



Guide for Single Phase, Single-Unit Service 100-200A Self-Contained

2011 Electric Service Requirements Excerpt

A full electronic copy of the Chugach Electric Service Requirements which includes requirements for all service sizes can be found at:
http://www.chugachelectric.com/system/files/customer_service/esr.pdf

INTRODUCTION

This guide is an excerpt of the Chugach Electric Service Requirements, which applies only to single phase, single-unit, residential and commercial service between 100 and 200 Amps. Clarification of requirements can be found in the full document available at http://www.chugachelectric.com/system/files/customer_service/esr.pdf or at our office at 5601 Electron Drive, Anchorage AK 99518.

Construction of new or remodeled installations must conform to current and applicable provisions of the National Electrical Code; the National Electrical Safety Code; federal and state regulations; municipal codes, regulations and ordinances; the Chugach Tariff; and Chugach's Electric Service Standards and Requirements. Chugach personnel are not authorized at any time to waive federal, state or municipal regulations.

Where there is a conflict between Chugach's Tariff and this guide, the Tariff shall take precedence. Codes, ordinances and regulations are available from several sources. Copies of specific pages from Chugach's Tariff are available by contacting Chugach's General Counsel's Office at 762-4790. The Chugach Tariff is also available online at www.chugachelectric.com

Information and/or questions about the National Electrical Code should be directed to the Municipality of Anchorage, Development Services, Building Safety Plan Review Engineer or to the Lead Electrical Inspector.

CHUGACH SERVICE AREA

Chugach provides electric service to all residents within its service area in accordance with its Operating Tariff (Tariff) which is approved by the Regulatory Commission of Alaska (RCA). See the service territory map on the back pages of this booklet.

APPLICATION FOR SERVICE

To obtain electric service from Chugach, contact the Member Services Department at 563-7366 to establish a member account for service. If the customer is not already a Chugach member, an application will need to be completed. Chugach-approved service equipment, inspected and approved by the Municipality of Anchorage must be provided by the customer. If Chugach does not have a power source immediately adjacent to the customer's property, a line extension may be required. In some cases, existing Chugach facilities may not be adequate and an upgrade will be required.

APPLICATION FOR A LINE EXTENSION

A line extension is the extension of primary electric facilities to the customer's property, subdivision or commercial building. For additional clarification, contact Chugach at 762-4631. An application for a line extension should be made as far in advance as possible.

Customers should contact Chugach for information for the estimated cost of extending electrical facilities. Chugach may ask for a site plan of the customer's property and a deposit to begin the review and design process for extending the electrical facilities. Chugach's Tariff will be discussed with the customer as to the amount that Chugach contributes and the cost the customer pays for the line extension.

Application. Customer applications are available by fax by calling 762-4631 or by coming to the Chugach office at 5601 Electron Drive. A sample copy can also be found at the end of this booklet. Submittal of a completed application and deposit to Chugach initiates the process. Deposits are \$100 per residential meter and \$300 per commercial meter. A designer will be assigned to the customer's project. Both the line extension coordinator and the designer will be in contact with the customer throughout the process. A work order number is also assigned for tracking purposes. Any drawings, electric load requirements, or permits the customer has for the project should be provided to Chugach at this time. Revised drawings should be provided to Chugach as soon as they become available.

Preliminary Design. A preliminary design and cost estimate is prepared for the customer's review. Chugach will explain how the costs are apportioned between Chugach and the customer. Chugach will deduct specific costs from the total cost and certain credits will be applied against the cost of the project on behalf of the customer in accordance with Chugach's Line Extension Tariff, Rule 8. The customer is required to sign both a preliminary cost estimate and an acknowledgment that the preliminary design meets the customer's requirements before the project can proceed.

Easement/Permit Review. After the customer signs the preliminary design and cost estimate, the project will be forwarded to Chugach's Land Services Department. Land Services will review the project design and proposed route to determine if easements are available or will need to be obtained, and what permits, if any, will be needed. Applicants are required to clear easements on their property to the specifications for secondary service furnished by Chugach.

Easement definition: An easement is an interest in land of another for a specific purpose. In the case of an electric utility such as Chugach, it includes the right of access over the easement area, the right to cut down or trim any part of trees within the easement, the right to remove any obstructions within the easement area that interfere with construction or maintenance activities. No permanent structure will be allowed within the easement. Pavement, fences, shrubbery and gardens may occupy the easement area but only at the property owner's risk.

Chugach will construct, own, operate and maintain facilities only on public or private property across which easements or rights-of-way, satisfactory to Chugach, may be obtained without cost to Chugach or within the public streets, roads or highways in which it has legal rights to occupy without future relocation liability. All applicants for service must provide Chugach with all easements or rights-of-way required for any portion of the line extension that is on the premises owned, leased or otherwise controlled by the applicant as may be necessary to provide services to the applicant or as may be reasonably required to provide service to adjacent properties.

Final Design. The designer will prepare a final design based on the report received from Land Services. Easements and permits are obtained at this time. After the completion of the design, engineering, right-of-way, and permit acquisition the applicant must provide written authorization to Chugach to proceed. Chugach will schedule construction at its discretion by independent contractors or by Chugach's employees as set forth below.

Bid Process. Projects under \$40,000 (based on the estimated contractor labor and contractor supplied material cost) utilize a unit price task order contract and no bid is required. Projects over \$40,000 are normally sent to bid every Tuesday to Chugach's approved contractors. Bids are generally received back the following Tuesday. The customer needs to have the property at final grade and the easements free from obstructions (i.e., gravel, debris, old cars, etc.) prior to the start of construction.

Agreement Process & Payment. After bids are received a Line Extension Agreement is finalized for customer's signature. Payment plans are available for single lot, residential line extensions only. The project will be released for construction when the Agreement has been signed and the customer has paid any monies due.

Applying for Service. Before the project is complete the customer will need to contact Chugach's Member Services Department at 563-7366 to establish a member account for service. If the customer is not already a Chugach member, an application will need to be completed. Chugach-approved service equipment, inspected and approved by the Municipality of Anchorage or the State of Alaska, as applicable, must be provided by the customer. All service entrance equipment shall conform to Chugach's Electric Service Standards and Requirements.

Note 1. Line extensions involve construction of poles and overhead lines or installation of trench and cables and other facilities to bring power to the customer's property, subdivision or commercial building. A secondary service connection links the meter in the customer's new house, apartment or business to the power line.

Note 2. The length of time it will take Chugach to design, bid and construct the customer's project will depend on, but is not limited to, the following: type of the line extension (single-phase, three-phase, residential, commercial), size of the extension, availability of easements and permits, time of year, changes to building design by the customer, execution of a Line Extension Agreement (signed contract), and receipt by Chugach of any monies due from the customer.

Note 3. If the customer's project plans change at any time, it may have an impact on Chugach's design and subsequent construction schedule. The customer should notify Chugach immediately. Redesign by Chugach may be required and the customer may incur a redesign fee. Changes to design can impact the time it takes to complete the customer's line extension. If the customer requires a project to be re-bid, an additional charge will be incurred.

Note 4. Certain parts of the Chugach service area have mandatory undergrounding requirements. Applicants wishing to seek waivers of this requirement are responsible for initiating the waiver process with the governing agency as well as any follow-up and appearances before boards and commissions. Customer Construction: A customer may choose to hire an engineer to design and a contractor to construct a new line extension under the conditions described in the Chugach Tariff, Section 8.9. A licensed Alaska-registered electrical engineer must perform the design. A licensed Alaska electrical contractor must perform the construction. The contractor must employ a licensed Alaska electrical administrator (unlimited line work category). Contractor installation personnel must possess valid Alaska certificates of fitness. For specific requirements, please contact Chugach.

STEPS TO FOLLOW TO OBTAIN PERMANENT SERVICE – 200 Amps or Less

Please note: Overhead or underground service is available in areas served by overhead lines. In areas served by underground facilities, you may only receive underground service. Underground service is required in the MOA Underground Surcharge area.

