



SERVICE INSTALLATIONS		
DPP NUMBER	DPP 500 P III-417	
EFFECTIVE DATE	10/03/2019	SUPERSEDES 6/26/2017
APPROVED BY	<i>Debra Smith</i>	DATE 10/03/2019

1.0 PURPOSE

To establish policy for charging customers for the costs of installation of new, additional, modified or temporary electric service, service removals, relocations and other distribution system modifications that may be necessitated by development, and customer-requested engineering, design work, and field services.

2.0 POLICY

Installation charges shall recover all labor and upfront material costs incurred by the Department while performing work to install, modify, or remove customer connections.

2.1 **Estimates.** Estimates are provided on request, and without upfront charge. To be honored, estimates must be accepted and paid within 120 days, and the Department's work must commence within one year, without scope changes. Any engineering design time beyond what is required to prepare a high-level simple cost estimate (typically 8 hours of design time or less) shall be billed to the customer.

2.2 **Temporary Service Installations.** Temporary services are intended to provide delivery from the Department's distribution system to the point of termination at the customer's equipment energized by the Department on a temporary basis. Temporary services may be single or three-phase and are most commonly used during construction of a building.

Temporary service installations are billed separately from permanent service installations. However, the cost for material installed for a temporary service that is used in the permanent service will be excluded from the installation charge or credited against the permanent service installation charge.

Temporary services should be removed no later than one year from date of installation. Extensions may be granted with Department approval.

Temporary service electrical usage shall be billed at Small General Service rates.

2.3 **Permanent Service Installations.** Permanent services provide energy delivery from the Department's distribution system to the point of termination at the customer's equipment energized by the Department on a permanent basis. Installation charges for permanent services should recoup all labor and material costs incurred. In addition, an Amp Fee will also be assessed on all new and modified permanent services.

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**2.3.1 Amp Fee.** In addition to charges for labor and material costs, all permanent services shall be charged an Amp Fee (see Table 1) that reflects the amperage of new capacity added to the distribution system. Amp Fees will be identified and listed separately from other installation charges and are not included in time and materials threshold calculations.

**2.4 Installation Charges.** The following charging policies apply to both temporary and permanent installations. Cost thresholds are inclusive of all estimated charges.

**2.4.1 Fixed Charges.** Installation of services where the total cost is estimated to be **less than or equal to** \$50,000 (Looped Radial)/\$100,000 (Network) are charged fixed costs.

Charges are based on all labor and material costs incurred for typical segments of work that would be included in the installation services. Cost assumptions are based on data maintained in the Department's Work and Asset Management System (WAMS) and are typically updated annually, or in response to material changes in costs. WAMS is the Department's system of record for all labor and material costs for electric services.

For fixed charge billings, installation charges must be paid in full before any installation work begins, and there is no final billing or refund.

**2.4.2 Time and Materials Installations.** Installations totaling more than \$50,000 (Looped Radial)/\$100,000 (Network) are billed based on actual time and material cost. An advance payment of 20% of the estimate is required before any installation work begins. All fees (including 100% of the estimate) must be paid before service can be approved for connection and energized. A final bill made after the job is completed will adjust for actual time and material cost. If the final bill is not yet available, a preliminary billing (identified clearly as such) may be provided on request.

Final Bills will be revised only in the event of a computational error, or discovery of unbilled additional work outside the scope of the original estimate. If the bill revision totals \$10,000 or more, the Department will immediately notify the customer in writing that a bill revision is forthcoming. Revisions shall only be made within 12 months of issuance of the final bill.

**2.4.3 Payment Arrangements.** In general, payment is required as described in §2.4. Customers may make a written request to the proper level of authority for approval of payment arrangements for installation charges that differ from those described.

