricated from fiberglass reinforced plastic, metal, reflective mesh, or other reflective material as approved by the Assistant City Engineer or acting agent. Absolutely, no ***paper signs*** shall be allowed.
    a. Signs shall be in good condition, no tears, not worn out, or no missing reflective properties.
    b. Typical TTC setup and other beneficial material have been printed in the 2006 Work Area Traffic Control Handbook (WATCH). The 2006 WATCH guide is in conformance with *California MUTCD.*

3. All TTC signing shall be **STANDARD / CONVENTIONAL** in size.

4. Channeling cones shall be 28" in height and in good clean condition. Reflective sheeting is advisable and mandatory when left overnight or for night work.

5. Each high-level warning device shall have flags and at least one (1) cone on the left vehicle approach side. In some cases, barricades may be required, however when left overnight or for night work, the device shall have a flashing beacon.

6. In most cases, there may be a special need to protect bicycles and pedestrians, which are not fully covered in Part 6 of the MUTCD. Special bike and pedestrian signage shall be required by the City of Cupertino.

7. Construction signing shall **NOT** be placed in bike lane or in pedestrian walkway, unless the bike lane, sidewalk, or pedestrian path has been **APPROVED** for closure.

8. Construction signing shall **NOT** be installed on traffic signal poles. It is okay to install construction signs on City owned electroliers.

Common TTC Signing (California in parentheses): W20-1 (C23) Road Work Ahead, W9-3 (C20) XXX Lane Closed Ahead (L, R, Center, Bike), C30 (CA) Lane Closed, G20-2 (C14) End Road Work, ~~SC11 (CA) Bike lane Closed~~, W16-1 Share the Road (black on yellow), R9-9 Sidewalk Closed (black on white), R9-11(L,R) Sidewalk Closed Ahead (black on white), C9 (CA) Flagger (w/stop paddle), W4-2 (W11) lane drop.

Table 6C-1. Recommended Advance Warning Sign ~~Minimum~~ Spacing

Road Type	Distance Between Signs**		
	A	B	C
Urban ~~(low speed)~~ - 25 mph or less***	100 feet	100 feet	100 feet
Urban - more than 25 mph to 40 mph***	250 feet	250 feet	250 feet
Urban ~~(high speed)~~ - more than 40 mph***	350 feet	350 feet	350 feet
Rural	500 feet	500 feet	500 feet
Expressway / Freeway	1,000 feet	1,500 feet	2,640 feet

* ~~Speed category to be determined by the highway agency.~~

** The column headings A, B, and C are the dimensions shown in Figures 6H-1 through 6H-46. The A dimension is the distance from the transition or point of restriction to the first sign. The B dimension is the distance between the first and second signs. The C dimension is the distance between the second and third signs. (The "first sign" is the sign in a three-sign series that is closest to the TTC zone. The "third sign" is the sign that is furthest upstream from the TTC zone.)

*** Posted speed limit, off-peak 85th-percentile speed prior to work starting, or other anticipated operating speed in mph.

Table 6C-2. Stopping Sight Distance as a Function of Speed on Level Roads. (Used as suggested longitudinal buffer space length or location for flagger station)

Speed*	Distance
20 mph	115 feet
25 mph	155 feet
30 mph	200 feet
35 mph	250 feet
40 mph	305 feet
45 mph	360 feet
50 mph	425 feet
55 mph	495 feet
60 mph	570 feet
65 mph	645 feet
70 mph	730 feet
75 mph	820 feet

* Posted speed, off-peak 85th-percentile speed prior to work starting, or the anticipated operating speed in mph.

