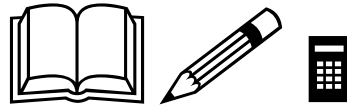


STATE OF OREGON



LANDSCAPE CONTRACTOR EXAM STUDY GUIDE PACKET

This packet contains information you may need to study for the Landscape Contractors Board examinations. **THIS IS A "GUIDE ONLY" NOT A TEXT BOOK FOR THE EXAM.**

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Landscape Contractors Board
2111 Front Street NE Ste 2-101
Salem, OR 97301

Telephone: (503) 378-5909
Fax: (503) 378-5950
Website: www.lcb.state.or.us

LANDSCAPE CONTRACTORS BOARD

Questions and Answers about the Exam

What should I study for the exam?

See the Study Guide on page 6-14 and suggested reading references on pages 24-25. These items summarize the subjects covered on the exam but are not a “text book” for the exam. Be familiar with the plants on the plant list on pages 21-23. Review the enclosed information on contracts, claims and liens on pages 15-20.

You will also be tested on the Oregon Revised Statutes and Administrative Rules: ORS 671.510-671.992, and ORS 808 (<http://www.leg.state.or.us/ors/671.html>); http://arcweb.sos.state.or.us/rules/OARS_800/OAR_808/808_tofc.html

How often is the exam given?

The exam is given on an individual basis. When you have qualified you will be sent a letter of qualification and a post card for you to return specifying when and where you want to take the exam.

Where is the exam given?

*Once we receive your postcard, you will either be called to schedule an appointment in the Landscape Contractors Board Salem office, or you will receive information in the mail to schedule directly with the Oregon Department of Motor Vehicles (DMV) office in your area. **Please see page 26 for the list of available DMV offices in your area.***

What should I bring with me to the exam?

*You should bring an engineer’s scale (1:20) and a calculator. Do not bring study material, notes, books, cell phones; lap top computers, palm top computers, hand-held PCs, or personal organizers. **This is not an open book test.***

Once I have taken the exam, how long will it be before I find out the results?

If you take the exam at a DMV, you will be notified by mail within approximately 10 working days. If you take the exam at the LCB office in Salem, you will receive immediate results. You will also be able to review the questions you answered incorrectly at the LCB office.

Good Luck!

BACKGROUND INFORMATION ON THE EXAM

The current Landscape Contractors Board examination was developed over a 14-month period by a volunteer committee, which included currently licensed landscape contractors in Oregon, several members of the Landscape Contractors Board, and educators in the field of landscape technology. Care was taken to recruit members of the committee from all geographic regions of the state.

The committee discussed the expertise and knowledge required of landscape contractors and developed categories for testing. The categories were prioritized and assigned to subcommittees for developing questions. A bank of questions was created for every category so that different versions of each exam section could be developed. The backflow section is approved by the Plumbing Board which allows an LCB license holder to connect to potable water supplies for irrigation. All questions of the examination were reviewed by the entire committee and a final version was adopted.

The Exam Committee now meets four times a year to regularly review the exam questions. Exam statistics are used to determine whether or not a question needs to be revised or deleted from the exam. New questions are also written by the committee to increase the bank of available questions.

There are four categories to the exam: Laws & Rules; General (consisting of four separate sections); Irrigation, and Backflow. The number of questions in each category and section are noted below. All questions are multiple-choice.

Exam Category	# Exam Questions	Percentage of Landscaping Questions	
• Laws & Rules	50		100%
• General:	(total 225)		
Section A: Plants – Turf	55	24%	
Section B: General Construction	50	22%	
Section C: Grading and Drainage	45	20%	
Section D: General Safety	27	12.4%	
Estimating	20	9%	
Soil Science	20	9%	
Chemicals	8	3.6%	100%
• Irrigation	(total 100)		100%
Design		20%	
Irrigation Plan		9%	
Hydraulics		10%	
Pipes and Fittings		10%	
Heads and Nozzles		5%	
Valves		4%	
Plant Culture		9%	
Drip Irrigation		10%	
Electrical		7%	
Installation/Practical Application		8%	
Winterization		4%	
Repair and Troubleshooting		4%	
• Backflow	50		100%
TOTAL OF ALL EXAMS	425		

You will see that some landscaping categories have more questions than others. The categories with a greater number of questions were judged by the committee to have a higher priority than those categories with fewer questions. Therefore, in preparing for the exam, the applicant should concentrate his or her studying accordingly.

SAMPLE EXAM QUESTIONS

(answers are located on the bottom of page 5)

LAWS AND RULES SECTION:

1. Who may use the title "landscape contractor"?
 - A. Any owner of a registered construction business.
 - B. Any person who has a landscape contractors license.
 - C. Any person who is in the business of landscaping.
 - D. A or B
2. A newly licensed landscape contractor may begin work right away, if he or she:
 - A. Has obtained a personal performance bond.
 - B. Affixed the "stickers" supplied by the Board to all vehicles used for landscape work.
 - C. Is an owner or an employee of a licensed landscaping business.
 - D. Both A & C

GENERAL SECTION:

Section A: Plants – Turf

1. Which of the following deciduous shrubs is noted for the display of its berries?
 - A. *Pyracantha coccinea*
 - B. *Ilex aquifolium*
 - C. *Symphoricarpos albus*
 - D. *Mahonia repens*
2. Which of the following shrubs would be best in a sunny bed with reflected heat?
 - A. *Skimmia japonica*
 - B. *Ilex cornuta*
 - C. *Abelia grandiflora*
 - D. *Fatsia japonica*

Section B: General Construction

1. The 3-4-5 triangle measuring technique is used for:
 - A. Locating distance between postholes.
 - B. Figuring infill requirements.
 - C. Determining right angles.
 - D. All of the above.
2. What is the best slope for step treads?
 - A. 3.5%
 - B. 10%
 - C. 5%
 - D. 1%

Section C: Grading and Drainage

1. If a spot elevation reads 5.5 at point A and the second elevation reads 4.2 at point B, what is the elevation differential?
 - A. 9.7 inches above absolute elevation.
 - B. 9.7 feet elevation differential.
 - C. 1.3 feet.
 - D. None of the above.

