

State of Michigan

ROOFING

Business and Law examination specifications and suggested study materials are contained in the Candidate Information Bulletin.

# of Questions	Passing % Score	Passing Raw Score
50	72	36

Topic Information	# of Items
PLANNING AND ESTIMATION	12
Project Planning	
Select roof system components to meet customers' needs, local climate conditions, weight requirements, warranties, and comply with state and local codes (e.g., insulation, shingles, decking, underlayment, flashing, ice shields)	
Evaluate structural roofing load (e.g., live and dead loads)	
Conduct pre-job walk-through to determine access, roof's condition, roof penetrations, landscaping issues, loading and tear-off areas, and safety requirements	
Review roofing details, blueprints/plans, and drawings to determine job scope	
Obtain proper permits	
Understand basic roofing types and terminology	
Project Estimation	
Measure roof dimensions from blueprints/plans, satellite imaging tools, or existing roofs	
Calculate cost and quantity of materials and equipment needed	
Calculate need and cost of subcontractors, labor, access, and other factors	
Calculate slope of roofs to determine type and amount of material to install	
Prepare project estimate	
MATERIALS AND INSTALLATION	18
Roof System Preparation	
Determine whether existing roofs must be torn off, tear off if required, and properly collect and dispose of tear-off debris	
Follow procedures for covering skylights and other openings in roofs for fall protection	
Determine if other trades' work is ready for roof installation	
Protect surrounding areas from damage (e.g., landscaping, personal property, walls, affected interior spaces)	
Identify and correct unacceptable or inadequate framing or sheathing members	
Manage live and dead roof loads throughout tear-off and roofing installation processes	
Install roof deck sheathing over framing members	
Identify and correct unacceptable decking, membrane, and drainage areas	
Install roof-to-wall transitions, curbs, other platforms, and pitch transitions	



Roof System Installation	
Install insulation	
Install roof metals and flashings	
Install required underlayment	
Install roof drains	
Install metal roof systems	
Install fiberglass-reinforced asphalt roof systems	
Install valleys (open and closed)	
REPAIR	4
Roof System Repair	
Inspect roof systems	
Repair roof systems	
Perform roofover	
VENTILATION SYSTEMS	5
Ventilation Requirements	
Determine proper ventilation requirements	
Ventilation Installation	
Install ridge vents	
Install soffit vents	
Install drip edge vents	
SAFETY AND PUBLIC PROTECTION	11
MIOSHA Regulations	
Follow MIOSHA regulations for maintaining a safe work environment	
Site Safety and Personal Protection	
Barricade openings and roof perimeters to prevent falls and injuries	
Set up ladders and scaffolding for roof access and installations	
Operate lift equipment, vehicles, and devices for roof access and loading	
Identify and prevent potential fire hazards	
Contain and manage materials to prevent harm to workers and the public	
Prevent injuries and hazardous material exposure by using personal protective clothing and equipment	
Install barriers and signage to protect the site, public, and workers	
Environmental Safety Concerns	
Recycle materials according to business practices and state regulations	
Handle, store, and dispose of hazardous products in accordance with Safety Data Sheet (SDS) guidelines	



Suggested Study Materials

Except for the Michigan Laws, Rules, Codes and Standards, neither the Department nor PSI endorses any of the materials listed. However, we try to ensure that the references are currently available and consist of recognized industry standards.

If the answer to a specific examination question could differ because of conflicting information contained in the suggested study materials, the legal requirement, such as a law, regulation, board or commission rule, or building code, takes precedence over (overrides) any other reference. If two legal requirements appear to conflict, the Michigan specific law, regulation, board or commission rule, or building code, takes precedence over the national one. Information from the suggested study materials listed here takes precedence over information from all other sources or persons.

This is only a sample of the available reference materials that contain information about the professions. These materials contain neither all of the general trade knowledge required to be competent in any specific area nor all of the information on which you will be tested. Also, please be aware that reference materials may go out of print or be otherwise unavailable.

Please contact a library, community college, currently practicing builder or contractor, Code enforcement agency, or other specialists in the profession for additional information or reference material.

These examinations are CLOSED BOOK, so the following reference materials suggested as study resources are not allowed in the examination center.

- *Michigan Residential Code*, 2015, Michigan Department of Licensing and Regulatory Affairs, Bureau of Construction Codes, PO Box 30255, Lansing, MI 48909, (517) 241-9313, <https://www.michigan.gov/lara/0,4601,7-154-10575--00.html>
- *Michigan Occupational Safety and Health Act: Act 154 of 1974*, Michigan Department of Licensing and Regulatory Affairs Occupational Safety & Health Administration, 525 W. Allegan Street, P.O. Box 30643, Lansing, MI 48909-8143, https://www.michigan.gov/lara/0,4601,7-154-11407_52824---00.html
- *NRCA Roofing Manual: Architectural Metal Flashing, Condensation Control and Reroofing*, 2018, National Roofing Contractors Association, (847) 299-9070, www.nrca.net
- *NRCA Roofing Manual: Steep-Slope Roof Systems*, 2017, National Roofing Contractors Association, (847) 299-9070, www.nrca.net

- *NRCA Roofing Manual: Membrane Roofing Systems*, 2019, National Roofing Contractors Association, (847) 299-9070, www.nrca.net
- *Roofing Construction and Estimating*, 1995, Daniel Atcheson, ISBN: 1-57218-007-2, Craftsman Book Company, (800) 829-8123, www.craftsman-book.com
- *International Building Code*, 2018, International Code Council, (800) 786-4452, www.iccsafe.org
- *Carpentry and Building Construction*, 2016, McGraw Hill Education, www.mheducation.com
- *Insulation Handbook*, 2001, Richard T. Bynum, Jr., ISBN: 0-07-134872-7, McGraw-Hill, www.mheducation.com