Table 6C-3. Taper Length Criteria for Temporary Traffic Control Zones

Type of Taper	Taper Length
Merging Taper	at least L
Shifting Taper	at least 0.5 L
Shoulder Taper	at least 0.33 L
One-Lane, Two-Way Traffic Taper	50 feet minimum, 100 feet maximum
Downstream Taper	50 feet minimum, 100 feet maximum

Note: Use Table 6C-4 to calculate L

Table 6C-3(CA). Taper Length Criteria for Temporary Traffic Control Zones (for 12 feet Offset Width)

Speed* S (mph)	Minimum Taper Length** for Width of Offset 12 feet (W)			
	Merging L (feet)	Shifting L/2 (feet)	Shoulder L/3 (feet)	Down Stream (feet)***
20	80	40	27	50
25	125	63	42	50
30	180	90	60	50
35	245	123	82	50
40	320	160	107	50
45	540	270	180	50
50	600	300	200	50
55	660	330	220	50
60	720	360	240	50
65	780	390	260	50
70	840	420	280	50
75	900	450	300	50

* - Posted speed limit, off-peak 85th-percentile speed prior to work starting, or the anticipated operating speed in mph.

** - For other offsets use the following merging taper length formula for L:

For speeds of 40 mph or less, $L=WS^2/60$

For speeds of 45 mph or more, $L=WS$

Where: L = taper length in feet
W = width of offset in feet
S = posted speed limit, off-peak 85th-percentile speed prior to work starting, or the anticipated operating speed in mph

*** - Maximum downstream taper length is 100 feet. See Section 6C.08.

Table 6C-4. Formulas for Determining Taper Length

Speed (S)	Taper Length (L) in feet
40 mph or less	$L = \frac{WS^2}{60}$
45 mph or more	$L = WS$

Where: L = taper length in feet
W = width of offset in feet
S = posted speed limit, or off-peak 85th-percentile speed prior to work starting, or the anticipated operating speed in mph

Table 6C-101(CA). Stopping Sight Distance as a Function of Speed on Downgrades. (Used as suggested longitudinal buffer space length or location for flagger station)

Speed (mph)	% Downgrade (Buffer Space)		
	-3% (feet)	-6% (feet)	-9% (feet)
20	116	120	126
25	158	165	173
30	205	215	227
35	257	271	287
40	315	333	354
45	378	400	427
50	446	474	507
55	520	553	593
60	598	638	686
65	682	728	785
70	771	825	891
75	866	927	1003

* Exhibit 3-2. A Policy on Geometric Design of Highways and Streets, AASHTO, 2001, p.115.

In the Santa Clara Valley, storm drains flow directly to our local creeks, and on to San Francisco Bay, with no treatment.

Storm water pollution is a serious problem for wildlife dependent on our waterways and for the people who live near polluted streams or baylands.

Proper management of construction sites reduces pollution significantly.

This sheet summarizes the "Best Management Practices" (BMPs) for storm water pollution prevention.

ORDINANCE OF THE CITY OF CUPERTINO FOR STORM WATER POLLUTION PREVENTION & WATERCOURSE PROTECTION: Chapter 9.18

9.18.040 Discharge into the storm drain prohibited

It is unlawful to cause, allow, or permit to be discharged, any discharge not composed entirely of stormwater to the storm drain system or to surface waters or to any location where it would contact or eventually be transported to surface waters, including flood plain areas, unless specifically called out in the Municipal Regional Permit as an exempt or conditionally exempt discharge.

9.18.070 Accidental Discharge

All persons shall notify the Director of Public Works immediately upon accidentally discharging pollutants of concern to enable countermeasures to be taken by the City to minimize damage to storm drains and the receiving waters. Initial notification shall be followed, within five (5) business days of the date of occurrence, by a detailed written statement describing the causes of the accidental discharge and the measures being taken to prevent future occurrences. Such notification will not relieve persons of liability for violations of this chapter or for any fines imposed on the City on account thereof under Section 13350 of the California Water Code, or for violation of Section 5650 of the California Fish and Wildlife Code, or any other applicable provisions of State or Federal laws.

9.18.220 Violation*

Any person who violates any provision of this Chapter shall be guilty of a misdemeanor and upon conviction thereof shall be punished as provided in Chapter 1.12 of the City of Cupertino Municipal Code.

