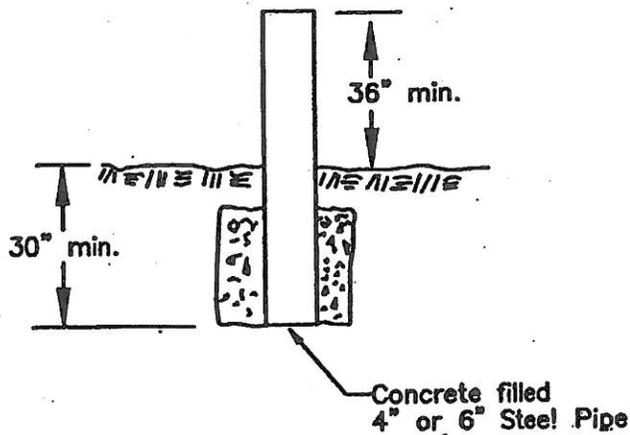
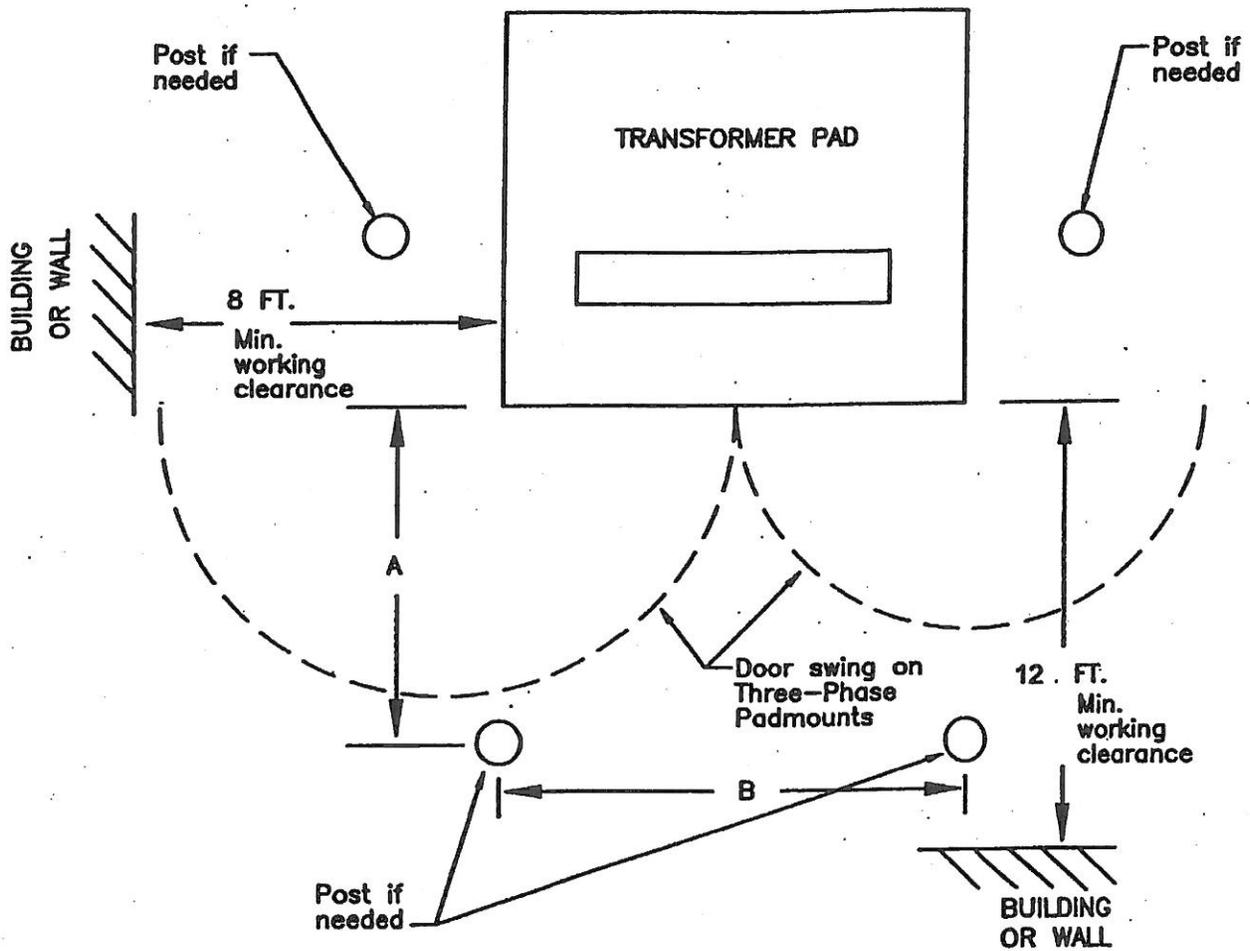


