# **EXAM DESCRIPTIONS**

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## ACOUSTICAL CEILINGS CLASS A

Tests a candidate's knowledge of the installation, repair, alteration and extension of any acoustical or suspended acoustical ceiling.

Number of Questions	30
Time allowed (hours)	2

Subject Area	# Quest.
Plan Reading & Estimating	8
Materials	7
Acoustical Installation	10
Safety	5

## References

- Basic Safety. ISBN: 9781323676189. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at www.provbookstore.com.
- <u>Drywall Level 1</u>, 2007. ISBN: 978-0-13-604512-0. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.
- <u>Drywall Level 2</u>, 2009. ISBN: 978-0-13-604480-2. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.
- Florida Building Code 2017 Building, 2017. ISBN: 978-1-60983-687-0. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org

#### **ALARM SYSTEM CONTRACTOR I**

Alarm System Contractor II shall be a person whose business includes the execution of contracts requiring the experience and skill to lay out, fabricate, install, maintain, alter, repair, monitor, inspect, replace, or service any electrical device, signaling device, or combination of electrical devices used to signal or detect a burglary, robbery, or medical emergency operating at less thatn 98 volts. An Alarm System contractor II means an alarm contractor whose business includes all types of alarm systems for all purposes except as provided herein. The applicant shall have no less than seven (7) years practical electrical experience, including a MINIMUM of three (3) years practical electrical experience as a Certified Fire Alarm System Journeyman. The Board may, in its sole discretion, consider a person's formal or vocation eduction as practical experience in the trade. An Alarm System Contractor I shall be registreed with the State of Florida as an EH or EY Contractor.

Number of Questions	50
Time allowed (hours)	2
Subject Area	# Quest.
General Electrical Knowledge	5
Fire & Intrusion Detection & Alarms	24
Power Supplies	5
Notification Appliances & Signaling Circuits	5
Grounding & Bonding	4
Raceways & Boxes	3
Conductors & Cables	3
Special Occupancies	1

## References

Code of Federal Regulations, Title 29, Part 1926, 2012. ISBN: 9780160911576. Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954. Available at http://bookstore.gpo.gov. Candidate printed versions permitted in testing room if exam is open book. OSHA Standards for the Construction Industry is permitted as a substitute for this book.

- NFPA 72 National Fire Alarm and Signaling Code, 2010. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at www.nfpa.org.
- Understanding and Servicing Alarm Systems, 3rd Ed., 1999.
   ISBN:

   978-0750672061.
   Butterworth-Heinemann, 225 Wildwood Ave.,

   Woburn, MA 01801.
   Available at www.amazon.com.

## ALARM SYSTEM CONTRACTOR II

Alarm System Contractor II shall be a person whose business includes the execution of contracts requiring the experience and skill to lay out, fabricate, install, maintain, alter, repair, monitor, inspect, replace, or service any electrical device, signaling device, or combination of electrical devices used to signal or detect a burglary, robbery, or medical emergency operating at less thatn 98 volts. An Alarm System contractor II means an alarm contractor whose business includes all types of alarm systems, other than fire, for all purposes except as provided herein. The applicant shall have no less than seven (7) years practical electrical experience as a certified limited energy systems (F/K/A a low voltage) specialty journeyman. The Board may, in its sole discretion, consider a person's formal or vocation education as practical experience in the trade. An Alarm System Contractor II shall be registered with the State of Florida as an EI or EZ Contractor.

Number of Questions Time allowed (hours)	50 2
Subject Area	# Quest.
General Electrical Knowledge	5
Acoustical Installation	10
Power Supplies	5
Intrusion Detection	17
Notification Appliances & Signaling Circuits	9
Supervisory Stations	4

#### References

- Code of Federal Regulations, Title 29, Part 1926, 2012. ISBN: 9780160911576. Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954. Available at http://bookstore.gpo.gov. Candidate printed versions permitted in testing room if exam is open book. OSHA Standards for the Construction Industry is permitted as a substitute for this book.
- <u>Understanding and Servicing Alarm Systems</u>, 3rd Ed., 1999. ISBN: 978-0750672061. Butterworth-Heinemann, 225 Wildwood Ave., Woburn, MA 01801. Available at www.amazon.com.

#### **ALUMINUM SPECIALTY STRUCTURE CLASS AL**

Aluminum Specialty Structure Category Class "AL": The scope of work of a Class "AL" specialty building contractor shall include and be limited to the fabrication, assembling, handling, erection, installation, dismantling, adjustment, alteration, repair, servicing, and design work, when not prohibited by law, of vinyl and fiberglass screening material, aluminum metal, and associated materials, as set forth below. The scope of work shall include and be limited to screened porches, screened enclosures, pool enclosures, preformed panel-post and beam roofs, mobile home panel roof-overs, residential aluminum metal/glass windows within enclosures, vinyl panel windows within enclosures, single-story self-contained aluminum utility storage structures (not to exceed five hundred (500) square feet), aluminum siding, soffit, fascia, gutters, and awnings. The scope of work shall include masonry concrete work and be limited to foundations, slabs, and block kneewalls not to exceed four (4) feet, incidental to the aluminum and allied materials construction work. This category includes but is not limited to metal, canvas, and storm shutters. The Class "AL" specialty building contractor shall not perform any work that alters the structural integrity of the existing building including, but not limited to, roof trusses, lintels, load-bearing walls, windows, doors, and foundations.

Number of Questions Time allowed (hours)	50 2
Subject Area	# Quest.
Miscellaneous Aluminum Structures & Gutters	6
Concrete	7
Plan Reading & Estimating	7
Safety	6
Screen Rooms, Carports & Patio Covers	8
Screen Enclosures	8
Siding, Soffit & Fascia	8

#### References

- AAF Guide to Aluminum Construction in High Wind Areas, 2010. Aluminum Association of Florida, 13165 McCrory Place, Suite 185, Orlando, FL 33432. Available at http://www.aaof.org/. (Also permitted is the Guide to Aluminum Construction in High-Wind Area ASCE7 Supplement to the 2010 Guide )
- Basic Safety TG, 2009. ISBN: 978-0-136-09875-1. NCCER MATS Testing, 13614 Progress Blvd, Alachua, FL 32615. Available at www.provbookstore.com or http://nccer.pearsonconstructionbooks.com
- Florida Building Code 5th edition Building, 2014. ISBN: Item #:5601L14. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. Available at www.iccsafe.org.
- Study Guide for Residential Carpentry & Repair, 2nd edition, 2014. ISBN: 978-1-269-78561-7. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com

#### **AWNING ERECTION AE**

Awning Erection Category-Class "AE": The scope of work of a Class "AE" specialty building contractor shall include and be limited to the fabrication, erection, and installation of awnings and canopies which become a permanent fixed part of building or structure or which are self-supporting, and the pouring of such footings and slabs on grade as may be necessary and incidental thereto. A Class "AE" specialty building contractor may install such hardware as may be necessary and incidental to the extension and retraction of awnings and canopies. This category applies to awnings that are movable or retractable or the replacement of detachable cloth/synthetic cover material on existing frames. Electrical wiring incidental to the awning may be included in the contract for work, but shall be subcontracted to a licensed electrical contractor. This category includes, but is not limited to, metal, canvas, and storm shutters. In order to be eligible to be certified as a Class "AE" specialty building contractor by the board, the applicant shall have at least three (3) years of practical experience in the category.

Number of Questions	50
Time allowed (hours)	2
Subject Area	# Quest.
Building Codes	15
Design, Plan Reading and Estimating	8
Awnings, Canopies, & Hurricane Shutters	15
Concrete and Reinforcement	6
Safety	6

## References

- Basic Safety. ISBN: 9781323676189. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at www.provbookstore.com.
- **Fabric Awning & Canopy Building Code**, 2010. Industrial Fabrics Association International, Roseville, MN. https://www.ifai.com
- Florida Building Code 2017 Building, 2017. ISBN: 978-1-60983-687-0. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- <u>Hurricane Shutter Designs</u>. APA The Engineered Wood Association, 7011 S. 19th ST, Tacoma, WA 98466. Available at www.apawood.org Candidate printed versions allowed if exam is open book.
- Study Guide for Residential Carpentry & Repair, 2nd edition, 2014. ISBN: 978-1-269-78561-7. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com

## **BURGLAR ALARM ELECTRICAL 2014**

Tests a candidate's knowledge of the design, installation, maintenance, and alteration of burglar alarm circuits and equipment.

Number of Questions Time allowed (hours)	50 2
Subject Area	# Quest.
General Electrical Knowledge	5
Acoustical Installation	10
Power Supplies	5
Intrusion Detection	17
Notification Appliances & Signaling Circuits	9
Supervisory Stations	4

#### References

- <u>American Electrician's Handbook</u>, 16th Edition. ISBN: 978-0071798808. McGraw Hill Glencoe Order Services, P.O. Box 545, Blacklick, OH 43004. Available at www.amazon.com
- Low Voltage Wiring: Security/Fire-Alarm Systems, 2001. ISBN: 978-0071376747. McGraw Hill Glencoe Order Services, P.O. Box 545, Blacklick, OH 43004. Available at www.amazon.com.
- NFPA 70 National Electrical Code, 2014. ISBN: 9781455906727. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at www.nfpa.org.
- <u>Understanding and Servicing Alarm Systems</u>, 3rd Ed., 1999. ISBN: 978-0750672061. Butterworth-Heinemann, 225 Wildwood Ave., Woburn, MA 01801. Available at www.amazon.com.

## **BUSINESS PROCEDURES (ENGLISH OR SPANISH)**

Tests a candidate's knowledge of payroll taxes, workers' compensation, unemployment compensation, lien laws and other laws or subjects that will affect their daily operations as contractors.

Number of Questions Time allowed (hours)	50 3
Subject Area	# Quest.
Business Organization	2
Licensing	3
Lien laws	2
Tax Laws	5
Safety OSHA	3
Labor Laws	5
Contract Management	6
Project Management	6
Estimating & Bidding	4
Financial Management	5
Risk Management	4
Broward County Municipal Code Chapter 9	5

#### References

- FLORIDA NASCLA Contractors Guide to Business, Law and Project Management, 1st. ISBN: 1-934234-92-3 OR 978-1-934234-92-1. NASCLA, 23309 N. 17th Drive, Building 1, Unit 110, Phoenix, AZ 85027. Available at www.nascla.org or www.provbookstore.com. Please note, the Florida Business and Law Study Guide for Contractors (published by Prov) is permitted as a substitute.
- Broward County Code Chapter 9 Contractors, 2016. ISBN: No ISBN. Board of County Commisioners of Broward County, Broward, FL. https://www.municode.com
- Code of Federal Regulations, Title 29, Part 1926, 2012. ISBN: 9780160911576. Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954. Available at http://bookstore.gpo.gov. Candidate printed versions permitted in testing room if exam is open book. OSHA Standards for the Construction Industry is permitted as a substitute for this book.

## CABINETRY - CLASS "CB"

The scope of work of a Class "CB" specialty Building Contractor shall include and be limited to the fabrication and installation of wood cabinets, countertops, bookshelves, and shelving. A Class "CB" specialty Building Contractor shall be allowed to subcontract with other licensed contractors for work directly related to the work set forth below, but which falls within the scope of another licensed trade: (1) Electrical: directly related to the cabinetry work, removal and/or installation of receptacles, lights, switches, and wiring of appliances. (2) Plumbing:: directly related to the cabinetry work, removal and/or installation of sinks, faucets, and all fixtures or appliances. (3) Mechanical: directly related to the cabinetry work, removal and/or installation of ducts and vent pipes for equipment. (4) Ceramic tile: directly related to the cabinetry work, including liquefied petroleum and natural gas systems. (6) Windows: directly related to the cabinetry work, involving existing

openings, which are contiguous to the cabinetry work. In order to be eligible to be certified as a Class "CB" specialty Building Contractor, the applicant shall have at least two (2) years of practical experience in the category.

Number of Questions	50
Time allowed (hours)	2

## Subject Area

Plan Reading & Estimating	6
Cabinet and Millwork Fabrication	8
Cabinet Installation	8
Millwork Installation	8
Cabinet & Millwork Finishing	8
Countertops	6
Safety	6

## References

- Carpentry and Building Construction, 2010. ISBN: 0078797845. McGraw-Hill Companies, Inc, 8787 Orion Place, Columbus, OH 43240-4027.
- Carpentry Level One, Carpentry Fundamentals 2013, 2013. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.
- <u>Carpentry Level Two 2013</u>, 2013. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336.
- Code of Federal Regulations, Title 29, Part 1926, 2012. ISBN: 9780160911576. Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954. Available at http://bookstore.gpo.gov. Candidate printed versions permitted in testing room if exam is open book. OSHA Standards for the Construction Industry is permitted as a substitute for this book.
- Finish Carpentry: A Complete Interior & Exterior Guide, 1995. ISBN: 0-8069-0700-2. Sterling Publishing Company, 387 Park Avenue South, New York, NY 10016. amazon.com
- The Complete Guide to Cabinets and Countertops.
   Black and Decker,

   Quayside Publishing Group DBA Cool Springs Press, 400 First Avenue
   North
   Suite
   400,
   Minneapolis,
   MN
   55401.

   http://www.homedepot.com1591865896/204758064
   Suite
   400,
   Suite
   Suite
- The New Wood Finishing Book, Revised Edition, 2010. ISBN: 1561582999. The Taunton Press, 63 South Main St., P.O. Box 5506, Newton, CT 06470. http://www.amazon.com/Wood-Finishing-Book-Revised-Edition/dp/1561582999

## CARPENTRY CATEGORY CLASS "CA" (ENGLISH OR SPANISH)

Carpentry Category Class "CA": The scope of work of a Class "CA" specialty building contractor shall include the scopes of work of the Finished Carpentry Category, Class "FC," Rough Carpentry Category, Class "RC," and the Cabinetry Category, Class "CB." In order to be eligible to be certified as a Class "CA" specialty builder by the board, the applicant shall have at least three (3) years of practical experience in the category.

Number of Questions	50
Time allowed (hours)	2
Subject Area	<b># Quest.</b>
Plan Reading & Estimating	6

Floor Systems Wall & Ceiling Framing Roof Framing Thermal & Moisture Protection Exterior Finishing Cold-Formed Steel Framing Windows, Doors & Stairs Interior Trim	4 8 4 5 4 2 5
Safety	5

#### References

# Quest.

- BCSI Guide to Good Practice for Handling, Installing, Restraining and Bracing of Metal Plate Connected Wood Trusses, 2013-2015. ISBN: none available. Truss Plate Institute, 583 D?Onofrio Dr., Ste. 200, Madison, WI 53719. Available at support.sbcindustry.com
- Carpentry and Building Construction, 2010. ISBN: 0078797845. McGraw-Hill Companies, Inc, 8787 Orion Place, Columbus, OH 43240-4027.
- Code of Federal Regulations, Title 29, Part 1926, 2012. ISBN: 9780160911576. Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954. Available at http://bookstore.gpo.gov. Candidate printed versions permitted in testing room if exam is open book. OSHA Standards for the Construction Industry is permitted as a substitute for this book.
- Finish Carpentry: A Complete Interior & Exterior Guide, 1995. ISBN: 0-8069-0700-2. Sterling Publishing Company, 387 Park Avenue South, New York, NY 10016. amazon.com
- Florida Building Code 2017 Building, 2017. ISBN: 978-1-60983-687-0. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- Florida Building Code 2017 Residential, 2017. ISBN: 978-1-60983-692-4. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- <u>Setting Tile</u>, 1995. The Taunton Press, 63 South Main St., P.O. Box 5506, Newton, CT 06470. Available at www.taunton.com.