Chapter 1.12: General Penalty, Section 1.12.010, paragraph D, states*:

Unless otherwise specified by this code, an infraction is punishable by:

1. A fine not to exceed $100 for a first violation
2. A fine not to exceed $200 for a second violation
3. A fine not to exceed $500 for a third violation of the same chapter within one year.

9.18.240 Civil penalty for illicit discharges*

Any person who discharges pollutants, in violation of this Chapter, by the use of illicit connections shall be civilly liable to the City in a sum **not to exceed twenty-five thousand dollars per day per violation** for each day in which such violation occurs.

*Excerpts – For complete CODE language refer to the City ofCupertino Municipal Code.

Cupertino
Building Dept: 408-777-3228
Public Works Dept: 408-777-3354

Santa Clara County Recycling Hotline: 800-533-8414
www.reducewaste.org
www.recyclestuff.com
Small Business Hazardous Waste: 408-299-7300

Cupertino Sanitary Sewer Distr 408-253-7071

Santa Clara Valley Urban Runoff Pollution Prevention Prgm 800-794-2482

State Office of Emergency Services 1-800-852-7550 (24 hrs)

Report spills to 911

General Construction and Site Supervision

Storm Drain Pollution from Construction Activities

Construction sites are common sources of storm water pollution. Materials and wastes that blow or wash into a storm drain, gutter, or street have a direct impact on local creeks and the Bay.

As a contractor, or site supervisor, owner or operator of a site, you may be responsible for any environmental damage caused by your subcontractors or employees.

General Principles

- Keep an **orderly site** and ensure good housekeeping practices are used.
- **Maintain equipment** properly.
- **Cover** materials when they are not in use.
- Keep materials **away from streets**, storm drains and drainage channels.
- Ensure **dust control** water doesn't leave site or discharge to storm drains.

Advance Planning To Prevent Pollution

- **Schedule excavation and grading activities for dry weather periods.** To reduce soil erosion, plant temporary vegetation or place other erosion controls before rain begins. Use the *Erosion and Sediment Control Manual*, available from the Regional Water Quality Control Board, as a reference.
- **Control the amount of runoff** crossing your site (especially during excavation!) by using berms or temporary or permanent drainage ditches to divert water flow around the site. Reduce stormwater runoff velocities by constructing temporary check dams or berms where appropriate.
- **Train your employees and subcontractors**. The city can provide brochures about these issues for you to distribute to workers at your construction site. Inform your subcontractors about the stormwater requirements and their own responsibilities. Use *Blueprint for a Clean Bay*, a construction best management practices guide available at our Building Dept. counter.

Good Housekeeping Practices

- **Designate one area of the site** for auto parking, vehicle refueling, and routine equipment maintenance. The designated area should be well away from storm drains or storm drain inlets, bermed if necessary. Make major repairs off site.
- **To prevent off-site tracking of dirt,** provide entrances with stabilized aggregate surfaces. Or provide a tire wash area.
- **Keep materials out of the rain** – prevent runoff contamination at the source. Cover exposed piles of soil or construction materials with plastic sheeting or temporary roofs. Before it rains, sweep and remove materials from surfaces that drain to storm drains, creeks, or channels.
- **Contain all litter, food wrappers, bottles and cans** - Place lidded trash and recycling bins around the site.
- **Clean up leaks, drips and other spills** immediately so they do not contaminate soil or groundwater or leave residue on paved surfaces. Use dry cleanup methods whenever possible. If you must use water, use just enough to keep the dust down.
- **Cover and maintain dumpsters**. Place dumpsters under roofs or cover with tarps or plastic sheeting secured around the outside of the dumpster. Never clean out a dumpster by hosing it down on the construction site.
- **Place portable toilets** away from storm drains. Make sure portable toilets are in good working order. Check frequently for leaks.

