



# Conduct of Engineering Request for Variance or Alternate Method

To display the VAR Request Metadata pane for this document, click File > Info > Properties > Show Document Panel.

## 1.0 General

1.1 Document Number: <b>VAR-10234</b>		1.2 Revision: <b>0</b>	
1.3 Brief Descriptive Title: <b>Circuit length requirements for voltage drop</b>			
1.4 Affected Program: <b>Engineering Standards</b>		1.5 Request Type: <b>Variance</b>	
1.6a Affected Tech Area <b>99</b>		1.6b Affected Buildings <b>Sitewide</b>	
1.7 Requestor: <b>Stromberg, Eric R</b> Organization: <b>ES-EPD</b>			
1.8 Revision History			
Revision Number	Changes and Comments		
<b>R0</b>	Initial issue.		

## 2.0 Affected Conduct of Engineering Program/Documents

2.1 Affected "P" Document: <b>P342 Engineering Standards</b>  If against the P document itself, revision (or <b>N/A</b> ): <b>N/A</b>	2.2 Subordinate or related document(s) [AP, master spec, LANL ESM chapter & section; or code, Order, standard, etc.]: Document Title/No.: <b>D5010, Electrical Service &amp; Distribution</b>  <b>Revision 4</b> Document Title/No.: <i>Enter text..</i> <b>Revision</b> <i>Enter text..</i> Document Title/No.: <i>Enter text..</i> <b>Revision</b> <i>Enter text..</i>
2.3 Section/Paragraph: <b>2.6.1 G.2 and G.3</b>	
2.4 Specific Requirement(s) as Written in the Document(s):  G. Locate panelboards as close to the center of the load area and on the same floor as the branch circuit loads served to meet the following criteria: <sup>73</sup> 1. 2. Maximum 208Y/120V system branch circuit length: 100 ft 3. Maximum 480Y/277V system branch circuit length: 230 ft	
2.5 Contractual, preference, or other basis for requirement in 2.4: <b>The distances given are based on a requirement of 5% voltage drop or less, from the service point to the electrical load. This requirement is found in ASHRAE 90.1. The distances given are calculated with the</b>	

typical size conductor. Greater distances are possible with a conductor of increased size. The footnotes in the ESM indicate this. These requirements should have been written as guidance.

2.6 Type of VAR from ESM Chap 1, Z10 [*Applies only to standards variances*]

Type 2

2.7 Discipline

Electrical

### 3.0 Request Information & Comments

3.1 NCR required (work has occurred)? **No**

If Yes, NCR Number: [Enter text.](#)

3.2 System/Component Affected

OpSystem Acronym & Name **ED\_Electrical Distribution**

System Number or Name [\[Select SystemNumberOrName\]](#)

3.3 Highest ML Level

ML-1

3.4 Proposal with Justification/Compensatory Measures:

Delete sections G.2 and G.3. The voltage drop requirements are already there. As such, G.2 and G.3 are not needed.

This has already been done in the draft version of D5010. The draft version is awaiting an Engineering Standards Board meeting for approval, before it gets posted.

3.5 Attachments

Document Title or Description **N/A**

3.6a Project ID

**N/A**

3.6b: Project Name

**N/A**

3.6c: Code of Record Date

**N/A**

3.7 Duration:

**Lifetime**

3.8a If Finite Period, Start Date:

[Click to enter a date.](#)

3.8b End Date:

[Click to enter a date](#)

3.8c Provide the PFITS number for tracking removal/correction: [\[PFITSNum\]](#)

3.9 USQD/USID required (Nuclear, High/Mod Hazard)? **No**

If Yes, USQD/USID Number [Click here to enter text.](#)

3.10 QA Review for process change matters potentially affecting LANL's NQA-1 implementation

Is a QPA Determination required?: **No** If **Yes**, then: [Choose an item.](#)

QPA Comments: [Enter text..](#)

3.11 POC Determination: **Accept**

POC Comments: [Enter text..](#)

3.12 Management Program Owner's (SMPO) Approval for P341 and APs; P342, ESM, ML-1 and -2, and Contract Matters; and P343

SMPO Determination: **Accept**

Comments: [Enter text..](#)

#### 4.0 Participant Signatures

**NOTE:** DO NOT ADD NAMES FROM WITHIN WORD! Save and close the form first, then do 1-4 below:

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3. Click **Edit Properties** and check out the document if prompted to Enter names using the controls provided, then **Save**

<p>4.1 POC (Management Program Owner's Representative):</p> <p>Stromberg, Eric R</p>	<p>Organization ES-EPD</p>	<p>Signature</p>
<p>4.2 Facility Design Authority Representative</p> <p>[FDARName]</p> <p>FDAR signature not required <input checked="" type="checkbox"/></p>	<p>Organization Enter text..</p>	<p>Signature</p>
<p>4.3 LANL Owning Manager (FOD or R&amp;D/Program)</p> <p>[FODorPrgmMgrName]</p> <p>FOD or Program Manager signature not required <input checked="" type="checkbox"/></p>	<p>Organization Enter text..</p>	<p>Signature</p>
<p>4.4 Quality Reviewer's Name:</p> <p>[QPAName]</p> <p>QPA review/signature not required <input checked="" type="checkbox"/></p>	<p>Organization Enter text.</p>	<p>Signature</p>
<p>4.5 Safety or Security Management Program Owner's Approval for P341 and APs; P342, ESM and Contract Matters; and P343</p> <p>Goen, Lawrence Kenneth</p> <p>SMPO signature not required (Type 1 variance) <input type="checkbox"/></p>	<p>Organization ES-DO</p>	<p>Signature</p>

<p>4.6 Additional Signer 1</p> <p>[AdditionalSigner1]</p> <p>Role: Enter text.</p>	<p>Organization</p> <p>Enter text.</p>	<p>Signature</p>
<p>4.7 Additional Signer 2</p> <p>[AdditionalSigner2]</p> <p>Role: Enter text.</p>	<p>Organization</p> <p>Enter text.</p>	<p>Signature</p>
<p>4.8 CoE Administrator Signature</p> <p>Salazar-Barnes, Christina L</p> <p><u>NOTE:</u> The CoE Admin is always the last signature placed on this document. The date of that signing is the date of this document.</p>	<p>Signature</p>	