# CLASS "A" GENERAL BUILDING CONTRACTOR (ENGLISH OR SPANISH)

Class "A": The scope of work of a Class "A" General Building Contractor is unlimited as to the type of construction work that may be performed and shall include the construction, repair, alteration, remodeling, addition to, subtraction from, improvement, and demolition of any building or structure, including related improvements to real estate, and excluding electrical, mechanical, plumbing, and liquefied petroleum gas work relating thereto. A Class "A" general building contractor is unlimited as to the height, area, and complexity of a building, structure, or related real property improvements. A Class "A" general building contractor is authorized to perform the work of all the building contractor and specialty building contractor categories and classes. In order to be eligible to be certified as a Class "A" general building contractor by the board, the applicant shall have at least six (6) years of practical building construction trade experience.

Number of Qu	estions
Time allowed	(hours)

Subject Area	# Quest.
Plan Reading & Estimating	10
Sitework	5
Concrete	10
Masonry	5
Structural Steel	10
Carpentry & Metal Framing	10
Roofing	4
Associated Trades	2
Interior Finishes	5
Exterior Finishes	5
Safety	4
Hurricane Zone Building Contractor	5

- 2012 Study Guide for Structural Steel, 2012. ISBN: 978-1-269-08432-Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com
- Architectural Sheet Metal, 7th. ISBN: none available. Sheet Metal and Air Conditioning Contractors National Association, 4201 Lafayette Center Drive, Chantilly, VA 20151-1209. Available At www.smacna.org
- BCSI Guide to Good Practice for Handling, Installing, Restraining and Bracing of Metal Plate Connected Wood Trusses, 2013-2015. ISBN: none available. Truss Plate Institute, 583 D?Onofrio Dr., Ste. 200, Madison, WI 53719. Available at support.sbcindustry.com
- Carpentry and Building Construction, 2010. ISBN: 0078797845. McGraw-Hill Companies, Inc, 8787 Orion Place, Columbus, OH 43240-4027.
- Code of Federal Regulations, Title 29, Part 1926, 2012. ISBN: 9780160911576. Superintendent of Documents. P.O. Box 371954. Pittsburgh, PA 15250-7954. Available at http://bookstore.gpo.gov. Candidate printed versions permitted in testing room if exam is open book. OSHA Standards for the Construction Industry is permitted as a substitute for this book.
- Code of Standards Practice for Steel Buildings and Bridges, 1992. American Institute of Steel Construction, 1 E Upper Wacker Drive, Chicago, IL 60601. https://www.aisc.org
- Design and Control of Concrete Mixtures, 14th,2008. ISBN: 0-89312-217-3. Portland Cement Association Publications, 5420 Old Orchard Rd, Skokie, IL 60077. https://www.researchgate.net
- Excavation and Grading Handbook, 3rd, 2006. ISBN: 978-1-57218-173-1. Craftsman Book Company, 6058 Corte Del Cedro, Carlsbad, CA 92009. https://www.craftsman-book.com
- Florida Building Code 2017 Building, 2017. ISBN: 978-1-60983-687-0. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- Florida Building Code 2017 Residential, 2017. ISBN: 978-1-60983-International Code Council, 4051 West Flossmoor Road, 692-4. Country Club Hills, IL 60478. www.iccsafe.org
- Formwork for Concrete, 2005, 7th Ed.. ISBN: 978-0-87031-177-2. American Concrete Institute, 38800 International Way, Country Club Dr, P.O. Box 9094, Farmington Hills, MI 48333. http://www.concrete.org
- Ortho's All About Masonry Basics, 1st. ISBN: 0-89721-438-2. Meredith Books, 1716 Locust Street, Des Moines, IA 50309-3023. www.ortho.com
- Placing Reinforcing Bars, 9th, 2011. Concrete Reinforcing Steel Institute, 933 North Plum Grove Road, Schaumburg, IL 60173. https://crsi.org
- Roofing Construction and Estimating, 1995. ISBN: 1572180072.

Craftsman Book Company, 6058 Corte Del Cedro, Carlsbad, CA 92009. http://www.craftsman-book.com

# CLASS "C" RESIDENTIAL BUILDING CONTRACTOR (ENGLISH OR SPANISH)

Class "C": The scope of work of a Class "C" Residential Building Contractor shall include and be limited to the construction, remodeling, repair, alteration, and improvement of one (1), two (2), and three (3) residential dwelling units, and accessory use structures in connection therewith, all of which shall not exceed two (2) stories in height. A Class "C" residential building contractor shall not do any electrical, mechanical, plumbing, or liquefied petroleum gas work. In order to be eligible to be certified as a Class "C" residential building contractor by the board, the applicant shall have at least three (3) years of practical building construction trade experience.

Number of Questions	75
Time allowed (hours)	3

Subject Area	# Quest.
Plan Reading	5
Sitework & Foundations	5
Concrete and Reinforcement	12
Masonry	10
Carpentry	12
Roofing	5
Interior Finishes	5
Exterior Finishes	5
Associated Trades	5
Safety	6
Hurricane Zone Residential	5

#### References

- Architectural Sheet Metal, 7th. ISBN: none available. Sheet Metal and Air Conditioning Contractors National Association, 4201 Lafayette Center Drive, Chantilly, VA 20151-1209. Available At www.smacna.org
- BCSI Guide to Good Practice for Handling, Installing, Restraining and Bracing of Metal Plate Connected Wood Trusses, 2013-2015. ISBN: none available. Truss Plate Institute, 583 D?Onofrio Dr., Ste. 200, Madison, WI 53719. Available at support.sbcindustry.com
- Carpentry and Building Construction, 2010. ISBN: 0078797845. McGraw-Hill Companies, Inc, 8787 Orion Place, Columbus, OH 43240-4027.
- ISBN: • Code of Federal Regulations, Title 29, Part 1926, 2012. 9780160911576. Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954. Available at http://bookstore.gpo.gov. Candidate printed versions permitted in testing room if exam is open book. OSHA Standards for the Construction Industry is permitted as a substitute for this book.
- Design and Control of Concrete Mixtures, 14th,2008. ISBN: 0-89312-217-3. Portland Cement Association Publications, 5420 Old Orchard Rd, Skokie, IL 60077. https://www.researchgate.net
- Drywall: Professional Techniques for Great Results, 2012, 4th Ed... ISBN: 978-1-60085-963-2. Taunton Press, 63 South Main Street, P.O. Box 5506, Newtown, CT 06470-5506. www.tauntonstore.com
- Excavation and Grading Handbook, 3rd, 2006. ISBN: 978-1-57218-173-1. Craftsman Book Company, 6058 Corte Del Cedro, Carlsbad, CA

92009. https://www.craftsman-book.com

- Florida Building Code 2017 Building, 2017. ISBN: 978-1-60983-687-0. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- Florida Building Code 2017 Residential, 2017. ISBN: 978-1-60983-692-4. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- Ortho's All About Masonry Basics, 1st. ISBN: 0-89721-438-2. Meredith Books, 1716 Locust Street, Des Moines, IA 50309-3023. www.ortho.com
- Placing Reinforcing Bars, 9th, 2011. Concrete Reinforcing Steel Institute, 933 North Plum Grove Road, Schaumburg, IL 60173. https://crsi.org
- <u>Roofing Construction and Estimating</u>, 1995. ISBN: 1572180072. Craftsman Book Company, 6058 Corte Del Cedro, Carlsbad, CA 92009. http://www.craftsman-book.com

#### CLASS A AIR CONDITIONING CONTRACTOR (ENGLISH OR SPANISH)

Class A Air Conditioning Contractor means a contractor whose services are unlimited in the execution of contracts requiring the experience, knowledge, and skill to install, maintain, repair, fabricate, alter, extend, or design, when not prohibited by law, central air conditioning, refrigeration, heating, and ventilating systems, including duct work in connection with a complete system only to the extent such duct work is performed by the contractor as is necessary to make complete an air-distribution system, boiler and unfired pressure vessel systems, and all appurtenances, apparatus, or equipment used in connection therewith; and any duct cleaning and equipment sanitizing which requires at least a partial disassembling of the system; to install, maintain, repair, fabricate, alter, extend, or design, when not prohibited by law, piping, insulation of pipes, vessels, and ducts, pressure and process piping, and pneumatic control piping; to disconnect or reconnect power wiring on the load side of the disconnect switch and low-voltage heating, ventilating, and air conditioning control wiring; and to install a condensate drain from an air conditioning unit to an existing safe waste or other approved disposal other than a direct connection to a sanitary system. The scope of work for such contractor shall also include any excavation work incidental thereto, but shall not include any work such as liquefied petroleum or natural gas fuel lines within buildings, except for disconnecting or reconnecting changeouts of liquefied petroleum or natural gas appliances within buildings; potable water lines or connections thereto; sanitary sewer lines; swimming pool

Time allowed (hours)	4
Subject Area	# Quest.
Piping	14
Equipment	10
Maintenance	10
Plan Reading	6
Systems & Sizing	25
General Knowledge	10

75

#### References

Number of Questions

ACCA Duct slide rule. Air Conditioning Contractors of America, 2800 Shirlington Road, Suite 300, Arlington, VA 22206. Available at www.acca.org

- <u>Architectural Sheet Metal</u>, 7th. ISBN: none available. Sheet Metal and Air Conditioning Contractors National Association, 4201 Lafayette Center Drive, Chantilly, VA 20151-1209. Available At www.smacna.org
- Code of Federal Regulations, Title 29. Part 1910, 2012. Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954. Available at www.gpo.gov. Candidate printed versions allowed if exam is open book. Also available at http://www.provbookstore.com
- Florida Building Code 5th edition Energy Conservation, 2014. ISBN: Item #:5681L14. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. Available at www.iccsafe.org.
- Florida Building Code 5th edition -Fuel Gas, 2014. ISBN: Item #:5661L14. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. Available at www.iccsafe.org.
- Florida Building Code 5th edition -Mechanical, 2014. ISBN: Item #:5631L14. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. Available at www.iccsafe.org.
- HVAC Duct Construction Standards, 3rd. 2005. ISBN: 978-1-61721-030-3. Sheet Metal and Air Conditioning Contractors National Association, 4201 Lafayette Center Drive, Chantilly, VA 20151-1209. Available at www.bnibooks.com.
- Modern Refrigeration and Air Conditioning, 19th Edition. ISBN: 978-1-61960-199-4. Goodheart-Wilcox Company, Inc., 18604 West Creek Dr., Tinley Park, IL 60477-6243. Available at www.g-w.com.

## CLASS B AIR CONDITIONING CONTRACTOR (ENGLISH OR SPANISH)

Class B Air Conditioning Contractor means a contractor whose services are limited to twenty-five (25) tons of cooling and five hundred thousand (500,000) Btu of heating in any one (1) system in the execution of contracts requiring the experience, knowledge, and skill to install, maintain, repair, fabricate, alter, extend, or design, when not prohibited by law, central air conditioning, refrigeration, heating, and ventilating systems, including duct work in connection with a complete system only to the extent such duct work is performed by the contractor as is necessary to make complete an air-distribution system being installed under this classification; and any duct cleaning and equipment sanitizing which requires at least a partial disassembling of the system; to install, maintain, repair, fabricate, alter, extend, or design, when not prohibited by law, piping and insulation of pipes, vessels, and ducts; to disconnect or reconnect power wiring on the load side of the disconnect switch and low-voltage heating, ventilating, and air conditioning control wiring; and to install a condensate drain from an air conditioning unit to an existing safe waste or other approved disposal other than a direct connection to a sanitary system. The scope of work for such contractor shall also include any excavation work incidental thereto, but shall not include any work such as liquefied petroleum or natural gas fuel lines within buildings, except for disconnecting or reconnecting changeouts of liquefied petroleum or natural gas appliance within buildings; potable water lines or connections thereto; sanitary sewer lines; swimming pool piping and filters; or electrical power wiring on the line side of the disconnect switch.

Number of Questions	75
Time allowed (hours)	4
Subject Area	# Quest.
General Knowledge	12
Piping	14

25
12
8
4

- ACCA Duct slide rule. Air Conditioning Contractors of America, 2800 Shirlington Road, Suite 300, Arlington, VA 22206. Available at www.acca.org
- Architectural Sheet Metal, 7th. ISBN: none available. Sheet Metal and Air Conditioning Contractors National Association, 4201 Lafayette Center Drive, Chantilly, VA 20151-1209. Available At www.smacna.org
- Broward County Code Chapter 9 Contractors, 2016. ISBN: No ISBN. Board of County Commisioners of Broward County, Broward, FL. https://www.municode.com
- Code of Federal Regulations, Title 29, Part 1926, 2012. ISBN: 9780160911576. Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954. Available at http://bookstore.gpo.gov. Candidate printed versions permitted in testing room if exam is open book. OSHA Standards for the Construction Industry is permitted as a substitute for this book.
- Florida Building Code 2017 Energy Conservation, 2017. ISBN: 978-1-60983-695-5. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- Florida Building Code 2017 Fuel Gas, 2017. ISBN: 978-1-60983-691 7. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- Florida Building Code 2017 Mechanical, 2017. ISBN: 978-1-60983-690-0. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- HVAC Duct Construction Standards, 3rd. 2005. ISBN: 978-1-61721-030-3. Sheet Metal and Air Conditioning Contractors National Association, 4201 Lafayette Center Drive, Chantilly, VA 20151-1209. Available at www.bnibooks.com.
- Modern Refrigeration and Air Conditioning, 19th Edition. ISBN: 978-1-61960-199-4. Goodheart-Wilcox Company, Inc., 18604 West Creek Dr., Tinley Park, IL 60477-6243. Available at www.g-w.com.

#### **CLASS B GENERAL BUILDING CONTRACTOR**

Class "B" General Building Contractor: The scope of work of a Class "B" General Building Contractor shall include and be limited to the construction of commercial buildings and single- and multipleresidential dwellings, and accessory use structures in connection therewith, all of which Bshall not exceed three (3) stories in height. A Class "B" general building contractor may remodel, repair, improve, or alter any building or structure, providing such work does not affect the structural members of buildings and structures which are over three (3) stories in height. A Class "B" general building contractor shall not do any electrical, mechanical, plumbing, or liquefied petroleum gas work. In order to be eligible to be certified as a Class "B" general building contractor by the board, the applicant shall have at least four (4) years of practical building construction trade experience.

