

SPECIAL APPLICATIONS

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Electric Service Requirements



SPECIAL APPLICATIONS

GENERAL

The information and specifications included herein cover conductors and equipment connecting the CRA-ES electrical supply system to the Customer's premises. Subjects relative to this service are also presented for the mutual interest of the Customer and his representatives.

It is not a complete set of rules governing the installation of electrical wiring and equipment.

These requirements are supplementary to and are not intended to conflict with the currently applicable National Electric Safety Code, National Electric Code, Municipal, County or State Codes, Ordinances or Regulations within the State of Arizona.

On new installations, or where changes necessitate relocating or replacing the service equipment, or when an installation has been disconnected by CRA-ES or the Fire Department because of fire or other damage, **CRA-ES shall not energize or restore service until the wiring has been approved and proper notification given to CRA-ES by the inspection authorities where such inspection is required.**

In areas where local inspection is not required, the service entrance including grounding and bonding shall be in accordance with CRA-ES requirements and the National Electric Code. The above equipment shall be inspected and approved by an CRA-ES representative prior to service being energized.



1201.3 COMBINATION METERED/UN-METERED LOCATIONS:

- A) Metered and un-metered services **shall not occupy the same conduit or meter can.**
- B) The CRA-ES “point-of-service” for the un-metered service shall be an CRA-ES supplied, Customer installed J-Box. For the metered service, the “point-of-service” shall be the meter can or pedestal.
- C) CRA-ES shall specify J-Box type and location.
- D) Two separate conduit systems shall be installed by the Customer. One from the J-Box to the meter can for the metered service, and one from the J-Box to the control cabinet/disconnect for the un-metered service.
- E) CRA-ES shall install wire from the J-Box to the meter can for the metered service.
- F) The Customer shall install wire from the J-Box to the control cabinet/disconnect for the unmetered service.
- G) Meter locations and equipment shall meet all requirements listed in Paragraphs 1201.1 and 1201.2.

1201.4 MAINTENANCE AT INTERSECTIONS

- A) CRA-ES shall notify ADOT, appropriate local City personnel and local Police Department before any outages at intersections.
- B) The Customer shall notify CRA-ES of any changes to load at un-metered locations that will affect flat-rated billing.

1201.5 CONTROLLED ACCESS AREA FENCING REQUIREMENTS

Figure 1

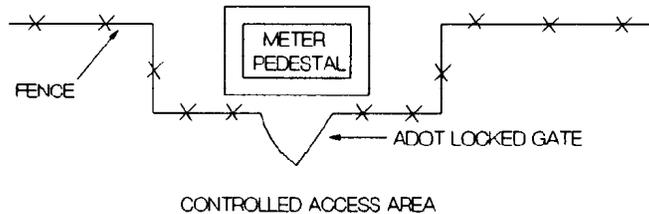
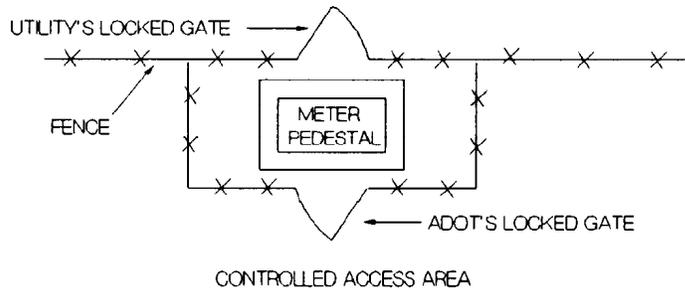


Figure 2



NOTE:

- 1. A minimum of 3 feet clear and level working space is required in front of metering equipment.