**2.5 Additional Types of Work/Service.** The cost of all work performed by the Department specifically arising from customer request should be recouped through upfront charges. Incremental chargeable work includes, but is not limited to, establishing easements, meter enhancements, poles, line extensions, and special connectors. Tables 2-10 describe rates and charges for typical billable work. The following policies pertain to various types of chargeable work, which may be applied to fixed cost or time and materials billings.

**2.5.1 Make Permanent Work.** Rewired services provided with temporary connections by non-Department personnel shall require permanent connection by the Department. The Department may add the connection charges to the customer's billing account if the

customer commissioned the work. In this situation, work may precede the payment of installation charges.

- 2.5.2 *Daily Trip Charge.* The Department shall charge for every trip that is required. There may be more than one trip charge if a crew arrives on site and the installation is not ready as scheduled or does not meet the requirements and the crew has to come back. If the customer makes a specific request for an additional trip to complete service work, the customer will be charged for another trip charge.
- 2.5.3 *Safety Standby.* The Department shall provide safety standby for the contractor while conduit entry is being made into and while conductors are being pulled into energized Department facilities. Standby service charges will be based on the hourly rates in Table 9.
- 2.5.4 *Inspection/Review.* The Department shall provide inspection and review service for contractor-installed equipment and material between the customer's service connection point and the Department's distribution system to assure contractor compliance with Department specifications, standards, and requirements for service. All such inspections and/or reviews shall be charged based on the hourly rates in Table 9.
- 2.5.5 *Space Checks.* Space checks to verify socket to unit panel wiring may be performed at customer request or by Department requirement. Space checks are required for any new multi-unit construction, rewired multi-unit buildings, and may be required following address changes for multi-unit buildings. The costs associated with correcting abnormalities stemming from errors on the part the Department will be borne by the Department.
- 2.5.6 *Line Extensions.* Line extensions include requests for the extension of primary conductors or pole spans line extensions to serve a three-phase load in an area served by single-phase lines. The cost of line extensions is generally charged to the requestor. However, the Department may determine that a requested line extension serves a general need for future growth, in which case costs may be borne by the Department.

Line extensions must be located within established public right-of-way or private property for which the Department has a permanent easement. Customer-owned three-phase line extensions are prohibited.

For underground line extensions, the Department shall furnish and install the necessary conduit system required for the installation of an underground service crossing a street or alley, unless it is installed by a customer's private contractor. Costs required to construct a street crossing include labor and unsalvageable materials, as well as the cost of any construction permits, inspection fees, all backfill, and other restoration costs.

- 2.5.7 *Service Poles and Anchors.* Service poles in the rights-of-way or poles on private property that serve more than one customer are installed and maintained at Department cost. Other poles, such as poles to supply service to mobile homes, will be considered the responsibility of the requesting customer, for both installation and ongoing maintenance.

Service poles and anchors will be placed in accordance with the Requirements for Electric Service Connection. If a customer prefers a pole location with a more expensive installation cost than the least cost alternative, the customer is responsible for all incremental cost.

- 2.5.8 *Pole and line relocations.* Pole and line relocations necessitated by a new or modified service or any type of development activity shall be paid for by the requesting party. The requesting party will also be responsible for communicating with and fulfilling the requirements of any other parties (e.g. telecom utilities) impacted by the relocation. The Department may waive some or all of the portion of the cost requirement if poles block a normal single access (i.e. driveway 20' or less in width) to an existing residence or are found to be in poor condition and needing replacement. Any additional expenses incurred over and above the direct pole replacement cost shall be billed to the requestor.
- 2.6 **Permissible Offsets to Charges.** Construction of utility infrastructure by the customer is allowed under some circumstances. If the overall cost of the project is reduced, contributed work or assets are an allowable offset to charges. (e.g. the customer contributes a vault in a building and easement in lieu of building a vault under the road.) All such agreements are at the discretion of the Department and must be agreed to in advance and documented in an addendum to the service request.
- 2.7 **Contractor Installed Services.** May be allowed at the discretion of the Department. Final connections to the distribution system energizing the customer's service are made solely by the Department, without exception.
- 2.8 **No Standby Service.** Standby or alternate service shall not be installed or provided to customers unless there is a demonstratable public need for such backup service. The Department shall be the sole determinant of whether a request for standby service qualifies as a public benefit. Contracts for standby service that are already in effect will continue to be honored.
- 2.9 **Taxes.** Applicable taxes will be added on to the final billing for the service connection. Fees do not include taxes in the following tables.