Number of Questions	75
Time allowed (hours)	3

# Quest.

Subject Area

9 **Plan Reading & Estimating** 5 Sitework 12 Concrete Masonry 8 4 Structural Steel 10 **Carpentry & Metal Framing** 4 Roofing 3 Associated Trades Interior Finishes 4 4 **Exterior Finishes** 7 Safety Hurricane Zone Building Contractor 5

- <u>Architectural Sheet Metal</u>, 7th. ISBN: none available. Sheet Metal and Air Conditioning Contractors National Association, 4201 Lafayette Center Drive, Chantilly, VA 20151-1209. Available At www.smacna.org
- BCSI Guide to Good Practice for Handling, Installing, Restraining and Bracing of Metal Plate Connected Wood Trusses, 2013-2015. ISBN: none available. Truss Plate Institute, 583 D?Onofrio Dr., Ste. 200, Madison, WI 53719. Available at support.sbcindustry.com
- Carpentry and Building Construction, 2010. ISBN: 0078797845. McGraw-Hill Companies, Inc, 8787 Orion Place, Columbus, OH 43240-4027.
- Code of Federal Regulations, Title 29, Part 1926, 2012. ISBN: 9780160911576. Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954. Available at http://bookstore.gpo.gov. Candidate printed versions permitted in testing room if exam is open book. OSHA Standards for the Construction Industry is permitted as a substitute for this book.
- Code of Standards Practice for Steel Buildings and Bridges, 1992. American Institute of Steel Construction, 1 E Upper Wacker Drive, Chicago, IL 60601. https://www.aisc.org
- <u>Design and Control of Concrete Mixtures</u>, 14th,2008. ISBN: 0-89312-217-3. Portland Cement Association Publications, 5420 Old Orchard Rd, Skokie, IL 60077. https://www.researchgate.net
- Drywall: Professional Techniques for Great Results, 2012, 4th Ed.. ISBN: 978-1-60085-963-2. Taunton Press, 63 South Main Street, P.O. Box 5506, Newtown, CT 06470-5506. www.tauntonstore.com
- Excavation and Grading Handbook, 3rd, 2006. ISBN: 978-1-57218-173-1. Craftsman Book Company, 6058 Corte Del Cedro, Carlsbad, CA 92009. https://www.craftsman-book.com
- Florida Building Code 2017 Building, 2017. ISBN: 978-1-60983-687-0. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- Florida Building Code 2017 Residential, 2017. ISBN: 978-1-60983-692-4. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- Formwork for Concrete, 2005, 7th Ed.. ISBN: 978-0-87031-177-2. American Concrete Institute, 38800 International Way, Country Club Dr, P.O. Box 9094, Farmington Hills, MI 48333. http://www.concrete.org
- Ortho's All About Masonry Basics, 1st. ISBN: 0-89721-438-2. Meredith Books, 1716 Locust Street, Des Moines, IA 50309-3023. www.ortho.com
- Placing Reinforcing Bars, 9th, 2011. Concrete Reinforcing Steel Institute, 933 North Plum Grove Road, Schaumburg, IL 60173. https://crsi.org
- Plastering Skills, 1984. ISBN: 0-8269-0657-5. American Society for Testing and Materials, 100 Barr Harbor Drive, P.O. Box C700, West

Conshohocken, PA 19428-2959. gclicense.com

- Residential Steel Framing Construction Guide, 1994. ISBN: No ISBN. Technical Publications, 1442 E. Lincoln Ave., #319, Orange, CA 92665. 1-888-886-7978 www.contractorcampus.com
- Roofing Construction and Estimating, 1995. ISBN: 1572180072. Craftsman Book Company, 6058 Corte Del Cedro, Carlsbad, CA 92009. http://www.craftsman-book.com

## COMMERCIAL POOL/SPA CONTRACTOR CLASS "CPC"

Commercial Pool/Spa Contractor Class "CPC": The scope of work of a class CPC specialty building contractor includes, but is not limited to, the construction, repair, water treatment, and servicing of any swimming pool, hot tub, or spa, whether public, private, or otherwise, regardless of use. The scope of work includes the installation, repair, or replacement of existing equipment, any cleaning or equipment sanitizing which requires at least a partial disassembling, and the installation of new pool/spa equipment, interior finishes, installation of all perimeter and filter piping, construction of equipment rooms or housing for pool equipment, and installation of package pool heaters. However, the scope of such work does not include direct connections to a sanitary sewer system or to potable water lines.

Number of Questions	75
Time allowed (hours)	2
Subject Area	# Quest.
Plan Reading & Estimating	# Quest: 4
5 5	4
Site Preparation, Excavation and Backfilling	7
Pool Shell Construction	20
Interior Surface Preparation and Finishing	15
Tile, Coping and Trimwork	11
Accessory Work	3
Care and Operation	7
Safety	8

#### References

- Code of Federal Regulations, Title 29, Part 1926, 2012. ISBN: 9780160911576. Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954. Available at http://bookstore.gpo.gov. Candidate printed versions permitted in testing room if exam is open book. OSHA Standards for the Construction Industry is permitted as a substitute for this book.
- <u>Design and Control of Concrete Mixtures</u>, 14th,2008. ISBN: 0-89312-217-3. Portland Cement Association Publications, 5420 Old Orchard Rd, Skokie, IL 60077. https://www.researchgate.net
- Florida Administrative Code, Ch. 64E-9, Public Swimming Pools & <u>Bathing Places</u>, 2009. State of Florida, 2600 Blair Stone Road M.S. 3500, Tallahassee, FL 32399. available at http://www.floridahealth.gov/environmental-health/swimming-pools/\_documents/64E-9\_FAC\_Draft\_Rev7\_no\_strike.pdf Candidate printed versions allowed if exam is open book
- Florida Building Code 5th edition Building, 2014. ISBN: Item #:5601L14. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. Available at www.iccsafe.org.
- Guide to Shotcrete
   506R-05,
   1995.
   ISBN: none available.
   American

   Concrete Institute,
   38800 International Way,
   Country Club Dr,
   P.O. Box

   9094,
   Farmington
   Hills,
   MI
   48333.

   https://www.concrete.org/store.aspx
   Kill
   Kills
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- Placing Reinforcing Bars, 9th, 2011. Concrete Reinforcing Steel Institute, 933 North Plum Grove Road, Schaumburg, IL 60173. https://crsi.org
- Pool & Spa Operator Handbook, 2012. ISBN: 0-9815803-9-5. National Swimming Pool Foundation, 4775 Granby Circle, Colorado Springs, CO 80919. www.nspf.org

# CONCRETE PLACING AND FINISHING CLASS "CP" (ENGLISH OR SPANISH)

The scope of work of a Class "CP" specialty building contractor shall include and be limited to the placing and finishing of concrete, mixing or batching of concrete, including flatwork (slabs on grade, sidewalks, etc.), cutting and coring of concrete, and concrete pumping. In order to be eligible to be certified as a Class "CP" specialty building contractor by the board, the applicant shall have at least two (2) years of practical experience in the category. An individual who has a Class "C" engineered paving builder certificate of competency may automatically obtain a Concrete Placing and Finishing Category Class "CP" certificate of competency upon application to the Broward County Central Examining Board of General Construction Trades.

Number of Questions Time allowed (hours)	40 2
Subject Area	# Quest.
Plan Reading & Estimating	4
Properties of Concrete	6
Preparation for Placement	5
Reinforcement	3
Placement & Finishing	8
Specialized Installations & Finishes	4
Quality Control & Curing	6
Safety	4

- Code of Federal Regulations, Title 29, Part 1926, 2012. ISBN: 9780160911576. Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954. Available at http://bookstore.gpo.gov. Candidate printed versions permitted in testing room if exam is open book. OSHA Standards for the Construction Industry is permitted as a substitute for this book.
- <u>Design and Control of Concrete Mixtures</u>, 14th,2008. ISBN: 0-89312-217-3. Portland Cement Association Publications, 5420 Old Orchard Rd, Skokie, IL 60077. https://www.researchgate.net
- Excavation and Grading Handbook, 3rd, 2006. ISBN: 978-1-57218-173-1. Craftsman Book Company, 6058 Corte Del Cedro, Carlsbad, CA 92009. https://www.craftsman-book.com
- Formwork for Concrete, 2005, 7th Ed.. ISBN: 978-0-87031-177-2. American Concrete Institute, 38800 International Way, Country Club Dr, P.O. Box 9094, Farmington Hills, MI 48333. http://www.concrete.org
- Placing Reinforcing Bars, 9th, 2011. Concrete Reinforcing Steel Institute, 933 North Plum Grove Road, Schaumburg, IL 60173. https://crsi.org

# DEMOLITION CATEGORY (NONEXPLOSIVE) CLASS D

The scope of work of a Class "D" specialty building contractor shall include and be limited to the demolition, wrecking, and disassembling of buildings and other structures or parts thereof, and the removal of debris therefrom in such a manner that adjoining structures, properties, and parts thereof, workers, and other persons are not injured. In order to be eligible to be certified as a Class "D" specialty building contractor by the board, the applicant shall have at least two (2) years of practical experience in the category

Number of Questions Time allowed (hours)	50 2
Subject Area	# Quest.
Plan Reading & Interpretation	6
Structural Concrete	6
Structural Masonry	6
Structural Framing	5
Structural Steel	8
Rigging and Cranes	9
Safety	10

## References

- Carpentry Level One, 2006. ISBN: 978-0-13-229268-9. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.
- Code of Federal Regulations, Title 29, Part 1926, 2012. ISBN: 9780160911576. Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954. Available at http://bookstore.gpo.gov. Candidate printed versions permitted in testing room if exam is open book. OSHA Standards for the Construction Industry is permitted as a substitute for this book.
- Florida Building Code 2017 Building, 2017. ISBN: 978-1-60983-687-0. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- Ironworking Level One, 2011. ISBN: 978-0-13-213714-0. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.
- Masonry Level One, 2004. ISBN: 978-0-13-228718-0. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.
- NFPA 241 Safeguarding Construction, Alteration and Demolition
   Operations. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at www.nfpa.org.

## DIRECT BURIAL CABLE TELEVISION (CATV) CONTRACTOR 2014

A Direct Burial Cable Television (CATV) Contractor is an engineering contractor certified by this Board to trench, backfill, and restore paving and concrete block and cement work either incidental to or as a part of the work of installing, repairing, altering or adding to any system of underground cable in the public rights-of-way for the commercial transmission of television signals. Such contractor shall have a qualifying agent with experience and skill gained by at least two (2) years' practical work in this field and who has passed an examination approved by this Board. The scope of work of this classification shall be limited to that work directly involved in performing contract work underground for direct burial of cable for receiving and transmitting community antenna television signals. (Ord. No. 81-43, § 1, 4-21-81)

Number of Questions Time allowed (hours)	50 3
Subject Area	# Quest.
Concrete Materials, Methods & Placement	12
Communication Systems	20
FL DOT Utility Accommodation	8
Earthwork	6
Safety	4

#### References

- Basic Safety. ISBN: 9781323676189. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at www.provbookstore.com.
- FL DOT Utility Accommodation Manual, 2010. State of Florida, 2600 Blair Stone Road M.S. 3500, Tallahassee, FL 32399. Available at www2.dot.state.fl.us/proceduraldocuments/procedures/bin/710020001/7 10020001.pdf. Candidate printed versions permitted in testing room if exam is open book.
- NFPA 70 National Electrical Code, 2014. ISBN: 9781455906727. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at www.nfpa.org.
- Study Guide for General Engineering, 3rd edition, 2014. ISBN: 978-1-269-78657-7. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com

### DRYWALL & LATHING CLASS "DL"

Drywall and Lathing Category Class "DL": The scope of work of a Class "DL" specialty building contractor shall include and be limited to the installation of gypsum drywall products to existing studs, joists, or suspended ceiling channels; the fabrication and installation of all necessary and incidental metal accessories, including non-load bearing studs, runners, hangers, channels, drywall metal suspension accessories, and prefabricated ceiling materials, and the preparation and finish of the drywall surface.

Number of Questions Time allowed (hours)	50 2
Subject Area	# Quest.
Plan Reading & Estimating	6
Materials	7
Lathing	7
Drywall Installation	7
Drywall Finishing	5
Steel Framing	7
Exterior Cladding	3
Interior Specialties & Finishes	4
Safety	4

#### References

## ASTM C1063-12a - Standard Specification for Installation of Lathing & Furring to Receive Interior & Exterior Portland Cement Based Plaster, 2012. American Society for Testing and Materials, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428-2959. Available at

http://www.astm.org/. Candidate printed versions allowed if exam is open book.

- Basic Safety. ISBN: 9781323676189. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at www.provbookstore.com.
- Drywall Level 1, 2007. ISBN: 978-0-13-604512-0. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.
- <u>Drywall Level 2</u>, 2009. ISBN: 978-0-13-604480-2. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.
- Florida Building Code 2017 Building, 2017. ISBN: 978-1-60983-687-0. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- Florida Building Code 2017 Residential, 2017. ISBN: 978-1-60983-692-4. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org

# **ELECTRICAL COMMUNICATION AND SOUND 2014**

Tests a candidate's knowledge of the design, plan, installation, repair, alteration, and maintenance of telephone, data, intercom, and CATV systems.

Number of Questions Time allowed (hours)	40 4
Subject Area	# Quest.
Community antenna television & radio distribution systems	5
Communications Circuits	10
General Electrical Knowledge	5
Network-powered broadband communication systems	15
Radio & Television Equipment	5

#### References

- <u>American Electrician's Handbook</u>, 16th Edition. ISBN: 978-0071798808. McGraw Hill Glencoe Order Services, P.O. Box 545, Blacklick, OH 43004. Available at www.amazon.com
- NFPA 70 National Electrical Code, 2014. ISBN: 9781455906727. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at www.nfpa.org.

#### ELECTRICAL FIRE ALARM 2014

Tests a candidate's knowledge of the design, installation, maintenance, alteration, and testing of fire alarm circuits and equipment.

Number of Questions	50
Time allowed (hours)	2

Subject Area	# Quest.
General Electrical Knowledge	4
Installation Requirements Electrical	10
Initiating Devices	12
Notification Appliances & Signaling Circuits	13
Systems Testing	9

**Supervisory Stations** 

#### References

- <u>American Electrician's Handbook</u>, 16th Edition. ISBN: 978-0071798808. McGraw Hill Glencoe Order Services, P.O. Box 545, Blacklick, OH 43004. Available at www.amazon.com
- Low Voltage Wiring: Security/Fire-Alarm Systems, 2001. ISBN: 978-0071376747. McGraw Hill Glencoe Order Services, P.O. Box 545, Blacklick, OH 43004. Available at www.amazon.com.
- NFPA 70 National Electrical Code, 2014. ISBN: 9781455906727. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at www.nfpa.org.
- <u>Understanding and Servicing Alarm Systems</u>, 3rd Ed., 1999. ISBN: 978-0750672061. Butterworth-Heinemann, 225 Wildwood Ave., Woburn, MA 01801. Available at www.amazon.com.

### **ELECTRICAL SIGN CONTRACTOR 2014**

The scope of certification includes the structural fabrication including concrete foundation, erection, installation, alteration, repair, service and wiring of electrical signs and outline lighting. The scope of certification shall not include the provision of, or any electrical work beyond, the last disconnect mean or terminal points. However, a contractor certified under this section may provide the electrical entrance requirements for metering and main disconnect of remote billboards or signs which are independent of any structure or building and which require no more than twenty-five (25) kilowatts at two hundred fifty (250) volts maximum (61G6-7.001).

Number of Questions	40
Time allowed (hours)	2
Subject Area	# Quest.
Basic Electricity & Wiring	6
Electrical Signs & Outline Lighting	16
Grounding & Bonding	4
Motors & Controls	3
Transformers	3
Wiring & Protection	4
Wiring Methods & Materials	4

#### References

- <u>American Electrician's Handbook</u>, 16th Edition. ISBN: 978-0071798808. McGraw Hill Glencoe Order Services, P.O. Box 545, Blacklick, OH 43004. Available at www.amazon.com
- NFPA 70 National Electrical Code, 2014. ISBN: 9781455906727. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at www.nfpa.org.

#### **ELEVATOR ELECTRICAL 2014**

Elevator Specialty Electrical Contractor means the scope of certification includes and is limited to the electrical portion of the installation, repair, assembly, service and maintenance of elevators, conveyors, electrified dumbwaiters, escalators and moving sidewalks and all automatic and manual controls, signal systems and all other devices and manual controls, and electrical wiring appurtenant to the safe and efficient operation of such elevators. However, the scope of such certification shall not include work beyond the last disconnecting means or the terminal equipment adjacent to or in the elevator shaft or designated construction area. As regulated under Florida Statute, a person who has passed a competency examination as an Elevator Specialty Electrical Contractor may perform these or related tasks or may supervise persons in his employ in the execution of these tasks.

Number of Questions	50
Time allowed (hours)	2

Subject Area	# Quest.
Commercial Elevators & Lifts	15
Construction Elevators	4
Dumbwaiters	3
Emergency Service & Signaling Devices	5
Escalators	5
General Electrical Knowledge	5
Moving Walks	3
Residential Elevators & Lifts	5
Safety	5

## References

- ISBN: 978-American Electrician's Handbook, 16th Edition. 0071798808. McGraw Hill Glencoe Order Services, P.O. Box 545, Blacklick, OH 43004. Available at www.amazon.com
- ASME A17.1-2010 Safety Code for Elevators and Escalators, 2010. ISBN: 978-0-7918-3311-7. American Society of Mechanical Engineers, Three Park Avenue, New York, NY 10016-5990. Available at http://www.asme.org/shop/.
- ASME A17.3-11 Safety Code for Existing Elevators and Escalators, 2011. ISBN: 978-0-7918-3359-9. American Society of Mechanical Engineers, Three Park Avenue, New York, NY 10016-5990. Available at http://www.asme.org/shop/.
- NFPA 70 National Electrical Code, 2014. ISBN: 9781455906727. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at www.nfpa.org.

