

SECTION IV SERVICE CONNECTIONS

Section IV. Service Connections

General

1. This section applies to new service installations and to existing installations when changes and/or rearrangements are made. Each case shall be referred to the Company before electrical work is begun.

2. Normally only one type of electrical service will be made available to a customer's building or premises. Exceptions may be by special permission in accordance with the National Electrical Code, Article 230 - Services. These exceptions must be approved by the Company before work is started (see Section II for the definition of "Building").

3. The type of construction and route of the service connection will be determined by the Company and the customer. Services will not be run from building to building. When crossing property, service drop wires should not be carried over buildings and shall not be carried over swimming pools.

4. The customer shall furnish, install, own and maintain all service entrance conductors and service equipment.

5. The Company will furnish, install, own and maintain adequate metering to measure the energy and demand used in accordance with its contracts.

6. To provide for future load growth, the Company recommends that the capacity of service entrance conductors and service equipment be greater than the National Electrical Code's required minimum.

7. Where service in excess of 600 volts is desired, the customer shall consult the Company at an early stage to allow design and coordination of the service connection. In addition, the Company will advise the customer of any additional requirements for electrical insulation, grounding, service equipment and metering facilities. Reference shall be made to NYSEG publication SP-1099. The Company will inform the customer of available short circuit currents. The customer shall submit detailed plans for approval by the Company prior to the purchase of equipment or before proceeding with the installation.

8. Overhead Service Connection. The minimum service entrance and service equipment shall be single phase, three wire, 100 ampere. A variation will be permitted only after the prospective customer assures the Company, in writing, that a smaller service will be adequate for requirements, or when service is to be used solely for supplying loads of less than 3000 watts, such as signs, traffic signals, CATV power supplies or temporary construction.

9. Underground Service Lateral (URD Subdivisions only). The minimum service lateral conductors shall be #2/0 AWG Aluminum (see Section XVI, Specification 1 for details). No variation will be permitted for residential application. Exception shall only

SECTION IV SERVICE CONNECTIONS

be when the service is to be used solely to supply loads of less than 3000 watts, such as signs, traffic signals, etc.

Overhead Service Connections from Overhead Distribution Lines

10. The Company will usually install, own and maintain the overhead service drop. The customer may be required to contribute towards the cost of the excess service length or make other arrangements according to NYSEG policy.

11. The Company reserves the right to designate the location at which its service drop will be attached to the customer's structure. This point will normally be not less than 15 feet nor more than 25 feet above final grade. Where the customer's building is too low to permit the installation of the service bracket at the minimum of 15 feet above grade, the Company may, if local ordinances and field conditions permit, approve the attachment at a point not less than 10 feet above finished grade provided that the minimum heights specified in the National Electrical Code can be obtained (see Fig. No. 31 for Swimming Pool Clearance Specifications).

12. The point of service attachment must be accessible from the ground by ladder.

13. The Customer will furnish and install a suitable attachment for the service drop to be securely bolted to a stud or plate at the point designated by the Company.

14. Where the customer's structure is too low to provide a point of attachment that will assure the minimum required conductor clearance, the customer may be required to install a mast type riser as shown in Figure No. 19.

15. The customer's service weatherhead shall be located above and within 12 inches of the point of attachment of the Company's service drop.

Service entrance conductors shall extend a minimum of 36" beyond the service head to allow for connection to the service drop (see Figure No. 18).

16. On farms or other premises where buildings under a single occupancy or management will be supplied through one meter, it may be desirable to install the meter on a pole (see Figure No. 13, 14). In such cases, the meter pole with necessary guys shall be furnished, installed, owned and maintained by the customer. The Company shall be consulted in all cases for its requirements regarding the poles and guys.

17. Where temporary service is to be supplied, the customer shall provide, at the point of attachment, a substantial and adequate support. The support shall be capable of withstanding a horizontal pull of 1000 pounds at the center of the service bracket. Such a support should be a pressure treated pole (Figure 12) or a pipe riser attached to the framing of a building. The point of attachment to these risers shall be made according to Figure 19. The Company shall be consulted in all cases for required pole sizes, setting depths and guying requirements.

