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# **RESEARCH LABORATORY VA DESIGN GUIDE**

Department of Veterans Affairs  
Veterans Health Administration  
Office of Research & Development  
with  
Construction Management Office  
Facilities Quality Office  
Standards Service  
202-565-6775

## Foreword

The material contained in the Research Laboratory Design Guide is the culmination of a partnering effort by the Department of Veterans Affairs Office of Research and Development and the Facilities Quality Office. The goal of the Design Guide is to ensure the quality of VA facilities while controlling construction and operating costs.

This document is intended to be used as a guide and a supplement to current technical manuals and other VA criteria in the planning of Research Laboratory facilities. The Design Guide is not to be used as a standard design, and use of this Design Guide does not limit the project Architects' and Engineers' responsibilities to develop a complete and accurate project design that best meets the users' needs and applicable code requirements.

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# **Section 1**

## **Acknowledgments, Introduction, Abbreviations, and Legend of Symbols**

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# Introduction

The Research Laboratory Design Guide is intended to be a graphic consolidation of existing Department of Veterans Affairs standards and criteria. It contains data from the following sources:

- PG-08-1, Master Construction Specifications
- H-08-3, Construction Standards
- PG-08-4, Standard Details
- PG-7610, Equipment Guide List
- PG-08-6, Equipment Reference Manual
- H-7610, Space Planning Criteria
- PG-08-13, Barrier-Free Design Guide
- PG-08-14, Room Finishes, Door, and Hardware Schedule
- Various Design Manuals and other technical criteria pertaining to Architectural, HVAC, Plumbing, and Electrical.
- Consensus information from Research and Development Staff of various VA Medical Centers.
- Research Service

The Design Guide refers to the above mentioned sources when data is either too detailed or too broad to be included in this guide.

The Research Laboratory Design Guide was developed as a design tool to assist the medical profession in better understanding the choices that designers ask them to make, and to help designers understand the functional requirements necessary for proper operation of a Research Laboratory.

The guide plates contained in the Research Laboratory Design Guide are intended as illustrations of VA's furniture, equipment and personnel space needs. They are not meant to limit design opportunities. Equipment shown is not necessarily complete.

**This Design Guide is not intended to be project specific.** While it does contain the majority of spaces that now are required in Research Laboratory, it is not possible to encompass all possible future requirements. Therefore, it is recommended that the project-specific space program be the starting point for an individual project design. In addition, it is important to note that the guide plates are a **generic graphic representation** only. Equipment manufacturers should be consulted for actual dimensions and utility requirements. Use of this Design Guide does not diminish the project Architects' and Engineers' responsibilities to develop a complete and accurate design that meets the user's needs and appropriate code requirements.

# Abbreviations

A.....	ampere	FACS .....	Fluorescent Activated Cell Sorter
AABC .....	Associated Air Balance Council	fc.....	foot-candle
ADA.....	Americans with Disabilities Act	fpm.....	feet per minute
ADP.....	automatic data processing	ft.....	foot
A/E .....	Architect/Engineer	G .....	fuel gas
ai .....	acquisition and installation	gal.....	gallon
AIHA.....	American Industrial Hygiene Association	GFI.....	ground fault interrupter
amp .....	ampere	gwb .....	gypsum wallboard systems
ANSI.....	American National Standards Institute	HEPA .....	high efficiency particulate air
AR .....	as required	hr.....	Hour
ASHRAE.....	American Society of Heating, Refrigeration, and Air Conditioning Engineers	HVAC .....	Heating, Ventilating, and Air Conditioning
at .....	acoustical ceiling tile	kg .....	kilogram
at (sp) .....	acoustical ceiling tile with sprayed plastic finish	kPa.....	kilopascal
c .....	concrete	kW.....	kilowatt
°C .....	degrees Celsius	L.....	liter
CC .....	Contractor Furnished and Installed — Construction Funds for Equipment and Installation	LA .....	laboratory air
CF .....	Construction Funds — For VA Furnishing of Equipment and/or Installation	lab.....	laboratory
cfm .....	cubic feet per minute	lb.....	pound
CM.....	Office of Construction Management	LV .....	laboratory vacuum
cmu .....	concrete masonry unit	lx .....	lux
CS .....	Construction Standard	m.....	meter
dB.....	decibel	MCS.....	Master Construction Specifications
ECC.....	Engineering Control Center	min .....	minimum
ELF.....	equivalent linear footage	mm.....	millimeter
erf .....	epoxy resinous flooring	NEBB .....	National Environmental Balancing Bureau
°F.....	degrees Fahrenheit	NFPA .....	National Fire Protection Association
		NMR.....	Nuclear Magnetic Resonance
		nsf.....	net square feet
		Ø.....	phase

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OSHA .....Occupational Safety and Health  
Administration

Pa .....pascal

PC .....Project Coordinator

PCR.....Polymerase Chain Reactor

prep .....preparation

psf.....pounds per square foot

psi.....pounds per square inch

psig.....pounds per square inch gauge

PVC .....polyvinyl chloride

qty.....quantity

rb .....resilient base

RE .....Resident Engineer

recep .....receptacle

RFI.....radiofrequency interference

RH .....relative humidity

sc.....special coating (high build  
glazed coating)

SD .....Standard Detail

temp .....temperature

typ.....typical

V .....volt

VA.....Department of Veterans Affairs

VAMC .....Veterans Affairs Medical Center

VAV .....variable air volume

VC .....VA Furnished and Contractor  
Installed — Medical Care  
Appropriation for Equipment,  
and Construction Funds for  
Installation

vct.....vinyl composition tile

VV.....VA Furnished and Installed —  
Medical Care Appropriation for  
Equipment and Installation

W .....watt



## Legend of Symbols