The Potentially Catastrophic Design Error
– And the Ethical Response

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I. Introduction

Despite advances in design and more stringent regulations, errors persist in the design process. The discovery of a potentially catastrophic design error after the completion and delivery of a project presents an array of ethical and legal issues for the design professional and attorneys who represent them. Ultimately, the questions before the design professional are whether he or she has an ethical or legal duty to warn of the error, and what must be done to satisfy that duty.

II. Discovery of the Design Error and Response

The first step in determining whether a design professional has a duty to disclose or warn of a design error is to determine whether a design error does, in fact, exist. Given the complexity of many of today’s designs, it is not always clear that an actual error is present in the design. It is therefore incumbent on the design professional to take steps to confirm the existence of the error. This may range from simply reviewing one’s work, consulting with appropriate members of the design team, or engaging an outside expert to conduct a peer review of the design.

If this investigation confirms the existence of a design error, then, the design professional must ascertain the nature and severity of the error. A number of factors should

1 Mark J. Heley and Michael S. Zetlin graciously thank Stephen F. Buterin, Esq., Reena Costello, and Michael J. Slotnick, Esq. for their assistance in connection with this paper.

be considered, including, but not limited to, whether: (1) the error poses an actual or potential threat to human health and safety; (2) the risk of harm is imminent or remote (3) the error is isolated or systemic; and (4) the error is confined to a single project or affects multiple projects or owners. The assessment of these factors, along with others, will determine the ethical and legal obligations of the design professional in determining the most appropriate strategies to contain and mitigate the errors. 3

III. Ethical Obligations and the Duty to Warn

A number of professional organizations have promulgated ethical codes and rules of practice to provide guidance and direction to members of their professions.

A. ASCE and AIA

The American Society of Civil Engineers (“ASCE”) and the American Institute of Architects (“AIA”) have adopted Codes of Ethics that apply to its members. While these Codes of Ethics do not establish a legal duty,4 they are reflective of what these organizations expect from their members and may be indicative of what an expert witness may opine is the standard of care when evaluating the alleged negligence of a design professional. The ASCE Code of Ethics codifies this comprehensive obligation as the first Canon for professional conduct: “Hold Safety Paramount . . . . Engineers shall hold paramount the safety, health, and welfare of the public.”5 Canon 1(a) of the ASCE Code of Ethics states that “[e]ngineers shall recognize that the lives, safety, health and welfare of the general public are dependent upon engineering judgments, decisions, and practices incorporated into structures, machines,

3 Id.
products, processes and devices.”6 This canon clearly applies to public safety, but the inclusion of the word “welfare” likely expands the scope of this duty to non-safety situations.

ASCE commentary supports this expansion: Canon 1(a) “implies more than a mere abstract awareness of the engineer’s duty to the public; it requires the engineer to be untiringly vigilant in preserving the interests of the men, women, and children whose lives may be affected by the engineer’s actions.”7 Also, the duty to hold paramount the public welfare means:

- taking steps to address any threat to the public the engineer perceives in rendering his or her services. In cases in which responsible parties fail to act even when advised of the threat, the engineer may have to go further and disclose the matter in a public forum or report it to authorities.8

Finally, Canon 1(c) states that “[e]ngineers whose professional judgment is overruled under circumstances where the safety, health and welfare of the public are endangered, or the principles of sustainable development ignored, shall inform their clients or employers of the possible consequences.”9

The ASCE does not overtly define what parties may be “overruling” an engineer’s professional judgment that would trigger the obligation of engineers to inform their clients or employers of the possible consequences, but the ASCE appears to include at least an engineer’s direct superior.10

In 2009, at the ASCE’s annual conference, ASCE members participated in a workshop regarding Ethics: The Keystone of Civil Engineering Leadership, in which ASCE

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6 Id.
members were presented a hypothetical scenario, asked to consider the ASCE Code of Ethics, and polled for their preferred course of action among six options. In this scenario, an engineer that is designing an equalization tank in a municipal wastewater treatment plant advises the town’s sewer commissioner that it may be necessary to make the treatment room explosion-proof based upon the National Fire Protection Association code. The sewer commissioner “reacts angrily to the prospect of additional cost and delay of the project,” and the county fire official advises that the room is already explosion-proof. Despite the fire official’s statement, the engineer surveyed the treatment room and noted that several pieces of electrical equipment “show no signs of having been made explosion-proof.” The ASCE members discussed the scenario and decided that ASCE Canon 1 – to hold safety paramount – should primarily guide the engineer’s next steps. Ultimately, more than half of the ASCE members in attendance determined that the engineer should investigate the matter further, consulting the NFPA code and possibly involving a more experienced third party to inspect the treatment plant to provide input. If the room is not in compliance, [the engineer] should develop various solutions. This extra work should be billed to the project regardless of the effect on the project’s budget.

The ASCE members clearly believed that the fire official’s statement marginally affected the engineer’s ethical duty to proactively determine whether the treatment room was safe and code compliant.