SECTION IV SERVICE CONNECTIONS

Underground Service Connections from Overhead Lines Below 600 Volts

18. General. If a customer desires an underground service lateral where the Company's line is overhead, the customer shall furnish, install, own, and maintain the necessary facilities at the customer's expense. The installation shall be in accordance with NYSEG's specifications (see Figure 20) and the National Electrical Code. The Company shall be consulted in every case before work is started so that it may designate the pole from which the service will be taken, the location of the riser on the pole and meter location. Precautions must be taken when trenching near poles to prevent undermining of the pole. The customer or contractor performing the work will be held responsible for any damage to NYSEG facilities. If multiple service laterals will emanate from the same pole, NYSEG has the option to install and own the pole riser portion and a handhole at the base of the pole to terminate the customer service laterals. (see Paragraph 22)

In some circumstances, the customer may be required to secure a high way occupancy permit for installations within the public right-of-way. In such cases, the customer shall provide the company with proof that the appropriate permits have been obtained prior to starting the installation.

Underground service laterals are difficult and costly to change. The Company emphasizes the need to size the cable to allow for future load additions.

19. Company Pole Replacements or Relocations. If the pole from which a residential underground service (400 Amp or below) originates is replaced or relocated, NYSEG will assume the responsibility to transfer the service lateral and riser to the new pole provided that only reasonable hand excavation is required. NYSEG reserves the right to make this judgment. The customer shall otherwise bear the responsibility to relocate or replace the underground service lateral. All services above 400 Amp will be the sole responsibility of the customer to transfer.

20. Replacement. The replacement and/or installation of additional or larger conductors, due to customer initiated service changes, will be at the customer's expense.

21. Direct Buried Cable. The service cables may be buried directly in the ground. The cable and its installation must be in accordance with the National Electrical Code (see Section XVI, Specification 1 for installation requirements).

22. Conduit at Pole. On Company owned poles, the Customer shall install galvanized rigid steel conduit, or Schedule 80 PVC to a point not less than 8 ft. or more than 12 feet above the ground line and extending at least 18 inches below the ground line to protect the cables. Provided the Customer has utilized materials that are compatible with the Companies stock materials, the Company will furnish and install the protective conduit, u-guard, adapters, and mounting straps above the customer installed portion in order to reach the Company's secondary conductors (see Figure No. 20 for installation details). The Company's stock conduit sizes are 2" and 4" with attachment directly to the pole being the standard installation. If the Customer requires alternate sizes or attachment methods, the Customer may be required to provide the materials or

SECTION IV SERVICE CONNECTIONS

cover the cost of material purchase. Two 4-inch risers or their space equivalent are the maximum permitted on Company owned poles.

On privately owned poles, the customer shall furnish and install the galvanized steel conduit, or schedule 80 PVC conduit adapters, and mounting straps up the pole to a point 12 inches above the Company's secondary conductors. The Company will assist in the installation if the pole supports the Company's energized conductors.

23. Conduit to Meter. When the underground service lateral terminates in a meter enclosure on the outside of a building, the cable shall be protected by a galvanized steel or Schedule 80 PVC conduit up the wall to the meter socket. When direct burial cable is used, the conduit shall extend 18 inches below grade (see Figure No. 20).

24. Where the underground service cable terminates in a building, it shall be protected by a galvanized steel conduit through the wall and 5 feet outside the wall. All conduits entering a building underground shall be sealed at their indoor ends with a suitable compound to prevent the entrance of moisture and gases.

SECTION IV SERVICE CONNECTIONS

25. Grounding. Metallic riser conduits on the outside of a building shall be grounded in accordance with the National Electrical Code. A metallic pole riser shall be grounded to an approved ground clamp at the top of the metal conduit on the pole (see Figure No. 20 for installation details).

26. Length of Lateral. The customer shall install service lateral cable long enough to extend from the terminals of the meter device to a point 48 inches beyond the top of the Company's secondary conductors or transformer secondary terminals. Pending the connection, the cable shall be carefully coiled and fastened to the pole at the top of the conduit and the conduit opening sealed with Duct Seal or equivalent compound (see Figure No. 20). The Company will make final connections to the distribution system.

