

THE GENERAL ASSEMBLY OF PENNSYLVANIA

HOUSE BILL

No. 2101 Session of 2019

INTRODUCED BY EMRICK, GILLEN, JOZWIAK, MILLARD, PICKETT, READSHAW AND MARSHALL, DECEMBER 2, 2019

AS REPORTED FROM COMMITTEE ON PROFESSIONAL LICENSURE, HOUSE OF REPRESENTATIVES, AS AMENDED, FEBRUARY 3, 2020

AN ACT

1 Amending the act of May 23, 1945 (P.L.913, No.367), entitled "An
2 act relating to and regulating the practice of the profession
3 of engineering, including civil engineering, mechanical
4 engineering, electrical engineering, mining engineering and
5 chemical engineering, the profession of land surveying and
6 the profession of geology and constituent parts and
7 combinations thereof as herein defined; providing for the
8 licensing and registration of persons practicing said
9 profession, and the certification of engineers-in-training
10 and surveyors-in-training, and the suspension and revocation
11 of said licenses, registrations and certifications for
12 violation of this act; prescribing the powers and duties of
13 the State Registration Board for Professional Engineers, Land
14 Surveyors and Geologists, the Department of State and the
15 courts; prescribing penalties; and repealing existing laws,"
16 further providing for definitions, FOR PROCEDURE FOR <--
17 LICENSING AS PROFESSIONAL ENGINEER, for continuing
18 professional competency requirements and for exemption from
19 licensure and registration.

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

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

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

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

12 \* \* \*

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

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

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

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

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

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

25 (A) geodetic control;

26 (B) orthoimagery;

27 (C) elevation and hydrographic;

28 (D) fixed works;

29 (E) private and public boundaries; and

30 (F) cadastral information.

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

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

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

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

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

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

19 (2) Excludes the following activities:

20 (i) The creation of general maps:

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

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

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

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

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

1 users guides.

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

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

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

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

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

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

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

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

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

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

19 \* \* \*

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

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

16 \* \* \*

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

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

22 (x) "Cadastre" as used in this act or rules promulgated <--  
23 under this act, shall mean a register of property showing the  
24 extent, value and ownership of land for taxation.

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

27 (y) "Geospatial technology" shall refer to equipment  
28 necessary to acquire, process, store and analyze geospatial  
29 data, including ~~global positioning system~~ GPS or GIS. <--

30 (z) "GIS" shall mean GEOGRAPHIC INFORMATION SYSTEM, an <--

1 information system and related applications and infrastructure  
2 used to store, view, edit, analyze and display geographical  
3 information and associated attribute data related to positions  
4 on, above or beneath the Earth's surface.

5 (aa) "~~Global Positioning System~~" shall mean "GPS" SHALL MEAN <--  
6 GLOBAL POSITIONING SYSTEM, a global navigating satellite system  
7 and associated components that provides geographic location  
8 information.

9 (bb) "LIS" shall mean LOGISTICS INFORMATION SYSTEM, an <--  
10 automated system used to communicate with other units on  
11 vertical and horizontal flow of logistics and maintenance  
12 information and status.

13 Section 2. Sections 4.2(C), 4.5(c) and 5 are amended to <--  
14 read:

15 SECTION 4.2. PROCEDURE FOR LICENSING AS PROFESSIONAL <--  
16 ENGINEER.--\* \* \*

17 (C) AN APPLICANT WHO IS A CERTIFIED ENGINEER-IN-TRAINING MAY  
18 APPLY FOR LICENSURE AND SHALL PASS THE EXAMINATION IN  
19 ENGINEERING PRINCIPLES AND PRACTICE. TO QUALIFY FOR THE  
20 PRINCIPLES AND PRACTICE EXAMINATION, AN APPLICANT SHALL, IN  
21 ADDITION TO HOLDING THE ENGINEER-IN-TRAINING CERTIFICATE, SHOW  
22 SATISFACTORY PROOF OF:

