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**HOUSE BILL NO. 2145**

Offered January 11, 2017

Prefiled January 11, 2017

*A BILL to amend and reenact §§ 54.1-400, 54.1-402, 54.1-404, and 54.1-406 of the Code of Virginia and to amend the Code of Virginia by adding a section numbered 54.1-407.1, relating to Board for Architects, Professional Engineers, Land Surveyors, Certified Interior Designers and Landscape Architects; regulation of land surveyor photogrammetrists.*

Patron—LeMunyon

Referred to Committee on General Laws

**Be it enacted by the General Assembly of Virginia:**

**1. That §§ 54.1-400, 54.1-402, 54.1-404, and 54.1-406 of the Code of Virginia are amended and reenacted and that the Code of Virginia is amended by adding a section numbered 54.1-407.1 as follows:**

**§ 54.1-400. Definitions.**

As used in this chapter unless the context requires a different meaning:

"Architect" means a person who, by reason of his knowledge of the mathematical and physical sciences, and the principles of architecture and architectural design, acquired by professional education, practical experience, or both, is qualified to engage in the practice of architecture and whose competence has been attested by the Board through licensure as an architect.

The "practice of architecture" means any service wherein the principles and methods of architecture are applied, such as consultation, investigation, evaluation, planning and design, and includes the responsible administration of construction contracts, in connection with any private or public buildings, structures or projects, or the related equipment or accessories.

"Board" means the Board for Architects, Professional Engineers, Land Surveyors, Certified Interior Designers and Landscape Architects.

"Certified interior designer" means a design professional who meets the criteria of education, experience, and testing in the rendering of interior design services established by the Board through certification as an interior designer.

"Improvements to real property" means any valuable addition or amelioration made to land and generally whatever is erected on or affixed to land which is intended to enhance its value, beauty or utility, or adapt it to new or further purposes. Examples of improvements to real property include, but are not limited to, structures, buildings, machinery, equipment, electrical systems, mechanical systems, roads, and water and wastewater treatment and distribution systems.

"Interior design" by a certified interior designer means any service rendered wherein the principles and methodology of interior design are applied in connection with the identification, research, and creative solution of problems pertaining to the function and quality of the interior environment. Such services relative to interior spaces shall include the preparation of documents for nonload-bearing interior construction, furnishings, fixtures, and equipment in order to enhance and protect the health, safety, and welfare of the public.

"Land surveyor" means a person who, by reason of his knowledge of the several sciences and of the principles of land surveying, and of the planning and design of land developments acquired by practical experience and formal education, is qualified to engage in the practice of land surveying, and whose competence has been attested by the Board through licensure as a land surveyor.

The "practice of land surveying" includes surveying of areas for a determination or correction, a description, the establishment or reestablishment of internal and external land boundaries, or the determination of topography, contours or location of physical improvements, and also includes the planning of land and subdivisions thereof. The term "planning of land and subdivisions thereof" shall include, but not be limited to, the preparation of incidental plans and profiles for roads, streets and sidewalks, grading, drainage on the surface, culverts and erosion control measures, with reference to existing state or local standards.

"Land surveyor photogrammetrist" means a person who by reason of his specialized knowledge in the area of photogrammetry has been issued a license by the Board to survey land for the determination of topography, contours, or location of planimetric features, utilizing photogrammetric methods or similar remote sensing technology. "Land surveyor photogrammetrist" does not include the establishment of any ground survey control.

"Landscape architect" means a person who, by reason of his special knowledge of natural, physical

59 and mathematical sciences, and the principles and methodology of landscape architecture and landscape  
60 architectural design acquired by professional education, practical experience, or both, is qualified to  
61 engage in the practice of landscape architecture and whose competence has been attested by the Board  
62 through licensure as a landscape architect.

63 The "practice of landscape architecture" by a licensed landscape architect means any service wherein  
64 the principles and methodology of landscape architecture are applied in consultation, evaluation,  
65 planning (including the preparation and filing of sketches, drawings, plans and specifications) and  
66 responsible supervision or administration of contracts relative to projects principally directed at the  
67 functional and aesthetic use of land.

68 "Professional engineer" means a person who is qualified to practice engineering by reason of his  
69 special knowledge and use of mathematical, physical and engineering sciences and the principles and  
70 methods of engineering analysis and design acquired by engineering education and experience, and  
71 whose competence has been attested by the Board through licensure as a professional engineer.