2. The percentage of slope is calculated by:
 - A. First determining the rate of inclination.
 - B. Percent = length/3.1416 averaged to nearest 2 decimals.
 - C. The formula rise/run = slope.
 - D. The formula 3.1416/length average to the nearest 2 decimals.

Section D: General Safety

1. MSDS are:
 - A. Not required if the chemical is a trade secret.
 - B. Are required only when transporting chemicals from one county to another.
 - C. Are never used when other official forms are used because the redundancy is confusing.
 - D. None of the above.
2. Another name associated with OR-OSHA is:
 - A. Oregon Occupational Safety and Health Division.
 - B. Oregon Organization for Science and Health Association.
 - C. Occupational Safety and Health Act.
 - D. Oregon Occupations in Science and Health Administration.

Section D: Estimating

3. A right triangular area measures 17' – 10" x 54' – 2". To the nearest 1/100th, how many square feet are in the triangle?
 - A. 463.41 square feet.
 - B. 756.97 square feet.
 - C. 387 square feet.
 - D. 482.99 square feet.
4. If the wholesale cost of a plant is \$10.00, your shipping and handling costs are \$2.00, replacement and other overhead costs are \$4.00 and you want a 20% profit on the selling price of your plants, what is the selling price to your customer for this plant? (make sure you understand profit is on selling price)
 - A. \$26.00
 - B. \$19.20
 - C. \$20.00
 - D. 2.5 times cost of plant

Help: [total costs + profit = selling price; let sp = selling price, then profit = .2(sp)
 ⇒ total costs + .2(sp)=sp
 ⇒ total costs = .8(sp)
 ⇒ total costs/.8 = sp. Do the math.]

Section D: Soil Science

5. The soil matrix is:
 - A. The arrangement of layers in the soil profile.
 - B. A graphic chart of soil particle sizes.
 - C. A three-phase system of solid soil particles, liquid, and gas.
 - D. The pressure of soil water in the soil profile.
6. At which of the following soil water conditions is water available for plant use?
 - A. Gravitational water.
 - B. Field capacity water.
 - C. Hygroscopic water.
 - D. Saturation.

Section D: Chemicals

7. Chemicals will be labeled to indicate the hazard to humans. Which of the following indicates a chemical with the greatest hazard?
 - A. Toxic
 - B. Warning
 - C. Caution
 - D. Danger

IRRIGATION SECTION:

1. The velocity of flow through the service line should not exceed what velocity?
 - A. 3 to 5 fps.
 - B. 5 to 7.5 fps.
 - C. 7.5 to 10 fps.
 - D. 10 to 15 fps.

2. Unions may be placed:
 - A. Anywhere in the irrigation piping system.
 - B. Only downstream of the backflow device.
 - C. Only upstream of the control valves.
 - D. Only downstream of the control valves.

BACKFLOW SECTION:

1. The type of backflow prevention device to be used is determined by:
 - A. The anticipated degree of hazard.
 - B. The cost of the device.
 - C. The expected life of the device.
 - D. None of the above.

Answers: L&R: 1(B), 2(C); General Section A: 1(C), 2(C); Section B: 1(C), 2(D); Section C: 1(C), 2(C); Section D: 1(D), 2(A), 3(D), 4(C), 5(C), 6(B), 7(D); Irrig: 1(B), 2(A); Backflow: 1(A)

STUDY GUIDE

This guide is meant only to be a “guide” not a textbook for the exam. Not every answer to every question on the exam will be found in the source material suggested in this guide. Experience, general knowledge and math deductive skills are taken into consideration in asking the questions on the exam.

LAWS AND RULES (50 questions)

This category tests the applicant’s knowledge of the Oregon Revised Statutes (ORS) and Oregon Administrative Rules (OAR) that cover landscape contractors. It also tests the applicant’s understanding of contracts. Information about contracts and liens is included at the end of this section.

In studying for this section, the applicant should become familiar with Chapter 671 of the Oregon Revised Statutes and Chapter 808 of the Oregon Administrative Rules. These can be found on the web at: <http://www.leg.state.or.us/ors/671.html> &

http://arcweb.sos.state.or.us/rules/OARS_800/OAR_808/808_tofc.html

You can also call the office and staff will send you a hard copy if needed.