## ELEVATOR INSTALLATION AND MAINTENANCE CATEGORY CLASS "E"

Elevator Installation and Maintenance Category Class "E": The scope of work of a Class "E" specialty building contractor shall include and be limited to the construction, installation, maintenance, repair, alteration, and extension of elevators, dumbwaiters, escalators, or any vertical conveyance. In order to be eligible to be certified as a Class "E" specialty building contractor by the board, the applicant shall have at least four (4) years of practical experience in the category

Number of Questions Time allowed (hours)	50 2
Subject Area	# Quest.
Commercial Elevators & Lifts	15
Construction Elevators	4
Dumbwaiters	3
Emergency Service & Signaling Devices	5
Escalators	5
General Electrical Knowledge	5

Moving Walks	3
Residential Elevators & Lifts	5
Safety	5

#### References

- American Electrician's Handbook, 16th Edition. ISBN: 978-0071798808. McGraw Hill Glencoe Order Services, P.O. Box 545. Blacklick, OH 43004. Available at www.amazon.com
- ASME A17.1-2016 Safety Code for Elevators and Escalators, 2016. ISBN: 9780791871096. American Society of Mechanical Engineers, Three Park Avenue, New York, NY 10016-5990. Available at http://www.asme.org/shop/.
- ASME A17.3 2015 Safety Code for Existing Elevators and Escalators, ISBN: 9780791870259. 2015. American Society of Mechanical Engineers, Three Park Avenue, New York, NY 10016-5990. Available at http://www.asme.org/shop/.
- ASME A17.5-11 Elevator and escalator electrical equipment, 2011. ISBN: 978-1-55436-757-3. American Society of Mechanical Engineers, Three Park Avenue, New York, NY 10016-5990. Available at http://www.asme.org/shop/.
- ASME A18.1 Safety Standard for Platform Lifts and Stairway Chairlifts, 2014. American Society of Mechanical Engineers, Three Park Avenue, New York, NY 10016-5990. Available at http://www.asme.org/shop/.
- Code of Federal Regulations, Title 29, Part 1926, 2012. ISBN: 9780160911576. Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954. Available at http://bookstore.gpo.gov. Candidate printed versions permitted in testing room if exam is open book. OSHA Standards for the Construction Industry is permitted as a substitute for this book.
- NFPA 70 National Electrical Code, 2014. ISBN: 9781455906727. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at www.nfpa.org.

## FABRIC AWNING CLASS "AF"

Fabric Awning Contractors are those who are qualified to manufacture, install, maintain, repair, alter or extend detachable cloth/synthetic cover material over a rigid metal designed to be used as a protection against sun and weather. Electrical wiring required for the purpose of lighting the awning may be included in the contract for work, but must be subcontracted to a Certified Electrical Contractor.

Number of Questions Time allowed (hours)	50 2
Subject Area	# Quest.
Building Codes	10
Design, Plan Reading and Estimating	12
Awning Installation & Attachment	19
Safety	9

- All about Awnings. Professional Awning Manufacturers Association, 1801 County Road В West, Roseville, MN 55113. http://www.awninginfo.com/commercial\_awning\_architects\_resources.ht ml Candidate printed copies allowable
- **Carpentry Level One**, 2006. ISBN: 978-0-13-229268-9. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at

http://nccer.pearsonconstructionbooks.com.

- <u>Core Curriculum: Introductory Craft Skills Basic Safety</u>, 2009. ISBN: 978-0-136-09875-1. NCCER, 13614 Progress Blvd., Alachua, FL 32615. Available at http://nccer.pearsonconstructionbooks.com.
- Florida Building Code 2017 Building, 2017. ISBN: 978-1-60983-687-0. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org

## FENCING ERECTION CLASS "F" (ENGLISH OR SPANISH)

Fence Erection Category Class "F": The scope of work of a Class "F" specialty building contractor shall include and be limited to the fabrication, manufacture, construction, assembling, erection, maintenance, extension, and installation of wire, wood, metal, PVC, or plastic components, or precast or prefabricated fences, railings and the posts and foundations necessary and incidental thereto,

Number of Questions	75
Time allowed (hours)	2

Subject Area	# Quest.
Plan Reading & Estimating	7
Layout & General Math	11
Wood Fencing	15
Masonry Fencing	14
Metal & Chain Link Fencing	12
Safety	12
Hurricane zone Fencing	4

#### References

- Code of Federal Regulations, Title 29, Part 1926, 2012. ISBN: 9780160911576. Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954. Available at http://bookstore.gpo.gov. Candidate printed versions permitted in testing room if exam is open book. OSHA Standards for the Construction Industry is permitted as a substitute for this book.
- Fences and Retaining Walls, 1990. ISBN: 0-934041-53-9. Craftsman Book Company, 6058 Corte Del Cedro, Carlsbad, CA 92009. Available at www.craftsman-book.com.
- Florida Building Code 2017 Building, 2017. ISBN: 978-1-60983-687-0. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org

## FINISHED CARPENTRY CATEGORY CLASS "FC"

The scope of work of a Class "FC" specialty building contractor shall include and be limited to cabinet installation, saunas, woodwork, wood floor surface materials, doors, nonstructural framing, wood stairs, handrails, garage doors, and windows, and hardware incidental thereto, trim shelving, including soffits and fascias, siding, and related work. A Class "FC" specialty building contractor may pull permits for windows, doors, and garage doors. A Class "FC" specialty building contractor who obtained said certification prior to April 20, 2010, may perform all work and activities of a Rough Carpentry "RC" specialty building contractor. In order to be eligible to be certified as a Class "FC" specialty builder by the board, the applicant shall have at least two (2) years of practical experience in the category.

# Number of Questions50Time allowed (hours)2

Subject Area	# Quest.
Plan Reading & Estimating	6
Building Materials, Fasteners & Adhesives	6
Windows & Exterior Doors	5
Exterior Finishing	6
Doors & Hardware	6
Interior Trim	5
Cabinet Installation	5
Safety	5
Stairs	6

#### References

- <u>Carpentry and Building Construction</u>, 2010. ISBN: 0078797845. McGraw-Hill Companies, Inc, 8787 Orion Place, Columbus, OH 43240-4027.
- Code of Federal Regulations, Title 29, Part 1926, 2012. ISBN: 9780160911576. Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954. Available at http://bookstore.gpo.gov. Candidate printed versions permitted in testing room if exam is open book. OSHA Standards for the Construction Industry is permitted as a substitute for this book.
- Finish Carpentry: A Complete Interior & Exterior Guide, 1995. ISBN: 0-8069-0700-2. Sterling Publishing Company, 387 Park Avenue South, New York, NY 10016. amazon.com
- Florida Building Code 2017 Building, 2017. ISBN: 978-1-60983-687-0. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- Florida Building Code 2017 Residential, 2017. ISBN: 978-1-60983-692-4. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org

## FIRE ALARM SYSTEM JOURNEYMAN

Journeyman Fire Alarm: The term Journeyman shall mean any person who possesses the required skill, knowledge and experience, as evidenced by three (3) years' proven experience in the trade or craft, or education equivalent thereto, or a combination thereof, but not more than one-half (1/2) of such experience may be education equivalent, and who has passed an examination in his or her particular trade or craft and possesses a valid certificate of competency as a journeyman in such trade or craft. There shall be at least one (1) journeyman for every three (3) trainees on each construction or installation job site for which a permit is required, and which involves a trade in which journeyman are required and certified. It shall be the responsibility of the employing contractor, and the qualifying agent, to provide journeymen on each job site in accordance with this section, and failure to do so shall be a violation of this chapter, subject to the penalties provided herein, and provided under Section 1-5 of this Code. In addition, any work in the trade concerned on any such job site wherein journeymen are not provided in accordance with this section shall be stopped by the enforcing agency or administrative agency concerned until journeymen are so provided. Further, any person working at a trade which requires journeymen on the job site where no journeyman or master in the trade concerned is present shall be in violation of this chapter and subject to the penalties provided herein, and provided under Section 1-5 of this Code. A

journeyman may only work in the employ of a contractor holding a certificate of competency in the field in which the journeyman is certified. Journeymen shall be required in the electrical, plumbing and mechanical trades. Journeymen are required to earn continuing education credit during each term the personal certificate of competency is valid as established in this chapter and as required by the board through written rules or regulations commencing October 1, 1995.

Number of Questions	50
Time allowed (hours)	2

Subject Area	# Quest.
General Electrical Knowledge	5
Initiating Devices	10
Installation Requirements Electrical	11
Notification Appliances & Signaling Circuits	12
Systems Testing	10
Supervisory Stations	2

#### References

- **American Electricians' Handbook,** 15th Edition. ISBN: 978-0-07-149462-5. McGraw Hill Glencoe Order Services, P.O. Box 545, Blacklick, OH 43004. Available at www.amazon.com
- Low Voltage Wiring: Security/Fire-Alarm Systems, 2001. ISBN: 978-0071376747. McGraw Hill Glencoe Order Services, P.O. Box 545, Blacklick, OH 43004. Available at www.amazon.com.
- NFPA 70 National Electrical Code, 2011. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at www.nfpa.org.
- Understanding and Servicing Alarm Systems, 3rd Ed., 1999. ISBN: 978-0750672061 Butterworth-Heinemann, 225 Wildwood Ave., Woburn, MA 01801. Available at www.amazon.com.

# FLATWORK CONCRETE SPECIALTY CONTRACTOR CLASS "FWC(ENGLISH OR SPANISH)

Tests a candidate's knowledge of the components, construction and installation of horizontal and vertical formwork, both site built and prefabricated as well as the installation of reinforcement. Includes the placement and finishing of concrete in forms or on grade and shoring and reshoring of horizontal formwork..

Number of Questions	50
Time allowed (hours)	2
Subject Area	# Quest.
Plan Reading & Estimating	6
Properties of Concrete	6
Preparation for Placement	5
Reinforcement	6
Formwork	5
Placement & Finishing	8
Specialized Installations & Finishes	3
Quality Control & Curing	6
Safety	5

#### References

- ACI 318 Building Code Requirements for Structural Concrete 2014, 2014. ISBN: 978-0-87031-930-3. American Concrete Institute, 38800 International Way, Country Club Dr, P.O. Box 9094, Farmington Hills, MI 48333. Available at http://www.concrete.org/.
- Concrete Finishing Level One, 1998. ISBN: 978-0-13-010246-1. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.
- Concrete Finishing Level Two, 1999. ISBN: 978-0-13-014860-5. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.

#### FLOORING CONTRACTOR CLASS "FL"

A Wood Flooring Contractor must demonstrate knowledge : all local/state/federal regulations and codes, as well as demonstrate proficiency in the installation and repair of laminate, parquet, wood strips, nail and non-nailed wood flooring and prefinished flooring which is prefabricated or cast-in place. Including but not limited to sub-flooring and finishing.

Number of Questions	25
Time allowed (hours)	1

Subject Area	# Quest.
Flooring Finishing	3
Flooring Installation	6
Flooring Materials & Accessories	4
Troubleshooting	3
Job Preparation	4
Subflooring	5

References

- Florida Building Code 2017 Building, 2017. ISBN: 978-1-60983-687-0. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- Wood Flooring: A Complete Guide to Layout, Installation & Finishing. The Taunton Press, 63 South Main St., P.O. Box 5506, Newton, CT 06470.

#### GARAGE DOOR CATEGORY CLASS "GD

A Garage door installer is a person or firm gualified and certified to install, maintain, repair, alter or extend residential or commercial garage doors, including all hardware and operating devices. Onehundred-twenty-volt electrical installation required for the door operating devices may be included in the contract for work but must be subcontracted to a certified or registered electrical contractor.

Number of Questions	50
Time allowed (hours)	2
Subject Area	# Quest.
Garage Doors Installation	18
Garage Doors, Materials & Hardware	17
Garage Door Service, Repair & Maintenance	9
Safety	6

Basic Safety.	ISBN: 9781323676189.	Prentice Hall, P.O. Box 11071,
busic buicty.	15011. 5701525070105.	

Des Moines, IA 50336. Available at www.provbookstore.com.

- Florida Building Code 2017 Building, 2017. ISBN: 978-1-60983-687-0. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- TDS 151 General Code Inspection Guidelines for Garage Doors. Door and Access Systems Manufacturers Association International, 1300 Sumner Avenue, Cleveland, OH 44115-7333. Available at http://www.dasma.com/PubTechData.asp. Candidate printed versions allowed if exam is open book.
- TDS 156 Standard Wood Header and Jamb Detail Guidelines. Door and Access Systems Manufacturers Association International, 1300 Sumner Avenue, Cleveland, OH 44115-7333. Available at http://www.dasma.com/PubTechData.asp. Candidate printed versions allowed if exam is open book
- TDS 157 Garage Doors and Foam Plastic.
   Door and Access Systems

   Manufacturers
   Association
   International,
   1300
   Sumner
   Avenue,

   Cleveland,
   OH
   44115-7333.
   Available
   at

   http://www.dasma.com/PubTechData.asp.
   Candidate
   printed
   versions

   allowed if exam is open book
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   Avenue
   Versions
- TDS 158 Glazing in Garage Doors.Door and Access SystemsManufacturersAssociationInternational, 1300SumnerCleveland,OH44115-7333.Availableathttp://www.dasma.com/PubTechData.asp.Candidateprintedversionsallowed if exam is open bookbookStateState
- TDS 160 Sectional Garage Door Terminology.
   Door and Access

   Systems Manufacturers Association International, 1300 Sumner Avenue,
   Cleveland, OH 44115-7333.
   Available at

   http://www.dasma.com/PubTechData.asp.
   Candidate printed versions
   allowed if exam is open book
- TDS 161 Connecting Garage Door Jambs to Building Framing. Door and Access Systems Manufacturers Association International, 1300 Sumner Avenue, Cleveland, OH 44115-7333. Available at http://www.dasma.com/PubTechData.asp. Candidate printed versions allowed if exam is open book
- TDS 162 Wood Door Finishing Guidelines.
   Door and Access Systems

   Manufacturers
   Association
   International,
   1300
   Sumner
   Avenue,

   Cleveland,
   OH
   44115-7333.
   Available
   at

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- TDS
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   Door
   and Access
   Systems

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   Association
   International,
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   Sumner
   Avenue,

   Cleveland,
   OH
   44115-7333.
   Available
   at

   http://www.dasma.com/PubTechData.asp.
   Candidate
   printed
   versions

   allowed if exam is open book
   Source
   Avenue,
   Candidate
   Candidate
- TDS 164 Drywall Surfaces and the Mounting of Garage Door Hardware. Door and Access Systems Manufacturers Association International, 1300 Sumner Avenue, Cleveland, OH 44115-7333. Available at http://www.dasma.com/PubTechData.asp. Candidate printed versions allowed if exam is open book
- TDS 165 Garage Door Manual Operation. Door and Access Systems Manufacturers Association International, 1300 Sumner Avenue, Cleveland, OH 44115-7333. Available at http://www.dasma.com/PubTechData.asp. Candidate printed versions allowed if exam is open book
- TDS 166 Guidelines for Connecting a Drawbar Operator to a Sectional Garage Door. Door and Access Systems Manufacturers Association International, 1300 Sumner Avenue, Cleveland, OH 44115-7333. Available at http://www.dasma.com/PubTechData.asp. Candidate printed versions allowed if exam is open book.
- TDS 167 Sectional Garage Door & Electric Operator Checklist for

   Home Inspectors and Consumers.
   Door and Access Systems

Manufacturers Association International, 1300 Sumner Avenue, Cleveland, OH 44115-7333. Available at http://www.dasma.com/PubTechData.asp. Candidate printed versions allowed if exam is open book

- TDS
   172 Garage Door Labels.
   Door and Access Systems

   Manufacturers
   Association
   International, 1300
   Sumner
   Avenue,

   Cleveland,
   OH
   44115-7333.
   Available
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   http://www.dasma.com/PubTechData.asp.
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- TDS 179 Wood Garage Door Inspection and Maintenance Guidelines. Door and Access Systems Manufacturers Association International, 1300 Sumner Avenue, Cleveland, OH 44115-7333. Available at http://www.dasma.com/PubTechData.asp. Candidate printed versions allowed if exam is open book
- TDS 181 General Code Inspection Guidelines For Wind Load Rated Garage Doors. Door and Access Systems Manufacturers Association International, 1300 Sumner Avenue, Cleveland, OH 44115-7333. Available at http://www.dasma.com/PubTechData.asp. Candidate printed versions allowed if exam is open book
- TDS 182 Technical Considerations for Dock Doors.Door and AccessSystems Manufacturers Association International, 1300 Sumner Avenue,<br/>Cleveland, OH 44115-7333.Available athttp://www.dasma.com/PubTechData.asp.Candidateprinted versionsallowed if exam is open bookFinite Content of the second second
- TDS 260 Common Rolling Steel Door Installation Problems. Door and Access Systems Manufacturers Association International, 1300 Sumner Avenue, Cleveland, OH 44115-7333. Available at http://www.dasma.com/PubTechData.asp. Candidate printed versions allowed if exam is open book
- TDS 270 Recommended Rolling Door Maintenance Practices for<br/>Building Maintenance Supervisors.Door and Access SystemsManufacturersAssociation International, 1300Sumner Avenue,<br/>Avenue,<br/>Cleveland, OH 44115-7333.Available at<br/>http://www.dasma.com/PubTechData.asp.AttackCandidate printed versions<br/>allowed if exam is open bookCandidate printed versions

## GLAZING CLASS G (ENGLISH OR SPANISH)

The scope of work of a Class "G" specialty building contractor shall also include the installation of metal accessories and prefabricated glass, metal, or plastic curtain walls or panels; caulking incidental to all such work; and fabrication and installation of shower and tub enclosure doors and metal fascias. In order to be eligible to be certified as a Class "G" specialty building contractor by the board, the applicant shall have at least three (3) years of practical experience in the category.