**Table 1: Amp Fee**

<b>Voltage</b>	<b>\$/Amp</b>	<b>Amp Credit</b>
120/240 Single-Phase	\$3.83	200
120/208 Single-Phase	\$3.32	231
240/480 Single-Phase	\$7.67	100
277/480 Single-Phase	\$7.67	100
208/120 Three-Phase	\$5.49	133
240/120 Three-Phase (Open Delta)	\$6.34	115
480/240 Three-Phase (Open Delta)	\$12.68	58
480/277 Three-Phase	\$12.68	58
4,160/2,400 Three-Phase	\$109.88	7
13.8k/7,970 Three-Phase	\$364.51	2
26k/15,242 Three-Phase	\$686.76	1

Examples to illustrate the Amp Fee computation for various service types:

**1) New 200 A service at 120/240V Single-Phase:**

Amp Fee = \$3.83/Amp \* (200 Amps -200 Amp Credit) = \$0

**2) New building with two 3000 A and one 400 A service at 208/120V Three-Phase:**

Amp Fee = \$5.49/Amp \* (6400 Amps -133 Amp Credit) = \$34,430.02

**3) Existing service rewired from 4000 A to 5000 A at 480/277V Three-Phase:**

Requested amps: 5000-4000 =1000 A

Amp Fee = \$12.68/Amp \* (1000 Amps -58 Amp credit) = \$11,946.61

**4) Existing service rewired with no increase service size (e.g. 600 A to 600 A)**

Amp Fee = \$0.

**Note: Amp Fee is separate and not included in the \$50,000 (Looped Radial) and \$100,000 (Network) time and material threshold calculations.**

**Table 2: Standard Installation Charges for Temporary Services**

	<b>Overhead Service</b>	<b>Underground Service</b>
<b>Residential and Non-residential</b>	\$700	\$1,375

**Table 3: Standard Installation Charges for Overhead Service**

<b>Single - Phase</b>				
<b>Conductor Size</b>	<b>#2 AL TP</b>	<b>1/0 AL TP</b>	<b>4/0 AL TP</b>	<b>(2) 4/0 AL TP</b>
Conductor Installation (\$/ft)	\$3.63	\$4.02	\$7.50	\$15.00
Hardware Installation	\$37	\$37	\$120	\$240
Each Bridle	\$413	\$413	\$413	\$413
<b>Three-Phase</b>				
<b>Conductor Size</b>	<b>#2 AL QP</b>	<b>1/0 AL QP</b>	<b>4/0 AL QP</b>	<b>(2) 4/0 AL QP</b>
Conductor Installation (\$/ft)	\$4.03	\$4.89	\$8.71	\$17.42
Hardware Installation	\$37	\$37	\$140	\$279
Each Bridle	\$413	\$413	\$413	\$413
<b>Special Connectors</b>				
	<b>Single-Phase</b>		<b>Three-Phase</b>	
	3-4 pos	\$961	4-4 pos	\$1,281
	3-6 pos	\$1,806	4-6 pos	\$2,454
<b>Metering - Single-Phase</b>			<b>Metering - Three-Phase</b>	
	Self-Contained Meter	\$32	Self-Contained Meter	\$383
	Install < 480V CT	\$64	Install < 800A CT	\$510
	Install ≥ 480V CT	\$135	Install ≥ 800A CT	\$766
<b>Additional Charges</b>				
Engineering				\$1,796
Service Assessment				\$536
Install Keybox: Knox				\$897

