

**ARIZONA REGISTRAR OF CONTRACTORS
A GENERAL ENGINEERING (COMMERCIAL)**

SCOPE OF WORK

To review the scope of work for a license classification, visit www.roc.az.gov/license-classifications.

Examination	# of Questions	Minimum Passing Score	Time Allowed
A General Engineering	109	70%	240 minutes

CONTENT OUTLINE

Subject Area	# of Items
Sewers	10
Water Piping	5
Gas Piping	6
Paving	10
Excavation, Compaction, and Grading	12
Safety	10
Steel	3
Piles	6
Concrete	10
Traffic Control	6
Electrical Transmission Lines	11
Storm Water Runoff	9
Solar Thermal	8
Photovoltaic Systems	3

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.psionlinestore.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 <https://www.osha.gov/laws-regs/regulations/standardnumber/1926>

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.psionlinestore.com

ASME B31.8 - Gas Transmission and Distribution Systems, 2007 or 2014, American Society of Mechanical Engineers, 22 Law Drive, PO Box 2900, Fairfield NJ 07007, (800) 843-2763, www.asme.org

Uniform Solar Energy Code, 2015, International Association of Plumbing and Mechanical Officials (IAPMO), (909) 472-4100, www.iapmo.org

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

Photovoltaic Systems, 2010 or 2012, 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

Contractors Guide to Quality Concrete Construction, 2005 or 2018, ACI/ASCC, 38800 Country Club Drive, PO Box 9094, Farmington Hills, MI 48333, (248) 848-3700, www.concrete.org

DIPRA Installation Guide for Ductile Iron Pipe, 2000, 2007, 2012 or 2015, Ductile Iron Research Association, 245 Riverchase Parkway East, Suite O, Birmingham, AL 35244, (205) 4028700, www.dipra.org

Pipe and Excavation Contracting, Dave Roberts, 1987 or 2011, Craftsman Book Company, (800) 829-8123, www.craftsmanbook.com

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

Handling and Erection of Steel Joists and Joist Girders, 1987, 2006, or 2008 edition, Steel Joist Institute, 234 W. Cheves Street, Florence, SC 29501, (843) 407-4091, steeljoist.org

Concrete Pipe and Box Culvert Installation Manual, 2007, American Concrete Pipe Association, 683 Grigsby Way, Cedar Hill, TX 75104, (972) 506-7216, ISBN: 960386825, www.concretepipe.org

Lineman's and Cableman's Handbook, Shoemaker and Mack, 12th or 13th Edition, McGraw Hill, shop.mheducation.com

Manual on Uniform Traffic Control Devices for Streets and Highways, 2003 or 2009, US Department of Transportation - Federal Highway Administration, (202) 366-0537, www.fhwa.dot.gov

Design and Construction of Urban Storm Water Management Systems, 1992 American Society of Civil Engineers, www.asce.org

Storm Water Management for Construction Activities, 1992, Environmental Protection Agency, (202) 272-0167, www.epa.gov/npdes/pubs/owm0307.pdf

Construction Planning, Equipment, and Methods, Robert L. Peurifoy, Clifford J. Schexnayder, Aviad Shapira, 2005, 2010 or 2018, McGraw Hill, www.mhhe.com

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



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.