Number of Questions	75
Time allowed (hours)	2
Subject Area	# Quest.
Plan Reading & Estimating	6
Glass & Glazing	17
Plastic & Glazing	4
Sealants	15
Curtain Walls	8
Structural Glazing Systems	5
Bath Enclosures & Mirrors	6
Safety	7
Hurricane Zone Glass and Glazing.	7

- Code of Federal Regulations, Title 29, Part 1926, 2012. ISBN: 9780160911576. Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954. Available at http://bookstore.gpo.gov. Candidate printed versions permitted in testing room if exam is open book. OSHA Standards for the Construction Industry is permitted as a substitute for this book.
- Florida Building Code 5th edition Building, 2014. ISBN: Item #:5601L14. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. Available at www.iccsafe.org.
- GANA Glazing Manual, 50th Anniversary Edition. Glass Association of North America, 800 SW Jackson Street, STE. 1500, Ste. A, Topeka, KS 66612-1200. Available at www.glasswebsite.com.
- GANA Sealant Manual, 2008. Glass Association of North America, 800 SW Jackson Street, STE. 1500, Ste. A, Topeka, KS 66612-1200.

#### GUNITE CATEGORY CLASS "GU"

Tests a candidate's knowledge of preparing, forming, mixing, and applying concrete to various surfaces by hydraulic or pneumatic methods.

Number of Questions Time allowed (hours)	50 2
Subject Area	# Quest.
Plan Reading & Estimating	5
Preparation for Placement	15
Proportioning and Preconstruction Testing	3
Batching and Mixing	3
Shotcrete Construction	20
Safety	4

#### References

- ISBN: 978-0-13-010246-1. **Concrete Finishing Level One**, 1998. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.
- Concrete Finishing Level Two, 1999. ISBN: 978-0-13-014860-5. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.
- Florida Building Code 2017 Building, 2017. ISBN: 978-1-60983-687-0. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- Guide to Shotcrete, 506R.90, 1995. American Concrete Institute, 38800 International Way, Country Club Dr, P.O. Box 9094, Farmington Hills, MI 48333. https://www.concrete.org/store.aspx

### INSULATION CONTRACTOR CLASS "I"(ENGLISH OR SPANISH)

The scope of work of a Class "I" specialty building contractor shall include and be limited to the fabrication, installation, and application of thermal or fire-retardant materials to and within existing walls, floors, and ceilings by mechanical or adhesive methods, in such manner that, under an agreed specification, satisfactory insulation can be accomplished. A Class "I" specialty building contractor may also

install metal channels, hangers, and suspension systems for the support of thermal or fire-retardant materials. A Class "I" specialty building contractor shall not insulate any pipes, vessels, or ducts, builtup refrigeration boxes or rooms, nor insulate the top of a roof deck where such insulation is attached over the top by adhesive. In order to be eligible to be certified as a Class "I" specialty building contractor by the board, the applicant shall have at least one (1) year of practical experience in the category.

Number of Questions Time allowed (hours)	75 2
Subject Area	# Quest.
Plan Reading & Estimating	8
Theory	6
Insulation Materials & Accessories	20

Insulation Materials & Accessories	20
Insulation Installation	18
Systems Insulation	13
Safety	10

#### References

- Florida Building Code 2017 Building, 2017. ISBN: 978-1-60983-687-0. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- Florida Building Code 2017 Energy Conservation, 2017. ISBN: 978-1-60983-695-5. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- Insulating Level Three, 1999. ISBN: 978-0-13-909458-3. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.
- Insulating Level Two, 1999. ISBN: 978-0-13-909417-0. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.
- Study Guide for Insulation. ISBN: 978-0-136-06315-5. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at http://nccer.pearsonconstructionbooks.com

## JOURNEYMAN ELECTRICIAN (ENGLISH OR SPANISH) 2014

A Journeyman Electrician is gualified and tested to perform work in the electrical trades while employed by a Master Electrician.

Number of Questions Time allowed (hours)	70 3
Subject Area	# Quest.
Communication Systems	4
Equipment for General Use	6
General Electrical Theory & Principles	9
Motors & Controls	3
Plan Reading	4
Special Conditions	3
Special Equipment	3
Special Occupancies	2
Wiring & Protection	14
Wiring Methods & Materials	22

- <u>American Electrician's Handbook</u>, 16th Edition. ISBN: 978-0071798808. McGraw Hill Glencoe Order Services, P.O. Box 545, Blacklick, OH 43004. Available at www.amazon.com
- NFPA 70 National Electrical Code, 2014. ISBN: 9781455906727. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at www.nfpa.org.

### **JOURNEYMAN ELECTRICIAN 2014**

A Journeyman Electrician is qualified and tested to perform work in the electrical trades while employed by a Master Electrician.

Number of Questions	70
Time allowed (hours)	3

Subject Area General Electrical Theory & Principles Plan Reading Wiring & Protection Wiring Methods & Materials Motors & Controls Equipment for General Use Special Occupancies Special Equipment	# Quest. 9 4 14 22 3 6 2 3
	_
Communication Systems	4

#### References

- <u>American Electrician's Handbook</u>, 16th Edition. ISBN: 978-0071798808. McGraw Hill Glencoe Order Services, P.O. Box 545, Blacklick, OH 43004. Available at www.amazon.com
- NFPA 70 National Electrical Code, 2014. ISBN: 9781455906727. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at www.nfpa.org.

#### **JOURNEYMAN RESIDENTIAL ELECTRICAL 2014**

Tests a candidate's knowledge of the planning, installation, repair, alteration, and maintenance of electric conductors, raceways, and equipment for light, heat, and power in one-, two- and three-family dwellings.

Number of Questions Time allowed (hours)	65 3
Subject Area	# Quest.
General Electrical Knowledge	15
Wiring & Protection	15
Wiring Methods & Materials	6
Equipment for General Use	7
Special Occupancies	2
Special Equipment	4
Special Conditions	4
Communication Systems	5
Plan Reading	4
Motors & Controls	3

- <u>American Electrician's Handbook</u>, 16th Edition. ISBN: 978-0071798808. McGraw Hill Glencoe Order Services, P.O. Box 545, Blacklick, OH 43004. Available at www.amazon.com
- NFPA 70 National Electrical Code, 2014. ISBN: 9781455906727. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at www.nfpa.org.

## JOURNEYMAN SIGN ELECTRICIAN 2014

Tests a candidate's knowledge of the planning, installation, repair, alteration, and maintenance of electric conductors, raceways, and equipment associated with electric signs. The branch circuit supplying power to the sign shall originate from an existing disconnect or power outlet.

Number of Questions Time allowed (hours)	40 2
Subject Area	# Quest.
Electrical Signs & Outline Lighting	16
Grounding & Bonding	4
General Electrical Knowledge	6
Motors & Controls	3
Transformers	3
Wiring & Protection	4
Wiring Methods & Materials	4

#### References

- <u>American Electrician's Handbook</u>, 16th Edition. ISBN: 978-0071798808. McGraw Hill Glencoe Order Services, P.O. Box 545, Blacklick, OH 43004. Available at www.amazon.com
- NFPA 70 National Electrical Code, 2014. ISBN: 9781455906727. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at www.nfpa.org.

## LIGHTNING PROTECTION 2014

Those who are qualified to install, maintain, repair or alter any lightning protection system, including all terminals, conductors, ground rods, fittings and all other system fastenings, connections and bonding necessary to complete a system designed to protect structures and open spaces. Electrical installation required to make the system operational may be included in the contract for work but must be subcontracted to a Certified Electrical Contractor.

Number of Questions Time allowed (hours)	50 2
Subject Area	# Quest.
General Electrical Knowledge	10
Hazardous Structures	5
Heavy Duty Stacks	5
Ordinary Structures	10
Safety	5
Special Occupancies	5
Wind Turbines and Watercraft	5
Explosive Materials	5

www.nfpa.org.

- American Electrician's Handbook, 16th Edition. ISBN: 978-0071798808 McGraw Hill Glencoe Order Services, P.O. Box 545, Blacklick, OH 43004. Available at www.amazon.com
- NFPA 70 National Electrical Code, 2014. ISBN: 9781455906727. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at www.nfpa.org.
- NFPA 780 Standard for the Installation of Lightning Protection Systems, 2011. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at www.nfpa.org.

## LIMITED ENERGY SYSTEMS SPECIALTY CONTRACTOR

Limited Energy Systems (f/k/a low voltage) Specialty Contractor. The scope of work of a limited energy systems specialty contractor includes the installation, repair, fabrication, erection, alteration, addition to, or design of electrical wiring, fixtures, appliances, thermostats, apparatus, raceways, conduits, and fiber optics (transmission of light over stranded glass) or any part thereof not to exceed 98 volts, when those items are for the purpose of transmitting data, proprietary video (satellite systems which are not part of a community antenna television, cable television, or radio distribution system), radio frequency, central vacuum, electric locks, data distribution networks, home theater systems, surround sound systems, public address systems, or telephone systems. The applicant shall have no less than seven (7) years of practical experience in the limited energy systems industry, including a minimum of three (3) years of practical experience in the limited energy systems industry as a limited energy systems specialty journeyman. The board may, in its sole discretion, consider a person's formal or vocational education as practical experience in the trade

Number of Questions	75
Time allowed (hours)	2

Subject Area	# Quest.
General Electrical Knowledge	26
Wiring & Protection	4
Wiring Methods & Materials	16
Equipment for General Use	6
Special Occupancies	7
Special Equipment	4
Special Conditions	7
Communication Systems	5

#### References

- American Electricians' Handbook, 15th Edition. ISBN: 978-0-07-149462-5. McGraw Hill Glencoe Order Services, P.O. Box 545, Blacklick, OH 43004. Available at www.amazon.com
- Code of Federal Regulations, Title 29, Part 1926, 2012. ISBN: 9780160911576. Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954. Available at http://bookstore.gpo.gov. Candidate printed versions permitted in testing room if exam is open book. OSHA Standards for the Construction Industry is permitted as a substitute for this book.
- **NFPA 70 National Electrical Code, 2011.** National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at

## LOW VOLTAGE (ENGLISH OR SPANISH) 2014

Qualified and certified to install, fabricate, erect, repair, alter, add to or change any electrical wiring, fixtures, appliances, thermostats, apparatus, raceways and conduit, or any part thereof, not to exceed ninety-eight (98) volts, which generates, transmits, transforms or utilizes electrical energy, when those items are for the purpose of transmitting any form of light, heat or communications, including but not limited to telephone, radio, computer and data. A low voltage specialty electrical contractor may connect to an existing separate circuit of approved capacity, which is terminated in an approved outlet, junction box or fused disconnect within six (6) feet of the equipment to be energized.

Number of Questions	50
Time allowed (hours)	2

Subject Area	# Quest.
General Electrical Knowledge	12
Wiring & Protection	4
Wiring Methods & Materials	10
Equipment for General Use	6
Special Occupancies	6
Special Equipment	3
Special Conditions	4
Communication Systems	5

## References

- American Electrician's Handbook, 16th Edition. ISBN: 978-0071798808 McGraw Hill Glencoe Order Services, P.O. Box 545, Blacklick, OH 43004. Available at www.amazon.com
- NFPA 70 National Electrical Code, 2014. ISBN: 9781455906727. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at www.nfpa.org.
- Understanding and Servicing Alarm Systems, 3rd Ed., 1999. ISBN: 978-0750672061. Butterworth-Heinemann, 225 Wildwood Ave., Woburn, MA 01801. Available at www.amazon.com.

#### MAINTENANCE ELECTRICIAN (ENGLISH OR SPANISH) 2014

Tests a candidate's knowledge of the maintenance of existing electrical systems operating at 480 volts or less. Exam is limited to the repair, alteration, and relocation of existing electrical branch circuits and equipment

Number of Questions Time allowed (hours)	50 2
Subject Area	# Quest.
General Electrical Knowledge	15
Safety	5
Servicing Applications	8
Wiring & Protection	13
Wiring Methods & Materials	9

- <u>American Electrician's Handbook</u>, 16th Edition. ISBN: 978-0071798808. McGraw Hill Glencoe Order Services, P.O. Box 545, Blacklick, OH 43004. Available at www.amazon.com
- NFPA 70 National Electrical Code, 2014. ISBN: 9781455906727. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at www.nfpa.org.

## MASONRY CONTRACTOR CLASS "M"

The scope of work of a Class "M" specialty Building Contractor shall include and be limited to the selection, curring, and laying of bricks, concrete block, and any other unit masonry or clay products, roughcut and dress stone, artificial stone, pre-cast blocks, structural glass brick or block, decor block, and veneer, all of which may be laid at random or in course and with or without mortar, and applying tile to floors or exterior wall surfaces, masonry, or pre-case concrete fences. A Class "M" specialty building contractor shall not pour, place, or finish cast-in-place concrete or epoxy products. In order to be eligible to be certified as a Class "M" specialty Building Contractor by the Board, the applicant shall have at leasat two (2) years of practical experience in the category.

Number of Questions	50
Time allowed (hours)	2
Subject Area	# Quest.
Plan Reading & Estimating	8
Masonry Units	7
Mortar	7
Reinforcement	6
Masonry Installation	10
Safety	7
Tile	5

#### References

- ACI 530 Building Code Requirements and Specification for Masonry <u>Structures 2013</u>, 2013. ISBN: 978-1-929081-43-1. American Concrete Institute, 38800 International Way, Country Club Dr, P.O. Box 9094, Farmington Hills, MI 48333. Available at http://www.concrete.org OR http://www.techstreet.com/searches/16672726 OR amazon.com
- American National Standards Specifications for the Installation of <u>Ceramic Tile, Material & Installation Standards 2013</u>, 2013. American National Standards Institute, 25 West 43rd Street, 4th floor, New York, NY 10036. Available at http://www.ansi.org/
- Florida Building Code 2017 Building, 2017. ISBN: 978-1-60983-687-0. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- <u>Study Guide for Masonry Contractors, 2nd Edition</u>, 2014. ISBN: 978-1-269-78558-7. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com.
- <u>Tile Your World</u>, 2003. ISBN: 0-9742754-3-3. Mistflower Press, 6717 Mistflower Lane, Katy, TX 77449. Available at mistflowerpress.com/index.html.

