

5 Clearances

5.1. Meter Clearances and Locations

The Customer must provide suitable space and provisions for mounting a meter base at a location acceptable to the Power Company. It is in the mutual interest of both the Customer and the Power Company to provide a suitable location resulting in the most convenience to both parties for reading, testing, and replacing meters. The minimum unobstructed working space required in front of a single meter is 78" high, 30" wide, and 36" deep, as required by NEC 110-16e (see Figures 5-1 and 5-2). The use of current transformers requires a minimum working space of 78" high, 70" wide and 36" deep. Meters installed in a cabinet require a minimum space of 48" deep to open the cabinet door. Place all meters and metering equipment at least 36" horizontally from a gas meter.

Install *residential* meters outdoors at a location acceptable to the Power Company. Generally locate the meter on the side of the structure closest to Power Company lines or within 10 feet of the front (street) side to prevent meters from being located behind yard fences. Avoid installations on exterior bedroom or bathroom walls or patios as well as exterior walls that are likely to be fenced in. Never install the meter over window wells, steps in stairways, or in other unsafe or inconvenient locations. Keep shrubs and landscaping from obstructing access to meter.

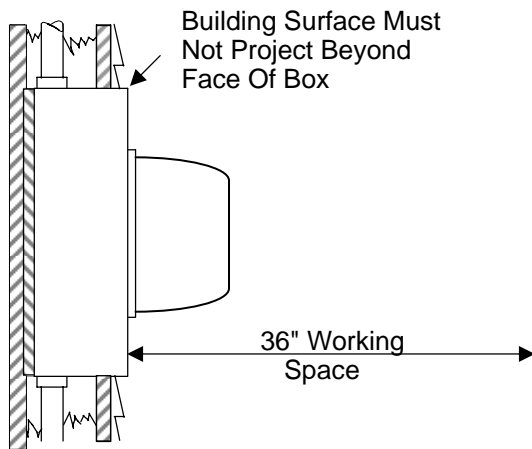
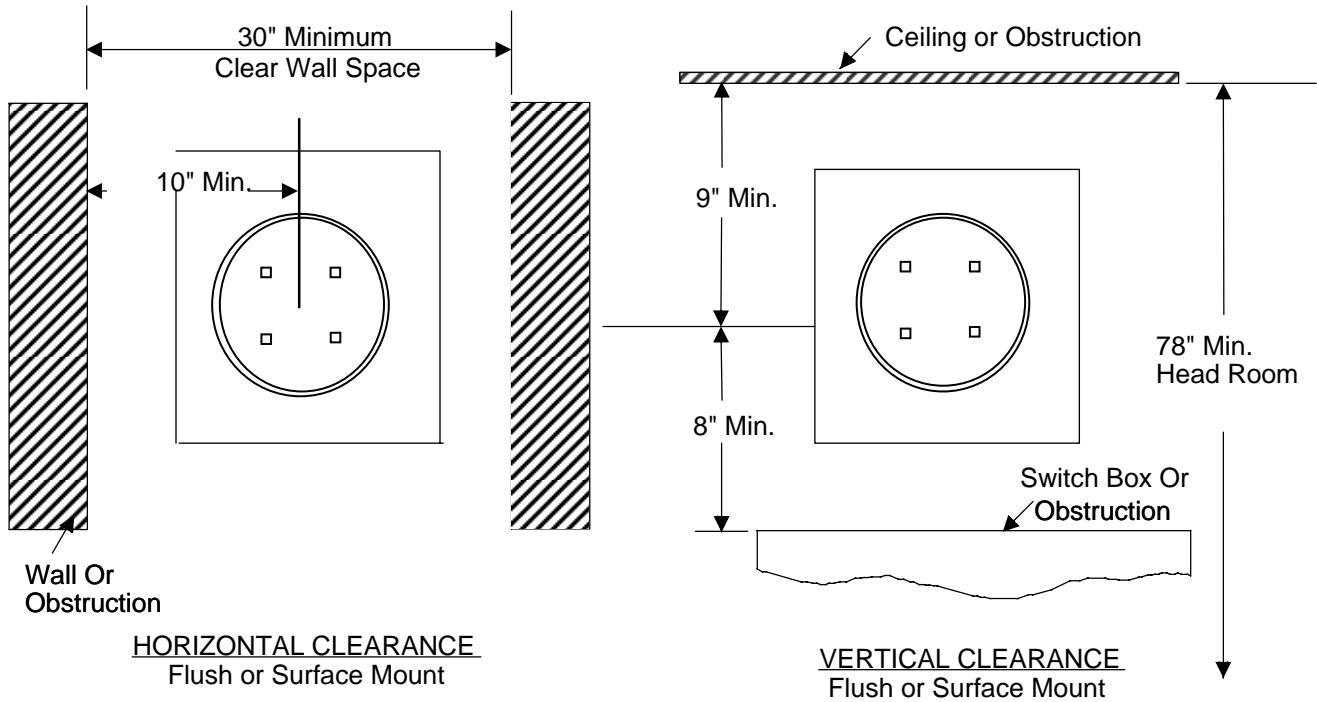
Place *nonresidential* meters outdoors unless the Power Company confirms prior to installation that no acceptable outdoor location exists. Any indoor location must have prior written approval by the Power Company. Make all meter locations accessible to the Power Company during daytime working hours (7:00 a.m. to 5:00 p.m.). Do not locate indoor meters in show windows, closets, bathrooms, over sinks or laundry tubs, or in any location not safe, convenient, or readily accessible. Locked meter rooms are not considered to be accessible unless keyed for a Power Company lock or equipped with a Power Company-provided lock box for each meter room. For entry ways to meter rooms, doors must open outward.

