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February 23, 2009

State Representative Matthew J. Conway, Jr.
Legislative Office Building, Room 4028
Hartford, CT 06106-1591

Reference: Proposed Bill No. 5462
An Act Concerning the Regulation of Marine Structures

Dear Representative Conway:

I am writing to you to state my opposition to Proposed Bill No. 5462. The intent of this letter is to identify certain flaws with the information that the CT DEP has provided to the Committee on the Environment. Because of these errors provided by the CT DEP, I am concerned that the Committee on the Environment will make decisions based on subjective, bias, incomplete, and incorrect information. It is the responsibility of the Committee on the Environment to review the subject matter at hand using the most complete and objective information available. Unfortunately, the CT DEP has failed the Committee miserably at this task.

The following information provides you with a brief background on my experience following by a list of incomplete or incorrect information that the Committee on the Environment should pursue prior to recommending this Bill become law.

I am a Professional Engineer with over 21 years of experience in the structural design of residential, commercial, and industrial structures, of which the last 16 years has been dedicated to the design of waterfront structures. I received my Bachelor of Science degree in Civil Engineering from the University of Connecticut. I am a member of the Connecticut Society of Civil Engineers (CSCE) and serve on the CT DEP Liaison Committee. I am also an active member of the Structural Engineers Coalition (SEC). I am a member of the American Institute of Steel Construction (AISC) and have received certification from the Structural Engineers Certification Board (SECB). I also served in the Connecticut Army National Guard with the 242nd Engineer Battalion in Stratford, Connecticut. As you can see, I am very proud to be a lifelong resident of the State of Connecticut.

Based on my experience, I feel that I am qualified to provide you with my opinion on the information that I understand the Committee has reviewed. Of specific concern is the Final Report, dated May 11, 2006 titled, "Evaluation of the Impact of Diffusible Constituents from Treated Wood and Alternative Construction Materials on Estuarine and Marine Environments." There is no challenge to the analytical data presented in this report. The comments are limited to identifying information that is missing or speculative in nature. Because this report is grossly inadequate in its investigation, it cannot be seriously considered by the Committee without at least supplemental data on the following points.

- The report immediately focuses on the reason that wood is treated for exposure to the marine environment. It states that the material can be subject to marine boring organisms. This is true. However, the report fails to mention the most common type of decay. That is, its constant exposure to a wet and drying cycle in the tidal zone. This omission indicates

immediately that there is a general lack of knowledge of marine structures and their performance along the shoreline of Connecticut.

- The report states "it is also difficult to establish the extent of adverse effects from treated wood with any degree of certainty." This statement is made on page 23. However, the report continues to present speculative data supporting the use of alternative materials.

- The report failed to discuss the current barrier technology available for protection of marine borers and whether this technology offers any protection against potential adverse impacts from treated timber. Again demonstrating a general lack of knowledge of the marine construction industry or related engineering.

- The report mentions that the Washington State Ferries (WSF) developed a budget based on life expectancy and found steel was more cost effective than wood due to its longevity. This may be the conclusion that the WSF made, but it does not relate to the construction or geologic conditions found in Connecticut. There is no reference to the differences in design standards, building codes, prevailing wages, construction equipment, etc. This statement is not only irresponsible, it may not be accurate. Therefore, this statement is at best speculative in nature and is meant to imply that steel is cheaper to use than treated timber. The more appropriate means to develop an opinion to cost is to have one structure designed using both materials and have a cost analysis and comparison performed.

- The report provides what appears to be a complete discussion of alternative construction materials, complete with material properties. Again, herein this section demonstrates a lack of understanding of construction materials required for use in this region. Connecticut has one of the most challenging geologic characteristics known. Engineers are required to design for certain seismic loads, rock and glacial till, soft sediments, and everything in-between. Generally, installation of structural foundation piles made from plastic is usually not done because of geologic conditions. Plainly, it is either difficult or impossible to install this material in certain areas. Again, the proper means to determine appropriate construction materials is to perform additional research.

- It is very important that the engineering and construction community provide input on whether construction materials can be easily changed as implied on page 35. Page 35 makes some rather strong statements without any relevant supporting evidence that this is truly a viable option. References made do not discuss the inherent challenges that these other materials exhibit. There is no discussion about how concrete can be subject to abrasion and erosion from ice. There is no discussion about how steel corrodes or about the types of protective coatings and expensive cathodic protection systems that had limited effect on steel located in the tidal zone.

- Lastly, there is no discussion about the fact that there are no current alternate treatments available for preserving timber in a marine environment. ACQ and Borate treatments currently available for timber treatments are not applicable to the marine environment. Southern yellow pine is by far the most widely used timber species in the state. Use of tropical hardwoods would not be an environmentally friendly option.

The above points could have all been included in the section titles "Data Gaps." However, this was not presented.

I believe that the information presented to the Committee on the Environment is grossly flawed, inadequate and represents a blatant attempt to cherry-pick data that supports a preconceived conclusion. The proper evaluation of construction materials used in the marine environment should be supported by the engineering profession and construction industry. Additionally, this bill can have serious impacts to the construction industry and commerce and should have other State departments review its implications as a whole.

I hope that this new evidence is presented to the Committee and reviewed objectively. Thank you in advance for the opportunity to present this information.

Sincerely,

Tim DeBartolomeo, PE, SECB
Senior Engineer

Copy: Paul Brady, Executive Director, CSCE

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