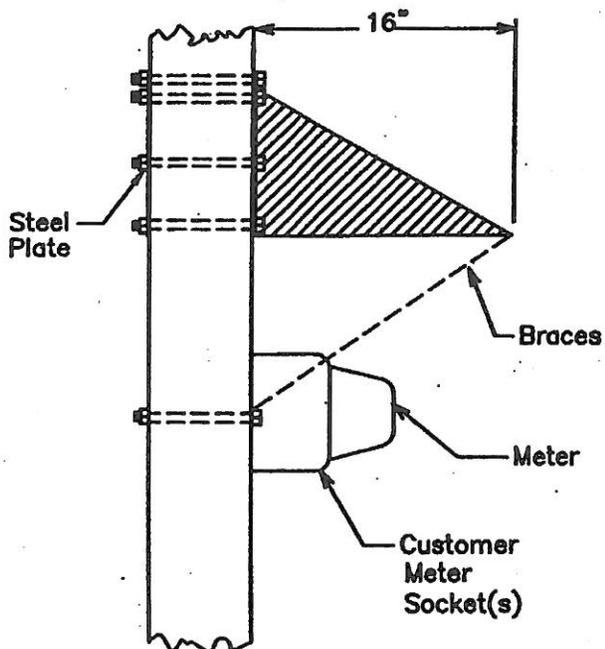
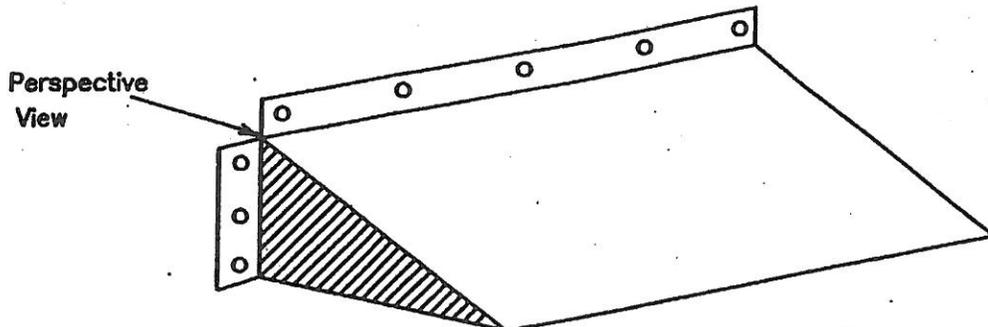
APPENDIX

Drawings

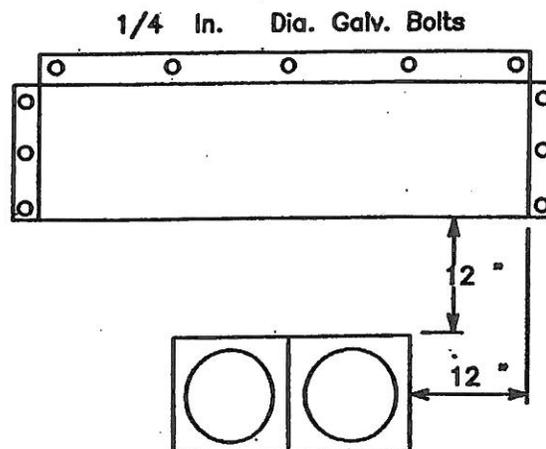


NOTE:
 Protective posts are required where the transformer is subject to vehicular traffic. Installation and cost of this protection is the responsibility of the customer. If the Utility has to install this protection, appropriate charges will be billed to the customer. Minimum clearances or greater should be maintained per State Administrative Code.