Set the center of any meter socket located *outdoors* to no more than 6' or less than 4' above the finished grade or floor immediately in front of the meter, except for the center of meter sockets in pedestals which are set for 42" minimum above finished grade. In the case of vertical four-gang meter bases, set the center of the lowest meter socket to no less than 42" above final grade.

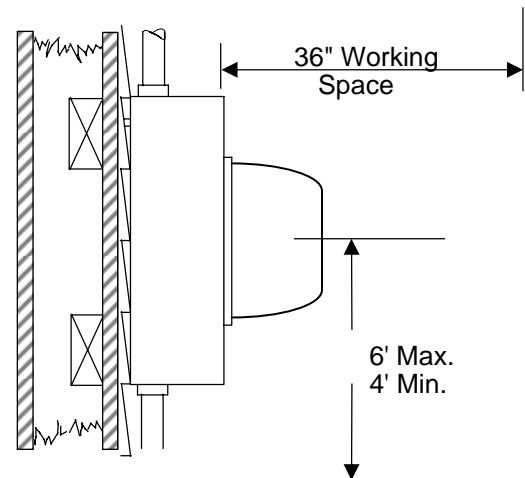
If a Customer makes a meter inaccessible (in the opinion of the Power Company) such as by installing a fence or enclosure, the Customer must, at his or her own expense, provide access acceptable to the Power Company or move the meter socket to a location acceptable to the Power Company.

Power Company will not install meters on mobile structures such as trailers, barges, cranes, dredges, draglines, or any mobile pumping equipment or on floating dwelling units such as houseboats.

