

**CITY OF ELK GROVE
SMUD SERVICES REQUEST
FOR TELECOMMUNICATOINS
SERVICE PROVIDER**



Date of Request:

Approximate Date Service Connection is Needed:

START DISCONNECT TRANSFER OF SERVICE
OTHER _____

Telecommunications Service Provider (TSP) Name: **AT&T**

TSP Billing Address: **AT&T Mobility c/o Engie Insight MS 7372 P.O. Box 2241 Spokane, WA 99210**

TSP Tax ID:

Contact Person and Number: **Engie Insight (866) 322-4547**

Point of Connection (POC): City Service#: **1686**

SMUD POC to City Conductor:

1. Descriptive Address: Measurements must be from the street center line and must be listed as x feet, the side of the street, and include north/south and east/west directions. For example: 50 feet of East Street and 10 feet South of J Street.

Address: SMUD Vault & Box 30' South of City Service U8993

Description: East side of Lewis Stein Rd, 35 feet from the centerline; 390 feet South from the centerline of Sheldon Rd.

2. California State, Zone 2, NAD83 in Feet: X,Y coordinate of the connection point:

NAD83:0402, 6731072.681ftUSE 1921516.107ftUSN

Decimal: 38.436992, -121.408575

3. Attach City Map with SMUD POC to City Conductor with an X or highlight on the map. (Note: please only submit the drawing with this location. Do not submit all drawing pages.)

City Pole Number: Pole #: SLT-33345

Location of TSP Devices on City Street lights:

1. Descriptive Address: Measurements must be from the street center line and must be listed as x feet, the side of the street, and include north/south and east/west directions. For example: 50 feet of East Street and 10 feet South of J Street.
Address: 8873 Lewis Stein Rd
Description: East 40 Feet from the centerline of Lewis Rd.; 380 Feet South from the centerline of Sheldon Rd
2. California State, Zone 2, NAD83 in Feet: X,Y coordinate of the connection point:
NAD 83: Zone 0402, 6731085.852ftUSE 1921516.922ftUSN
Decimal: 38.436994, -121.408529
3. California State, Zone 2, NAD83 in Feet: X,Y coordinate of the connection point where the antenna is being powered from:
NAD 83: 0402 6731072.681ftUSE 1921516.107ftUSN
Decimal: 38.436992, -121.408575
4. Attach City Map with locations of 1) TSP devices on City Street light with an X or highlight on the map and 2) where the device is getting power from. (Note: please only submit the drawing with these locations. Do not submit all drawing pages.)

Number/Type of Devices: (How many transmitters, antennae, etc.)

2 Transmitters (RRU's), 2 Power Supply Units (PSU) and 1 antenna

Make and Model of Devices:

Ericsson RRU 4415, Ericsson RRU 4426, PSU AC 08, JPAK-AM-600-04LS-2.5

Maximum Nameplate AC Wattage of each Device:

Ericsson RRU 4415 = 1100W, Ericsson RRU 4426 = 1100W

Small cell attachment equipment specification sheet

attached X

This area reserved for SMUD use only

SAC01_020

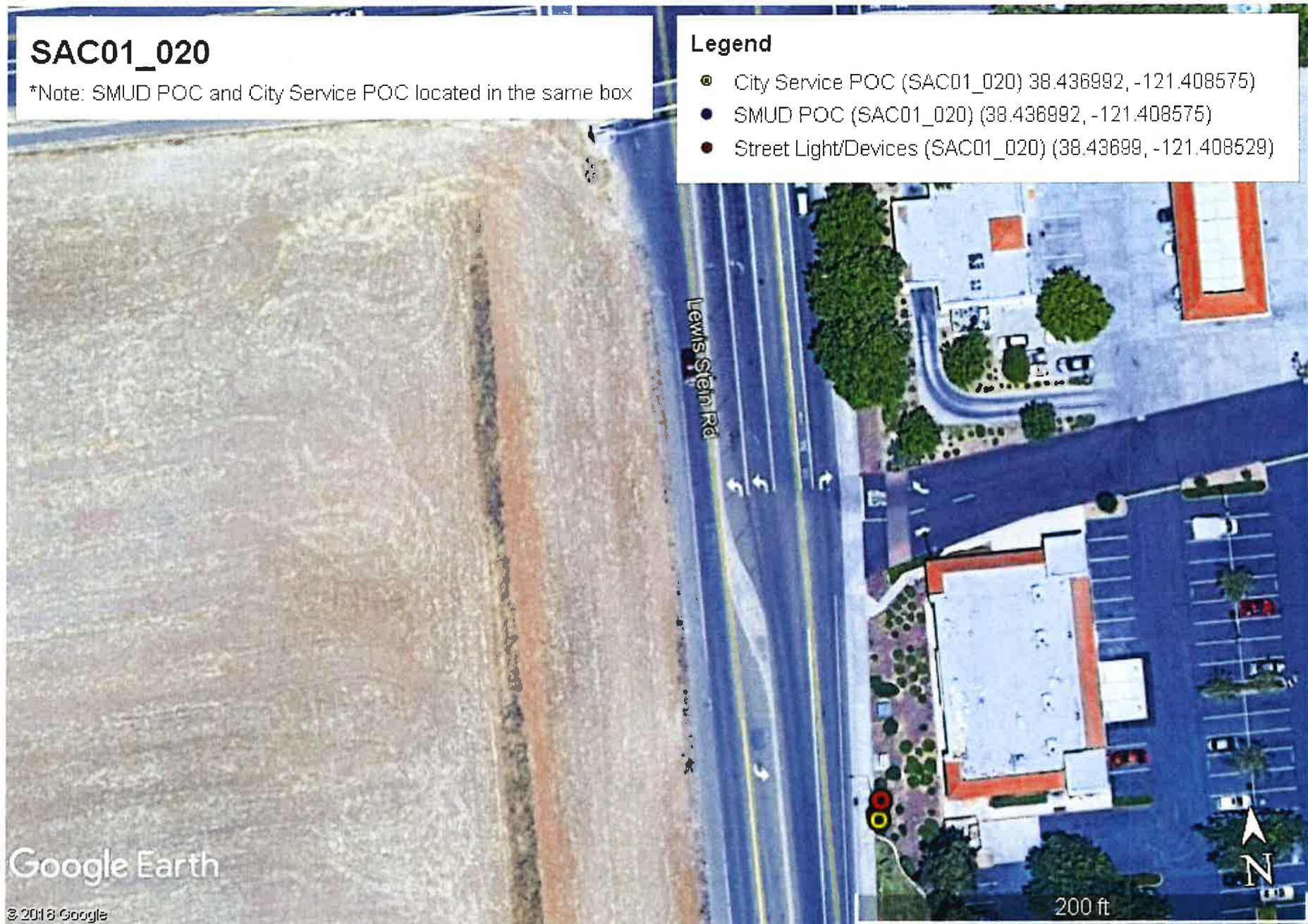
*Note: SMUD POC and City Service POC located in the same box

Legend

- City Service POC (SAC01_020) 38.436992, -121.408575
- SMUD POC (SAC01_020) (38.436992, -121.408575)
- Street Light/Devices (SAC01_020) (38.43699, -121.408529)

Google Earth

© 2018 Google





SMALL CELL LOAD SUMMARY – Elk Grove

Vendor Name: Vinculums
 City Project Number:
 Date: 11/4/19

Project:					
Location Address:	8873 Lewis Stein Road				
Pole Coordinates:	38.43699, -121.408529	City Service Coordinates:	38.436992, -121.408575		
Node Number:	SAC01_020				
Street Light Pole Number:	SLT-33345 (MA-LED)				
City Service Address:	8873 Lewis Stein Road				
SMUD Point of Connect:	SMUD Vault & Box 30' South of City Service U8993				
City Service Number:	1686				
RF Config:	MICRO	Radio Load:	2200W	Future Radio Load:	
Circuit Breaker:	Position #2, 40 AMP				
Voltage:	<input checked="" type="checkbox"/> 120 V <input type="checkbox"/> 240 V <input type="checkbox"/> 277 V <input type="checkbox"/> 480 V				
Number of Existing Loads:	MA-LED:	1	ORN-LED:		PT-LED:
	MA-HPS:		ORN-HPS:		PT-HPS:
Description of Existing Loads (Street Light Numbers):					
33345					

Total Existing Loads:		
1	MA-LED X 110 W	110 W
	MA-HPS X 200 W	W
	ORN-LED X 110 W	W
	ORN-HPS X 100 W	W
	PT-LED X 110 W	W
	PT-HPS X 100 W	W
	Radio Load	2200 W
New Load Total (RP):		2310 W
Total Load on Circuit:		2.89 KVA
*Minimum Circuit Overcurrent Protection Required:		24 AMP
Radio Load Pico kWh/Yr.:		19,272

Recircuiting Required:		
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
Existing Circuit Breaker	40 AMPS	
Percentage Overcurrent Protection Used	48%	
Difficulty Level:	1	
1. No Constructability Issues	2. Difficult	3. Very Difficult
Pass or Fail:	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail	
Notes:		
*Per NEC Regulation, the Real Power (RP) will not exceed 80% of the Overcurrent Protection.		

Street Light No.		GPS		Light Type			Comments
Site Pole	Others	Latitude	Longitude	Lamp Post	Post Top	Mast Arm	(LED, HPS, SIGNAL, COBRA, ETC.)
33345	X	38.43699	-121.408529			X	LED



Penso Engineering
Joshua Penso, PE-EE

Date: 11/20/2019

To Whom It May Concern:

In coordination with RLS-CMC & Vinculum/AT&T drawings for node SAC01_020. I have reviewed the OEM specifications for the proposed equipment listed below. Based on the data sheets for the equipment listed, I have calculated the power consumption, apparent power, and yearly usage listed for the typical radio equipment configuration powered solely by this equipment. This calculation is based on a single power supply powered by a 120V 2-wire service and all proposed radio loads will be powered only by this single supply.

Equipment	Description	Max Power (Watts)	Max Current (Amps)	KVA	KWh/Yr
PSU AC 08	Rectifier Power Supply	2200	18.34	2.2	19272

I, Joshua Penso, affirm that the design presented in this document meets the 2016 California Electric Code, the 2014 NEC and the 2014 National Electric Safety Code (NESC).

Sincerely,

JP
Joshua Penso, PE-EE
California License E-16741
Expiration Date: 9/30/2020





SITE ID: CRAN_RSFR_SAC01_020
NODE FA: 14807746 NODE USID: 187851
PACE: MRSFR044020
IN THE PUBLIC R.O.W.
ADJACENT TO 8873 LEWIS STEIN RD
ELK GROVE, CA 95758
STREET LIGHT ID #: 33345
PROJECT TYPE: MICRO CONFIGURATION



1387 CALLE AVANZADO
SAN CLEMENTE CA 92673 (949) 361-0624

LOCATION NO:	14807746
DRAWN BY:	EZG
CHECKED BY:	MM

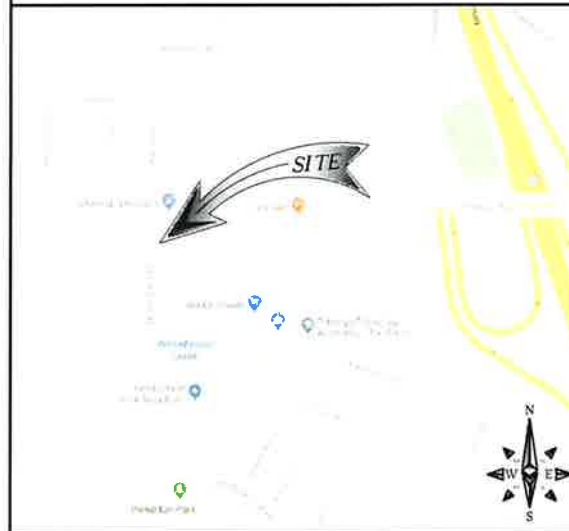
CONSULTING TEAM

ENGINEERING COMPANY: M SQUARED WIRELESS
1387 CALLE AVANZADO
SAN CLEMENTE, CA 92673
CONTACT: MICHAEL MONTELLO
PHONE: (949) 391-6824

PLANNING CONSULTANT: VINCULUMS SERVICES
1200 DEL PASO RD, STE 150
SACRAMENTO, CA 95843
CONTACT: DIAN TARDIFF
PHONE: (209) 662-4217
EMAIL: DTARDIFF@VINCULUMS.COM

CONSTRUCTION MANAGER: VINCULUMS SERVICES
1200 DEL PASO RD, STE 150
SACRAMENTO, CA 95843
CONTACT: ROBERT FLYNT
PHONE: (916) 768-9699
EMAIL: RFLYNT@VINCULUMS.COM

VICINITY MAP



POLE # 33345



PROJECT DESCRIPTION

THIS IS UNMANNED WIRELESS TELECOMMUNICATION FACILITY FOR AT&T MOBILITY CONSISTING OF THE INSTALLATION AND OPERATION OF AN ANTENNA AND ASSOCIATED EQUIPMENT ON AN (E) STREET LIGHT POLE IN THE PUBLIC RIGHT OF WAY. SCOPE OF WORK & SITE COMPLETION CHECKLIST:

- INSTALL A (N) TELECOMMUNICATION ANTENNA & EQUIPMENT BOXES ON AN (E) STREET LIGHT POLE. INSTALLATION CONSISTS OF (1) CYLINDRICAL ANTENNA IN A 10-1/2"Ø FIBERGLASS SHROUD WITH A 10-3/4"Ø CAP & (1) 4426 RRU, (1) 4415 RRU AND (2) PSU.
- DEPTH OF (E) CAISSON HAS BEEN VERIFIED BY NON-DESTRUCTIVE TESTING BY A TRAINED PROFESSIONAL. IF CAISSON IS OF LESSER DIMENSIONS THAT SHOWN ON STRUCTURAL ANALYSIS, IT IS TO BE REPLACED WITH (N) CAISSON FOR TYPE 15 STREET LIGHT POLE PER CALTRANS STANDARD PLANS, LATEST REVISION, SHOWN ON POLE FOUNDATION DETAILS SHEET IN THIS PLAN SET.
- DURABLE PAINT - ANTENNA SHROUD, CABLING & RADIO SHROUDS TO BE PAINTED TO MATCH (E) STREET LIGHT POLE USING A DURABLE PAINT (E.G. SHERWIN WILLIAMS FRAZEE OR EQUIVALENT).
- CABLING - CABLING TO BE INSTALLED IN A TIDY MANNER WITHOUT EXCESS CABLE LOOPS.
- SPACING OF SUPPORT ELEMENTS - SUPPORT EQUIPMENT (E.G. RRUS) TO BE CLUSTERED AS CLOSE AS TECHNICALLY FEASIBLE ON POLE.
- LOGO REMOVAL - ALL EQUIPMENT LOGOS, OTHER THAN THOSE REQUIRED BY REGULATION (E.G. NODE IDENTIFICATION OR SHUTDOWN SIGNAGE) OR PG&E REGULATIONS SHALL BE PAINTED OVER OR REMOVED. RAISED/DEPRESSED LOGOS/TEXT ON RRUS OR OTHER EQUIPMENT, IF PRESENT, TO BE SANDED OFF OR SIMILARLY REMOVED/ FILLED.
- UTILITY LINES - PROPOSED UTILITY LINES BETWEEN (E) POINT OF CONNECTION TO BE UNDERGROUND.
- IF A BANNER OR BANNER BRACKETS ARE PRESENT, REMOVE AND REPLACE (E) BRACKETS WITH (N) BREAKAWAY BRACKETS.
- INSTALL (1) NEW PULLBOX & CONDUITS FOR ASSOCIATED POWER & FIBER.
- INSTALL (2) NEW DIPLEXERS.