Underground Service Connections in Underground Network Areas Below 600 Volts

27. General. The Company must be consulted for the location of these areas during the design stage of any project.

28. Conduit. When the Company's low voltage distribution line is underground in a public street adjacent to the customer's building, the Company will furnish, install, own, and maintain at its expense, the conduit to the customer's property line. The conduit on private property (including any necessary adapter) must be furnished, installed, owned, and maintained by the customer. The Company will designate the service lateral location.

29. Junction Box. If the point where the conduit enters the building is within ten feet of the property line, the Company will provide and the customer shall install a junction box on the inside where the conduit enters the building. If the distance from the property line to the point where the conduit enters the building exceeds ten feet, the customer shall furnish, install, own, and maintain a handhole at the property line. The handhole shall be constructed to Company specifications.

30. Cable. The Company will furnish, install, own, and maintain the cable to the customer's property line. If a Junction Box is within ten feet of the property line, the Company will furnish, install, own, and maintain the cable to the Junction Box. The customer will reimburse the Company for the installed cost of the cable on private property. If a handhole is used, the Company will furnish and install the cable to this handhole. The customer will install the cable from this handhole to the service equipment.

31. Relocations. If a service is relocated on an order from a public authority, the customer will be responsible for that portion of the service on private property. If the service is relocated at the customer's request, the customer shall pay the entire cost of the relocation both on private and public property.

32. Company Lines on Private Property. Where the Company's underground low voltage distribution line is on private property, on or adjacent to the customer's property, the division of responsibility will be the customer's outside building line instead of the property line as covered in the previous paragraphs.

SECTION IV SERVICE CONNECTIONS

Exception: Where the Company's underground low voltage distribution line is underground on private property, and where the Company has a right-of-way, one side of which is adjacent to public property, the Company will install all facilities within and up to the edges of this right-of-way. Any facilities on the adjacent public or private property will be installed in accordance with the previous paragraphs.

33. Service Entrance Equipment. An overcurrent device of adequate short circuit and load current interrupting capacity shall be furnished, installed, owned, and maintained by the customer. The customer is cautioned that underground systems generally have high short circuit currents available. The Company will furnish the customer information on equipment short circuit current requirements.

(URD) Underground Service Connections for Residential Developments

34. General. Public Service Commission regulations require that underground electric systems be provided in a government approved subdivision consisting of five or more dwelling units or to a multiple dwelling of four or more units. Any new mobile home development or extension of an existing development to serve five or more sites with a permanent water and sewer connection is considered by NYSEG to be the same as a development of conventionally constructed single-family homes for the purposes of determining if underground facilities must be installed. Information on URD and related costs is available at the Company's local offices.

Because of the special nature of underground systems, the developer must make application to the Company with sufficient lead time for design of the underground electric facilities within the development.

The Company will not install the underground electric facilities until water and sewer are installed and the final grade of the streets has been established. The developer shall rough grade (within six inches of final grade) the electric utility's easement strip, place and maintain construction survey stakes indicating grades, property lines and the locations of other utilities. Curbing and paving shall not be installed until the underground electric facilities are installed.

35. Service Lateral. The service lateral within the lot line and running to a building will be installed by the applicant in accordance with the Company's specifications. The Company shall be consulted in every case before work is started in order to designate the location of the meter and the route of the service. The minimum permitted service lateral for a single family dwelling will be 150 Amps (see Section XVI, Specification #1).

36. Replacement. Where the Company owns and maintains a Company or customer installed URD service, the replacement and/or installation of additional or larger conductors due to customer initiated service changes will be at the customer's expense.

Underground Service Connections for Commercial Developments

37. General. Where the customer applies for underground electric facilities, the Company will install underground distribution in new commercial developments where

SECTION IV SERVICE CONNECTIONS

there is no existing distribution system and the development meets qualifications. Information on undergrounding in commercial developments and related costs to the developer is available at the Company's offices.

38. Because of the special nature of underground systems, the developer must provide the Company with sufficient lead time to design the underground electric facilities within the development.

39. Prior to any installation of electric distribution facilities by the Company, the developer will install sewage and water facilities and will establish final roadway and parking area grades, stake curbs, and drainage within the development and maintain these during construction.

40. The Company shall be consulted in every case before work is started so that it may designate the location from which service will be taken and the metering location.