



Plumbing and Mechanical Contractors Association
of Milwaukee and Southeastern Wisconsin



Sheet Metal and Air Conditioning Contractors'
Association of Milwaukee, Inc.

MEMO

October 12, 2022

Re: Joint Legislative Council Study Committee on Occupational Licenses

Good afternoon, my name is Jonathan Kowalski. I am the Executive Director of the Plumbing, Mechanical, Sheetmetal Contractor's Alliance, Inc. (the "PMSMCA").

The PMSMCA is a mechanical contractors association comprised of over three dozen mechanical – plumbing, sheet metal and steam-fitting – contractors throughout southeast Wisconsin. In addition, I represent the Sheetmetal contractor's association of East Central – Sheboygan – Wisconsin, The Sheetmetal Contractor's Association of Southeast – Racine/Kenosha – Wisconsin and the Wisconsin Environmental Balancing Bureau.

I want to echo the provided testimony that has been provided for you by my peers throughout the state and recommend that the **designer of engineering systems permits** ["DE"] credential be continued.

Rules: Per the 2018 Wisconsin Occupational Licensing Study Legislative Report, it has been recommended that the credential – of which there were 749 issued throughout the state - be eliminated citing the following:

- The job duties of these individuals could be picked up through other credentials such as professional engineers, architects, HVAC contractors, Plumbers, Electricians, POWTS Maintainer and Fire Detection, Prevention and Suppression Inspectors.
- The license requirements for this permit are very steep.
- According to Wis. Stats. 442.07(5) The permit shall restrict the holder to the specific field and subfields of designing in which the permittee acquired his or her experience in designing. If qualified in more than one type of designing, persons may receive permits for more than one field or subfield of designing as may be determined by the designer section.
- There have been zero complaints resulting in disciplinary action within the last 5 years.
- There are no other states besides that license this occupation

Applications:

It is accurate that these duties could be picked up by those aforementioned credential holders. However, the purpose of creating this credential is believed to have been:

- 1) Ease the burden on those other credentialed professionals;

- 2) In the case of architects and professional engineers: create a more cost effective and timely option for designing and approving these systems.
- 3) Keep this work in Wisconsin, done by Wisconsin citizens/taxpayers – as opposed to out of state licensed Professional Engineers; and
- 4) Create a specific credential for a professional who is compliant and educated on the specific nuances of the Wisconsin building codes – plumbing & HVAC specifically

The PMSMCA disagrees that the license requirements for this credential are too steep. Due to the nuanced language and nature – otherwise known in the industry as “Wisconsinisms” of the Wisconsin Uniform Dwelling Code (WUDC) – rather than the more widely held/popular Uniform Dwelling Code (UDC) and its neighbor codes the International Plumbing Code (IPC) or even more comprehensive Uniform Plumbing Code (UPC) the Designer of Engineering Systems credential involves a specific understanding of the WUDC that requires a set of requirements necessary to keep our buildings compliant and safe.

There have been no complaints resulting in disciplinary action in the 5 years at the time the Study was completed ... this is a good thing that indicates that the credential works.

No other states require such a license for the same reasons as listed above: in Wisconsin we are different ... I'd like to say we're better, but per the code, we're different. Whereas most states – especially the neighboring Minnesota, Illinois, Michigan and Iowa are closely based off of, or completely tied to the International Building Code, IPC or UPC.

Furthermore, it is the Alliance's belief that the removal of this license would force current license holders to obtain additional licensing through another means. Or, they might lose the ability to perform these required and necessary actions that they have been licensed to perform.

If this license was to be eliminated, in order to maintain safe and functional systems in buildings, the review process for our statewide buildings would revert back to the Professional Engineers, architects, plumbers, electricians, etc.. Mechanical and other building contractors statewide assert that this would cause a financial burden on customers – initially the building owners and developers – as these other credentialed individuals are not as cost effective as the Designers of Engineering Systems.

Ultimately, should these other professionals, whom do not have the deep technical understanding of the Wisconsin Codes and requirements necessary to build safe and efficient buildings, the risk of having unqualified professionals conduct these reviews would ultimately be born by the occupants – Wisconsin citizens – of these buildings.