REV	DATE	DESCRIPTION
D	12/02/2013	100% CD'S FOR REVIEW
B	11/22/2019	95% CD'S FOR REVIEW
A	09/12/2019	90% CD'S FOR REVIEW

DO NOT SCALE DRAWINGS

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



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CONTRACTOR NOTES

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

PROJECT INFORMATION

OWNER: CITY OF ELK GROVE
 APPLICANT: AT&T MOBILITY
5001 EXECUTIVE PARKWAY
SAN RAMON, CA 94583
 ADJACENT APN#: 116-1550-005
 LATITUDE: 38.436994° N
 LONGITUDE: 121.408529° W
 JURISDICTION: CITY OF ELK GROVE
 ZONING: PUBLIC RIGHT-OF-WAY
 PROPOSED USE: UNMANNED TELECOMMUNICATIONS FACILITY
 POWER COMPANY: SMUD

DRIVING DIRECTIONS

DIRECTIONS FROM SACRAMENTO INTERNATIONAL AIRPORT:

- MERGE ONTO I-5 S
- TAKE EXIT 6B TO MERGE ONTO 99 S TOWARD FRESNO
- TAKE EXIT 288 FOR SHELDON RD & TURN LEFT
- TURN LEFT ONTO LEWIS STEIN RD
- TURN LEFT ONTO W STOCKTON BLVD
- MAKE A U-TURN
- TURN RIGHT ONTO LEWIS STEIN RD
- DESTINATION WILL BE ON THE RIGHT

APPLICABLE CODES

ALL WORK AND MATERIALS SHALL BE PERFORMED AND INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES.

- CALIFORNIA ADMINISTRATIVE CODE (INCL TITLE 24 & 25)
- 2016 CALIFORNIA BUILDING CODE
- 2016 MECHANICAL CALIFORNIA CODE
- 2016 CALIFORNIA ELECTRICAL CODE
- 2016 GREEN BUILDING CODE
- 2016 CALIFORNIA ENERGY CODE
- GENERAL ORDER 95 (JUNE 2009 EDITION)
- CURRENT SACRAMENTO CITY CODE AMENDMENTS

SHEET INDEX

SHEET	DESCRIPTION
T-1	TITLE SHEET
A-1	SITE PLAN
A-2	ENLARGED SITE PLAN
A-3	ELEVATIONS
D-1, D-2, D-3	EQUIPMENT DETAILS
D-4	EQUIPMENT DETAILS
E-1	ELECTRICAL DETAILS
TCP-1	TRAFFIC CONTROL PLAN NOTES
TCP-2	TRAFFIC CONTROL PLAN

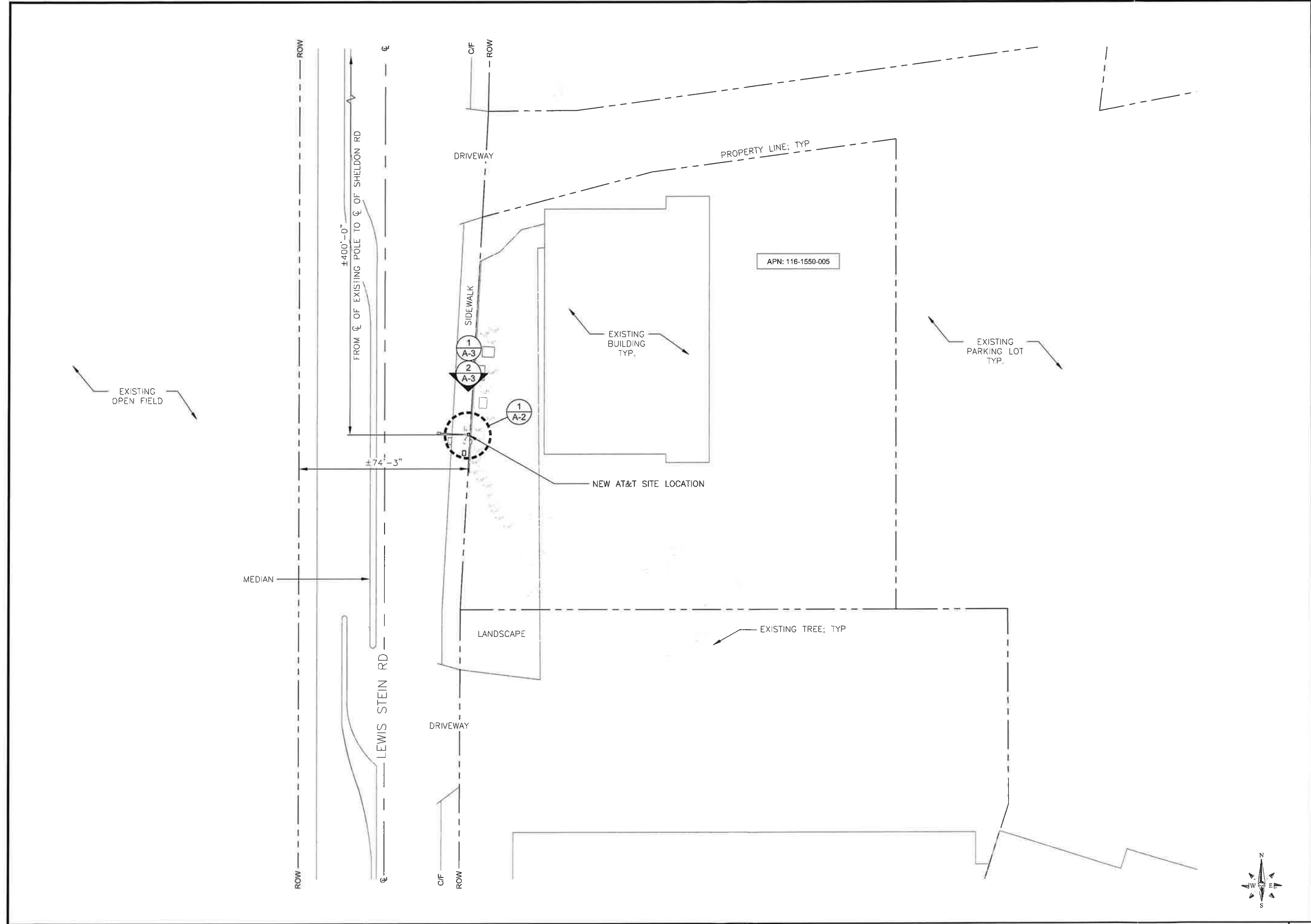
CRAN_RSFR_SAC01_020

POLE #33345
IN THE PUBLIC R.O.W.
8873 LEWIS STEIN RD
ELK GROVE, CA 95758

SHEET TITLE
TITLE SHEET

SHEET NUMBER
T-1

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.



M SQUARE
WIRELESS
1387 CALLE AVANZADO
SAN CLEMENTE CA 92673 (949) 391-8824

LOCATION NO: 14807746
DRAWN BY: EZG
CHECKED BY: MM

REV	DATE	DESCRIPTION
0	12/02/2019	100% CD'S FOR REVIEW
B	11/22/2019	95% CD'S FOR REVIEW
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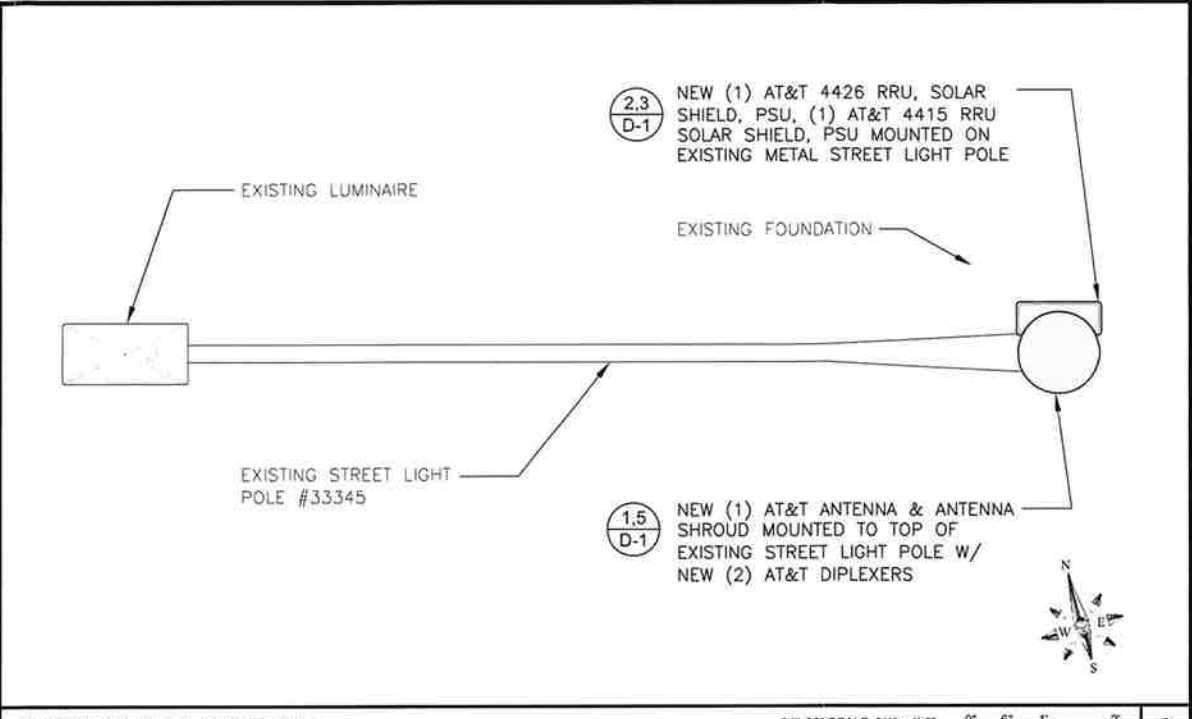
POLE #33345
IN THE PUBLIC R.O.W.
8873 LEWIS STEIN RD
ELK GROVE, CA 95756

SHEET TITLE
SITE PLAN

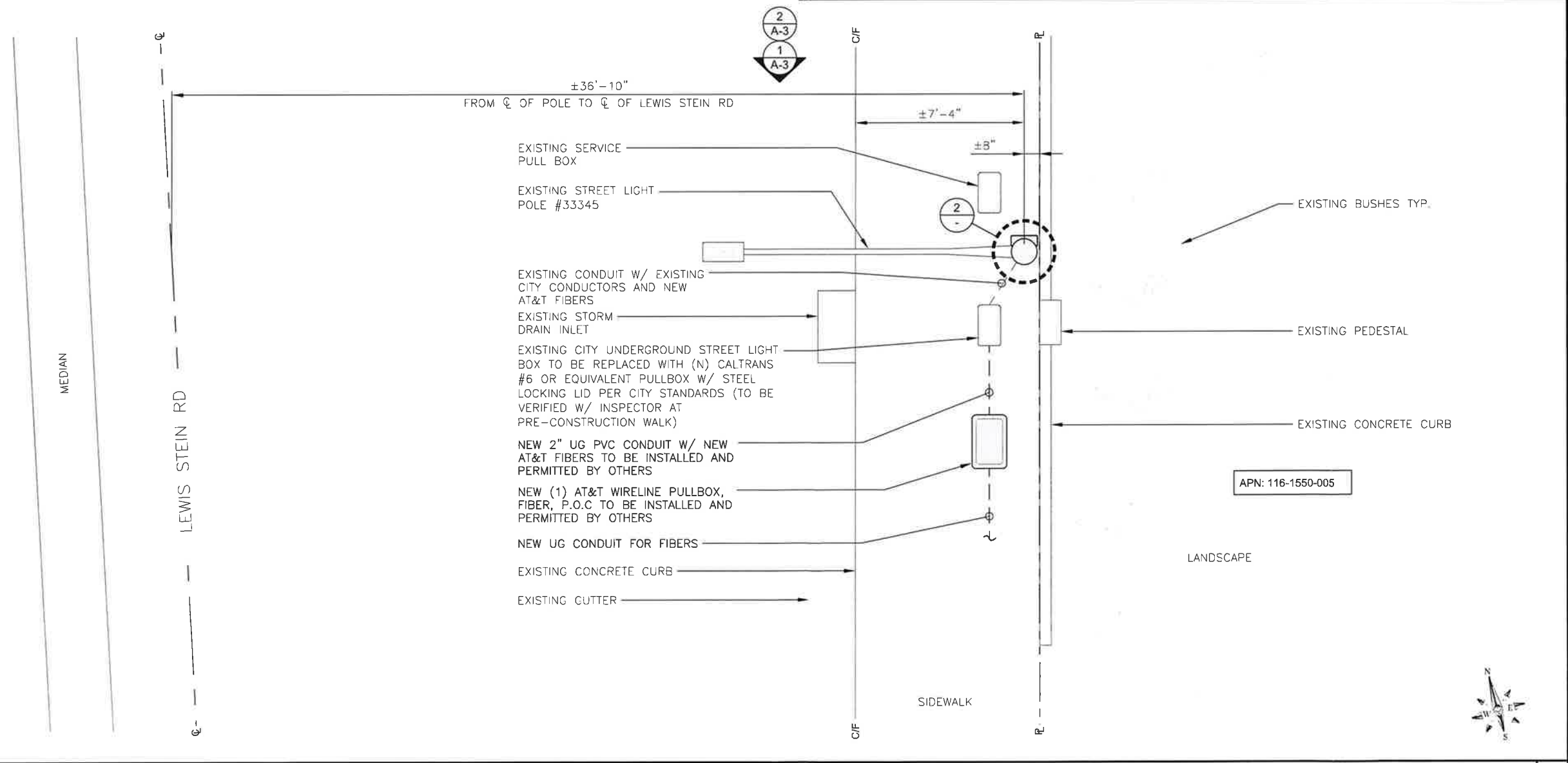
SHEET NUMBER
A-1



811 USA NORTH
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ANTENNA LAYOUT
 24"x36" SCALE: 3/4" = 1'-0"
 11"x17" SCALE: 3/8" = 1'-0" 2