PROTECTIVE POSTS FOR PADMOUNT TRANSFORMERS



Wall section

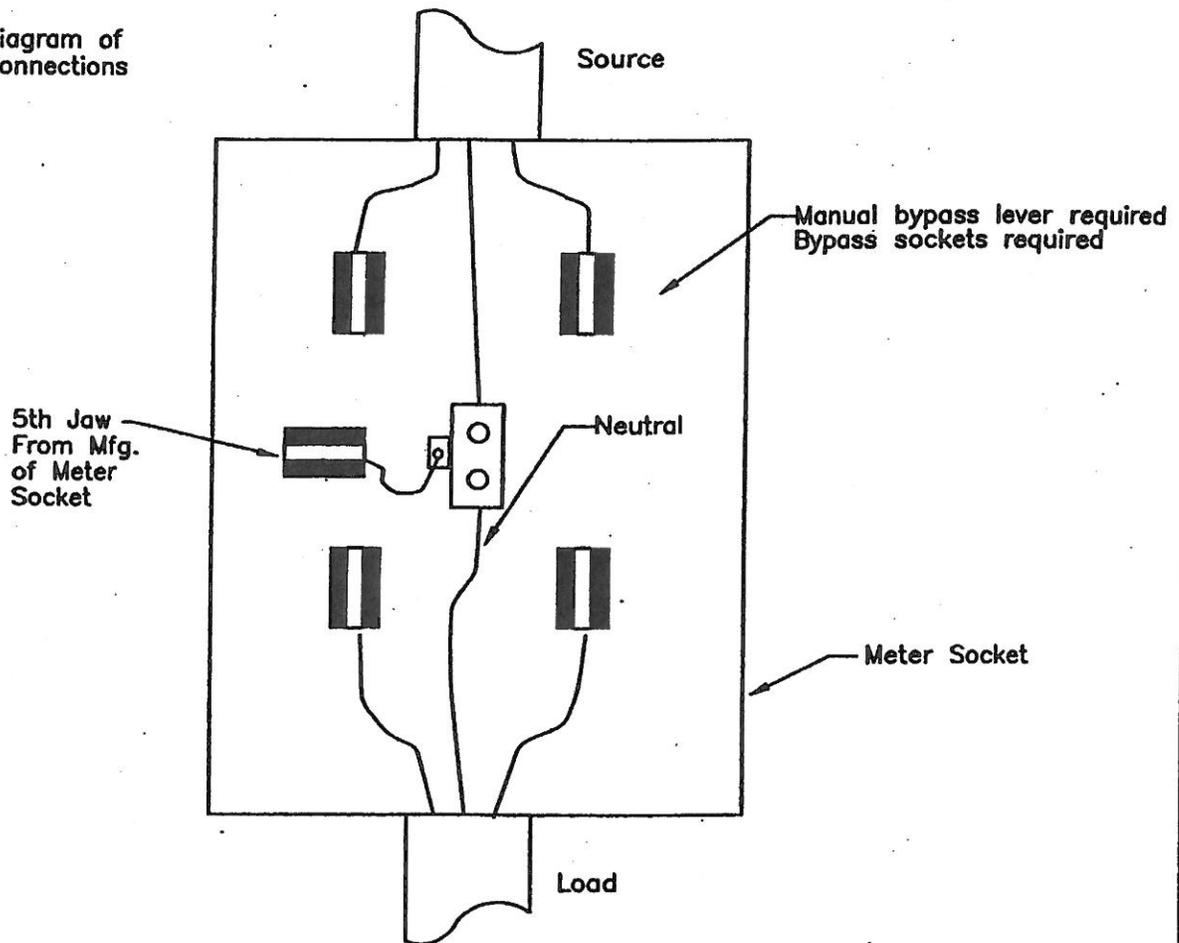


Front View

NOTES:

1. A snow and ice shield is mandatory on the pitched side of metal buildings (provided by the customer). A shield is highly recommended for other areas. The customer is responsible for damage to the metering and meter sockets, etc.
2. Shield must be capable of protecting meter.
3. Metal shields (min. of 10 gauge) shall be primed and painted with rust resistant paint.
4. Wood or plywood shields shall be supported by braces.

