

Summary of Modifications/Changes in this Update

This Summary of Changes is for information only.
It is not a part of the referenced document, and should not be used for project documentation.

U.S. Department of Veterans Affairs ♦ Office of Construction & Facilities Management

DATE OF THIS VERSION:

March 1, 2025

TITLE OF DOCUMENT:

Electrical Design Manual

DATE OF VERSION BEING SUPERSEDED (old):

December 1, 2019

DESCRIPTION OF DOCUMENT (previous title, number, other identifying data):

Electrical Design Manual

SUMMARY OF CHANGES IN THIS VERSION:

1. Section 1.1: Adding the requirement that AHJ shall be the final authority to evaluate and adjudicate the interpretations or definitions of any requirements in this standard.
2. Section 1.3: Revising the definition of AHJ.
3. Sections 1.5.1 – 1.5.17: Revising the “Purpose” area of each section to provide consistency and clarity.
4. Section 1.7.1(f): Revising organization name to the Joint Commission (formerly known as the Joint Commission on Accreditation of Healthcare Organizations – JCAHO).
5. Section 1.7.2(b): Adding requirement for the A/E to address VAMCs with own electrical requirements.
6. Sections 1.10, 1.10.2 – 1.10.4: Revising to include overcurrent protection device coordination study in the design phase.
7. Section 3.1(a): Revising to clearly defining that the term “receptacle” implies “duplex receptacle”, and single receptacle must be clearly called out on drawings.
8. Section 3.3: Revising to provide clarity in the equivalent number of receptacles with number of single receptacles.
9. Section 4.1: Revising to add definition of Patient Care Spaces.

10. Section 4.4.2(b): Revising to include the Physical Security Resiliency Design Manual (PSRDM)'s updated classifications of facilities.
11. Section 4.6.1.3: New section. Revising to move requirement of previous section 4.6.2 to this new section.
12. Section 4.6.2: Revising to make this section "Reserved". Previous requirement in this section is being consolidated to new section 4.6.1.3.
13. Section 4.6.3: Revising to clearly require N+1 generator redundancy configuration for the EES of Hospitals.
14. Section 4.7.3: Revising to provide clear requirement of alternate source of power for the EES of Nursing Homes and Limited Care Facilities.
15. Section 4.8.1: Revising to provide clear requirement of alternate source of power for the EES of Other Healthcare Facilities.
16. Section 4.10.1: Revising to include requirement for facilities with new classifications stated in the PSRDM. Revising to standby system to be selectively coordinated.
17. Section 4.10.2: Revising to clarify that N+1 generator redundancy arrangement is required for standby electrical system.
18. Section 5.2.1: Revising to provide latitude for electrical topology design for Ancillary buildings.
19. Section 5.2.2: Revising to replace old building classifications with new PSRDM's building classifications.
20. Section 5.2.4: Replacing old section with this new section to show requirement of circuit breakers for primary side connection of the substation in the body of the EDM. This requirement was shown in the Appendix A single line diagram but was not expressed in the body of the EDM.
21. Section 5.3.1: Revising to incorporate the PSRDM's classifications of buildings and to include the types of patient space that this requirement is applied to.
22. Section 5.5.1: Revise to emphasize that the PG-18-3 Topic 8 must be complied with. This is a repetition of the requirement stated in Section 1.5 of the EDM.
23. Appendix A – Single Line Diagram – Critical and Essential Facilities – EES System Located in a Centralized Area or Energy Center: Revise to edit Title, Legend and General Notes.
24. Appendix A – Single Line Diagram – Critical and Essential Facilities: Revise to edit Title, Legend, Keyed Notes, and General Notes.