72 The "practice of engineering" means any service wherein the principles and methods of engineering  
73 are applied to, but are not necessarily limited to, the following areas: consultation, investigation,  
74 evaluation, planning and design of public or private utilities, structures, machines, equipment, processes,  
75 transportation systems and work systems, including responsible administration of construction contracts.  
76 The term "practice of engineering" shall not include the service or maintenance of existing electrical or  
77 mechanical systems.

78 "Residential wastewater" means sewage (i) generated by residential or accessory uses, not containing  
79 storm water or industrial influent, and having no other toxic, or hazardous constituents not routinely  
80 found in residential wastewater flows; or (ii) as certified by a professional engineer.

81 "Responsible charge" means the direct control and supervision of the practice of architecture,  
82 professional engineering, landscape architecture, or land surveying.

83 **§ 54.1-402. Further exemptions from license requirements for architects, professional engineers,**  
84 **and land surveyors.**

85 A. No license as an architect or professional engineer shall be required pursuant to § 54.1-406 for  
86 persons who prepare plans, specifications, documents and designs for the following, provided any such  
87 plans, specifications, documents or designs bear the name and address of the author and his occupation:

88 1. Single- and two-family homes, townhouses and multifamily dwellings, excluding electrical and  
89 mechanical systems, not exceeding three stories; or

90 2. All farm structures used primarily in the production, handling or storage of agricultural products or  
91 implements, including, but not limited to, structures used for the handling, processing, housing or  
92 storage of crops, feeds, supplies, equipment, animals or poultry; or

93 3. Buildings and structures classified with respect to use as business (Use Group B) and mercantile  
94 (Use Group M), as provided in the Uniform Statewide Building Code and churches with an occupant  
95 load of 100 or less, excluding electrical and mechanical systems, where such building or structure does  
96 not exceed 5,000 square feet in total net floor area, or three stories; or

97 4. Buildings and structures classified with respect to use as factory and industrial (Use Group F) and  
98 storage (Use Group S) as provided in the Uniform Statewide Building Code, excluding electrical and  
99 mechanical systems, where such building or structure does not exceed 15,000 square feet in total net  
100 floor area, or three stories; or

101 5. Additions, remodeling or interior design without a change in occupancy or occupancy load and  
102 without modification to the structural system or a change in access or exit patterns or increase in fire  
103 hazard; or

104 6. Electric installations which comply with all applicable codes and which do not exceed 600 volts  
105 and 800 amps, where work is designed and performed under the direct supervision of a person licensed  
106 as a master's level electrician or Class A electrical contractor by written examination, and where such  
107 installation is not contained in any structure exceeding three stories or located in any of the following  
108 categories:

109 a. Use Group A-1 theaters which exceed assembly of 100 persons;

110 b. Use Group A-4 except churches;

111 c. Use Group I, institutional buildings, except day care nurseries and clinics without life-support  
112 systems; or

113 7. Plumbing and mechanical systems using packaged mechanical equipment, such as equipment of  
114 catalogued standard design which has been coordinated and tested by the manufacturer, which comply  
115 with all applicable codes. These mechanical systems shall not exceed gauge pressures of 125 pounds per  
116 square inch, other than refrigeration, or temperatures other than flue gas of 300° F (150 degrees C)  
117 where such work is designed and performed under the direct supervision of a person licensed as a  
118 master's level plumber, master's level heating, air conditioning and ventilating worker, or Class A  
119 contractor in those specialties by written examination. In addition, such installation may not be contained  
120 in any structure exceeding three stories or located in any structure which is defined as to its use in any

of the following categories:

- a. Use Group A-1 theaters which exceed assembly of 100 persons;
- b. Use Group A-4 except churches;
- c. Use Group I, institutional buildings, except day care nurseries and clinics without life-support systems; or

8. The preparation of shop drawings, field drawings and specifications for components by a contractor who will supervise the installation and where the shop drawings and specifications (i) will be reviewed by the licensed professional engineer or architect responsible for the project or (ii) are otherwise exempted; or

9. Buildings, structures, or electrical and mechanical installations which are not otherwise exempted but which are of standard design, provided they bear the certification of a professional engineer or architect registered or licensed in another state, and provided that the design is adapted for the specific location and for conformity with local codes, ordinances and regulations, and is so certified by a professional engineer or architect licensed in Virginia; or

10. Construction by a state agency or political subdivision not exceeding \$75,000 in value keyed to the January 1, 1991, Consumer Price Index (CPI) and not otherwise requiring a licensed architect, engineer, or land surveyor by an adopted code and maintenance by that state agency or political subdivision of water distribution, sewage collection, storm drainage systems, sidewalks, streets, curbs, gutters, culverts, and other facilities normally and customarily constructed and maintained by the public works department of the state agency or political subdivision; or

11. Conventional and alternative onsite sewage systems receiving residential wastewater, under the authority of Chapter 6 of Title 32.1, designed by a licensed onsite soil evaluator, which utilize packaged equipment, such as equipment of catalogued standard design that has been coordinated and tested by the manufacturer, and complies with all applicable codes, provided (i) the flow is less than 1,000 gallons per day; and (ii) if a pump is included, (a) it shall not include multiple downhill runs and must terminate at a positive elevational change; (b) the discharge end is open and not pressurized; (c) the static head does not exceed 50 feet; and (d) the force main length does not exceed 500 feet.

B. No person shall be exempt from licensure as an architect or engineer who engages in the preparation of plans, specifications, documents or designs for:

- 1. Any unique design of structural elements for floors, walls, roofs or foundations; or
- 2. Any building or structure classified with respect to its use as high hazard (Use Group H).

C. Persons utilizing photogrammetric methods or similar remote sensing technology shall not be required to be licensed as a land surveyor pursuant to subsection B of § 54.1-404 or 54.1-406 to: (i) determine topography or contours, or to depict physical improvements, provided such maps or other documents shall not be used for the design, modification, or construction of improvements to real property or for flood plain determination, or (ii) graphically show existing property lines and boundaries on maps or other documents provided such depicted property lines and boundaries shall only be used for general information.

Any determination of topography or contours, or depiction of physical improvements, utilizing photogrammetric methods or similar remote sensing technology by persons not licensed as a land surveyor pursuant to § 54.1-406 shall not show any property monumentation or property metes and bounds, nor provide any measurement showing the relationship of any physical improvements to any property line or boundary.

Any person not licensed pursuant to subsection B of § 54.1-404 or 54.1-406 preparing documentation pursuant to subsection C of § 54.1-402 shall note the following on such documentation: "Any determination of topography or contours, or any depiction of physical improvements, property lines or boundaries is for general information only and shall not be used for the design, modification, or construction of improvements to real property or for flood plain determination."

D. Terms used in this section, and not otherwise defined in this chapter, shall have the meanings provided in the Uniform Statewide Building Code in effect on July 1, 1982, including any subsequent amendments.

#### **§ 54.1-404. Regulations; code of professional practice and conduct.**

A. The Board shall promulgate regulations not inconsistent with this chapter governing its own organization, the professional qualifications of applicants, the requirements necessary for passing examinations in whole or in part, the proper conduct of its examinations, the implementation of exemptions from license requirements, and the proper discharge of its duties.

B. The Board may impose different licensure requirements for a limited area of the practice of land surveying for persons who determine topography, contours, or depiction of physical improvements utilizing photogrammetric methods or similar remote sensing technology who are not otherwise exempt pursuant to subsection C of § 54.1-402. Any such requirements shall include reasonable provisions for licensure without examination of persons deemed by the Board to be qualified to provide

182 photogrammetric and remote sensing surveying services.

183 Any license issued pursuant to this subsection shall be distinctive, reflecting the limited area of the  
184 practice of land surveying so authorized, and considered as a land surveyor and the practice of land  
185 surveying for the purposes of §§ 13.1-549, 13.1-1111, ~~54.1-402~~, 54.1-405, 54.1-406 and 54.1-411.  
186 Nothing herein shall be construed to authorize a person issued a limited license pursuant to this  
187 subsection to practice beyond such limited area of practice. The establishment of any such limited  
188 license shall not prohibit any duly qualified land surveyor licensed pursuant to § 54.1-400 from engaging  
189 in any such limited area of practice.

190 C. The regulations may include a code of professional practice and conduct, the provisions of which  
191 shall serve any or all of the following purposes:

192 1. The protection of the public health, safety and welfare;

193 2. The maintenance of standards of objectivity, truthfulness and reliability in public statements by  
194 professionals;

195 3. The avoidance by professionals of conflicts of interests;

196 4. The prohibition of solicitation or acceptance of work by professionals on any basis other than their  
197 qualifications for the work offered;

198 5. The restriction by the professional in the conduct of his professional activity from association with  
199 any person engaging in illegal or dishonest activities; or

200 6. The limitation of professional service to the area of competence of each professional.

201 **§ 54.1-406. License required.**

202 A. Unless exempted by § 54.1-401, 54.1-402, or 54.1-402.1, a person shall hold a valid license prior  
203 to engaging in the practice of architecture or engineering which includes design, consultation, evaluation  
204 or analysis and involves proposed or existing improvements to real property.

205 Unless exempted by § 54.1-401, ~~54.1-402~~, or 54.1-402.1, a person shall hold a valid license prior to  
206 engaging in the practice of land surveying.

207 B. Unless exempted by § 54.1-402, any person, partnership, corporation or other entity offering to  
208 practice architecture, engineering, or land surveying without being registered or licensed in accordance  
209 with the provisions of this chapter, shall be subject to the provisions of § 54.1-111 ~~of this title~~.

210 C. Any person, partnership, corporation or other entity which is not licensed or registered to practice  
211 in accordance with this chapter and which advertises or promotes through the use of the words  
212 "architecture," "engineering" or "land surveying" or any modification or derivative thereof in its name or  
213 description of its business activity in a manner that indicates or implies that it practices or offers to  
214 practice architecture, engineering or land surveying as defined in this chapter shall be subject to the  
215 provisions of § 54.1-111.

216 D. Notwithstanding these provisions, any state agency or political subdivision of the Commonwealth  
217 unable to employ a qualified licensed engineer, architect, or land surveyor to fill a responsible charge  
218 position, after reasonable and unsuccessful search, may fill the position with an unlicensed person upon  
219 the determination by the chief administrative officer of the agency or political subdivision that the  
220 person, by virtue of education, experience, and expertise, can perform the work required of the position.

221 E. Notwithstanding the provisions of this section, a contractor who is licensed pursuant to the  
222 provisions of Chapter 11 (§ 54.1-1100 et seq.) ~~of this title~~ shall not be required to be licensed or  
223 registered to practice in accordance with this chapter when bidding upon or negotiating design-build  
224 contracts or performing services other than architectural, engineering or land surveying services under a  
225 design-build contract. The architectural, engineering or land surveying services offered or rendered in  
226 connection with such contracts shall only be rendered by an architect, professional engineer or land  
227 surveyor licensed in accordance with this chapter.

228 **§ 54.1-407.1. Land surveyor photogrammetrists.**

229 A. Any individual desiring to be licensed as a land surveyor photogrammetrist shall file a written  
230 application on a form prescribed by the Board on or before July 1, 2018. The application shall be  
231 accompanied by a fee set by the Board pursuant to § 54.1-201. The application shall contain, at a  
232 minimum, the applicant's name, place of employment, and business address; information on the  
233 knowledge, skills, abilities, and education or training of the applicant; three references from licensed  
234 land surveyors in a state or territory of the United States; and an affidavit stating that the information  
235 on the application is correct.

236 B. The applicant shall pass an examination on Board regulations and laws governing the practice of  
237 land surveying within the first two consecutive examination administrations after being approved for the  
238 examination.

239 C. For the purposes of this section, "responsible charge of photogrammetric mapping project" means  
240 supervision of the:

241 1. Assessment of the project needs, constraints, and accuracies;

242 2. Creation of the project plan, including determining data standards;

243 3. Creation of overall project specifications;

- 244 4. Development of detailed procedure manuals;  
245 5. Determination of flight lines and appropriate photogrammetric control required for project  
246 accuracies and constraints;  
247 6. Review and approval of aerotriangulation results, prior to map compilation and certification of  
248 the final aerotriangulation report;  
249 7. Determination of the appropriate features to be collected and how they are to be collected;  
250 8. Review and editing of collected data and features;  
251 9. Review of equipment, technology, and procedures that meet project requirements;  
252 10. Determination of final data standards and quality control for a project;  
253 11. Review and approval of the final map products, deliverables, files, and spatial data;  
254 12. Review and editing of final map data for specified completeness and accuracies, including  
255 project reports, metadata, and any associated databases;  
256 13. Project management; and  
257 14. Other duties requiring decision making, control, influence, and accountability of the project.  
258 D. Any person meeting the requirements of this section shall be licensed as a land surveyor  
259 photogrammetrist.  
260 E. The use of photogrammetry to perform any part of the practice of land surveying as defined in  
261 this chapter shall be performed under the direct control and supervision of a licensed land surveyor or  
262 licensed land surveyor photogrammetrist.  
263 F. A land surveyor photogrammetrist licensed by the Board shall comply with Board regulations,  
264 including the requirement regarding use and application of a professional seal. A licensed land surveyor  
265 photogrammetrist shall obtain and use such seal, which shall conform in detail and size to that seal that  
266 the Board shall specify for such use, and which shall be similar in appearance to the seal specified in  
267 the Board's regulations for use by the licensed land surveyor, but which shall clearly identify the  
268 licensee as a land surveyor photogrammetrist.