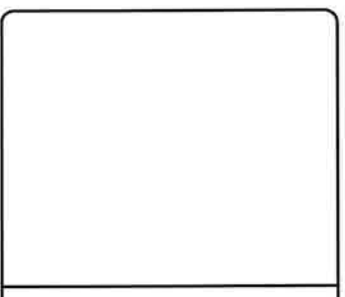
ENLARGED SITE PLAN
 24"x36" SCALE: 3/8" = 1'-0"
 11"x17" SCALE: 3/16" = 1'-0" 1



M SQUARE WIRELESS
 1387 CALLE AVANZADO
 SAN CLEMENTE CA 92673 (949) 391-8824

LOCATION NO:	14807746
DRAWN BY:	EZG
CHECKED BY:	MM

REV	DATE	DESCRIPTION
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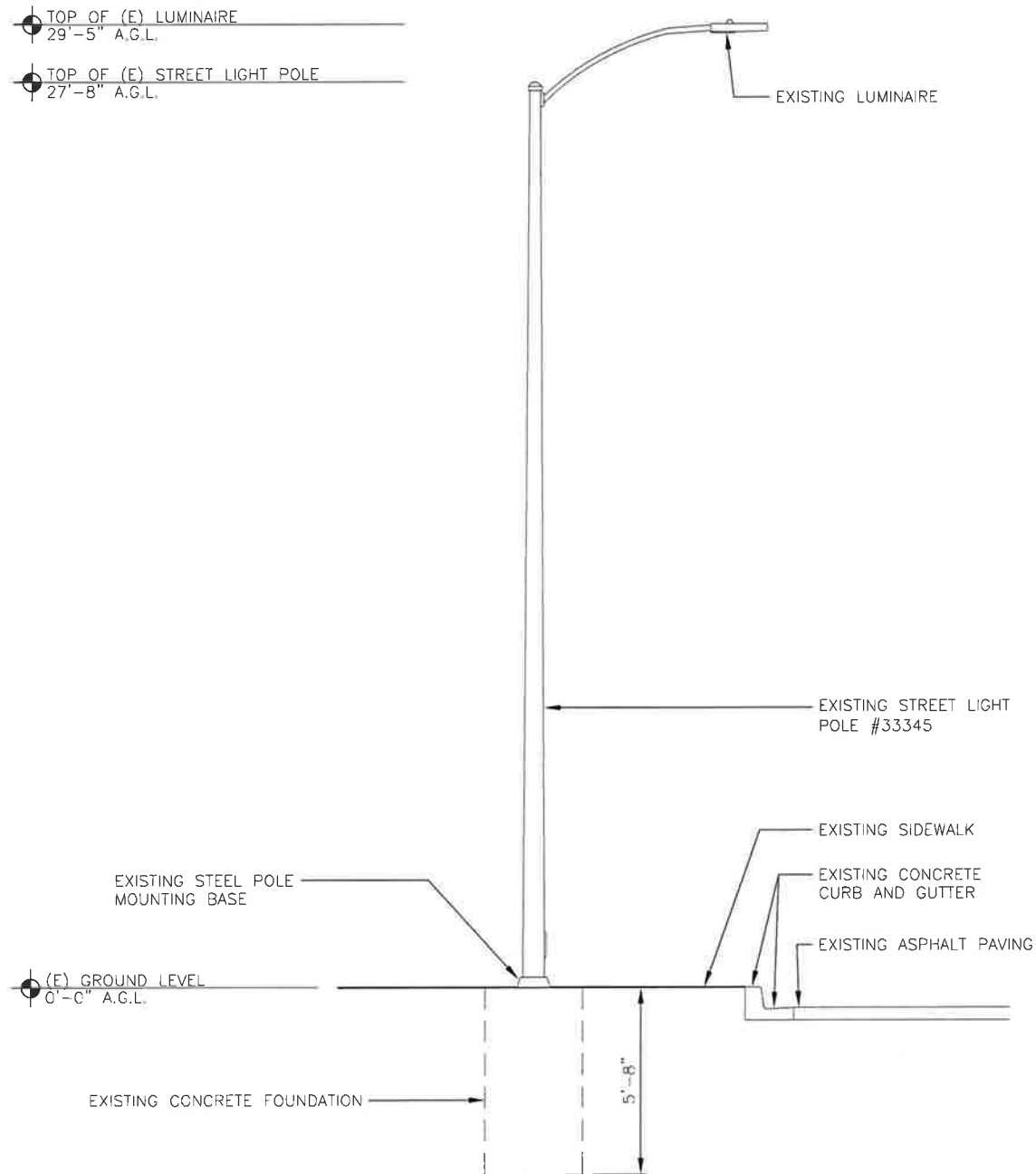
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CRAN_RSFR_SAC01_020
 POLE #33345
 IN THE PUBLIC R.O.W.
 8873 LEWIS STEIN RD
 ELK GROVE, CA 95758

SHEET TITLE
ENLARGED SITE PLAN

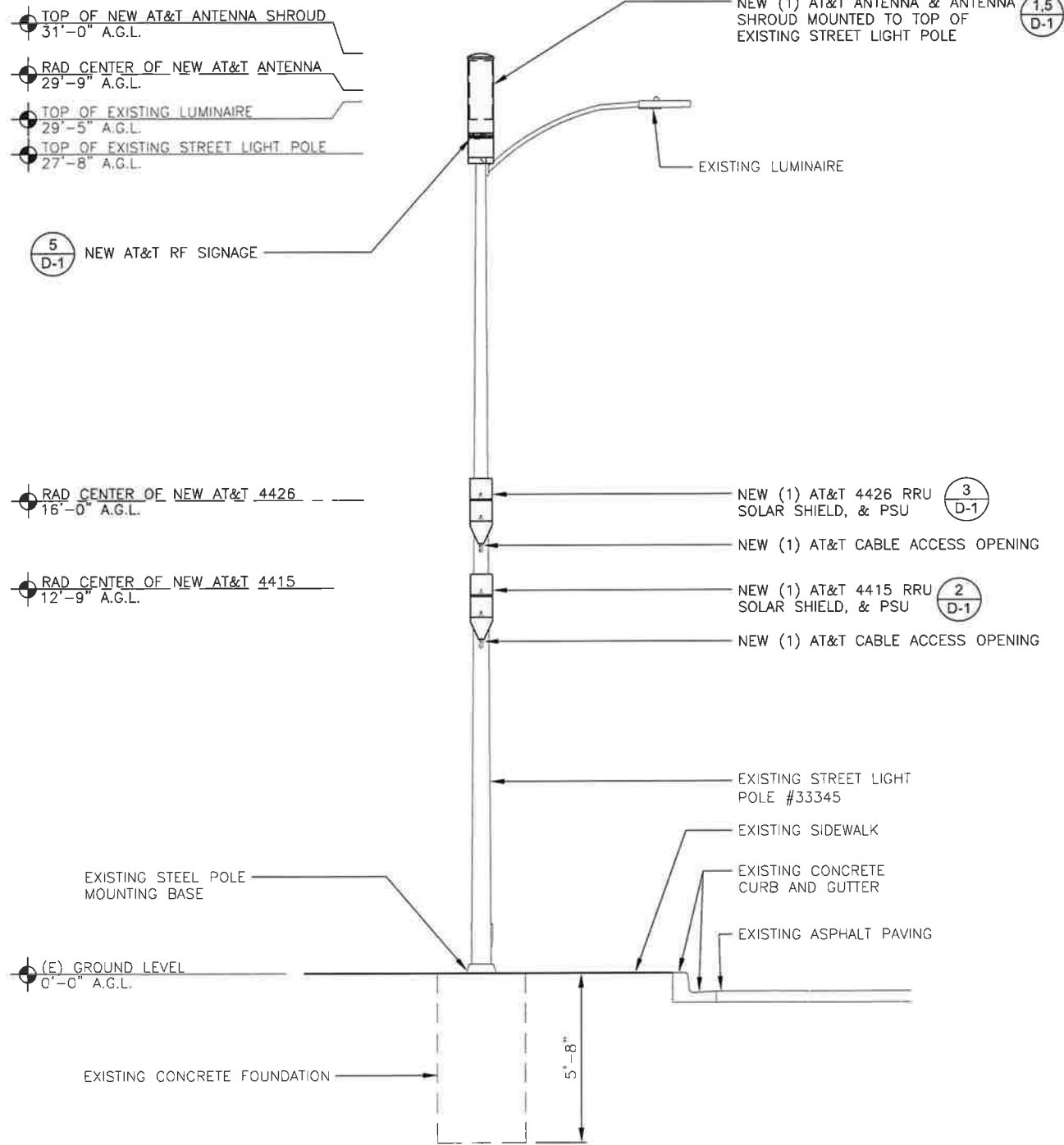
SHEET NUMBER
A-2

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EXISTING NORTH ELEVATION

24"x36" SCALE: 3/8" = 1'-0"
 11"x17" SCALE: 3/16" = 1'-0"



NEW NORTH ELEVATION

NOTE:
 ALL NEW EQUIPMENT TO BE PAINTED TO
 MATCH EXISTING POLE COLOR USING DURABLE
 NON-REFLECTIVE PAINT (E.G. SHWERWIN
 WILLIAMS, FRAZEE OR EQUIVALENT)



LOCATION NO: 14807745
 DRAWN BY: EZG
 CHECKED BY: MM

REV	DATE	DESCRIPTION
0	12/02/2019	100% CD'S FOR REVIEW
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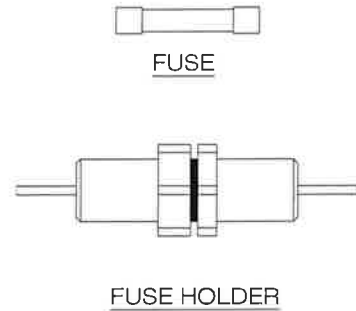
POLE #33345
 IN THE PUBLIC R.O.W.
 8873 LEWIS STEIN RD
 ELK GROVE, CA 95758

SHEET TITLE
POLE ELEVATIONS

SHEET NUMBER
A-3

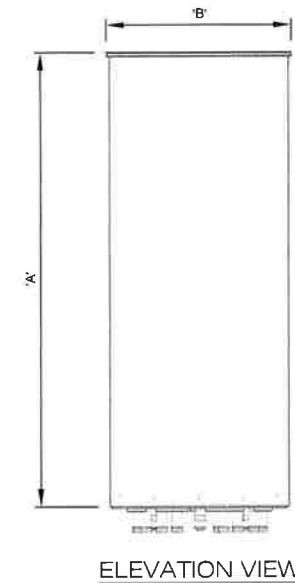
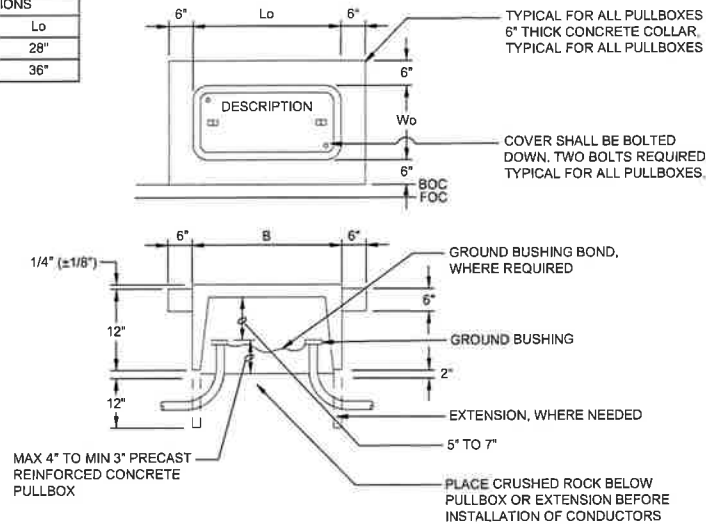
24"x36" SCALE: 3/8" = 1'-0"
 11"x17" SCALE: 3/16" = 1'-0"

MANUFACTURER: EATON/BUSSMAN
 FUSE MFG P/N: FNM-7 AMP. 7
 MANUFACTURER: EATON/BUSSMAN
 FUSE HOLDER MFG P/N: HEB-AA
 AMPS RATING: 30A



NOTE:
 DETAIL IS SHOWN FOR
 REFERENCE ONLY, AND NOT FOR
 CONSTRUCTION, REFER TO
 EQUIPMENT MANUFACTURER
 SPECIFICATIONS AND
 INSTALLATION PROCEDURES FOR
 ADDITIONAL INFORMATION

PULLBOX	Wo	Lo
5	18"	28"
6	23"	36"