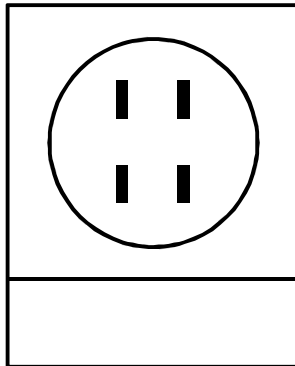
1. Before any service entrance is installed, the customer, builder or his authorized representative shall obtain agreement from Chugach as to where the service entrance and meter(s) shall be located. Chugach meters shall be located on the outside of the building. The service entrance must be installed as close as possible to existing Chugach facilities and protected from falling snow and ice (see typical location detail).
2. Acquire an electrical permit from the Municipal Building Safety Department located at 4700 Elmore Road. This is for construction within areas of Municipal jurisdiction. Phone: 343-8211.
3. For extensions of secondary service to a building, Chugach will require the customer to clear a 10-foot wide path from the Chugach power source to the meter base. The route must be clear of all trees, shrubs, brush, stumps and debris.
4. After your meter base has been installed on your building, call the Municipal Building Safety Department to request an inspection. See Section 4. All remote meter locations require approval from Chugach Engineering in advance of installation. This applies only if you are building within the Municipal inspection area.
5. Building Safety will come out and inspect your meter base. When approved, Building Safety will leave a green inspection tag on your meter base. This inspection tag has a five-digit number on it. You will need this number when calling Chugach for a hookup request.
6. If you are a Chugach member, you can phone in your request for permanent power at 762-4729.
7. If you are not a Chugach member, you will be required to pay a \$20.00 non-refundable membership fee. A membership application will be mailed to you for signature. If the signed application is not returned within 15 days, you will be scheduled for disconnect. Commercial customers who are not members of Chugach must come in to apply for service at Chugach's Member Service Center located at 5601 Electron Drive.
8. Member Service will ask you for the inspection tag number (five-digit number on the tag), the subdivision, lot, block, street name, whether you want 100 or 200 amp service, and your account name. A 200A rated meter main is the minimum size for an underground feed service; overhead services are available to a minimum of 100A. There is a \$15.00 connect fee. Other fees may be required such as meter deposit fees, which may vary, based on electric usage or credit worthiness.
9. Chugach will send out its own inspector to look at your meter base. If it does not pass inspection, Chugach will leave a form attached to your meter base with the problems listed. Once the meter base passes Chugach's inspection, your request will be turned over to one of Chugach's crew for hook-up. All follow-up inspections will be charged at the current tariff rate.

**GENERAL REQUIREMENTS FOR PERMANENT SERVICE
– 200 Amps or Less**

1. Chugach will extend up to 100 feet (or the nearest point of service, whichever is shorter) of secondary service line, either overhead or underground, to a building at no charge provided Chugach's facilities are of proper capacity to serve the customer's needs and provided the installation is consistent with the National Electrical Safety Code and Chugach's requirements for the shortest direct route from the meter base to the Chugach pedestal or pole. The customer shall pay all costs for pavement cutting, removal, and repair related to the service extension. The customer may only receive underground secondary service when an area has underground facilities, or either overhead or underground secondary service from overhead facilities (outside of the area subject to the Municipality of Anchorage Underground Ordinance (Title 21.90)). All new secondary residential services require underground service within the Municipality of Anchorage underground surcharge area. The customer will be responsible for the additional cost listed in Chugach's tariff for secondary service in excess of 100 feet (or the nearest point of service, whichever is shorter). All services greater than 300 feet require Engineering review and approval.
 - a. Placement of the customer's meter base at any location on the residential structure, other than within 3 feet from the corner of the structure that is closest to the appropriate power source designated by Chugach, requires prior approval by Chugach.
 - b. For extension of secondary service to a building, Chugach will require the customer to clear a 10-foot wide path on the property to be served from the power source to the meter base following the most direct route. The route must be clear of all trees, shrubs, brush, stumps, debris, building materials, etc. For underground services the slope of the route must be no more than 3:1 for inline installations and no more than 4:1 where the trench traverses the slope. If these slope conditions cannot be met, Chugach must either approve the route in advance (based on specific site conditions) or an alternative meter and service entrance equipment location will be required. In all cases where an exception is made to install a trench in a steeper slope, the customer accepts responsibility for restoration and maintenance of the trench to control possible erosion. Chugach will backfill the trench in accordance with standard practices.
2. The customer shall provide a self-contained ring-style meter socket appropriate to the type of service requested. The self-contained meter socket shall include terminal lugs, meter jaws, and sealing mechanism.
3. All service entrances require an external (located outside the building) lockable service disconnect switch.
4. The customer's neutral wire shall be grounded within the service entrance enclosure at the neutral terminal bus. It may not be grounded in the utility conductor entrance compartment of the metered base.
5. Within the Municipality of Anchorage inspection area, the use of concrete encased ground electrodes is required where footers exist as part of the structure for new installations and when available for remodeled structures that include new foundations. Outside of the Municipality of Anchorage inspection area, two ground rods are required (because of the quality of concrete encased ground electrodes, their use is recommended outside the municipality in addition to the required two driven ground rods).
6. For commercial installations where a concrete foundation does not exist (load centers, remote meters, etc.) ground rods shall be required as per the NEC.
7. Where ground rods are used as part of the grounding electrode system, they shall be placed a minimum of 36 inches from any Chugach underground conductor/conduit, padmounted equipment, or poles. Enstar requires 36 inches minimum separation between the ground rod and the gas service line.
8. Where multiple ground rods are installed as part of the grounding electrode system, they shall be placed a minimum of 8 feet apart. Locate ground rods to one side of the service entrance equipment. Do not straddle the riser conduit(s) for underground installations.
9. Ground rod connections must remain visible until inspections are completed. The top of the ground rods shall be installed 12 inches below surface grade after covering.
10. The customer's service equipment shall conform to the latest revision of the National Electrical Code, Municipal local amendments to the NEC, and State and Municipal Codes. Underwriter's Laboratory (UL) listing is required where applicable.

METERING

1. Self-contained meters are designed to carry rated current and to be energized at line potential. They do not require auxiliary instrument transformers to step down line current and/or voltage. Self-contained meter sockets are required on all electric services with a rating of 200 amperes or less.
2. Service equipment with a minimum rating of 200-ampere is required for all self-contained services except for: 1) self-contained service equipment with a minimum 100-ampere rating is acceptable for use on overhead services, and 2) 100-ampere rated service equipment with test block by-pass may be used on non-residential remote meter bases and load centers for overhead and underground services.
3. Self-contained meter sockets shall have a maximum ampere rating not less than the ampere rating of the associated meter disconnect. The maximum ampere rating is 125% of the continuous duty rating.
4. Meter sockets used in residential applications shall meet the requirements of SS-1, include a disconnect, and shall be located on the exterior of the building.
5. Meter sockets used in commercial, industrial, or non-residential applications shall meet the requirements of SS-1, shall include a disconnect test block with manual by-pass or safety socket. The meter socket shall be located on the exterior of the building, as applicable. The following non-residential applications do not require test block with by-pass: decorative lighting, head bolt heater receptacles, Lake Hood/Spenard floatplane tie downs, and thaw wires.
6. Automatic type, slide type, horn type, screw type and lever type meter socket by-pass devices are not allowed under any circumstances or conditions.
7. The service termination facilities of meter sockets used in underground service applications shall be specifically designed to accept underground service risers. Enclosures designed for either overhead or underground entry are acceptable provided they meet the requirements for both types of cable entry.
8. The service cable entry section and the meter socket shall be sealable and isolated from other integral enclosure sections, which are accessible to the customer, in order to effectively prevent the attachment of unauthorized connections to the supply side (un-metered) conductors and/or terminals.



4 Terminal

TYPE OF SERVICE

- 120/240V, Single Phase , 3 Wire

NOTE:

1. All underground feed meter installations require 7"Wx16"Hx5-1/2"D (minimum) utility conductor entrance compartment dimensions. The utility line side conductor lugs shall be sized to accommodate 4/0 AWG. The line side conductor lug height must be 11" (min.) measured from bottom of enclosure.
2. Refer to appendix for a listing of 200A meter mains approved by Chugach (current list is available at Chugach or at www.chugachelectric.com). If a meter main is not listed it may be submitted to the Chugach Metering Department for an evaluation for acceptance.

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| REV. NO. 1: _____ DATE: 12/08 Standards Engineer: <u>L MASS</u> Dir., Operating Div.: <u>Bill Beronin</u> Dir., Engineering Svcs. Div.: <u>Darg C. Ryp</u> | | SERVICE STANDARD SELF CONTAINED METER SOCKETS 100 TO 200 AMPS |
| | | DRAWING NUMBER: SS-1 |
| | | SHEET 1 of 1 |

WORKING SPACE AND CLEARANCE – Metering and service entrance equipment

1. This guide supplements the requirements outlined in Sections 300 of the Electric Service Requirements.
2. A level standing and working surface shall be provided and maintained in front of each metering installation. A clear and unobstructed working space shall be provided above this surface.
3. The working space around the meter socket shall include a minimum of 10 inches from the centerline of the meter socket opening to the nearest sidewall or other obstruction. This minimum 10-inch side clearance requirement applies to both sides of the meter socket.
4. The working space above the meter socket shall include a minimum of 9 inches from the centerline of the meter socket opening to any obstruction above the meter.
5. The 36-inch width is the minimum requirement.
6. The working space shall extend at least 36 inches out from the front panel of the meter socket.
7. The minimum height of the working space shall be equal to the height of the service equipment but no less than 78 inches.