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12 Id.
13 Id.
14 Id.
15 Id.
16 Id.
In comparison to the ASCE Code of Ethics, the AIA Code of Ethics sets architects’ “Obligations to the Public” as Canon 2 and provides much more specific direction in Rule 2.105:

If, in the course of their work on a project, the Members become aware of a decision taken by their employer or client which violates any law or regulation and which will, in the Members’ judgment, materially affect adversely the safety to the public of the finished product, the Members shall:
(a) Advise their employer or client against the decision,
(b) Refuse to consent to the decision, and
(c) Report the decision to the local building inspector or other public official charged with the enforcement of the applicable laws and regulations, unless the Members are able to cause the matter to be satisfactorily resolved by other means.17

The AIA has evaluated the responsibility of its member architects under its ethical canons promoting the protection of public safety.18 In one decision regarding the AIA Code of Ethics, an architect submitted a Zoning Board application to elevate a house with a significant quantity of additional fill, proposing to raise the property’s grade above a neighbor’s property.19 While the application was pending, the regrading of the lot began, and the architect saw the fill in place.20 Subsequently, the city issued a Stop Work Order and a Notice of Violation to the contractor for commencing land balance and fill operations before a “site drainage plan” was submitted to the Zoning Board, and the architect “informed

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19 Id.
20 Id.
her clients and the contractor that they had to ‘take care of this.’" 21 Ultimately, the neighbor’s property flooded. 22

The AIA determined that the architect violated several rules of the AIA Code of Ethics. 23 First, the architect violated Rule 2.105 by failing to report the client’s safety violation to the city’s Director of Public Service and Building Office before the city issued the Stop Work Order and Notice of Violation. 24 Next, the architect wantonly disregarded the neighbor’s rights despite AIA Rule 2.104 that “Members shall not engage in conduct involving . . . disregard of the rights of others” because there was a significant risk that the neighbor’s property would flood based upon the architect’s design. 25 Furthermore, the architect failed to obtain the neighbor’s consent in violation of AIA Rule 3.201 that “[a] Member shall not render professional services if the Member’s professional judgment could be affected by responsibility to another project or person . . . unless all those who rely on the Member’s judgment consent after full disclosure.” 26 The commentary to the rule clarifies that this rule encompasses conflicts between the architect and others who may be affected by the architect’s professional decision. 27

In its decision, the AIA recognized that Rule 3.201 obligates architects to determine who qualifies as “affected” by the architect:

To read into Rule 3.201 a requirement that an architect notify everyone who might be adversely affected by design decisions would be to demand the impossible. However, in the circumstances presented by this ethics case, the immediate

21 Id.
22 Id.
23 Id.
24 Id.
25 Id.
26 Id.
27 Id.
neighbors . . . were directly affected by the design put forward by the Respondent to such extent that she had an obligation to them under this rule. Her design required adding a very significant quantity of fill to create a large “plinth” upon which the new house and associated garages and drives would be placed, a design approach that could have affected neighboring property in multiple ways.  

B. NSPE

The National Society of Professional Engineers (NSPE), in the Preamble to its Code of Ethics for Engineers, considers the health and safety of the public to be of paramount importance, stating the services of engineers “must be dedicated to the protection of the public health, safety, and welfare.”

It codifies this obligation in Canon I, which explicitly requires that “[e]ngineers, in the fulfillment other professional duties, shall ... [h]old paramount the safety, health, and welfare of the public.”

To assist engineers in meeting this ethical obligation, Canon II provides direct guidance to engineers, stating:

Engineers shall hold paramount the safety, health, and welfare of the public:

a. If engineers’ judgment is overruled under circumstances that endanger life or property, they shall notify their employer or client and such other authority as may be appropriate.

b. Engineers shall approve only those engineering documents that are in conformity with the applicable standards.

c. Engineers shall not reveal facts, data, or information without the prior consent of the client or employer except as authorized or required by law or this Code.

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f. Engineers have knowledge of any alleged violation of this Code shall report thereon to appropriate professional bodies and, when it

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28 Id.
30 Id. at Canon I.
relevant, also to public authorities, and cooperate with the proper authorities in furnishing such information or assistance as may be required.31

C. ACEC

In 1980, the American Council of Engineering Companies (ACEC) adopted its “Professional and Ethical Conduct Guidelines.” The Fundamental Canons, which are found in Section I, state the first priority is that “[c]onsulting engineers, in the fulfillment of their professional duties, shall * * * hold paramount the safety, health and welfare of the public in the performance of the professional duties.”32 The accompanying Rules of Practice provide the following guidance to engineers:

1. Consulting engineers shall hold paramount the safety, health and welfare of the public in the performance of their professional duties.

   a. Consulting engineers shall at all times recognize that their primary obligation is to protect the safety, health, property and welfare of the public. If their professional judgment is overruled under circumstances where the safety, health, property or welfare of the public are endangered, they shall notify their client and such other authority as may be appropriate.

   b. Consulting engineers shall approve only engineering work which, to the best of their knowledge and belief, is safe for public health, property and welfare and in conformity with accepted standards.

There is little doubt that the primary ethical obligation of design professionals in providing professional services is to protect the health, safety, and welfare of the public. This obligation is overarching and supersedes all other ethical obligations.