Diagram of Connections



NOTES:

1. A fifth jaw can be added to most new-style, single-phase 120/240 meter sockets for 120/208 single-phase service. The fifth jaw shall be added in the 9 o'clock position as pictured and securely attached (Milbank Snap in Jaws are not acceptable).
2. This voltage is common in or near commercial areas. It is also common for large apartment complexes.
3. There are some existing installations with the fifth jaw in the 6'clock position (as compared to the normal 9 o'clock position) or with a wire jumper between the meter and the meter socket. These should be corrected if possible when upgrading the wiring.
4. Single phase service drop application shall be limited to 200 Amp. Larger installations shall have a three phase service drop with the single phase meters and connected loads balanced on all phases. The single phase meters must also be limited to 200 Amp.

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withstand the loads specified in Section 25, multiplied by the "at replacement" overload factor in NESC Table 253-2 without exceeding the strength factors of NESC Table 261-1B.

History: CR 07-021; cr. Register January 2008 No. 625, eff. 2-1-08.

Section 26. Strength Requirements

Table PSC 114.261-1A [NESC Table 261-1A, p. 207] Strength Factors for Structures, Crossarms, Braces, Support Hardware, Guys, Foundations, and Anchors for Use With Load Factors of Table 253-1 (Changes)

Change Footnote 2 to read:

² Wood and reinforced concrete structures shall be replaced or rehabilitated when deterioration reduces the structure strength to 2/3 of that required when installed. If a structure is replaced, it shall meet the strength required by NESC Table 261-1A. Where conductors or equipment is altered or replaced, or where portions of a structure are rehabilitated, the remaining structures and rehabilitated portions thereof shall have strength greater than 2/3 of that required when installed.

Change Footnote 3 to read:

³ Wood and reinforced concrete structures shall be replaced or rehabilitated when deterioration reduced the structure strength to 3/4 of that required when installed. If a structure is replaced, it shall meet the strength required by NESC Table 261-1A. Where conductors or equipment are altered or replaced, or where portions of a structure are rehabilitated, the remaining structures and rehabilitated portions thereof shall have strength greater than 3/4 of that required when installed.

Change Footnote 6 to read:

⁶ Metal and pre-stressed concrete structures, guy wires, guy anchors and foundations shall be replaced or rehabilitated when deterioration reduces the strength of the structure or the component to 2/3 of that required when installed. If a structure is replaced, it shall meet the strength requirement by Table 261-1A. Rehabilitated portions of structures shall have strength greater than 2/3 of that required when installed.

History: CR 07-021; cr. Register January 2008 No. 625, eff. 2-1-08.

Part 3. Safety Rules for the Installation and Maintenance of Underground Electric Supply and Communication Lines

Section 30. Purpose, Scope, and Application of Rules

PSC 114.302 Application of rules. [NESC 302, p. 219]

Change Rule 302 to read:

302. Application of Rules

The general requirements for application of these rules are contained in s. PSC 114.005.

History: CR 07-021; cr. Register January 2008 No. 625, eff. 2-1-08.

Section 31. General Requirements Applying to Underground Lines

PSC 114.310 Referenced sections. [NESC 310, p. 220] Change Rule 310 to read:

310. Referenced Sections

The Introduction (Section 1) as amended by s. PSC 114.010, Definitions (Section 2) as amended by Section 2 of Chapter PSC 114, List of Referenced Documents (Section 3), and Grounding Methods (Section 9) as amended by Section 9 of Chapter PSC 114, shall apply to the requirements of Part 3.

History: CR 07-021; cr. Register January 2008 No. 625, eff. 2-1-08.

PSC 114.317 Outdoor location of oil-insulated pad-mounted transformers near buildings. [Follows NESC 316, p. 222] Add the following section:

PSC 114.317 Outdoor location of oil-insulated padmounted transformers near buildings.

A. Noncombustible and Combustible Walls

For the purposes of this section, combustible walls are walls of Type No. V buildings as determined by Wisconsin Building Code (Construction Classification IBC Chapter 6). All other walls are considered to be non-combustible.

B. Noncombustible Walls

Padmounted oil-insulated transformers may be located directly next to noncombustible walls if the following clearances are maintained from doors, windows and other building openings.

1. Padmounted oil-insulated transformers shall not be located within a zone extending 6.1 m (20 ft) outward and 3.0 m (10 ft) to either side of a building door. See Figure PSC 114-317B1.

