



Residential Electrical Services Permit Requirements

Planning Building & Transportation
2263 Santa Clara Ave., Room 190
Alameda, CA 94501
510.747.6800

Hours: 8:30-3:00 Mon-Thur

AMP Email: bascara@alamedamp.com

CODE SECTIONS

Alameda Municipal Power (AMP) Regulations

CEC Articles 110, 230, 250, 300, 344, 404

CPC 1211

PERMITS & INSPECTIONS

- A permit is required for installation, modification, removal, or replacement of an electrical service.
- Do not cover any portion of the installation until inspected and instructed: "*Okay to cover*".
- Modification of any portion of the existing service requires a complete service upgrade to the current code. (AMP)

PERMIT APPLICATION REQUIRED DETAILS

- Service size. ≤ 250 amps and ≤ 3 meters may use Express permitting. All others must apply for a standard permit and provide load calcs.
- Service entrance conductor size and type.
- Conduit size and type.
- Number of meters with each corresponding disconnect size.
- Panel make and model number.
- **IMPORTANT: the service panel must be selected from the EUSERC-compliant list attached.**

PROTECTION OF SERVICE ENTRANCE (SE) CONDUCTORS

- Main service disconnect shall have a rating not less than the calculated load.
- SE conductors shall be sized based on the busbar rating of the service meter main panel.
- All services supplying dwelling units shall be provided with surge-protection devices. CEC 230.67

GENERAL REQUIREMENTS

- Meter locations shall be accessible and outdoors. All electrical meter installations shall be located to be accessible to authorized representatives of AMP for installation, removal, reading, testing, and inspection. AMP
- LBs or gutters shall not be installed between the service panel and the weatherhead or vault. AMP
- Conduit Type and Size: Rigid conduit sized per CEC. Min of ≥ 1.25 " and threaded. CEC 230.50
- The service panel shall be installed ≥ 10 " from the corner of the house to the center of the meter. AMP
- Drip loops are required. CEC 230.54.F.
- The weatherhead shall be installed ≥ 8 " beyond the edge of the roof. AMP
- Double conduit straps are required at the corner adjacent to the weatherhead. AMP
- A conduit riser clamp must be installed within 3' of all conduit terminations. CEC 344.30
- Conductors shall be ≥ 18 " proud of the weatherhead. AMP
- The service panel must be ≥ 3 ' from the gas riser & meter. AMP
- Max breaker height is $\leq 6'7$ ". CEC 404.8
- Panel circuits must be labeled. CEC 110.22.A
- There shall be no gate between the street and the meter. AMP
- All conduits below grade require duct seal. CEC 300.5.G
- **Meter height:** 48"-66" or 72"-75" (driveway) from the centerline of the meter to the standing surface. Where the meter location does not meet the minimum height clearances, protective bollards shall be installed. AMP
- **Working Space:**
 - Meter shall be ≥ 3 ' from the property line. AMP
 - A level standing surface with a clear and unobstructed working space must be provided and maintained in front of each metering installation. The working space must have a width of ≥ 30 " and a height of ≥ 75 " for individual field-installed meter panels (78" minimum from the standing surface for all other installations).
 - The working space must extend ≥ 36 " in front of the service panel and be free from all obstructions and vegetation.

RESIDENTIAL SERVICE SIZE REQUIREMENTS AND LIMITATIONS

- **Minimum Service:**
 - Single family: 100 amps.
 - Multi-family: 60 amps.
 - Attached & detached ADUs: 100 amps each.
- **Size Limitations:**
 - ≤ 250 amps: No restrictions. Express permitting is allowed.
 - > 250 amps and > 3 meters: Apply for a standard permit and requires load calcs.