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31 Id. at Canon II.
32 ACEC American Council of Engineering Companies, http://www.acec.org/about/ethics/, at Canon II.
One of the most famous cases illustrating the ethical dilemmas that confront design professional faced with a potentially calamitous design error involved the Citigroup Center in New York City.\textsuperscript{33} The architect was Hugh Stubbins, and structural engineer was William LeMessurier.\textsuperscript{34} The structural design incorporated a number of new and innovative concepts.\textsuperscript{35} A year after construction was completed, LeMessurier recalculated the wind loads on the building, which included quartering winds that had not been considered in his original design.\textsuperscript{36} LeMessurier’s recalculation revealed that with a quartering wind, the wind loads increased by 40\% and the overall loading at all construction joints increased by 160\%. Thus, in certain severe, but possible wind conditions, the building could collapse.\textsuperscript{37} The collapse would not only jeopardize the building occupants, but also cause a “domino” effect that threatened surrounding buildings and structures.\textsuperscript{38}

LeMessurier advised Hubbins of the problem.\textsuperscript{39} They then disclosed the problem to the client and city engineer.\textsuperscript{40} After considering the problem, the group agreed to a repair plan involving remedial construction that could be accomplished over the next few months.\textsuperscript{41} During this time, a storm-monitoring system and a contingency evacuation plan were developed.\textsuperscript{42} The client and Hubbins strongly agreed that the problem should be kept secret, while LeMessurier was confident that the remedial construction would completely rectify the

\begin{footnotesize}
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\item \textsuperscript{33} LeMessurier Stands Tall: A Case Study in Professional Ethics, AIA Trust, \url{http://www.theaiatrust.com/whitepapers/ethics/LeMessurier-Stands-Tall_A-Case-Study-in-Professional-Ethics.pdf}
\item \textsuperscript{34} Id.
\item \textsuperscript{35} Id.
\item \textsuperscript{36} Id.
\item \textsuperscript{37} Id.
\item \textsuperscript{38} NSPE Board of Ethical Review Case No. 98-9, \url{https://www.nspe.org/sites/default/files/Ber98-9-app.pdf}
\item \textsuperscript{39} LeMessurier Stands Tall: A Case Study in Professional Ethics, AIA Trust, \url{http://www.theaiatrust.com/whitepapers/ethics/LeMessurier-Stands-Tall_A-Case-Study-in-Professional-Ethics.pdf}
\item \textsuperscript{40} Id.
\item \textsuperscript{41} Id.
\item \textsuperscript{42} Id.
\end{itemize}
\end{footnotesize}
potential problem and that the evacuation plan had a reasonable chance of success.\textsuperscript{43} The city engineer, however, had concerns for the public, especially the office workers, and the right to know.\textsuperscript{44} Hubbins and LeMessurier maintained that this right was superseded by the consequences of a possible panic resulting from any notification to the public.\textsuperscript{45}

In reviewing the case, the NSPE Board of Ethical Review considered two issues: (1) whether it was ethical for structural engineer to comply with the desire of the client and architect for secrecy; and (2) whether it was ethical for the city engineer to maintain secrecy.\textsuperscript{46} The Board concluded that, under the NSPE Code of Ethics, “the engineer is released from the obligation to maintain confidentiality.”\textsuperscript{47} It noted that while the engineer’s obligation to refrain from revealing confidential information, data, and facts concerning the business affairs of the client without the consent of the client is a significant ethical obligation, the Code refers to the primary obligation of the engineer to protect the safety, health, property and welfare of the public.\textsuperscript{48} Based on this backdrop, the Board unequivocally ruled that, “matters of public health and safety must take precedence.”\textsuperscript{49} It ultimately concluded that it was not ethical for the structural engineer to comply with the client’s and the architect’s desire for secrecy or for the city engineer to maintain secrecy.\textsuperscript{50}

As the Citigroup case demonstrates, there is an uneasy tension between competing ethical obligations to which a design professional is subject. It also illustrates the gray areas

\begin{footnotesize}
\textsuperscript{43} Id.
\textsuperscript{44} Id.
\textsuperscript{45} Id.
\textsuperscript{46} NSPE Board of Ethical Review Case No. 98-9, https://www.nspe.org/sites/default/files/Ber98-9-app.pdf
\textsuperscript{47} Id.
\textsuperscript{48} Id.
\textsuperscript{49} Id.
\textsuperscript{50} Id.
\end{footnotesize}
between those ethical obligations. In the end, however, the protection of the health, safety, and welfare of the public should take precedence.

IV. The Duty to Warn/Disclose

A. Error Creates a Risk to Public Safety

A design professional that discovers a potentially calamitous error that creates a dangerous situation also may have a legal duty to warn certain people of the danger. Justice Cardozo famously described the circumstances in which a legal duty arises: “The risk reasonably to be perceived defines the duty to be obeyed, and risk imports relation; it is risk to another or to others within the range of apprehension.”51 Therefore, a design professional that discovers dangerous conditions due to a design flaw should evaluate who is at risk of danger.

