USE: Multi-Family housing, four or more floors.

RESIDENTIAL, HIGH-RISE BUILDING, INDIVIDUALLY METERED UNITS

1. GENERAL

   This electric service requirement details metering requirements for high-rise multi-floor residential buildings comprised of rental or owner-occupied apartment dwelling units. This standard applies to metering above ground floor and does not apply to sub-grade meter installations in parking garages and basements.

   The purpose of these requirements is to provide safe, reliable service to building occupants while also accommodating Service Provider's operating and maintenance responsibilities.

2. SCOPE

   High-rise buildings covered under these requirements include those consisting of multi-family housing having four or more floors above ground level with each residential dwelling unit individually metered.

3. SERVICE ENTRANCE SECTION (SES) REQUIREMENTS

   a. Standard service for high-rise residential buildings is 120/208V, three-phase, four-wire.

   b. Metering of individual dwelling units may be 120/208V single-phase or three-phase.

   c. Maximum SES size shall be 3,000 amps.

   d. Should standard 120/208V service result in excessive voltage drop or does not meet capacity needs, 277/480-volt, 3-phase, 4-wire service, may be requested.

   e. Customer is responsible for furnishing and maintaining necessary transformation to provide required voltages for individual dwelling units.

   f. Company billing meters may be installed in SES switchgear.

4. POINT-OF-DELIVERY

   a. The point-of-delivery is where Service Provider's facilities connect to Customer-owned facilities.

   b. For high-rise residential buildings, the point-of-delivery is at the secondary terminals of the Service Provider's pad-mounted distribution transformer serving the building.

   c. Customer shall own, install, operate, and maintain all wiring and equipment beyond the point-of-delivery.

   d. Service Provider will only own, read, and maintain the electrical billing meters and any associated instrument transformers beyond the point-of-delivery.

5. MAIN DISCONNECT SWITCH

   a. Customer shall furnish a main disconnect switch in the SES for the purpose of isolating all residential dwelling unit billing meters from the Company supply.

   b. Main disconnect switch shall be load-break, have a rating equal to the bus duct riser rating, and be lockable in the open position.

   c. Main disconnect switch may be installed between the Service Provider's distribution transformer and the SES or may be installed in a dedicated compartment in the SES.

6. METER ROOM LOCATION & METERING

   a. Meters for all dwelling units shall be grouped in meter packs and located in locked meter rooms, refer to SR-405. All metering equipment shall be located on ground level for buildings with less than four floors.

   b. Maximum height to center of meter socket is 6'-3" minimum height shall be 3'-6", except for multi-meter packs for which the minimum height is permitted to be 2'-6".

   c. There shall be no more than one electrical meter room for every two floors.

   d. Each meter room shall be located within 50 feet of an elevator.

   e. Meter rooms shall be located in approxiamately the same location on each floor.

   f. Meter rooms shall have adequate space for installation, reading, and maintenance of metering equipment.

   g. Meter rooms shall not be used for any type of storage.

   h. Fire risers and water valves are not allowed in meter rooms.

   i. Fire sprinkler heads shall not be directly above meter panel equipment.

   j. Customer shall provide a 1 inch metal conduit from each above ground level switchgear/meter room to an exterior junction box located at ground level for Company installation of metering antennas.

7. ACCESS

   a. Service Provider's access to any locked electrical meter rooms shall be by means of a lock box, refer to SR-405, Definitions, Meter Room.

   b. A pushbutton wall-mounted key lock box will be provided to the Customer for installation to provide unrestricted access for Service Provider's personnel.

   c. The lock box shall be with 12 inches of the locked door and shall contain the key.

   d. The customer shall provide a key(s) to the Service Provider prior to energizing of meter equipment. It is the responsibility of the customer to ensure that if a door lock is changed a new key is provided to the Company.

   e. The customer is to ensure that any locking mechanism on a meter room door(s) is in compliance with any Federal or State Fire Code Requirements.

8. LABELING

   a. Meter sockets for dwelling units shall be clearly labeled with each unit's number, refer to SR-405.

   b. A building diagram shall be permanently posted on the SES pull section cover listing all meter locations and associated dwelling units.

9. SEALING OF UN-METERED CONDUCTORS

   a. Means shall be provided to seal the main disconnect switch and any SES compartments housing circuit breakers or fused switches that serve as the disconnecting means for the dwelling unit meter packs. Those sealing means shall be capable of accommodating a standard Service Provider meter lock.

   b. Means shall be provided to seal any box or conductor raceway containing un-metered conductors with a Service Provider meter lock, in the same manner as that described for the SES.