MANUFACTURER:	COMMSCOPE	TOTAL WEIGHT:	15.4 LBS
MODEL:	VVSSP-360S-F		
DIMENSIONS:			
A	23.6"		
B	7.9"		

IN-LINE FUSE W/ FUSE HOLDER

24"x36" SCALE: NTS
 11"x17" SCALE: NTS

6

CALTRANS #5 OR # 6 PULLBOX

24"x36" SCALE: NTS
 11"x17" SCALE: NTS

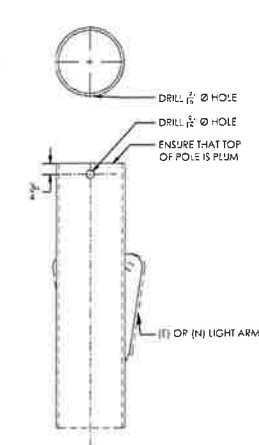
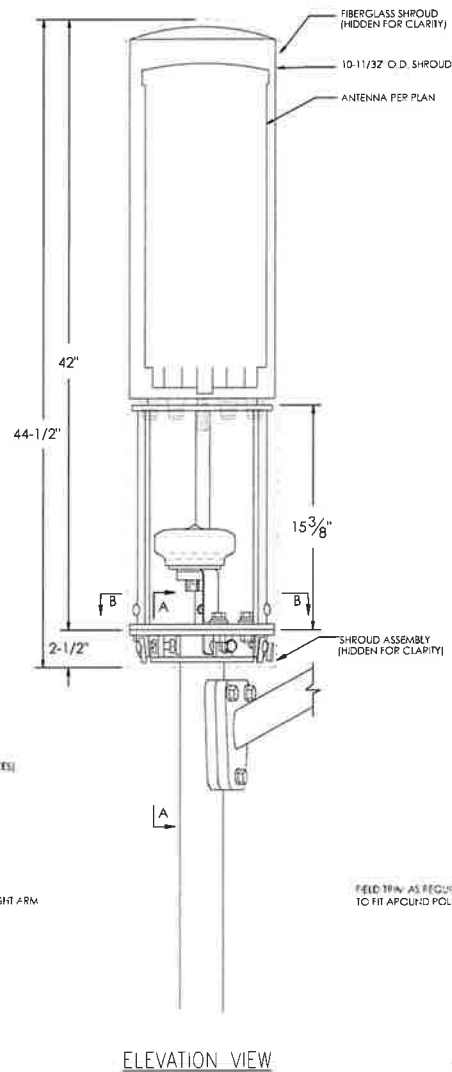
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OMNI-DIRECTIONAL ANTENNA

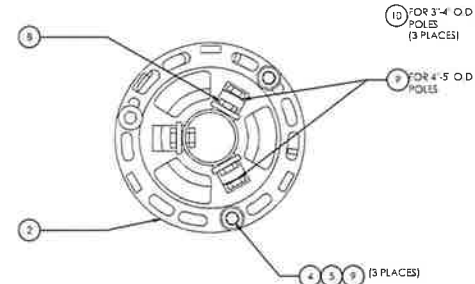
24"x36" SCALE: NTS
 11"x17" SCALE: NTS

1

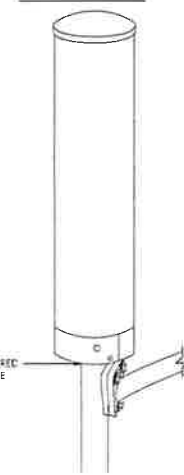
ITEM NO.	DESCRIPTION	QTY
CLAMP-ON BRACKET PARTS / HARDWARE		
1	2"x10" O.D. ANTENNA CAGE	1
2	2"x9-7/8" O.D. MOUNTING BRACKET	1
3	11 GA x 2-1/2" x 7-1/2" AS69 METER BRACKET	1
4	1/2" O.D. x 1.332" O.D. x 121" FLAT WASHERS S.S.	4
5	1/2" LOCK WASHERS S.S.	7
6	1/2" FLAT WASHER TEFLON	3
7	1/2" FLAT WASHER S.S.	3
8	1/2" JAM NUT, S.S.	3
9	1/2" O.D. x 1-1/2" FULLY THD D BOLT S.S.	5
10	1/2" O.D. x 2-1/2" FULLY THD D BOLT S.S.	2
11	1/2" O.D. x 3" LONG S.S. THREADED ROD	1
SHROUD ASSEMBLY & COVER PLATE PARTS / HARDWARE		
12	10-11/32" O.D. x 42" FIBERGLASS SHROUD ASSEMBLY	1
13	16 GA x 10-1/8" x 23-3/8" METAL SHROUD	1
14	16 GA x 10-1/8" x 23-3/8" METAL SHROUD	1
15	1/2" PHCS S.S.	6
16	1/2" SPRING NUT	3
17	1/2" PHCS S.S.	6



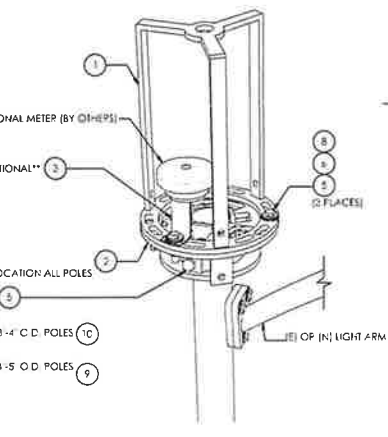
SECTION A-A



SECTION B-B



SHROUD ASSEMBLY (AS ASSEMBLED)

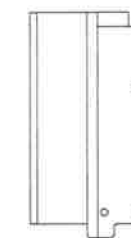


BASE MOUNT ON BRACKET (ANTENNA NOT SHOWN FOR CLARITY)

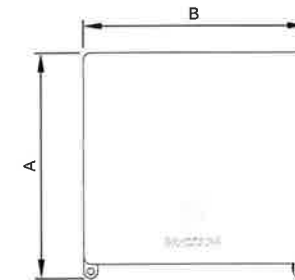
MANUFACTURER:	ERICSSON	
MODEL NO.:	RRU 4415	
DIMENSIONS:	COLOR:	
A	16.54"	GRAY
B	13.46"	TOTAL WEIGHT:
C	6.30"	±44 LBS



TOP VIEW



SIDE VIEW



FRONT VIEW

ERICSSON RRU 4415

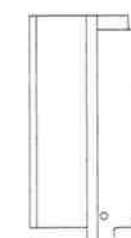
24"x36" SCALE: NTS
 11"x17" SCALE: NTS

2

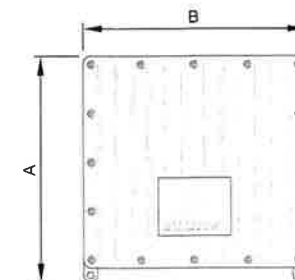
MANUFACTURER:	ERICSSON	
MODEL NO.:	RRU 4426	
DIMENSIONS:	COLOR:	
A	16.54"	GRAY
B	13.50"	TOTAL WEIGHT:
C	6.30"	±46 LBS



TOP VIEW



SIDE VIEW



FRONT VIEW

ERICSSON RRU 4426

24"x36" SCALE: NTS
 11"x17" SCALE: NTS

3

JPAK-AM-600-04LS-2.5 OR EQUIVALENT

24"x36" SCALE: NTS
 11"x17" SCALE: NTS

5



LOCATION NO:	14807746
DRAWN BY:	EZC
CHECKED BY:	MM

REV	DATE	DESCRIPTION
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CRAN RSFR SAC01_020

POLE #33345
 IN THE PUBLIC R.O.W.
 8873 LEWIS STEIN RD
 ELK GROVE, CA 95758

SHEET TITLE
 EQUIPMENT DETAILS

SHEET NUMBER
D-1

NOTE:
NOTICE/CAUTION SIGN DECAL SHALL BE
INSTALLED PER EME/RFSA P REQUIREMENTS.

NOTICE

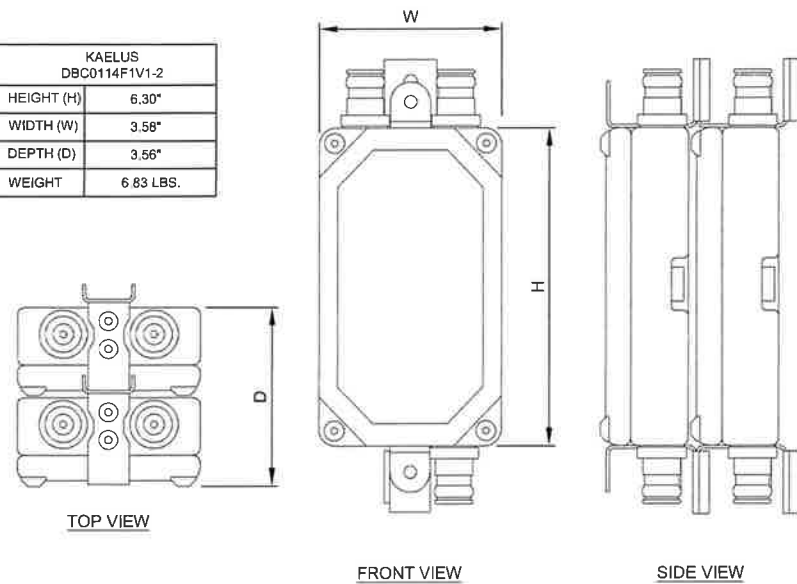
RF energy emitted by this antenna may exceed the FCC's exposure limits for the general population. Stay at least 1 foot away from the antenna. Call AT&T at 800-638-2822, option 9 then 3, to help if you need access within 1 foot.

RF SIGNAGE

24"x36" SCALE: NTS
11"x17" SCALE: NTS

5

KAEIUS DBC0114F1V1-2	
HEIGHT (H)	6.30"
WIDTH (W)	3.58"
DEPTH (D)	3.56"
WEIGHT	6.83 LBS.



DBC0114F1V1-2 DIPLEXER

24"x36" SCALE: NTS
11"x17" SCALE: NTS

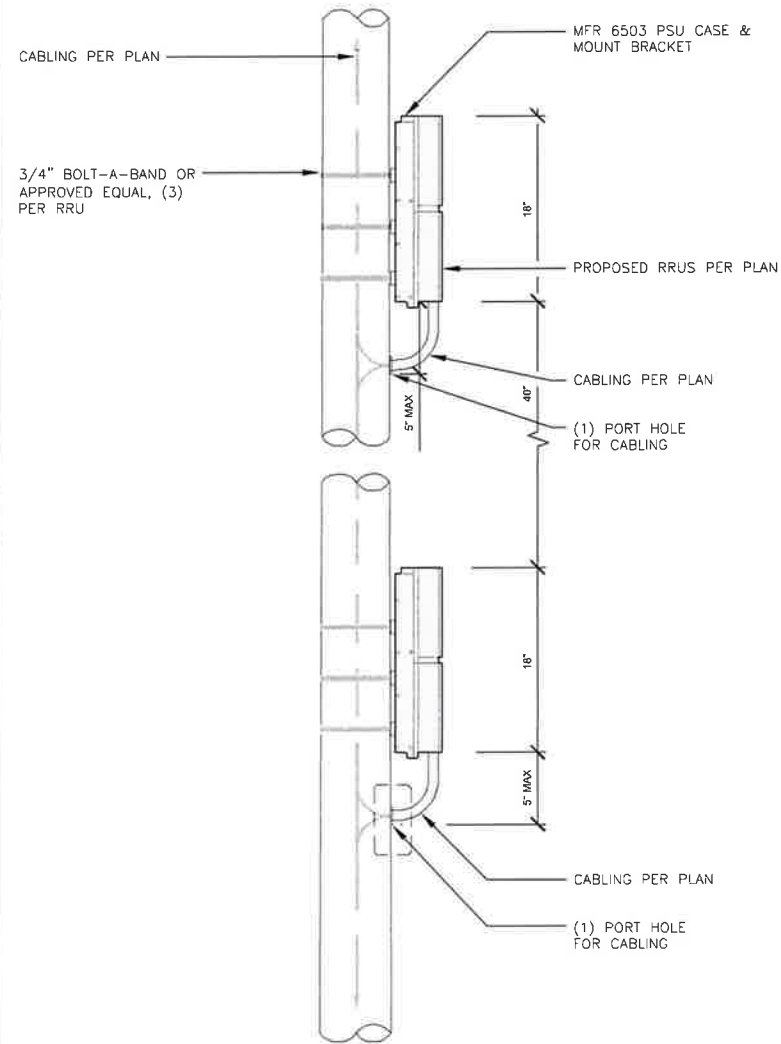
6

NOT USED

NOT USED

NOTE:

MOUNTING BRACKETS AND POLE MOUNTED EQUIPMENT TO BE PAINTED TO MATCH EXISTING POLE COLOR.