To further emphasize the safety component that would be negatively impacted by the elimination of this credential; removing this license could have an additional negative impact on other organizations as well. OSHA, the nationally recognized testing laboratory, Factory Mutual and others would have an issue with the safety concerns and liability in buildings should they not be reviewed and verified by a licensed system engineer.

Proposed [if necessary]:

Create required continuing education requirements for the credential holders so that they maintain their level of expertise and professional development. No different than a plumber, engineering, air balancing technician, etc.

Possibly, should the DE license be eliminated, we would ask that the license be eliminated for all future applicants and allow an extended “grandfathered” window of 4-6 years on the last license renewal term for DE’s to properly allow time for them to pursue and obtain the qualifications for a PE license (should they choose to do so)

Conclusion:

The purpose of this credential was to reduce the delays in the approval of building systems engineering plans as they were not cost effective for credentialled professional engineers. At the same time, these approvals are necessary to provide a safe living/working/learning environments for the state’s citizens. Building Engineering Systems are complicated, and a state issued credential is necessary to ensure that qualified professionals are approving their design before individuals like/work/play in these buildings.

Thank you for allowing me to present to you today. I look forward to a continued partnership between the Alliance, our Industry and the state government as we work together to keep our citizens safe and productive.

Sincerely,



Jonathan Kowalski
Executive Director

Legislative Council Study Committee on Occupational Licenses

Review of Designer of Engineering Systems Permits

Comments from the NSPE-WI, Wisconsin Society of Professional Engineers

Glen R. Schwalbach, P.E.

October 12, 2022

NSPE-WI strongly recommends the continuation of the Designer of Engineering Systems Permits.

The Designer Permits have proved to be an efficient and effective means to directly protect public safety and welfare while also protecting our environment as Wisconsin residents acquire the necessities for daily living. They compliment the efforts of Professional Engineers who are usually in short supply.

In the late seventies, over forty years ago, the state legislature decided to enable people with an associate degree in engineering technology to be considered for a Designer permit in their field of expertise. This consideration would give opportunity to non-engineers to design various systems that today include electrical, fire protection, HVAC, plumbing and private sewage systems. I don't think they called it "Removing Barriers to Entry" but it certainly appears to have accomplished that. There was concern among some Professional Engineers at the time that the public safety might be negatively impacted but the Permit has been a good thing. Designers consult with Professional Engineers as necessary.

All of these engineering systems can harm individuals if not designed by qualified people. Consumers find it very difficult to know who to hire to provide themselves, their families, or other occupants with a safe, livable home, school, hospital, or workplace. There are those who offer the services illegally. There are a lot of stories of people ending up with an unsafe design and wasted money. Designers have reported that a portion of their work is fixing defects in the designs of non-credential individuals who cost consumers a lot of money. The Designer Permit is about "Consumer Protection".

Eliminating the Designer Permit would have many unintended consequences. Using the HVAC plan review process as an example. DSPS reports over 2000 HVAC plans were submitted for review this year. Over 70% were submitted by Designers. The plans are considered well done with about 20% needing requests from DSPS for more information. This is a lower rate of follow-up requests than some other professions.

Here are some of the consequences if the Permit is eliminated:

1. There would be a void of knowledgeable and experienced people to design these critical systems. Architects are not qualified. Master trades people focus on designs for residential, such as apartment buildings, not so much on commercial. Even Professional Engineers are not available to fill the void because many focus on structural design and others involved in electrical, plumbing and HVAC often provide only the overall plan for design and rely on the Designers to design the details.
2. Professional Engineers would not stamp design plans for which they are not qualified and, again, rely on the Designers to do so. Without Designers, ongoing projects would become delayed and new projects would take more time and, likely, end up being done by out-of-state firms.
3. Wisconsin's Design-Build firms would lose their competitive edge because developers need the timeliness and lower costs provided by Designers.
4. Contractors, such as members of the Associated Builders and Contractors, rely on Designers more than they may realize. When they follow the Designers' plans, their projects are less likely to fail their clients as regards safety and serviceability. These smaller contractors often don't have Designers of their own. Besides having a plan from an engineering/designing firm, small contractors may rely on wholesale material suppliers who employ Designers to help small contractors get it right and safe. These different service options reduce the small contractors' liability from lawsuits and helps them build a reputation for quality.
5. The DSPS would see more unsafe and out-of-code designs which would slow the approval process.
6. The safety and health of building occupants would suffer. Effective design, as well as all technical processes, requires built-in quality. Plan review, while essential to the process, cannot find all errors. The Designer permit accomplishes both the goal and the need to design for safety with economy in mind as the design germinates, not after it is done and then requires a redo.
7. Because of the shortage of Professional Engineers who do the detail design in Wisconsin, this is likely to cause a brain drain in Wisconsin. Designers would take their expertise where Professional Engineers do this work but can use assistants who create designs for review by the Professional Engineers.
8. There would be less opportunities for veterans. We don't have actual quantity data but veterans can use their service as a credit for the Designer Permit application.
9. A new "Barrier to Entry" would be established in Wisconsin.

Note that the Designer Permit comes with a statutory obligation for ethical conduct. This is a huge benefit for Wisconsin residents.

One thing that the Legislature should consider is to require continuing education for Designers. Today's engineering systems are very complicated and intertwined. New technologies are coming fast and furious and add to the complexity. Codes are always changing to accommodate the technologies but also to react to accidents. Designers work hard to keep up. Continuing education requirements would help Designers get more support from their employers so that the Designers can take part in code and technology update training.

While Wisconsin is unique with this credential, the success of it should be trumpeted to the likes of the National Conference of State Legislatures, the American Legislative Exchange Council and Wisconsin Institute for Law and Liberty and the MacIver Institute.

NSPE-WI and many others in the design and building of Wisconsin's infrastructure see the benefits that Designers have brought to the process of protecting public safety and welfare of our residents and visitors. We ask that you preserve the Designer of Engineering Systems Permit.

Thank you.

Submitted by Glen R. Schwalbach, P.E., NSPE Fellow

On the behalf of NSPE-WI, the Wisconsin Society of Professional Engineers

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**Statement Regarding
Designer of Engineering Systems
September 13, 2022**

**Jeffrey J. Beiriger, Executive Director
Plumbing Heating Cooling Contractors – Wisconsin Association**

My name is Jeff Beiriger, and I am the Executive Director of the Plumbing Heating Cooling Contractors – Wisconsin Association (PHCC-WI). PHCC-WI represents plumbing-heating-cooling contractors in Wisconsin. Our members provide services in urban and rural areas, are union and non-union, are large and small, and are start-ups and multi-generational businesses. Our membership also includes companies – wholesalers, manufacturers, and business services entities – that serve the plumbing-heating-cooling industry.

Created more than 125 years ago, the association has been the leading advocate for plumbing apprenticeship, licensure, continuing education, code development, plan review, inspection, and enforcement. It has been, and continues to be, our mission to protect the health and safety of Wisconsin residents through a partnership with State and local governments that enforce plumbing and HVAC requirements

It is important to emphasize our partnership with State government in particular. The various regulations affecting our industry are not the product of government alone. Instead, they are the product of our industry. We sought to be regulated because it provided us with the best means to protect public health and safety. We agreed to pay fees for licenses (and their renewals) and plan review, and those fees have allowed the Department of Safety & Professional Services and its predecessor agencies to be funded completely by program revenue.

That there are no general tax dollars are used to support our industry is a source of great pride for our industry, and I should note that the industry will always consider paying more for additional services that support a growing workload or, more generally, activities that support public health and safety related to plumbing and HVAC.

With that as background, we have been asked to consider the necessity for the Designer of Engineered Systems licenses. We will limit our remarks to plumbing, HVAC and POWTS, as these are our areas of expertise.

Under the State's plumbing licensing law, a Master Plumber is qualified to develop and submit plumbing plans for review. The limitation is that the Master Plumber can *only* submit plans for projects that will be constructed under his/her license.