### MASTER ELECTRICIAN (ENGLISH OR SPANISH) 2011

In order to be eligible to receive certification from the board as a Master Electrician and/or Electrical Contractor, the applicant shall demonstrate possession of the experience, knowledge, and skill to install, repair, alter, add to, or design electrical wiring, luminaries, appliances, apparatus, raceways, conduits, fire alarm systems, or any part thereof, which generate, transmit, transform, or utilize electrical energy in any form, including the electrical installations and systems within plants and sub-stations,

Number of Questions	75
Time allowed (hours)	3
Culture Aven	
Subject Area	# Quest.
General Electrical Knowledge	10
Communication Systems	5
Equipment for General Use	4
Motors & Controls	4
Plan Reading	6
Special Conditions	6
Special Equipment	6
Special Occupancies	6
Wiring & Protection	10
Wiring Methods & Materials	18

#### References

- <u>American Electrician's Handbook</u>, 14th Ed., 2002. ISBN: 9780071798808. McGraw Hill Glencoe Order Services, P.O. Box 545, Blacklick, OH 43004. http://www.mhprofessional.com
- Code of Federal Regulations, Title 29, Part 1926, 2012. ISBN: 9780160911576. Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954. Available at http://bookstore.gpo.gov. Candidate printed versions permitted in testing room if exam is open book. OSHA Standards for the Construction Industry is permitted as a substitute for this book.
- Industrial Motor Control, 1999, 4th Ed.. ISBN: 0-8273-8640-0. Delmar Publishers Inc., 3 Columbia Circle, P.O. Box 15015, Albany, NY 12212-5015. www.amazon.com
- NFPA 70 National Electrical Code, 2011. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at www.nfpa.org.
- Ugly's Electrical References, 2002. ISBN: 0-9623229-6-2. Jones and Bartlett Publishers, 40 Tall Pine Dr., Sudbury, ME 01776. Available at www.uglys.net.

#### MASTER PLUMBER (ENGLISH OR SPANISH)

A Master Plumber may install, maintain, test, repair, alter, extend, or, when not prohibited by law, design sanitary drainage or storm drainage facilities; venting systems; public or private water supply systems; septic tanks; drainage and supply wells; swimming pool piping; irrigation systems; solar heating water systems and all appurtenances, apparatus, and equipment used in connection therewith, including boilers and pressure process piping and including the installation of water, natural gas, liquefied petroleum gas and related venting, and storm and sanitary sewer lines; and water and sewer plant substations. The scope of work of a master plumber also includes the design, when not prohibited by law, installation, maintenance, testing, repair, alteration, and extension of airpiping, vacuum line piping, oxygen line piping, nitrous oxide piping, and all related medical gas systems; fireline standpipes and fire sprinklers, to the extent authorized by law; ink and chemical lines; fuel oil and gasoline piping and tank and pump installation, except bulk storage plants; gaseous and liquefied hydrogen systems; and pneumatic control piping systems.

Number of Questions	75
Time allowed (hours)	3

Subject Area	# Quest.
Drain, Waste & Vent Systems	8
Fuel Gas Systems	4
Fixtures & Fittings	8
General Knowledge	8
Isometrics & Plan Reading	8
Plumbing Math	8
Safety	5
Storm & Roof Drainage	5
Water Heaters	8
Water Supply and Distribution	10
Hurricane zone items for Plumbing	3

#### References

- Code of Federal Regulations, Title 29, Part 1926, 2012. ISBN: Superintendent of Documents, P.O. Box 371954, 9780160911576. Pittsburgh, PA 15250-7954. Available at http://bookstore.gpo.gov. Candidate printed versions permitted in testing room if exam is open book. OSHA Standards for the Construction Industry is permitted as a substitute for this book.
- Florida Building Code 2017 Fuel Gas, 2017. ISBN: 978-1-60983-691-International Code Council, 4051 West Flossmoor Road, Country 7. Club Hills, IL 60478. www.iccsafe.org
- Florida Building Code 2017 Plumbing, 2017. ISBN: 978-1-60983-689-4. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- **Plumbing**, 1994. ISBN: 0-8269-0612-5. American Technical Publishers, 10100 Orland Parkway Suite 200, Orland Park, IL 60467-5756. amazon.com
- Plumbing Technology: Design and Installation, Second. ISBN: 0-8273-5523-8. Delmar Publishers Inc., 3 Columbia Circle, P.O. Box 15015, Albany, NY 12212-5015.

## **MASTER RESIDENTIAL ELECTRICAL 2014**

Tests a candidate's knowledge of the design, plan, installation, repair, alteration, and maintenance of electric conductors, raceways, and equipment for light, heat, and power in one-, two-, and three-family dwellings.

Number of Questions	65
Time allowed (hours)	3

Subject Area	# Quest.
General Electrical Knowledge	16
Wiring & Protection	13
Wiring Methods & Materials	10
Equipment for General Use	8
Special Occupancies	2

Special Equipment	4
Special Conditions	3
Communication Systems	5
Motors & Controls	4

#### References

- American Electrician's Handbook, 16th Edition. ISBN: 978-0071798808. McGraw Hill Glencoe Order Services, P.O. Box 545, Blacklick, OH 43004. Available at www.amazon.com
- NFPA 70 National Electrical Code, 2014. ISBN: 9781455906727. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at www.nfpa.org.

#### MASTER SIGN ELECTRICIAN 2014

Tests a candidate's knowledge of the design, plan, installation, repair, alteration, and maintenance of electric conductors, raceways, and equipment associated with electric signs. The branch circuit supplying power to the sign shall originate from an existing disconnect or power outlet.

Number of Questions	40
Time allowed (hours)	2
Subject Area	# Quest.
Electrical Signs & Outline Lighting	16
Grounding & Bonding	4
General Electrical Knowledge	6
Motors & Controls	3
Transformers	3
Wiring & Protection	4
Wiring Methods & Materials	4

#### References

- American Electrician's Handbook, 16th Edition. ISBN: 978-0071798808 McGraw Hill Glencoe Order Services, P.O. Box 545, Blacklick, OH 43004. Available at www.amazon.com
- NFPA 70 National Electrical Code, 2014. ISBN: 9781455906727. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at www.nfpa.org.

## MASTER TV ANTENNA 2014 (ENGLISH OR SPANISH)

A Master TV Antenna Specialty Electrical Contractor is gualified and certified to install, repair, alter, add to or change any privately owned TV antenna systems on and in multiple occupancy, residential or commercial buildings of three (3) or more tenants, rooms or apartments all connected to a central master system, as well as in theaters, schools and like public occupancies. Such systems may be electrically energized in whole or in part for the reception, amplification and distribution of TV signals. The scope of these systems shall include conductors and raceways, radio frequency carriers, laser beams and any other means of signal transmission as well as all apparatus pertaining to master TV antenna systems, including but not limited to amplifiers, splitters, cables and outlets for connecting individual TV sets. A master TV antenna specialty electrical

contractor may connect to an existing separate circuit of approved capacity, which is terminated to an approved outlet, junction box.

Number of Questions	75
Time allowed (hours)	3

Subject Area Community antenna television & radio distribution systems	<b># Quest.</b> 12
General Electrical Knowledge	16
Grounding & Bonding	20
Low Voltage, Signaling & Remote Control	8
Radio & Television Equipment	8
Safety	11

#### References

- <u>American Electrician's Handbook</u>, 16th Edition. ISBN: 978-0071798808. McGraw Hill Glencoe Order Services, P.O. Box 545, Blacklick, OH 43004. Available at www.amazon.com
- Code of Federal Regulations, Title 29, Part 1926, 2012. ISBN: 9780160911576. Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954. Available at http://bookstore.gpo.gov. Candidate printed versions permitted in testing room if exam is open book. OSHA Standards for the Construction Industry is permitted as a substitute for this book.
- NFPA 70 National Electrical Code, 2014. ISBN: 9781455906727. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at www.nfpa.org.
- Trade Knowledge. Prov, 13614 Progress Blvd., Alachua, FL 32615. This reference is not a book for purchase. This reference represents the general knowledge that a candidate gains through experience in their trade.

## MISCELLANEOUS METALS ERECTION CATEGORY - CLASS "MM"

A Miscellaneous Metals Contractor is qualified and certified to fabricate, apply, erect and install miscellaneous appurtenances, appendages, parts or equipment of metal, including other materials incidental thereto, in or on buildings or other structures and shall also include all work involving: metal awnings and storm shutters, canvas awnings, metal cabinets and store fixtures, screen enclosures and all work incidental thereto, metal partitions, flagpoles, ornamental metals including structural railings, and metal sunshades. The work of a miscellaneous metals contractor shall not include the work of a metal decking and siding contractor, reinforcing steel placing contractor, or structural steel contractor

Number of Questions	75
Time allowed (hours)	3
A 11 A	
Subject Area	# Quest.
Characteristics and Properties of Metals	13
Metal Cutting	20
Safety	5
Welding Practices	18

References

Weld Quality Control

Welding Symbols & Detail Drawings

- <u>Advanced Topics in Welding: Aluminum</u>, 2010. ISBN: 978-0-13-213722-5. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.
- Code of Federal Regulations, Title 29, Part 1926, 2012. ISBN: 9780160911576. Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954. Available at http://bookstore.gpo.gov. Candidate printed versions permitted in testing room if exam is open book. OSHA Standards for the Construction Industry is permitted as a substitute for this book.
- Florida Building Code 2017 Building, 2017. ISBN: 978-1-60983-687-0. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- Welding Level 1 2015, 2015. ISBN: 978-0-13-413110-8. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.
- Welding Level 2 2015, 2015. ISBN: 978-0-13-431110-4. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.

#### PAINTING (INTERIOR AND EXTERIOR) CATEGORY CLASS "P"

Tests a candidate's knowledge of painting and decorating, including spray application and pressure washing. Does not include sandblasting or application of plural component roof materials, waterproofing, or damp-proofing.

Number of Questions Time allowed (hours)	75 3
Subject Area	# Quest.
Plan Reading & Estimating & Planning	6
Substrates & Preparation	24
Materials	19
Application	20
Safety	6

#### References

7

12

- Painting Level One, 1997. ISBN: 978-0-13-771239-7. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.
- <u>Painting Level Three</u>, 1998. ISBN: 978-0-13-949041-5. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.
- <u>Painting Level Two</u>, 1997. ISBN: 978-0-13-771296-0. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.

## PAINTING UNLIMITED CATEGORY CLASS "PU"

Specialty building contractor shall include and be limited to the cleaning, caulking, and sizing of surfaces, including roofs, in preparation for the application of paint and related liquid or viscous products by brush, roller, or spray methods in such a manner that, under an agreed specification, satisfactory painting can be accomplished. A "PU" specialty building contractor is qualified to clean, sandblast, caulk, and prime surfaces in preparation for, and to apply, waterproofing products by brush, roller, or spray method in such

a manner that, under agreed specifications, satisfactory waterproofing can be accomplished either inside or outside (vertical surfaces only). A "PU" specialty building contractor is also qualified to clean surfaces in preparation of waterproofing or painting (engraving, cutting, or cleaning glass or stone or removing scale for metals). The scope of work may include pressure spraying to clean exterior surfaces of homes or buildings.

Number of Questions	80
Time allowed (hours)	3

Subject Area	# Quest.
Safety	6
Substrates & Preparation	15
Materials	17
Application	18
Job Planning & Estimating	8
Paint Failures & Remedies	6
Equipment	10

#### References

- Painting Industrial Level 4, 1998. ISBN: 978-0-13-910100-7. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.
- <u>Painting Level One</u>, 1997. ISBN: 978-0-13-771239-7. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.
- Painting Level Three, 1998. ISBN: 978-0-13-949041-5. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.
- Painting Level Two, 1997. ISBN: 978-0-13-771296-0. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.

#### PAVERS CLASS "PV"

The scope of work of a Class "PV" specialty building contractor shall include and be limited to preparing the base, providing for proper drainage, and selecting, cutting, and laying pavers. A Class "PV" specialty building contractor shall be permitted to build modular retaining walls that retain no more than three (3) feet of earth or fill material, provided the modular retaining wall system is demonstrated to have been engineered for the intended use by an engineer. A Class "PV" specialty building contractor shall not pour or finish concrete, except for footings required for the placing of a paver system. In order to be eligible to be certificated as a Class "PV" specialty building contractor, the applicant shall have at least four (4) years of practical experience in the category.

Number of Questions	50
Time allowed (hours)	2

Subject Area	# Quest.
Plan Reading & Estimating	8
Soil Characteristics & Compaction	6
Base Materials, Bedding & Edge Restraints	7
Paving Materials	7
Paver Installation	16

Safety

#### References

- <u>Core Level 1 2015</u>, 2015. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.
- ICPI Concrete Paver Installer Course Manual, 8th Edition. ISBN: 978-0-9886795-0-4. Interlocking Concrete Pavement Institute, 13921 Park Center Road, Suite 270, Herndon, VA 20171. https://www.icpi.org

#### PLASTERING & STUCCO CLASS "PS" (ENGLISH OR SPANISH)

Lathing and Plastering Scope: A lathing and plastering contractor coats surfaces with a mixture of sand, gypsum plaster, quick-lime or hydrated lime and water, or sand and cement and water, or a combination of such other materials that create a permanent coating, including coatings for the purpose of soundproofing and fireproofing. These coatings are applied with a plasterer?s trowel or sprayed over any surface which offers a mechanical means for the support of such coating, and will adhere by suction. This contractor also installs lath (including metal studs) or any other material prepared or manufactured to provide a base or bond for such coating. A lathing and plastering contractor also applies and affixes wood and metal lath, or any other material prepared or manufactured to provide key or suction bases for the support of plaster coatings. This classification includes the channel work and metal studs for the support of metal or any other lathing material and for solid plaster partitions.

Number of Questions Time allowed (hours)	50 3
Subject Area	# Quest.
Plan Reading & Estimating	5
Framing	10
Lathing	10
Materials	10
Application & Finishing	10
Safety	5

- ASTM C1007-11a Standard Specification for Installation of Load Bearing (Transverse and Axial) Steel Studs and Related Accessories, 2011. American Society for Testing and Materials, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428-2959. Available at http://www.astm.org/. Candidate printed versions allowed if exam is open book.
- ASTM C1063-12a Standard Specification for Installation of Lathing & <u>Furring to Receive Interior & Exterior Portland Cement Based Plaster</u>, 2012. American Society for Testing and Materials, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428-2959. Available at http://www.astm.org/. Candidate printed versions allowed if exam is open book.
- ASTM C926-12a Standard Specification for Application of Portland <u>Cement Based Plaster</u>. American Society for Testing and Materials, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428-2959. Available at http://www.astm.org/. Candidate printed versions allowed if exam is open book.
- <u>Basic Safety</u>. ISBN: 9781323676189. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at www.provbookstore.com.

- Florida Building Code 2017 Building, 2017. ISBN: 978-1-60983-687-0. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- **<u>Gypsum Construction Handbook</u>**, 2009. ISBN: 978-0876292587. United States Gypsum Corporation, 350 Burnhamthorpe Road West, 5th Floor, Mississauga, ON. Available at www.amazon.com.
- Introduction to Construction Math, 2015. NCCER MATS Testing, 13614
   Progress Blvd, Alachua, FL 32615.

## **RESIDENTIAL APPLIANCE ELECTRICAL 2014**

Tests a candidate's knowledge of the installation, repair, alteration, and maintenance of electric conductors and raceways intended to supply power to electrical appliances. The branch circuit supplying power to the appliance shall originate from an existing disconnect or power outlet.