A design professional’s duties may extend to several stakeholders, even without contractual privity, where safety is at risk. Such stakeholders may include contractors that rely upon the design, the public, developers, and people that have legal interest in property.52 Furthermore, depending on the jurisdiction, a court may weigh several factors to determine whether the design professional owes a duty of care to a party without contractual privity.53

B. Duty to Warn Based Upon the Scope of Work

The scope of the design professional’s contractual commitment also shapes the design professional’s duty to warn the public regarding safety concerns. For example, an architect that contracted to review comprehensively a water garden’s existing conditions and

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determine whether the water garden complied with the ADA owed no duty to the public because the contract did not require the architect to report any hazards detected.\textsuperscript{54} In that case, a city contracted with an architectural firm to review a water garden’s existing conditions and determine whether the water garden complied with the ADA.\textsuperscript{55} The architect visually inspected the water garden and submitted a conditions survey to the city, but the city did not retain the firm to design or implement any changes.\textsuperscript{56} Subsequently, four people improperly entered the water gardens and died.\textsuperscript{57} The Texas Court of Appeals held that the architects owed no duty to the public because the architects’ “duty depends on the contract they entered into with the City, and because there is no evidence that the contract required ... [the architects] to report or make safe any hazards detected.”\textsuperscript{58}

\textit{Construction Workers}

The scope of work can also be important to determine whether a design professional has a duty of care to construction workers on the project where safety issues arise. Standards applied by courts in different jurisdictions vary, but the level of supervision that the design professional has over the construction seems to be an important factor. For example, the New Jersey Supreme Court determined that an engineer who was contractually responsible to observe the progress of the construction, had a duty of care to construction workers even though “[t]he engineer did not have any contractual obligation to supervise the safety

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\footnotetext{54}{Dukes v. Philip Johnson/Alan Ritchie Architects, P.C., 252 S.W.3d 586, 595 (Tex. App. 2008).}
\footnotetext{55}{Id. at 593.}
\footnotetext{56}{Id.}
\footnotetext{57}{Id. at 590.}
\footnotetext{58}{Id. at 595}
\end{footnotes}
procedures of the construction.”59 In contrast, Delaware courts focus on whether the design professional has active control over the construction work.60

Assumed Duty

Despite the significance of the scope of work, a design professional’s duty of care when a safety risk arises may exceed the duties arising out of the contractual scope of work if the design professional assumes a duty of care by its affirmative conduct. The Supreme Court of Alaska, for example, has held that the state retained sufficient control of a project as to assume a duty of care to construction workers where a state engineer once stopped work on a project.61 In that case, a state geologist reported to a state project engineer that the slope of excavation was too steep, and the engineer stopped the work on the project.62 Subsequently, after work resumed, loose, hanging rock fell from the slope and killed two construction workers.63 The Supreme Court of Alaska held that a reasonable juror could find that “the state retained sufficient control over the construction operation to impose a duty of care . . . by assuming affirmative duties with respect to safety.”64 Therefore, while the scope of work is normally critical to determine the duty of care, a design professional’s affirmative conduct may trump the scope of work to define the professional’s duty of care.

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62 Id. at 213.
63 Id. at 213-14.
64 Id. at 214.
C. Client Confidentiality and the Duty to Warn

One potential thorn arises in a design professional’s determination of whether to notify the public of a potential catastrophic error that impacts safety where an engineer maintains a confidential professional relationship with the owner.\textsuperscript{65}

The NSPE Board of Ethical Review has addressed the conflict between a design professional duty to protect public health and safety with the obligation to maintain the confidentiality of client information. In Case No. 13-11,\textsuperscript{66} a fire protection engineer was retained by his client to provide a confidential report in connection with the possible renovation of an apartment building the client owned. An audibility test of the fire alarm inside of occupied residential units showed the alarm could not be heard within all the residential units, which was a violation of the local fire code. The engineer informed of the client of the audibility test results and code violation. Later, the client informed the engineer that the financing for the project had fallen through and the renovations would be delayed. As a result, the problems with the fire alarm system would not be immediately addressed but would have to wait until a later time when financing was available.

The Board was asked to decide what the engineer’s obligations were under the circumstances. In reaching its decision, the Board iterated that matters of public health and safety are primary and must take precedence over the obligation of an engineer to refrain from revealing confidential information, data, and facts concerning the business affairs of the client without consent of the client. The Board noted that the engineer’s ethical obligations hinged on his professional judgment regarding the level of risk posed by the fire code

\textsuperscript{66} NSPE Board of Ethical Review Case No. 13-11, https://www.nspe.org/sites/default/files/BER%20Case%20No%2013-11-FINAL.pdf
violation. If the engineer determined the risk is imminent, “he should immediately advise the client that appropriate steps must be taken to protect the occupants of the building from the risks associated with the fire code violation.” Then, if the client does not address these issues, the engineer would be obligated to report the violation to code enforcement officials. The Board believed the fire alarm defect rose to the level of an imminent and ongoing public safety risk, and required the engineer to immediately advise the client that appropriate steps must be taken to protect the occupants of the building from those risks. If the client did not address the issues immediately, then the engineer would be obligated to report the code violation to enforcement officials.

Similarly, the advice of California’s Attorney General is likely illustrative of what would be expected of a design professional when confronted in choosing between risk of serious injury to a third party and client confidentiality: if an owner retains an engineer to investigate a building’s integrity, and the engineer “determines that there is an imminent risk of serious injury to the occupants,” but “the owner requests that the engineer treat the results of the investigation as confidential, the engineer has a duty to warn the building’s occupants.”

D. Confidentiality of Peer Review or Third-party Consultants

As part of its investigation of a potential design error, the design professional may seek peer-review to confirm the actual existence of the error and the nature and severity of the error. In doing so, the design professional should exercise caution. If the reviewing

design professional determines the design error poses a threat to human health and safety, that person may have an ethical duty to warn that extends beyond the client.

