DUVAL COUNTY/CITY OF JACKSONVILLE- EXAM DESCRIPTIONS

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BUILDING CONTRACTOR

Building Contractor means a contractor whose services are limited to construction of commercial and single-dwelling or multiple-dwelling residential buildings, which commercial or residential buildings do not exceed three stories in height, and accessory use structures in connection therewith or a contractor whose services are limited to remodeling, repair, or improvement of any size building if the services do not affect the structural members of the building. As regulated under Florida Statute, a person who has passed a competency examination as a Building Contractor may perform these or related tasks or may supervise persons in his employ in the execution of these tasks.

Number of Questions	70
Time allowed (hours)	3
Subject Area	# Quest.
Plan Reading & Estimating	10
Sitework	5
Concrete	11
Masonry	8
Structural Steel	4
Carpentry & Metal Framing	9
Roofing	4
Associated Trades	4
Interior Finishes	4
Exterior Finishes	4
Safety	7

References

- 2012 Study Guide for Structural Steel, 2012. ISBN: 978-1-269-08432-1. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com
- ACI 530 Building Code Requirements and Specification for Masonry Structures 2013, 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
- 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 2020 Building, 2020.
 International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.
- Masonry Level Three, 2014. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336.
- Study Guide for Commercial Carpentry, 2nd Edition, 2014. ISBN: 978-1-269-78661-4. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com

BUILDING CONTRACTOR (SPANISH)

Building Contractor means a contractor whose services are limited to construction of commercial and single-dwelling or multiple-dwelling residential buildings, which commercial or residential buildings do not exceed three stories in height, and accessory use structures in connection therewith or a contractor whose services are limited to remodeling, repair, or improvement of any size building if the services do not affect the structural members of the building. As regulated under Florida Statute, a person who has passed a competency examination as a Building Contractor may perform these or related tasks or may supervise persons in his employ in the execution of these tasks.

Number of Questions	70
Time allowed (hours)	3
Subject Area	# Quest.
Plan Reading & Estimating	10
Sitework	5
Concrete	11
Masonry	8
Structural Steel	4
Carpentry & Metal Framing	10
Roofing	4
Associated Trades	3
Interior Finishes	4
Exterior Finishes	4
Safety	7

- 2012 Study Guide for Structural Steel, 2012. ISBN: 978-1-269-08432-1. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com
- ACI 530 Building Code Requirements and Specification for Masonry Structures 2013, 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
- 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 2020 Building, 2020.
 International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.
- <u>Masonry Level Three</u>, 2014. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336.
- Study Guide for Commercial Carpentry, 2nd
 Edition, 2014. ISBN: 978-1-269-78661-4. Pearson,
 501 Boylston Street, Suite 900, Boston, MA 02116.
 Available at www.provbookstore.com

BURGLAR & FIRE ALARM ELECTRICAL 2014

Tests a candidate's knowledge of the design, plan, installation, repair, alteration, and maintenance of intrusion detection, fire detection, and signaling systems.

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

- American Electrician's Handbook, 16th Edition. ISBN: 978-0071798808. McGraw Hill Glencoe Order Services, P.O. Box 545, Blacklick, OH 43004. Available at https://www.mheducation.com/highered/product/american-electricians-handbook-sixteenth-edition-croft-hartwell/9780071798808.html
- 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 AND LAW

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	50	Number of Questions	50
Time allowed (hours)	2	Time allowed (hours)	2
Subject Area	# Quest.	Subject Area	# Quest.
Business Organization	2	Business Organization	2
Licensing	3	Licensing	3
Lien laws	2	Lien laws	2
Tax Laws	5	Tax Laws	5
Safety OSHA	3	Safety OSHA	3
Labor Laws	8	Labor Laws	8
Contract Management	9	Contract Management	9
Project Management	6	Project Management	6
Estimating & Bidding	4	Estimating & Bidding	4
Financial Management	5	Financial Management	5
Risk Management	3	Risk Management	3

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.

References

as contractors.

• FLORIDA - NASCLA Contractors Guide to

Business, Law and Project Management,
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.

BUSINESS AND LAW (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

CARPENTRY

Tests a candidate's knowledge of light and heavy carpentry, rough framing, trusses, sheathing, metal framing, paneling, trim, cabinetry, doors, windows, stairs, and incidental hardware

Number of Questions	50	Number of Questions	50
Time allowed (hours)	3	Time allowed (hours)	2
Subject Area	# Quest.	Subject Area	# Quest.
Plan Reading & Estimating	6	Cold-Formed Steel Framing	5
Floor Systems	4	Exterior Finishing	4
Wall & Ceiling Framing	8	Floor Systems	4
Roof Framing	8	Interior Trim	2
Thermal & Moisture Protection	4	Plan Reading & Estimating	6
Exterior Finishing	4	Safety	5
Cold-Formed Steel Framing	5	Roof Framing	8
Windows, Doors & Stairs	4	Thermal & Moisture Protection	4
Interior Trim	2	Wall & Ceiling Framing	8
Safety	5	Windows, Doors & Stairs	4

hardware

References

- <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
- 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

References

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

CARPENTRY (SPANISH)

Tests a candidate's knowledge of light and heavy carpentry,

rough framing, trusses, sheathing, metal framing, paneling,

trim, cabinetry, doors, windows, stairs, and incidental

- 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
- 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

COMMERCIAL SWIMMING POOL

Shall include the construction, repair, water treatment, and servicing of any swimming pool or hot tub or spa, whether public or private or otherwise, regardless of use. The scope of such work includes layout, excavation, operation of construction pumps for dewatering purposes, steelwork, installation of light niches, construction of floors, guniting, fiber glassing, installation of tile and coping, installation of all perimeter and filter piping, installation of all filter equipment and chemical feeders of any type, plastering of the interior, construction of decks (slabs incidental to the pool), construction of equipment rooms or housing for pool equipment, and installation of package pool heaters. (However, the scope of work of such Contractor shall not include direct connections to a sanitary sewer or to potable water lines.) Such Contractors may contract for screen enclosures if a sublicensed specialist performs such work and contracted with pool work.

Number of Questions	50
Time allowed (hours)	2
Subject Area	# Quest.
Plan Reading & Estimating	4
Site Preparation, Excavation and Backfilling	5
Pool Shell Construction	14
Interior Surface Preparation and Finishing	10
Tile, Coping and Trimwork	4
Accessory Work	3
Care and Operation	6
Safety	4

- <u>Basic Safety</u>. ISBN: 9781323676189. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at www.provbookstore.com.
- Florida Building Code 2020 Building, 2020.
 International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.
- <u>Swimming Pools: Design and Construction</u>, Fourth Edition. ISBN: 978-0419235903. Taylor and Francis, 270 Madison Avenue, New York, NY 10016. Available at www.amazon.com.

DEMOLITION

Tests a candidate's knowledge of demolition and removal of structures and buildings. Tests a candidate's knowledge of demolition of structural steel, structural concrete, masonry and structural wood framing. Emphasis on cranes and crane safety as well as explosives and explosive safety. Focuses on interpreting plans and understanding of how components of various structures are assembled. Covers single and multistory buildings and structures of the types mentioned above.

