

	<p>CITY OF DANA POINT</p> <p>COMMUNITY DEVELOPMENT, BUILDING AND SAFETY</p> <p>33282 Golden Lantern, Suite 209 Dana Point, CA 92629 949 248-3594</p> <p>www.danapoint.org</p>		B027-ELECT SVC
			<p>2016 CALIFORNIA CODES</p> <p><small>CODE CYCLE</small></p>
			<p>01/01/2017</p> <p><small>EFFECTIVE DATE</small></p>
RESIDENTIAL ELECTRICAL SERVICE			

The following explains the requirements for Temporary Power and/or Service Meter change outs, as adopted by the City of Dana Point, following the SDG&E guidelines. When site conditions dictate that a different approach is required, any other than standard installation of the temporary power system may be approved on an individual basis and must have approval of the Building Official and SDG&E.

TYPES OF SERVICE

NEW CONSTRUCTION and MAJOR RENOVATION

All new dwellings and dwellings that are renovated to a point that exceeds 50% of the total floor area are required to have the electric service and utilities underground.

ADDITION AND/OR RENOVATION

A residential addition and/or renovation that remains inhabited and the work does not affect the existing service may continue to use the residential power provided the electrical service remains safe for the residence and the work can be performed safely and GFCI protection is provided for all construction outlets.

A residential addition and/or renovation involving work where the existing overhead service or the change out and/or relocation of the service is in the new construction zone may be required to install a “Power Pole” for the duration of the construction. Upon completion and inspection approval, energizing of the permanent service panel will be allowed.

A residential addition or renovation consisting of a service change and a complete rewire may require installation of a power pole.

POWER POLE

A power pole is a self-contained, separate service, either overhead or underground, installed with a dedicated outdoor weather resistant meter service panel and GFCI protection of all circuits. The power pole shall be installed on the building site, shall include a driven ground rod and be located outside of the construction zone. The address of the power pole shall be visible from the street and have a minimum 3” lettering.

POWER PEDESTAL

A power pedestal is a self-contained outdoor weather resistant underground service. Usually associated with landscape or other outdoor electrical requirement installed on a permanent basis. Pedestals sit on a concrete pad and the grounding rods are positioned inside of the housing. The address of the power pedestal shall be visible from the street and have a minimum 3” lettering.

RESIDENTIAL SERVICE CONVERSION TO POWER POLE

The conversion of a residential service to a temporary construction service is permitted when the service is located outside the construction zone or is dedicated specifically to the construction power and is deemed electrically safe. This type of service may be used for the duration of the construction project. This type of temporary service requires the removal of all of the existing circuits and installation of dedicated GFCI protected outlets for the construction equipment. Existing panels that are not listed for outdoor use or have exposed or missing knockouts shall have weather protection, a dead front panel installed without open spaces and knockouts closed and sealed. The service panel must be supported by the existing wall framing. The service panel shall not be solely supported by the service riser. Existing residential service panels may not be relocated onto a pole, fence, fence post, wall or tree.

Any other type of temporary electrical service not specifically listed above is subject to an individual review and approval by the Building Official and SDG&E.

RESIDENTIAL SERVICE CHANGE OUT

Replacement or upgrades of a residential meter panel typically consist of changing from a 100 amp to a 200 amp panel. Contact the SDG&E service planner for their requirements and to set up the job coordination.

Generally the utility will disconnect in the morning and re-connect the same afternoon provided the panel passes preliminary panel inspection. After inspection the city will release the meter to the utility company. Call in your inspection request the day before your scheduled date from the utility.

The new panel must be installed per the 2016 California Electric Code (CEC) and be listed for outdoor use and approved by the utility. Changes in location must be approved by the utility company and working clearances shall be provided. If replacement of the underground service conduit is required, this conduit is inspected by the utility company. When re-construction is in excess of 50% an underground service is required.

UTILITY REQUIREMENTS

APPLICABLE CODES

The service from the utility to the meter is covered by the utility regulations and includes all systems up the meter socket. The actual panel and all user side wiring and related electrical components must comply with the 2016 California Electrical Code.

Utility regulations prohibit users, including Owner/Builders, Electrical Contractors, Maintenance Workers or any other person from accessing the utility side of the service. This includes removal and reset of the meter and panel replacement without an SDG&E provided disconnect.

Unauthorized Service changes, modifications or access into the utility side of the service constitutes an electrical hazard and is subject to an immediate hazard disconnecting order.