In Case No. 90-5, the NSPE Board of Ethical Review addressed the issue of whether an engineer retained by an attorney for a building owner involved in litigation had an ethical obligation to disclose serious structural defects in the building that he discovered during his inspection that he believed posed an immediate threat to the safety of the building tenants, despite being told by the attorney that he must maintain the information is confidential. The Board ruled that the engineer, having become aware of the imminent danger to the structure, “had an obligation to make absolutely certain that the tenants and public authorities were made immediately aware of the dangers that existed.” In reaching its decision, the Board recognized that while engineers have an important ethical obligation to not reveal facts obtained in a professional capacity without the client’s consent, the Code provides a clear exception in cases where the disclosure of such information is authorized by the code or required by law. The Board ultimately ruled that in cases where the public health and safety is endangered, engineers not only had the right, but also the ethical responsibility to reveal such facts to the proper persons.

E. Duty To Warn Where A Design Error Creates No Risk To Public Safety

A question arises as to the extent of a design professional’s duty to warn where a design error or omission is discovered that poses no risk to public health and safety. For example, must a design professional make a disclosure where a design is not code-compliant, or a performance test is not the test specified under the contract, though he or she is satisfied that no harm to the public will ensue?
Where a design professional takes issue with a proposed deviation or non-conformance sought by the owner, the designer should make this objection clear. It has been suggested that continuing work under a well-documented written protest may reduce liability, and be a less risky approach than terminating the work or contract entirely.\textsuperscript{69} This should not, of course, take away from the duty to warn where any danger arises to public health and safety.

The National Society of Professional Engineers’ Board of Ethical Review considered an engineer’s duty to report government contract variations in Case Number 09-4.\textsuperscript{70} Here, an engineer worked as an executive with SuperCom, a company producing electronic equipment for the military. The engineer was soon informed by a manager in a separate division that under an existing contract with the Department of Defense, a key test on a product was not being performed as specified in the contract. After investigation, the engineer found that a shorter and significantly less costly test had been substituted, though the new test was as effective. The engineer recommended to upper management that it apply for a contract change authorizing the simpler test. Upper management rejected this suggestion and the engineer took no further action.

The question for the Board was whether it was ethical for the engineer not to pursue the matter further? The Board considered that SuperCom may be engaging in government contractor fraud by knowingly employing an unauthorized substitution, in violation of the contract, resulting in a financial windfall. This conduct exposed SuperCom and its

\begin{footnotesize}
\textsuperscript{69} Sido, Kevin R., O’Meara, Frances M., Jensen, Amy K., “Architect and Engineer Liability: Claims against Design Professionals” (4\textsuperscript{th} Ed, 2017-1 Supplement) §20.09.
\textsuperscript{70} National Society of Professional Engineers, Case No. 09-4, https://www.nspe.org/sites/default/files/resources/pdfs/Ethics/EthicsResources/EthicsCaseSearch/2009/BER%20Case%2009-4-APPROVED.pdf
\end{footnotesize}
employees, including the engineer who reported the issue to upper management, to civil and possibly criminal prosecution. 71 The Board concluded that the engineer had an ethical obligation to advise SuperCom’s higher level executive team that they were compelled to contact the appropriate federal contracting officials and seek a contract change. 72 When SuperCom decided to take no further action, the engineer, according to the view of the NSPE Board, should have reported the conduct to the appropriate governmental authorities. The Board reached this conclusion even though the substitution of the test did not pose any danger to public health and safety, and notwithstanding the engineer was neither involved in the decision nor directly responsible for overseeing the assignment for SuperCom.

V. Reconciling Legal Standards with Ethical Obligations

In LeBlanc v. Logan Hilton Joint Venture 73 an architectural firm provided services pursuant to a contract which included construction administration services during the construction of a hotel under which it was obliged to report to the hotel any deficiencies in work and/or deviations from the contract. 74 The firm hired an electrical engineering services consultant who informed the electrical subcontractor by letter that it needed to place warning signs and diagrams on parts of the electrical switchgear. The consultant directed the subcontractor to submit a shop drawing detailing the wording and placement of signs. 75 The electrical subcontractor took no action. The project was completed and certified by the architect without the warnings signs being installed. An electrician was subsequently electrocuted. The Court observed that there was sufficient evidence that the design team

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71 Id. at 4.
72 Id. at 5.
74 Id. at 318.
75 Id. at 322.
committed a breach of its contractual obligations by failing to report to the hotel that the electrical subcontractor had failed to comply with the direction.\textsuperscript{76} The Court noted that, in this case, the design team had actual knowledge of the deficiencies but wrongfully failed to report the deficiencies even though the deficiencies presented an obvious risk to the safety of any person who would operate the switchgear.\textsuperscript{77}

In \textit{Burg v. Shannon & Wilson, Inc.},\textsuperscript{78} an engineering firm was hired by a city to investigate cliffs above certain residences, so that the firm could submit recommendations for improving the land’s stability in an area prone to significant landslides.\textsuperscript{79} The firm recommended that various remedial measures be taken prior to the next rainy season. Between its initial recommendations and the final report, the same engineering firm was retained to provide a report relating to one of the affected resident’s property for the purposes of seeking an equity loan on the property.\textsuperscript{80} Some months later, a severe storm damaged various residents’ properties. The homeowners brought an action against the engineering firm for failure to warn of the recommendations that had been made to the city.