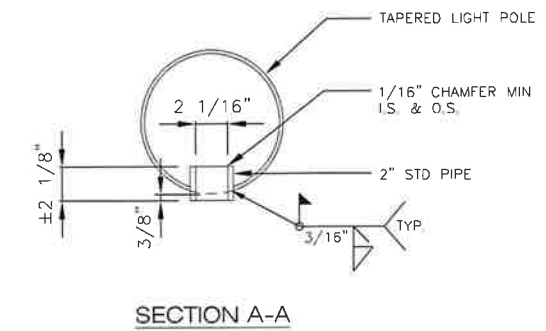
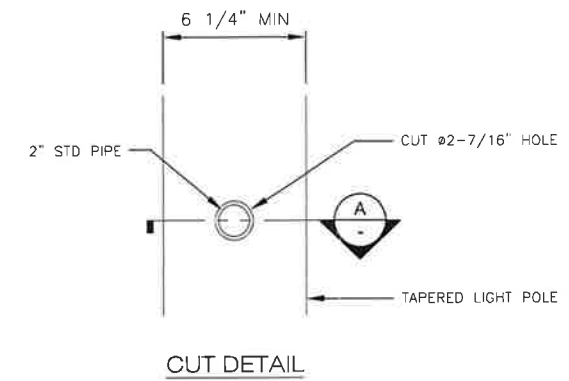
RRU MOUNTING DETAIL

24"x36" SCALE: NTS
11"x17" SCALE: NTS

3

NOT USED

NOT USED



FIELD WELDING NOTES:

1. WELDING TO BE PERFORMED BY AN AWS CERTIFIED WELDER FOR THE TYPE OF AND POSITION INDICATED. ALL WORK MUST BE IN CONFORMANCE WITH LATEST EDITION OF ASIC & AWS D 1.1
2. GRIND SURFACES TO BE WELDED WITH A SILICONE CARBIDE WHEEL PRIOR TO WELDING TO REMOVE ALL GALVANIZING WHICH MAY OTHERWISE BE CONSUMED IN THE WELD METAL. APPLY ANTI-SPATTER COMPOUND AFTER GRINDING.
3. WELDING TECHNIQUE MUST MINIMIZE TEMPERATURE RISE ON THE INSIDE SURFACE OF THE MONOPOLE AND ALSO VOLATIZE ANY REMAINING ZINC WITHIN THE BASE METAL WITH MINIMUM SPATTER. USE AN E70 (LOW HYDROGEN) ELECTRODE. USE LARGEST DIAMETER ELECTRODE COMPATIBLE WITH WELDING POSITION AND MATERIAL THICKNESS. STRICTLY FOLLOW ALL MANUFACTURER'S INSTRUCTIONS FOR STORAGE AND USE OF ELECTRODES. AVOID REMOVING ELECTRODES FROM MANUFACTURER'S PACKAGING UNTIL READY IMMEDIATE USE.
4. WELDING MAY PRODUCE TOXIC FUMES. REFER TO ANSI STANDARD Z49.1 "SAFETY IN WELDING AND CUTTING" FOR PROPER PRECAUTIONS.
5. UPON COMPLETION OF WELDING, APPLY GALV-A-STICK ZINC COATING TO ALL UNPROTECTED SURFACES. APPLY A SECOND LAYER OF COLD GALVANIZING SPRAY COMPOUND CONTAINING A MINIMUM ZINC CONTENT OF 95%. IF NECESSARY, APPLY A FINAL COAT OF COMPATIBLE PAINT TO MATCH SURROUNDING SURFACES.

ACCESS PORTS

24"x36" SCALE: NTS
11"x17" SCALE: NTS

1

NOT USED

2



LOCATION NO: 14807746
DRAWN BY: EZG
CHECKED BY: MM

REV	DATE	DESCRIPTION
D	12/02/2019	100% CD'S FOR REVIEW
B	11/22/2019	95% CD'S FOR REVIEW
A	09/12/2019	90% CD'S FOR REVIEW

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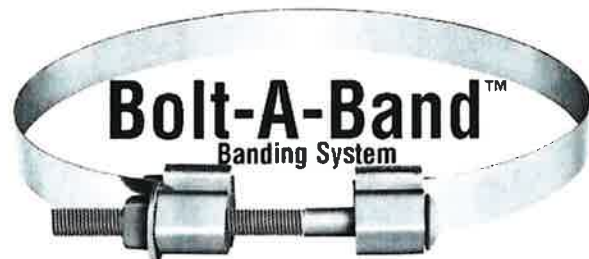
CRAN_RSFR_SAC01_020

POLE #33345
IN THE PUBLIC R.O.W.
8873 LEWIS STEIN RD
ELK GROVE, CA 95758

SHEET TITLE
EQUIPMENT DETAILS

SHEET NUMBER

D-2



Bolt-A-Band™
Banding System

For Mounting Equipment on Most Steel, Wood, or Concrete Poles

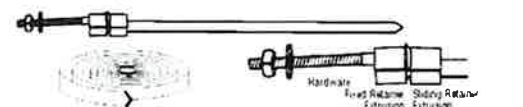
Bolt-A-Band™ lets you mount equipment on round, square or irregular shaped poles without drilling holes. Bolt-A-Band™ features a pre-cut, high quality stainless steel band with accompanying installation hardware. Adjusts easily to fit most any size pole. Installs in just minutes with no special tools required. Use it as shown for equipment mounting... or create your own applications! Call Aluma-Form inside sales for more information.



How to Select Proper Size

Band Width – Bolt-A-Band™ is available in 1/2" and 1 1/4" band widths and many lengths for mounting a variety of equipment. Generally, use 1/2" band for lighter loads (cables, telephone drops, U-Guards, co-axial cable, etc.) and 1 1/4" band for high tension loads.

Band Length – Proper length is easily determined by placing equipment to be mounted against pole or structure at mounting position. Measure total length needed around structure. Add six (6) inches and round up to next standard length to determine correct length to order. Installation instructions are always included with each Bolt-A-Band™ order.



STANDARD LENGTH SINGLE BAND

CATALOG #	WEIGHT EA.	STD. CARTON	HARDWARE	LENGTH	BAND
EAE 3537	75 lb.	24	1/2"	50'	1/2"
EAE 3541	80 lb.	24	1/2"	40'	1/2"
EAE 3543	80 lb.	24	1/2"	45'	1/2"
EAE 3544	90 lb.	24	1/2"	50'	1/2"
EAE 3572	90 lb.	24	1/2"	50'	1/2"
EAE 3544	1.00 lb.	24	1/2"	50'	1/2"
EAE 3545	1.80 lb.	24	1/2"	50'	1/2"
EAE 3546	1.85 lb.	24	1/2"	47'	1/2"
EAE 3548	1.85 lb.	24	1/2"	45'	1/2"
EAE 3549	2.10 lb.	24	1/2"	50'	1/2"
EAE 3550	2.30 lb.	24	1/2"	50'	1/2"
EAE 3554	2.50 lb.	24	1/2"	48'	1/2"

SPECIFICATIONS

Stainless Steel Band – Type 301 stainless steel with minimum tensile of 70,000 PSI and maximum yield of 45,000 PSI. Available in 1/2" and 1 1/4" thickness and standard 1/2" (348 thickness) 1/4" width.

Aluminum Hardware Extrusions – 6061 T6 Aluminum Extrusion. Tensile yield to ASTM B221. Aluminum tensile strength: 38,000 PSI, and maximum yield strength of 25,000 PSI.

Carriage Bolt – High strength Grade 5 carriage bolt (ASTM A488). Standard 1/2" x 1 1/2" or 1 1/4" x 1 1/2" size.

STANDARD 100' LENGTH BANDS

CATALOG #	WEIGHT EACH	STD. CARTON	HARDWARE	LENGTH	BAND
100-211-500-1/2"	8,000 lbs.	1	1/2"	100'	1/2"
100-211-500-1 1/4"	19,000 lbs.	1	1 1/4"	100'	1 1/4"

BUCKLES FOR 100' BANDS

CATALOG #	WEIGHT EACH	STD. CARTON
EAB 35	5.00 lb.	24
EAB 34	1.25 lb.	24

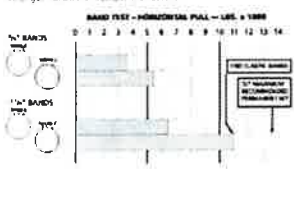
STANDARD LENGTH DOUBLE BAND

CATALOG #	WEIGHT EA.	STD. CARTON	HARDWARE	LENGTH	BAND
EAB 3530-2	3.50 lb.	24	1/2"	50'	1/2"
EAB 3532-2	4.00 lb.	24	1/2"	45'	1/2"
EAB 3534-2	7.50 lb.	24	1/2"	50'	1/2"

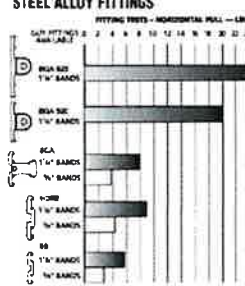
BANDING STRENGTH TESTS

MAXIMUM BAND CAPACITY

These tests were conducted with special large steel fittings to simulate the maximum recommended loadings of the various steel bands. Aluminum alloy fittings such as the 6061-T6 (35,000 PSI) are generally weaker than these values. For strength hardware, consult the factory.

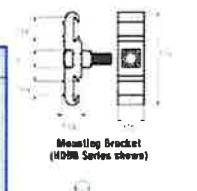


BAND STRENGTH WITH ALUMINUM OR STEEL ALLOY FITTINGS



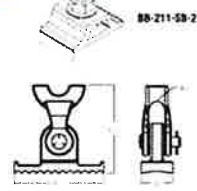
ALL PURPOSE MTG. BRACKET (LOCATES 1/4" BOLT)

CATALOG #	WEIGHT EA.	STD. CARTON	DESCRIPTION
BB-1511-M	60 lb.	24	Mounting Bracket with 1/4" x 1/2" x 1/2" slot
100BB-1511-M	95 lb.	24	Heavy Duty Mounting Bracket with 1/4" x 1/2" x 1/2" slot
100BB-1511-M-PM	1.00 lb.	24	Heavy Duty Mounting Bracket with 1/4" x 1/2" x 1/2" slot
100BB-1511-M-1 1/4"	95 lb.	24	Heavy Duty Mounting Bracket with 1/4" x 1/2" x 1/2" slot
BB-211-1511-C	580 lb.	24	1/4" Mounting Bracket with 1/4" x 1/2" x 1/2" slot



BANDED GUY ATTACHMENT WITH CLEVIS

CATALOG #	WEIGHT EA.	STD. CARTON	DESCRIPTION
BGA-100	1.50 lb.	24	Heavy Duty Banded Guy Attachment with Clevis
BGA-425	2.80 lb.	24	Heavy Duty Banded Guy Attachment with Clevis
BGA-425	4.250 lb.	24	Heavy Duty Banded Guy Attachment with Clevis



CONDUIT AND U-GUARD STRAPS

CATALOG #	WEIGHT EA.	STD. CARTON	FOR	A	B
B11	11.00 lb.	24	1"	1 1/2"	1 1/2"
B11-1	11.00 lb.	24	2"	2 1/2"	2 1/2"
B11-2	15.00 lb.	24	3"	3 1/2"	3 1/2"
B11-3	17.00 lb.	24	4"	4 1/2"	4 1/2"
B11-4	22.00 lb.	24	5"	5 1/2"	5 1/2"
B11-5	27.00 lb.	24	6"	6 1/2"	6 1/2"



BANDED SERVICE DROP ATTACHMENT

CATALOG #	WEIGHT EA.	STD. CARTON	DESCRIPTION
BSC-50	800 lb.	50	Banded Service Drop Attachment with 1/2" x 1/2" Band



BANDED CABLE TIE RETAINER

CATALOG #	WEIGHT EA.	STD. CARTON	DESCRIPTION
CTR	019 lbs.	100	Banded Cable Tie Retainer for use with either 1/2" or 1 1/4" Band



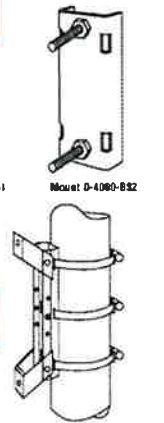
GENERAL PURPOSE MOUNT

CATALOG #	WEIGHT EA.	STD. CARTON	DESCRIPTION
D-4080	0.2 lbs.	3	Mounting bracket of 1" diameter steel 1/4" x 1" for use with 1/2" band
D-4080-PS1	7.20 lbs.	3	1 1/4" x 1" mounting bracket with 1/2" carriage bolt
D-4080-PS2	10.50 lbs.	3	1 1/4" x 1" mounting bracket with 1 1/4" carriage bolt



TRANSFORMER MOUNTING BRACKET

CATALOG #	WEIGHT EA.	STD. CARTON	DESCRIPTION
EE-1001-5LE	9.3 lbs.	1	Standard transformer bracket dimensions: 12" x 28" top opening



M SQUARE
WIRELESS

1387 CALLE AVANZADO
SAN CLEMENTE CA 92673 (949) 391-8824

LOCATION NO: 14807746
DRAWN BY: EZG
CHECKED BY: NM

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POLE #33345
IN THE PUBLIC R.O.W.
8873 LEWIS STEIN RD
ELK GROVE, CA 95758

SHEET TITLE
BOLT-A-BAND DETAIL

SHEET NUMBER
D-3

KBW BANNERFLEX D3 BANNER BRACKET
13/16" ROUND FIBERGLASS ARM 31" LONG
STAINLESS STEEL BANDING
STAINLESS STEEL BUCKLE

BannerFlex D3 ...for standard large format light pole banners



The patented original BannerFlex™ D3 bracket has endured the test of time to become the benchmark of the banner bracket industry. KBW D3 is the product of choice for standard utility and light pole applications. KBW D3's angled arms can be adjusted without moving the main vertical pole or can be removed altogether with replacement top or bottom rod holders. BannerFlex D3 D3 offers the highest level of durability and performance and, best of all, there are no moving parts to wear out, providing peace of mind for years to come.

Features

- Patented
- 30-40% durability
- 40% lighter
- Only 1 part (no bolts)
- Choice of Round Pole or Square Pole
- Choice of Square Pole or Round Pole
- Strong Corrosion Resistant Materials
- Bright Aluminum or Black Powder-Coated
- No Moving Parts to Wear Out

The benchmark of the banner bracket industry.



Installation:

KBW BannerFlex brackets have been installed on hundreds of thousands of poles worldwide. On-site adjustability of both the arms and the main bracket itself make BannerFlex the installer's first choice. Corrosion-resistant construction means maintenance-free performance for years.

About Banner Bracket Design...

Hardware is the most important part of a successful banner system. When founded in 1968, one of our goals included finding a solution to reduce the stress on utility poles and increase banner longevity. The result was BannerFlex, the first bracket in the industry to use pultruded fiberglass arms rather than steel. The original design was patented and awarded a U.S. patent in 1998, and further refinements came in 1997 and 2003.

The design behind BannerFlex is that it is a more durable and resistant to wind force and still returns to its original shape. The brackets are cantilevered to the top arm angles slightly up and the bottom arm angles slightly down. The wind load is immediately transferred from the banner to the flexible fiberglass arms which then absorbs some of the stress produced by the wind, eliminating the need for an extra wind stop which reduces the capacity of the banner and have also been proven ineffective for stress reduction.