Number of Questions	50
Time allowed (hours)	2
Subject Area	# Quest.
Plan Reading & Interpretation	6
Structural Concrete	5
Structural Masonry	5
Structural Framing	4
Structural Steel	6
Blasting	6
Rigging and Cranes	8
Safety	10

References

- <u>Carpentry Level One</u>, 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 2020 Building, 2020.
 International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.
- <u>Ironworking Level One</u>, 2011. ISBN: 978-0-13-213714-0.
 Prentice Hall, P.O. Box 11071, Des Moines, IA 50336.
 Available at http://nccer.pearsonconstructionbooks.com.
- ISEE Blasters' Handbook. ISBN: 978-1892396006.
 International Society of Explosives Engineers, 30325
 Bainbridge Road, Cleveland, OH 44139. Available at www.isee.org.
- 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.

DEMOLITION (SPANISH)

Tests a candidate's knowledge of demolition and removal of structures and buildings. Tests a candidate's knowledge of demolition of structural steel, structural concrete, masonry and structural wood framing. Emphasis on cranes and crane safety as well as explosives and explosive safety. Focuses on interpreting plans and understanding of how components of various structures are assembled. Covers single and multistory buildings and structures of the types mentioned above.

Number of Questions	50
Time allowed (hours)	2
Subject Area	# Quest.
Plan Reading & Interpretation	6
Structural Concrete	5
Structural Masonry	5
Structural Framing	4
Structural Steel	6
Blasting	6
Rigging and Cranes	8
Safety	10

- <u>Carpentry Level One</u>, 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 2020 Building, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.
- 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.
- ISEE Blasters' Handbook. ISBN: 978-1892396006.
 International Society of Explosives Engineers, 30325
 Bainbridge Road, Cleveland, OH 44139. Available at www.isee.org.
- 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.

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

- American Electrician's Handbook, ISBN: 978-0071798808. McGraw Hill Glencoe Order Services, P.O. Box 545, Blacklick, OH 43004. Available at https://www.mheducation.com/highered/product/americ an-electricians-handbook-sixteenth-edition-crofthartwell/9780071798808.html
- NFPA 70 National Electrical Code, 2014. ISBN: 9781455906727. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at www.nfpa.org.

EXCAVATION CONTRACTOR

Tests a candidate's knowledge of the excavation or removal of materials such as rock, gravel and sand to construct or excavate canals, lakes, levees, including the clearing of land of surface debris; and vegetation, the grubbing of roots, the removal of debris; and leveling of related surfaces.

Number of Questions	50
Time allowed (hours)	2
Subject Area	# Quest.
Plan Reading & Estimating	10
General Knowledge	6
Survey & Layout	5
Clearing & Grubbing	4
Excavating	7
Dewatering	3
Grading	8
Safety	7

- <u>Basic Safety</u>. ISBN: 9781323676189. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at www.provbookstore.com.
- Study Guide for Excavation Contractors, 2nd edition, 2014. ISBN: 978-1-269-78572-3. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com

FABRIC AWNING CONTRACTORS

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

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- All about Awnings. Professional Awning Manufacturers Association, 1801 County Road B West, Roseville, MN 55113. http://www.awninginfo.com/commercial_awning_architects_resources.html 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</u>
 <u>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 2020 Building, 2020.
 International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.

GARAGE DOOR INSTALLER CONTRACTOR

A Garage door installer is a person or firm qualified and certified to install, maintain, repair, alter or extend residential or commercial garage doors, including all hardware and operating devices. One-hundred-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

- <u>Basic Safety</u>. ISBN: 9781323676189. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at www.provbookstore.com.
- Florida Building Code 2020 Building, 2020.
 International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.
- 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 https://dasma.com/dasma-pages/DASMA-tehnicaldata-sheets.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 https://dasma.com/dasma-pages/DASMA-tehnical-data-sheets.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 https://dasma.com/dasmapages/DASMA-tehnical-data-sheets.asp. Candidate printed versions allowed if exam is open book
- TDS 158 Glazing in Garage Doors. Door and Access Systems Manufacturers Association International, 1300 Sumner Avenue, Cleveland, OH 44115-7333. Available at https://dasma.com/dasmapages/DASMA-tehnical-data-sheets.asp. Candidate printed versions allowed if exam is open book

- TDS 160 Sectional Garage Door Terminology.
 Door and Access Systems Manufacturers Association International, 1300 Sumner Avenue, Cleveland, OH 44115-7333. Available at https://dasma.com/dasmapages/DASMA-tehnical-data-sheets.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
 https://dasma.com/dasma-pages/DASMA-tehnical data-sheets.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 https://dasma.com/dasmapages/DASMA-tehnical-data-sheets.asp. Candidate printed versions allowed if exam is open book
- TDS 163 Garage Door R-Value. Door and Access Systems Manufacturers Association International, 1300 Sumner Avenue, Cleveland, OH 44115-7333. Available at https://dasma.com/dasma-pages/DASMA-tehnical-data-sheets.asp. Candidate printed versions allowed if exam is open book
- 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 https://dasma.com/dasma-pages/DASMA-tehnical-data-sheets.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 https://dasma.com/dasmapages/DASMA-tehnical-data-sheets.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 https://dasma.com/dasmapages/DASMA-tehnical-data-sheets.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 https://dasma.com/dasma-pages/DASMA-tehnical-data-sheets.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 at https://dasma.com/dasma-pages/DASMA-tehnical-data-sheets.asp. Candidate printed versions allowed if exam is open book

- TDS 179 Wood Garage Door Inspection and <u>Maintenance Guidelines</u>. Door and Access Systems Manufacturers Association International, 1300 Sumner Avenue, Cleveland, OH 44115-7333. Available at https://dasma.com/dasma-pages/DASMA-tehnical- data-sheets.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 https://dasma.com/dasma-pages/DASMA-tehnical-data-sheets.asp. Candidate printed versions
 allowed if exam is open book
- TDS 182 Technical Considerations for Dock

 <u>Doors</u>. Door and Access Systems Manufacturers

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

 https://dasma.com/dasma-pages/DASMA-tehnicaldata-sheets.asp. Candidate printed versions allowed if
 exam is open book
- TDS 260 Common Rolling Steel Door Installation Problems. Door and Access Systems Manufacturers Association International, 1300 Sumner Avenue, Cleveland, OH 44115-7333. Available at https://dasma.com/dasma-pages/DASMA-tehnicaldata-sheets.asp. Candidate printed versions allowed if exam is open book
- TDS 270 Recommended Rolling Door Maintenance Practices for Building Maintenance
 Supervisors. Door and Access Systems Manufacturers Association International, 1300 Sumner Avenue, Cleveland, OH 44115-7333. Available at https://dasma.com/dasma-pages/DASMA-tehnical-data-sheets.asp. Candidate printed versions allowed if exam is open book

GENERAL CONTRACTOR

Tests a candidate's knowledge of the construction, repair, alteration, remodeling, addition to, subtraction from, improvement, and demolition of any building or structure including related improvements to real estate excluding electrical, mechanical, plumbing, and liquefied petroleum gas work related thereto.

Number of Questions	81
Time allowed (hours)	3
Subject Area	# Quest.
Plan Reading & Estimating	11
Sitework	5
Concrete	12
Masonry	8
Structural Steel	10
Carpentry & Metal Framing	12
Roofing	4
Associated Trades	2
Interior Finishes	5
Exterior Finishes	5
Safety	7

References

- 2012 Study Guide for Structural Steel, 2012. ISBN: 978-1-269-08432-1. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com
- ACI 530 Building Code Requirements and Specification for Masonry Structures 2013, 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
- <u>Carpentry Level One</u>, 2006. ISBN: 978-0-13-229268 9. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336.
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- 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 2020 Building, 2020.
 International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.
- Masonry Level Three, 2005. ISBN: 978-0-13-109169-6. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.
- Study Guide for Commercial Carpentry, 2nd
 Edition, 2014. ISBN: 978-1-269-78661-4. Pearson, 501
 Boylston Street, Suite 900, Boston, MA 02116.
 Available at www.provbookstore.com

GENERAL CONTRACTOR (SPANISH)

Tests a candidate's knowledge of the construction, repair, alteration, remodeling, addition to, subtraction from, improvement, and demolition of any building or structure including related improvements to real estate excluding electrical, mechanical, plumbing, and liquefied petroleum gas work related thereto.

Number of Questions	80
Time allowed (hours)	3
Subject Area	# Quest.
Plan Reading & Estimating	10
Sitework	6
Concrete	12
Masonry	8
Structural Steel	7
Carpentry & Metal Framing	12
Roofing	5
Associated Trades	3
Interior Finishes	5
Exterior Finishes	6
Safety	6

- 2012 Study Guide for Structural Steel, 2012. ISBN: 978-1-269-08432-1. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com
- ACI 530 Building Code Requirements and Specification for Masonry Structures 2013, 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
- <u>Carpentry Level One</u>, 2006. ISBN: 978-0-13-229268 9. 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 2020 Building, 2020.
 International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.
- Masonry Level Three, 2005. ISBN: 978-0-13-109169 Prentice Hall, P.O. Box 11071, Des Moines, IA 50336.
 Available at http://nccer.pearsonconstructionbooks.com.
- Study Guide for Commercial Carpentry, 2nd Edition, 2014. ISBN: 978-1-269-78661-4. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com

IRRIGATION SPRINKLER

Install, repair, maintain, alter or extend all piping and sprinkler heads for the irrigation of lawns including incidental connections to a water pump (but not direct connection to potable water lines).

Number of Questions	50
Time allowed (hours)	2
Subject Area	# Quest.
Plan Reading & Estimating	6
Planning & Layout	8
Materials	6
Controls	6
Irrigation Installation	10
Cross Contamination & Backflow Prevention	5
Reclaimed Water	4
Safety	5

References

- <u>Basic Safety</u>. ISBN: 9781323676189. Prentice Hall,
 P.O. Box 11071, Des Moines, IA 50336. Available at www.provbookstore.com.
- Florida Administrative Code, Ch. 62-610, Reuse of
 Reclaimed Water & Land Application, 2012. State
 of Florida, 2600 Blair Stone Road M.S. 3500,
 Tallahassee, FL 32399.
 http://www.dep.state.fl.us/legal/Rules/wastewater/62-610.pdf Candidate printed versions permitted in testing
 room if exam is open book.
- <u>Florida Building Code 2017 Plumbing</u>, 2017. ISBN: 978-1-60983-689-4. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org
- Turf Irrigation Manual The Complete Guide to
 <u>Landscape Irrigation Design</u>, 5th Ed., 1994. ISBN: 978-0963509604. Weathermatic, P.O. Box 180205, Dallas, TX 75218-0205. Available at www.amazon.com.

IRRIGATION SPRINKLER (SPANISH)

A Master Lawn Sprinkler is qualified and certified to install, maintain, repair, alter or extend a lawn sprinkling system and appliances and devices used in connection with such systems, except that such systems shall not include the drilling of wells or the connecting of such systems to potable water. Sprinkler and irrigation systems used for agricultural purposes shall not be included within the scope of this subsection.

Number of Questions	50
Time allowed (hours)	2
Subject Area	# Quest.
Plan Reading & Estimating	6
Planning & Layout	8
Materials	6
Controls	6
Irrigation Installation	10
Cross Contamination & Backflow Prevention	5
Reclaimed Water	4
Safety	5

- <u>Basic Safety</u>. ISBN: 9781323676189. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at www.provbookstore.com.
- Florida Administrative Code, Ch. 62-610, Reuse of Reclaimed Water & Land Application, 2012. State of Florida, 2600 Blair Stone Road M.S. 3500, Tallahassee, FL 32399. http://www.dep.state.fl.us/legal/Rules/wastewater/62-610.pdf Candidate printed versions permitted in testing room if exam is open book.
- Florida Building Code 2020 Plumbing, 2020.
 International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.
- Turf Irrigation Manual The Complete Guide to
 <u>Landscape Irrigation Design</u>, 5th Ed., 1994. ISBN:

 978-0963509604. Weathermatic, P.O. Box 180205,
 Dallas, TX 75218-0205. Available at www.amazon.com.

JOURNEYMAN AIR CONDITIONING

Qualified to install, maintain, repair, alter, fabricate or extend air conditioning, refrigeration systems, piping vessels, warm air heating, low pressure boilers, ventilation systems, duct systems, insulation, and related appurtenances within a complete system unlimited in horsepower or tonnage.

Number of Questions	106	Number of Questions
Time allowed (hours)	3	Time allowed (hours)
Subject Area	# Quest.	Subject Area
General Knowledge	23	General Knowledge
Piping	10	Piping
Systems & Sizing	24	Systems & Sizing
Equipment	11	Equipment
Maintenance	26	Maintenance
Plan Reading	12	Plan Reading

References

- Advanced Mechanical Study Guide, 2nd edition,
 2nd. ISBN: 9781323725184. Pearson, 501 Boylston
 Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com.
- Florida Building Code 2020 Building, 2020.
 International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.
- Florida Building Code 2020 Mechanical, 2020.
 International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.
- HVAC Basics for Contractors,3rd Edition, 3rd Edition. ISBN: 13:9781323725146. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com.
- <u>Intermediate Mechanical Study Guide</u>, 2015. ISBN: 9781323725221. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com.

JOURNEYMAN AIR CONDITIONING (SPANISH)

Qualified to install, maintain, repair, alter, fabricate or extend air conditioning, refrigeration systems, piping vessels, warm air heating, low pressure boilers, ventilation systems, duct systems, insulation, and related appurtenances within a complete system unlimited in horsepower or tonnage.

Number of Questions	100
Time allowed (hours)	3
Subject Area	# Quest.
General Knowledge	22
Piping	10
Systems & Sizing	24
Equipment	11
Maintenance	28
Plan Reading	5

- Advanced Mechanical Study Guide, 2nd edition,
 2nd. ISBN: 9781323725184. Pearson, 501 Boylston
 Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com.
- Florida Building Code 2020 Building, 2020.
 International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.
- Florida Building Code 2020 Energy Conservation, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.
- Florida Building Code 2020 Mechanical, 2020.
 International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.
- HVAC Basics for Contractors,3rd Edition, 3rd Edition. ISBN: 13:9781323725146. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com.
- Intermediate Mechanical Study Guide, 2015. ISBN: 9781323725221. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com.

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

References

- American Electrician's Handbook, 16th Edition. ISBN: 978-0071798808. McGraw Hill Glencoe Order Services, P.O. Box 545, Blacklick, OH 43004. Available at https://www.mheducation.com/highered/product/americ an-electricians-handbook-sixteenth-edition-croft-hartwell/9780071798808.html
- NFPA 70 National Electrical Code, 2014. ISBN: 9781455906727. National Fire Protection Association, 1
 Batterymarch Park, Quincy, MA 02169-7471. Available at www.nfpa.org.

References

Electrician.

 American Electrician's Handbook, 16th Edition. ISBN: 978-0071798808. McGraw Hill Glencoe Order Services, P.O. Box 545, Blacklick, OH 43004. Available at

JOURNEYMAN ELECTRICIAN 2017

A Journeyman Electrician is qualified and tested to perform

work in the electrical trades while employed by a Master

- https://www.mheducation.com/highered/product/americ an-electricians-handbook-sixteenth-edition-croft-hartwell/9780071798808.html
- NFPA 70 National Electric Code 2017, 2017. ISBN: 978-145591277-3. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at www.nfpa.org.

JOURNEYMAN GENERAL MECHANICAL

Journeyman General Mechanical: 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	60
Time allowed (hours)	3
Subject Area	# Quest.
General Knowledge	9
Piping	6
Equipment	13
Maintenance	10
Plan Reading	4
Systems & Sizing	18

References

 Advanced Mechanical Study Guide, 2nd edition, 2nd. ISBN: 9781323725184. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. 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 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 Basics for Contractors,3rd Edition, 3rd Edition. ISBN: 13:9781323725146. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com.
- HVAC Level Three Trainee Guide, 2008. ISBN: 978-0-13-604492-5. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.
- HVAC Level Two Trainee Guide, 2007. ISBN: 978-0-13-614385-7. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.
- Intermediate Mechanical Study Guide, 2015. ISBN: 9781323725221. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com.
- Manual N Commercial Load Calculations, 2008.
 ISBN: 978-1892765383. Air Conditioning Contractors of America, 2800 Shirlington Road, Suite 300, Arlington, VA 22206. www.amazon.com

JOURNEYMAN GENERAL MECHANICAL (SPANISH)

Journeyman General Mechanical: 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	60
Time allowed (hours)	3
Subject Area	# Quest.
General Knowledge	9
Piping	6
Equipment	13
Maintenance	10
Plan Reading	4
Systems & Sizing	18

References

Advanced Mechanical Study Guide, 2nd edition, 2nd.
ISBN: 9781323725184. Pearson, 501 Boylston Street,
Suite 900, Boston, MA 02116. 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 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 Basics for Contractors,3rd Edition, 3rd Edition. ISBN: 13:9781323725146. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com.
- Intermediate Mechanical Study Guide, 2015. ISBN: 9781323725221. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com.

JOURNEYMAN PLUMBER

Perform work under the supervision and in the employ of a state certified plumber or a locally licensed master plumber.

Number of Questions	80
Time allowed (hours)	3
Subject Area	# Quest.
Drain, Waste & Vent Systems	14
Fixtures & Fittings	6
General Knowledge	10
Isometrics & Plan Reading	10
Plumbing Math	5
Storm & Roof Drainage	8
Water Heaters	8
Water Supply and Distribution	12
Safety	7

References

- 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 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

JOURNEYMAN PLUMBER (SPANISH)

Perform work under the supervision and in the employ of a state certified plumber or a locally licensed master plumber.

Number of Questions	80
Time allowed (hours)	3
Subject Area	# Quest.
Drain, Waste & Vent Systems	14
Fixtures & Fittings	6
General Knowledge	10
Isometrics & Plan Reading	10
Plumbing Math	5
Storm & Roof Drainage	8
Water Heaters	8
Water Supply and Distribution	12
Safety	7

References

- 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 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

JOURNEYMAN RESIDENTIAL PLUMBER

Tests a candidate's knowledge of the installation, repair, maintenance, and extension of a plumbing system, including drains, waste, sanitary vents, water supply, and fixtures as it applies to one and two-family residences, also multiple single-family dwellings (townhouses) not more than three stories in height.

Number of Questions	75
Time allowed (hours)	3
Subject Area	# Quest.
Drain, Waste & Vent Systems	10
Fixtures & Fittings	8
General Knowledge	10
Isometrics & Plan Reading	10
Plumbing Math	9
Storm & Roof Drainage	4
Water Heaters	10
Water Supply and Distribution	10
Safety	4

- Florida Building Code 2020 Residential, 2020.
 International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.
- 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

LOW VOLTAGE (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	Number of Questions	50
Time allowed (hours)	2	Time allowed (hours)	2
Subject Area	# Quest.	Subject Area	# Quest.
General Electrical Knowledge	12	General Electrical Knowledge	12
Wiring & Protection	4	Wiring & Protection	4
Wiring Methods & Materials	10	Wiring Methods & Materials	10
Equipment for General Use	6	Equipment for General Use	6
Special Occupancies	6	Special Occupancies	6
Special Equipment	3	Special Equipment	3
Special Conditions	4	Special Conditions	4
Communication Systems	5	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
 - https://www.mheducation.com/highered/product/americ an-electricians-handbook-sixteenth-edition-crofthartwell/9780071798808.html
- 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.

LOW VOLTAGE 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

- American Electrician's Handbook, 16th Edition. ISBN: 978-0071798808. McGraw Hill Glencoe Order Services, P.O. Box 545, Blacklick, OH 43004. Available
 - https://www.mheducation.com/highered/product/americ an-electricians-handbook-sixteenth-edition-crofthartwell/9780071798808.html
- 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.

MARINE CONSTRUCTION

Marine Contractors are those who are qualified with the experience and skill to construct, maintain, alter, install or repair seawalls, bulkheads, revetments, docks, piers, wharfs, groins, boat lifts, davits and other marine structures, including pile driving.

Number of Questions	75
Time allowed (hours)	3
Subject Area	# Quest.
Carpentry	10
Florida Building Code application to Structures	Marine10
Piles	10
Plan Reading & Estimating	6
Safety	9
Sitework	10
Structures	10
Concrete and Reinforcement	10

- 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.
- DESIGN OF COASTAL REVETMENTS, <u>SEAWALLS</u>, AND BULKHEADS, 1995. US Army Corps of Engineers, Washington, DC. Available at http://www.delmar.ca.us/DocumentCenter/View/1899 Candidate printed versions permitted in testing room if exam is open book.
- FLDOT Structures Detailing Manual, 2013, 2013.
 State of Florida, 2600 Blair Stone Road M.S. 3500, Tallahassee, FL 32399.
 http://www.dot.state.fl.us/structures/StructuresManual/CurrentRelease/Vol2_SDM.pdf Candidate printed versions allowed if exam is open book.
- Florida Building Code 2020 Building, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.
- <u>Fundamentals of Hydraulic Dredging</u>, 1996. ISBN: 9780784401477. American Society of Civil Engineers, 1800 Alexander Bell Drive, Reston, VA 20191. https://www.asce.org/templates/publications-bookdetail.aspx?id=7971

- <u>Pile Design and Construction Practice</u>, 5th. ISBN: 978-0415385824. Taylor and Francis, 270 Madison Avenue, New York, NY 10016. Available at www.Contractor-books.com
- Standard Specifications for Road and Bridge Construction, 2013. State of Florida, 2600 Blair Stone Road M.S. 3500, Tallahassee, FL 32399. Available at www.dot.state.fl.us. Candidate printed versions allowed if exam is open book.
- 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
- The Dock Manual: Designing/Building/Maintaining, 1999. ISBN: 978-1-58017-098-7. Storey Publishing, 210 MASS MoCA Way, North Adams, MA 01247. https://www.storey.com/books/the-dock-manual/#

MASTER AC (UNLIMITED)

Tests a candidate's knowledge of the design, installation, maintenance, repair, fabrication, alteration & extension of Ac/refrigeration, piping vessels, warm air heating, low and high pressure boilers, ventilation systems, duct systems, insulation & related appurtenances within a complete system unlimited in horsepower or tonnage.

Number of Questions	100	Num
Time allowed (hours)	4	Time
Subject Area	# Quest.	Subj
Piping	18	Pipin
Equipment	14	Equip
Maintenance	22	Main
Plan Reading	7	Plan
Systems & Sizing	20	Syste
General Knowledge	19	Gene

References

- Advanced Mechanical Study Guide , 2nd edition,
 2nd. ISBN: 9781323725184. Pearson, 501 Boylston
 Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com.
- Florida Building Code 2020 Building, 2020.
 International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.
- Florida Building Code 2020 Energy Conservation, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.
- Florida Building Code 2020 Fuel Gas, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.
- <u>Florida Building Code 2020 Mechanical</u>, 2020.
 International Code Council, 4051 West Flossmoor Road,
 Country Club Hills, IL 60478.
- HVAC Basics for Contractors,3rd Edition, 3rd
 Edition. ISBN: 13:9781323725146. Pearson, 501
 Boylston Street, Suite 900, Boston, MA 02116.
 Available at www.provbookstore.com.
- Intermediate Mechanical Study Guide, 2015. ISBN: 9781323725221. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com.
- Manual N Commercial Load Calculations, 2008.
 ISBN: 978-1892765383. Air Conditioning Contractors of America, 2800 Shirlington Road, Suite 300, Arlington, VA 22206. www.amazon.com
- <u>Residential Load Calculations Manual J.</u> Air Conditioning Contractors of America, 2800 Shirlington Road, Suite 300, Arlington, VA 22206. www.acca.org

MASTER AC (UNLIMITED) (SPANISH)

Tests a candidate's knowledge of the design, installation, maintenance, repair, fabrication, alteration & extension of Ac/refrigeration, piping vessels, warm air heating, low and high pressure boilers, ventilation systems, duct systems, insulation & related appurtenances within a complete system unlimited in horsepower or tonnage.

Number of Questions	100
Time allowed (hours)	4
Subject Area	# Quest.
Piping	18
Equipment	14
Maintenance	22
Plan Reading	7
Systems & Sizing	20
General Knowledge	19

- Advanced Mechanical Study Guide, 2nd edition,
 2nd. ISBN: 9781323725184. Pearson, 501 Boylston
 Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com.
- Florida Building Code 2020 Building, 2020.
 International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.
- Florida Building Code 2020 Energy Conservation, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.
- Florida Building Code 2020 Fuel Gas, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.
- Florida Building Code 2020 Mechanical, 2020.
 International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.
- HVAC Basics for Contractors,3rd Edition, 3rd
 Edition. ISBN: 13:9781323725146. Pearson, 501
 Boylston Street, Suite 900, Boston, MA 02116.
 Available at www.provbookstore.com.
- Intermediate Mechanical Study Guide, 2015. ISBN: 9781323725221. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com.
- Manual N Commercial Load Calculations, 2008.
 ISBN: 978-1892765383. Air Conditioning Contractors of America, 2800 Shirlington Road, Suite 300, Arlington, VA 22206. www.amazon.com
- <u>Residential Load Calculations Manual J.</u> Air Conditioning Contractors of America, 2800 Shirlington Road, Suite 300, Arlington, VA 22206. www.acca.org

MASTER ELECTRICIAN 2014

Those who have the knowledge and skill to install, repair, alter, add to or change any electrical wires, fixtures, appliances, apparatus, raceways, conduit or any part thereof; which generates, transmits, transforms or utilizes electrical energy in any form for light, heat, power or communications, all in compliance with applicable plans, specifications, codes, laws and regulations.

Number of Questions	75	Number of Questions	75
Time allowed (hours)	3	Time allowed (hours)	3
Subject Area	# Quest.	Subject Area	# Quest.
Communication Systems	3	General Electrical Knowledge	12
Equipment for General Use	6	Communication Systems	3
General Electrical Knowledge	12	Equipment for General Use	6
Motors & Controls	4	Motors & Controls	4
Plan Reading	4	Plan Reading	4
Special Conditions	4	Special Conditions	4
Special Equipment	3	Special Equipment	3
Special Occupancies	2	Special Occupancies	2
Wiring & Protection	17	Wiring & Protection	17
Wiring Methods & Materials	20	Wiring Methods & Materials	20

References

- American Electrician's Handbook, 16th Edition. ISBN: 978-0071798808. McGraw Hill Glencoe Order Services, P.O. Box 545, Blacklick, OH 43004. Available at https://www.mheducation.com/highered/product/americ an-electricians-handbook-sixteenth-edition-crofthartwell/9780071798808.html
- NFPA 70 National Electrical Code, 2014. ISBN: 9781455906727. National Fire Protection Association, 1
 Batterymarch Park, Quincy, MA 02169-7471. Available at www.nfpa.org.

References

• American Electrician's Handbook, 16th Edition. ISBN: 978-0071798808. McGraw Hill Glencoe Order Services, P.O. Box 545, Blacklick, OH 43004. Available at https://www.mheducation.com/highered/product/americ

MASTER ELECTRICIAN (SPANISH) 2014

Those who have the knowledge and skill, to install, repair,

alter, add to or change any electrical wires, fixtures,

appliances, apparatus, raceways, conduit or any part thereof;

which generates, transmits, transforms or utilizes electrical

energy in any form for light, heat, power or communications,

all in compliance with applicable plans, specifications,

codes, laws and regulations.

- https://www.mheducation.com/highered/product/american-electricians-handbook-sixteenth-edition-croft-hartwell/9780071798808.html
- 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 ELECTRICIAN 2017

Those who have the knowledge and skill to install, repair, alter, add to or change any electrical wires, fixtures, appliances, apparatus, raceways, conduit or any part thereof; which generates, transmits, transforms or utilizes electrical energy in any form for light, heat, power or communications, all in compliance with applicable plans, specifications, codes, laws and regulations.

Number of Questions	75	Number of Questions	75
Time allowed (hours)	3	Time allowed (hours)	3
Subject Area	# Quest.	Subject Area	# Quest.
Communication Systems	3	Communication Systems	3
Equipment for General Use	6	Equipment for General Use	6
General Electrical Knowledge	12	General Electrical Knowledge	12
Motors & Controls	4	Motors & Controls	4
Plan Reading	4	Plan Reading	4
Special Conditions	4	Special Conditions	4
Special Equipment	3	Special Equipment	3
Special Occupancies	2	Special Occupancies	2
Wiring & Protection	17	Wiring & Protection	17
Wiring Methods & Materials	20	Wiring Methods & Materials	20

References

- American Electrician's Handbook, 16th Edition. ISBN: 978-0071798808. McGraw Hill Glencoe Order Services, P.O. Box 545, Blacklick, OH 43004. Available at https://www.mheducation.com/highered/product/americ an-electricians-handbook-sixteenth-edition-crofthartwell/9780071798808.html
- NFPA 70 National Electric Code 2017, 2017. ISBN: 978-145591277-3. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at www.nfpa.org.

References

 American Electrician's Handbook, 16th Edition. ISBN: 978-0071798808. McGraw Hill Glencoe Order Services, P.O. Box 545, Blacklick, OH 43004. Available at https://www.mheducation.com/highered/product/americ

MASTER ELECTRICIAN (SPANISH) 2017

Those who have the knowledge and skill, to install, repair,

alter, add to or change any electrical wires, fixtures, appliances, apparatus, raceways, conduit or any part thereof;

which generates, transmits, transforms or utilizes electrical

energy in any form for light, heat, power or communications,

all in compliance with applicable plans, specifications,

codes, laws and regulations.

- https://www.mheducation.com/highered/product/americ an-electricians-handbook-sixteenth-edition-crofthartwell/9780071798808.html
- NFPA 70 National Electric Code 2017, 2017. ISBN: 978-145591277-3. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at www.nfpa.org.

MASTER GASFITTER

Tests a candidate's knowledge of the design, installation, maintenance, repair, alteration, and extension of gas piping, gas mains, lines, laterals, tanks, appliances, and related appurtenances.

Number of Questions	50
Time allowed (hours)	3
Subject Area	# Quest.
General Knowledge	9
Isometrics & Plan Reading	5
Sizing and Design	5
Pipefitting Math	5
System installation	9
LP gas	7
Venting	5
Safety	5

References

- <u>Basic Safety</u>. ISBN: 9781323676189. Prentice Hall,
 P.O. Box 11071, Des Moines, IA 50336. Available at www.provbookstore.com.
- <u>Drawings and Detail Sheets</u>, 2006. ISBN: 0-13-613596-X. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.
- Florida Building Code 2020 Fuel Gas, 2020.
 International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.
- <u>Identifying and Installing Valves</u>, 2006. ISBN: 0-13-613598-6. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.
- NFPA 58: Liquefied Petroleum Gas Code, 2014.
 ISBN: 978-145590711-3. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. available at www.nfpa.org
- <u>Pipefitting Power Tools</u>, 2006. ISBN: 0-13-229023-5. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.
- <u>Pipefitting Trade Math</u>, 2006. ISBN: 0-13-613599-4. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.
- Socket Weld Pipe Fabrication, 2006. ISBN: 978-0-13-613601-9. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.

Threaded Pipe Fabrication, 2006. ISBN: 0-13-613600-1. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.

MASTER MECHANICAL

Master Mechanical shall mean any person whose services are unlimited in the execution of contracts requiring the experience, knowledge, and skill to perform the following; install maintain, repair, fabricate, alter, extend or design (when not prohibited by law) central air conditioning, refrigeration, heating and ventilation (including duct work in connection with a complete system only to the extent such duct work is performed by the Contractor necessary to make complete an air distribution system) boiler and unfired pressure vessel systems, lift stations, equipment and piping and all appurtenances, apparatus, or equipment used in connection therewith; also piping, insulation of pipes, vessels and ducts, pressure and process piping, pneumatic control piping, gasoline tanks and pump installation and piping for same, fire sprinkling systems and standpipes, air piping, vacuum line piping, oxygen lines, nitrous oxide piping, ink and chemical lines, fuel transmission lines and installation of 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, all in such a manner to comply with all plans, specifications, codes, laws and regulations applicable thereto. The scope of work for such Contractor shall not include any work such as liquefied petroleum or natural gas fuel lines within buildings, potable waterlines or connections thereto, sanitary sewer lines, swimming pool piping and filters and electrical power wiring.

Number of Questions	100
Time allowed (hours)	4
Subject Area	# Quest.
General Knowledge	16
Piping	12
Systems & Sizing	31
Equipment	16
Maintenance	16
Plan Reading	9

- Advanced Mechanical Study Guide, 2nd edition,
 2nd. ISBN: 9781323725184. Pearson, 501 Boylston
 Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com.
- Florida Building Code 2020 Building, 2020.
 International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.
- Florida Building Code 2020 Energy Conservation,
 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.

- Florida Building Code 2020 Fuel Gas, 2020.
 International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.
- Florida Building Code 2020 Mechanical, 2020.
 International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.
- HVAC Basics for Contractors,3rd Edition, 3rd
 Edition. ISBN: 13:9781323725146. Pearson, 501
 Boylston Street, Suite 900, Boston, MA 02116.
 Available at www.provbookstore.com.
- Intermediate Mechanical Study Guide, 2015. ISBN: 9781323725221. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com.
- Manual N Commercial Load Calculations, 2008.
 ISBN: 978-1892765383. Air Conditioning Contractors of America, 2800 Shirlington Road, Suite 300, Arlington, VA 22206. www.amazon.com
- Residential Load Calculations Manual J. Air Conditioning Contractors of America, 2800 Shirlington Road, Suite 300, Arlington, VA 22206. www.acca.org

MASTER PLUMBER

Those who have the knowledge and skill to install, maintain, repair, alter or extend plumbing, sanitary drainage or storm drainage facilities, venting systems, public and private water supply systems, septic tanks, drainage and supply wells, swimming pool piping; irrigation systems; or solar heating water systems and all appurtenances, apparatus, or equipment used in connection therewith, including boilers and pressure process piping and including the installation of water and storm and sewer lines, water and sewer plants and substations.

Number of Questions	100
Time allowed (hours)	3
Subject Area	# Quest
Drain, Waste & Vent Systems	18
Fixtures & Fittings	8
General Knowledge	12
Isometrics & Plan Reading	13
Plumbing Math	10
Storm & Roof Drainage	8
Water Heaters	10
Water Supply and Distribution	14
Safety	7

References

- Florida Building Code 2020 Plumbing, 2020.
 International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.
- 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

MASTER PLUMBER (SPANISH)

The scope of work of a Master Plumber shall include the knowledge and skill to install, maintain, repair, alter or extend plumbing, septic tanks, drainage and supply wells, swimming pool and piping or solar heating systems and all appurtenances, apparatus or equipment used in connection therewith, including boilers and pressure and process piping and including the installation of water, gas, storm and sanitary sewer lines, and for the mechanical installation of gas, water and sewage plants and substations. The scope shall also include the installation, maintenance, repair, alteration or extension of air piping, vacuum line piping, oxygen line piping, nitrous oxide piping, fire line standpipes and fire sprinklers to the extent allowed by law, up to five (5) sprinkler heads out of potable water lines, ink and chemical lines, gasoline piping and tank and pump installation (excepting bulk storage plants) and pneumatic control piping systems. The scope of work does not include the installation

Number of Questions	100
Time allowed (hours)	3
Subject Area	# Quest.
Drain, Waste & Vent Systems	18
Fixtures & Fittings	8
General Knowledge	12
Isometrics & Plan Reading	13
Plumbing Math	10
Storm & Roof Drainage	8
Water Heaters	10
Water Supply and Distribution	14
Safety	7

- Florida Building Code 2020 Plumbing, 2020.
 International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.
- 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

MASTER PLUMBER WITH GAS

Those who have the knowledge and skill to install, maintain, repair, alter or extend plumbing, sanitary drainage or storm drainage facilities, venting systems, public and private water supply systems, septic tanks, drainage and supply wells, swimming pool piping; irrigation systems; or solar heating water systems and all appurtenances, apparatus, or equipment used in connection therewith, including boilers and pressure process piping and including the installation of water and storm and sewer lines, water and sewer plants and substations; And who are qualified to install, service, modify, alter or repair apparatus, piping, vents, flues, tanks, tubing, appliances, equipment & L.P. and/or Natural gas systems, unlimited with regards to residential or commercial systems.

Number of Questions	100	Number of Questions	100
Time allowed (hours)	3	Time allowed (hours)	3
Subject Area	# Quest.	Subject Area	# Quest.
Drain, Waste & Vent Systems	15	Drain, Waste & Vent Systems	15
Fuel Gas Systems	15	Fuel Gas Systems	15
Fixtures & Fittings	8	Fixtures & Fittings	8
General Knowledge	10	General Knowledge	10
Isometrics & Plan Reading	8	Isometrics & Plan Reading	8
Plumbing Math	6	Plumbing Math	6
Safety	6	Safety	6
Storm & Roof Drainage	8	Storm & Roof Drainage	8
Water Heaters	12	Water Heaters	12
Water Supply and Distribution	12	Water Supply and Distribution	12

References

- Florida Building Code 2020 Fuel Gas, 2020.
 International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.
- <u>Florida Building Code 2020 Plumbing</u>, 2020.
 International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.
- 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

MASTER PLUMBER WITH GAS (SPANISH)

Those who have the knowledge and skill to install, maintain, repair, alter or extend plumbing, sanitary drainage or storm drainage facilities, venting systems, public and private water supply systems, septic tanks, drainage and supply wells, swimming pool piping; irrigation systems; or solar heating water systems and all appurtenances, apparatus, or equipment used in connection therewith, including boilers and pressure process piping and including the installation of water and storm and sewer lines, water and sewer plants and substations; And who are qualified to install, service, modify, alter or repair apparatus, piping, vents, flues, tanks, tubing, appliances, equipment & L.P. and/or Natural gas systems, unlimited with regards to residential or commercial systems.

- Florida Building Code 2020 Fuel Gas, 2020.
 International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.
- Florida Building Code 2020 Plumbing, 2020.
 International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.
- 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

METAL AWNING & STORM SHUTTER CONTRACTOR

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 self-supporting, 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	50	Number of Questions	49
Time allowed (hours)	2	Time allowed (hours)	2
Subject Area	# Quest.	Subject Area	# Quest.
Plan Reading & Estimating	7	Plan Reading & Estimating	8
Concrete and Reinforcement	6	Concrete and Reinforcement	7
Metal Storm Panel Shutters	6	Metal Storm Panel Shutters	6
Wood Storm Shutters	4	Wood Storm Shutters	5
Installation & Anchorage	16	Installation & Anchorage	13
Building and Municipal Codes	7	Building and Municipal Codes	7
Safety	4	Safety	3

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 Available http://nccer.pearsonconstructionbooks.com.
- Florida Building Code 2020 Building, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.
- Hurricane Shutter Designs. APA The Engineered Wood Association, 7011 S. 19th ST, Tacoma, WA 98466. Available at www.apawood.org Candidate's printed versions, Form T450 is allowed if exam is open

METAL AWNING & STORM SHUTTER CONTRACTOR (SP)

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 self-supporting, 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	49
Time allowed (hours)	2
Subject Area	# Quest.
Plan Reading & Estimating	8
Concrete and Reinforcement	7
Metal Storm Panel Shutters	6
Wood Storm Shutters	5
Installation & Anchorage	13
Building and Municipal Codes	7
Safaty	3

- 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, 50336. Available http://nccer.pearsonconstructionbooks.com.
- Florida Building Code 2020 Building, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.
- Hurricane Shutter Designs. APA The Engineered Wood Association, 7011 S. 19th ST, Tacoma, WA 98466. Available at www.apawood.org Candidate's printed versions, Form T450 is allowed if exam is open

PLASTERING & LATHING

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.

other fathing material and for some plaster partitions.	
Number of Questions	50
Time allowed (hours)	3
Subject Area	# Quest.
Plan Reading & Estimating	5
Framing	10
Lathing	10
Materials	10
Application & Finishing	10
Safety	5

References

- 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 & 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.
- ASTM C926-15b Standard Specification for Application of
 Portland Cement-Based Plaster, 2015. 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/.
- <u>Basic Safety</u>. ISBN: 9781323676189. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at www.provbookstore.com.
- Florida Building Code 2020 Building, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.
- Gypsum Construction Handbook, 2009. ISBN: 978-0876292587. United States Gypsum Corporation, 350 Burnhamthorpe Road West, 5th Floor, Mississauga, ON. Available at www.amazon.com.
- <u>Introduction to Construction Math</u>, 2009. ISBN: 978-0-13-609877-5. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.

PLASTERING & LATHING (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	50
Time allowed (hours)	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 & 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.
- ASTM C926-12a Standard Specification for Application of
 Portland Cement Based Plaster.
 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 2020 Building, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.
- Gypsum Construction Handbook, 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.

POOL DECKING SUBCONTRACTOR

The scope of work of a Pool Decking Subcontractor shall be limited to design, layout, pouring, finishing, replacement or repair of concrete decks and patios around a commercial or residential swimming pool, spa or hot tub according to applicable building codes. Such subcontractor may also apply all types of decorative concrete or brick coatings or veneers, including river rock, brick, dressed or artificial stone, pre-cast concrete blocks, kool deck or other similar material Such subcontractor however, may not install wooden decks.

Number of Questions	25
Time allowed (hours)	1
Subject Area	# Quest.
Plan Reading & Estimating	2
Properties of Concrete	2
Preparation for Placement	5
Placement & Finishing	5
Specialized Installations & Finishes	5
Quality Control & Curing	3
Safety	3

References

- 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.

POOL MAINTENANCE

Tests a candidate's knowledge of service, maintenance, and treatment of water in all swimming pools, spas, and hot tubs. Includes equipment, pumps, filters, chemical feeders, and minor repairs to pool masonry, patching cracks, and repainting and resurfacing pool walls and bottoms.

Number of Questions	50
Time allowed (hours)	3
Subject Area	# Quest.
Calculations	8
Filtration	6
Circulation	8
Disinfection	7

Testing	8
Management	3
Repairs	4
Safety	6

References

- <u>Certified Pool/Spa Operator Handbook</u>, 2009.
 National Swimming Pool Foundation, 4775 Granby Circle, Colorado Springs, CO 80919. Available at www.nspf.org.
- 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/swimming-pools/_documents/64E-9_FAC_Draft_Rev7_no_strike.pdf Candidate printed versions allowed if exam is open book
- Florida Building Code 2020 Building, 2020.
 International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.
- Florida Building Code 2020 Residential, 2020.
 International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.

POOL STEEL SUBCONTRACTOR

The scope of work of a pool steel subcontractor shall be limited to the fabrication, placing and tying of steel reinforcing bars (rods) of any profile, perimeter, or cross-section which is used, intended or designed to be used to reinforce concrete, gunite, shotcrete or similar material in a pool, in accordance with the plans and specifications thereof; operating of construction pumps for dewatering purposes.

Number of Questions	25
Time allowed (hours)	1
Subject Area	# Quest.
General Knowledge	6
Reinforcement Placement	6
Reinforcement Cutting & Bending	5
Rigging Equipment & Practices	4
Safety	4

References

 <u>Reinforcing Ironwork Level One</u>, 2005. ISBN: 978-0-13-228220-8. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336.

POOL TILE SUBCONTRACTOR

The scope of work of the Pool Tile Subcontractor shall be limited to the installation, repair, maintanence, or replacement of tile and stone materilas which are applied to the existing walls, floor or decking of commercial or residential swimming pools, spas or hot tubs.

Number of Questions	50
Time allowed (hours)	2
Subject Area	# Quest.
Plan Reading & Estimating	8
Substrates	6
Tile	14
Stone	8
Grout	6
Safety	8

References

- <u>Basic Safety</u>. ISBN: 9781323676189. Prentice Hall,
 P.O. Box 11071, Des Moines, IA 50336. Available at www.provbookstore.com.
- Introduction to Construction Math, 2015. NCCER MATS Testing, 13614 Progress Blvd, Alachua, FL 32615.
- <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 2014. Tile Council of North America, 100
 Clemson Research Blvd., Anderson, SC 29625.

 Available at www.tcnatile.com.

RESIDENTIAL CONTRACTOR

Residential Contractor means a contractor whose services are limited to construction, remodeling, repair, or improvement of one-family, two-family, or three-family residences not exceeding two (2) habitable stories above no more than one uninhabitable story and accessory use structure in connection therewith. As regulated under Florida Statute, a person who has passed a competency examination as a Residential Contractor may perform these or related tasks or may supervise persons in his employ in the execution of these tasks.

Number of Questions	60
Time allowed (hours)	3
Subject Area	# Quest.
Plan Reading	6
Sitework & Foundations	5
Concrete and Reinforcement	8
Masonry	8
Carpentry	10
Roofing	4
Interior Finishes	5
Exterior Finishes	5
Associated Trades	4
Safety	5

- <u>Basic Safety</u>. ISBN: 9781323676189. Prentice Hall,
 P.O. Box 11071, Des Moines, IA 50336. Available at www.provbookstore.com.
- Florida Building Code 2020 Residential, 2020.
 International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.
- Masonry and Sitework for the Residential
 Contractor, 2nd edition, 2nd. ISBN: 978-1-269-78556-3. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com
- 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
- Or, if the book above is unavailable, it may be <u>substituted by the following</u>. Substitute references shown below..
- Residential Home Builder Study Guide. ISBN: 9781323550915. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com.

RESIDENTIAL SWIMMING POOL

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	51
Time allowed (hours)	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
Safety	4

References

- <u>Basic Safety</u>. ISBN: 9781323676189. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at www.provbookstore.com.
- <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 2020 Residential, 2020.
 International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.

ROOFING (SPANISH)

A Roofing Contractor is a contractor qualified and certified to install, repair and replace roof systems, as defined in the South Florida Building Code, and the waterproofing thereof. Work may include, but shall not be limited to, roof deck insulation, roof coating, painting and covering, including use of sheet metal and installation of other sheet metal products incidental to roofing work, including gutters and downspouts, and other material in connection therewith or any combination thereof and including installation of nonstructural decking and siding. During the repair or replacement process of a roof system, a roofing contractor shall be allowed to repair and/or replace damaged decking and/or damaged wood structural or nonstructural members of the roof framing, provided that such replacement and/or repair conforms to the requirements of the South Florida Building Code and the repair or replacement of damaged decking and wood structural or nonstructural members of the roof framing constitutes less than fifty (50) percent of the value of the total work performed.

Number of Questions	50
Time allowed (hours)	2
Subject Area	# Quest.
Deck & Underlayment	6
Flashing	5
High Slope Roofing	15
Low Slope Roofing	9
Plan Reading & Estimating	8
Safety	7

- <u>Florida Building Code 2020 Building</u>, 2020.
 International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.
- <u>Roofing Study Guide</u>, 2018. ISBN: 978132388055.
 Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116.
- Or, if the book above is unavailable, it may be <u>substituted by the following</u>. Substitute references shown below..
- Core 2015, 27202-13 Roofing Applications, & 27403-14 Advanced Roof Systems. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116.

ROOFING UNLIMITED

Tests a candidate's knowledge of the installation, repair, and replacement of roof coverings, including roof deck insulation, roof coating, painting, covering, use of sheet metal products incidental to roofing work or other related material, and installation of nonstructural decking and siding.

Number of Questions	50
Time allowed (hours)	2
Subject Area	# Quest.
Plan Reading & Estimating	8
Deck & Underlayment	6
Flashing	5
High Slope Roofing	15
Low Slope Roofing	9
Safety	7

References

- Florida Building Code 2020 Building, 2020.
 International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.
- <u>Roofing Study Guide</u>, 2018. ISBN: 978132388055.
 Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116.
- Or, if the book above is unavailable, it may be substituted by the following. Substitute references shown below..
- Core 2015, 27202-13 Roofing Applications, & 27403-14 Advanced Roof Systems. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116.

SIDING, WINDOWS & DOORS

Tests a candidate's knowledge of siding, window and door installation including vinyl, wood or aluminum siding, soffit, fascia, gutters and all types of windows and doors. This includes the work necessary to prepare or repair the substrate to accomplish proper installation. Does not include any structural alterations.

Number of Questions	50
Time allowed (hours)	2
Subject Area	# Quest.
Plan Reading & Estimating	6
Building Materials, Fasteners & Adhesives	4
Windows & Exterior Doors	6
Thermal & Moisture Protection	8
Exterior Finishing	15
Doors & Hardware	6
Safety	5

- 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
- Study Guide for Siding & Finish Carpentry, 2012.
 ISBN: 978-1-256-61081-6. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com.

SIGN CONTRACTOR (NON-ELECTRIC)

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

References

- 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 Three 2014</u>, 2014. ISBN: 0133823059. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.
- Florida Building Code 2020 Building, 2020.
 International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.
- 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.

SWIMMING POOL FINISHING CONTRACTOR

Swimming Pool Finishing Contractor means any person or firm qualified and certified by the Board who performs any work limited to the coating or finishing of the interior surfaces of a commercial or residential swimming pool, spa or hot tub with materials such as marcite, water type plaster, fiberglass or other similar use products designed to create a permanent surface coating and which is usually applied with a plasterer's trowel or by pneumatic pressure to a surface which offers an existing mechanical key for the support of such coatings or to which such coating will adhere by suction. Such sub-contractor may also re-finish existing swimming pools, spas or hot tubs, perform minor surface coating repairs, and prepare the surface to be coated for such materials as listed above. The Swimming Pool Finishing sub-contractor shall contract with a certified or registered swimming pool/spa contractor or swimming pool/spa service contractor only.

Number of Questions	50
Time allowed (hours)	2
Subject Area	# Quest.
Materials	10
Substrates	10
Pool Finishing	14
Pool Water Quality	8
Troubleshooting & Repair	8

- ASTM C926-12a Standard Specification for
 Application of Portland Cement Based Plaster.

 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
- Builder's Guide to Swimming Pool Construction,
 2005. ISBN: 978-1889892504. Builder's Book, Inc.,
 8001 Canoga Avenue, Canoga Park, CA 91304.
 Available at www.amazon.com.
- 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/swimming-pools/_documents/64E-9_FAC_Draft_Rev7_no_strike.pdf Candidate printed versions allowed if exam is open book
- National Plasterers Council Technical Manual, 7th edition. National Plasterers Council, Inc., 1000 N. Rand Rd, suite 214, Wauconda, IL 60084. https://npconline.site-ym.com/store/

SWIMMING POOL PIPING

Swimming Pool Piping Contractor is a contractor having the required financial means and having a qualifying agent as provided herein. Such qualifying agent shall have experience and skill gained by not less than one (1) year of experience, or its educational equivalent, or a combination of such experience and education, in installing swimming pool piping under the supervision of a plumbing contractor or a contractor making swimming pool piping installations. Such qualifying agent shall be qualified, examined, and certified to perform the functions within the scope of work of a swimming pool piping contractor as hereinafter provided. The scope of work of a swimming pool piping contractor shall permit such a contractor to install, maintain, repair, alter, or extend swimming pool piping systems including the pumps, filters, pool heaters and chlorinators incidental to swimming pools and involving the means of disposing of pool water. The scope of work in this classification shall not include direct connection to a sanitary sewer system, potable water line or electrical supply, or the installation of package pool heaters.

Number of Questions	75	
Time allowed (hours)	3	
Subject Area	# Quest.	
Plan Reading & Estimating	7	
Site Preparation, Excavation and Backfilling	6	
Pool Piping	22	

Pool Equipment	18
Care and Operation	12
Safety	10

- <u>Basic Safety</u>. ISBN: 9781323676189. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at www.provbookstore.com.
- <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 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/swimming-pools/_documents/64E-9_FAC_Draft_Rev7_no_strike.pdf Candidate printed versions allowed if exam is open book
- Florida Building Code 2020 Building, 2020.
 International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.