Number of Questions Time allowed (hours)	50 2
Subject Area	# Quest.
General Electrical Knowledge	10
Wiring & Protection	15
Wiring Methods & Materials	13
Servicing Applications	7
Safety	5

#### References

- <u>American Electrician's Handbook</u>, 16th Edition. ISBN: 978-0071798808. McGraw Hill Glencoe Order Services, P.O. Box 545, Blacklick, OH 43004. Available at www.amazon.com
- NFPA 70 National Electrical Code, 2014. ISBN: 9781455906727. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at www.nfpa.org.
- Trade Knowledge. Prov, 13614 Progress Blvd., Alachua, FL 32615. This reference is not a book for purchase. This reference represents the general knowledge that a candidate gains through experience in their trade.

#### **RESIDENTIAL INTERIOR REMODELING CONTRACTOR CLASS "RIR**

The scope of work of a Class "RIR" specialty building contractor shall be limited to the interior remodeling only of one (1) family, two (2) family, or three (3) family residential dwelling units, and accessory use structure(s) in connection therewith, all of which shall not exceed two (2) stories in height. A Class "RIR" specialty building contractor may remodel, provided such remodeling work does not affect the structural components or the exterior of the residential dwelling unit(s) or accessory use structure(s). The scope of work of a Class "RIR" specialty building contractor shall not include the installation of exterior windows and doors, specifically, windows or windows that are part of the building envelope or subject to wind loads or water infiltration. A Class "RIR" specialty building contractor shall subcontract any electrical, mechanical, plumbing, or liquefied petroleum gas work. A Class "RIR" specialty building contractor is authorized to perform the work of all specialty building contractor categories and classes which directly relate to interior remodeling. In order to be eligible to be

certified as a Class "RIR" specialty building contractor, the applicant shall have at least three (3) years of practical experience in interior remodeling. .

Number of Questions Time allowed (hours)	60 2
Subject Area	# Quest.
Plan Reading & Estimating	12
Carpentry	12
Cabinetry	6
Millwork	6
Stairs	6
Associated Trades	12
Safety	6

## References

- Basic Safety. ISBN: 9781323676189. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at www.provbookstore.com.
- Florida Building Code 2017 Residential, 2017. ISBN: 978-1-60983-692-4. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- <u>Study Guide for Residential Carpentry & Repair, 2nd edition</u>, 2014.
   ISBN: 978-1-269-78561-7. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com

#### **RESIDENTIAL POOL/SPA CONTRACTOR CLASS "RP**

Tests a candidate's knowledge of the construction, service, and repair of residential swimming pools. Does not include direct connections to a sanitary sewer system nor to potable water lines, nor the grounding and bonding of metal surfaces, nor the making of any electrical connections.

Number of Questions Time allowed (hours)	51 3
Subject Area	# Quest.
Plan Reading & Estimating	5
Site Preparation, Excavation and Backfilling	6
Pool Shell Construction	14
Interior Surface Preparation and Finishing	6
Tile, Coping and Trimwork	5
Accessory Work	5
Care and Operation	6

# References

Safety

<u>Basic Safety</u>. ISBN: 9781323676189. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at www.provbookstore.com.

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- <u>Builder's Guide to Swimming Pool Construction</u>, 2005. ISBN: 978-1889892504. Builder's Book, Inc., 8001 Canoga Avenue, Canoga Park, CA 91304. Available at www.amazon.com.
- Florida Building Code 2017 Residential, 2017. ISBN: 978-1-60983-692-4. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org

## **ROOF DECKS CATEGORY CLASS "RD"**

Roof Deck Contractor is a contractor gualified and certified to erect, construct, fabricate and install roof decks of Portland cement or gypsum concrete, using lightweight aggregate, on joists or other supporting members erected by others, and shall include the placing of forms and welding of supporting members for forms and miscellaneous reinforcing of the deck and the proportioning, mixing and placing of cement, aggregate and water, provided, however, that roof decks of wood, metal, heavy aggregate concrete, glass or plastic and the application of roofing felts or other water resistant membranes shall not be a part of the scope of such work. The experience requirement for the qualifying agent for a roof deck contractor shall be one (1) year.

Number of Questions	50
Time allowed (hours)	2

Subject Area	# Quest.
Plan Reading & Estimating	5
Formwork	10
Welding & Cutting	6
Steel Joists & Metal Decking	6
Lightweight Concrete	9
Safety	14

#### References

- ASTM C956-04 Standard Specification for Installation of Cast-In-Place Reinforced Gypsum Concrete. American Society for Testing and Materials, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428-2959. Available at http://www.astm.org/Standards/C956.htm Candidate printed versions allowed if exam is open book.
- Basic Safety. ISBN: 9781323676189. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at www.provbookstore.com.
- Concrete Finishing Level Two, 1999. ISBN: 978-0-13-014860-5. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.
- Florida Building Code 2017 Building, 2017. ISBN: 978-1-60983-687-0. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- Guide for Structural Lightweight-Aggregate Concrete ACI 213R-03. American Concrete Institute, 38800 International Way, Country Club Dr, P.O. Box 9094, Farmington Hills, MI 48333. Available at http://www.concrete.org/general/home.asp
- Introduction to Basic Rigging, 2015. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. available @ www.mypearsonstore.com
- Ironworking Level One, 2011. ISBN: 978-0-13-213714-0. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.
- Ironworking Level Two, 2011. ISBN: 978-0-13-257822-6. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.

## **ROOF PAINTING AND CLEANING CATEGORY CLASS "RP"**

The scope of work of a Class "RP" specialty building contractor shall include and be limited to the application of paint or other decorative coatings to roof surfaces by brush, roller, or spray method, in such a manner to satisfy the agreed specifications, including the pressure cleaning of roofs to remove fungus, dirt, and paint, by steam or chemicals, in preparation for the application of coatings thereto. A Class "RP" specialty building contractor shall not replace any cracked or broken roof tiles nor perform any roof repairs. In order to be eligible to be certified as a Class "RP" specialty building contractor by the board, the applicant shall have at least six (6) months of practical experience in the category.

Number of Questions	25
Time allowed (hours)	1.5
Subject Area	# Quest.
Safety	6
Substrates & Preparation	6
Materials	5
Application	3
Job Planning & Estimating	2
Equipment	3

#### References

- Painting Level One, 1997. ISBN: 978-0-13-771239-7. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.
- **Painting Level Two**, 1997. ISBN: 978-0-13-771296-0. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.

## **ROOFING CLASS "R" (ENGLISH OR SPANISH)**

Roofing Category Class "R": The scope of work of a Class "R" specialty builder shall include and be limited to the installation, repair, and replacement of roof coverings to stop water from passing by such applied protective material, membrane, surface, or seal including, but not limited to, the use of sheet metal and other sheet metal products necessary and incidental to roofing work; including the installation, repair, waterproofing, leak stoppage, extension of the life of the roof, and replacement of downspouts, shingles, roofing tiles, and other materials used in connection therewith: and including the installation of nonstructural elements

Number of Questions Time allowed (hours)	75 2
Subject Area	# Quest.
Plan Reading & Estimating	9
Deck & Underlayment	10
Flashing	7
High Slope Roofing	16
Low Slope Roofing	16
Safety	7
Hurricane Zone Roofing	10

References

- Architectural Sheet Metal, 7th. ISBN: none available. Sheet Metal and Air Conditioning Contractors National Association, 4201 Lafayette Center Drive, Chantilly, VA 20151-1209. Available At www.smacna.org
- Code of Federal Regulations, Title 29, Part 1926, 2012. ISBN: 9780160911576. Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954. Available at http://bookstore.gpo.gov. Candidate printed versions permitted in testing room if exam is open book. OSHA Standards for the Construction Industry is permitted as a substitute for this book.
- Florida Building Code 2017 Building, 2017. ISBN: 978-1-60983-687-0. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- <u>Roofing Construction and Estimating</u>, 1995. ISBN: 1572180072. Craftsman Book Company, 6058 Corte Del Cedro, Carlsbad, CA 92009. http://www.craftsman-book.com

## ROUGH CARPENTRY CATEGORY CLASS "RC":

Rough Carpentry Category Class RC: The scope of work of a Class RC specialty Building Contractor shall include and be limited to rough carpentry and formwork for wooden patio decks, roofs, trusses, sheathing, fascia boards (furring and blocking), placing and finishing concrete, and prefabricated sheds limited to two hundred (200) square feet. The Class RC category does not include trim carpentry or finish carpentry. A Class RC specialty Building Contractor may not pull permits for more than two (2) floors. In order to be eligible to be certified as a Class RC specialty builder by the Board, the applicant shall have at least two (2) years of practical experience in the category.

Number of Questions	50
Time allowed (hours)	3

Subject Area	# Quest.
Plan Reading & Estimating	4
Floor Systems	6
Wall & Ceiling Framing	6
Roof Framing	8
Exterior Finishing	8
Preparation for Placement	5
Placement & Finishing	8
Safety	5

#### References

- BCSI Guide to Good Practice for Handling, Installing, Restraining and Bracing of Metal Plate Connected Wood Trusses, 2013-2015. ISBN: none available. Truss Plate Institute, 583 D?Onofrio Dr., Ste. 200, Madison, WI 53719. Available at support.sbcindustry.com
- Carpentry and Building Construction, 2010. ISBN: 0078797845. McGraw-Hill Companies, Inc, 8787 Orion Place, Columbus, OH 43240-4027.
- Code of Federal Regulations, Title 29, Part 1926, 2012. ISBN: 9780160911576. Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954. Available at http://bookstore.gpo.gov. Candidate printed versions permitted in testing room if exam is open book. OSHA Standards for the Construction Industry is permitted as a substitute for this book.
- <u>Design and Control of Concrete Mixtures</u>, 14th,2008. ISBN: 0-89312-217-3. Portland Cement Association Publications, 5420 Old Orchard Rd, Skokie, IL 60077. https://www.researchgate.net

- Excavation and Grading Handbook, 3rd, 2006. ISBN: 978-1-57218-173-1. Craftsman Book Company, 6058 Corte Del Cedro, Carlsbad, CA 92009. https://www.craftsman-book.com
- Florida Building Code 2017 Building, 2017. ISBN: 978-1-60983-687-0. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- Florida Building Code 2017 Residential, 2017. ISBN: 978-1-60983-692-4. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- Formwork for Concrete, 2005, 7th Ed.. ISBN: 978-0-87031-177-2. American Concrete Institute, 38800 International Way, Country Club Dr, P.O. Box 9094, Farmington Hills, MI 48333. http://www.concrete.org

#### SANDBLASTING CATEGORY CLASS "S"

Sandblasting Category--Class "S": The scope of work of a Class "S" specialty building contractor shall include and be limited to the cleaning of surfaces by pneumatic sandblasting in preparation for waterproofing or paint, engraving, cutting, or cleaning glass or stone, and removing scale from metals. In order to be eligible to be certified as a Class "S" specialty building contractor by the board, the applicant shall have at least one (1) year of practical experience in the category.

Number of Questions	25
Time allowed (hours)	1.5
Subject Area	# Quest.
Surface, Substrate Materials and Conditions	5
Abrasive Blasting and Containment	8
Work Planning & Quality Control	4
Safety	8

## References

- <u>Containment</u>. ISBN: 978-0-13-604795-7. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.
- Health, Safety, Debris Management, Containment, and Ventilation, 2009. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.
- Industrial Coating Safety. ISBN: 0-13-604827-7. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.
- Surface Preparation, 2009. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.
- <u>Surface Preparation Two</u>. ISBN: 0-13-604797-1. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.
- Work Planning and Quality Control. ISBN: 0-13-604796-3. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.

## SCREEN ENCLOSURES CLASS "SC"

A Screen Enclosure Contractor is qualified and certified to fabricate, erect and install on grade only, screen enclosures with metalsupporting members, in whole or in part self-supporting, having walls and roof of screen except that the roof may be of metal or plastic where the area of solid wind resistant material does not exceed forty (40) percent of the area of screen roof. The scope of work shall include footings or slab on grade in connection therewith.

Number of Questions	60
Time allowed (hours)	3

Subject Area	# Quest.
Foundations and Concrete	7
Plan Reading & Estimating	14
Safety	12
Understand and apply the building code as it pertains to the construction of screen enclosures and associated work.	6
Screen Enclosures	21

### References

- AAF Guide to Aluminum Construction in High Wind Areas, 2010. Aluminum Association of Florida, 13165 McCrory Place, Suite 185, Orlando, FL 33432. Available at http://www.aaof.org/. (Also permitted is the Guide to Aluminum Construction in High-Wind Area ASCE7 Supplement to the 2010 Guide )
- Florida Building Code 2017 Building, 2017. ISBN: 978-1-60983-687-0. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- <u>Study Guide for Residential Carpentry & Repair, 2nd edition</u>, 2014.
   ISBN: 978-1-269-78561-7. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com

## SHUTTER/OPENING PROTECTIVE SPECIALTY CONTRACTOR CLASS "SO"

Metal Awning and Storm Shutter Contractor is qualified and certified to fabricate, erect and install awnings or canopies of metal including other materials, incidental thereto, in or on buildings or other structures, and which may be, in whole or part, supported from a building wall erected and provided by others, or may be selfsupporting, and including footings or slabs on grade in connection therewith. Such contractor shall have a qualifying agent with experience and skill gained by at least one (1) year's practical work in this field and who has passed a designated examination.

Number of Questions Time allowed (hours)	75 2
Subject Area	# Quest.
Plan Reading & Estimating	15
Concrete and Reinforcement	10
Metal Storm Panel Shutters	6
Wood Storm Shutters	5
Installation & Anchorage	25
Building and Municipal Codes	7
Safety	7

## References

- Basic Safety. ISBN: 9781323676189. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at www.provbookstore.com.
- Carpentry Level One, 2006. ISBN: 978-0-13-229268-9. Prentice Hall,

P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.

- Florida Building Code 2017 Building, 2017. ISBN: 978-1-60983-687-0. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- <u>Hurricane Shutter Designs</u>. APA The Engineered Wood Association, 7011 S. 19th ST, Tacoma, WA 98466. Available at www.apawood.org Candidate printed versions allowed if exam is open book.

# SHUTTER/OPENING PROTECTIVE SPECIALTY CONTRACTOR CLASS "SO" (ENGLISH OR SPANISH)

The scope of work of a Class "SO" specialty building contractor shall include and be limited to the fabrication, assembling, application, handling, erection, installation, dismantling, adjusting, alteration, protective repair, and servicing of shutters, panels, and other windstorm protective devices, except impact-resistant glazing, certified in accordance with AAMA 101/I.S.2 or Miami -Dade TAS 201, 202, 203, as specified by the Florida Building Code in buildings of any height of Group R occupancy, as defined by the Florida Building Code. This shall include all types of shutters and panels, including hardware, structural supports, and operating devices, that are designed to protect openings from hurricane and storm force winds and windborne debris and for security purposes. In order to be eligible to be certified as a Class "SO" specialty building contractor by the board, the applicant shall have at least one (1) year of practical experience in the category.

Number of Questions	75
Time allowed (hours)	2

Subject Area	# Quest.
Plan Reading & Estimating	15
Concrete and Reinforcement	10
Metal Storm Panel Shutters	6
Wood Storm Shutters	5
Installation & Anchorage	25
Building and Municipal Codes	7
Safety	7

## References

- Basic Safety. ISBN: 9781323676189. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at www.provbookstore.com.
- Carpentry Level One, 2006. ISBN: 978-0-13-229268-9. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.
- Florida Building Code 2017 Building, 2017. ISBN: 978-1-60983-687-0. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- <u>Hurricane Shutter Designs</u>. APA The Engineered Wood Association, 7011 S. 19th ST, Tacoma, WA 98466. Available at www.apawood.org Candidate printed versions allowed if exam is open book.

## SIGN ERECTION (NONELECTRIC) CATEGORY CLASS "SE"

Tests a candidate's knowledge of installation, repair, and modification of non-electrical signs.

