PRINTER'S NO. 572

THE GENERAL ASSEMBLY OF PENNSYLVANIA

HOUSE BILL

No. 609 Session of 2021

INTRODUCED BY EMRICK, HELM, JOZWIAK, MARSHALL, MILLARD, ROTHMAN, SAYLOR AND ZIMMERMAN, FEBRUARY 24, 2021

REFERRED TO COMMITTEE ON PROFESSIONAL LICENSURE, FEBRUARY 24, 2021

AN ACT

Amending the act of May 23, 1945 (P.L.913, No.367), entitled "An act relating to and regulating the practice of the profession of engineering, including civil engineering, mechanical engineering, electrical engineering, mining engineering and chemical engineering, the profession of land surveying and the profession of geology and constituent parts and combinations thereof as herein defined; providing for the licensing and registration of persons practicing said profession, and the certification of engineers-in-training and surveyors-in-training, and the suspension and revocation of said licenses, registrations and certifications for violation of this act; prescribing the powers and duties of the State Registration Board for Professional Engineers, Land Surveyors and Geologists, the Department of State and the courts; prescribing penalties; and repealing existing laws," further providing for definitions, for procedure for licensing as professional engineer, for continuing professional competency requirements and for exemption from licensure and registration.

The General Assembly of the Commonwealth of Pennsylvania hereby enacts as follows:

Section 1. Section 2(a)(1), (c), (d) and (j) of the act of May 23, 1945 (P.L.913, No.367), known as the Engineer, Land Surveyor and Geologist Registration Law, are amended and the section is amended by adding subsections to read:

Section 2. Definitions.--As used in this act--

(a) (1) "Practice of Engineering" shall mean the application of the mathematical and physical sciences for the design or analysis of public or private buildings, structures, machines, equipment, processes, works or engineering systems, and the consultation, investigation, evaluation[, engineering] or surveys, construction management, modification and alteration, planning and inspection in connection therewith, the performance of the foregoing acts and services being prohibited to persons who are not licensed under this act as professional engineers unless exempt under other provisions of this act. The term includes the performance of engineering land surveys.

* * *

(c) ["Engineer-in-Training"] "Engineer Intern," formerly known as "engineer-in-training," means a candidate for licensure as a professional engineer, who has been granted a certificate as an engineer intern or the predecessor title of engineer-in-training after successfully passing the prescribed written examination in fundamental engineering subjects, and who shall be eligible upon the completion of the requisite years of experience in engineering, under the supervision of a professional engineer, or similarly qualified engineer, for the final examination prescribed for licensure as a professional engineer.

(d) "Practice of Land Surveying" [means the practice of that branch of the profession of engineering which involves the] shall mean the authoritative acts of location, relocation, establishment, reestablishment or retracement of any property line or boundary of any parcel of land or any road right-of-way, easement or alignment; the use of principles of land surveying, determination of the position of any structure or permanently

installed equipment in relation to monuments or reference points, determination of the position of any monument or reference point which marks a property line boundary, or corner setting, resetting or replacing any such monument or individual point including the writing of deed descriptions; the performance of engineering land surveys; procuring or offering to procure land surveying work for himself or others; managing or conducting as managers, proprietors or agent any place of business from which land surveying work is solicited, performed, or practiced; the performance of the foregoing acts and services being prohibited to persons who are not granted certificates of registration under this act as a professional land surveyor unless exempt under other provisions of this act. The term also:

(1) Includes, but is not limited to, the following activities:

(i) The creation of maps and geospatial databases representing authoritative locations for boundaries, the location of fixed works or topography. This includes maps and geospatial databases prepared by a person or government agency if the data is provided to the public as a survey product.

(ii) Original data acquisition, or the resolution of conflicts between multiple data sources, if used for the authoritative location of features within the following data themes:

(A) geodetic control;

(B) orthoimagery;

(C) elevation and hydrographic;

(D) fixed works;

(E) private and public boundaries; and

(F) cadastral information.

(iii) Certification of positional accuracy of maps or measured survey data.

(iv) Authoritative adjustment or interpretation of raw survey data.

(v) GIS-based parcel or cadastral mapping used for authoritative boundary definition purposes wherein land title or development rights for individual parcels are or may be affected.

(vi) Interpretation of maps, deeds and other land title documents to resolve conflicting data elements with the intent of being authoritative.

(vii) Acquisition of field data required to authoritatively position fixed works or cadastral data relative to geodetic control.

(viii) Analysis, adjustment or transformation of cadastral data of the parcel layers with respect to the geodetic control layer within a GIS resulting in the affirmation of positional accuracy with the intent of being authoritative.

(2) Excludes the following activities:

(i) The creation of general maps:

(A) Prepared by private firms or government agencies for use as guides to motorists, boaters, aviators or pedestrians.

(B) Prepared for publication in a gazetteer or atlas as an educational tool or reference publication.

(C) Prepared for or by education institutions for use in the curriculum of a course of study.

(D) Produced by an electronic or print media firm as an illustrative guide to the geographic location of an event.

(E) Prepared by laypersons for conversational or illustrative purposes. This includes advertising material and

users guides.

(ii) The transcription of previously georeferenced data into a GIS or LIS by manual or electronic means, and the maintenance thereof, if the data is clearly not intended to indicate the authoritative location of property boundaries, the authoritative definition of the shape or contour of the earth or the authoritative location of fixed works of individuals.

(iii) The transcription of public record data, without modification except for graphical purposes, into a GIS or LIS based cadastre, including tax maps and associated records, by manual or electronic means, the maintenance of that cadastre and dissemination of the cadastre if the data is clearly not intended to authoritatively represent property boundaries. This includes tax maps and zoning maps.

(iv) The preparation and dissemination of a document that does not authoritatively define real property boundaries. This includes civilian and military versions of quadrangle topographic maps, military maps, satellite imagery and other documents.

(v) The incorporation or use of documents or databases into a GIS or LIS, including, but not limited to, Federal census and demographic data, quadrangle topographic maps and military maps.

(vi) Original data acquisition, inventory maps and databases created for nonauthoritative use by an organization, in either hard copy or electronic form, of physical features, facilities or infrastructure that are wholly contained within properties to which they have rights or for which they have management responsibility. The distribution of these maps or databases outside the organization must contain appropriate metadata describing, at a minimum, the accuracy, method of compilation,

data sources and dates and disclaimers of use clearly indicating that the data is not intended to be used as a survey product.

(vii) Maps and geospatial databases depicting the distribution of natural resources or phenomena prepared by foresters, geologists, soil scientists, geophysicists, biologists, archeologists, historians or other persons qualified to document the data.

(viii) Original data acquisition, maps and geospatial databases depicting assets, features and events prepared by any government agency where the access to that data is restricted by statute.

(ix) Original data acquisition, maps and geospatial databases created for use in, and support of, emergency operations, including 911 dispatch.

(x) Nonauthoritative GIS or LIS and related activities, including, but not limited to, original data acquisition, geospatial database development and maintenance and map creation by any government organization.

* * *

(j) "Engineering Land Surveys" means surveys for: (i) the development of any tract of land including the incidental design of related improvements, such as line and grade extension of roads, sewers and grading but not requiring independent engineering judgment: Provided, however, That tract perimeter surveys shall be the function of the Professional Land Surveyor; (ii) the determination of the configuration or contour of the earth's surface, or the position of fixed objects thereon or related thereto for purposes of authoritative review, analysis and determination of the location or as-built construction of fixed assets or objects, the postdevelopment contours, or for

the purposes of designs based thereon by means of measuring lines and angles and applying the principles of mathematics, photogrammetry or other measurement, mapping or positioning methods without regard to tools or technologies which currently exist or which may be developed in the future, the application of which means and methods involves professional understanding as to the appropriate and safe usage; (iii) geodetic survey, underground survey and hydrographic survey; (iv) storm water management surveys and sedimentation and erosion control surveys; (v) the determination of the quantities of materials; (vi) tests for water percolation in soils; and (vii) the preparation of plans and specifications and estimates of proposed work and attendant costs as described in this subsection. The term does not include any activity under subsection (d)(2).

* * *

(u) "Agent" shall mean a person who is authorized to act for another through employment, by contract or apparent authority.

(v) "Authoritative" shall mean presented as definitive when used to describe products, processes, applications or data to be used as a survey product.

(w) "Cadastre" shall mean a register of property showing the extent, value and ownership of land for taxation.

(x) "Contractor" shall mean a person or entity that enters into a contract.

(y) "Geospatial technology" shall refer to equipment necessary to acquire, process, store and analyze geospatial data, including GPS or GIS.

(z) "GIS" shall mean Geographic Information System, an information system and related applications and infrastructure

used to store, view, edit, analyze and display geographical information and associated attribute data related to positions on, above or beneath the Earth's surface.

(aa) "GPS" shall mean Global Positioning System, a global navigating satellite system and associated components that provides geographic location information.

(bb) "LIS" shall mean Logistics Information System, an automated system used to communicate with other units on vertical and horizontal flow of logistics and maintenance information and status.

Section 2. Sections 4.2(c), 4.5(c) and 5 are amended to read:

Section 4.2. Procedure for Licensing as Professional Engineer.--* * *

(c) An applicant who is a certified engineer-in-training may apply for licensure and shall pass the examination in engineering principles and practice. To qualify for the principles and practice examination, an applicant shall, in addition to holding the engineer-in-training certificate, show satisfactory proof of:

(1) four or more years of progressive experience in engineering work performed after the [issuance of the engineer-in-training certificate] successful completion of the fundamentals of engineering examination and under the supervision of a professional engineer or a similarly qualified engineer of a grade and character to fit him to assume responsible charge of the work involved in the practice of engineering; or

(2) four or more years of progressive teaching experience in an approved curriculum under the supervision of a professional

engineer or a similarly qualified engineer of a grade or character to fit him to assume responsible charge of the work involved in the practice of engineering.

* * *

Section 4.5. Continuing Professional Competency Requirements.--* * *

(c) Each licensee shall be required to obtain twenty-four PDH units during the biennial renewal period. If a licensee exceeds the requirement in any renewal period, a maximum of twelve PDH units may be carried forward into the subsequent renewal period. PDH units may be earned as follows:

(1) Successful completion of college courses relevant to professional practice.

(2) Completion of continuing education courses relevant to professional practice.

(3) Completion of [correspondence, televised, videotaped and other short courses or tutorials relevant to professional practice.] distance learning courses if the course relates to professional practice and the PDH units awarded are verifiable and measurable by the actual hours of instruction.

(4) Completion of seminars, employer-sponsored courses, workshops or professional or technical presentations made at meetings, conventions or conferences relevant to professional practice.

(5) Teaching, presenting or instructing in any of the activities listed in clauses (1), (2), (3) and (4).

(6) Authoring published papers, articles or books relevant to professional practice.

(7) Obtaining patents relevant to professional practice.

* * *

Section 5. Exemption from Licensure and Registration.--Except as specifically provided in this section, this act shall not be construed to require licensure and registration in the following cases:

(a) The practice of engineering, land surveying or geology by any person who acts under the supervision of a professional engineer, professional land surveyor or geologist, respectively, or by an employe of a person lawfully engaged in the practice of engineering, land surveying or geology and who, in either event, does not assume responsible charge of design or supervisions[;].

(b) The practice of engineering, land surveying or geology, not exceeding thirty days in the aggregate in one calendar year, by a nonresident not having a place of business in this Commonwealth, if such person is legally qualified to engage in the practice of engineering, land surveying or geology in the state or territory of his residence: Provided, That standards of such state or territory are at least equal to the standards of this Commonwealth[;].

(c) The practice of engineering, land surveying or geology by officers and employes of the United States Government for the said government[;].

(d) Except as otherwise provided in subsection (g) of this section, the practice of engineering or land surveying by a regular employe, contractor or agent of a public utility company, as defined by the Public Utility Code (66 Pa.C.S. § 101 et seq.) in connection with the facilities of such public utility, which are subject to regulation by the Pennsylvania Public Utility Commission: Provided, That such public utility shall employ at least one professional engineer, as defined in this act, who shall be in responsible charge of such utility's

engineering work and shall employ at least one professional land surveyor, as defined in this act, who shall be in responsible charge of such utility's land surveying[;].

(e) The practice of architecture by a duly registered architect, and the doing of such engineering work as is incidental to his architectural work[;].

(f) The practice of engineering, land surveying or geology by any person or by any employe of any copartnership, association or corporation upon property owned by such person or such copartnership, association or corporation, unless such practice affects the public safety or health or the property of some other person or entity.

(f.1) The practice of engineering or land surveying by a regular employe or agent of an electric cooperative corporation, as defined in 15 Pa.C.S. § 7302 (relating to application of chapter), in connection with the facilities of the electric cooperative, provided that the electric cooperative corporation or agent thereof either shall employ at least one professional engineer or professional land surveyor or belongs to a Pennsylvania electric cooperative association that employs a professional engineer or professional land surveyor.

(g) The practice of engineering, land surveying or geology work by a manufacturing, mining, communications common carrier, research and development or other industrial corporation or by employes of such corporation, provided such work is in connection with or incidental to products of, or non-engineering services rendered by, such corporation or its affiliates.

(h) The running of lines or grades and layout work on or within established property limits, or from established points outside the property limits to or within such property limits

when performed by a contractor or home builder in conjunction with the construction, reconstruction, alteration, maintenance or demolition of a structure or other facility.

(i) The writing of deed descriptions and narrative descriptions utilizing information from a survey.

(j) The preparation of shop drawings or the performance of construction management services by persons customarily engaged in construction work.

(k) The practice of individuals providing geologic services to businesses engaged in the exploration or development of gas or oil.

(l) The practice of engineering, land surveying or geology work by the employes, contractors or agents of a provider of cable service, voice over Internet protocol service, broadband Internet access service or any other service delivered over a cable system, a provider of enhanced telecommunications services or a provider of telecommunications services, if those services are in connection with or incidental to products of, or nonengineering, land surveying or geology services rendered by the company.

Section 3. This act shall take effect in 60 days.