

**ELECTROLIERS**

STANDARD TYPES	DESCRIPTION
15, 15D	HIGH MAST LIGHT POLE
15 STRUCTURE	DOUBLE ARM LIGHTING STANDARD
21, 21D STRUCTURE	EXISTING ELECTROLIER
30	ELECTROLIER FOUNDATION (FUTURE INSTALLATION)
31	
32	
35	
36-20A	

**NOTES:**

- Luminaires shall be 310 W HPS when installed on Type 21, 21D, 30, 31, 32, 35 and 36-20A Standards, unless otherwise specified. Luminaires shall be 200 W HPS when installed on other type standards or poles, unless otherwise specified.
- Luminaires shall be the cutoff type, ANSI Type III medium cutoff lighting distribution, unless otherwise specified.
- Variations noted adjacent to symbol on project plans.

ELECTROLIER (SEE PROJECT NOTES OR PROJECT PLANS)

LUMINAIRE ON WOOD POLE

**LEGEND:**

<b>AB</b>	ABANDON. IF APPLIED TO CONDUIT, REMOVE CONDUCTORS.
<b>BC</b>	INSTALL PULL BOX IN EXISTING CONDUIT RUN.
<b>BP</b>	PEDESTRIAN BARRICADE, TYPE AS INDICATED ON PLAN.
<b>CB</b>	INSTALL CONDUIT INTO EXISTING PULL BOX.
<b>CC</b>	CONNECT NEW AND EXISTING CONDUIT. REMOVE EXISTING CONDUCTORS AND INSTALL CONDUCTORS AS INDICATED.
<b>CF</b>	CONDUIT TO REMAIN FOR FUTURE USE. REMOVE CONDUCTORS. INSTALL PULL WIRE OR ROPE.
<b>DH</b>	DETECTOR HANDHOLE.
<b>FA</b>	FOUNDATION TO BE ABANDONED.
<b>IS</b>	INSTALL SIGN ON SIGNAL MAST ARM.
<b>NS</b>	NO SLIP BASE ON STANDARD.
<b>PEC</b>	PHOTOELECTRIC CONTROL.
<b>PEU</b>	PHOTOELECTRIC UNIT.
<b>RC</b>	EQUIPMENT OR MATERIAL TO BE REMOVED AND BECOME THE PROPERTY OF THE CONTRACTOR.
<b>RE</b>	REMOVE ELECTROLIER, FUSES AND BALLAST. TAPE ENDS OF CONDUCTORS.
<b>RL</b>	RELOCATE EQUIPMENT.
<b>RR</b>	REMOVE AND REUSE EQUIPMENT.
<b>RS</b>	REMOVE AND SALVAGE EQUIPMENT.
<b>SC</b>	SPLICE NEW TO EXISTING CONDUCTORS.
<b>SD</b>	SERVICE DISCONNECT.
<b>TSP</b>	TELEPHONE SERVICE POINT.