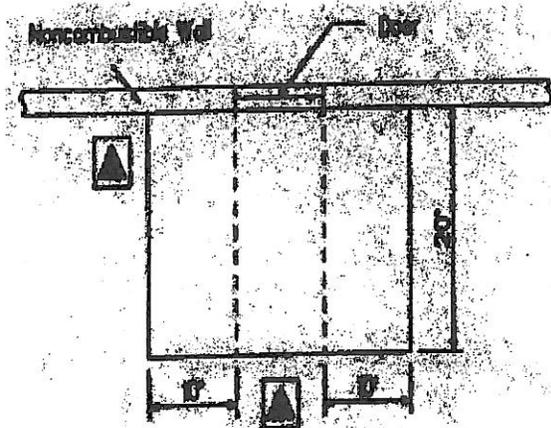


Figure PSC 114-317B1.

2. Padmounted oil-insulated transformers shall not be located within a zone extending 3.0 m (10 ft) outward and 3.0 m (10 ft) to either side of an air intake opening. Such transformers may be located within said zone beneath an air intake opening provided there is not less than 7.6 m (25 ft) diagonal separation between the transformer and said opening. See Figure PSC 114-317B2.

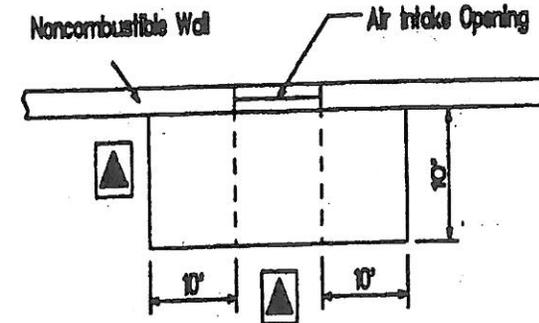


Figure PSC 114-317B2.

3.a. Padmounted oil-insulated transformers shall not be located within a zone extending 3.0 m (10 ft) outward and 0.9 m (3 ft) to either side of a building window or opening other than an air intake. See Figure PSC 114-317B3a.

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Exception: This does not apply to a glass block or fire window meeting the requirements of the Wisconsin Commercial Building Code (Fire Window IBC Chapter 7, Section 714.3).

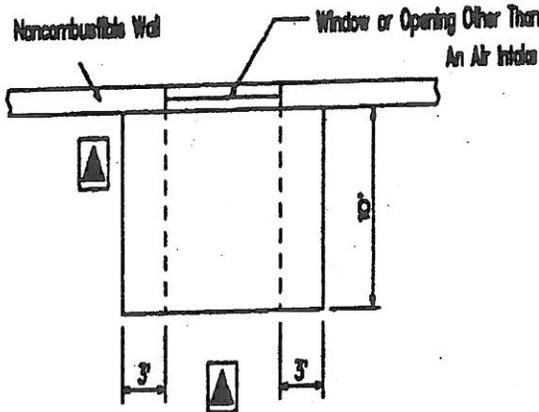


Figure PSC 114-317B3a.

3.b. For second story windows, the transformer shall not be located less than 1.5 m (5 ft) from any part of the window. See Figure PSC 317B3b.

Exception: This does not apply to a glass block or fire window meeting the requirements of the Wisconsin Commercial Building Code (Fire Window, IBC Chapter 7, Section 714.3).

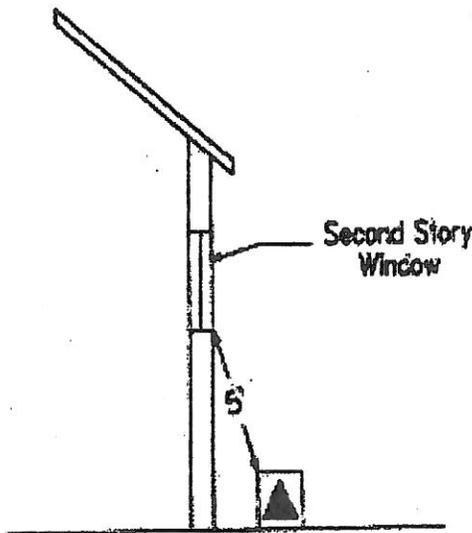


Figure PSC 114-317B3b.

C. Combustible Walls

1. Padmounted oil-insulated transformers in sizes up to and including 100 kVA shall be located according to the provisions set forth in Subsection B for noncombustible walls.