Questions in this section address:

1. Landscape Contractors:
 - Business Issues
 - Definition of Landscape Contractor
 - Building permits and project compliance
2. Landscape Contractors Board:
 - Authority of the Landscape Contractors Board
 - Use of administrative rules
3. Licenses:
 - Limited licenses
 - Irrigation and backflow requirements
 - Suspension, renewal, expiration of license
 - Advertising and license numbers
4. Landscape Businesses:
 - Requirements for a landscape business license (new and renewal) business names, advertising and licenses
5. Bonds:
 - Bond requirements (amount and filing)
 - Use of bonds for claims
6. Contracts:
 - When are contracts required, when are they not required
 - Specifications that must be included in contracts
7. Claims:
 - Circumstances for filing a claim
 - Who can file a claim
 - Warranty work and claims
8. Liens:
 - Valid and invalid liens
 - Circumstances and time frame for filing liens
9. Codes
 - National Electric Codes
 - Building Codes Division

GENERAL (225 questions)

Section A. Plants and Turf (55 questions)

This section of the exam tests the applicant's ability to identify plants and grasses by both their common and Latin names. It also tests the applicant's knowledge of plant culture as well as the habitat and use of specific plants. The applicant should study the plants on the list provided, referring to the *Western Garden Book* (Sunset Publishing Corporation) for information on habitat and culture of the listed plants.

Questions in this section address:

1. Seed mixtures for various Oregon localities & seeding rates
2. Installation of sod
3. Cultural requirements of specific grass mixtures and plants
4. Plant identification (Latin and common names)
5. Plant installation, including planting, fertilization, staking, watering, amending soils
6. Balled and burlapped vs. bare root installation
7. Soil structure as related to plant cultivation

Section B. General Construction (50 questions)

This section tests the applicant's knowledge in constructing decks, retaining walls, pavements, drains, water-features, and installing low voltage lighting.

Questions in this section address:

1. Decks:
 - Identification of the parts of a deck
 - Choice of materials and installation
 - Joists
 - Guardrails
 - Blocking
 - Flashing
2. Low Voltage Wiring:
 - Choice of materials and installation
 - Cables and transformers
3. Concrete and Masonry:
 - Choice of materials and installation
 - Joints
 - Reinforcement
 - Expansion strips
 - Mortar
 - Brick paving
 - Tooling and curing
4. Retaining Walls (both dry stack and mortared):
 - Choice of materials and installation
 - Footings
 - Joints
 - Weep holes and drains

5. Fences:
 - Choice of materials and installation
 - Postholes and joints
 - Gates
 - Painting or staining
6. Water-features:
 - Choice of materials and installation
 - Pumps
 - Water clarity and quality
7. Steps, Walks, Paths:
 - Choice of materials and installation
8. Materials:
 - Terminology, including board size, lumber grades, nails
9. Project Layout
 - Use of right triangles
 - Staking

Section C. Grading and Drainage (45 questions)

This section tests the applicant's knowledge of grading and drainage with specific reference to soil types, fill materials, surveying, and erosion control. The ability to read a landscape architect's plan and to calculate slope is necessary.

For this section, a calculator and an engineer's rule are required. All calculations should be to the 100th decimal (2 places). A grading plan will be provided with a scale of 1": 20' (one inch to 20 feet).

Questions in this section address:

1. Surface and Subsurfaces:
 - Removing and adding soil
 - Area drains, French drains
 - Grading for pathways
 - Defining terms which relate to grade
2. Surveying:
 - Specific calculations of grade (given elevation points)
 - Using the surveying instrument
 - Topographical surveys
3. Erosion Control:
 - Methods for slowing erosion
 - Soil types as they relate to erosion
 - Techniques for erosion control on slopes
4. Soil Types:
 - Percolation rates and water retention rates of various soils
 - Erosion rates and angle of repose of various soil types
5. Effects of Grading:
 - Effects of grading a site
 - What happens when grading is too flat or too steep
 - Swales
6. Slope Calculations:
 - Specific mathematical questions

7. Reading Plans (questions refer to grading plan provided):
 - Identification of terms and symbols on the plan such as directional arrows, contour lines, swales, berms, cuts, and elevations
 - Calculation of contours and slopes
 - Choice of subsurfaces for pavers (stone & concrete), walks, pathways
 - Choice of soil amendments
 - Choice of erosion control materials (top dressings, nettings, etc.)
8. Cutting and Filling:
 - Calculating amounts for excavation and fill (rock, bark, soil, etc.)

Section D. General Safety, Estimating, Soil Science, Chemicals (75 questions)

These four topics are combined in one test section of the LCB exam.

GENERAL SAFETY

This portion of the exam tests the applicant's knowledge of equipment safety, first aid, hazardous substances, OR-OSHA (Oregon Occupational Safety and Health Division), personal and public safety.

Questions in this section address:

1. Equipment Safety:
 - Safety blades
 - GFCI and extension cords
2. First Aid:
 - Kits and supplies
3. Handling and Storing Materials and/or Hazardous Substances:
 - Storage containers and locations
 - Storage of Materials (lumber, rock, etc.)
 - MSDS
4. OR-OSHA:
 - OR-OSHA services
 - Safety committees and employee training
5. Personal Protection:
 - Clothing and personal protective equipment
 - Tools and ladders
6. Public Safety:
 - Traffic controls
 - Hazards on job site, such as trenches
 - Use of chemicals

ESTIMATING

This portion of the exam tests an applicant's ability to estimate areas of the landscape and to calculate the amount of materials needed. Some questions refer to the plan provided. A calculator and engineer's rule are necessary for this section of the test. Some questions ask the applicant to estimate costs, pricing, and discounts for materials.

