

ARIZONA REGISTRAR OF CONTRACTORS

B-4 GENERAL RESIDENTIAL ENGINEERING

SCOPE OF WORK

Construction and repair of appurtenances to residential structures. Work related to electrical, plumbing, air conditioning systems, boilers, and water wells must be subcontracted to an appropriately licensed contractor. This scope includes the CR-21, B-5, and all B-4R sub-classifications. As related to scope information: *Appurtenances means all structures and improvements subordinate to a residence within residential property lines, excluding the residential structure itself, such as driveways, fences, patios, swimming pools, landscaping, sport courts and gazebos. (R49101 Definitions)*

Examination	# of Questions	Minimum Passing Score	Time Allowed
B-4	80	70%	210 Minutes

CONTENT OUTLINE

Subject Area	# of Items
Pools, Spas and Hot Tubs	6
General Concrete	8
General Paving	6
Sitework and Excavating	8
Utilities and Septic Systems	8
Landscaping and Sprinkler Systems	6
Walls and Fences	4
Safety	4
Solar Thermal	15
Photovoltaic Systems	15

REFERENCE LIST

To find reference materials, you may use the link provided or search for the material online via a search engine such as Google. You may also go to PSI's online store at www.psonlinestore.com.

The reference material listed below was used to prepare the questions for this examination. The examination may also contain questions based on trade knowledge or general industry practices. **Except for Code books**, you can base your answers on later editions of references as they become available. For Code questions, the examinations will be based **only** on the edition of the Code book that is listed.

Candidates may use a silent, nonprinting, non-programmable calculator in the examination center.

The following reference material is allowed in the examination center:

Code of Federal Regulations - 29 CFR Part 1926 (OSHA), with latest available amendments, U.S. Government Printing Office, (866) 512-1800 or <http://www.access.gpo.gov/nara/cfr/cfr-table-search.html>

OR

Code of Federal Regulations - 29 CFR Part 1926 Selections by PSI, with latest available amendments, 3210 E Tropicana, Las Vegas, NV 89121, (800) 733-9267, www.psonlinestore.com (See order form at the end of the Candidate Information Bulletin.)

NFPA 70: National Electrical Code, 2008, National Fire Protection Association, 1 Batterymarch Park, Quincy, Massachusetts 02169-9101, (800) 344-3555, www.nfpa.org, ISBN 0877654603

Uniform Solar Energy Code, 2009, International Association of Plumbing and Mechanical Officials (IAPMO), (909) 472-4100, www.iapmo.org

International Building Code, 2009, 2012, 2015, or 2018, International Code Council, (800) 786-4452, www.iccsafe.org

International Plumbing Code, 2009, 2012, 2015, or 2018, International Code Council, (800) 786-4452, www.iccsafe.org

International Residential Code for One- and Two-Family Dwellings, 2009, 2012, 2015, or 2018, International Code Council, (800) 786-4452, www.iccsafe.org

2018 ISPSC International Swimming Pool and Spa Code. www.iccsafe.org

Arizona Administrative Code, Title 18, Chapter 9, Dept. of Environmental Quality Water Pollution Control, www.azdeq.gov

The following reference material is not allowed in the examination center:

Photovoltaic Systems, 2nd edition, 2010, James Dunlap, American Technical Publishers, Orland Park, IL 60467-5756, 800-323-3471, www.go2atp.com

Planning & Installing Solar Thermal Systems: A Guide for Installers, Architects, and Engineers, 2nd edition, 2010, www.irecusa.org

Certified Pool-Spa Operators Handbook, 2006, National Swimming Pool Foundation, www.nspf.com

Pipe and Excavation Contracting, Dave Roberts, 1987, Craftsman Book Company, (800) 829-8123, www.craftsmanbook.com

Guide to Shotcrete, American Concrete Institute, 38880 Country Club Dr, Farmington Hills, MI, 48331, 248-848-3700, www.concrete.org

Fences and Retaining Walls, William McElroy, 1990, Craftsman Book Company, (800) 829-8123, www.craftsman-book.com

Simplified Irrigation Design, Pete Melby, 1995, 2nd Edition

Concrete Pipe Installation Manual, 1995, American Concrete Pipe Association, www.concretepipe.org

Landscaping Principles and Practices, Jack E. Ingels, 2004, 6th Edition, www.cengage.com

Arizona 811: Arizona Blue Stake, Inc., July 2010, 1-800-STAKEIT (782-5348), www.arizona811.com

Construction Planning, Equipment, and Methods, Robert L. Peurifoy, Clifford J. Schexnayder, Aviad Shapira, 2005, 7th edition, McGraw Hill, www.mhhe.com



Contractors Guide to Quality Concrete Construction, 3rd Edition, 2005, American Concrete Institute, 38800 Country Club Drive, Farmington Hills, MI 48333, (248) 848-3700, www.concrete.org

Hot-Mix Asphalt Paving Handbook (MAPH-2), 2000, AASHTO, 444 North Capitol Street NW, Ste 249, Washington DC 20001, bookstore.transportation.org

Candidates are responsible for bringing their own references to the examination center. Reference materials may be highlighted, underlined, annotated and/or indexed prior to the examination session. However, references may not be written in during the examination session. Any candidate caught writing, highlighting, underlining and/or indexing in the references during the examination will be reported to the Arizona Registrar of Contractors. Furthermore, candidates are not permitted to bring in any additional papers (loose or attached) with their approved references. References may be tabbed/indexed with permanent tabs only. (permanent tabs are defined as tabs that would tear the page if removed). Temporary tabs, (defined as Post-It notes, or other tabs that may be removed without tearing the page) are not allowed and must be removed from the reference before the exam will begin. If you are downloading from the Internet, you may bring this reference into the testing center with you as long as it is bound. You can have it spiral bound or you may hole-punch it and put it in a binder.