LIKELY TO POSE A HAZARD NOTIFICATION

If, during any inspections, the electrical service is found to have the potential to pose a hazard, a "Likely to Pose a Hazard" letter is required to be sent to the utility. This will prompt a notification from the utility, advising of the removal and disconnection of the electrical service within seven (7) days. An additional inspection, inspection fee and verification of the hazard removal is then required.

IMMEDIATE HAZARD NOTIFICATION

If, during any inspections, the electrical service is found to be unsafe and pose a hazard, an “Immediate Hazard” letter is required to be sent to the utility. This will prompt an immediate removal and disconnection of the electrical service within 24 hours. An additional inspection, inspection fee and verification of the hazard removal is then required for restoration.

SERVICE WORK ORDER

All temporary service installations require a San Diego Gas and Electric service work order. This work order details the approved connection point, location of the temporary power pole, utility requirements/standards and utility inspection information. For projects that also require a service change out, a separate work order is prepared for both the temporary power and the new service installation.

All new services shall be installed underground. In some areas of the city, a lack of underground easement may allow the installation of an overhead service with provisions for a future conversion to underground service at the owner’s expense. This exemption request shall be in writing and must have documented proof of the reasons and/or mitigating circumstances requiring the overhead service. Each request is reviewed by the Building Official.

TYPICAL CONDUCTOR/CONDUIT CHART

SINGLE FAMILY RESIDENTIAL CONDUCTOR / CONDUIT SIZE CHART

Service Main Amps	Entrance Conductors Thhn /thwn	Rigid metal Conduit Mast/Riser	Grounding Electrode Conductor	Cold water / Gas bond	Grounding Electrode (Ufer)	Grounding Electrode (Ground rod)
100	4 AWG	1”	8 AWG	10 AWG	8 AWG	8 AWG
125	2 AWG	1”	8 AWG	10 AWG	8 AWG	8 AWG
200	2/0 AWG	1-1/2”	4 AWG	8 AWG	4 AWG	6 AWG
400	400 KCMIL	2-1/2”	1/0 AWG	8 AWG	4 AWG	6 AWG

ELECTRICAL UTILITY RELEASE

POWER POLE TEMPORARY SERVICE

This release is used for temporary power poles and temporary residential power for construction (long term).

RESIDENTIAL FINAL

This release is performed after Building Final and Certificate of Occupancy. It removes the electrical service from the construction rate and temporary status and allows the standard residential rate to apply.

INSPECTIONS

All Services require a permit and inspection by the City of Dana Point Building and Safety Division. Inspections may be required by both the City of Dana Point and SDG&E. Refer to your SDG&E service work order for utility inspections. At the time of inspection the following items are required:

- Electrical permit required and Inspection card posted on site.
- Address posted on power poles and pedestals. 3" minimum height letters.
- Electric meter panel secured to framing member.
- Dead front installed, secure, and all circuits labeled on inside cover.
- Proper phasing for multi-conductor Romex®. (Red & Black conductors to separate legs).
- 240 v circuit breaker handles and DW / GD circuit breaker handles tied with a listed handle tie.
- Interior of panel complete. All conductors landed.
- Single wire to each breaker (no double lug wires allowed)
- Neutrals and grounds to be landed and a single lug per wire per panel listing.
- Proper wire size. See wire size schedule.
- Minimize splices in panel box enclosures.
- Anti-oxidant on all aluminum conductors and proper splice nuts for al/cu connections (purple).
- Clear working space of 30" required.
- No open knockouts. Plug empty holes.
- Spare or future circuits not landed to a circuit breaker shall be capped (wire nut) and space must be available on the bus bar for the future breakers.
- Grounding conductor to be sized according to panel data plate rating.
- Run grounding conductor through a knock out with a clamped connector.
- Bonds to include the water piping (metallic) & the customer side of the gas piping. (250-104)
- Ufer ground or ground rod clamps secure and accessible. Exposed rod clamps to be acorn type.
- Grounding conductor exposed on the outside of the building to be supported.
- Meter height 4' 6" minimum - 6' 3" maximum from finish grade.
- Nonmetallic cable(s) (Romex) to be clamped and/or stapled and proper guard strips (nail plates).
- J boxes and LB boxes to be secured and sealed (caulked) at the exterior moisture barrier.
- The stucco lath repair around the service panel requires inspection for proper flashing and stucco wire. Minimum 4" vertical lap and 2" horizontal lap on stucco lath paper.