Questions in this section address:

1. The Landscape Plan:
 - Calculating areas of turf, planting beds, walkways, etc.
 - Calculating the amount of materials needed for coverage (bark, gravel, brick, edging)
 - Determining the number of plants needed per section of the plan
2. General Estimating:
 - Given specific dimensions, calculating units of bark, cubic feet of sand, rolls of sod, number of trucks needed, feet of edging
 - Calculating price to customer given cost of material, markup, overhead, profit and handling

SOIL SCIENCE AND FERTILIZATION

This portion of the exam tests an applicant's knowledge of soil structure and fertilizers. A calculator is necessary for this section of the exam. Calculations should be the 100th decimal (2 places).

Questions in this section address:

1. Soils:
 - Soil matrix, tilth, structure
 - Water availability and nutrients
 - Fertilizer components and application
2. Calculations:
 - Amount of soil amendments needed to achieve a certain percentage given the depth
 - Amount of fertilizer to apply given the area of turf (or size of plant) and the rate of application

CHEMICAL

This portion of the exam tests the applicant's understanding of the use of chemicals in the landscape, including application and safety.

Questions in this section address:

1. Regulation of pesticides and warning labels
2. Herbicides, antitranspirants, and weed killers

IRRIGATION (100 questions)

The irrigation exam covers 12 different sections.

- 1. Design**
 - Head spacing
 - Precipitation rate
 - Pressure loss
 - Velocity
 - Pipe wire sizing

- 2. Irrigation Plan**
 - Identifying common components of an irrigation plan
 - Head spacing and selection
 - Topography related questions

- 3. Hydraulics**
 - Friction loss
 - Velocity
 - Flow

- 4. Pipes and Fittings**
 - Diameters
 - Types and ratings

- 5. Valves**
 - Remote control valves
 - Check valves
 - Drain valves

- 6. Heads and Nozzles**
 - Head types and their appropriate use
 - Nozzle types and their appropriate use

- 7. Plant Culture**
 - Different plant types water requirements
 - Hydro-zoning

- 8. Drip Irrigation**
 - Components
 - Application

- 9. Electrical**
 - Electrical wire in general
 - Remote control valves
 - Controller

- 10. Installation/Practical Application**
 - Installation techniques
 - Trenching
 - Connecting pipe

11. Winterization

- Shutting down a system for the winter

12. Repair and Troubleshooting

- Diagnosing common problems of an existing irrigation system

BACKFLOW (50 questions)

OREGON STATE PLUMBING SPECIALTY CODE 1997 EDITION (adopted in 2000) and 1994 Edition (adopted in 1996) and 2005 Edition (sections listed available at office)

ADMINISTRATION:

1997 Edition

Pages 8.12-8.29 OAR 918-750-0100 through 918-780-0190

1994 Edition

Pages 1-14.4 OAR 918-750-005 through 918-780-190

DEFINITIONS:

1997 Edition	Section	1994 Edition	Section	2005 Edition	Section
Pages 9-16	201-228	Pages 15-28	201-202	Pages 11-18	201-226

GENERAL REGULATIONS:

1997 Edition

Pages 17-22 Sections 301-317

1994 Edition

Pages 29-38 Sections 301-317

WATER SUPPLY AND DISTRIBUTION:

1997 Edition	Section	1994 Edition	Section	2005 Edition	Section
Page 45	602.0	Page 61	602.0	Page 91	601-602
Pages 46-50	603.0	Pages 62-67	603.0	Pages 92-96	603
Pages 50-51	604.0	Pages 67-68	604.0	Pages 96-97	604
Pages 51	605.0	Pages 68-69	605.0	Pages 97-98	605
Page 51-52	606.0	Page 69	606.0	Page 98	606
Pages 52-53	608.0	Pages 69-71	608.0	Pages 98-99	608
Pages 53-56	609.0	Pages 71-73	609.0	Pages 99-103	609
Pages 56-58	610.0	Pages 73-80	610.0	Pages 103-106	610-611

ABBREVIATIONS & PLUMBING MATERIAL STANDARDS:

1997 Edition

Page 129-144

1994 Edition

Page 154-154.1 and 155-154.1

(Those titles and abbreviations shown in bold print only)

INSTALLATION STANDARDS:

1997 Edition:

Pages 233-239 Copper Plumbing Tube, Pipe and Fittings, IS 3-93
 Pages 253-254 Polyethylene (PE) Cold Water Building Supply and Yard Piping IS 7-90
 Pages 255-263 PVC Cold Water Building Supply and Yard Piping IS 8-95
 Pages 305-311 Welded Copper and Copper Alloy Water Tube IS 21-89

1994 Edition:

Pages 287-297 Copper Plumbing Tube, Pipe and Fittings, IS 3-93
 Pages 317-320 Polyethylene (PE) Cold Water Building Supply and Yard Piping IS 7-90
 Pages 321-340 PVC Cold Water Building Supply and Yard Piping IS 8-95
 Pages 397-406 Welded Copper and Copper Alloy Water Tube IS 21-89

USEFUL TABLES:

1997 Edition
Pages 333-334

1994 Edition
Pages 407-408

CROSS CONNECTION CONTROL MANUAL:

The entire manual, Cross Connection Control Manual 6/e (330082) PNS-AWWA
<http://www.epa.gov/safewater/pdfs/crossconnection/crossconnection.pdf>

Abbreviations used in the Plumbing Code refer to standards or specifications issued by the organizations listed below:

1. **ASHRAE** American Society of Heating, Refrigeration and Air Conditioning Engineers
2. **AWWA** American Water Works Association
3. **ANSI** American National Standards Institute
4. **AHAM** American Home Appliance Manufacturers
5. **ASTM** American Society for Testing Materials
6. **ASME** American Society of Mechanical Engineers
7. **CS** Commercial Standards
8. **PS** Product Standards
9. **FS** Federal Specifications
10. **IAPMO** International Association of Plumbing and Mechanical Officials
11. **UPC** Uniform Plumbing Code
12. **UL** Underwriters Laboratory
13. **WQA** Water Quality Association
14. **ICBO** International Conference of Building Officials
15. **ASSE** American Society of Sanitary Engineers
16. **CABO** Council of American Building Officials
17. **UMC** Uniform Mechanical Code
18. **UBC** Uniform Building Code
19. **SMACNA** Sheet Metal and Air Conditioning Contractors of North America
20. **CISPI** Cast Iron Soil Pipe Institute
21. **OSPSC** Oregon State Plumbing Specialty Code
22. **OSPB** Oregon State Plumbing Board
23. **BCD** Building Codes Division
24. **OPCCC** Oregon Plumbing Code Change Committee

CUSTOMER RELATIONS AND EXPECTATIONS

Contracts, Claims and Liens

IMPORTANT INFORMATION FOR CONTRACTS, CLAIMS, AND LIENS:

Contracts and liens pertain to customer relations. Good customer relations and management practices can prevent problems that can lead to having claims filed against the business or liens filed against the homeowner. The following checklists are provided to help the landscape contractor manage customer relations.

There are four phases in managing customer expectations:

- Pre-contract phase
- Contract phase
- Performance phase
- Follow-through phase

Pre-contract Phase Checklist:

- Determine customer objectives
- Determine customer budget
- Prepare plans for the work
- Determine your capacity to handle the job (skill and manpower needed)
- Discuss the following with the customer:
 - ◆ Time expectations
 - ◆ Payment
 - ◆ Project management
 - ◆ Customer-contractor communication
 - ◆ Quality of work
 - ◆ Post installation maintenance
- Determine the availability of materials and supplies
- Make sure you have accurate take-offs
- Contact subcontractors and get firm quotes if appropriate

Contract Phase Checklist:

- Use a written contract (no written contract means you may not get paid and a civil penalty by the LCB will be assessed)
- Review material terms with the customer
- Explain the change order process
- Explain maintenance obligations
- Get a down payment on the contract price
- Introduce the licensed supervisor for the work
- Review the plans
- Confirm time expectations
- Firm up subcontracts
- Confirm warranty terms

Performance Phase Checklist:

- Obtain all required permits
- Schedule work
- Order materials and supplies
- Staff up
- Coordinate all subcontractors
- Review plans with foreman and crew
- Lay out job; review with customer
- Review plant material with customer on site
- Review any other major materials such as brick, wood, rock, if selected by the customer
- Monitor daily work, both quality and progress
- Address unknowns immediately after discovery and inform the customer
- Follow plans strictly
- Obtain change orders BEFORE new work starts
- Send progress statements or billings
- Meet time expectations
- Train customer for maintenance
- Manage the site

Follow-through Phase Checklist:

- Do final inspection with customer
- Perform necessary tests
- Prepare and deliver written maintenance instructions to customer
- Have customer sign acceptance and completion statement
- Collect unpaid fees
- Visit site a week after completion
- Follow up with maintenance proposal
- Perform all warranty or guaranty obligations
- Ask for customer feed back (prepare a form in advance)

CONTRACTS

Minimum standards for contracts and billings are found in Oregon Revised Statute 671.625 and Oregon Administrative Rules Chapter 808, Division 2, 808-002-0020. The following checklist is an additional resource for study and a guide for future written contracts:

Landscape Contract Checklist Requirements (minimum standards for contracts):

1. Written landscape contracts must include:
 - Landscape business name, 4-digit license number, address, and telephone number
 - Consumer's name and address
 - Work location and address, if different from the consumer's
 - Plant material list (with quantities and sizes)
 - General description of the work to be performed
 - Estimated time and/or date of completion
 - Price and payment schedule
 - Guarantee; if no guarantee, that statement should be included
 - Statement that the business is licensed by the LCB and the current address and telephone number of the LCB
 - Signatures of Business licensee and consumer

2. Written landscape contracts apply to all landscape contracting work, no matter what the cost of the project is. A contract that does not comply with the above items may not be enforced by a landscaping business in any court or other proceedings within this state.

CLAIMS & BONDS

ORS section 671.690 through 671.710 and OAR chapter 808, Division 4 pertain to claims.

Bond Requirements

- A surety bond is required to be filed with the LCB for all licensed landscaping businesses. The bonding requirements are based upon the charges per landscape job.
- If the business charges for jobs up to, but not exceeding, \$10,000, a \$3,000 bond is required.
- If the business charges above \$10,000, but less than \$25,000 for a single job, a \$10,000 bond is required.
- If the business charges above \$25,000 for a single job, a \$15,000 bond is required.
- If the business constructs fences, decks, arbors, patios, landscape edging, driveways, walkways or retaining walls, not in conjunction with other landscaping work, a \$10,000 bond is required.
- When the landscaping project exceeds the limitations of the current bond, it is the business' responsibility to obtain the increased bond before work continues on that project.

Types of Claims

- Breach of Contract Claims:
A claim for amounts due from a landscaping business as a result of a breach of contract in performing landscape contracting work.
- Material or Equipment Claims:
A claim for unpaid materials for or rental of equipment to a landscaping business.
- Employee Claims:
A claim for unpaid wages or benefits filed by an employee of a landscaping business for work performed by the employee relating to the business' operation as a landscaping business.
- Negligent or Improper Work Claims:
A claim as a result of negligent or improper landscape contracting work.
- State Tax and Contribution Claims:
A claim filed by the State of Oregon for amounts due for taxes and contributions due to the State of Oregon from a landscaping business.
- Subcontractor Claims:
A claim arising out of a contract between the subcontractor and the landscaping business.