To become a Master Plumber, most individuals serve an apprenticeship, write his/her journeyman examination, work two or more additional years as a journeyman, and then write a Master Plumber examination, an examination which is, generally, more focused on design.

To own a plumbing business, the owner must either be or must employ a Master Plumber. The responsible Master Plumber is acknowledging that the company will comply with applicable licensing laws and the codes that govern design and installation. A company can employ multiple Master Plumbers, but only one is the responsible party and only one signs any given design. It is a big step to sign a plan or permit, so not every Master Plumber wants that responsibility.

It's important to note that a Master Plumber can only do designs for projects that his/her company will ultimately build. A Master Plumber cannot create and sign off on a design for another company. Designing a plan for another company to build requires an engineer, an architect, or a designer of plumbing systems (the license in question).

One question to consider then, is why any plumbing contractor would use a designer of plumbing systems. It would be an additional expense to hire a third party to do a plan, and yet the practice is used to a great extent in the industry. Put another way, most plumbing designers are hired by plumbing contractors.

They do this for several reasons. One is time. A plumbing contractor may simply not have enough time to do a design. That could result from the volume of plans the company may be doing or it could be that they are better served by having their Master Plumbers install work rather than design it.

But the primary reason that plumbing designers are used – whether by a plumbing contractor, an architectural or engineering firm, or an end user – is that they produce a higher quality of work. Master Plumbers, Architects, and Engineers may be able to do this work, but it doesn't mean that they are equally proficient in producing designs.

Designers have an excellent (and current) understanding of the codes. They have experience with all types of buildings (where some plumbing contractors may have a narrow niche of work in which they excel, such as residential, multi-family, restaurants, etc.).

As a result, designs created by designers of plumbing systems are more likely to have a quicker and easier review by the reviewing government entity. They are more likely to know what will and will not work and, especially for those with field experience, how to create designs that can be constructed in the field.

Similarly, the plans created by designers will often feature the most current design options, generally because the designers are more familiar with them. By way of example, recent modification to options for the sizing of water distribution piping can

result in much lower overall project costs, but those will only result if two things happen – the designer is aware of the option and the system is designed and installed properly.

Plan review is an important step in the safety net for end users. It is a final review before work commences in the field. Rework in the field can be costly – for the plumbing contractor, other trades, and the end user. Poor designs leading also lead to more difficult inspections and rework associated with any failed elements of the system. Good plans and their review save time, money, and they save lives.

It should be noted that current law allows others – architects and engineers – to submit plumbing plans. If the designer of plumbing systems is eliminated, work will shift to contractors, who may not have capacity to do it, or to the A & E community. The challenges of finding individuals to do the additional work could prove daunting. More than that, the cost to have plans done by a licensed architect or engineer will, we believe, be higher than that charged by designers of plumbing systems. Additionally, the individuals doing the designs may lack the experience of today’s plumbing designers and the insights of tomorrows, as most designers have experience as Journeyman and Master Plumbers.

There are thousands of Master Plumbers in the State who could become licensed designers, so the pipeline for future designers is full. The role of a designer is, for many, a last step in a long career in the trades, giving that individuals an opportunity to extend their career using their experience to create designs even as they are no longer physically able to perform work in the field. And on the other end of the spectrum, hundreds of new journey-level plumbers are added to the ranks each year upon completion of their apprenticeship. They will be available to grow the pool for future designers as well.

Having stated our reasons for support for the license, we look to the DSPS report from 2018 that provided some of the agency’s rationale for its elimination.

- It is true that these responsibilities could be picked up by other licenses. But the market has responded to this by continuing to use licensed designers for all the reasons stated above. It’s a better system because it provides better outcomes.
- The license requirements are steep, but no more so than someone seeking to become a licensed architect or engineer. In fact, the pipeline to becoming a licensed designer is full. With thousands of Master Plumbers already eligible to become designers, we have a decades-long stream of potential licenses holders. Each year, we add new apprentices to our ranks, and so our pool of potential designers is growing by several hundred each year as well.
- We would not want a brain surgeon to perform heart surgery. The idea that someone is an expert in their area is, to us, an advantage. Again, we have real-world designs that are easier to review, build, and inspect. The outcome is a better project – both from a cost perspective, and from a health and safety perspective.
- That there have been no complaints regarding this license is, we think, a good thing. It isn’t a reason to propose the elimination of a license.

