Brad Raffensperger, Secretary of State

La Trenda Tyler-Jones, Division Director

GEORGIA BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS AND LAND SURVEYORS

J. Darren Mickler III, Executive Director
237 Coliseum Drive
Macon, Georgia 31217

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To whom it may concern:

The Georgia Board supports the effort of the ASPE to add a Plumbing option to the Mechanical Principles and Practices Exam. Please find attached an additional letter with the required supporting information.

Regards,

Darren Mickler

Brad Raffensperger, Secretary of State

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1. **Proof of such need**

- If one uses the standard definition of "plumbing" as the apparatus (i.e., piping and fixtures) concerned in the distribution of water in a building and the transportation of sanitary and waste fluids, a unique knowledge and skill set support a basic understanding of the code. Note that the underlying principles of the code and/or technical documents come from the engineering principles that are the foundation of any engineering discipline.
- However, the design of plumbing systems beyond the standard definition requires a deep understanding of the interaction of such systems within the environment in which they are being applied. The more technical systems require greater knowledge and skills, such as:
  - Domestic and process water treatment requirements and systems (e.g., soft, reverse osmosis, distilled, and deionized water)
  - Water distribution systems on a macro scale
  - Specialized waste systems and treatment (e.g., fats, oils, and grease [FOG], petroleum-based oils, solid and corrosive wastes)
  - Fuel gas systems (e.g., natural gas and liquefied petroleum gas [LPG])
  - Medical, laboratory, and service gas systems
  - Water reclamation systems (e.g., rainwater, grey, and black water sources)
- Consider the City of Flint, MI, in which appropriate evaluation of the impact of switching water systems was neither understood nor considered. Changing the pH of the water allowed the protective lining of the lead piping to be stripped from the existing piping, permitting lead to enter the drinking water of the consumer. This has had and will continue to have a negative impact on public health, safety, and welfare (which is the paramount, and underlying, concern that ASPE is attempting to address).
- Legionella continues to have an adverse impact on public health, safety, and welfare. Initially this was thought to be associated with cooling towers and in some cases continues to be. However, the Legionella bacterium is a naturally occurring condition in all water. The lack of understanding as to how to adequately monitor and control such bacterium within water will continue to have a negative impact on public health, safety, and welfare.
- The level of knowledge needed for modern and complex water and sanitary systems continues to increase. The continued growth in complexity will continue to mandate a need for specialized knowledge that differs from engineers who specialize in environmental conditioning.
- No engineer, professional or degreed, can be knowledgeable of all aspects of a given area of engineering. That is why Professional Engineers focus on their core competencies: those competencies that are verified when one's peers are in agreement that the person has demonstrated sufficient knowledge in the product/work they produce and are consistent with safeguarding public health, safety, and welfare.

2. **Estimate of usage**

- Plumbing should attract 50 to 150 first-time takers on a national level once it is developed and placed in the NCEES exam process. We estimate that, for the State of Georgia, Plumbing should attract 7 per session and 14 per year of first-time test takers.

3. **Impact on safeguarding the health, safety, and welfare of the public**

- The ultimate goal of ASPE's initiative is the establishment of a verifiable measure of competency for the discipline of Plumbing and the continued, even enhanced, protection of the health, safety, and welfare of the public at large. As Registered Engineers, should we be expected to do any less?

Regards,
Darren Mickler