Filing Deadlines

- Breach of contract and negligent or improper work claims must be filed within one year following the date the work was completed (the date when all the provisions of the contract were substantially fulfilled, excluding warranty work; or the date the landscaping business ceased work, if the business failed to substantially fulfill the provision of the contract).

- Material, equipment rental and employee claims must be filed with the LCB within one year after the delivery date of the material, equipment or labor.
- State tax and contributions claims must be filed within one year of the due date of the tax or contribution.

Contract Requirements

- A claim may only be accepted when:
 1. A direct contractual relationship exists based on a contract entered into by the claimant and the landscaping business, or their agents; or
 2. An employment relationship exists.

Miscellaneous Claim Information

- A claim may only be processed against a business that had/has an active license when the work was performed.
- The LCB will accept:
 1. State Tax and contribution claims
 - The tax and contribution liability arose while the business was licensed,
 2. Material claims
 - One or more invoices involve material delivered while the business was licensed (note: damages will be awarded only for material delivered within the period time that the business was actively licensed), or
 3. Any other claims:
 - The landscaping business was actively licensed during all or part of the work period.
- Claims are accepted only for work performed within the boundaries of the state of Oregon or for materials or equipment supplied for installation or use on property located within the boundaries of the state of Oregon.
- Material or equipment claims may not include non-payment for tools or equipment sold to a landscaping business that is not incorporated into the job site, for interest or service charges on an account or for materials purchased as stock items.

CONSTRUCTION LIENS

The following information is provided as a resource for study for the LCB exam. It may also be useful for future reference. However, this information is not intended to provide legal assistance or to interpret Oregon law. In situations where filing a construction lien becomes necessary, a landscaping business is encouraged to seek appropriate legal advice.

Who May File a Lien?

1. A landscape business has a right to assert a lien for construction work only (not for planting related work) under the following conditions.
 - The landscape business must be licensed with the LCB.
 - The license must be in effect at the time of bidding, when the work begins, and continuously during the performance of the work.
2. Persons who prepare plans, drawings or specifications that are “used for the landscaping or preparation of a lot or parcel of land” or who supervise the landscaping or preparation also have a right to lien.
3. A construction contractor also has a right to assert a lien if he/she is registered with the CCB and that registration meets the requirements the CCB.
4. Persons who engage in or rent equipment for “preparation of a lot or parcel of land” at the request of the owner also have a right to assert a lien.

5. Persons who perform labor or furnish materials or supplies for construction or any improvement at the insistence of the owner or the agent of the owner.

What Kind of Work is Subject to Liens?

1. Materials and Supplies
 - Upon delivery to the site
 - Consumed or destroyed during construction
 - Materials which have become a permanent part of the improvement
2. Equipment (rental)
3. Plans, drawings and specifications used for landscaping or preparation of land

What Could Be the Amount of the Lien?

1. Amount of the contract price
2. The amount for use of equipment that is equal to the reasonable rental value

What Notices are required?

1. Information Notice to Owner About Construction Liens
 - This notice applies to the original owner
 - This notice also applies to the first purchaser of the property if it is sold before or within the 75-day period following completion.
2. Notice of Right to Lien
 - There is a statutory form for giving notice of the right to lien
 - Notice can be given at any time during the progress of the work
 - The notice protects lien rights for work provided up to 8 days before the notice is given
 - Notice is required for all residential work
 - Notice is required only for material suppliers on commercial work
3. Notice to Mortgagee
 - Mortgagees also receive notice of the right to lien
4. Notice of Filing
 - Notice of filing is given to the owner and all mortgagees
 - Notice of filing is given within 20 days after filing
 - Notice includes the loss of costs, disbursements and attorney fees
5. Notice of Intent to Foreclose
 - Such notice is given to the owner and all mortgagees
 - Such notice is given at least 10 days before a suit is filed

Filing a Lien:

1. DEADLINES:
 - A lien must be filed within 75 days after the claimant either completes construction or ceases to provide labor or equipment or to furnish supplies
 - The Notice of Completion begins the 75 day period
 - You cannot modify or correct a lien after the 75 day period lapses
 - The 75-day lien period is not extended by performing insubstantial work following notice of completion. This includes warranty work.
 - The 75-day lien period is not extended by correcting substandard work following notice of completion. This includes warranty work.
2. Liens are filed following a statutory lien format
3. Liens are filed with the recording officer of the county where the improvement is located

PLANT LIST

NOTE: The plants on this list were selected by Subject Matter Experts, licensed landscape contractors and educators, on the LCB Exam Committee and approved by the State Landscape Contractors' Board. They represent a group of plants that are in use from different parts of the.

Scientific Name:

Common Name:

<i>Abelia grandiflora</i>	Glossy Abelia
<i>Abies procera</i>	Noble Fir
<i>Acer circinatum</i>	Vine Maple
<i>Acer negundo</i> 'Variegatum'	Variegated Box Elder
<i>Acer palmatum</i>	Japanese Maple
<i>Acer platanoides</i>	Norway Maple
<i>Acer rubrum</i>	Red Maple
<i>Acer saccharinum</i>	Silver Maple
<i>Acer saccharum</i>	Sugar Maple
<i>Actinidia kolomitka</i>	Variegated Kiwi
<i>Agrostis</i>	Bentgrass
<i>Agrostis tenuis</i>	Colonial Bent
<i>Arbutus menziesii</i>	Pacific Madrone
<i>Arbutus unedo</i> 'Compact'	Compact Strawberry Tree Madrone
<i>Aucuba japonica</i>	Japanese Aucuba
<i>Aucuba japonica</i> 'Golddust'	Golddust Laurel
<i>Berberis thunbergii</i>	Japanese Barberry
<i>Berberis verruculosa</i>	Warty Barberry
<i>Betula pendula</i>	European White Birch
<i>Calocedrus decurrens</i>	Incense Cedar
<i>Camellia sasanqua</i>	Sasanqua Camellia
<i>Ceanothus gloriosus</i>	Point Reyes Ceanothus
<i>Cedrus atlantica</i>	Atlas Cedar
<i>Cedrus deodara</i>	Deodar Cedar
<i>Cercidiphyllum japonicum</i>	Katsura Tree
<i>Cercis canadensis</i> 'Forest Pansy'	Forest Pansy Redbud
<i>Choisya ternata</i>	Ternate Mexican Orange
<i>Clematis armandii</i>	Evergreen Clematis
<i>Clematis montana</i>	Anemone Clematis
<i>Cornus florida</i>	Eastern Flowering Dogwood
<i>Cornus kousa</i>	Kousa Dogwood
<i>Cornus nuttallii</i>	Pacific Dogwood
<i>Cornus stolonifera</i>	Redosier Dogwood
<i>Corylus avellana</i> 'Contorta'	Harry Lauder's Walking Stick
<i>Cotinus coggygria</i> 'Royal Purple'	Royal Purple Smoke Tree
<i>Cotoneaster apiculatus</i>	Cranberry Cotoneaster
<i>Cotoneaster dammeri</i>	Bearberry Cotoneaster
<i>Cotoneaster horizontalis</i>	Rockspray Cotoneaster
<i>Crataegus phaenopyrum</i>	Washington Hawthorn
<i>Cupressocyparis leylandii</i>	Leyland Cypress
<i>Cupressus arizonica</i>	Arizona Cypress
<i>Cynodon dactylon</i>	Bermuda Grass
<i>Cytisus kewensis</i>	Kew Broom
<i>Cytisus praecox</i>	Warminster Broom
<i>Cytisus scoparius</i>	Scotch Broom

Scientific Name:

Daphne cneorum
Euonymus alata 'Compacta'
Fagus sylvatica
Fatsia japonica
Festuca
Festuca rubra
Festuca rubra 'Commutada'
Festuca ovina 'Glauca'
Fraxinus latifolia
Fraxinus angustifolia 'Raywood'
Fraxinus pennsylvanica 'Marshall Seedless'
Gaultheria shallon
Genista lydia
Genista pilosa
Gleditsia triacanthos 'Sunburst'
Hamamelis mollis
Hosta
Hydrangea macrophyllum
Hydrangea quercifolia
Ilex aquifolium
Ilex crenata
Ilex cornuta
Juniperus chinensis 'Pfitzeriana'
Juniperus chinensis 'Torulosa'
Juniperus sabina 'Tamariscifolia'
Juniperus squamata 'Blue Star'
Kalmia latifolia
Kerria japonica
Leucothoe fontanesiana
Liquidambar styraciflua
Liriodendron tulipifera
Lolium
Lolium perenne
Lolium perenne 'Derby'
Lolium perenne 'Manhattan'
Magnolia grandiflora
Magnolia soulangiana
Magnolia stellata
Mahonia aquifolium
Mahonia repens
Malus floibunda
Malus sargentii
Metasequoia glyptostroboides
Miscanthus sinensis 'Zebrina'
Myrica californica
Nandina domestica
Nyssa sylvatica
Pachysandra terminalis
Parthenocissus tricuspidata
Plox subulata
Picea abies

Common Name:

Garland Daphne
Compact Winged Euonymous
European Beech
Japanese Aralia
Fescue
Red Fescue
Chewings Fescue
Blue Fescue
Oregon Ash
Raywood Ash
Marshall Seedless Ash
Salal
Lydia Broom
Woadwaxen
Sunburst Honey Locust
Chinese Witch Hazel
Hosta
Bigleaf Hydrangea
Oakleaf Hydrangea
English Holly
Japanese Holly
Chinese Holly
Pfitzer Juniper
Hollywood Juniper
Tam Juniper
Blue Star Juniper
Mountain Laurel
Japanese Kerria
Drooping Leucothoe
American Sweetgum
Tulip Tree
Ryegrass
Perennial Ryegrass
Derby Ryegrass
Manhattan Ryegrass
Southern Magnolia
Saucer Magnolia
Star Magnolia
Oregon Grape
Creeping Mahonia
Japanese Crabapple
Sargent Crabapple
Dawn Redwood
Zebra Grass
Pacific Waxmyrtle
Heavenly Bamboo
Sour Gum or Black Tupelo
Japanese Spurge
Boston Ivy
Moss Pink
Norway Spruce

Scientific Name:

Picea pungens
Picea sitchensis
Pieris japonica
Pinus contorta
Pinus densiflora
Pinus mugo mugo
Pinus strobus
Platanus acerifolia
Poa pratensis
Prunus cerasifera
Prunus laurocerasus
Prunus laurocerasus 'Otto Luyken'
Prunus serrulata
Psuedotsuga menziesii
Pyracantha coccinea
Pyrus calleryana
Quercus rubra
Raphiolepis indica
Rhododendron 'Unique'
Rhus typhina
Salix purpurea
Sarcococca humilis hookeriana
Sciadopitys verticillata
Senecio cineraria
Sequoia giganteum
Sequoia sempervirens
Skimmia japonica
Sorbus aucuparia
Stewartia pseudocamellia
Styrax japonica
Symphoricarpos albus
Taxus baccata
Thuja occidentalis 'Emerald Green'
Thuja occidentalis 'Tom Thumb'
Thuja plicata
Thujopsis dolabrata
Tilia cordata
Tsuga heterophylla
Viburnum tinus
Weigela florida

Common Name:

Colorado Spruce
Sitka Spruce
Lily of the Valley Shrub
Coast Pine
Japanese Red Pine
Mugho Pine
Eastern White Pine
London Plane Tree
Kentucky Bluegrass
Flowering Plum
English Laurel
Otto Luyken Laurel
Japanese Flowering Cherry
Douglas Fir
Firethorn
Callery Pear
Northern Red Oak
India Hawthorn
Unique Rhododendron
Staghorn Sumac
Alaska Blue Willow
Low Sarcococca
Japanese Umbrella Pine
Dusty Miller
Giant Redwood
Coast Redwood
Japanese Skimmia
European Mountain Ash
Japanese Stewartia
Japanese Snowbell
Common Snowberry
English Yew
Emerald Green Arborvitae
Tom Thumb Arborvitae
Western Red Cedar
Deerhorn Cedar
Littleleaf Linden
Western Hemlock
Laurustinus Viburnum
Weigela

REFERENCE MATERIAL

LAWS AND RULES:

Found on the Web:

Statutes: <http://www.leg.state.or.us/ors/671.html>

Rules: http://arcweb.sos.state.or.us/rules/OARS_800/OAR_808/808_tofc.html

Building Codes: <http://www.permitsprotect.info/index.html>

GENERAL:

If you want to order books you may try this website:

<http://www.buildingtechbooks.com/flyers.html>

Section A: Plants and Turf

<http://oregonstate.edu/dept/lcplants/>

Western Garden Book (Sunset Publishing Corporation)

All About Lawns (Ortho)

Turfgrass Management (Turgeon)

Section B: Construction:

www.oregonlandscape.org/association/3803/sites/oregon%20landscapeguidelines.pdf

Sunset Books:

Fences and Gates

Basic Masonry Illustrated

Garden Pools, Fountains and Waterfalls

Taunton Books

Building and Designing Decks by [Scott Schuttner](#), [Jeff Beneke](#) (Editor)

Landscape Construction, Sauter, David; Delmar Publishers, Thomson Learning

Section C: Grading and Drainage

Construction Surveying and Layout, Crawford, Wesley G, 3rd Edition

Landscape Construction, Sauter, David; Delmar Publishers, Thomson Learning

Section D: General Safety, Estimating, Soil Science & Chemicals

Soil Science and Management, Pilaster, Edward J., Delmar Publishers, 3rd Edition

1-800-998-7498 or at www.delmarlearning.com

Oregon Pesticide Applicator Manual, Publication Orders: Extension & Experiment Station Communications, Oregon State University; 422 Kerr Admin. Building, Corvallis, Oregon 97331-2119 (Telephone: 541-737-2513)

OSHA: Safety Regulations

If you hire workers or elect Workers' Compensation coverage for yourself, you are under the jurisdiction of Oregon OSHA. If you have workers on your job site under your supervision who you have "leased" you are subject to Oregon OSHA. If you are incorporated and you are the only officer and receive remuneration, you are considered an employee of the corporation and are under the jurisdiction of Oregon OSHA.

OSHA: (Oregon Administrative Rules, Chapter 437):
<http://www.orosha.org/standards/standards.htm>
www.cbs.state.or.us/external/osha/pdf/pubs/2942.pdf

Division 1

General Administrative Rules

Applies to everybody and includes information on safety committees:
http://www.orosha.org/standards/div_1.htm

IRRIGATION & BACKFLOW

Cross Connection Control Manual, 6th Edition (330062) PNS-AWWA

<http://www.epa.gov/safewater/pdfs/crossconnection/crossconnection.pdf>

Uniform Plumbing Code, (1994 UPC plus 1996 Oregon Amendments)

Turf Irrigation Manual, 5th Edition (Richard B. Choate)

Landscape Irrigation Design Manual (Rainbird, 1998 version)

Low Volume Landscape Irrigation Design Manual (RainBird)

Cross Connection Control Handbook (Febco)

DMV FIELD OFFICES OFFERING LCB EXAMS

Northwest Region

Albany
Lincoln City
McMinnville
Newport

Sunset Region

Astoria
Beaverton DTC
Hillsboro
St. Helens
Tillamook

Mt. Hood Region

Gladstone
Gresham
Hood River
Portland - North
The Dalles

Portland Metro Region

Portland DTC (SE Powell)

South Region

Brookings
Coos Bay
Grants Pass
Klamath Falls
Medford
Florence

Central Region

Bend
Canyonville
Eugene DTC
Redmond
Roseburg
Springfield

East Region

Baker
Burns
Enterprise
Hermiston
John Day
LaGrande
Ontario
Pendleton

NOTE: Above are the only DMV offices available for the exam. You must select from this list only.