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DATE OF THIS VERSION:

December 1, 2019

TITLE OF DOCUMENT:

Electrical Design Manual

DATE OF VERSION BEING SUPERSEDED (old):

December 1, 2015

DESCRIPTION OF DOCUMENT (previous title, number, other identifying data):

Electrical Design Manual for New Hospitals, Replacement Hospitals, Ambulatory Care, Clinical Additions, Energy Centers, Outpatient Clinics, Animal Research Facilities, Laboratory Buildings

SUMMARY OF CHANGES IN THIS VERSION:

Major Changes made in this version:

1. Section 1.1: Revised to provide clarity and consistency with VA latest terminologies. Included a process for deviation request.
2. Section 1.3: Revised to reflect the definition of AHJ from Veterans Health Administration (VHA)'s Office of Capital Asset Management Engineering and Support (OCAMES).
3. Section 1.5.5 (Note): Revised to provide clarity.
4. Section 1.5.8 (Purpose): Revised to provide clarity.
5. Section 1.7.1: Deleted sub-section (j) – Telecommunication Infrastructure Design.
6. Section 1.9.2: Replaced "Signal or Other Plans" with "Other Plans".
7. Section 1.14.10: Revised to provide clarity.
8. Section 1.14.12(a) & (b): Revised to provide clarity.
9. Section 2.1: Revised to provide clarity.
10. Section 2.1.2(a) & (b): Revised to provide clarity.
11. Section 2.1.4: Revised to make floor duct an option for administrative areas.
12. Section 2.1.5: Replaced "Radiology" with "Imaging" to reflect latest terminology.

13. Section 2.1.5(a) & (b): Revised to provide clarity.
14. Section 3.1(a): Revised to provide clarity.
15. Section 3.4.2(b)(2): Revised to provide clarity.
16. Section 3.4.3: Replaced PBPU with PBSW.
17. Section 3.4.6(f): Revised to provide clarity.
18. Section 3.4.8: Revised to change corridor receptacle distance to 15 M (50 ft) spacing and within 7.62 M (25 ft) of corridor ends.
19. Section 4.4.1: Revised to provide clarity in types of generator as required by VHA's OCAMES.
20. Section 4.4.5(c): Revised to include this section.
21. Section 4.6.3(a): Revised to include this section.
22. Section 4.8.1: Replaced "Type 3 Loads" with "Alternate Source of Power".
23. Section 4.8.2: Deleted.
24. Section 4.10.2(a): Revised to provide clarity.
25. Section 5.1(b) & (c): Revised to provide clarity.
26. Section 5.2.2(a): Revised to provide clarity.
27. Section 5.3.3(b): Revised to provide clarity.
28. Section 5.3.4(b): Revised to provide clarity.
29. Section 5.5.1(d): Revised to provide clarity.
30. Section 5.5.1(i): Revised to provide clarity.
31. Section 5.7: Revised to provide clarity.
32. Section 6.2: Revised title and content to match latest terminology to be consistent with VA Master Specification Section 10 25 13. Revised to provide clarity.
33. Section 6.3: Revised to provide consistency.
34. Section 6.3(a)(b): Revised title.
35. Section 6.3(c): Deleted.
36. Section 6.4: Revised title.
37. Section 6.5: Revised title and updated Table 6.5.
38. Index: Deleted.

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U.S. Department of Veterans Affairs ♦ Office of Construction & Facilities Management

DATE OF THIS VERSION (new)

December 1, 2015

TITLE OF DOCUMENT (new title if applicable):

Electrical Design Manual

DATE OF VERSION BEING SUPERSEDED (old):

December 1, 2010

DESCRIPTION OF DOCUMENT (previous title, number, other identifying data):

VA Electrical Design Manual is a guide for electrical engineers and designers for the planning and design of the electrical power distribution and related systems at Department of Veterans Affairs (VA) facilities.

SUMMARY OF CHANGES IN THIS VERSION:

1. Removed Chapters 7: Telecommunications Systems and Chapter 8: Information Technology Rooms Requirements become the base paragraphs for the new Telecommunications and Special Telecommunications Design Manual.
2. Revised format, section numbers, and content resulting from removal of Chapters 7 and 8.
3. Updated references to latest electrical, energy design guidance, codes and technologies.
4. Updated document to comply with Section 508 of the Rehabilitation Act of 1973.
5. Revised embedded HTML links to referenced documents in the VA Technical Information Library (TIL).
6. Updated cover.
7. Removed Chapter 6 Lighting, which is now covered under the new Lighting Design Manual.