- Similarly, that no other states have a similar license is not a reason to propose the elimination of a license in Wisconsin. The comparison of one state's laws to another may be helpful, but it is dangerous to oversimplify the comparison. We really can't say, with any certainty, how other states address their plan submittals and their review process, nor can we measure their level of commitment to public health and safety and their sensitivities for balancing that concern with costs. What we can speak to is Wisconsin. Our industry values public health and safety and has committed to providing the resources for its regulatory agency to provide its oversight.

Bottom line....

This license is part of what we described early on as a partnership between state government and our industry. We sought licensure to protect public health and safety. It was not imposed upon us. Today, the plumbing, POWTS, and HVAC designer categories are *working* and are being utilized by the industry. We do not wish to see them eliminated. We do, however, always maintain a desire for open dialogue about any way that we can, working together, make improvements to our trades and professional licensing programs affecting our industry.

Thank you for your consideration.



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From: Steve Jandrin

Sent: Thursday, October 6, 2022 4:38 PM

To: Sen.Stafsholt@legis.wisconsin.gov; Rep.Sortwell@legis.wisconsin.gov;
sen.cowles@legis.wisconsin.gov; rep.steineke@legis.wiscosin.gov

Subject: Elimination of the Designer of Engineering Systems Credential

Importance: High

Good afternoon,

I greatly look forward to receiving a response to you regarding how you plan to address this matter outlined with my comments and the additional info farther down in the email.

As a Designer of Engineering System credential holder for HVAC, I find this information extremely disheartening, discouraging and quite frankly absurd. How can eliminating a credential like this even be under consideration. We as designers have spent endless amounts of time preparing ourselves to be professional, efficient and effective at our jobs and not to mention the countless hours that have been spent studying and meeting the requirements put forth to even be able to qualify to take the test to obtain the credential for Designer of Engineering System. To sit here and think that this is on the verge of just be done away with after I have spent the last 18 years of my career dedicated to the HVAC industry is repulsive. Eliminating this would be like one day just eliminating all bachelors degrees achieved for marketing, business, etc and telling those people too bad you don't have a degree any more you will have to figure something else out or go back to school for a different degree. I am a husband, father and provider for my family with 2 young children and this elimination would mean the loss of my position with my employer that I have been employed at for going on 10 years now, that hardly seems fair don't you think? In my 18 years in the HVAC trade I have developed so many solid relationships with many installers, services tech, company owners, fellow designers etc that I work hand and hand with on a consistent basis. They depend on my services to complete their daily work loads as well and if this elimination takes place that means that the services I provide them are no longer available requiring them to look elsewhere to try and fill the void which would likely result in hardship on their end as well. I trust that when you consider what is actually on the table with the elimination consideration that you will realize that this is not an appropriate measure and the amount of Designers, contractors and families that would negatively suffer from these actions is far to great. I sincerely hope you do everything in your power to keep this from taking place. Again, I look forward to your comments on this matter.

If there are other individuals that I should share my concerns with as well on this matter, please let me know who that would be.

Thanks

Steve Jandrin, D.E.

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This is to inform you of the 2022 Legislative Council Study on Occupational Licenses and some of the discussions that may have an impact to you and your

organization. <https://docs.legis.wisconsin.gov/misc/lc/study/2022/2404>. The council is considering eliminating the Designer of Engineering Systems credential.

The recommendation is based off a study from 2018 which recommended eliminating the credential.

Currently this year, DSPS has received over 2000 applications for HVAC and it is estimated that over 70% are from WI HVAC Designers many of them frequent submitters. If the Legislative Council recommends to eliminate the credential there would be many unintended consequences some of which are listed below:

RECOMMENDATIONS IN 2018 DSPS REPORT TO ELIMINATE CREDENTIALS

In December 2018, DSPS issued its Legislative Report on the [Wisconsin Occupational Licensing Study](#). According to the report, DSPS conducted the statewide occupational licensure study using DSPS's own data, comparative data from other states, information from news articles, trade and professional organizations, state and national research organizations, a survey of credential holders and stakeholders, and other sources. The report notes that there was much variation in availability and reliability of data sources, and in states' definitions for each occupation.