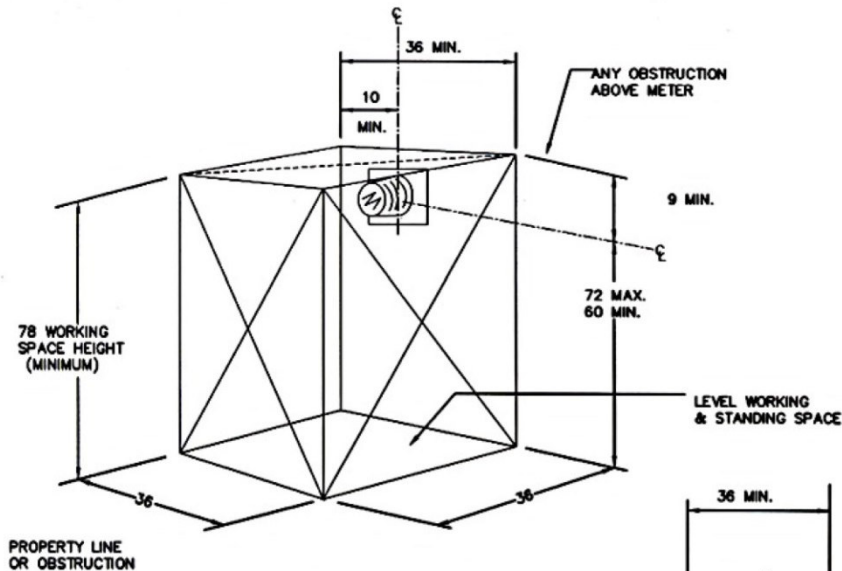


FIGURE 1

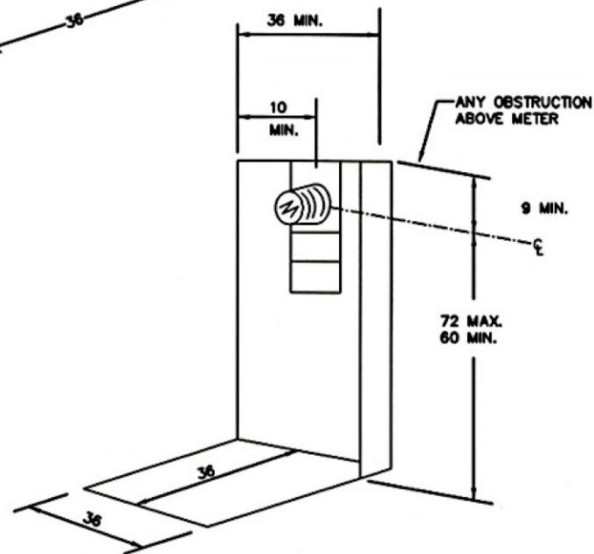


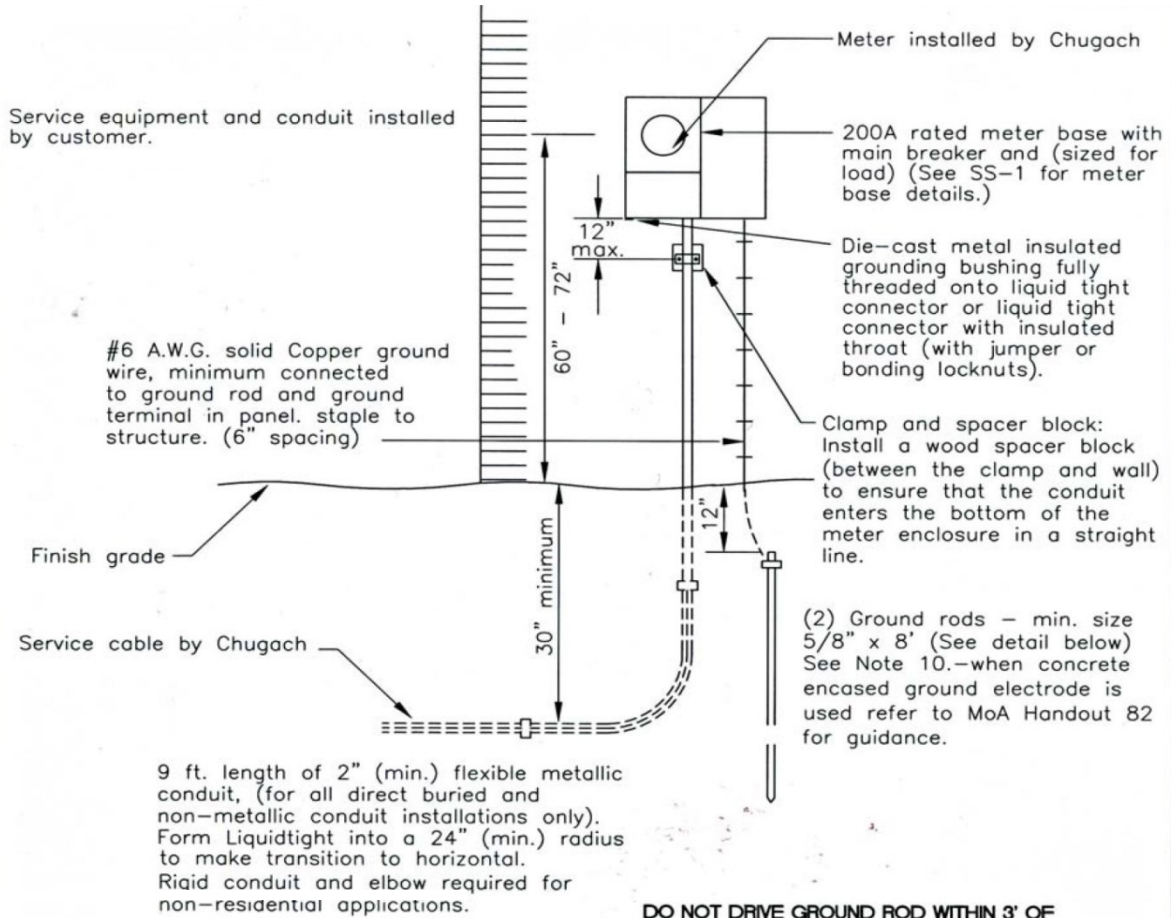
FIGURE 2

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| REV. NO.: _____ DATE: <u>6/06</u> Standards Engineer: <u>L. MASS</u> Dir., Operating Div.: <u>William J. Benner</u> Dir., Engineering Svcs. Div.: <u>[Signature]</u> | | SERVICE GUIDE WORKING SPACE AND CLEARANCE METERING AND SERVICE EQUIPMENT |
| DRAWING NUMBER SG-4 | | SHEET 1 of 1 |

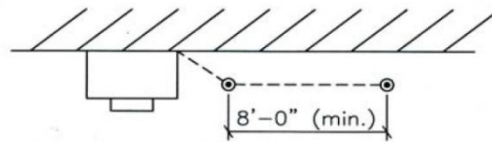
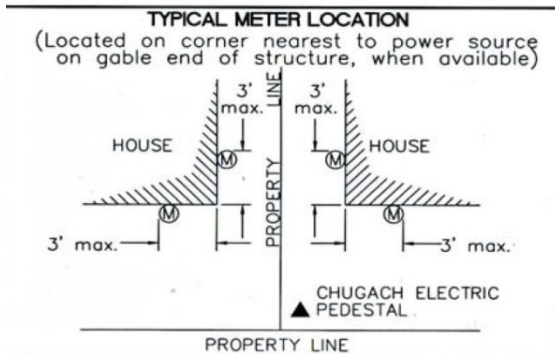
PERMANENT UNDERGROUND SERVICE, 200 AMPS

- Wall mount

1. The source side conduit shall be flexible metal conduit (liquid tight) with an insulated busing or ferrule on the buried end. The conduit must be installed with an offset bend to allow for conduit movement. All conduit clamps below the offset bend must be oversized to facilitate vertical movement. Non-residential installations require a rigid steel conduit with a 90° elbow, and shall meet all requirements for non-residential services.
2. A die-cast metal insulated grounding bushing must be fully threaded onto the liquid tight connector; a liquid tight connector with an insulated throat may be substituted for the insulated bushing.