Figure 5-1 Meter Socket Clearance Requirements



FLUSH MOUNT METER

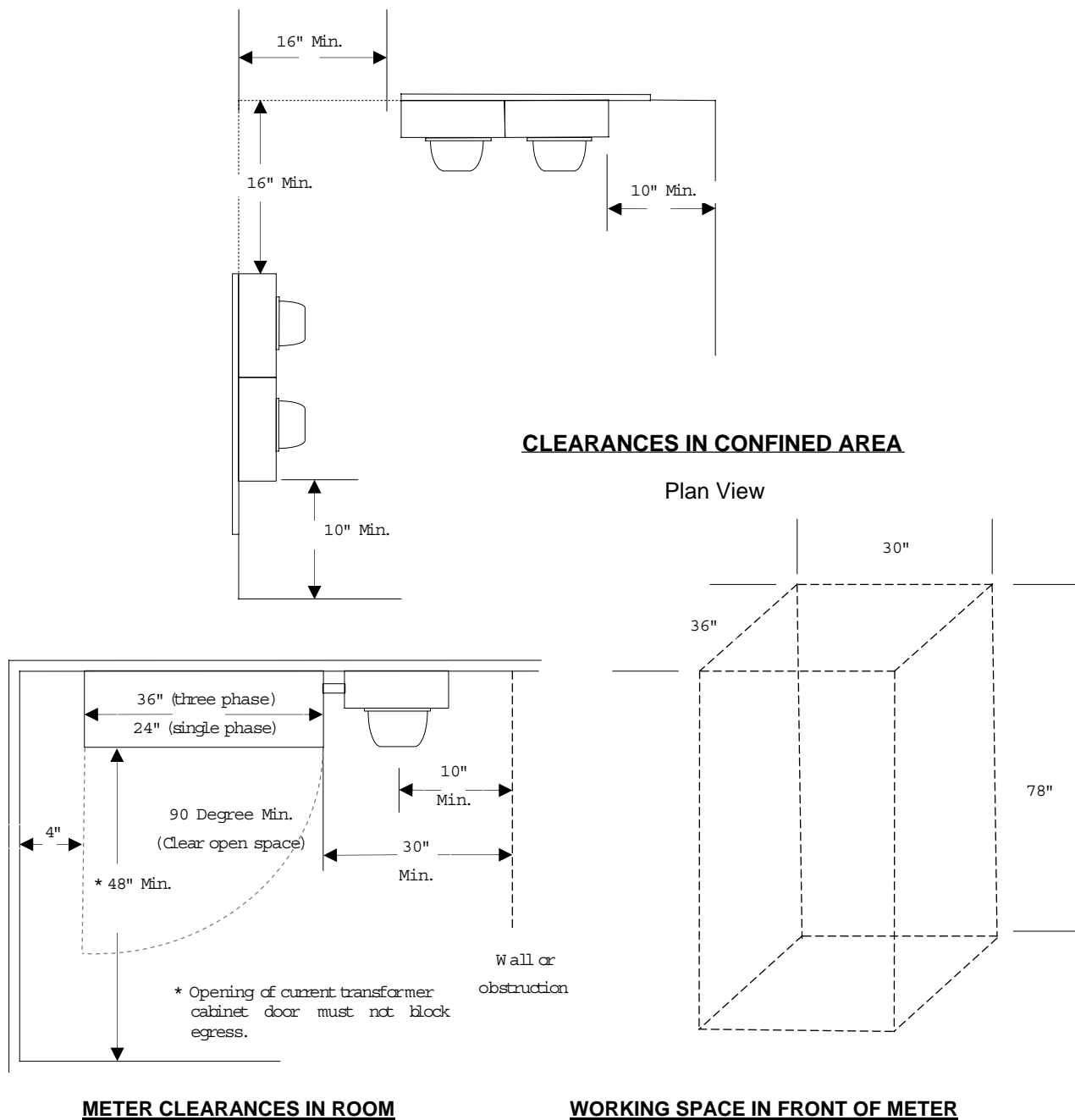


SURFACE MOUNT METER

Notes:

- a. Power Company requires a minimum clear working space of 78" high by 30" wide by 36" deep in front of meter. For C.T. installations see section 10.2.2, and for switchboard installations see section 10.3.1.
- b. Dimensions do not refer to meters housed in EUSERC approved switchboards or enclosures, such as EUSERC 354.