**ABBREVIATIONS AND EQUIPMENT DESIGNATIONS**

NEW	EXISTING	DESCRIPTION
BBS	bbs	BATTERY BACKUP SYSTEM
BC	bc	BOLT CIRCLE
C	C	CONDUIT
CB	CB	CIRCUIT BREAKER
CCTV	cctv	CLOSED CIRCUIT TELEVISION
CKT	ckt	CIRCUIT
CMS	cms	CHANGEABLE MESSAGE SIGN
CTID	ctid	CALTRANS IDENTIFICATION COMMUNICATION
COMM	comm	COMMUNICATION
DLC	dlc	LOOP DETECTOR LEAD-IN CABLE
EMS	ems	EXTINGUISHABLE MESSAGE SIGN
EVC	evc	EMERGENCY VEHICLE CABLE
EVD	evd	EMERGENCY VEHICLE DETECTOR
FB	fb	FLASHING BEACON WITHOUT SLIP BASE
FBCA	fbca	FLASHING BEACON CONTROL ASSEMBLY
FBS	fb	FLASHING BEACON WITH SLIP BASE
FO	fo	FIBER OPTIC
G	G	GROUND (EQUIPMENT GROUNDING CONDUCTOR)
GB	GB	GROUND BUS
GFCI	GFCI	GROUND FAULT CIRCUIT INTERRUPTER
HAR	har	HIGHWAY ADVISORY RADIO
HEX	hex	HEXAGONAL
HPS	hps	HIGH PRESSURE SODIUM
IISNS	iisns	INTERNALLY ILLUMINATED STREET NAME SIGN
ISL	isl	INDUCTION SIGN LIGHTING
LED	led	LIGHT EMITTING DIODE
LMA	lma	LUMINAIRE MAST ARM
LPS	lps	LOW PRESSURE SODIUM
LTG	ltg	LIGHTING
LUM	lum	LUMINAIRE
M	M	METERED
MAT	mat	MAST ARM MOUNTING VEHICLE SIGNAL FACES, TOP ATTACHMENT
MAS	mas	MAST ARM MOUNTING VEHICLE SIGNAL FACES, SIDE ATTACHMENT
MAS-4A	mas-4A	MAST ARM MOUNTING VEHICLE SIGNAL FACES, SIDE ATTACHMENT - 4 SIGNAL SECTION
MAS-4B	mas-4B	
MAS-4C	mas-4C	
MAS-5A	mas-5A	MAST ARM MOUNTING VEHICLE SIGNAL FACES, SIDE ATTACHMENT - 5 SIGNAL SECTION
MAS-5B	mas-5B	
mc	mc	MERCURY CONTACTOR
M/M	m/m	MULTIPLE TO MULTIPLE TRANSFORMER
MT	mt	CONDUIT WITH PULL WIRE OR ROPE ONLY
MTG	mtg	MOUNTING
mv	mv	MERCURY VAPOR LIGHTING FIXTURE
MVDS	mvds	MICROWAVE VEHICLE DETECTION SYSTEM
N	N	NEUTRAL (GROUNDED CONDUCTOR)
NB	NC	NEUTRAL BUS
NC	NO	NORMALLY CLOSE
NO	NO	NORMALLY OPEN
P	P	POLE (CIRCUIT BREAKER)
PB	pb	PULL BOX
PEC	pec	PHOTOELECTRIC CONTROL (TYPE I, II, III, IV OR X AS SHOWN)
PED	ped	PEDESTRIAN
PEU	peu	PHOTOELECTRIC UNIT
PPB	ppb	PEDESTRIAN PUSH BUTTON
RL	RL	RELOCATED EQUIPMENT
RM	rm	RAMP METERING
RWIS	rwis	ROADSIDE WEATHER INFORMATION SYSTEM
SB	sb	SLIP BASE
SBI	sbi	SLIP BASE INSERT
SIC	sic	SIGNAL INTERCONNECT CABLE
SIG	sig	SIGNAL
SMA	sma	SIGNAL MAST ARM
SNS	sns	STREET NAME SIGN
SP	sp	SERVICE POINT
TDC	tdc	TELEPHONE DEMARCATION CABINET
TMS	tms	TRAFFIC MONITORING STATION
TOS	tos	TRAFFIC OPERATIONS SYSTEM
UM	UM	UNMETERED
VEH	veh	VEHICLE
VIVDS	vivds	VIDEO IMAGE VEHICLE DETECTION SYSTEM
WIM	wim	WEIGH-IN-MOTION
XFMR	xfmr	TRANSFORMER

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

*Jeffrey G. McPhee*  
REGISTERED ELECTRICAL ENGINEER

May 20, 2011  
PLANS APPROVAL DATE

Jeffrey G. McPhee  
No. E14512  
Exp. 6-30-12  
REGISTERED PROFESSIONAL ENGINEER  
ELECTRICAL  
STATE OF CALIFORNIA

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**SOFFIT AND WALL MOUNTED LUMINAIRES**

- PENDANT, 70 W HPS UNLESS OTHERWISE SPECIFIED.
- FLUSH, 70 W HPS UNLESS OTHERWISE SPECIFIED.
- WALL SURFACE, 70 W HPS UNLESS OTHERWISE SPECIFIED.
- EXISTING SOFFIT OR WALL LUMINAIRE TO REMAIN UNMODIFIED.
- EXISTING SOFFIT OR WALL LUMINAIRE TO BE MODIFIED AS SPECIFIED.

**NOTE:**  
Arrow indicates "street side" of luminaire.

COMMONLY USED SYMBOLS FOR UNITED STATES CUSTOMARY UNITS OF MEASUREMENT:

SYMBOL USED	DEFINITIONS
Ω	OHMS
min	MINUTE
s	SECOND
bps	BITS PER SECOND
Bps	BYTES PER SECOND
A	AMPERE
V	VOLT
V <sub>(dc)</sub>	VOLT (DIRECT CURRENT)
V <sub>(ac)</sub>	VOLT (ALTERNATING CURRENT)
FC	FOOT - CANDLE
W	WATTS
VA	VOLT-AMPERE
M	MEGA
K	KILO
m	MILLI
μ	MICRO
P	PICO
Hz	HERTZ

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
**ELECTRICAL SYSTEMS**  
**(LEGEND, NOTES AND ABBREVIATIONS)**

NO SCALE

**ES-1A**