DO NOT DRIVE GROUND ROD WITHIN 3' OF CHUGACH UNDERGROUND FACILITIES. CALL FOR LOCATES



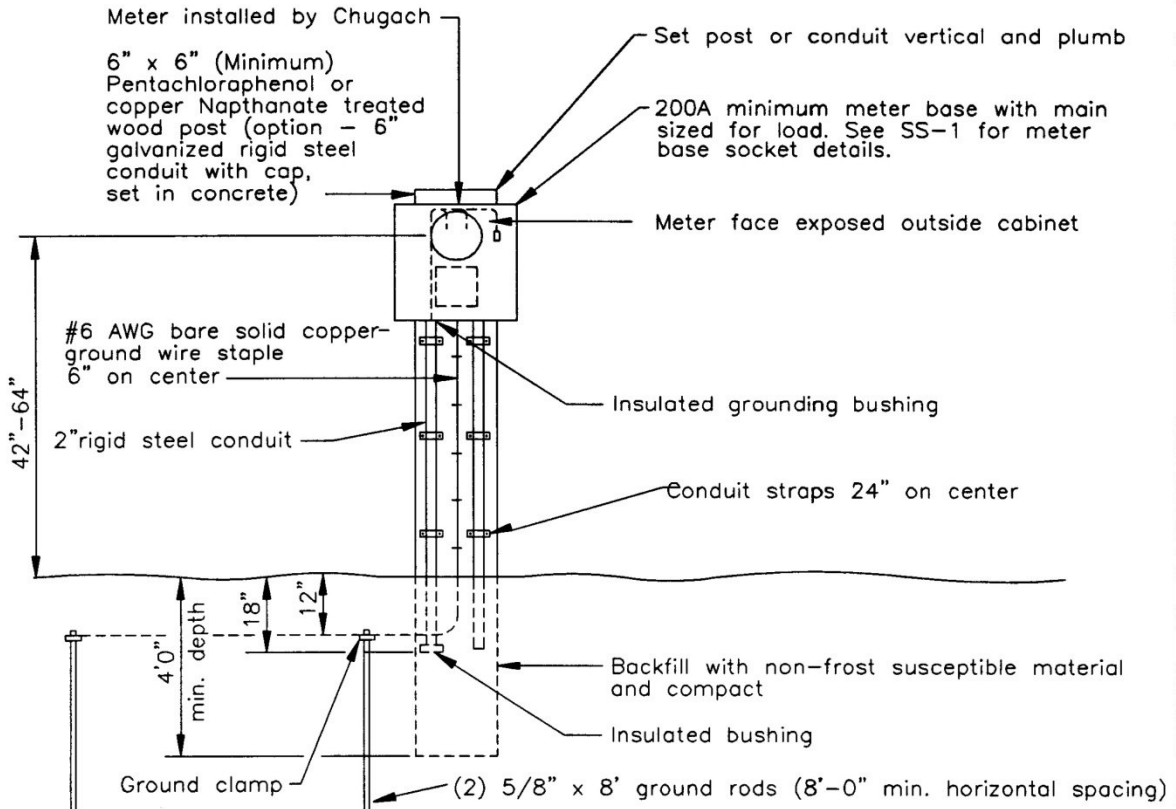
Locate ground rods parallel to foundation and to the side of service entrance opposite of the Chugach power service (pedestal).

CONCRETE ENCASED GROUND ELECTRODE REQUIRED IN MoA

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| REV. NO.: 7 DATE: 2/08 Standards Engineer: <i>L. MASS</i> Dir., Operating Div.: <i>Bill Bernier</i> Dir., Engineering Svcs. Div.: <i>Eric L. Riff</i> | | <p style="text-align: center;">SERVICE STANDARD</p> <p style="text-align: center;">UNDERGROUND SERVICE 200 AMPS</p> |
| DRAWING NUMBER: SS-6 | | SHEET 1 OF 1 |

**PERMANENT UNDERGROUND SERVICE, 200 AMPS
- Remote/Post Mount**

For remote services to permanent structures, a permanent sign shall be maintained on the exterior in a location between five and six feet above grade and within three feet of the corner nearest the remote meter location. The engraved laminated plastic sign at the building shall be blue or black letters on white background reading "NOTICE REMOTE SERVICE EQUIPMENT Located 00 ft north/south and 00 ft east/west from this location" (the triangulated distances and bearings for the actual location inserted). The service equipment shall be labeled with the street address of the structure. All labeling and signage shall comply with the language in Appendix - Permanent Identification Labelling.



DO NOT DRIVE GROUND ROD WITHIN 3' OF CHUGACH UNDERGROUND FACILITIES, CALL FOR LOCATES.

NOTES:

1. Service entrance location must be pre-approved by Chugach.
2. Conduit for service cable shall be sized to accommodate aluminum service conductors as specified by Chugach - minimum size conduit is 2 inch.
3. Customer's service equipment shall conform to the National Electrical Code and State and Municipal Codes and shall be inspected prior to connection of service by Chugach.
4. Any deviation from this standard must be pre-approved, in writing, by the Engineering Services Division of Chugach.
5. Customer's service equipment shall meet Chugach's electric service requirements.

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| REV. NO.: _____ DATE: <u>1/04</u> Standards Engineer: <u>L MASS</u> Mgr., Dist. Standards & Support: <u>[Signature]</u> Dir., Operating Div.: <u>William J. Beauvoir</u> Dir., Engineering Svcs. Div.: <u>[Signature]</u> | | <p align="center">SERVICE STANDARD SS-7 UNDERGROUND SERVICE REMOTE AND TRAILERS 200 AMPS OR LESS</p> |
| DRAWING NUMBER <u>SS-7</u> | | SHEET <u>1</u> OF <u>1</u> |

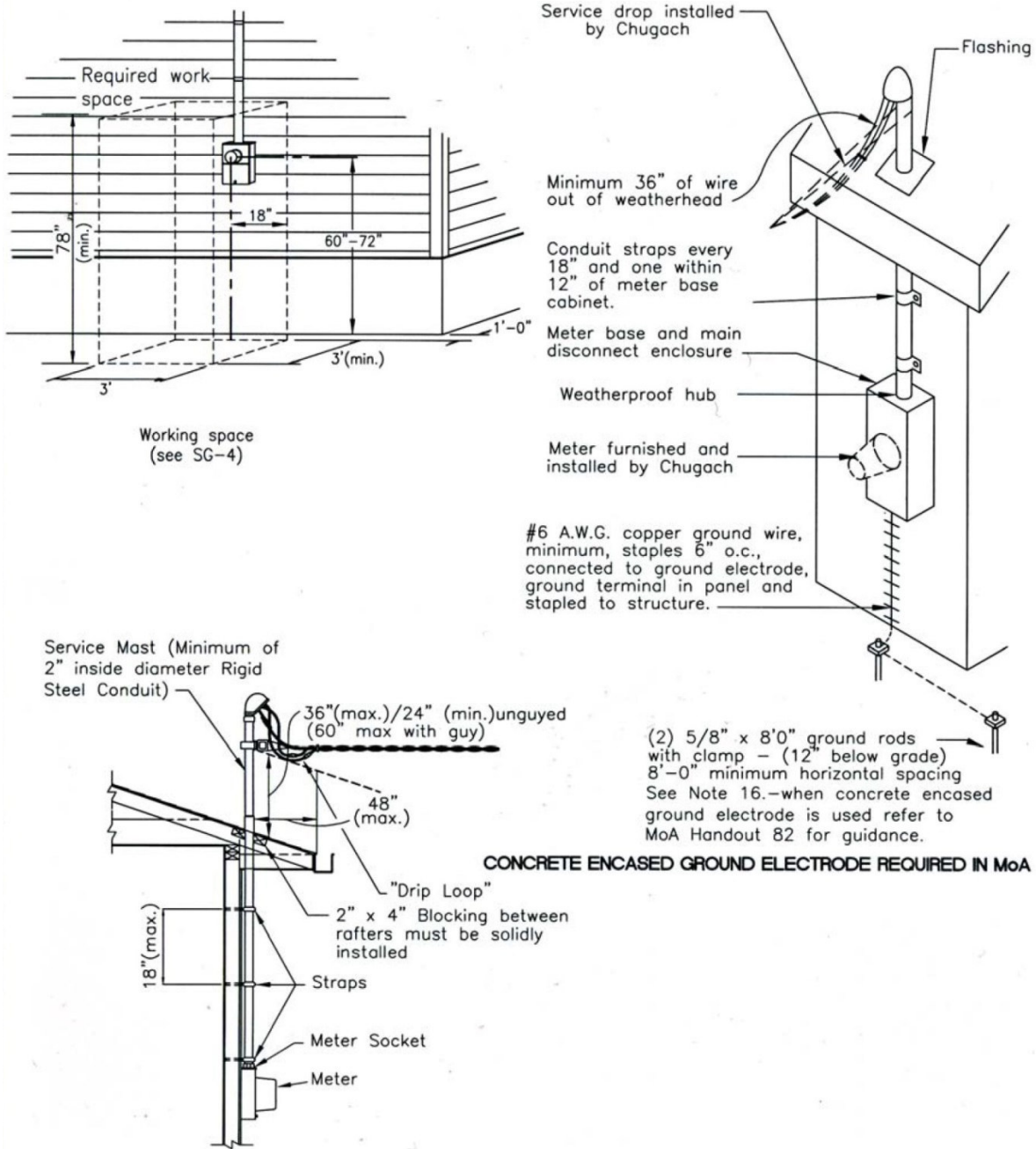
PERMANENT OVERHEAD SERVICE, 200 AMPS
– General Requirements

1. Minimum overhead service wire clearances are:
 - a. 11' crossing over the roof of an unattached structure
 - b. 10' above grade at the service weatherhead (drip loop)
 - c. 18' above driveways and parking areas.