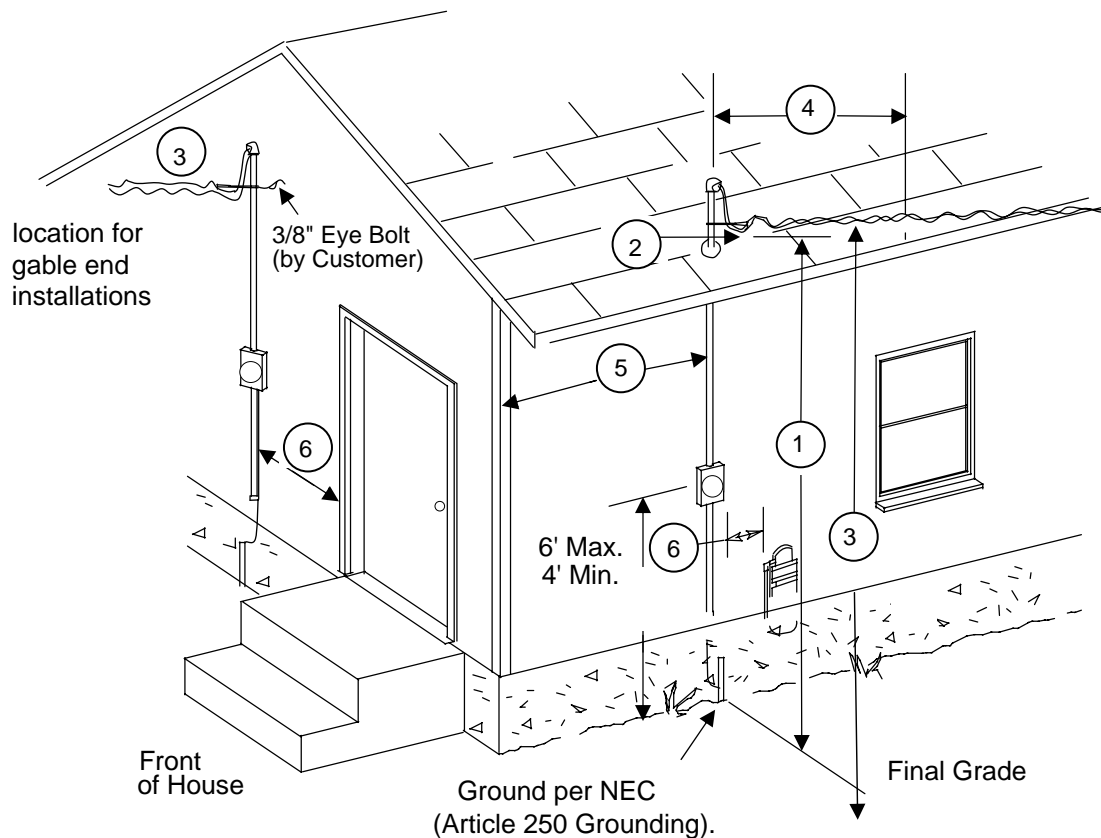
Figure 5-2 Meter Working Space



Notes:

- In a multiple meter socket installation, a minimum unobstructed working space is needed. For side clearance, see figure 5-2 and 8-2 for additional clearances.
- Power Company requires a minimum clear working space of 78" high by 30" wide by 36" deep in front of meter (NEC 110-16e). For C.T. installations see section 10.2, and for switchboard installations see section 10.3.
- Dimensions do not refer to meters housed in EUSERC approved switchboards or enclosures, such as EUSERC 354.
- All man-doors must open outward from rooms that contain Power Company metering and termination equipment.

Figure 5-3 Residential Clearances for Overhead Service



References:

1. Refer to Table 5-1 for minimum drip loop clearances.
2. The cable and drip loop (lowest point) must be at least 18" above the roof. Weatherhead to be located a minimum of 24" above roof and within 4 feet of the roof edge (NEC 230-24 a, #3). See figure 7-7 for guying requirements.
3. For minimum service drop clearance requirements see table 5-1.
4. Six-foot maximum of service cable length over roof surface (NEC 230-24 a, #3).
5. Ten-foot maximum from corner of house closest to Power Company lines.
6. Three-foot minimum distance from gas meter (per NEC 110-16a and NFGC 2.7.2c), window or doors for customer's privacy and clearance. (See note c this page).

Notes:

- a. Meter base and location must be approved by Power Company prior to installation.
- b. Buildings should not be constructed under or adjacent to lines.
- c. The three foot distance from windows does not have to be maintained if the window is not designed to be opened.

**Table 5–1 Minimum Clearances for Service Drops
(600 Volt and Below)
Loaded Conditions**

Minimum service drop clearance

- Over roads, streets, and other areas subject to truck traffic. 18 Feet
- Over or along alleys, parking lots, and nonresidential driveways. 18 Feet
- Over land traveled by vehicles. 18 Feet

Minimum clearances over or along residential driveways

- If height of attachment will permit. 18 Feet
- If not;
 - For service drops 120/240 & 208Y/120 volt, provided trucks are not anticipated. 14 Feet
 - For drip loops of service drops 120/240 and 208/120 volts (NESC 232-B-1). 12 Feet