GROUNDING AND BONDING

- #4 rebar or bare copper UFER (20') or 8' x 5/8" rod with #4 copper. CEC 250.52.3.2
- GEC shall be protected. CEC 250.64.B.
- Ground rod shall be placed as close as practicable to the service. CEC 250.30.A.4
- All metallic piping systems shall be bonded. CPC 1211
- #6 copper cold water bond shall be installed outside & accessible. AMP

SERVICE OVERHEAD CLEARANCES CEC 230.24

- ≥ 8' above roofs < 4:12 pitch.
- ≥ 3' above roofs ≥ 4:12 pitch.
- ≥ 18" at eaves.
- ≥ 18' above nonresidential driveway.
- ≥ 10' above walkways.
- ≥ 12' above driveways.
- ≥ 18' above roadway.

EUSERC APPROVED PANELS

EATON Catalog No:

1MBE1428B100BS
1MP2122R
1MP2122RC
1MP2204R
1MP2204RC
1MP3124R
1MP3124RC
1MP3206R
1MP3206RC
1MP4124R
1MP4124RC
1MP4206R
1MP4206RC
1MP5126R
1MP5126RC
1MP5206R
1MP5206RC
1MP6126R
1MP6126RC
1MP6206R
1MP6206RC
CMBE3242B150BS
CMBE3242B200BS
CMBE3242B225BS
CMBE4242B200BTS
CMBE88B150BTS
CMBE88B200BTS
CMBEB150BTS
CMBEB200BTS
CMBER88B150BTS
MBE1224B100BTS
MBE1224B100TS
MBE1224B125BTS
MBE1224B125TS
MBE1428B100BS
MBE2040B150BTS
MBE2040B200BS
MBE2040B200BTS
MBE2040B200TS
MBE2040B225BTS
MBE2040BH200BTF
MBE2040BH200BTS
MBE2040PV200BTS
MBE4040B200BSH
MBE4040B200BTS

MBE4040PV200BTS
MBE48B150BTS
MBE48B200BTS
MBE816P200TS
MBE816P200TSCU
MBE88B200BTS
MBEB200BTS
MBER48B150BTS
MBER48B200BTS

GENERAL ELECTRIC Catalog No:

TSF420CSCU
TSM1212CSCU
TSM1610CSCU
TSM1612CSCU
TSM2020CSCU
TSM2022USCU
TSM2420US42
TSM3220USCU
TSM3220UWCU
TSM3222USCU
TSM4020UWCU

SIEMENS Catalog No:

MC08168B1200EFN
MC0816B1200ESN
MC0816B1200EST
MC0816S1200SCT
MC1224B1100EFC
MC1224B1100ESC
MC1224B1125EFC
MC1224B1125ESC
MC1224B1200EFC
MC1224B1225EFC
MC2040B1200ESC
MC2040B1200FED
MC2040B1200SED
MC2442B1200ESC
MC2442B1200ESV
MC2442B1225ESC
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MC3040B1200SECW
MC3040S1200SC
MC3042B1200SED
MC3042B1225FED