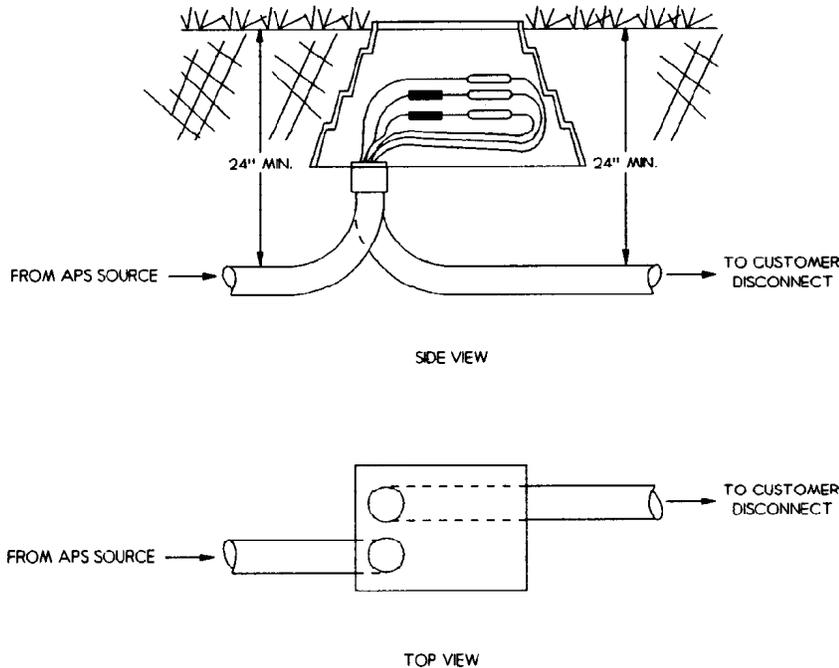


1202.0

UN-METERED SERVICE REQUIREMENTS

1202.1

TYPICAL UN-METERED SERVICE (For metered installations, see Section 500 Paragraph 506.7)
15 AMP MAXIMUM, 120V 1Ø 2 WIRE OR 120/240V 1Ø 3 WIRE, CONSTANT LOAD:



NOTES:

1. Installation shall be per N.E.C. and approved by local jurisdiction having authority.
2. Customer disconnect is required per N.E.C., also requires permanent ID tag.
3. Installation shall be an all conduit system with a minimum size 1 inch conduit. A 12" radius sweep is acceptable for 1" conduit.
4. See Section 500, Paragraph 502.0 for requirements for conduit system.
5. See Section 500, Paragraph 501.4 regarding coating required on steel conduit below grade.
6. Before digging or driving ground rod, be sure to call Blue Stake to get location of underground facilities. (See Section 100, Paragraph 100.12)
7. 5/8" x 8' ground rod to be installed at customer disconnect location. Rod must be 8' in the ground.
8. A #6 minimum copper ground wire is to be required for the ground rod connection.
9. Access shall be provided to J-box, with a minimum of 3 feet working clearance required in front of at least two adjacent sides of box.



1202.1-2 TYPICAL UNMETERED SERVICE (For metered installations, see Section 500, Paragraph 506.7)
15 AMP MAXIMUM, 120V 1Ø 2 WIRE OR 120/240V 1Ø 3 WIRE, CONSTANT LOAD:

10. Customer to extend conduit to an CRA-ES supplied, Customer installed J-box. CRA-ES shall specify J-box type and location. Customer to install J-box per CRA-ES specifications. (See local representative)
11. J-boxes shall not be installed in areas exposed to vehicular traffic.
12. Customer to install conductors to CRA-ES J-box. CRA-ES to terminate service in box.
13. CRA-ES provided and installed fuses shall be required at J-box terminations. CRA-ES "Point-of-Delivery" shall be the fused connection in the J-box.
14. For conduit system design between the J-box and the CRA-ES source, see Section 500 Paragraph 502.12-1 and 502.12-2.