10. CONNECTION FROM SES TO METER PACKS

   a. Connection from each disconnecting means in the SES to each meter pack shall be made by metal-enclosed bus duct.

   b. Bus duct shall be designed to allow for a close-coupled connection with each meter pack.

   c. Installation of all bus duct, dwelling unit meter packs, and associated connections must be completed to all floors before Service Provider will energize the SES.

   d. See FIGURE 1 for a typical one-line diagram for high-rise residential building metering.

USE: Multi-Family housing, four or more floors.

RESIDENTIAL, HIGH-RISE BUILDING, INDIVIDUALLY METERED UNITS

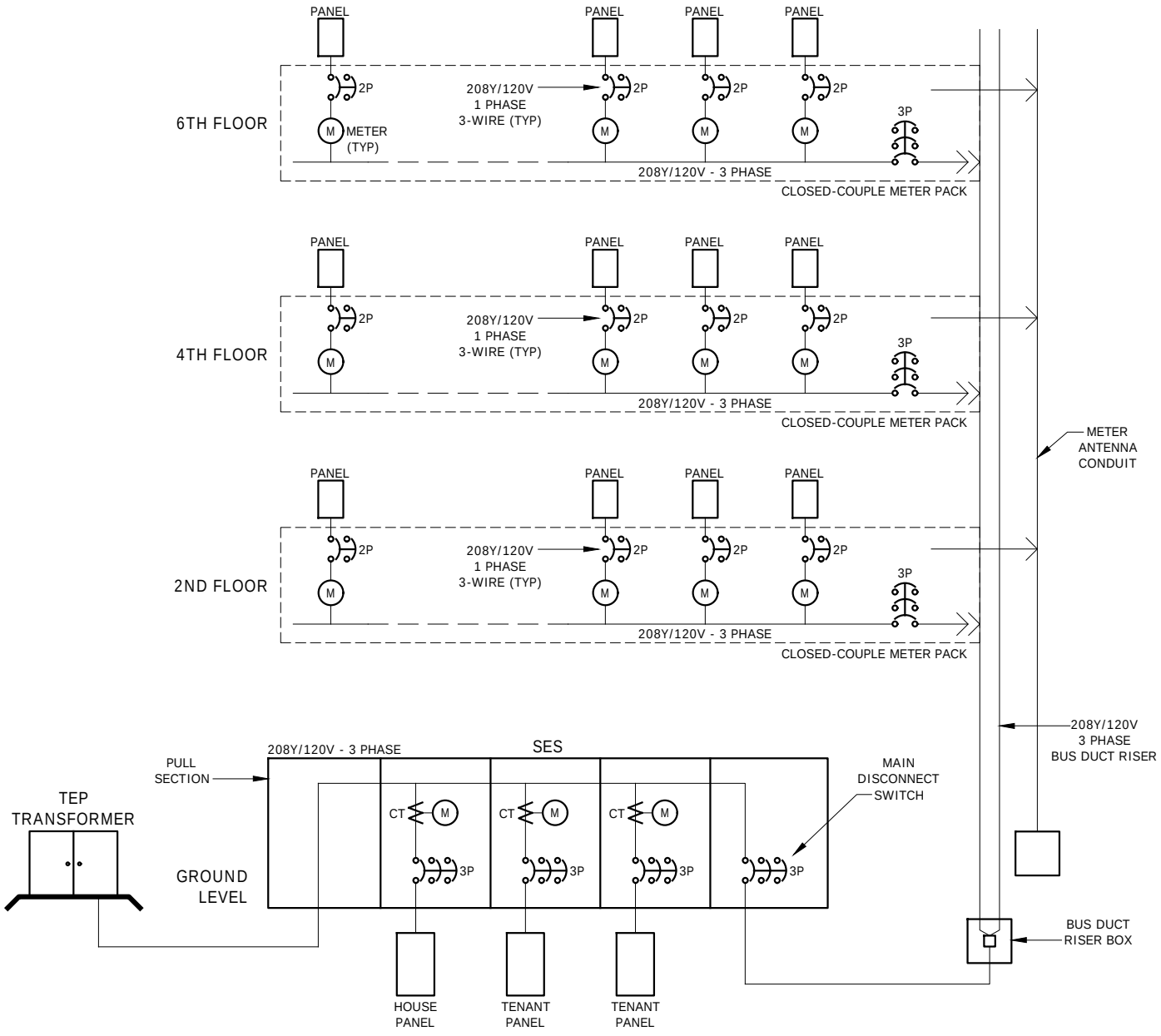

FIGURE 1
TYPICAL METERING ONE-LINE DIAGRAM

TEP Tucson Electric Power / UniSourceEnergy SERVICES SANTA CRUZ COUNTY	INITIATED BY	EKD	REVISION NO.	0	SR-419 Pg. 4 of 4
			ESR COMM.	-	
	ESR COMM.	11-21	EFFECTIVE DATE	11-21	