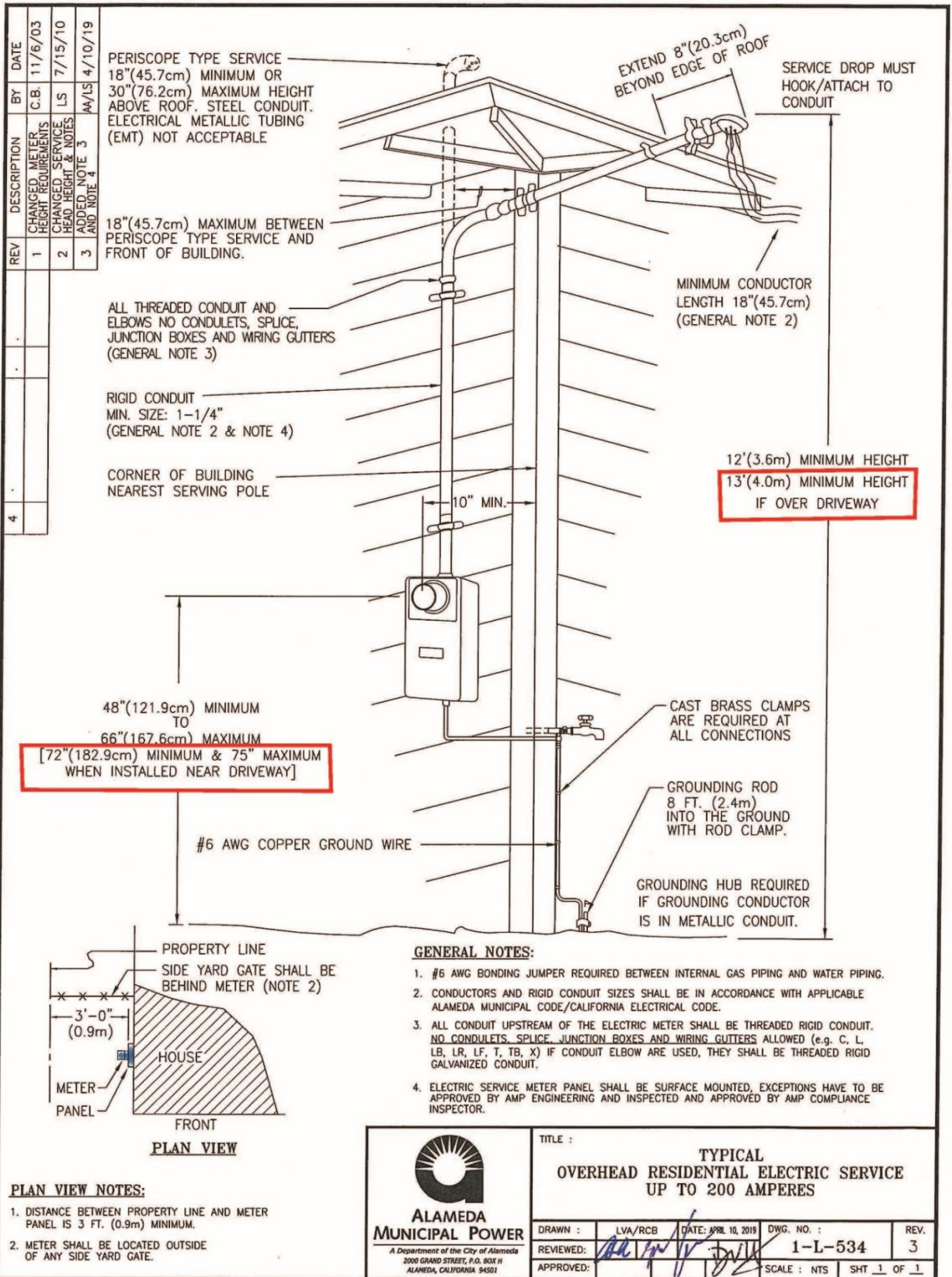
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MC4040S1200SC
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WEP4411
WEP4412
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WEP6611
WEP6612
WP5411

SQUARE D Catalog No:

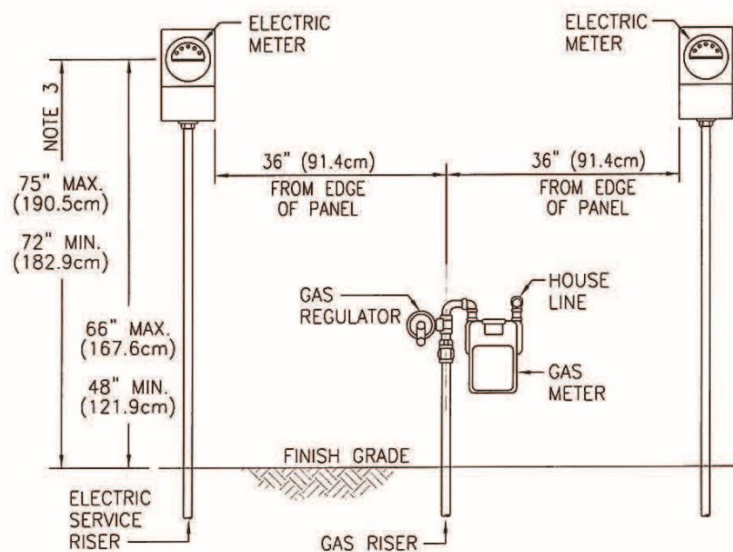
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MP33125
MP42200
MP43200
MP44125
MP55125
MP64200
MP66125
MP85200
MP86200
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SC1624M100F
SC1624M100S
SC1624M125S
SC2040M200C
SC2040M200PF
SC2040M200PS
SC2040M200S
SC3040M200PS
SC3042M200PS
SC40M200S
SC42M200PS
SC816F150PS
SC816F200PS
SU2040M200C
SU2040M2