2. Padmounted oil-insulated transformers in sizes above 100 kVA shall be located a minimum of 3.0 m (10 ft) from the building wall in addition to the clearances from building doors, windows and other openings set forth for noncombustible walls. Also, a sump shall be installed for transformers in size exceeding 500 kVA if the immediate terrain is pitched toward the building.

D. Barriers

If the clearances specified in PSC 114.317 cannot be obtained, a fire-resistant barrier may be constructed in lieu of the required separation. The following methods of construction are acceptable:

1. Noncombustible Walls

The barrier shall extend to a projection line from the corner of the padmounted transformer to the furthest corner of the window, door or opening in question. The height of the barrier shall be 0.3 m (1 ft) above the top of the padmounted transformer. See Figure PSC 114-317D1.

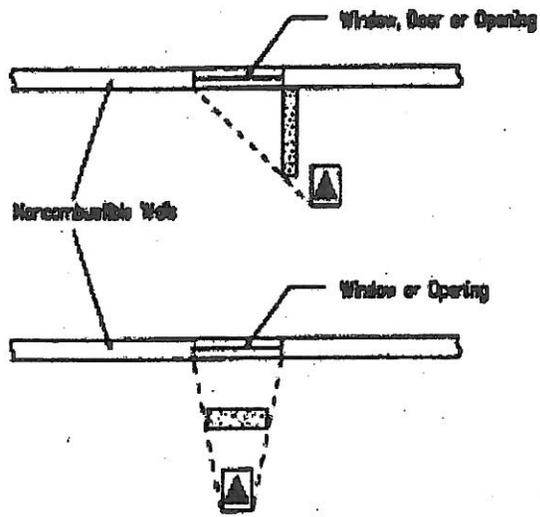


Figure PSC 114-317D1.

2. Combustible Walls

The barrier shall extend 0.9 m (3 ft) beyond each side of the padmounted transformer. The height of the barrier shall be 0.3 m (1 ft) above the top of the transformer. See Figure PSC 114-317D2.

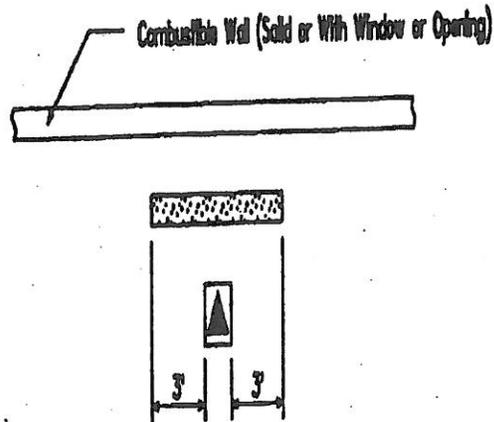


Figure PSC 114-317D2.

E. Fire Escapes

1. Padmounted oil-insulated transformers shall not be located within a zone extending 6.1 m (20 ft) outward and 3 m (10 ft) to

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either side of the point where a fire escape meets the ground. See Figure PSC 114-317E1.

2. Padmounted oil-insulated transformers located beneath fire escapes shall have a vertical clearance of not less than 3 m (10 ft) from the top of the transformer to the bottom of the fire escape. See Figure PSC 114-317E2.

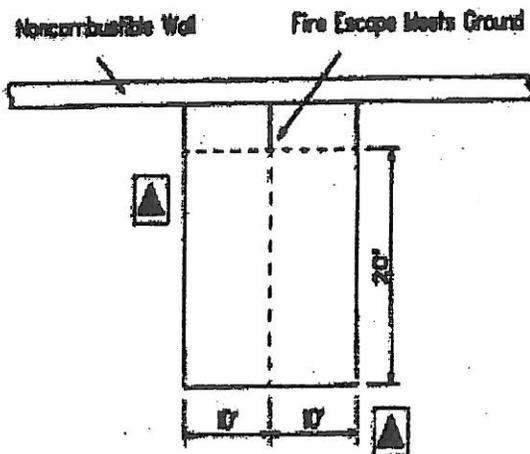


Figure PSC 114-317E1.