Electric Service Requirements 1202.1-2



1202.2 CUSTOMER-OWNED DUSK-TO-DAWN LIGHTS

FIGURE 1 - POLE MOUNTED

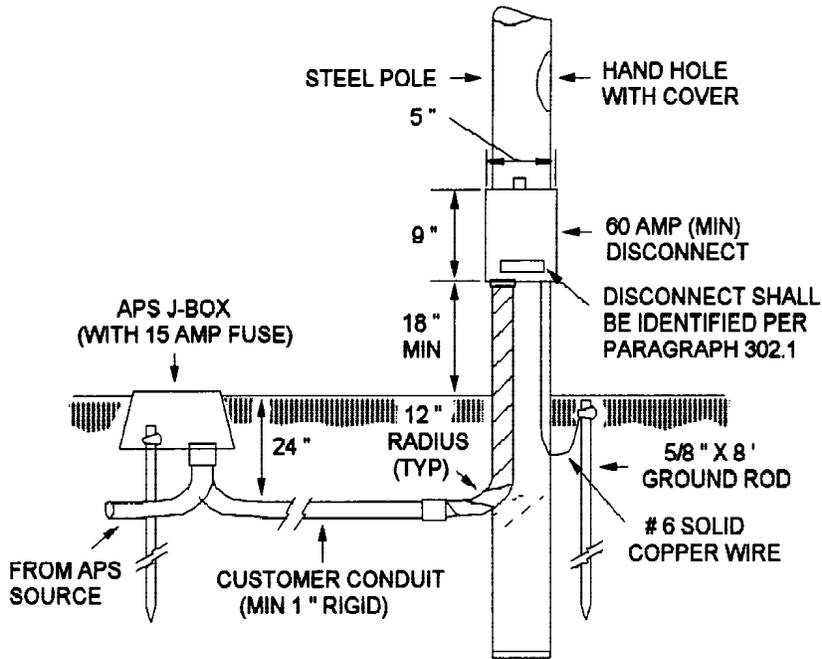
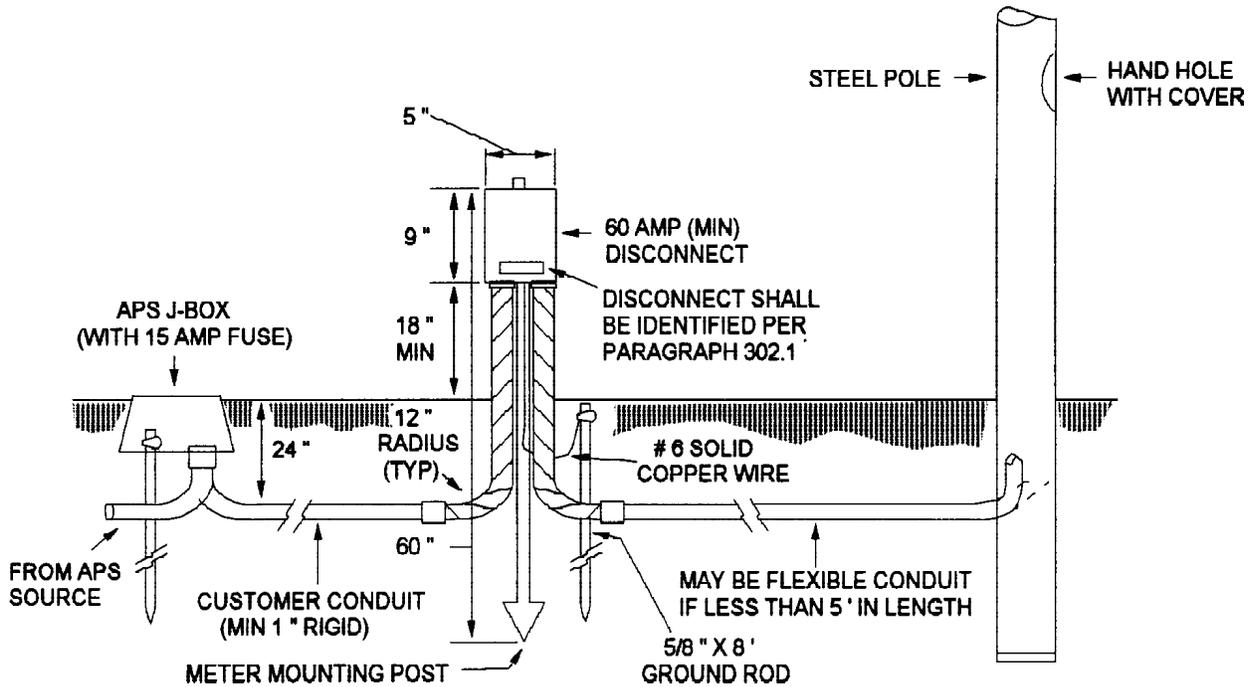
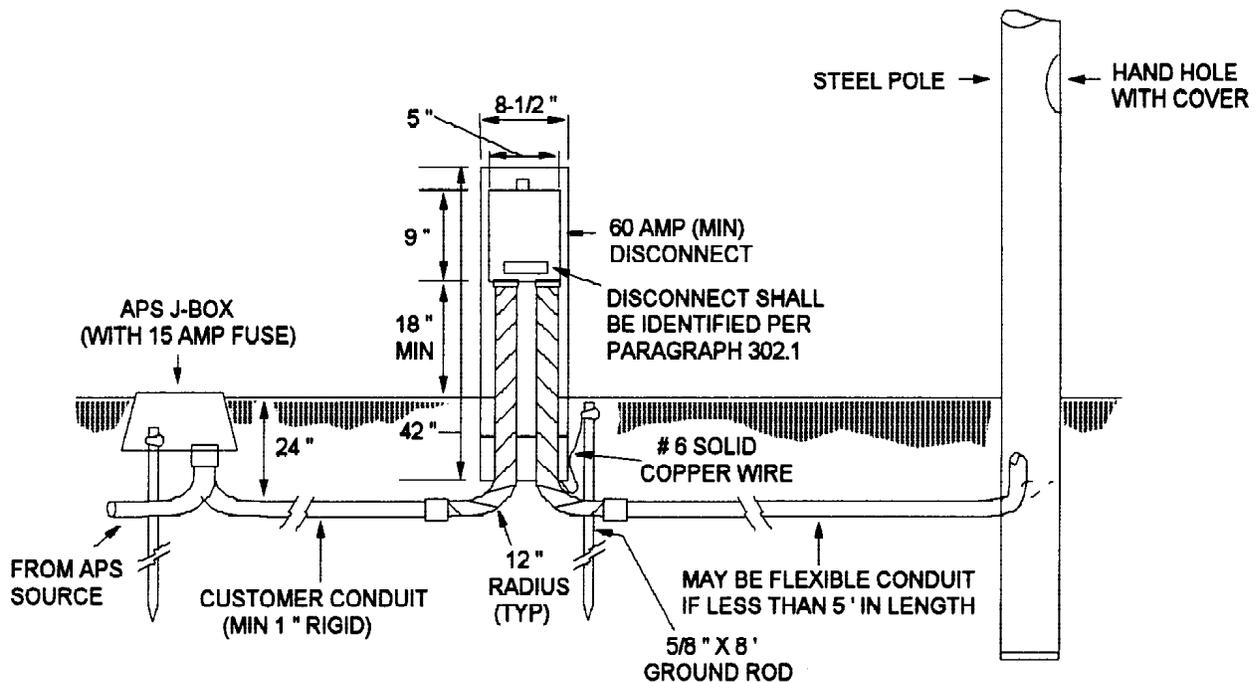