Note: Where clearances are not met, a Chugach service pole will be required.
2. The service entrance shall be securely fastened to the structure using wood screws (for 2" x 4" studs, log walls or other solid lumber), toggle bolts for wood siding, or concrete anchors (for masonry walls). All screws or bolts shall be 1/4" diameter (minimum), stainless steel required for masonry walls. A minimum of four fasteners is required to mount the service entrance.
3. Conduit riser mast clamps must be made of heavy gauge galvanized steel or malleable iron. These may be either 2-hole pipe clamps or single-hole pipe clamps (two required at each location) spaced 18" on center and one within 12" of meter base. The clamps shall be securely attached with either lag screws into the solid wood framework or toggle bolts into siding (concrete anchors are required for masonry).
4. All overhead services shall use galvanized rigid steel conduit (minimum size is 2"). Where the conduit riser length exceeds 10 feet the coupling and the shorter conduit section shall be placed nearest to the service equipment.
5. The customer's neutral wire shall be identified at the weatherhead with either a white or yellow jacket.
6. Outside of Girdwood, Whittier and heavy snow load areas, periscope mount riser masts are required for all installations except for flat roof and the gable wall or side of the building. This requirement is necessary to protect the service equipment and workers from falling ice.

PERMANENT OVERHEAD SERVICE, 200 AMPS - Periscope Mount

1. The use of this specification is discouraged for all sloped roofs and is not acceptable for use in Girdwood, Whittier and other heavy snow load areas (exception for flat roof structures). SS-3B or SS-6 required in these areas.
2. Periscope mount risers require guying if the height of the service deadend clamp exceeds 36" above the roof. Refer to the periscope mount detail for 2" x 4" blocking requirements.

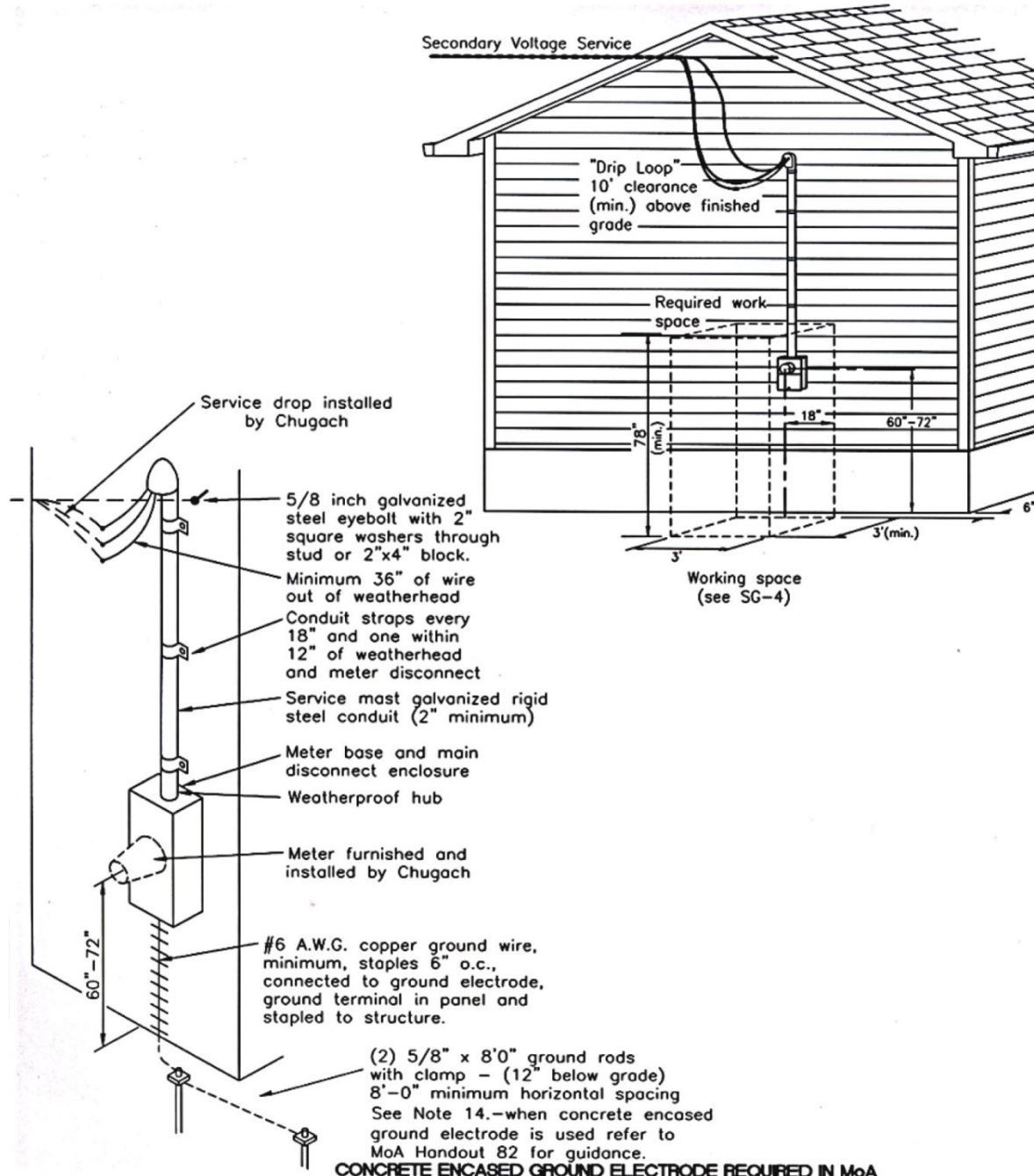


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| REV. NO.: 4 DATE: 2/08 Standards Engineer: <i>L. MASS</i> Dir., Operating Div.: <i>Bill Beerman</i> Dir., Engineering Svcs. Div.: <i>Doreen L. Papp</i> | | SERVICE STANDARD OVERHEAD PERMANENT SERVICE 200 AMPS OR LESS PERISCOPE MOUNT |
| DRAWING NUMBER SS-3A | | SHEET 1 of 1 |

PERMANENT OVERHEAD SERVICE, 200 AMPS

- Gable Mount

1. This specification is required for overhead services in Girdwood, Whittier and other heavy snow load areas. (Periscope style is permitted with a flat roof structure).
2. For gable mount weatherheads: a 5/8" galvanized steel eyebolt, mounted with 2" square galvanized steel washers, shall be installed into suitably braced framework. The point of attachment shall be a minimum of 15' above grade and shall not extend more than two feet above the weatherhead.



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| REV. NO.: <u>5</u> DATE: <u>6/06</u> Standards Engineer: <u>L. MASS</u> Dir., Operating Div.: <u>William J. Bennett</u> Dir., Engineering Svcs. Div.: <u>[Signature]</u> | | <p style="text-align: center;">SERVICE STANDARD</p> <p style="text-align: center;">OVERHEAD PERMANENT SERVICE 200 AMPS OR LESS GABLE MOUNT</p> |
| DRAWING NUMBER SS-3B | | SHEET 1 of 1 |