We have invested considerable resources to establish KBW as the experts in banners and hardware and remain committed to finding the safest, most secure solutions to the ever-changing needs of our banner customers. Only BannerFlex has been successfully wind-tunnel tested at hurricane force wind speeds - without failure. And, our revolutionary new Airrow rod sheds even more wind force.

KBW is proud to provide extensive engineering data to assist in determining the suitability of banners on utility poles. The KBW Wind Force Calculator can quickly assist engineers with analysis. Because we cannot personally determine if a utility pole is suitably strong enough, we encourage buyers to share this data with a qualified professional before purchasing banner hardware. We are confident your research will lead you to BannerFlex by KBW.

For more detailed engineering data, please call (800) 524-4224 or visit www.kalamazoobanner.com click on "hardware" and download the "white paper on Important Issues Concerning Banner Hardware".

Roger M. Lopley, AIA
 President
 Clinton, Illinois, Group



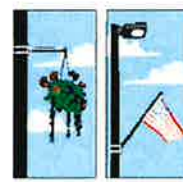
Fasteners

These tools and hardware make installation of BannerFlex brackets easy, fast and durable. All fasteners are made of stainless steel to ensure optimal performance. Contact your KBW Representative to determine what installation method is right for your project.



Adapters:

The Square Pole Adapter may be used when banding BannerFlex brackets onto square utility poles that are 5" or larger in width. The Tri-Down Bracket allows the lower portion of a banner to flutter in the breeze. Call your KBW Representative for advice on the use of Tri-Down Adapters.



Accessories

BannerFlex accessories add versatility to your banner hardware installation. The Flag Pole Holder and the Hand Holder may be placed into the Loop of when banners are not displayed. The Flag Pole Holder fits cleanly into the D3 main casting. The Hand holder is cantilevered slightly to bear more weight and resist sagging.



The BannerFlex Advantage
 3125 Fort Wayne Street
 Kalamazoo, MI 49001
 800 524-4224 • 261 988-4224 • Fax 261 988-2912
www.kbw.com
info@kbw.com

3 Technical Data

Table 1 lists the technical data of the PSU variants.

Technical Data	PSU AC 01	PSU AC 02	PSU AC 03	PSU AC 06	PSU AC 08	PSU 24 01	PSU 48 02
Maximum power dissipation (W)	200	70	178	80	80	200	55
Temperature range (°C)	Range	40 to +70	40 to +55	40 to +70	40 to +85	40 to +55	40 to +55
	Limited performance (case temp. > 40°C)	40 to 10	40 to 30	40 to 10	40 to 30	-	40 to 30
Limited performance (case power dissipation)		+55 to +70	N/A	+55 to +70	N/A	-	+55 to +70
	Normal input voltage	100-250 V AC	100-250 V AC	100-250 V AC	100-250 V AC	27.2 V DC	-54.5 V DC
Rated operating voltage range		90-275 V AC	90-275 V AC	90-275 V AC	90-275 V AC	18.5 to +30.0 V DC	-28.0 to +58.0 V DC
	External input fuse	10 A type at 1,200 W 10 A type at 1,800 W	For 700 W output power: 12 A at 100 V AC 6 A at 200 V AC	+ 10 A type at 8 A input current + 12.5 A type at 10 A input current + 15 or 16 A type at 12.5 A input current + 20 A type at 15 A input current + 25 A type at 15 A input current	For 1000 W output power: 16 A at 100 V AC 8 A at 200 V AC	For 1000 W output power: 10 A at 100 V AC 5 A at 200 V AC	8 A at 100 V AC 4 A at 200 V AC
Input current rating	9 A at 1,200 W 11 A at 1,800 W	9 A at 100 V AC 4.5 A at 200 V AC	8, 10, 12.5, and 15 A	13 A at 100 V AC 6.5 A at 200 V AC	11 A at 100 V AC	8.5 A at 1,800 W 10 A at 1,800 W	±20 A



Table 1 PSU Technical Data

Technical Data	PSU AC 01	PSU AC 02	PSU AC 03	PSU AC 06	PSU AC 08	PSU 24 01	PSU 48 02
Output Characteristic	Default output voltage	-54.5 V DC	-54.5 V DC	-54.5 V DC	-54.5 V DC	-54.5 V DC	-54.5 V DC
	Voltage range	-40 to 88.5 V DC	-40 to 88.5 V DC	-40 to 88.5 V DC	-40 to 88.5 V DC	-40 to 88.5 V DC	-40 to 88.5 V DC
Output power	1,200 or 1,800 W	700 W	See Table 2	1,000 W	1,000 W	1,200 or 1,800 W	700 W
	Height	43 mm	58 mm	43 mm	58 mm	100 mm	43 mm
Dimensions	Width	145 mm	330 mm	145 mm	274 mm	285 mm	145 mm
	Depth	220 mm	172 mm	220 mm	180 mm	180 mm	220 mm
	Weight	< 2.7 kg	5.2 kg	< 2.3 kg	5.2 kg	< 5.2 kg	< 2.2 kg

(1) The external AC power rating of the cabinet must meet the characteristic fuse, type gG-gQ in accordance with IECEN 60 269-1 and UL 248-6 and characteristic circuit breaker in accordance with IEC 60 947-2 and UL 489.
 (2) The external DC power rating of the cabinet must meet the characteristic fuse, type gG-gQ in accordance with IECEN 60 269-1 and UL 248-6 and characteristic circuit breaker in accordance with IEC 60 947-2 and UL 489A.
 (3) Selectable by switch.

Table 2 lists the output power of PSU AC 03.

Input Current Rating (A)	Input Voltage (V AC)	Output Power (W)
8	> 250	1800
	180	linear derated to 1300
10	> 250	2300
	180	linear derated to 1800
12.5	> 215	2500
	180	linear derated to 2100
15	> 180	2500



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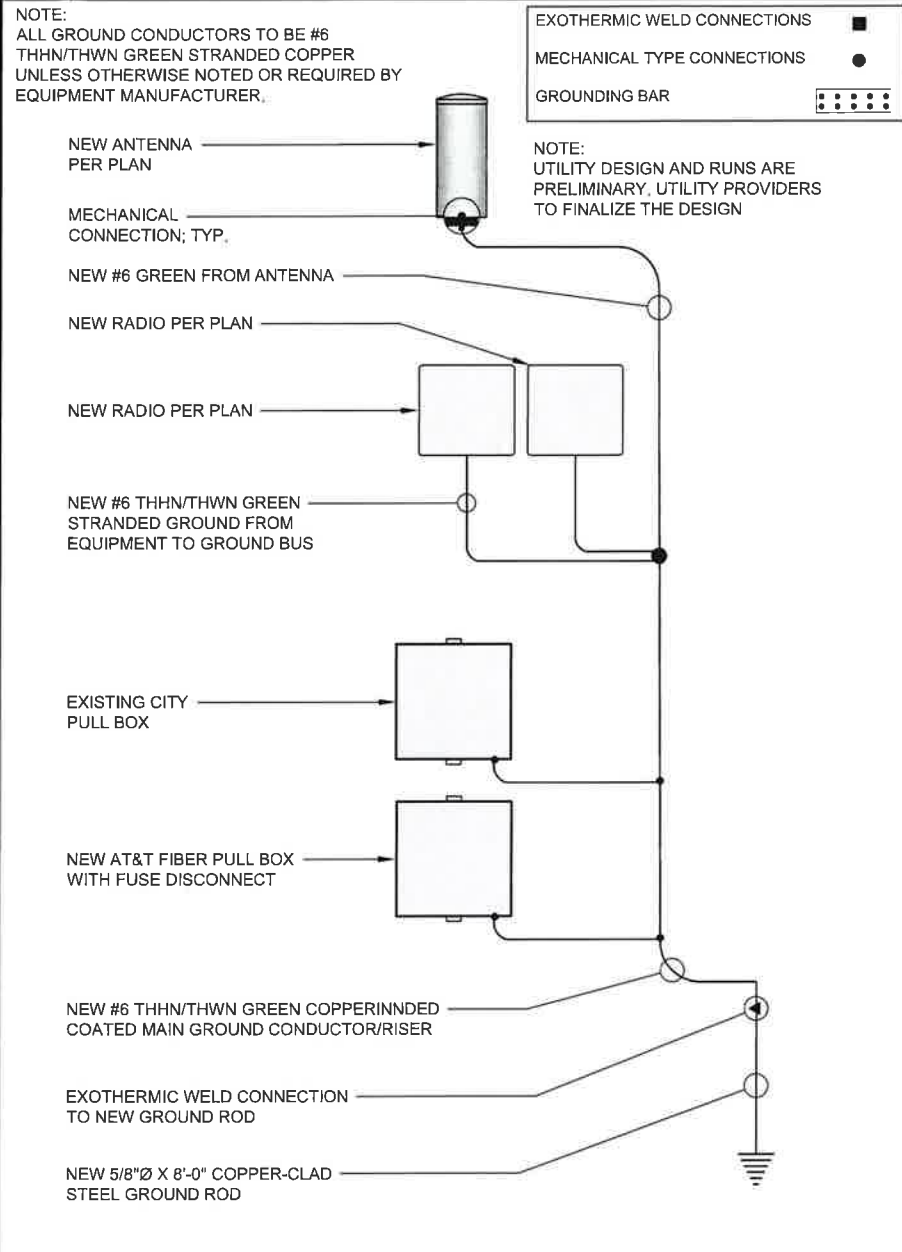
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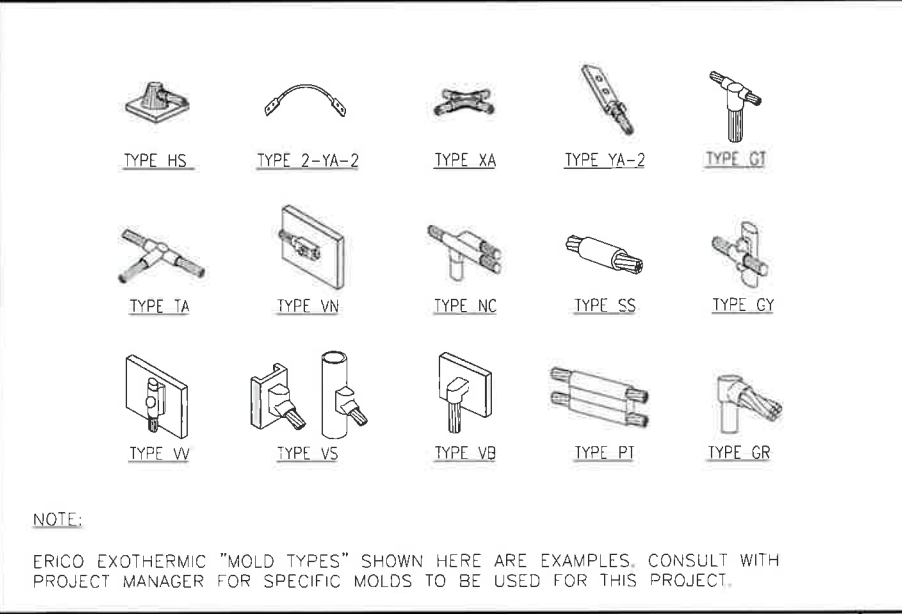
POLE #33345
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SHEET TITLE
BANNER BRACKET