FIGURE 2 - STAKE MOUNTED



1202.2 CUSTOMER-OWNED DUSK-TO-DAWN LIGHTS Cont'd

FIGURE 3 - PEDESTAL MOUNTED



NOTES:

1. Pole Location must be accessible to Company maintenance vehicles.
2. Customer shall install service disconnect with over-current protection. The disconnect may serve more than one fixture or pole.
3. Customer shall install 5/8 inch by 8 foot copper clad ground rod and connect to the service disconnect with a # 6 solid copper conductor.
4. Customer shall bond all non-current carrying parts at the service entrance.
5. Company shall install conductor to the utility junction box with 15 amp maximum fuses.
6. Customer to provide and install all materials beyond the utility junction box.
7. Installation requires city or county inspection and clearance prior to Company connection.
8. Minimum 1" galvanized steel riser with 12 inch radius sweep required. (Rigid or IMC) See Section 500, Paragraph 501.4 regarding coating requirements on steel conduit below grade. See also Paragraph 502.0 for additional requirements for conduit, and Section 600 for trenching requirements.
9. Before digging or driving ground rod, be sure to call Blue Stake to get underground facilities located. (See Section 100, Paragraph 100.12)
10. Fixture requirements: Luminaire style - any meeting the following requirements:
 Voltage: 120 or 240 volt 1 Phase
 Ballast: Lag or High Reactance, normal Power Factor

LOW PRESSURE SODIUM 55 WATT - 8,000 LUMENS 90 WATT - 13,500 LUMENS 135 WATT - 22,500 LUMENS 180 WATT - 33,000 LUMENS	HIGH PRESSURE SODIUM 70 WATT - 5,800 LUMENS 100 WATT - 9,500 LUMENS 150 WATT - 16,000 LUMENS 250 WATT - 30,000 LUMENS 400 WATT - 50,000 LUMENS
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11. Fixture and fixture height must meet local city ordinances and state "Dark Sky" ordinance requirements.
12. A junction box is required at each point of service.