The homeowners contended that a legal duty was embodied by the relevant professional engineering standards (created by the Legislature) that mandated that registrants “be duly certified in order to safeguard life, health and property, and to promote the public welfare.”\textsuperscript{81} The Washington Court of Appeals observed that Washington case law had not addressed whether these statutes and regulations establish a cognizable duty in a negligence

\textsuperscript{76} \textit{Id. at} 328.
\textsuperscript{77} \textit{Id. at} 331.
\textsuperscript{79} \textit{Id. at} 801-2.
\textsuperscript{80} \textit{Id. at} 802-3.
\textsuperscript{81} \textit{Id. at} 804 (citing Chapter 18.34 RCW).
action against professional engineers.\textsuperscript{82} It noted that professional engineers owe duties to the public, to their clients and to their employers but “the broad pronouncements that engineers owe a general duty to the public welfare alone, do not establish that engineers owe a duty to any identifiable group or individual.”\textsuperscript{83} The Court held that the homeowners had not demonstrated that the engineers owed a duty to them individually.\textsuperscript{84} Further, the Court reasoned that even though one of the homeowners was a client of the firm, the contract contained neither a gratuitous promise to apprise the homeowner of the recommendations made to the city nor a requirement for future reports.\textsuperscript{85}

VI. Nature and Extent of Disclosures

Once it is clear that there is a duty to disclose, a question may arise as to the content and extent of that duty. The design professional must decide whom to inform, the timing of any disclosures, and the nature and extent of the disclosures. A design professional may, in some circumstances, satisfy his or her duty to inform by the mere disclosure of the relevant issue or error, without further corrective action, so long as no misrepresentation arises. In other cases, a design professional should furnish possible solutions for consideration by an owner.

In \textit{Estate of Lyons v CNA Ins. Cos.},\textsuperscript{86} an action was brought against an engineering firm alleging the negligent design of a bridge. The engineering firm’s original design incorporated a long and low vertical curve requiring reconstruction of adjoining roadways,

\begin{itemize}
  \item \textsuperscript{82} \textit{Id.} at 806.
  \item \textsuperscript{83} \textit{Id.} at 807.
  \item \textsuperscript{84} \textit{Id.}
  \item \textsuperscript{85} \textit{Id.} at 809.
  \item \textsuperscript{86} 207 Wis.2d 446 (Ct. App. 1996).
\end{itemize}
increasing overall cost of the project.\textsuperscript{87} The engineering firm reported these findings to the Department of Transportation ("DOT"), which requested the firm propose an alternative design.\textsuperscript{88} The engineering firm proposed a bridge with a much higher vertical curve, exceeding design standards.\textsuperscript{89} The firm repeatedly advised that the 70-foot design curve was an exception to the current design standards.\textsuperscript{90} The DOT directed the engineering firm to proceed with the higher vertical curve.\textsuperscript{91}

The Wisconsin Court of Appeals held that the engineering firm fulfilled its duty to inform the DOT about design concerns by stating that the design was an “exception to the current standards.”\textsuperscript{92} The Court observed that the legal standard appropriate to this case required that a professional engineer warn the supervising state officials about any possible dangers that are otherwise unknown to the state.\textsuperscript{93}

Such a standard makes sense. It removes the danger that a design professional will suppress information discovered late in the project, the disclosure of which would be in the public interest. Further, it ensures that high level decisions as to whether to proceed, redesign or seek an exception are made with all of the pertinent information set forth for consideration by the owner.

\textbf{VII. Ethical Considerations For Lawyers – When May I Disclose?}

Lawyers may be placed in a unique situation where a client seeks legal advice on the obligation to disclose a significant design error, or where a problematic issue is revealed by

\footnotesize{\textsuperscript{87} Id. at 451. \\
\textsuperscript{88} Id. at 458. \\
\textsuperscript{89} Id. at 451. \\
\textsuperscript{90} Id. at 460. \\
\textsuperscript{91} Id. at 459. \\
\textsuperscript{92} Id. at 460. \\
\textsuperscript{93} Id.}
an expert retained during the course of the lawyer’s representation. Lawyers should provide a client with the most complete advice possible as to the likely consequences of disclosure or non-disclosure. However, lawyers may find themselves feeling conflicted where a client decides to withhold that information that could have a bearing on public health and safety. The question that then arises is whether there are circumstances that require or permit a lawyer to make disclosures of that confidential information to third parties, even where the client has objected to such disclosure.

Rule 1.6(a) of the ABA Model Rules (Confidentiality of Information)\(^4\) prevents lawyers from revealing information relating to the representation of their clients, unless informed consent is given by the client. Rule 1.6(b)(1), however, provides an exception to this rule, in circumstances where the lawyer reasonably believes disclosure is necessary “to prevent reasonably certain death or substantial bodily harm.”\(^5\) ABA Comment [6] to Model Rule 1.6 states that paragraph (b)(1) recognizes the overriding value of life, and that such harm is reasonably certain to occur if “it will be suffered imminently or there is a present and substantial threat that a person will suffer such harm at a later date if the lawyer fails to take action necessary to eliminate the threat.”\(^6\)

An example of acceptable disclosure provided by the Model Rules is where a lawyer knows that a client has accidently discharged toxic waste into a town’s water supply, creating a present and substantial risk that a person who drinks the water will contract a life-


\(^5\) Id.