Minimum clearances over spaces and ways subject to pedestrians/restricted traffic only

- At height of attachment 14 Feet
- Drip loops of service drops
 - For 480Y/277 volts 12.5 Feet
 - For 120/240 and 208Y/120 volt. 12 Feet

Minimum clearances from buildings for service drops not attached to the building

- Vertical clearance over or under balconies and roofs
 - Accessible to pedestrians. 13 Feet
 - Not accessible to pedestrians, if cabled together with a grounded bare neutral. 3.5 Feet
 - Not accessible to pedestrians, if open wire or cabled with the insulated neutral
(NESC Table 234-1). 10.5 Feet
- Horizontal clearance to walls, projections, windows, balconies, and areas accessible to pedestrians
 - If cabled together with grounded bare neutral. 5 Feet
 - If open wire or cabled with an insulated neutral. 5.5 Feet

Minimum clearances for service drops attached to a building or other installation (over or along the installation to which they are attached)

- From the highest point of roofs, decks or balconies over which they pass
 - If readily-accessible 11 Feet
 - If **not** readily-accessible 5 Feet
 - Above a not-readily-accessible roof and terminating at a (through-the roof) service conduit or approved support, the service and its drip loops set not less than 18-inches above the roof. Not more than 6-feet of the service cable over the roof or within 4-feet of the roof edge. 1.5 Feet
 - In any direction from windows designed to open (except from above). 3 Feet
 - In any direction from doors, porches, fire escape, etc. 3 Feet

5.1.1 Definition Notes for Clearance Table 5-1

1. A truck is any vehicle 8 to 14 feet in height. Areas not subject to truck traffic include places where truck traffic normally never occurs or is not reasonably anticipated.
2. Spaces and ways subject to pedestrians or restricted traffic only include those areas prohibiting equestrians, vehicles, or other mobile units that exceed 8 feet in height, through regulations, by permanent terrain configurations, or not normally encountered or reasonably anticipated.
3. The Power Company considers a roof, balcony, or area to be readily accessible to pedestrians if it can be casually accessed through a doorway, ramp, window, stairway, or permanently-mounted ladder, by a person on foot who neither exerts extraordinary physical effort nor employs special tools or devices to gain entry. The Power Company does not consider a permanently mounted ladder as a means of access if its bottom rung is eight feet or more from the ground or other permanently-installed accessible surface.

5.2 Clearances from Pools, Spas or Hot Tubs

5.2.1 Overhead Clearances

Overhead conductors *shall not* be located within 10 feet horizontally of a pool or pool attachments (NEC 680-8). The Power Company recommends conductors not pass over pools, buildings, trees, or other obstructions. Contact the Power Company before construction.

5.2.2 Underground Clearances

NEVER locate underground conductors under or horizontally within 5 feet (NEC 680-10) of the inside wall of a pool or spa. These conductors must be in conduit (electric grade gray Schedule 40 PVC) installed by the Power Company. For trench depth, cover, and conduit requirements see section 6.