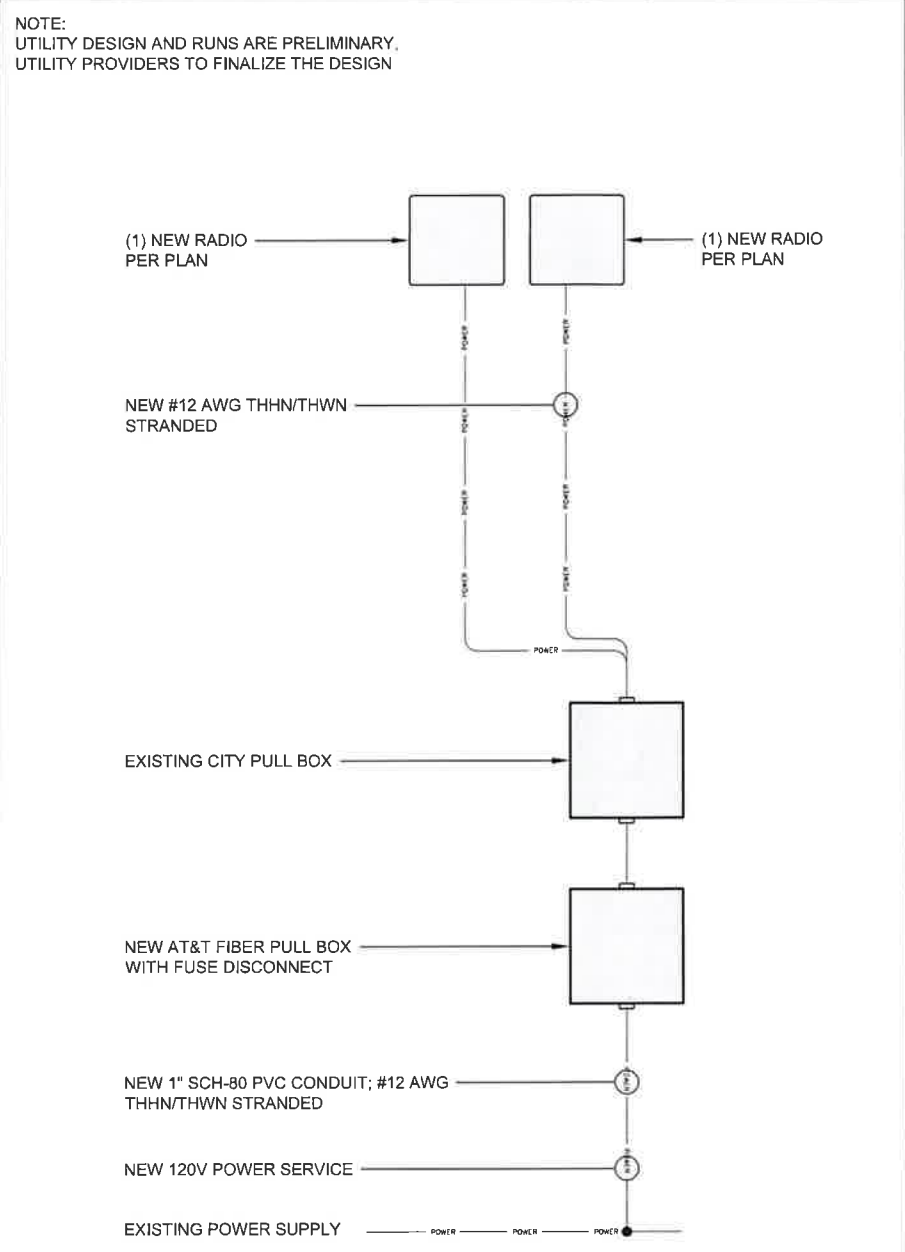
SHEET NUMBER
D-4



GROUNDING SCHEMATIC 24"x36" SCALE: NTS 11"x17" SCALE: NTS **6**

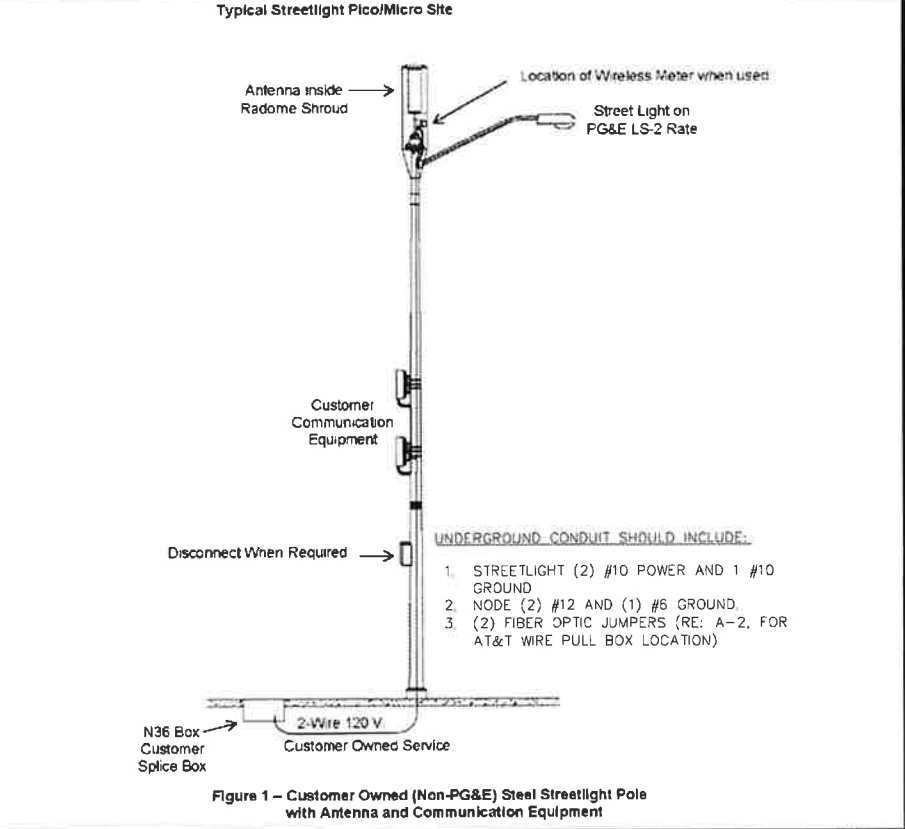


CADWELDS 24"x36" SCALE: NTS 11"x17" SCALE: NTS **5**



SINGLE LINE DIAGRAM 24"x36" SCALE: NTS 11"x17" SCALE: NTS **4**

NOT USED **3**



STREETLIGHT POLE 24"x36" SCALE: NTS 11"x17" SCALE: NTS **2**

UNDERGROUND ELECTRIC SERVICE NOTES:

UL APPROVED SCHEDULE 40 OR 80 PVC SCHEDULE 40 PVC SHALL NOT BE USED IF THE CONDUIT IS LOCATED SO THAT IT IS SUBJECT TO PHYSICAL DAMAGE. TO AVOID CABLE INSULATION DAMAGE, THE END OF THE CONDUIT SHALL BE PROVIDED WITH A SUITABLE TERMINATION FITTING SUCH AS A BUSHING, NIPPLE, END BELL, OR CABLE PROTECTOR, ETC. NOTE: CONDUITS SHALL NOT PASS UNDER OR THROUGH ONE BUILDING TO SUPPLY ADJACENT BUILDINGS.

PRIOR TO CABLE INSTALLATION, PROVE ALL CONDUITS FREE AND CLEAR BY MEANS OF A MANDREL OR OTHER METHOD ACCEPTABLE TO PG&E. A PG&E-APPROVED POLYESTER, FLAT PULLING TAPE, WHITE WITH SEQUENTIAL FOOTAGE MARKINGS EVERY FOOT, AND 2,500-POUND MINIMUM TENSILE STRENGTH (CODE 560154), SHALL BE INSTALLED IN ALL CONDUITS AND ATTACHED TO AN END CAP.

PG&E WILL FURNISH AND INSTALL THE UNDERGROUND SERVICE CONDUCTORS AND MAKE CONNECTIONS IN THE APPLICANT'S SERVICE TERMINATION ENCLOSURE.

WHEN THE INTRUSION OF WATER CAN REASONABLY BE EXPECTED, THE FOLLOWING ACTIONS ARE REQUIRED:

- 1) PG&E IS RESPONSIBLE FOR SEALING THE CONDUIT AT THE METER TERMINATION FACILITIES AS SHOWN IN DOCUMENT 062288. IF THE METER TERMINATION FACILITIES ARE SIGNIFICANTLY LOWER THAN THE SOURCE SIDE FACILITIES, THEN THE CONDUIT SHOULD BE SEALED AT BOTH ENDS. THE RAYFLATE DUCT SEALING SYSTEM (RDSS) CONDUIT SEALING SYSTEM CAN BE ORDERED FOR THIS PURPOSE. SEE DOCUMENT 062288.
- 2) THE APPLICANT IS RESPONSIBLE FOR PROVIDING A MEANS TO PREVENT THE ACCUMULATION OF EXCESS WATER OR WATER PRESSURE IN THE SERVICE CONDUIT SYSTEM. THIS IS ACCOMPLISHED BY INSTALLING A SPICE BOX AT THE BASE OF THE RISER TO THE METER PANEL, OR AT A MAXIMUM OF 6 FEET AWAY TO THE METER PANEL ALONG THE SERVICE RUN.

MAIN SERVICE PANEL RATING (AMPS)	CONDUIT SIZE AND NUMBER	CABLES REQUIRED TO SERVE MAXIMUM LOAD			
		ALUMINUM		COPPER	
		PER PHASE	NEUTRAL	PER PHASE	NEUTRAL
100	1"-3"	1-1/0	#2	NA	NA
CONDUIT DIAMETER		VERTICAL RADIUS		HORIZONTAL	
3"		24"		36"	

ELECTRICAL SERVICE NOTES 24"x36" SCALE: NTS 11"x17" SCALE: NTS **1**



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CHECKED BY:	MM

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ELK GROVE, CA 95758

SHEET TITLE
ELECTRICAL DETAILS

SHEET NUMBER
E-1

MUTCD REFERENCE GUIDE:

1. NOTHING ALLOWED IN THE BUFFER AND TRANSITION AREAS AT ALL TIMES.
2. SIGNS ARE ONLY SHOWING TO THE PUBLIC WHEN IN USE.
3. SIGNS AND CHANNELIZING DEVICES MUST BE RETROREFLECTIVE OR ILLUMINATED DURING NIGHT OPERATIONS.
4. SIGN PANEL SIZES 36"x36" MIN. ON ROADS <50MPH, 48"x48" ON ROADS >50MPH.
5. SIGNS ARE SPACED PER THE CA 2014 MUTCD (REVISION 2) MANUAL.
6. CHANNELIZING DEVICES SPACING AND TAPER LENGTHS ARE BASED ON THEIR RESPECTIVE CHARTS.
7. NOTIFY THE LOCAL LAW ENFORCEMENT, FIRE AND AMBULANCE COMPANIES WITHIN 72 HOURS BEFORE CONSTRUCTION BEGINS.
8. CONTRACTOR TO MAKE SURE ALL TRAFFIC CONTROL EQUIPMENT MEETS ALL AGENCY REQUIREMENTS.
9. REMOVE ALL CONFLICTING MARKINGS FOR LONG TERMS OPERATIONS (3 DAYS OR LONGER).
10. THE LOCATION OF THE SIGNS AS SHOWN ON THE ILLUSTRATIONS ARE GUIDELINES AND ACTUAL LOCATIONS WILL DEPEND UPON ALIGNMENT, GRADE, LOCATIONS OF STREET INTERSECTIONS AND 85% TILE POSTED SPEED LIMITS.
11. WHILE CROSSING INTERSECTIONS DURING MOBILE WORK, WORK MUST FOLLOW THE FLOW OF TRAFFIC AND PROCEED ON A GREEN LIGHT.
12. FULL COMPLIANCE IS REQUIRED WITH THE CITY AGENCY.
13. PEDESTRIAN ACCESS MUST BE MAINTAINED AS PER THE CA 2014 MUTCD (REVISION 2) STANDARDS AND ADA REQUIREMENTS.
14. C30 SIGNS ARE PERMITTED IN BUFFER AREAS.
15. SIGN SPACING IS PROVIDED IN THE CA MUTCD 2014 EDITION (REVISION 2), PART 6. TRAFFIC SPEEDS ARE BASED UPON RADAR MEASUREMENTS OF MOTORISTS. THE MUTCD ALLOWS FOR A "RANGE" IN SIGN PLACEMENT AND WILL BE PROVIDED BY DOT. THE 85% TILE IS USED WHEN AVAILABLE TO PROVIDE A MORE ACCURATE PRESENTATION OF MOTORISTS SPEEDS.
16. ANY WORK WITHIN 200FT OF A SIGNALIZED INTERSECTION WILL REQUIRE CONTACT AND COORDINATION WITH CITY AGENCY PRIOR TO ANY WORK.
17. QUALITY STANDARDS TO MEET REQUIREMENTS OF SECTION 1A-2 OF THE CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
18. ALL TRAFFIC CONTROL DEVICES INCLUDING: SIGNS, BARRICADES, VERTICAL PANELS, DRUMS, WARNING LIGHTS, ARROWBOARDS, CHANGEABLE MESSAGE SIGNS, CONES AND TUBULAR MARKERS THAT MEET THE REQUIREMENTS OF AMERICAN TRAFFIC SAFETY SERVICES ASSOCIATION (ATSSA), CA MUTCD 2014 (REVISION 2) SHALL BE USED ON THIS PROJECT/THIS WORK.
19. THE NCHRP REPORT 476 PROVIDES GUIDELINES FOR DESIGN AND OPERATION OF NIGHTTIME TRAFFIC CONTROL FOR HIGHWAY MAINTENANCE AND CONSTRUCTION. SEE TYPICAL APPLICATIONS NWT-1 THROUGH NWT-7. COMPLY WITH ANSI 107-2004 FOR APPAREL HIGHWAY CONSTRUCTION WORK LIGHTING SHALL BE PER CONSTRUCTION SAFETY ORDER 1523 - ILLUMINATIONS.
20. SIDEWALKS AT THE CONSTRUCTION LOCATION MAY BE CLOSED WITH ADEQUATE DETOURS, SIDEWALKS MAY ONLY BE CLOSED TO THROUGH TRAFFIC AND SHALL NOT PREVENT LOCAL PEDESTRIANS ACCESS. DETOURS SHALL NOT INCREASE THE PATH OF TRAVEL BY MORE THAN 500FT. DETOUR ROUTES SHALL BE LIMITED TO EXISTING SIDEWALKS, PRIVATE PROPERTIES (SEE BELOW REQUIREMENTS) AND CROSSINGS AT ROADWAY INTERSECTIONS. TO THE MAXIMUM EXTENT FEASIBLE, THE ALTERNATE CIRCULATION PATH SHALL BE PROVIDED ON THE SAME SIDE OF THE STREET AS THE DISRUPTED ROUTE. WHERE IT IS FEASIBLE TO PROVIDE A SAME-SIDE ALTERNATE CIRCULATION PATH AND PEDESTRIANS WILL BE DETOURED, SECTION 60.02 OF THE CA 2014 MUTCD (REVISION 2) SPECIFIES THAT THE ALTERNATE PATH PROVIDE A SIMILAR LEVEL OF ACCESSIBILITY TO THAT OF THE EXISTING DISRUPTED ROUTE. THIS MAY INCLUDE THE INCORPORATION OF ACCESSIBLE PEDESTRIAN SIGNS (APS), CURB RAMPS, OR OTHERS ACCESSIBILITY FEATURES.
21. PEDESTRIANS MAY BE DETOURED ONTO PRIVATE PROPERTY ONLY IF WRITTEN PERMISSION FROM THE PROPERTY OWNER IS OBTAINED ALONG WITH DOCUMENTATION INDICATING THAT THE CITY WOULD NOT BE LIABLE (HOLD HARMLESS) IN THE EVENT OF AN ACCIDENT.
22. DURING WORK HOURS, AT LEAST ONE WORKER SHALL BE ASSIGNED THE RESPONSIBILITY TO ESCORT ELDERLY, DISABLED OR ANY OTHER PEDESTRIANS IN NEED OF ASSISTANCE THROUGH THE CONSTRUCTION SITE. A WORKER ASSIGNED WITH THIS RESPONSIBILITY MAY ALSO PARTICIPATE IN OTHER CONSTRUCTION ACTIVITIES; HOWEVER, THE ASSIGNED WORKER SHALL BE AWARE OF HIS OR HERS RESPONSIBILITIES FOR PROVIDING THIS ASSISTANCE. MEASURES THAT SIMPLY CLOSE THE SIDEWALK, WITH THE EXCEPTION THAT PEDESTRIANS WILL CROSS SOMEWHERE ELSE DOES NOT ADEQUATELY SATISFY PEDESTRIAN ACCESS. PEDESTRIANS SHOULD NEVER BE DIRECTED/EXPECTED TO CROSS A MULTILANE ROADWAY AT ANY LOCATION OTHER THAN AT A SIGNAL (OR ALL-WAY STOP). ACCOMMODATIONS SHOULD BE MADE ON THE SAME SIDE OF ROADWAY AS WORK.

