

State of Vermont Professional Engineering Board Summary DRAFT Memo

This is the summary of recent action by the State of Vermont Professional Engineering board on a request to revise the statutory requirements to require a minimum of a Master's degree for Civil, Environmental, and Structural Engineers as the minimum education standard for licensure.

On May 7th The Vermont Professional Engineering Board voted by a 4 to 1 margin to approve the following motion:

"The Vermont Board of Professional Engineering, after receiving testimony and researching the topic, does not support amending Chapter 20 of Title 26 of the Vermont Statutes Annotated to increase the minimum level of education required for licensure as a Professional Engineer to a master's degree or equivalent."

This motion was the culmination of approximately 2 years of discussion by the board, and is an issue that at least three board members have been actively aware of for over a decade. There was significant outreach on this issue, and throughout the process the board worked hard to provide an open and fair process in which individuals and groups could provide comments, questions, and presentations. Public and licensee comment was sought and evaluated to help the board come to the determination that there is not sufficient reason or evidence to support any proposed legislation to increase the minimum education required for licensure to a Master's degree or equivalent.

This is a summary of the board actions and the public and licensee interactions on this issue.

Public commentary received during regularly scheduled board meetings

During the process of reviewing this the board received presentations from the following groups and individuals during our regularly scheduled meetings:

- Vermont State Representative Robert Krebs P.E. L.L.S. Past president of NCEES and Brad Aldrich P.E. Board member, and past president of NSPE presented on the raise the bar initiative at one meeting. The board was asked to consider "raising the bar to a master's degree or equivalent" for all disciplines.
- The Licensing That Works committee presented to the board via teleconference at one meeting
- Representative Robert Krebs P.E. L.L.S presented to the board at a total of four meetings and provided draft language for a statute change that he would introduce in the Vermont Legislature if the board supported it. The language included Civil, Environmental, and Structural Engineers only and read as:

Amend the current statute for the minimum education to read:

1182b.1 (F) to read: Individuals seeking licensure, environmental or structural disciplines, who obtain their bachelor's degree after January 1, 2020 shall complete a master's degree curriculum in engineering accredited by ABET or an acceptable amount of additional coursework as defined by board rule, to meet the educational requirements for licensure.

1182b.3 (F) individuals seeking licensure in civil, environmental or structural disciplines, who obtain their bachelor's degree after January 1, 2020 shall complete a master's degree curriculum in engineering accredited by ABET or an acceptable amount of additional coursework as defined by board rule, to meet the educational requirements for licensure.

- The Vermont chapter of ASCE's/Raise the bar committee presented in support of the proposal at one meeting
- The Vermont chapter of NSPE presented in support of the proposal at one meeting
- Two individuals from ASCE presented to the board on the inner workings of the ABET committees at one meeting.
- The Vermont chapter of ASHRAE presented its board position statement in opposition of the proposal at one meeting

Public commentary received at a specially designated meeting for the board to hear discussion and debate on this issue. (Local societies and engineers were notified of the public comment session directly and indirectly by the board as part of the open meetings law.)

The board hosted a meeting to gather information and had approximately 35 individuals attend for a full day discussion on this initiative. Commentary started at approximately 9:00 AM and continued with minor breaks until about 4:30 PM. All interested parties were given the opportunity to speak without any time limits or subject constraints. The speakers were given the option to take and accept questions from the audience if they chose. Board members each had the opportunity to ask questions of every speaker.

Testimony was received from twenty four individuals with multiple other individuals adding commentary from the floor throughout the day. Of those that spoke this was the summary:

- Thirteen spoke out against the initiative (Seven were Civil or Environmental Engineers, One was a board member, Five were from other disciplines)
- Eight spoke out in support of the initiative (Seven were Civil or Environmental Engineers, One was retired.)
- One spoke out and offered information only on ABET no opinion on the issue
- One spoke out and offered information only on the history of the structural engineering bachelors but offered no specific opinion on the issue.

Written Public comments

The following written comments were received as part of our review process:

From Representative Robert Krebs P.E. L.L.S.

- Four Letters providing information and requesting the board consider action on his initiative and proposed language.

From Vermont Chapters of Professional Societies:

- Four Letters in support of the initiative from the Vermont Chapter of ASCE Board
- Two Letters in support of the initiative from the Vermont Chapter on NSPE Board
- One Joint letter in support of the initiative from the Vermont Chapter of ASCE and NSPE

- One Letter in opposition from the Structural Engineers Board president stating that 81 percent of members who responded to a survey were in opposition. (Not intended to be a statement of opposition from the board, just a report on their member survey.)
- One Letter in opposition of the initiative from the Vermont ASHRAE Chapter Board

From National Professional Societies

- One Joint Letter in opposition from twelve national societies: ASME, ASHRAE, American Institute of Chemical Engineers, American Society of Agricultural and Biological Engineers, American Society of Engineering Education, American Society of Plumbing Engineers, International Society of Automation, Society of Mining, Metallurgy, and Exploration, Society of Naval Architects and Marine Engineers, Engineering Deans Council, Institute of Industrial Engineers.

From individuals in support of the initiative we received:

- Ten letters from individuals. (One individual sent in two letters.)
(Eight individuals were in public/private engineering practice, one was a professor, and all were civil, or structural disciplines.)

From individuals in opposition of the initiative we received:

- Twenty Six letters from individuals
(Fourteen letters from individuals, two letters represented were signed by twelve individuals.)
(Twenty Two individuals were in public/private Civil/Structural Engineering practice, four were mechanical)

From individuals providing information rather than opinions we received:

- One Letter. (The individual was a structural engineering professor.)

Board Discussion

At the May 7th meeting the board members were each given the opportunity to speak on the issue prior to a motion being made. The discussion was continued after the motion was on the floor.

In summary the general issues that were debated were:

- Public Health, Safety, and Welfare and whether there is any evidence of a current problem that it is affected by the current minimum standard.
- Review of current and historical enforcement actions in Vermont and Surrounding states
- Current Bachelors programs vs. Historical Bachelors programs.
- Credit hour comparisons vs. Coursework comparisons
- Current exams and how they fit into entry into the profession
- The Structural Engineers choice on changing the examination
- The importance of Accreditation ABET's transition from credit hour assessment to outcome based assessment
- The Professional Engineering standards vs. other professions
- Board implementation issues if it were decided that the Master's or equivalent should move forward
- Potential legislative issues if it were to come before the legislature. (Cost, barring entry into the profession, lack of engineers, designer licensing.)

Board Action and Decision

An initial motion was filed with the entire board working on substitute language which was originally agreed upon by a unanimous vote. (The motion was on the substitute language only.)

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The motion was then put to the question, as written above, and was passed by a vote of 4-1. The board is currently a 6 member board, the public member has not been appointed by the governor so was not in attendance.