STEPS TO FOLLOW TO OBTAIN TEMPORARY SERVICE – 200 Amps or Less

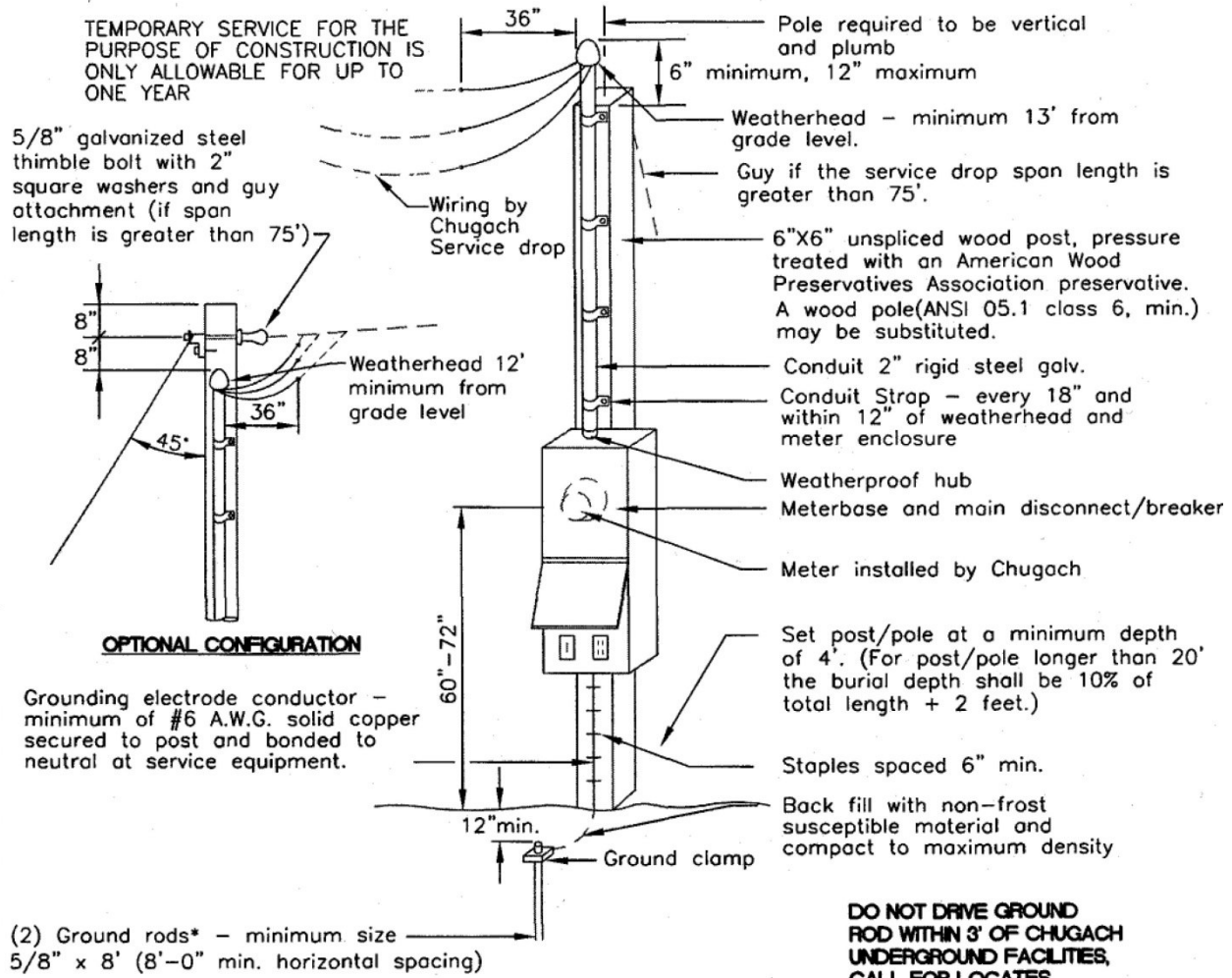
Please note: *The only type of temporary service extended to consumers from existing overhead will be overhead to a pole as shown on Chugach Service Standard SS-4. The only type of temporary underground service available to consumers is for connection to a meter base set up on a platform as shown on Chugach Service Standard SS-5.*

1. Acquire an electrical permit from the Municipal Building Safety Department located at 4700 Elmore Road. This is for construction within areas of Municipal jurisdiction. Phone: 343-8211.
2. After your temporary meter base has been set up, call the Municipal Building Safety Department at 563-3464 to request an inspection. This applies only if you are building within the Municipal inspection area.
3. Building Safety will come out and inspect your meter base. When approved, Building Safety will leave a green inspection tag on your meter base. This inspection tag has a five-digit number on it. You will need this number when calling Chugach for a hookup request.
4. If you are a Chugach member, you can phone in your request for temporary power at 762-4729.
5. If you are not a Chugach member, you will be required to pay a \$20.00 non-refundable membership fee. A membership application will be mailed to you for signature. If the signed application is not returned within 15 days, you will be scheduled for disconnect. Commercial customers who are not members of Chugach must come in to apply for service at Chugach's Member Service Center located at 5601 Electron Drive.
6. Member Services will ask you for the inspection tag number (five-digit number on the tag), the subdivision, lot, block, street name, whether you want 100 or 200 amp service, and your account name. There is a \$15.00 connect fee. Other fees may be required such as meter deposit fees, which may vary, based on electric usage or credit worthiness.
7. Chugach will send out its own inspector to look at your meter base. If it does not pass inspection, Chugach will leave a form attached to your meter base with the problems listed. Once the meter base passes Chugach's inspection, your request will be turned over to one of Chugach's crew for hook-up. All follow-up inspections will be charged at the current tariff rate.
8. Consumers may have temporary service for up to one year as a courtesy to assist in construction of their building. It is not intended to be permanent service for your structure. If you require service for longer than one year, a written explanation will need to be submitted to Chugach for approval.
9. If an application for temporary underground service is received after the first day of September and before thaw the following year, frozen ground may necessitate that the underground service must be installed either by steam thawing or temporarily placed above ground. When underground service is installed temporarily above ground, it shall be installed in corflo or electrical non-metallic tubing. Only secondary service conductors may be temporarily installed above ground for temporary facilities. Chugach will not install corflo across roadways, driveways, or other locations including easements open to vehicles or equipment where it may be subject to damage. The customer shall pay all related costs.

TEMPORARY OVERHEAD SERVICE

- 200 Amps or Less

The meter base for your temporary overhead service may be set no less than 10 feet from Chugach's facilities and a maximum distance of 100 feet from Chugach's facilities. A minimum 10-foot radius must be maintained from overhead power lines. Do not place the post in the 10-foot wide path between the transformer pole and permanent service location. An Encroachment Permit is required in advance to locate a temporary meter base within the Chugach easement.



Optional overhead service configuration: Install SS-5 meter assembly with a post/pole (guy when req'd.) and ground rod(s) installed in accordance with SS-4. The applicant shall install secondary wire (Type USE/THHN, #2 AWG min.) in 2" corflo from top of the temporary post/pole and connect to the SS-5 meter assembly. The ground rod(s) shall be connected to the ground wire.

*(1) ground rod acceptable for 100A temporary services.

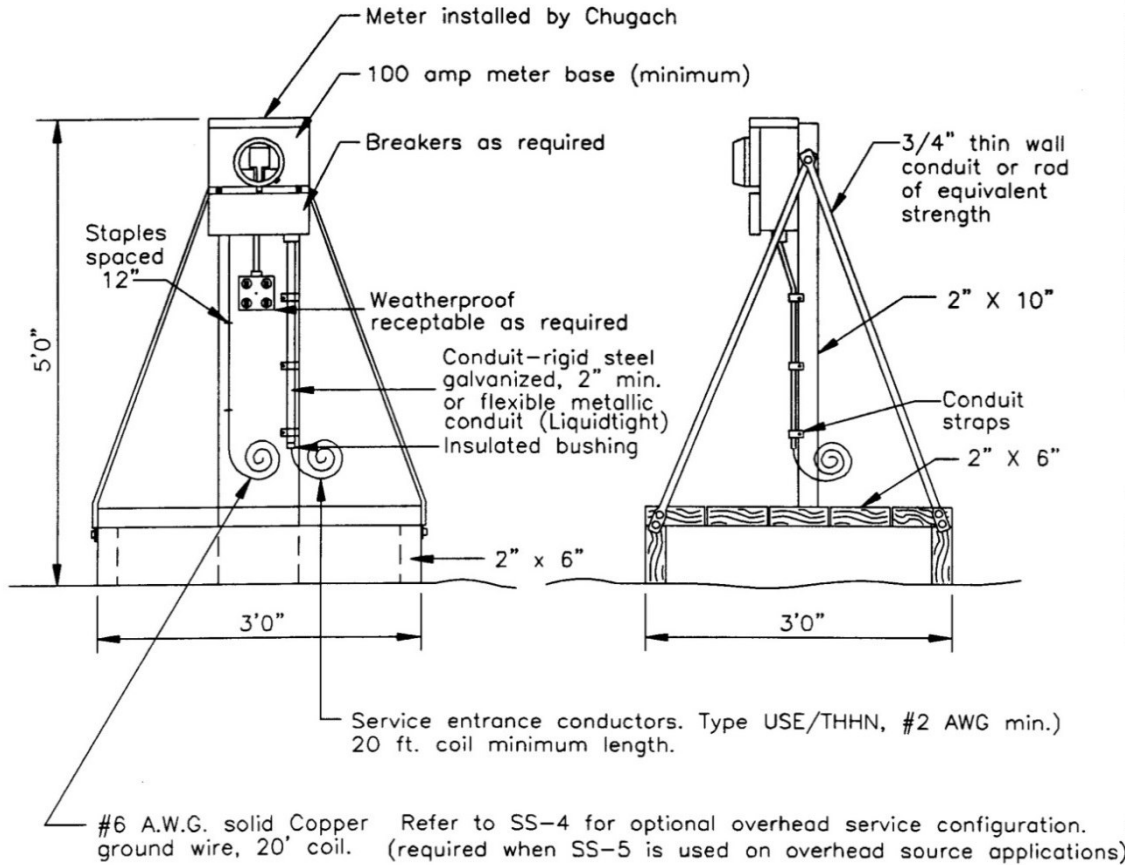
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| REV NO: _____ DATE: <u>12/01</u> Standards Engineer: <u>L. MASS</u> Mgr., Dist. Standards & Support: <u>[Signature]</u> Dir., Operating Div.: <u>William J. Bernier</u> Dir., Engineering Svcs. Div.: <u>[Signature]</u> | | SERVICE STANDARD SS-4 OVERHEAD SERVICE FOR TEMPORARY SERVICE AND FOR TRAILERS 200 AMPS OR LESS <hr/> DRAWING NUMBER: SS-4 |
| | | SHEET 1 of 1 |

TEMPORARY UNDERGROUND SERVICE

– 200 Amps or Less

The temporary meter base for underground service must be set up within 8 to 10 feet of Chugach's facilities. A minimum of one ground rod shall be installed, when required, for temporary service installations. The ground rod shall be placed no more than 72 inches from the service disconnect.