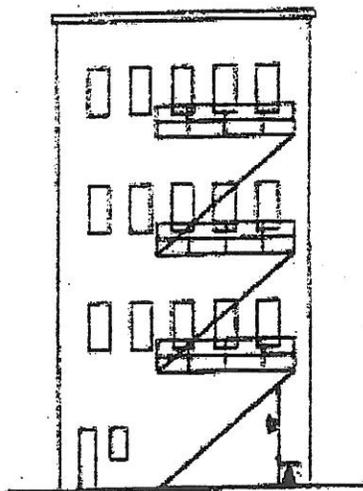


Figure PSC 114-317E2.

History: CR 07-021: cr. Register January 2008 No. 625, eff. 2-1-08.

Section 32. Underground Conduit Systems

PSC 114.320B7 Separation from other underground installations. [Follows NESC 320B6, p. 224] Add the following paragraph 7:

7. Gas Lines

a. The separation in any direction of gas transmission lines from electric supply and communication conduit systems shall be a minimum of 0.3 m (12 in).

b. The separation in any direction of gas distribution or service lines from electric supply and communication conduit systems shall be a minimum of 0.15 m (6 in).

Exception: If these separations cannot be attained, the gas line must be protected from damage that might result from the proximity of the electric supply or communication conduit system.

Note: The definition of gas "transmission line," "distribution line," and "service line", as used herein, is the same as that found in 49 CFR 192.

History: CR 07-021: cr. Register January 2008 No. 625, eff. 2-1-08.

PSC 114.323E Vault and utility tunnel access. [NESC 323E, p. 227] (Change and Addition) Change paragraph 3 to read:

3. Where accessible to the public, access doors to utility tunnels and vaults shall be locked unless qualified persons are in attendance to restrict entry by unqualified persons.

(Addition) Add Recommendation to read:

Recommendation: When vaults and utility tunnels contain exposed live parts, and where entry is through a vertical door a prominent safety sign should be visibly posted on the outside of the door.

History: CR 07-021: cr. Register January 2008 No. 625, eff. 2-1-08.

Section 35. Direct-Buried Cable

PSC 114.350F General. [NESC 350F, p. 234] (Section 35) (Change) Change paragraph F to read:

F. All direct-buried jacketed supply cable meeting Rule 350B and all direct-buried communication cables shall be legibly marked as follows:

The appropriate identification symbol shown in Fig 350-1 shall be indented or embossed in the outermost cable jacket at a spacing of not more than 1m (40 in). The symbol may be separate or sequentially combined with other data, or symbols, or both, printed on the jacket. If the symbol is sequentially combined, it shall be separated as indicated in Fig 350-1. If optional supplemental striping is used, only supply cables or non-metallic duct containing or intended to contain supply cables may have three equally separated longitudinal red stripes.

This rule applies to cable installed on or after January 1, 1996.

Exception 1: Cables with jackets that cannot be effectively marked in accordance with Rules 350F need not be marked.

Exception 2: Unmarked cable from stock existing prior to 1 January 1996 may be used to repair unmarked direct-buried jacketed supply cables and communication cables.

History: CR 07-021: cr. Register January 2008 No. 625, eff. 2-1-08.

Table PSC 114.352-1 [NESC Table 352-1, p. 236] Supply Cable or Conductor Burial Depth (Change and Addition)

Change the present "Exception" after the table to "Exception 1".

Add a new Exception 2 as follows:

Exception 2: Installations of insulated secondary underground cables operating at less than 600 volts between conductors shall be permitted to be laid on the ground during winter months provided they are suitably protected.

(Addition) Add Note to read:

Note: Grounding and bonding conductors are covered by Rule 093.

History: CR 07-021: cr. Register January 2008 No. 625, eff. 2-1-08.

PSC 114.353E Deliberate separations—Equal to or greater than 300 mm (12 in) from underground structures or other cables. [Follows NESC 353D, p. 237] Add the following paragraph E:

E. Gas Lines

The separation in any direction of gas pipelines from direct-buried electric supply and communication facilities shall be a minimum of 0.3 m (12 in).

Exception: If this clearance cannot be attained, the gas line shall be protected from damage that might result from the proximity of the electric supply or communication direct-buried system.

History: CR 07-021: cr. Register January 2008 No. 625, eff. 2-1-08.

PSC 114.354D1g Random separation – separation less than 300 mm (12 in) from underground structures or other cables. [NESC 354D1g, p. 238] Change paragraph g to read: