

STANDATA interpretation 21-ECI-006

Electrical

2021 Canadian Electrical Code, Part 1 Section 6 - Number of supply services permitted

Date Issued: July 2024

Page 1 of 4

Purpose

Clarifies requirements for installations regarding the number of supply services permitted to be located on one unit of a building consisting of row housing for residential occupancies.

Discussion

There has been inconsistency in application of CE Code Part 1, Rule 6-102 regarding type and location where metering equipment is permitted to be located on a building consisting of row housing.

Subdivisions of land may be developed with multiple service supplies or single service supplies intended to service a residential building as permitted in CE Code Part 1, Rule 6-102.

Utilities design electrical facilities that comply with requirements set out by the Alberta Electrical Utility Code (AEUC). The AEUC is adopted under the *Safety Codes Act (SCA)* and is used in combination with the Canadian Electrical Code Part 3, C22.3 No. 1 Overhead Systems and C22.3 No.7 Underground Systems which provides the minimum safety standards for the installations and maintenance of electrical utility systems in Alberta.

Code References

C22.1:21 – 2021 Canadian Electrical Code, Part 1

Building — a structure that stands alone or that is cut off from adjoining structures by firewalls, unpierced or with openings, protected by approved fire doors.

Service, supply — any one set of conductors run by a supply authority from its mains to a consumer's service.

Service box — an assembly consisting of an enclosure that can be locked or sealed, containing either fuses and a switch, or a circuit breaker, and of such design that it is possible to operate either the switch or circuit breaker to the open position by manual means when the box is closed (see Appendix B).

6-102 Appendix B

The supply authority should be consulted on the number and location of supply services.

6-102 Number of supply services permitted (see Appendix B)

- 1) Two or more supply services of the same voltage shall not be run to any building, except that additional supply services shall be permitted for supplying
 - a) fire pumps in accordance with Rule 32-304 1);
 - b) industrial establishments and other complex structures; or
 - c) completely self-contained occupancies where the occupancies
 - i) are not located one above the other; and
 - ii) have a separate entrance with direct access to ground level.

- 2) When two or more supply services are installed to a building, all service boxes associated with the various consumer's services shall be grouped, where practicable.
- 3) When two or more service boxes installed in accordance with Subrule 2) are not grouped together, a permanent diagram shall be posted on or near each service box indicating the location of all the other service boxes supplying power to the building.

6-104 Number of consumer's services permitted in or on a building

The number of consumer's services of the same voltage and characteristics, terminating at any one supply service, run to, on, or in any building, shall not exceed four, unless there is a deviation allowed in accordance with Rule 2-030.

Application

This interpretation applies to the number and location of supply services permitted to be installed on buildings that consist of row housing.

Interpretation

Rules 6-102 & 6-104 Number of supply services permitted

Buildings of the row housing type

Row housing would be those which:

- are not located one above the other; and
- each occupancy has a separate entrance with direct access to ground level.

Rule 6-102 permits a building to have more than one supply service located on one side of the building. When two or more supply services with the same voltage are installed to a building, all service boxes associated with the consumer's services should be grouped, where practical.

Grouped and ganged metering equipment

Grouped metering equipment is either one gang-able metering equipment when one service supply exists, or multiple single metering equipment that are grouped, at one location when multiple service supplies exist. Depending on the number of supply services available will determine when individual metering or gang-able metering equipment is utilized.

Additional requirements to those of the supply authority

- When one service supply is installed to a building of row housing, ganged metering equipment is acceptable to be installed.
- When two or more individual supply services exist, it is acceptable to install individual metering equipment grouped at one location, located on one side of the building of row housing.
- Bonding and grounding are to be installed in accordance with section 10.

The following diagrams are not exhaustive examples of acceptable installations under CE Code Part 1;

Diagram # 1 – Multi-unit condo or townhouse with 4 service underground supplies located on one unit.

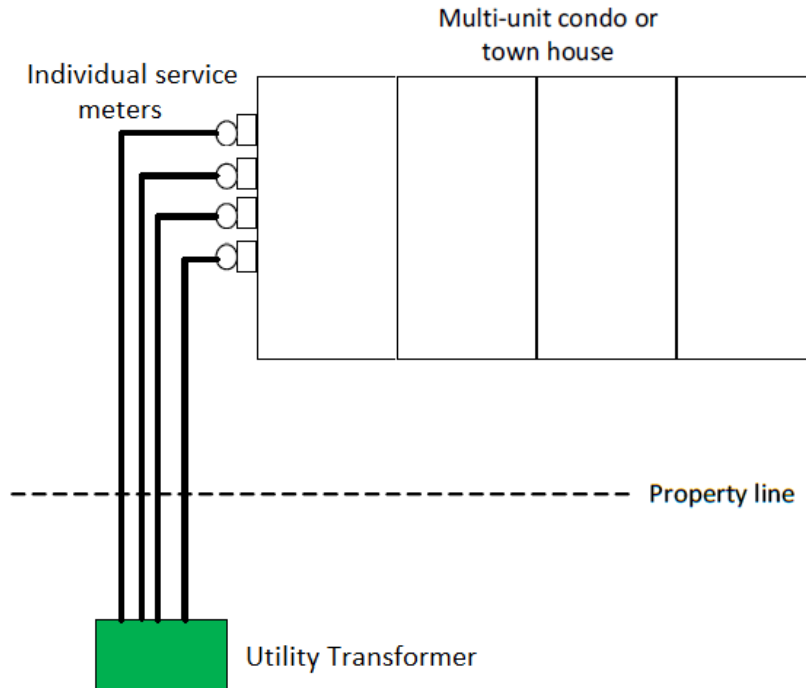


Diagram # 2 – Multi-unit condo or townhouse with 1 underground service supply located on one unit.