TEMPORARY SERVICE FOR THE PURPOSE OF CONSTRUCTION IS ONLY ALLOWABLE FOR UP TO ONE YEAR



DO NOT DRIVE GROUND ROD.

NOTES:

1. Service location must be approved by Chugach and must be located within 8' to 10' of existing Chugach service pedestal.
2. Customer's service equipment shall conform to the National Electrical Code and State and Municipal Codes and shall be inspected and approved prior to connection of service by Chugach.
3. Any deviation from this standard must be approved, in writing, by the Engineering Services Division of Chugach.
4. Customer's service equipment shall meet Chugach's electric service requirements.

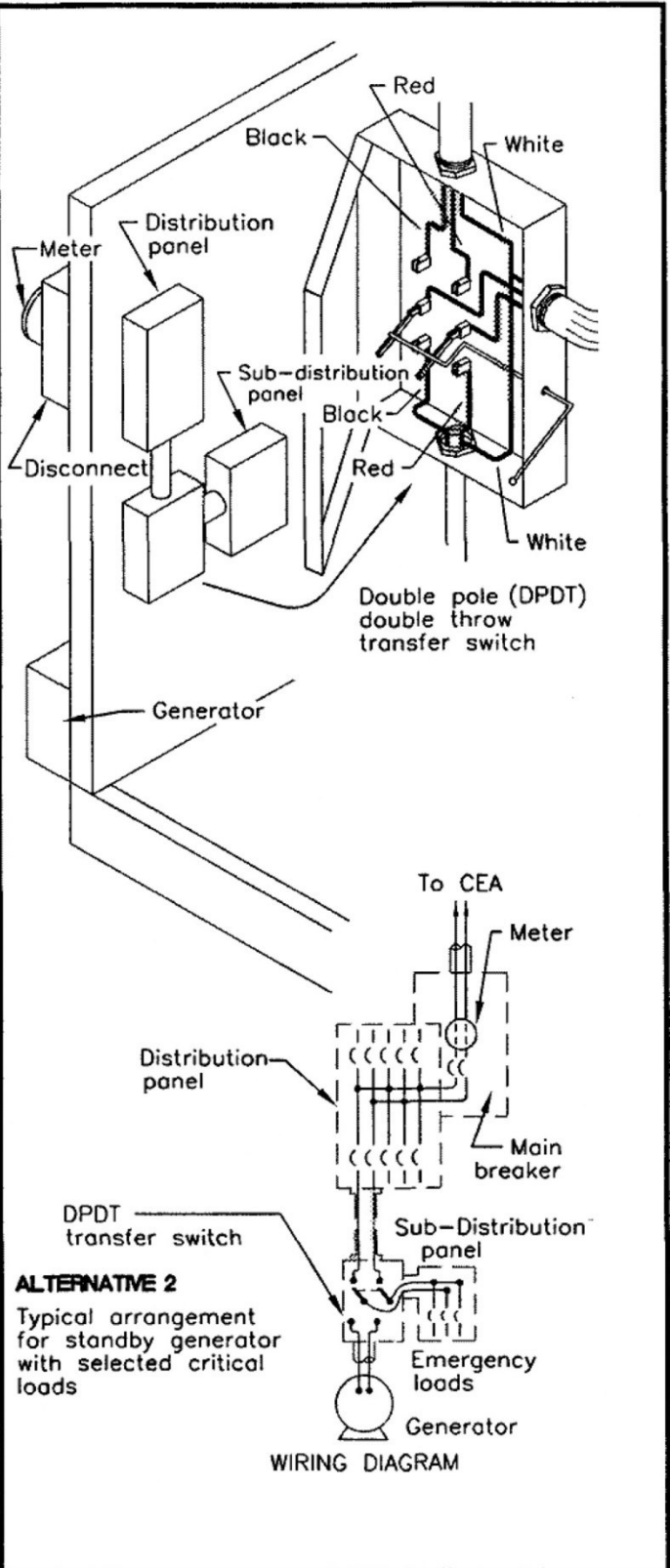
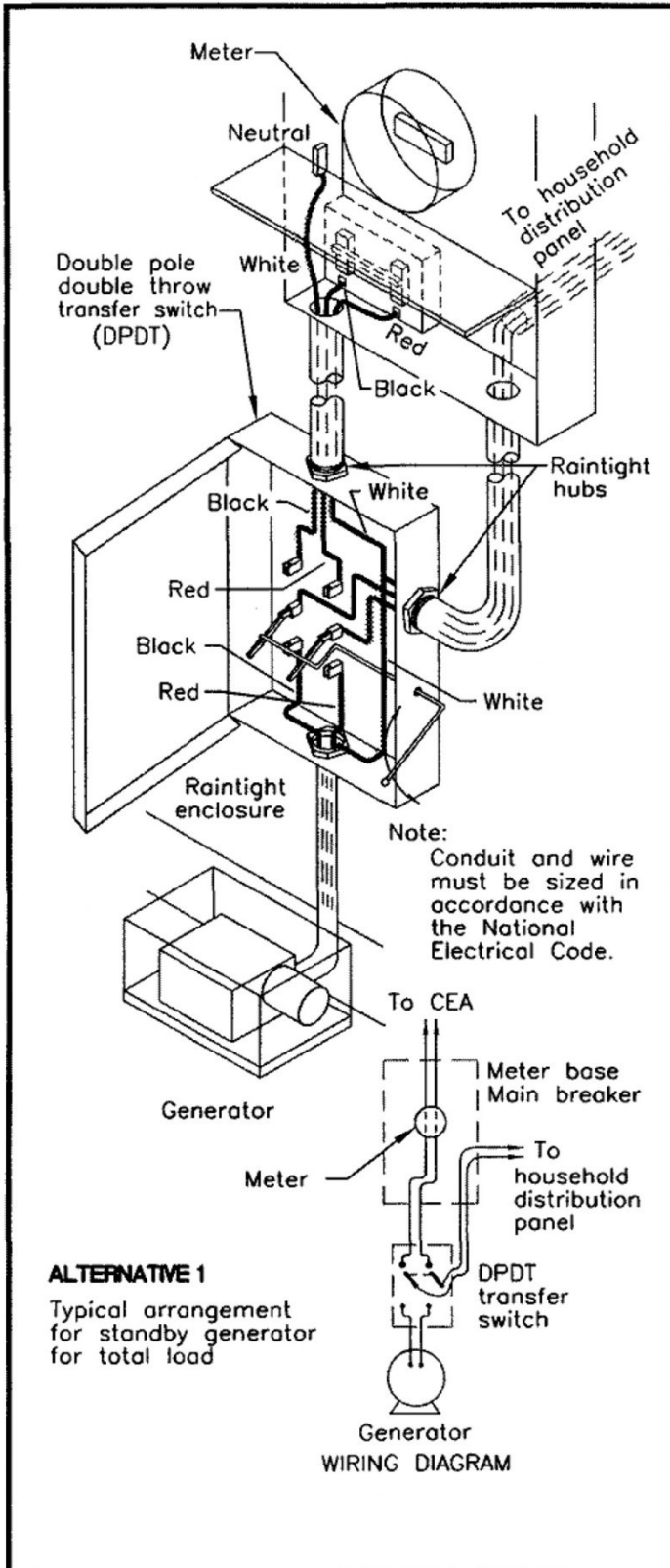
| | | |
|---|--|---|
| REV. NO.: _____ DATE: <u>1/04</u> Standards Engineer: <u>L. MASS</u> Mgr., Dist. Standards & Support: <u>[Signature]</u> Dir., Operating Div.: <u>William J. Bernier</u> Dir., Engineering Svcs. Div.: <u>[Signature]</u> | | SERVICE STANDARD SS-5 TEMPORARY UNDERGROUND SERVICE |
| | | DRAWING NUMBER: SS-5 SHEET 1 of 1 |