23 (1) FOUR OR MORE YEARS OF PROGRESSIVE EXPERIENCE IN  
24 ENGINEERING WORK PERFORMED AFTER THE [ISSUANCE OF THE ENGINEER-  
25 IN-TRAINING CERTIFICATE] SUCCESSFUL COMPLETION OF THE  
26 FUNDAMENTALS OF ENGINEERING EXAMINATION AND UNDER THE  
27 SUPERVISION OF A PROFESSIONAL ENGINEER OR A SIMILARLY QUALIFIED  
28 ENGINEER OF A GRADE AND CHARACTER TO FIT HIM TO ASSUME  
29 RESPONSIBLE CHARGE OF THE WORK INVOLVED IN THE PRACTICE OF  
30 ENGINEERING; OR



1 (2) FOUR OR MORE YEARS OF PROGRESSIVE TEACHING EXPERIENCE IN  
2 AN APPROVED CURRICULUM UNDER THE SUPERVISION OF A PROFESSIONAL  
3 ENGINEER OR A SIMILARLY QUALIFIED ENGINEER OF A GRADE OR  
4 CHARACTER TO FIT HIM TO ASSUME RESPONSIBLE CHARGE OF THE WORK  
5 INVOLVED IN THE PRACTICE OF ENGINEERING.

6 \* \* \*

7 Section 4.5. Continuing Professional Competency  
8 Requirements.--\* \* \*

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

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

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

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

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

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

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

1 (7) Obtaining patents relevant to professional practice.

2 \* \* \*

3 Section 5. Exemption from Licensure and Registration.--

4 Except as specifically provided in this section, this act shall  
5 not be construed to require licensure and registration in the  
6 following cases:

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

13 (b) The practice of engineering, land surveying or geology,  
14 not exceeding thirty days in the aggregate in one calendar year,  
15 by a nonresident not having a place of business in this  
16 Commonwealth, if such person is legally qualified to engage in  
17 the practice of engineering, land surveying or geology in the  
18 state or territory of his residence: Provided, That ~~the person~~ <--  
19 ~~applies for reciprocity in this Commonwealth and that the~~  
20 standards of such state or territory are at least equal to the  
21 standards of this Commonwealth[;]. <--

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

25 (d) Except as otherwise provided in subsection (g) of this  
26 section, the practice of engineering or land surveying by a  
27 regular employe, CONTRACTOR OR AGENT of a public utility <--  
28 company, as defined by the Public Utility Code (66 Pa.C.S. § 101  
29 et seq.) in connection with the facilities of such public  
30 utility, which are subject to regulation by the Pennsylvania

1 Public Utility Commission: Provided, That such public utility  
2 shall employ at least one professional engineer, as defined in  
3 this act, who shall be in responsible charge of such utility's  
4 engineering work and shall employ at least one professional land  
5 surveyor, as defined in this act, who shall be in responsible  
6 charge of such utility's land surveying[;]. <--

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

10 †(f) The practice of engineering, land surveying or geology <--  
11 by any person or by any employe of any copartnership,  
12 association or corporation upon property owned by such person or  
13 such copartnership, association or corporation, unless such  
14 practice affects the public safety or health or the property of  
15 some other person or entity.† <--

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

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

1 (h) The running of lines or grades and layout work on or  
2 within established property limits, or from established points  
3 outside the property limits to or within such property limits  
4 when performed by a contractor or home builder in conjunction  
5 with the construction, reconstruction, alteration, maintenance  
6 or demolition of a structure or other facility.

7 (i) The writing of deed descriptions AND NARRATIVE <--  
8 DESCRIPTIONS UTILIZING INFORMATION FROM A SURVEY.

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

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

15 (l) The practice of engineering, land surveying or geology  
16 work by the employes, contractors or agents of a ~~cable~~ <--  
17 ~~television system,~~ PROVIDER OF CABLE SERVICE, VOICE OVER <--  
18 INTERNET PROTOCOL SERVICE, BROADBAND INTERNET ACCESS SERVICE OR  
19 ANY OTHER SERVICE DELIVERED OVER A CABLE SYSTEM, A provider of  
20 enhanced telecommunications services or A provider of <--  
21 telecommunications services, if those services are in connection  
22 with or incidental to products of, or nonengineering, land  
23 surveying or geology services rendered by the company.

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