TRAFFIC CONTROL NOTES:

1. IT IS THE RESPONSIBILITY OF THE CONTRACTOR PERFORMING WORK ON A PUBLIC STREET TO INSTALL AND MAINTAIN THE TRAFFIC CONTROL DEVICES AS SHOWN HEREIN, AS WELL AS 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 PROVIDE MAXIMUM PROTECTION AND SAFETY TO CONSTRUCTION WORKERS.
2. ALL DELINEATORS SHALL BE EQUIPPED WITH REFLECTORS AT NIGHT TIME.
3. THE CONTRACTOR SHALL NOTIFY THE CITY/COUNTY OF RECORD AND CALTRANS PERMIT INSPECTOR AT LEAST FIVE WORKING DAYS IN ADVANCE OF IMPLEMENTING ANY CONSTRUCTION DETOUR.
4. ALL SIGNS, DELINEATORS, BARRICADES, ETC. AND THEIR INSTALLATION SHALL CONFORM TO THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (LATEST EDITION) AND THE MUTCD CALIFORNIA SUPPLEMENT, STATE OF CALIFORNIA STANDARD SPECIFICATIONS, SPECIAL PROVISIONS, AND STAMPED PLANS.
5. THE CITY/COUNTY OF RECORD AND CALTRANS RESERVE THE RIGHT TO OBSERVE THESE TRAFFIC CONTROL PLANS IN USE AND TO MAKE ANY NECESSARY CHANGES AS FIELD CONDITIONS WARRANT, ANY CHANGES SHALL SUPERSEDE THESE PLANS. EXACT LOCATION OF ALL EQUIPMENT AND TRAFFIC CONTROL DEVICES SHALL BE DETERMINED BY THE ENGINEER.
6. ALL TRAFFIC CONTROL DEVICES, STRIPES, MARKINGS, LEGENDS AND RAISED PAVEMENT MARKERS SHALL CONFORM TO THE MUTCD AND THE CALIFORNIA SUPPLEMENT (LATEST EDITION), THE STATE OF CALIFORNIA STANDARD SPECIFICATIONS (LATEST EDITION), SPECIAL PROVISIONS, AND STAMPED PLANS.
7. ALL TRAFFIC CONTROL DEVICES SHALL BE KEPT IN THEIR POSITION AT ALL TIMES AND SHALL BE REPAIRED, REPLACED OR CLEANED AS NECESSARY TO PRESERVE THEIR APPEARANCE AND CONTINUITY.
8. ALL TRAFFIC LANES SHALL HAVE A MINIMUM OF 5 FEET CLEARANCE FROM OPEN EXCAVATIONS AND A MINIMUM OF 2 FEET FROM VERTICAL OBSTRUCTIONS.
9. CONTRACTOR SHALL PROVIDE FLAGGERS AS DEEMED NECESSARY BY THE CITY/COUNTY INSPECTOR OR CALTRANS PERMIT INSPECTOR.
10. ALL ADVANCE WARNING SIGNS SHALL BE EQUIPPED WITH FLAGS.
11. TRAFFIC SIGNALS SHALL REMAIN IN OPERATION AT ALL TIMES. SIGNAL OPERATION DURING EACH CONSTRUCTION PHASE SHALL BE COORDINATED WITH AND APPROVED BY THE CITY/COUNTY OF RECORD AND/OR CALTRANS INSPECTOR.
12. PLACE ADDITIONAL "LANE CLOSED", (C30) SIGNS ON TYPE II BARRICADES AT 100 FOOT INTERVALS THROUGHOUT EXTENDED WORK AREAS IN EACH LANE THAT IS CLOSED. INSTALL "OPEN TRENCH" (C27) SIGNS WHENEVER AN OPEN EXCAVATION AREA EXISTS ADJACENT TO THE TRAVELED WAY.
13. 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 PROJECT.
14. CONTRACTOR SHALL REPLACE/REPAIR ALL DAMAGED STRIPING AT THE END OF EACH WORKING DAY.
15. 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. SIDEWALK CLOSURE/DETOUR SHALL COMPLY WITH THE WATCH STANDARDS AND MUST OBTAIN APPROVAL FROM THE CITY/COUNTY OF RECORD.
16. CONTRACTOR SHALL COVER OR REMOVE ALL CONFLICTING SIGNS.
17. CONTRACTOR SHALL POST "SYMBOL" UNEVEN LANES, "STEEL PLATES AHEAD" OR "BUMP" SIGNS FOR PAVEMENT SURFACE DISRUPTIONS OF 1/2" OR GREATER. PAVEMENT DISRUPTIONS FOR 1" OR GREATER SHALL HAVE A BEVELED EDGE OF FOUR (4) HORIZONTAL TO ONE (1) VERTICAL.
18. CONTRACTOR SHALL INSTALL "CAUTION STEEL PLATES AHEAD" AND/OR "ROUGH ROAD" SIGNS IN ADVANCE OF STEEL PLATE BRIDGING.
19. CONTRACTOR SHALL VERIFY ALL NECESSARY EQUIPMENT NEEDED FOR OVERHEAD CONSTRUCTION PRIOR TO THE START OF CONSTRUCTION.
20. WORK HOURS SHALL COMPLY WITH CITY OF ELK GROVE CONSTRUCTION CODE AND SCC CHAPTER 10.16 TRAFFIC CONTROL DEVICES.
21. RESIDENTS TO BE NOTIFIED OF DATES AND TIMES OF CONSTRUCTIONS TWO (2) WEEKS PRIOR TO THE START OF WORK.
22. A 5'-0" MIN. PEDESTRIAN CLEARANCE TO BE MAINTAINED AT EXISTING SIDEWALKS.
23. POSTED SPEED 35 MPH ON LEWIS STEIN RD

Posted Speed	Formula	Buffer Space	Minimum Taper Lengths									Maximum *Cone Spacing		Sign Spacing	LIDG (Ft)	
			L			1/2 L			1/3 L			L	1/2 L			1/3 L
			L	1/2 L	1/3 L	L	1/2 L	1/3 L	L	1/2 L	1/3 L					
25	L = WS ² 60	155'	104'	52'	35'	115'	57'	38'	125'	63'	42'	25'	13'	100' To 200'	94'	
30		200'	150'	75'	50'	165'	83'	55'	180'	90'	60'	30'	15'	120' To 250'	113'	
35		250'	204'	102'	68'	225'	112'	75'	245'	123'	82'	35'	18'	140' To 280'	131'	
40		305'	267'	133'	89'	293'	147'	98'	320'	160'	107'	40'	20'	160' To 320'	150'	
45	L = WS	360'	450'	225'	150'	495'	248'	165'	540'	270'	180'	45'	23'	360' To 540'	169'	
50		425'	500'	250'	167'	550'	275'	183'	600'	300'	200'	50'	25'	400' To 600'	197'	
55		495'	550'	275'	183'	605'	303'	202'	660'	330'	220'	50'	28'	440' To 660'	210'	
60		570'	600'	300'	200'	660'	330'	220'	720'	360'	240'	50'	30'	480' To 720'	225'	
65		645'	650'	325'	217'	715'	358'	238'	780'	390'	260'	50'	33'	520' To 700'	244'	
70		730'	700'	350'	233'	770'	385'	257'	840'	420'	280'	50'	35'	560' To 820'	263'	



LOCATION NO:	14807746
DRAWN BY:	EZG
CHECKED BY:	MM

REV	DATE	DESCRIPTION
0	12/02/2019	100% CD'S FOR REVIEW
B	11/22/2019	95% CD'S FOR REVIEW
A	09/12/2019	90% CD'S FOR REVIEW

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

CRAN_RSFR_SAC01_020
 POLE #33345
 IN THE PUBLIC R.O.W.
 8873 LEWIS STEIN RD
 ELK GROVE, CA 95758

SHEET TITLE
 TRAFFIC CONTROL
 PLAN NOTES

SHEET NUMBER
TCP-1

NOTE:
ALL TRAFFIC CONTROL SHALL COMPLY WITH ALL CITY OF ELK GROVE REQUIREMENTS. SEE ATTACHED MUTCD REFERENCE GUIDE FOR INFORMATION ON SIGN SPACING, LOCATION, OF CONSTRUCTION SIGNAGE, FLAGGERS, AND CHANNELING DEVICES.

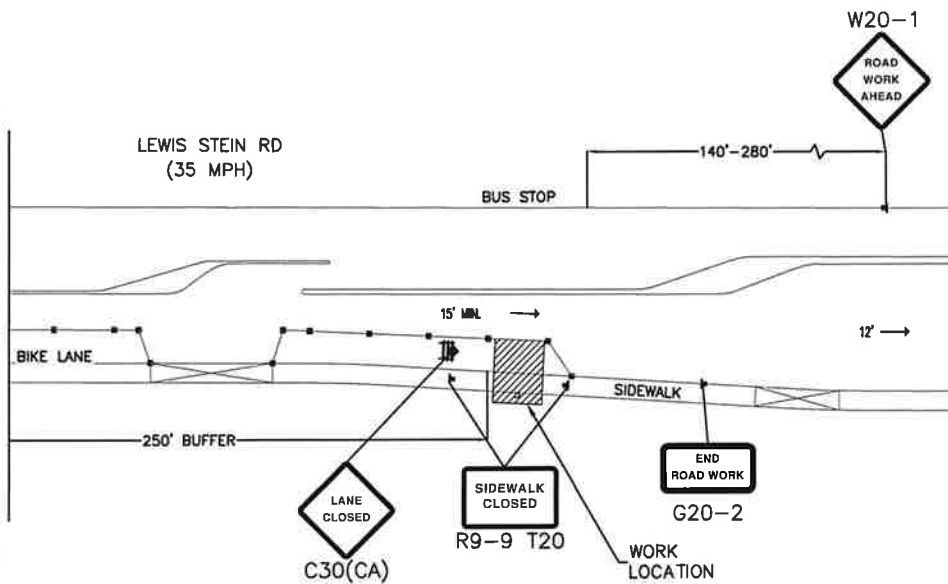
ALLOWABLE WORKING HOURS
M-F: 8:30AM - 3:30PM
SAT: 7:00AM - 5:00PM

NOTE:
MAINTAIN ACCESS TO R/T BUS STOPS OR COORDINATE WITH R/T TO RELOCATE BUS STOP LOCATIONS. CONTRACTOR SHALL COORDINATE THE BUS STOP WITH R/T REPRESENTATIVE.
(916) 321-2800

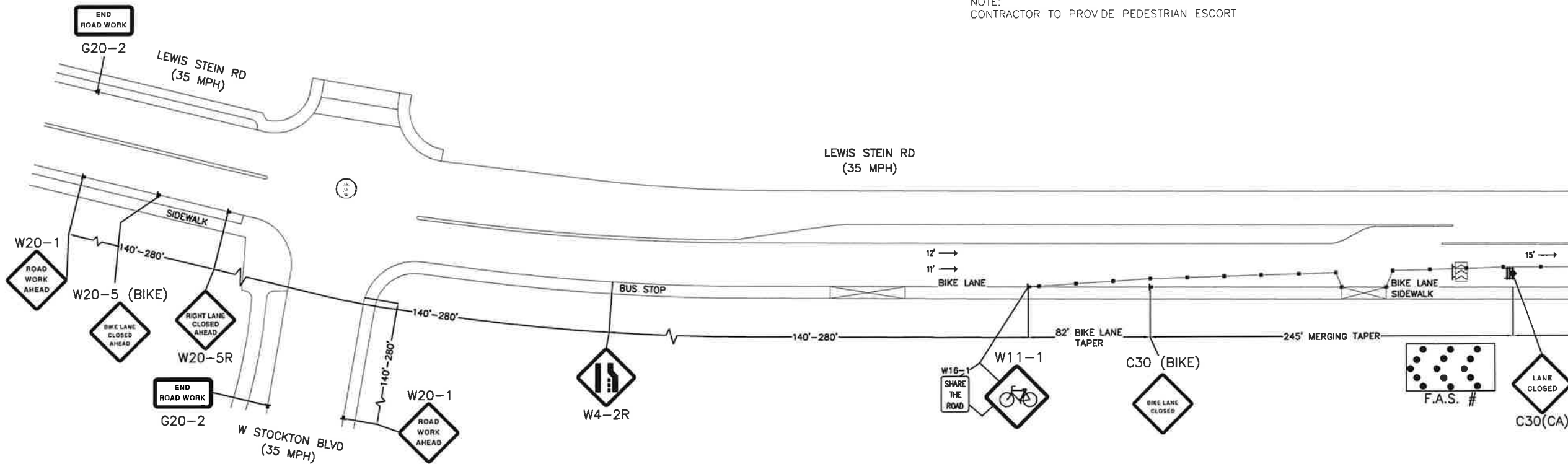
*POST TEMPORARY NO PARKING SIGN ON TYPE BARRICADE 72 HRS IN ADVANCED.

TRAFFIC CONTROL TO BE ARRANGED 72 HOURS IN ADVANCE OF CONSTRUCTION

MATCH LINE SEE BELOW LEFT



NOTE:
CONTRACTOR TO PROVIDE PEDESTRIAN ESCORT



MATCH LINE SEE ABOVE LEFT

LEGEND	
	FLASHING ARROW SIGN
	CHANNELIZING DEVICE
	HIGH LEVEL WARNING DEVICE W/ PROPOSED SIGN
	PROPOSED SIGN AND POST
	TYPE I BARRICADE
	TYPE I BARRICADE W/ PROPOSED SIGNS
	TYPE III BARRICADE
	TYPE III BARRICADE W/ PROPOSED SIGNS
	SIGNALIZED INTERSECTION
	CONSTRUCTION AREA
	FLAGGER



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8873 LEWIS STEIN RD
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SHEET TITLE
TRAFFIC CONTROL PLAN

SHEET NUMBER
TCP-2