**Table 4: Standard Installation Charges for Looped Radial Underground Service**

<b>Single-Phase</b>					
<b>Conductor Size</b>	<b>4/0 AL TX</b>	<b>350 AL TX</b>	<b>500 AL TX</b>	<b>(2) 350 AL TX</b>	<b>(2) 500 AL TX</b>
Conductor Installation (\$/ft)	\$7.69	\$9.32	\$11.94	\$18.65	\$23.89
Connections at Pole	\$103	\$162	\$185	\$324	\$369
Connections at Vault/Handhole	\$736	\$736	\$736	\$1,473	\$1,473
Connections at Termination Point	\$736	\$736	\$736	\$1,473	\$1,473
<b>Three-Phase</b>					
<b>Conductor Size</b>	<b>4/0 AL QX</b>	<b>350 KCMIL AL QX</b>	<b>500 KCMIL AL QX</b>	<b>(2) 350 KCMIL AL QX</b>	<b>(2) 500 KCMIL AL QX</b>
Conductor Installation (\$/ft)	\$9.80	\$11.96	\$13.36	\$23.91	\$26.72
Connections at Pole	\$103	\$167	\$190	\$334	\$379
Connections at Vault/Handhole	\$879	\$879	\$879	\$1,758	\$1,758
Connections at Termination Point	\$879	\$879	\$879	\$1,758	\$1,758
<b>Special Connectors</b>					
	<b>Single-Phase</b>		<b>Three-Phase</b>		
	3-3 pos	\$816	4-3 pos	\$993	
	3-4 pos	\$1,017	4-4 pos	\$1,356	
	3-6 pos	\$1,700	4-6 pos	\$2,314	
<b>Extend Conduit Riser on Pole</b>					
		<b>Pole Riser Extension</b>	<b>Extension with Weatherhead</b>		
	3 Inch Conduit	\$339	\$373		
	4 Inch Conduit	\$354	\$500		
	<b>Metering - Single-Phase</b>		<b>Metering - Three-Phase</b>		
	Self-Contained Meter	\$32	Self-Contained Meter	\$383	
	Install ≤ 480V CT	\$64	Install ≤ 800A CT	\$510	
	Install ≥ 480V CT	\$135	Install ≥ 800A CT	\$766	
<b>Additional Charges</b>					
		Engineering	\$1,796		
		Service Assessment	\$536		
		Install Keybox: Knox	\$897		

**Table 5: Easement Charges**

Recording Fee	\$74
Real Estate Agent	\$614

**Table 6: Daily Trip Charges\***

<b>Overhead and Underground Services</b>	
Line Service Crew	\$540
Overhead Pole Crew	\$1,040
Overhead Line Crew	\$1,045
Underground Crew	\$1,073
<b>Meter Services</b>	
Meter Crew (2 Person)	\$507
Meter Crew (1 Person)	\$240
<b>Electrical Reviewer and Inspection Services</b>	
Electrical Reviewer (1 Person)	\$146
Crew Coordinator (1 Person)	\$136
Civil Inspector (1 Person)	\$156

\*Based on travel within service area.

**Table 7: Space Check Charges**

1-4 Meters	\$202
5-8 Meters	\$270
9-20 Meters	\$675
21-100 Meters	\$1,148
Every 100 Meters	\$3,573

**Table 8: Charges for Customer-Requested Meter Enhancements**

	<b>All other services</b>	<b>Live service over 300V</b>
<b>Add KYZ Pulse</b>		
Pulse added to one meter	\$631	\$887
Each additional meter	\$531	\$723
<b>Add load profile to existing meter</b>	<b>All other services</b>	<b>Live service over 300V</b>
First Meter	\$441	\$696
Each additional meter	\$341	\$468
<b>Add modem to existing meter with load profile</b>	<b>All other services</b>	<b>Live service over 300V</b>
First Meter	\$844	\$1,100
Each additional meter	\$717	\$844
<b>Add Virtual Totalizer</b>		
Set up new virtual totalizer with 2 meters totalized		\$255
Each additional modem meter added to a new or existing totalizer		\$64