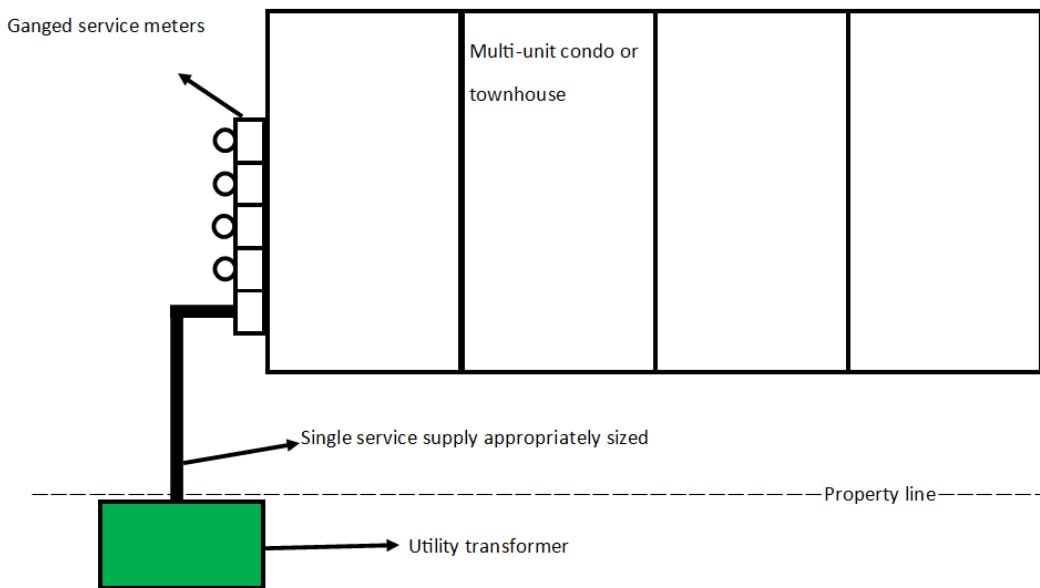


Diagram # 3 – Multi-unit condo or townhouse with 4 underground service supplies located on individual unit.

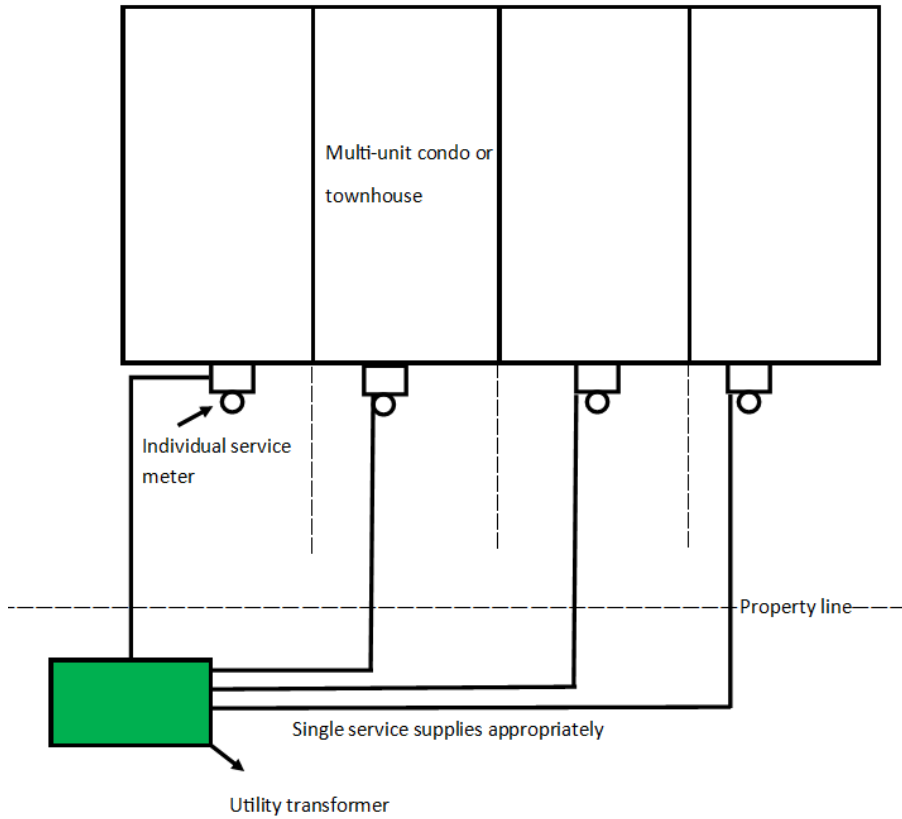


Diagram # 4 – Multi-unit condo or townhouse with 2 underground service supplies located on individual unit.