Materials/Waste Handling

- **Practice Source Reduction** -- minimize waste when you order materials. Estimate carefully.
- **Recycle excess materials**, whenever possible, such as concrete, asphalt, scrap metal, solvents, degreasers, cleared vegetation, paper, rock, and vehicle maintenance materials such as used oil, antifreeze, batteries, and tires: www.reducewaste.org for info.
- **Dispose of all wastes properly**. Materials that cannot be recycled must be taken to an appropriate landfill or disposed of as hazardous waste. Never bury waste materials or leave them in the street or near a creek or streambed.

Permits

- In addition to local grading and building permits, you will need to obtain coverage under the State's General Construction Activity Stormwater Permit if your construction **site's disturbed area totals 5 acres or more.** Information on the General Permit can be obtained from the Regional Water Quality Control Board. (This criteria will change to one acre as of Mar. 2003.)

Landscaping, Gardening, and Pool Maintenance

Landscaping/Garden Maintenance

- **Protect stockpiles** and landscaping materials **from wind and rain** by storing them under tarps or secured plastic sheeting.
- **Schedule** grading and excavation projects **during dry weather**.
- Use temporary **check dams or ditches** to divert runoff away from storm drains.
- **Protect storm drains with sandbags, gravel-filled bags, straw wattles,** or other sediment controls.
- **Re-vegetation** is an excellent form of erosion control for any site.
- **Store** pesticides, fertilizers, and other chemicals **indoors** or in a shed or storage cabinet.
- **Use pesticides sparingly**, according to instructions on the label. Rinse empty containers, and use rinsewater as product. Dispose of rinsed, empty containers in the trash. Dispose of unused pesticides as hazardous waste.
- In Cupertino, **residents** with curbside recycling can collect lawn, garden and tree trimmings in **yardwaste toters.** Yardwaste will be collected and composted by the city's contractors. Residents are encouraged to compost yardwaste on-site themselves. Or take yardwaste to a landfill where it will be composted.
- **Landscape contractors** should **take** clippings and pruning waste **to a landfill that composts yard waste** (BFI's Newby Island and Zanker Rd. landfill are the nearest).
- **Do not blow or rake leaves into the street.**

Storm Drain Pollution from Landscaping and Swimming Pool Maintenance

Many landscaping activities expose soils and increase the likelihood that earth and garden chemicals will run off into the storm drains during irrigation or when it rains.
Swimming pool water containing chlorine and copper-based algaecides should never be discharged to storm drains. These chemicals are toxic to aquatic life.

Pool/Fountain/Spa Maintenance

Draining pools or spas

When it's time to drain a pool, spa, or fountain please be sure to call the Cupertino Sanitary District before you start for further guidance on flow rate restrictions, backflow prevention, and handling special cleaning waste (such as acid wash). Discharge flows should be kept to the low levels typically possible through a garden hose. Higher flow rates may be prohibited by local ordinance.

- **Never discharge pool or spa water to a street or storm drain; discharge to a sanitary sewer cleanout.**
- If possible, when emptying a pool or spa, let chlorine dissipate for a few days and then recycle/reuse water by **draining it gradually onto a landscaped area.**
- **Do not use copper-based algaecides.** Control algae with chlorine or other alternatives, such as sodium bromide.

Filter Cleaning

- **Never clean a filter in the street or near a storm drain.** Rinse cartridge and diatomaceous earth filters onto a dirt area, and spade filter residue into soil. Dispose of spent diatomaceous earth in the garbage.
- **If there is no suitable dirt area**, call Cupertino Sanitary for instructions on discharging filter backwash or rinsewater to the sanitary sewer.

Earth-Moving Activities

Storm Drain Pollution from Earth-Moving Activities

Soil excavation and grading operations loosen large amounts of soil that can flow or blow into storm drains when handled improperly. Sediments in runoff can clog storm drains, smother aquatic life, and destroy habitats in creeks and the Bay. Effective erosion control practices reduce the amount of runoff crossing a site *and* slow the flow with check dams or roughened ground surfaces.