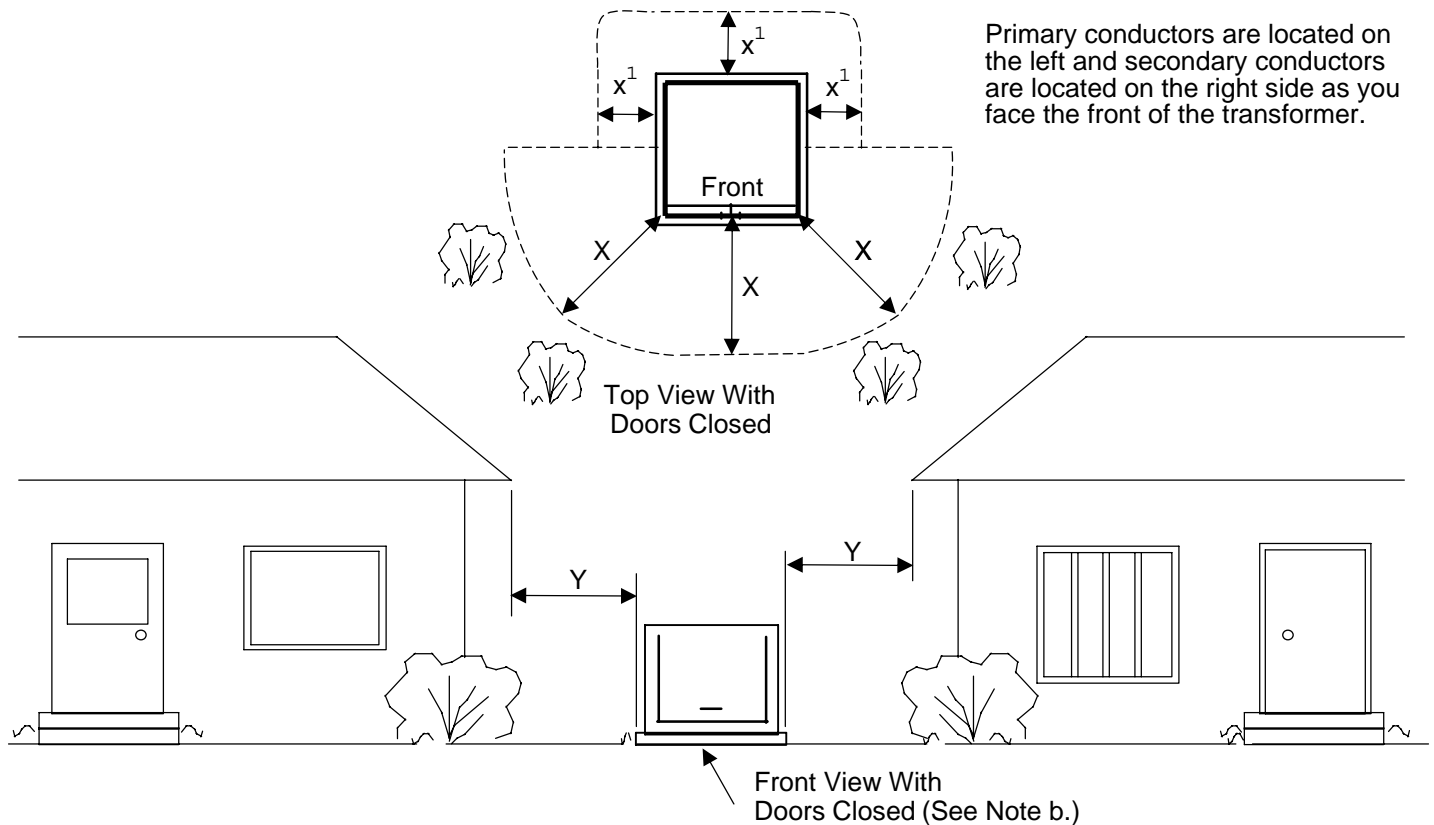
5.3 Clearance from Underground Gasoline Storage Tanks

Underground service conduits shall be located at least 10 feet from the fill opening of underground tanks containing flammable liquids. Where the fill opening is a tight connection, a 5 foot distance shall be maintained.

5.4 Clearance from Padmounted Transformer

Figure 5-4, Padmounted Equipment Clearance, located on the next page, shows appropriate clearances from padmounted equipment.

Figure 5-4 Padmounted Transformer Clearances



MINIMUM DISTANCE REQUIRED FROM PAD

- x = 10 ft. clear area in front of unit to allow use of hot sticks (see Note b.).
- x¹ = 3 ft. clear area in back and sides of unit to allow working on equipment.
- y = 10 ft. from any structure or roof overhang consisting of combustible material (exceeds Oregon Specialty Code).
3 ft. to non combustible structures having no openings closer than 10 ft. (exceeds Oregon Specialty Code).

Notes:

- a. Consult State requirements and *local building and fire codes* for more customer information.
- b. Place front of padmounted transformer away from building walls or other barriers to allow for safe working practices. If front of transformer must face a wall, allow 10 feet for working clearance. No vegetation in this work space is permitted.
- c. Consult Power Company for any additional required clearances to building doors, windows, fire escapes, air vents, etc.
- d. Where exposed to motorized vehicles, the customer must install and maintain Power Company approved barrier to protect padmounted transformers and other equipment. (See Figure 6-3)
- e. Place transformers within 15 feet of a maintained drivable surface.