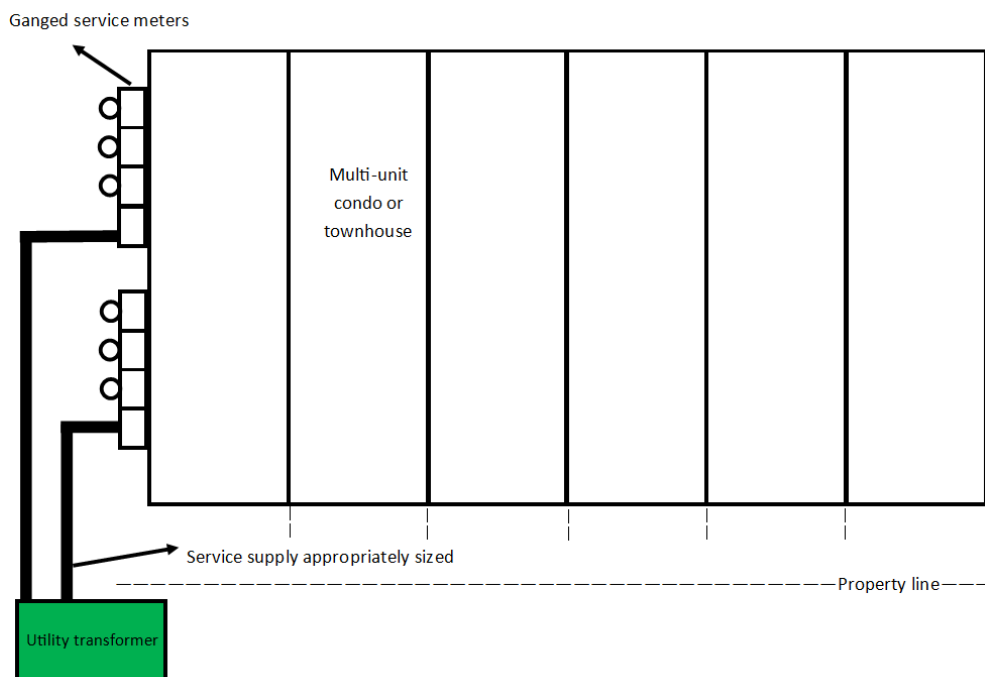
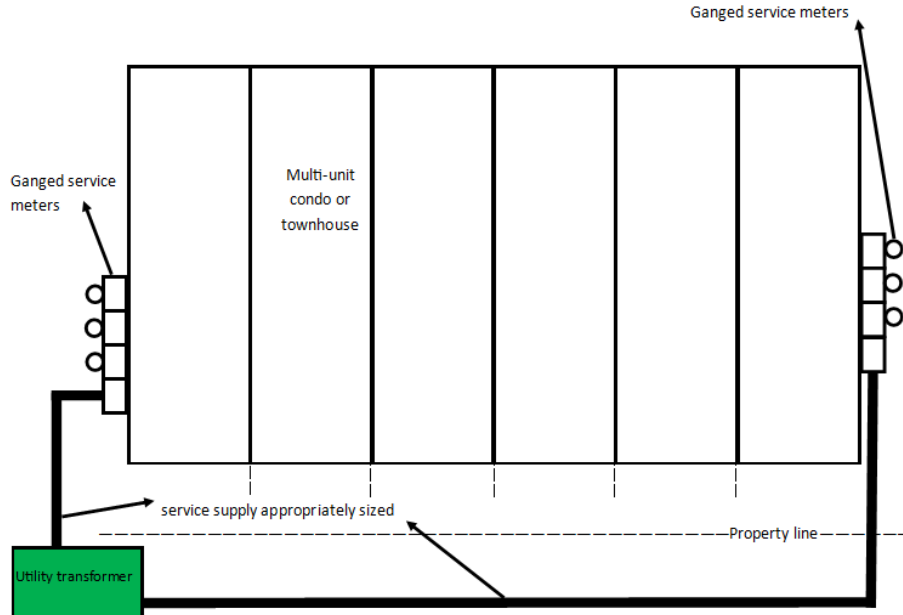


Diagram # 5 – Multi-unit condo or townhouse with 2 underground service supplies located on individual units where it is not practicable to group on one unit.

Note: Group where practicable as per 6-102.2; in some cases it may not be practicable and the following illustrates this.



Disclaimer: Both the supply authority and local authority having jurisdiction should be consulted prior to construction to avoid unnecessary, unexpected expenses, and ensure minimum levels of safety are achieved. The information in this bulletin is not intended to provide professional design advice. If professional expertise is required with respect to a specific issue or circumstance, the services of a professional should be sought.

This INTERPRETATION is applicable throughout the Province of Alberta.

Unless stated otherwise, all Code references in this STANDATA are to the Canadian Electrical Code, Part 1 2021

Issued by the Provincial Electrical Administrator

[Original Signed]
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