Practices During Construction

- Remove existing vegetation only when absolutely necessary. **Plant temporary vegetation for erosion control** on slopes or where construction is not immediately planned.
- **Protect downslope drainage courses, streams, and storm drains** with wattles, or temporary drainage swales. Use check dams or ditches to **divert runoff around excavations**. Refer to the Regional Water Quality Control Board's *Erosion and Sediment Control Field Manual* for proper erosion and sediment control measures.
- **Cover stockpiles** and excavated soil with secured tarps or plastic sheeting.

Dewatering Operations

Storm Drain Pollution From Dewatering Activities

Be sure to call your city's storm water inspector at 408-472-9907 before discharging water to a street, gutter, or storm drain. Filtration or diversion through a basin, tank, and sediment trap may be required. Reuse water for dust control, irrigation or another on-site purpose to the greatest extent possible.

Check for Sediment or Toxic Pollutants

- Check for odors, discoloration, or an oily sheen on groundwater.
- Ask your city inspector whether the groundwater must be tested by a certified laboratory.
- Depending on the test results, you may be allowed to discharge pumped groundwater to the storm drain OR you may be required to discharge to the sanitary sewer or collect and haul the water off-site for treatment and disposal at an appropriate treatment facility.
- When discharging to a storm drain, protect the inlet using a barrier of burlap bags filled with drain rock, or cover inlet with filter fabric anchored under the grate.
- Contact Cupertino Sanitary District at 253-7071 prior to discharging to the sanitary sewer.

Heavy Equipment Operation

Stormwater Pollution from Heavy Equipment on Construction Sites

Poorly maintained vehicles and heavy equipment that leak fuel, oil, antifreeze or other fluids on the construction site are common sources of storm drain pollution. Prevent spills and leaks by isolating equipment from runoff channels, and by watching for leaks and other maintenance problems. Remove construction equipment from the site as soon as possible.

Site Planning and Preventive Vehicle Maintenance

- **Designate one area** of the construction site, well away from streams or storm drain inlets, for auto and equipment parking, refueling, and routine vehicle and equipment maintenance. Contain the area with berms, sand bags, or other barriers.
- **Maintain all vehicles** and heavy equipment. Inspect frequently for and repair leaks.
- **Perform** major **maintenance**, repair jobs, and vehicle and equipment washing **off-site**, where clean up is easier.
- If you must drain and replace motor oil, radiator coolant, or other fluids on site, **use drip pans or drop cloths to catch drips and spills**. Collect all spent fluids, store in separate containers, and properly dispose as hazardous waste (recycle whenever possible).
- **Do not use diesel oil to lubricate** equipment parts or clean equipment. Use only water for any onsite cleaning.
- **Cover exposed fifth wheel hitches** and other oily or greasy equipment during rain events.

Spill Cleanup

- **Clean up spills immediately**
- **Never hose down** "dirty" pavement or impermeable surfaces where fluids have spilled. **Use dry cleanup methods** (absorbent materials, cat litter, and/or rags) whenever possible and properly dispose of absorbent materials.
- **Sweep up** spilled dry materials immediately. Never attempt to "wash them away" with water, or bury them.
- **Use as little water as possible** for dust control. Ensure water used does not leave silt or discharge to storm drains.
- **Clean up spills on dirt areas** by digging up and properly disposing of contaminated soil.
- **Call 911 for significant spills.**
- If the spill poses a **significant hazard** to human health and safety, property or the environment, you must also **report** it to the State Office of Emergency Services.

The property owner and the contractor share ultimate responsibility for the activities that occur on a construction site. You may be held responsible for any environmental damage caused by your subcontractors or employees.

Removal of BMP Facilities

The Project Contractor is responsible for removal of all BMP Facilities located within the Public Right of Way upon project final inspection.

Painting and Application of Solvents and Adhesives

Storm Drain Pollution from Paints, Solvents, and Adhesives

All paints, solvents, and adhesives contain chemicals that are harmful to wildlife in local creeks, San Francisco Bay, and the Pacific Ocean. Toxic chemicals may come from liquid or solid products or from cleaning residues or rags. Paint material and wastes, adhesives and cleaning fluids should be recycled when possible, or disposed of properly to prevent these materials from flowing into storm drains and watercourses.

Handling Paint Products

- **Keep all liquid paint products and wastes away from the gutter, street, and storm drains.**

Painting Cleanup

- **Never clean brushes or rinse paint containers into a street, gutter, storm drain, French drain, or creek.**
- For **water-based paints**, paint out brushes to the extent possible, and rinse into an inside sink drain that goes to the sanitary sewer.
- For **oil-based paints**, paint out brushes to the extent possible and clean with thinner or solvent. Filter and reuse thinners and solvents, where possible. Dispose of excess liquids and residue as hazardous waste.
- When thoroughly dry, empty paint cans, used brushes, rags, and drop cloths may be **disposed of as garbage**.

Paint Removal

- **Paint chips and dust from non-hazardous dry stripping and sand blasting** may be swept up or collected in plastic drop cloths and disposed of as trash.
- **Chemical paint stripping residue,** and chips and dust from **marine paints,** or **paints containing lead, mercury or tributyl tin** must be disposed of as hazardous wastes. Lead based paint removal requires a state-certified contractor.
- When stripping or cleaning **building exteriors** with high-pressure water, block storm drains. **Direct washwater onto a dirt area** and spade into soil. Or, check with Cupertino Sanitary District to find out if you can mop or vacuum the washwater and **dispose of it in a sanitary sewer drain**. Sampling of the washwater may be required.
- **Washwater from painted buildings constructed before 1978** can contain high amounts of **Lead,** even if paint chips are not present. Before you begin stripping paint or cleaning pre-1978 building exteriors with water under high pressure, test paint for lead by taking paint scrapings to a local laboratory. (See Yellow Pages for a state-certified laboratory.)
- If there is **loose paint** on the building, or if the **paint tests positive for lead**, block storm drains. Check with Cupertino Sanitary District to determine whether you may discharge water to the sanitary sewer, or if you must send it offsite for disposal as hazardous waste.

Paint Disposal, Return or Donation

- **Dispose of** unwanted liquid paint, thinners, solvents, glues, and cleaning fluids **as hazardous waste** (call the Small Business Hazardous Waste Prgm: 299-7300).
- Or **Return** to supplier. (Unopened cans of paint may be able to be returned. Check with the vendor regarding it's "buy-back" policy.)
- **Donate** excess paint (call 299-7300 to donate.)

Roadwork and Paving

Storm Drain Pollution from Roadwork

Road paving, surfacing, and pavement removal happen right in the street, where there are numerous opportunities for asphalt, saw-cut slurry, or excavated material to illegally enter storm drains. Extra planning is required to store and dispose of materials properly and guard against pollution of storm drains, creeks, and the Bay.

General Business Practices

- Develop and implement **erosion/sediment control plans** for roadway embankments.
- Schedule excavation and grading work during **dry weather.**
- Check for and **repair leaking equipment**.
- Perform **major equipment repairs** at designated areas in your maintenance yard, where cleanup is easier. Avoid performing equipment repairs at construction sites.
- When **refueling** or when vehicle/equipment maintenance must be done on site, designate a location away from storm drains and creeks.
- **Do not use diesel oil to lubricate** equipment parts or clean equipment.
- **Recycle** used oil, concrete, broken asphalt, etc. whenever possible, or dispose of properly. (www.recyclestuff.com for list of recycling companies.)

Asphalt/Concrete Removal

- Avoid creating excess **dust** when breaking asphalt or concrete.
- After breaking up old pavement, be sure to **remove all chunks and pieces**. Make sure broken pavement does not come in contact with rainfall or runoff.
- When making **saw cuts**, use as little water as possible. Shovel or vacuum saw-cut slurry and remove from the site. Cover or protect storm drain inlets during saw-cutting. Sweep up, and properly dispose of, all residues.
- Sweep, **never hose down streets** to clean up tracked dirt. Use a street sweeper or vacuum truck. Do not dump vacuumed liquor in storm drains.

During Construction

- **Avoid paving and seal coating in wet weather,** or when rain is forecast, to prevent fresh materials from contacting stormwater runoff.
- **Cover and seal catch basins and manholes** when applying seal coat, slurry seal, fog seal, or similar materials.
- **Protect drainage ways** by using earth dikes, sand bags, or other controls to divert or trap and filter runoff.
- Never wash excess material from **exposed-aggregate concrete** or similar treatments into a street or storm drain. Collect and recycle, or dispose to dirt area.
- **Cover stockpiles** (asphalt, sand, etc.) and other construction materials with plastic tarps. Protect from rainfall and prevent runoff with temporary roofs or plastic sheets and berms.
- Park **paving machines** over drip pans or absorbent material (cloth, rags, etc.) to catch drips when not in use.
- **Clean up all spills and leaks** using "dry" methods (with absorbent materials and/or rags), or dig up, remove, and properly dispose of contaminated soil.
- Collect and recycle or appropriately dispose of excess abrasive gravel or sand. ???
- Avoid over-application by **water trucks** for dust control.

Fresh Concrete and Mortar Application

Storm Drain Pollution from Fresh Concrete and Mortar Applications

Fresh concrete and cement-related mortars that wash into lakes, streams, or estuaries are toxic to fish and the aquatic environment. Disposing of these materials to the storm drains or creeks can block storm drains, causes serious problems, and is prohibited by law.

General Business Practices

- Wash out concrete mixers only in designated **washout areas** in your yard, away from storm drains and waterways, where the water will flow into a temporary waste pit in a dirt area. Let water percolate through soil and dispose of settled, hardened concrete as garbage. Whenever possible, recycle washout by pumping back into mixers for reuse.
- **Wash out chutes** onto dirt areas that do not flow to streets or drains.
- **Always store both dry and wet materials under cover,** protected from rainfall and runoff and away from storm drains or waterways. Protect dry materials from wind.
- **Secure bags of cement** after they are open. Be sure to keep wind-blown cement powder away from streets, gutters, storm drains, rainfall, and runoff.
- **Do not use diesel fuel as a lubricant** on concrete forms, tools, or trailers.

During Construction

- **Don't mix up more** fresh concrete or cement than you will use in a two-hour period.
- Set up and **operate small mixers on tarps** or heavy plastic drop cloths.
- When cleaning up after driveway or sidewalk construction, **wash fines onto dirt areas,** not down the driveway or into the street or storm drain.
- **Protect** applications of fresh concrete and mortar **from rainfall** and runoff until the material has dried.
- Wash down **exposed aggregate concrete** only when the washwater can (1) flow onto a dirt area, (2) drain onto a bermed surface from which it can be pumped and disposed of properly, or (3) be vacuumed from a catchment created by blocking a storm drain inlet. If necessary, divert runoff with temporary berms. Make sure runoff does not reach gutters or storm drains.
- When breaking up pavement, be sure to pick up all the pieces and **dispose of properly**. Recycle large chunks of broken concrete. See www.reducewaste.org for info on recyclers.
- **Never bury** waste material. Dispose of small amounts of excess dry concrete, grout, and mortar in the trash.
- Never dispose of **washout** into the street, storm drains, drainage ditches, or streams.

Small Business Hazardous Waste Disposal Prgm

Businesses that generate less than 27 gallons or 220 pounds of hazardous waste per month are eligible to use this program. Call 408-299-7300 for a quote.

CITY OF CUPERTINO

Santa Clara Valley *Urban Runoff* Pollution Prevention Program

UPDATED SEPTEMBER 2016

APPROVED BY:
TIMM BORDEN, RCE 45512
DIRECTOR OF PUBLIC WORKS
9/1/16
DATE

CONSTRUCTION BEST MANAGEMENT PRACTICES

CITY OF CUPERTINO
DEPARTMENT OF PUBLIC WORKS

SHEET:
OF SHEETS
FILE: