## St. Lucie County Exam Descriptions

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## Business and Law, 2nd edition

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.

\*This exam uses the second edition of FLORIDA - NASCLA Contractors Guide to Business, Law and Project Management.

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

#### References

FLORIDA - NASCLA Contractors Guide to Business, Law and Project Management, 2nd. NASCLA, 23309 N. 17th Drive, Building 1, Unit 110, Phoenix, AZ 85027.

### **Concrete Contractor**

The Concrete Contractor exam tests the candidate's knowledge of the properties, preparation, formwork, reinforcement, placement and the finishing of concrete, including materials, specialized installations and finishes, and concrete quality control and curing. This scope of work includes, but is not limited to concrete piers, foundations, walls, structures, slabs, curbs, sidewalks, and driveways. The scope of work excludes the installation of pool, spa, or hot tub decks; separate licensure is required. {Florida Administrative Code 61G4-15.032(B)(e)}

Number of Questions	50	
Time allowed (hours)	2	
Subject Area	# Quest.	
Plan Reading & Estimating	6	
Properties of Concrete	4	
Preparation for Placement	6	
Reinforcement	7	
Formwork	7	
Placement & Finishing	7	
Specialized Installations & Finishes	3	
Quality Control & Curing	5	
Safety	5	

#### References

- ACI 318 Building Code Requirements for Structural Concrete 2019, 2019. American Concrete Institute, 38800 International Way, Country Club Dr, P.O. Box 9094, Farmington Hills, MI 48333.
- Concrete Construction Level 1, 2021. ISBN: 978-0-13-686828-6. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. http://nccer.pearsonconstructionbooks.com/store/product.aspx?isbn=0 136868282 OR https://provexam.com/bookstore/.
- Concrete Construction Level 2, 2021. ISBN: 978-0-13-689832-0. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. httpn://provexam.com/store/product.aspx?isbn=0136868282 OR https://provexam.com/bookstore/.

# **Drywall (2023 edition)**

Number of Questions

Tests a candidate's knowledge of installation of gypsum drywall products to wood and metal studs, wood and steel joists, and metal runners, including the preparation of the surface over which the drywall product is to be applied, and the placement of metal studs, runners, and all necessary trim.

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Time allowed (hours)	2
Subject Area	# Quest.
Plan Reading & Estimating	6
Construction Materials & Methods	6
Thermal & Moisture Protection	5
Drywall Installation	7
Drywall Finishing	8

Steel Framing	7
Exterior Cladding	3
Interior Specialties & Finishes	4
Safety	4

#### References

- Basic Safety. ISBN: 9781323676189. Prentice Hall. P.O. Box 11071. Des Moines, IA 50336. Available at www.provbookstore.com.
- <u>Drywall Level 1</u>, 2007. ISBN: 978-0-13-604512-0. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.
- **Drywall Level 2,** 2009. ISBN: 978-0-13-604480-2. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.
- Florida Building Code 2023 Building, 2023. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. https://shop.iccsafe.org/

### **Electrical Fire Alarm 2020**

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

Number of Questions	50	
Time allowed (hours)	2	
Subject Area	# Quest.	
General Electrical Knowledge	4	
Installation Requirements Electrical	10	
Initiating Devices	12	
Notification Appliances & Signaling Circuits	13	
Systems Testing	9	
Supervisory Stations	2	

#### References

- American Electrician's Handbook, 17th Edition. ISBN: 978-1260457919. McGraw Hill Publishing Inc., P.O. Box 182604, Columbus, OH 43272. Available at https://www.mhprofessional.com/americanelectricians-handbook-seventeenth-edition-9781260457919-usa
- 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 2020, 2020. ISBN: 9781455922970. 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.

### **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	
Cultivat Augus	# 0	
Subject Area	# Quest.	
Plan Reading & Estimating	10	
General Knowledge	6	
Survey & Layout	5	
Clearing & Grubbing	4	
Excavating	7	
Dewatering	3	

8

#### References

Grading

Safety

- **Basic Safety.** 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.

### Fencing

Tests a candidate's knowledge of fencing installation.

Number of Questions Time allowed (hours)	50 2
Subject Area	# Quest.
Plan Reading & Estimating	5
Layout & General Math	5
Wood Fencing	10
Masonry Fencing	10
Metal & Chain Link Fencing	10
Safety	10

#### References

- Basic Safety. ISBN: 9781323676189. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at www.provbookstore.com.
- Fences and Retaining Walls, 1990. ISBN: 0-934041-53-9. Craftsman Book Company, 6058 Corte Del Cedro, Carlsbad, CA 92009. Available at www.craftsman-book.com.
- Florida Building Code 2020 Building, 2020. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. www.iccsafe.org.

# General Contractor (2023 edition)

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	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	6

#### References

ACI 530 Building Code Requirements and Specification for Masonry

<u>Structures 2013</u>, 2013. ISBN: 978-1-929081-43-1. American Concrete Institute, 38800 International Way, Country Club Dr, P.O. Box 9094, Farmington Hills, MI 48333. Available at http://www.concrete.org OR http://www.techstreet.com/searches/16672726 OR amazon.com

- Carpentry Level One, 2022 edition, 2022. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116.
- Concrete Construction Level 2, 2021. ISBN: 978-0-13-689832-0. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. httpn://provexam.com/store/product.aspx?isbn=0136868282 OR https://provexam.com/bookstore/.
- Florida Building Code 2023 Building, 2023. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. https://shop.iccsafe.org/
- Study Guide for Commercial Carpentry, 2nd Edition, 2014. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116.
- 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.

## **Irrigation Sprinkler (2023 edition)**

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	4	
Planning & Layout	8	
Materials	8	
Controls	6	
Irrigation Installation	10	
Cross Contamination & Backflow Prevention	5	
Reclaimed Water	3	
Safety	6	

#### 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.
- Florida Building Code 2023 Plumbing, 2023. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478.
- Turf Irrigation Manual The Complete Guide to Landscape Irrigation

  Design, 5th Ed., 1994. ISBN: 978-0963509604. Weathermatic, P.O.

  Box 180205, Dallas, TX 75218-0205. Available at www.amazon.com.

## Journeyman Electrician (2023 edition)

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

Number of Questions	70
Time allowed (hours)	3
Subject Area	# Quest.
Communication Systems	4
Equipment for General Use	6
General Electrical Theory & Principles	10
Motors & Controls	3
Plan Reading	2
Special Conditions	3
Special Equipment	3
Special Occupancies	2
Wiring & Protection	15
Wiring Methods & Materials	22

#### References

- American Electrician's Handbook, 17th Edition. ISBN: 978-1260457919. McGraw Hill Publishing Inc., P.O. Box 182604, Columbus, OH 43272. Available at https://www.mhprofessional.com/american-electricians-handbook-seventeenth-edition-9781260457919-usa
- NFPA 70 National Electrical Code 2023, 2023. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471.

### Journeyman Electrician 2020

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

Number of Questions	70
Time allowed (hours)	3
Subject Area	# Quest.
Communication Systems	4
Equipment for General Use	6
General Electrical Theory & Principles	10
Motors & Controls	3
Special Conditions	2
Special Equipment	3
Special Occupancies	4
Wiring & Protection	14
Wiring Methods & Materials	24

#### References

American Electrician's Handbook, 17th Edition. ISBN: 978-1260457919. McGraw Hill Publishing Inc., P.O. Box 182604, Columbus,

- OH 43272. Available at https://www.mhprofessional.com/american-electricians-handbook-seventeenth-edition-9781260457919-usa
- NFPA 70 National Electrical Code 2020, 2020. ISBN: 9781455922970. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at www.nfpa.org.

## Journeyman Plumber (2023 edition)

(UPDATED TO 2023 CODE) 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	12
Fixtures & Fittings	8
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 2023 Plumbing, 2023. 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.

# Masonry (2023 edition)

(UPDATED TO 2023 CODE) Tests a candidate's knowledge of the selection, cutting, and laying of brick, stone, and masonry products. This includes structural glass brick or block, insulated concrete units, and the placement of reinforcing steel, including concrete forming and placing incorporated into the masonry work.

Number of Questions	50
Time allowed (hours)	2
Subject Area	# Quest.
Plan Reading & Estimating	8
Masonry Units	8
Mortar	8
Reinforcement	7
Masonry Installation	12
Safety	7

#### References

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

- Florida Building Code 2023 Building, 2023. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. https://shop.iccsafe.org/
- Study Guide for Masonry Contractors, 2nd Edition, 2014. ISBN: 978-1-269-78558-7. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com.

## **Master Electrician (2023 edition)**

(UPDATED TO 2023 CODE) 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
Time allowed (hours)	3
Subject Area	# Quest.
Communication Systems	3
Equipment for General Use	6
General Electrical Knowledge	12
Motors & Controls	5
Plan Reading	2
Special Conditions	4
Special Equipment	4
Special Occupancies	2
Wiring & Protection	17
Wiring Methods & Materials	20

#### References

- American Electrician's Handbook, 17th Edition. ISBN: 978-1260457919. McGraw Hill Publishing Inc., P.O. Box 182604, Columbus, OH 43272. Available at https://www.mhprofessional.com/american-electricians-handbook-seventeenth-edition-9781260457919-usa
- <u>NFPA 70 National Electrical Code 2023</u>, 2023. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471.

### **Master Electrician 2020**

Number of Ougstions

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.

Time allowed (hours)	75 3
Subject Area	# Quest.
Communication Systems	3
Equipment for General Use	6
General Electrical Knowledge	12
Motors & Controls	5
Plan Reading	2
Special Conditions	4
Special Equipment	4

Special Occupancies	2
Wiring & Protection	17
Wiring Methods & Materials	20

#### References

- American Electrician's Handbook, 17th Edition. ISBN: 978-1260457919. McGraw Hill Publishing Inc., P.O. Box 182604, Columbus, OH 43272. Available at https://www.mhprofessional.com/american-electricians-handbook-seventeenth-edition-9781260457919-usa
- NFPA 70 National Electrical Code 2020, 2020. ISBN: 9781455922970. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at www.nfpa.org.

## Master Plumber (2023 edition)

(UPDATED TO 2023 CODE) 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 Time allowed (hours)	100 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 2023 Plumbing, 2023. 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.

### **Paving**

Tests a candidate's knowledge of the construction of roads, airport runways and aprons, parking lots, sidewalks, curbs and gutters, property line walls, patios and driveways, storm drainage facilities, and the performance of related excavating and grading.

Number of Questions	50
Time allowed (hours)	3
Subject Area	# Quest
Plans & Specifications	3

Survey & Layout	3
Earthwork, Compaction & Stabilization	5
Asphalt Paving Procedures	7
Asphalt Properties and General Uses	7
Use & Application of Asphalt Emulsions	7
Asphalt Preservation & Maintenance	7
Concrete and Reinforcement	8
Safety	3

#### References

- <u>Highway/Heavy Construction Level 1</u>. ISBN: 978-0-13-061611-1.
  Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.
- MS-16 Asphalt in Pavement, Preservation & Maintenance, 4th edition, 2009. ISBN: 978-1-934154-58-8. The Asphalt Institute, 2696 Research Park Drive, Lexington, KY 40511-8480. Available at www.asphaltinstitute.org.
- MS-19 Basic Asphalt Emulsion Manual, 4th edition. ISBN: 978-1-934154-56-4. The Asphalt Institute, 2696 Research Park Drive, Lexington, KY 40511-8480. Available at www.asphaltinstitute.org.
- Standard Specifications for Road and Bridge Construction. 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.

## **Residential Contractor (2023 edition)**

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.

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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

#### References

**Number of Questions** 

- Basic Safety. ISBN: 9781323676189. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at www.provbookstore.com.
- Florida Building Code 2023 Residential, 2023. 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 and 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 substituted by the following. 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.

## Roofing Unlimited (2023 edition)

(UPDATED TO 2023 CODE) 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.

Subject Area	# Quest.
Time allowed (hours)	2
Number of Questions	50

Plan Reading & Estimating 8
Deck & Underlayment 6
Flashing 5
High Slope Roofing 15
Low Slope Roofing 9
Safety 7

### References

- Florida Building Code 2023 Building, 2023. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. https://shop.iccsafe.org/
- Roofing Study Guide, 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.

# Structural Steel (2023 edition)

(UPDATED TO 2023 CODE) A Structural Steel Erection Contractor is a contractor qualified and certified to erect structural steel shapes and plates including such minor field fabrication as may be necessary, of any profile, perimeter or cross-section, that are or may be used as structural members for buildings and structures, including steel joists, steel decking and siding, and communication towers, and including riveting, welding and rigging only in connection therewith.

Number of Questions	50
Time allowed (hours)	2
Subject Area	# Quest
Plan Reading & Estimating	5
Structural Steel	10

Welding & Cutting	6
Structural Steel-Bolting	4
Metal Decking	6
Metal Buildings	3
Metal Joists & Trusses	5
Rigging and Cranes	6
Safety	5

#### References

- <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.
- <u>Ironworking Level Two</u>, 2011. ISBN: 978-0-13-257822-6. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.
- <u>Ironworking Level Three</u>, 2012. ISBN: 978-0-13-257785-4. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at http://nccer.pearsonconstructionbooks.com.
- Florida Building Code 2023 Building, 2023. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. https://shop.iccsafe.org/.