If your EUSERC panel is not listed above then contact Reynaldo Bascara at AMP for approval.
bascara@alamedamp.com

M:\PwrDrgs\WorkOrder\L_ConstructionStd\11534.DWG September 08, 2016



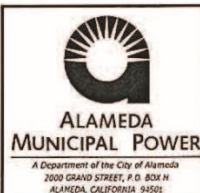
REV	DESCRIPTION	BY	DATE
1	CHANGED CO. NAME	T.N.	11/20/09
2	CHANGED REF. LINE FOR 10' CLEARANCE	L.S.	6/06/12
3	NEW CLEARANCES	J.U.	6/3/15
4	CORNER TWO DIAGRAM DIMENSION REMOVE	J.U.	7/21/15



REQUIRED MINIMUM SEPARATIONS AND CLEARANCES BETWEEN ELECTRICAL AND GAS METERS

NOTES:

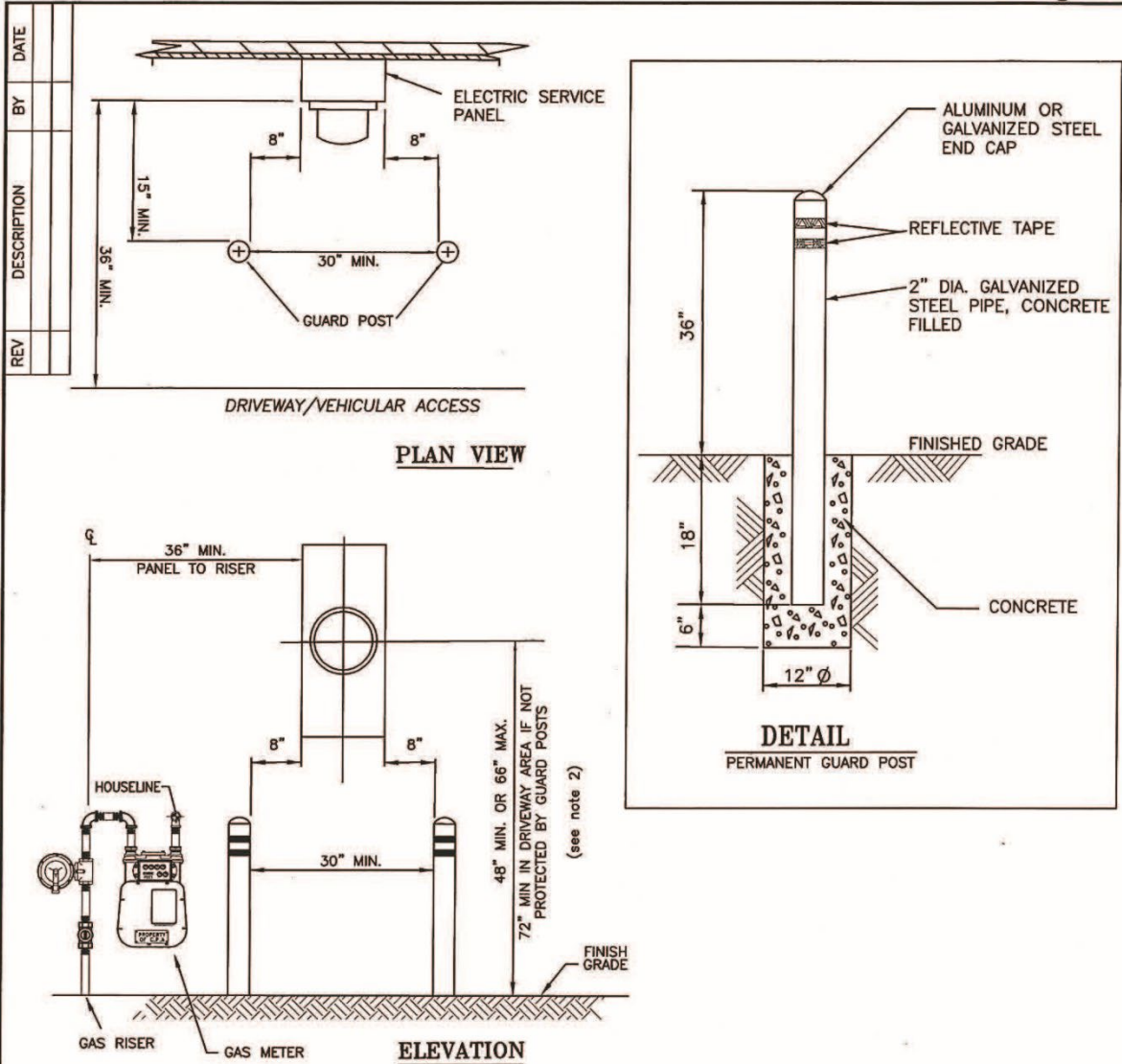
1. ELECTRIC METER PANEL LOCATIONS ARE SUBJECT TO ALAMEDA MUNICIPAL POWER (AMP) APPROVAL AND MUST COMPLY WITH THE ALAMEDA ELECTRICAL CODE REQUIREMENTS.
2. GAS METER LOCATIONS ARE SUBJECT TO GAS UTILITY'S APPROVAL.
3. INDIVIDUAL ELECTRIC METER WHEN INSTALLED NEAR A DRIVEWAY.



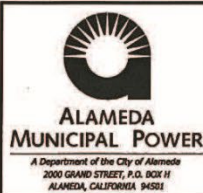