\(^6\) American Bar Association Model Rules of Professional Conduct, Comment on Rule 1.6, [http://www.americanbar.org/groups/professional_responsibility/publications/model_rules_of_professional_conduct/rule_1_6_confidentiality_of_information/comment_on_rule_1_6.html](http://www.americanbar.org/groups/professional_responsibility/publications/model_rules_of_professional_conduct/rule_1_6_confidentiality_of_information/comment_on_rule_1_6.html)
threatening or debilitating disease. In such a case, the lawyer’s disclosure is said to be necessary to eliminate the threat, or reduce the number of victims. New York, which has adopted ABA Model Rule 1.6(b)(1), additionally notes that “a remote possibility or small statistical likelihood that any particular unit of a mass-distributed product will cause death or substantial bodily harm to unspecified persons over a period of years” would not satisfy the exception.

The disclosure is to be made to “the authorities.” The Model Rules do not set out who that relevant authority might be. A good starting point would likely be the relevant professional authority and the relevant public authority. For example, a report could be submitted to the applicable state engineering Licensing Board, or the Board of Ethical Review for the National Society of Professional Engineers. In addition, a report to the relevant public authority might be, for example, the Environmental Protection Agency or the applicable state Department of Buildings.

Of course, a grey area exists when considering whether the harm is “reasonably certain” to occur or a “remote possibility.” Attorneys may find themselves in a difficult position when faced with a tension between warning third parties of potential risks while upholding their duty of loyalty to the client, who may have instructed an attorney to remain silent on the issue. This was the conflict faced by California lawyers in California Legal

97 Id at [6].
99 See comment [6] and [7] to Model Rule 1.6. With respect to a disclosure to prevent a client from committing a crime under Model Rule 1.6(b), the lawyer may reveal information to the extent necessary to ‘enable affected persons or appropriate authorities’ to prevent the crime or fraud.
Ethics Opinion 1981-58. In that case, the Committee on Professional Responsibility and Conduct found that the lawyers were not permitted to disclose to third parties the content of a report from an engineer retained by the lawyers, stating that a structure on the property owned by the client did not comply with the Uniform Building Code, and may not survive an earthquake. The Committee did not consider that the lawyers were “satisfied beyond a substantial doubt” that there was an immediate, substantial risk to the public unless the disclosure was made.

In the Committee’s view, the lawyers’ ethical responsibility was to give the client the most complete advice possible, in order for them to make an informed choice between disclosure and non-disclosure. It was observed that the lawyers’ primary responsibility was to maintain their own loyalty to the client and protect the client’s secret, even where that protection might result in the lawyers’ liability to third parties. Further, should the lawyer decide that his or her loyalty to the client has been so diluted by the decision to withhold disclosure, the lawyer may consider whether to withdraw from the representation. Nevertheless, the lawyer must still keep the report confidential, even once having withdrawn.

California has since updated its ethics rules to allow, but not require, a lawyer to reveal confidential information to the extent that the lawyer “reasonably believes the disclosure is necessary to prevent a criminal act that the member reasonably believes is
likely to result in the death of, or substantial bodily harm, to an individual.”\textsuperscript{104} Despite this updated rule, it is doubtful whether a different outcome would have been reached in the above case. The lawyers’ decision to reveal the report would only be mandated under the confidentiality exception, where the client’s failure to reveal the engineer’s findings, or failure to remedy the situation, constituted a criminal act, as contemplated by the section. Further, this rule would only apply in circumstances where the criminal act has not yet taken place, as the disclosure must be necessary for prevention of the crime. While California is considering a further revision of its rules, to reflect the ABA Model Rules, i.e., Rule 1.6(b), it is not yet clear whether this revision would yield a different outcome.\textsuperscript{105}

Even in those jurisdictions that adopt ABA Model Rule 1.6, lawyers face a significant challenge before disclosing confidential information. They must conclude that there is a reasonable certainty of death or substantial harm. Even if the lawyer in the California case was governed by ABA Model Rule 1.6, it is still unclear whether the engineer’s report creates reasonable certainty of death or substantial harm, sufficient to render any disclosure by the lawyers permissible, or whether a successful argument could be made that there is a present and substantial threat that a person will suffer such harm at a later date. Further, the situation may be complicated where doubt is cast on the accuracy of the relevant report, the expertise of the report’s author, or where two or more conflicting reports of professionals exist. If a design professional was faced with such a situation, an obligation to investigate further and make disclosures may necessarily arise. However, there is no suggestion that a

\textsuperscript{105} The California State Bar is currently seeking comments on proposed new and amended rules prepared by the Commission of the Rules of Professional Conduct., http://ethics.calbar.ca.gov/Committees/RulesCommission2014/ProposedRules.aspx
lawyer in the same position would be compelled to disclose or undertake peer review or otherwise seek verification of the allegations. Where two conflicting reports arise, this could arguably weaken the lawyer’s conviction of “reasonably certain death or substantial bodily harm.”

VIII. Insurance Considerations

Design professionals should be cognizant of whether any action brought against them for an alleged failure to warn will be covered or excluded under their relevant insurance policy. Whether an alleged failure to warn will fall within a coverage or exclusion may involve consideration of whether a duty to disclose arises from the carrying out of professional services or from some other duty unrelated to the party’s expertise. This may ultimately determine whether an insurer’s duty to defend will be triggered.