**Table 9: Standard Hourly Rates**

<b>Hourly rate</b>	<b>Normal</b>	<b>Overtime</b>
Electrical Reviewer	\$146	\$166
Crew Coordinator	\$155	\$171
Civil Inspector	\$135	\$153

**Table 10: Standard Pole Rates**

Pole Delivery	\$415
Pole Install Truckset	\$2,052
Pole Install Handset	\$3,998
Anchor	\$408
Guy Wire	\$604
Pipe Brace Guy Wire	\$691

### 3.0 DEFINITIONS

- 3.1 **Daily Trip Charge.** The trip charge includes the labor duration for average service territory travel time, safety tailboard, material handling/loading, and site setup.
- 3.2 **Enlarged/Expanded Service.** An increase in the electrical load-carrying capacity of a customer's service. At premises having an existing service that exceeds the ampacity limits specified in the "Requirements for Electric Service Connection" manual, load additions that necessitate additional service installation work by the Department are defined as enlarged/expanded services.
- 3.3 **Looped Radial.** The Department's distribution system outside of the network areas that has a single source of supply. Also referred to as "Non-Network".
- 3.4 **Network.** Distribution service from multiple sources of supply operating in parallel, which offers a high degree of reliability. Network service in Seattle can be found in Downtown, South Lake Union, University District and First Hill neighborhoods.
- 3.5 **Point of Termination.** Where the Department's system ends and connects to the electrical system owned by the customer.
- 3.6 **Service.** Energy delivery from the Department's distribution system to the point of termination at the customer's equipment.
- 3.7 **Service Removal.** The removal of all Department-owned electric service equipment including electrical conductors and meters. In the case of very large services, removals may include transformers and transformer meters.
- 3.8 **Service Size (or Service Rating).** The greater of the maximum nameplate ampere rating of the main service disconnect and the main service panel. In the absence of a single main service disconnect, the service rating is defined as the maximum nameplate rating of the main service bus or the rating of the main bus in the service entrance panel, whichever applies. In buildings where multiple services are connected from one service drop or lateral, the service rating for the building shall be the sum of the individual services.

### 4.0 REFERENCES

- 4.1 Seattle Municipal Code Section 21.49 and as the same may be amended or superseded.
- 4.2 Seattle City Light "Requirements for Electric Service Connection" Manual.
- 4.3 City of Seattle Municipal Code Chapter 3.02, the Administrative Code.

**APPENDIX:** Distribution: Posted online at <https://seattlegov.sharepoint.com/sites/SCL/DPP/DPP2013/default.aspx> and at <http://www.seattle.gov/light/policies/>

### REVISION HISTORY:

DATE	CHANGES MADE	REVISED BY
6/9/2017	Revised to update labor and material costs. Collapsed schedules 100-103 into DPP 417 header. Rescinded schedule 104 Temporary Service for short-term season events. Updated Looped Radial/Network limits from \$35k/\$75k to \$50k/\$100k. DPP 422 "Final Connection Costs for Contractor-Installed Services" was noted in DPP 417 although has not been used in several years.	Author: Kirsty Grainger, John Nierenberg, Allan Yamaguchi, Tief Weller, Kelly Enright, Jeanie Ahn Coordinator: Kim Kinney
10/03/2019	Updated fees to align with WAMS entries.  Added language to replace and rescind overlapping policy in DPPs 401-112, 112, 401-116, 116, 401-115, and 505.	Author: Kirsty Grainger, Carsten Croff, Gina Baxter, Tuan Tran, Alan Hall, Eivind Perander, Allan Yamaguchi, Tief Weller, Kelly Enright, Curtis Lu, Shelby Calipes, Christopher Raines,  Coordinator: Kim Kinney