TITLE :

REQUIRED MINIMUM SEPARATIONS AND CLEARANCES BETWEEN ELECTRICAL AND GAS METERS

DRAWN :	L.V. ANCHETA	DATE: JULY 21, 2015	DWG. NO. :	REV.
REVIEWED:	<i>[Signature]</i>		1-L-535	4
APPROVED:	<i>[Signature]</i>		SCALE : NTS	SHT 1 OF 1

**NOTES:**

1. METERS INSTALLED IN LOCATIONS SUSCEPTIBLE TO VEHICULAR DAMAGE SHALL BE PROTECTED BY GUARD POSTS OR INSTALLED AT A SUITABLE HEIGHT TO PREVENT CONTACT.
2. PER CEC ARTICLE 404.8(A), THE HIGHEST POSITION OF THE BREAKER HANDLE MUST NOT BE MORE THAN 79" ABOVE GRADE/FLOOR.
3. THIS STANDARD IS FOR RESIDENTIAL INSTALLATIONS ONLY, NOT FOR MULTIFAMILY DWELLINGS.
4. PERMANENT FIXED POSTS ARE REQUIRED.



TITLE :

**METER INSTALLATION IN
RESIDENTIAL DRIVEWAY**

DRAWN :	L.V. ANCHETA	DATE: NOV. 26, 2018	DWG. NO.:	REV.
REVIEWED:	<i>[Signature]</i>		1-L-624	0
APPROVED:	<i>[Signature]</i>		SCALE: NTS	SHT 1 OF 1