In *S.T. Hudson Engineers, Inc. v. Pennsylvania Nat’l. Mut. Cas. Co.*, an engineering firm, Hudson Engineers, designed methods to stabilize a pier on two occasions. Subsequently, an employee from the engineering firm and an employee from the construction company that installed the repairs observed that the repairs “were twisted, with flanges that were no longer parallel to each other.” The engineering firm directed an employee from the construction company “to inspect the pier further.” One year later, a company that owned a restaurant on the pier complained that the wood deck “was bouncy.”

107  Id. at 600.
108  Id. at 601.
109  Id.
110  Id.
engineering firm that “the pier was going to collapse.” As predicted, it collapsed that night.

Hudson’s Comprehensive General Liability policy excluded coverage for personal injury or property damage arising out of the rendering or failure to render any professional services. Hudson’s insurer contended that the allegations brought against Hudson came within the mantle of professional services, and were thus excluded. The Court disagreed. It observed that the exclusions speak in terms of professional services “actually performed or conducted.” Here, the failure to provide warnings in this case did not emanate from performance or failure to perform actual services, but rather from the failure to provide information. Therefore, these were not excluded by the professional services exclusion in the CGL policy. Ultimately, the Court found that Hudson had a duty to warn the owners of the danger, in addition to a duty to warn innocent third parties using the pier facilities. Nevertheless, the alleged negligent failure to provide such warnings represented a risk insured by the products-completed operations coverage, resulting in the insurer’s duty to defend under the CGL policy. Importantly, the court observed that the “allegations encompassing the violation of a duty to provide information about a known danger … are not dependent on the rendering of professional services.”

The underlying notion alluded to by the Court in Hudson – that the duty to provide information about a known danger is not dependent on the rendering of professional services

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111 Id.
112 Id. at 602. However, the CGL policy did provide for “products-completed operations hazard” coverage which included coverage for the providing of or failure to provide warnings or instructions. Also, note that Hudson was covered by a professional liability policy, but the policy’s coverage “does not apply to CLAIMS arising out of or caused by … completed operations which hazards are to be insured by YOU under a … (CGL) policy.” Id. at 603.
113 Id. at 605.
114 Id. at 607.
115 Id. at 608.
– is contentious. One could argue that any duty the engineer had to report on the imminent collapse of the pier would necessarily arise from the engineer’s retention to investigate the pier, and would undoubtedly involve their technical knowledge, skills and experience. The professional duties placed upon design professionals enumerated by professional codes underlie acts and omissions made in the course of providing services. To separate the duty to disclose from the carrying out of professional services is arguably an artificial distinction, particularly where the discovery is made following investigations rendered in the course of services, and not inadvertently. Notably, ethical codes do not qualify as legal standards which give rise to a legal duty of care.\textsuperscript{116}

In \textit{Landmark American Insurance Company v Soutex Surveyors},\textsuperscript{117} Soutex issued certificates of elevation for a number of homes, which later sustained flood-related damage in a hurricane. Claims brought against Soutex alleged that it erroneously certified higher elevations than it should have, and upon learning of the errors prior to the hurricane, failed to disclose them to homeowners. Landmark, the insurance company which issued a professional errors and omissions policy to Soutex, alleged that the failure to disclose the errors did not constitute a failure to render a “professional service.” Landmark argued that a subsequently-discovered surveying error that could potentially harm another does not require special knowledge or training, but rather the law imposes a duty to disclose such information.\textsuperscript{118} The Court considered \textit{S.T. Hudson Engineers}, which, while relevant, differed in that it construed a policy \textit{exclusion} which under New Jersey’s law is construed strictly. In

\textsuperscript{116} \textit{Chism v. CNH Am. LLC}, 638 F.3d 637, 643-44 (8th Cir. 2011); \textit{Sadler v. Int’l Paper Co.}, No. 09-1254, 2014 WL 1682014 at *6-7 (W.D. La. 2014); \textit{Burg v. Shannon & Wilson, Inc.}, supra, 110 Wash App. at 807.
\textsuperscript{117} 2010 WL 5692073. F.Supp.2d (E.D. Tex 2010).
\textsuperscript{118} \textit{Id.} at 7.
Texas, however, ambiguous policy coverage clauses are construed liberally. The Court considered the following with respect to a professional’s duty to disclose:

First, one should ponder whether a general duty to disclose or correct erroneous information previously thought to be correct necessarily forecloses the notion that there may be a concomitant professional duty. For example, might ethical codes impose a parallel professional duty? Might the law impose a redundant layer of duty on learned and skilled professionals that, a fortiori, constitutes a professional service? Are there instances when specialized knowledge, skill and training are so intertwined with discovering, disclosing or correcting an error that acting or failing to act comes within the ambit of rendering or failing to render a professional service?119

The Court concluded that such a failure will fall within the rendering of a professional service when “discovery of such errors is premised on knowledge obtained from surveying experience, and when surveying expertise underlies the alleged liability for failure to warn.”120 In this case, the error was only discovered through tedious, technical and skilled research, thereby triggering Landmark’s duty to defend.

IX. Conclusion

Design errors are an inevitable part of the design process. When confronted with the discovery of a potentially catastrophic design error, the design professional must carefully consider and balance many competing demands and obligations that, at times, may conflict with one another. But, in the end, the design professional must address design error issues in an ethically sound manner that places the health and safety of the public above all else.

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119 Id.
120 Id. at 9.