STANDBY GENERATOR

1. *Connections to other Systems:* Chugach will deny service to or disconnect its service from any premise or facility that is connected to another electrical system other than the customer's stand-by electrical system that is connected through a transfer switch that is approved by Chugach. A "stand-by electrical system" is an electrical system that is used to supply electricity to a customer's premise when utility service is not available. The transfer switch must be of a design that will ensure that backfeed into Chugach's electrical system will be prevented. Chugach shall make the sole determination as to whether or not a stand-by electrical system installation meets Chugach's requirements and provides an appropriate level of protection against backfeed into its electrical system.
2. *Manual Transfer Switches (Open Transition):* Manual transfer switches shall be of the double-throw, open-transition type. Key type interlock systems employing key cylinders, locking bolts, and ratcheting or pivoting plates that attempt to externally connect two independent circuit breakers in a break-before-make scheme are not approved.
3. *Automatic Transfer Switches (Open Transition):* Automatic transfer switches shall be the open transition type except as noted below (212.5). Automatic transfer switches must provide for manual transfer of customer load. Automatic transfer switches shall have both mechanical and electrical interlocks to prevent parallel operation of the customer's stand-by electrical system with Chugach's electrical system. When incorporating a standby electric generator into your electrical system, installation must conform to the provisions of Article 702, Optional Standby Systems, of the National Electric Code. A double-pole, double-throw transfer switch must be installed.
4. *Transfer Switch Approval:* Transfer switches, both open transition and closed transition, for use with stand-by electrical systems shall be approved by Chugach prior to installation. The applicant shall provide a one-line electrical diagram of the proposed installation showing the normal source (utility power), the alternate source (stand-by emergency power), and an accurate depiction of the transfer switch employed. Chugach also requires the generator's specific ratings and capacities, the transfer switch's specific ratings and capacities, and a detailed description of transfer switch operation. (If the transfer switch is intended for parallel operation (closed transition type), the applicant shall also provide specifications of all interconnecting equipment including circuit protection (protective relays), instrumentation, measurement, and control equipment.)
5. *Prohibited Transfer Equipment:* Meter socket adapter transfer devices are prohibited for use on Chugach's system.
6. *Interconnected Generation:* A customer may operate an electric generator in parallel with Chugach, provided they have executed an "Interconnection Agreement" with Chugach. Copies of the Chugach "Interconnection Guidelines for Non-Utility Generation" including the application forms are available upon request from Chugach Engineering or on-line under the Chugach Tariff. Refer to Section 217 for net-metering generation requirements.
7. It is Chugach's recommendation that a licensed electrician, for safety reasons as well as proper application, install the transfer switch. These installations require permit and inspection by the Municipality of Anchorage.
8. Chugach Service Standard SG-1 shows two alternative diagrams showing arrangements for wiring in your transfer switch.

Alternative 1 requires that the transfer switch be the same size as the main disconnect switch or breaker located adjacent to the meter. This transfer switch arrangement is capable of carrying all existing loads under normal conditions. This means that the only limiting factor on the amount of electrical equipment to run simultaneously under emergency conditions is the size of the generator installed. Under emergency conditions the homeowner must turn off all circuit breakers in the distribution panel except for those circuits that feed the emergency load.

Alternative 2 allows selected electrical loads to be separated from the main distribution panel in the house and wired into a sub-distribution panel. This reduces the size of the required transfer switch and may reduce total costs. The limitation is that the total building cannot be incorporated into the standby generator circuit.
9. By consulting with your electrician, an electrical plan can be made which will determine what equipment may be operated at the same time. This information will be used to select the proper size of generator (rate in wattage).
10. A double-pole, double-throw transfer switch may be obtained from electrical supply houses. Generator transfer switches without a visible break require prior approval from Chugach. Contact the Standards Engineer at 762-4611.
11. See Chugach Service Guide SG-1, Typical Arrangement for Standby Generators, Alternatives 1 and 2.



REV. NO.: _____ DATE: 12/01
 Standards Engineer: *L. Mass*
 Mgr., Dist. Standards & Support: *Cam B. H.*
 Dir., Operating Div.: *Walter J. Permin*
 Dir., Engineering Svcs. Div.: *Mick Moran*

CHUGACHI

SERVICE GUIDE
SG-1
 TYPICAL ARRANGEMENT FOR STANDBY GENERATORS, ALTERNATIVES 1 AND 2

DRAWING NUMBER: SG-1 SHEET 1 of 1

APPENDIX
– Meter Socket Quick Reference Guide

- Self-Contained

Single-Phase

For all Underground Residential Services rated up to 200 amps

4-Terminal, Single-Phase, 3-Wire, 120/240 Volt, 200 Amp Rated

Cooper B-Line U2M2R (residential only)

Cooper B-Line U2M11R (residential only)

Cutler-Hammer MBEB200BTS (residential only)

Cutler-Hammer MBE24L200BTS (residential only)

Cutler-Hammer MBE48B200BTS (residential only)

Cutler-Hammer MBE88B200BTS (residential only)

General Electric TSL420SCU (residential only)

Milbank U3584-O-200UG (residential only)

Siemens MM0406L1200GA (residential only)

Square D SC816D200C (residential only)

Thomas & Betts TBMB20SN (residential only)

Thomas & Betts TBMB20SLBN (residential only)

Notes:

1. All residential combination meter panels installed in Chugach's service area shall meet the requirements of SS-1 or shall be reviewed and accepted in writing by Chugach. The products listed above met this service standard, or were reviewed and accepted at the time of publication of these Electric Service Requirements.
2. Chugach does not specify short circuit current ratings for meter disconnect or service disconnect devices. It is the responsibility of the designer and/or installer of the equipment to evaluate and install a device with an AIC rating appropriate for the circumstances.
3. The catalog numbers listed above typically represent the lowest available AIC rating for a particular product.

– Permanent Identification Labelling

Examples of acceptable permanent identification labeling are: 1) 3M Scotchcal 220 cut vinyl decals or, 2) an embossed metal or engraved laminated plastic identification plate attached by screws, rivets or a plastic to metal epoxy adhesive rated for exterior applications with a temperature range of 120° to -40°F. All lettering and numbering for the code designation shall be a minimum of 3/4 inch in height, custom printed ownership decals are acceptable.

1. APPLICANT (person/entity responsible for signing contract/payment)
Name _____
Address _____
City/State/Zip _____
Phone _____
Fax _____
Cellular _____
E-mail _____

2. CONTACT (Individual responsible for coordinating with Chugach)
Name _____
Address _____
City/State/Zip _____
Phone _____
Fax _____
Cellular _____
E-mail _____

3. CURRENT PROPERTY OWNER(S) OF RECORD
Name _____
Address _____
City/State/Zip _____
Phone _____
Fax _____
Cellular _____
E-mail _____

4. LOAD INFORMATION
Description of building _____
Total demand load in kW _____

5. HEAT SOURCE Gas Electric

6. STREET LIGHTS Yes No

7. LOAD CENTERS Yes No

CIVIL ENGINEER _____
Contact _____
Address _____
City/State/Zip _____
Phone _____
Fax _____
Cellular _____
E-mail _____

ELECTRICAL ENGINEER _____
Contact _____
Address _____
City/State/Zip _____
Phone _____
Fax _____
Cellular _____
E-mail _____

8. PROJECT TITLE _____

9. JOB LOCATION
Address _____
Subdivision _____
Lots/Blocks _____
Grid(s) _____
Legal Description _____

10. SERVICE ENTRANCE
Size (amps) _____
Voltage _____
Type Single-Phase Overhead
 Three-Phase Underground

11. EMERGENCY BACKUP GENERATOR PLANNED?

Yes No

12. BUILDING PROGRESS (at time of application)
 Property Cleared Water/Sewer Installed
 Final Grade Bldg Under Construction
 Lot Corners Marked Temporary power available

If temporary power not available at site, temporary power needed by _____ (date)

13. Date Permanent Service Wanted _____

14. PLANS ATTACHED TO APPLICATION
 Site Plan Paving Electrical
 Subdivision Landscape Gas
 Grade Street Lights
Water/Sewer
 Communications
 Preliminary or Final Plat approved by Municipality

15. Zoning of Property _____
Flood Hazard Permit _____
Wetlands Permit _____

Applicant's Engineers / Contractors / Subcontractors

GENERAL CONTRACTOR _____
Contact _____
Address _____
City/State/Zip _____
Phone _____
Fax _____
Cellular _____
E-mail _____

ELECTRICAL CONTRACTOR _____
Contact _____
Address _____
City/State/Zip _____
Phone _____
Fax _____
Cellular _____
E-mail _____

| | | |
|------------------------------------|--------------------|-------------------|
| APPLICANT'S SIGNATURE _____ | TITLE _____ | DATE _____ |
|------------------------------------|--------------------|-------------------|