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The report focused on whether or not other states require a license for a comparable occupation. Because information on licensing requirements, such as fees and educational requirements, were not consistently available from all sources, the report did not include a comparison of that information. The report also noted that cross-comparisons were difficult due to whether or not specializations are categorized. The report noted, for example, that Wisconsin issues licenses for seven classifications of blasters, while several states issue only one umbrella license for all blaster classifications.

Based upon its analysis of the factors required in the biennial budget act and other input, DSPS recommended elimination of the following occupational licenses that are administered by DSPS or a credentialing board:¹¹

- Cosmetology temporary permit. [Report, Appendix C, p. 52; s. [454.06 \(10\)](#), Stats.]
- Cosmetology training permit. [Report, Appendix C, p. 52; s. [454.06 \(9\)](#), Stats.]
- Designer of engineering systems permit. [Report, Appendix C, p. 53; s. [443.07](#), Stats.]
- Music, art, and dance therapist registrations.¹² [Report, Appendix C, pp. 53 to 54; s. [440.03 \(14\) \(a\) 1](#) to 3, Stats.]
- Blaster license classes 2 to 7, with consolidation into one class. [Report, Appendix C, p. 54; s. [SPS 305.20, Wis. Adm. Code.](#)]
- Intermediate clinical supervisor license. [Report, Appendix C, p. 54; s. [440.88 \(3\) \(a\) 5](#), Stats.]
- Interior designer registration.¹³ [Report, Appendix C, p. 54; s. [443.075](#), Stats.¹⁴]

In making its recommendations, DSPS considered the following:

- Health, safety, and welfare of the public.
- Benefits to the public.
- Other regulatory options.
- Other states' licensed professions.
- Total persons affected by the license requirement.
- Financial burden of license requirement.
- Licensing agency or board perspective.
- Barriers to obtaining license.

1. No pipeline is in place to replace the knowledge the submitters of HVAC/Fire Suppression/Plumbing/Electrical Plans hold. This would have a severe impact on overall all building approvals and occupancy permits.

2. Few Architects or PE's, who can currently prepare and stamp plans won't. They don't have the errors and omissions (EO) insurance in place. If they felt competent in HVAC they would currently be preparing and stamping plans now which most don't because it's not their discipline.
3. The design build industry would lose their competitive edge because they would lose timeliness and upfront cost savings to developers because of the reduction and lack of qualified people that can stamp and design HVAC, Plumbing, Fire Suppression plans.
4. The wholesale industry would lose their competitive edge because, if enacted all plans would have to go through PE's/Architects that have HVAC expertise, there are a limited number compared to DES holders and they would become commodity suppliers.
5. DSPS HVAC, Fire Suppression, and plumbing plan holds would increase dramatically because people stamping plans would be lacking the same level of knowledge necessary, which would increase error rates.
6. HVAC design is highly specialized and is responsible for ventilation. The number of ventilation issues in the state will increase dramatically, affecting the overall health of Wisconsinites.
7. Fire Suppression is responsible for life safety and is a highly specialized discipline that you can't get from a general engineering track.
8. It is more costly, time consuming, and challenging to become a PE or Architect than it is to become a Designer of Engineering Systems. Eliminating the DES credential would be a limiting factor for career entry.
9. Overall costs to the construction industry will increase due to the limited number of people that can stamp plans.

If you have concerns with the shape of this proposed legislation you should contact the Chair and Co-Chair in addition to your legislative representatives in the Assembly and Senate. They are meeting again on Oct 12, 2022 and it would be in your best interest to reach out prior to that meeting.

Please share with those that you feel would be impacted by these proposed changes.

Sen.Stafsholt@legis.wisconsin.gov Chair
Rep.Sortwell@legis.wisconsin.gov Co Chair