Number of Questions	49	
Time allowed (hours)	2	
Subject Area	# Quest.	
Plan Reading	5	
Concrete and Reinforcement	9	
Wood	6	
Structural Steel	7	
Welding	7	
Non-Electric Sign	8	
Safety	7	

Number of Questions

- Carpentry Level One, Carpentry Fundamentals 2013, 2013. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.
- Carpentry Level Three 2014, 2014. ISBN: 0133823059. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.
- Florida Building Code 2017 Building, 2017. ISBN: 978-1-60983-687-0. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- Ironworking Level One, 2011. ISBN: 978-0-13-213714-0. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.

## **SOLAR CONTRACTOR CLASS CV**

A Solar Contractor means a contractor whose services consist of the installation, alteration, repair, maintenance, relocation, or replacement of solar panels for potable solar water heating systems, swimming pool solar heating systems, and photovoltaic systems and any appurtenances, apparatus, or equipment used in connection therewith, whether public, private, or otherwise, regardless of use. A contractor, certified or registered pursuant to the provisions of Chapter 489, Florida Statutes, is not required to become a certified or registered solar contractor or to contract with a solar contractor in order to provide any services enumerated in this paragraph that are within the scope of the services such contractors may render under Part I of Chapter 489, Florida Statutes. In order to be eligible to be certified as a Class "CV" specialty building contractor by the board, the applicant shall have at least four (4) years of practical experience in the category.

Number of Questions	80
Time allowed (hours)	3
Subject Area	# Quest.
Site Survey and Module Orientation	4
Designing photovoltaic systems to meet end-use	6
requirements	
Designing Grid Tied systems	5
Designing Standalone/Non-grid Connected	5
Systems	
Designing with hybrid systems	5
Installing photovoltaic systems	6
Commissioning systems	5
Using photovoltaic tools and equipment	5
Maintaining PV Systems	5

Complying with safety procedures and building	5
codes	
Plan Reading & Estimating	5
Solar Concepts	4
Materials	4
Solar Water Heating Systems	4
Solar Water Heating System Installation	4
Solar Water Heating System Troubleshooting	4
Swimming Pool Heating Systems	4

## References

- Code of Federal Regulations, Title 29 Labor Pt 1926 Revised as of July 1, 2016, 2016. ISBN: None listed in the book itself. National Archives and Records Administration, College Park, MD. https://bookstore.gpo.gov
- Florida Building Code 2017 Energy Conservation, 2017. ISBN: 978-1-60983-695-5. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- Florida Building Code 2017 Mechanical, 2017. ISBN: 978-1-60983-690-0. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- Florida Building Code 2017 Plumbing, 2017. ISBN: 978-1-60983-689-4. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- Florida Building Code 2017 Residential, 2017. ISBN: 978-1-60983-692-4. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- NFPA 70 National Electrical Code, 2011. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at www.nfpa.org.
- NRCA Guidelines for Rooftop-mounted Photovoltaic Systems, 2015. ISBN: Entered once delivered. National Roofing Contractors Association, 10255 W. Higgins Rd., #600, Rosemont, IL 60018. http://www.nrca.net
- Photovoltaic Systems, 3rd edition, 3rd. American Technical Publishers, 1155 IL Inc., W. 175th St., Homewood. 60430. http://www.atplearning.com/product/1058/photovoltaic-systems
- Plumbing Basics for Contractors, 3rd Edition, 2014. ISBN: 978-1-269-78624-9. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com
- Solar Construction Safety, 2006. ISBN: None listed in book itself. Oregan Solar Energy Industries Association, :600 14th Street, N.W.Suite 400, Washington, DC 20005. http://www.coshnetwork.org
- Solar Water and Pool Heating Manual, 2006. ISBN: FSEC-IN-24. University of Central Florida - UCF FL Solar Energy Center, 1679 Clearlake Road. Cocoa, FL 32922-5703 https://secure.fsec.ucf.edu/fsecstore/do/product/Publications/SWPHMan ual
- Walker's Building Estimator's Reference Book:, 30th. ISBN: 978-0-911592-30-6. Frank R. Walker Company, PO Box 318, Lisle, IL 60532. Available @ www.frankrwalker.com

#### STEEL REINFORCING AND IRON CATEGORY CLASS "SR"

Reinforcing Steel Placing Contractor is a contractor qualified and certified to fabricate, place, tie and weld steel reinforcing bars (rods) that are or may be used to reinforce concrete buildings or structures.

Number of Questions	
Time allowed (hours)	

80

3

Subject Area	# Quest.
Plan Reading & Estimating	6
Reinforcement Placement	14
Reinforcement Connections	12
Reinforcement Cutting & Bending	5
Rigging Equipment & Practices	5
Safety	8

- ACI 318 Building Code Requirements for Structural Concrete 2014, 2014. ISBN: 978-0-87031-930-3. American Concrete Institute, 38800 International Way, Country Club Dr, P.O. Box 9094, Farmington Hills, MI 48333. Available at http://www.concrete.org/.
- Florida Building Code 2017 Building, 2017. ISBN: 978-1-60983-687-0. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- Reinforcing Ironwork Level One, 2005.
   ISBN: 978-0-13-228220-8.

   Prentice Hall, P.O. Box 11071, Des Moines, IA 50336.

## STRUCTURAL STEEL CLASS "SS" (ENGLISH OR SPANISH)

The scope of work of a Class "SS" specialty building contractor shall include and be limited to the erection of structural steel shapes and plates, including such minor field fabrication as may be necessary, of any profile, perimeter, or cross-section used, or which may be used, as structural members for buildings and structures, including steel joists; steel decking in conjunction with lightweight decks; siding; communication towers; and all riveting, welding, and rigging necessary and incidental thereto. In order to be eligible to be certified as a Class "SS" specialty building contractor by the board, the applicant shall have at least six (6) years of practical experience in the category

Number of Questions	75
Time allowed (hours)	2

Subject Area	# Quest.
Plan Reading & Estimating	7
Structural Steel	15
Welding & Cutting	10
Structural Steel-Bolting	6
Metal Decking	6
Metal Buildings	4
Metal Joists & Trusses	11
Rigging and Cranes	11
Safety	5

## References

- Florida Building Code 5th edition Building, 2014. ISBN: Item #:5601L14. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. Available at www.iccsafe.org.
- Ironworking Level One, 2011. ISBN: 978-0-13-213714-0. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.
- Ironworking Level Three, 2012. ISBN: 978-0-13-257785-4. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.

Ironworking Level Two, 2011. ISBN: 978-0-13-257822-6. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.

#### SWIMMING POOL/SPA SERVICING CONTRACTOR CLASS "SP"

Swimming Pool Maintenance Contractor (unlimited) is a contractor qualified and certified to do the work of a swimming pool maintenance contractor (limited) and is covered by the same definition except that the swimming pool maintenance contractor (unlimited) shall be able to carry on all such work in connection with both private and public pools.

Number of Questions	75
Time allowed (hours)	3
Subject Area	# Quest.
Calculations	9
Circulation	10
Disinfection	10
Filtration	14
Management	7
Repairs	5
Safety	10
Testing	10

#### References

- Florida Administrative Code, Ch. 64E-9, Public Swimming Pools & Bathing Places, 2009. State of Florida, 2600 Blair Stone Road M.S. 3500, Tallahassee, FL 32399. available at http://www.floridahealth.gov/environmental-health/swimmingpools/\_documents/64E-9\_FAC\_Draft\_Rev7\_no\_strike.pdf Candidate printed versions allowed if exam is open book
- Florida Building Code 2017 Building, 2017. ISBN: 978-1-60983-687-0. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- Florida Building Code 2017 Residential, 2017. ISBN: 978-1-60983-692-4. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- Pool & Spa Operator Handbook, 2012. ISBN: 0-9815803-9-5. National Swimming Pool Foundation, 4775 Granby Circle, Colorado Springs, CO 80919. www.nspf.org

## **TEMPORARY STRUCTURES CLASS TS**

The scope of work of a Class "TS" Specialty Building Contractor shall include and be limited to the fabrication, erection, and installation of self-supporting tents, canopies, or temporary structures, or operation of a use in a self-supporting tent, canopy, or temporary structure, and the pouring of such temporary footings and slabs on grade as may be necessary and incidental thereto. A Class "TS" Specialty Building Contractor may install such hardware as may be necessary and incidental to the erection and retraction of tents or membrane structures. In order to be eligible to be certified as a Class "TS" Specialty Building Contractor by the board, the applicant shall have at least two (2) years of practical experience in the category.

#### Number of Questions

#### Time allowed (hours)

Subject Area	# Quest.
Building Codes	10
Design, Plan Reading and Estimating	8
Tent Erection	12
Concrete	6
Basic Rigging	4
Safety	10

### References

- Basic Safety. ISBN: 9781323676189. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at www.provbookstore.com.
- Florida Building Code 2017 Building, 2017. ISBN: 978-1-60983-687-0. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- Florida Fire Prevention Code 2010. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. www.NFPA.org
- Introduction to Concrete Construction and Finishing. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.
- Introduction to Construction Drawings, 2015. NCCER MATS Testing, 13614 Progress Blvd, Alachua, FL 32615.
- Introduction to Construction Drawings, Specifications, and Layout, 2013. ISBN: 0-13-340302-5. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.
- Introduction to Construction Math, 2015. NCCER MATS Testing, 13614
   Progress Blvd, Alachua, FL 32615.
- Rigging Equipment, 2011. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.
- The IFAI Procedural Handbook for the Safe Installation & Maintenance

<u>of Tentage</u>. ISBN: none available handbook or Publisher. Armbruster Manufacturing Company, 8600 Old Route 66 South, Springfield, IL 62712.

http://armbrustertentmaker.com/downloads/ifai\_handbook.pdf Candidate printed copies allowable

#### TERRAZZO CATEGORY CLASS "I"

The scope of work of a Class "T" specialty building contractor shall include and be limited to the mixing, pouring, preparation, and finishing of terrazzo, including the application of Chattahoochee stone or any stone aggregates applied or affixed through the use of adhesives. In order to be eligible to be certified as a Class "T" specialty building contractor by the board, the applicant shall have at least one (1) year of practical experience in the category.

Number of Questions	25
Time allowed (hours)	1.5

Subject Area	# Quest.
Plan Reading & Estimating	4
Substrates	5
Materials	3
Layout & Planning	3
Terrazzo	6

Safety

2

#### References

- Core Level 1 2015, 2015. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.
- Terrazzo Specifications and Design Guide, 1999. National Terrazzo and Mosaic Association, 110 East Market St., Leesburg, VA 20176. Available at http://naterrazzo.com/documents/Terrazzo\_Specifications\_amp\_Design \_Guide.pdf. Candidate printed versions allowed if exam is open book.

## TILE & MARBLE

Mix and prepare the base for and set tile and marble.

Number of Questions Time allowed (hours)	50 2
Subject Area	# Quest.
Plan Reading & Estimating	6
Substrates	11
Materials	6
Layout & Planning	6
Ceramic Tile Installation	11
Marble & Stone Installation	5
Safety	5

## References

- American National Standards Specifications for the Installation of <u>Ceramic Tile</u>, Version 2011.1. American National Standards Institute, 25 West 43rd Street, 4th floor, New York, NY 10036. Available at http://www.tcnatile.com/.
- Basic Safety. ISBN: 9781323676189. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at www.provbookstore.com.
- <u>Setting Tile</u>, 1995. The Taunton Press, 63 South Main St., P.O. Box 5506, Newton, CT 06470. Available at www.taunton.com.
- TCNA Handbook for Ceramic, Glass, and Stone Tile Installation. Tile Council of North America, 100 Clemson Research Blvd., Anderson, SC 29625. Available at www.tcnatile.com.
- Tile Your World, 2003. ISBN: 0-9742754-3-3. Mistflower Press, 6717 Mistflower Lane, Katy, TX 77449. Available at mistflowerpress.com/index.html.

## TILE, MARBLE AND GRANITE CATEOGRY CLASS "TMG"

The scope of work of a Class "TMG" specialty building contractor shall include and be limited to erecting, attaching, applying, and embedding tile, marble, and granite on concrete, countertops, or other materials, applied to floors or walls, and shall include the application of setting materials. Scope of work shall include tile, brick, marble, granite, or similar materials. This work is to include nonloadbearing structural elements. In order to be eligible to be certified as a Class "TMG" specialty building contractor by the board, the applicant shall have at least two (2) years of practical experience in the category.

Number of Questions	50
Time allowed (hours)	2

Subject Area	# Quest.
Plan Reading & Estimating	6
Substrates	8
Materials	6
Layout & Planning	5
Ceramic Tile Installation	10
Marble & Stone Installation	10
Safety	5

- American National Standards Specifications for the Installation of <u>Ceramic Tile, Material & Installation Standards 2013</u>, 2013. American National Standards Institute, 25 West 43rd Street, 4th floor, New York, NY 10036. Available at http://www.ansi.org/
- <u>Core Level 1 2015</u>, 2015. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.
- <u>Setting Tile</u>, 1995 copyright. ISBN: 978-1561580804. Taunton Press, 63 South Main Street, P.O. Box 5506, Newtown, CT 06470-5506. Available at www.taunton.com.
- TCNA Handbook for Ceramic, Glass, and Stone Tile Installation, 2015.

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   Tile Council of North America, 100 Clemson

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   Blvd.,
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   SC
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 6717

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 Lane,
 Katy,
 TX
 77449.
 Available
 at

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## WATERPROOFING CLASS W

The scope of a Class W Waterproofing specialty building contractor shall include and be limited to the application of waterproofing products by brush, roller, or spray methods to existing interior and exterior surfaces, except roofs, in accordance with the plans and specifications therefor, including the cleaning, sandblasting, caulking, and priming of surfaces in preparation for the application of waterproofing products. In order to be eligible to be certified as a Class "W" specialty building contractor by the board, the applicant shall have at least two (2) years of practical experience in the category.

Number of Questions	50
Time allowed (hours)	2
	# <b>O</b>
Subject Area	# Quest.
Waterproofing Principles	8
Below-Grade Waterproofing	12
Above-Grade Waterproofing	12
Sealants and Admixtures	5
Expansion Joints	2
Remedial Waterproofing	5
Envelope Testing	2
Safety	4

## References

. .

Basic Safety. ISBN: 9781323676189. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at www.provbookstore.com.

- <u>Construction Waterproofing Handbook</u>, 2nd Edition. ISBN: 9780071489737. Mcgraw Hill Education, Columbus, OH. http://www.mheducation.com
- Florida Building Code 2017 Building, 2017. ISBN: 978-1-60983-687-0. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org

## WINDOW AND DOOR CONTRACTOR CLASS "WD"

Those who are qualified to install, repair, replace or alter windows and doors including hardware in connection therewith. This contractor shall not effect structural changes (Rev 1/1/2013)

Number of Questions Time allowed (hours)	25 1.5
Subject Area	# Quest.
Building Codes	4
Doors & Windows	14
Plan Reading & Estimating	4
Safety	3

#### References

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- Florida Building Code 2017 Residential, 2017. ISBN: 978-1-60983-692-4. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- **<u>Study Guide for Siding & Finish Carpentry</u>**, 2012. ISBN: 978-1-256-61081-6. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com.

## WOOD FLOORING CONTRACTOR

A Wood Flooring Contractor must demonstrate knowledge : all local/state/federal regulations and codes, as well as demonstrate proficiency in the installation and repair of laminate, parquet, wood strips, nail and non-nailed wood flooring and prefinished flooring which is prefabricated or cast-in place. Including but not limited to sub-flooring and finishing.

Number of Questions Time allowed (hours)	25 1
Subject Area	# Quest.
Flooring Finishing	3
Flooring Installation	6
Flooring Materials & Accessories	4
Troubleshooting	3
Job Preparation	4
Subflooring	5

## References

Florida Building Code 2017 - Building, 2017. ISBN: 978-1-60983-687-0. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org

# Wood Flooring: A Complete Guide to Layout, Installation & Finishing.

The Taunton Press, 63 South Main St., P.O. Box 5506, Newton, CT 06470.