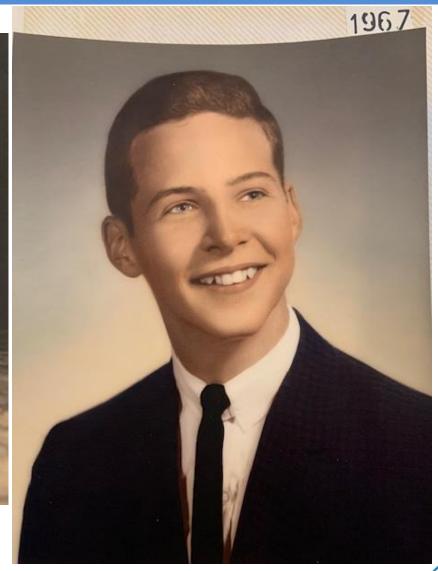
Honoring the Legacy of Ken C. Hover



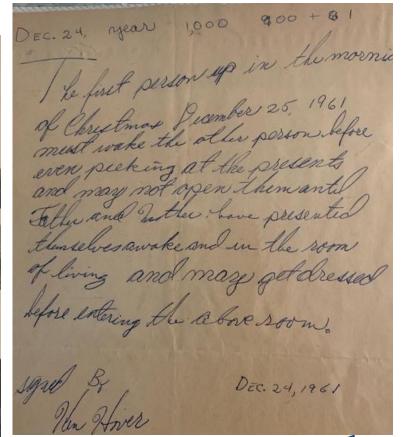




Multi-tasking, Safety & First Contract







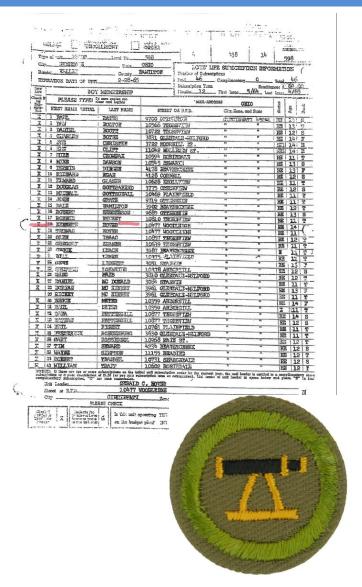


1953 & 1959





Surveying Merit Badge & Troop Registration









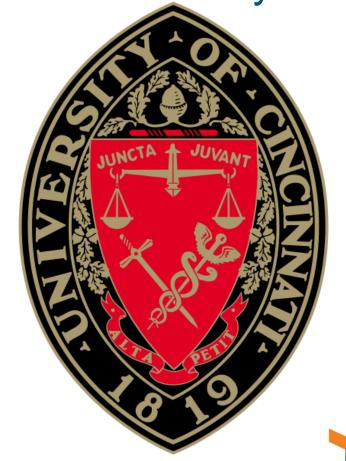
Education

University of Cincinnati 1968 and Today









Big Mac Bridge















Big Mac Bridge







THE WORLD'S GATHERING PLACE FOR ADVANCING CONCRETE









Hamilton County Justice System & One Lytle Place









Safety Article

Constructing an Affirmative Safety Culture in Educational and Research Laboratories

Part 2 of a two-part series

by Kenneth C. Hover and Michael J. Schneider

art 1 of this series discussed safety hazards and responses in civil engineering and construction management laboratories.¹ Meeting our responsibility to protect students in academic teaching and research laboratories also provides the opportunity to instill habits and attitudes about safety that students can carry to the professional workplace. We teach students how to solve technical problems in the design office and on the jobsite, and we should likewise teach them to recognize risks and hazards and how to take steps to protect themselves* and the people for whom they will soon be responsible. We know that our students want to be successful and make positive contributions to society. Herein, we explore why and how the academic community may make progress toward these goals.

Culturing Safety

Fatalities and serious injuries in university laboratories (and the ensuing legal actions) have demonstrated the need to radically change academia's approach to laboratory safety from what we call "rule-and-reminder-based programs" to changing "the way faculty, staff, and students work and think." The incidents that precipitated this concern are discussed in multiple landmark documents calling for safer

"Many of us crave adventure and challenge. Many of us want to "five on the edge" and "walk on the wild side," and some are drawn to "extreme" sports, hobbies, and careers where personal risk is unavoidable. But regardless of the pursuit, the goal every day is to come home from the job or activity with all body parts intact. academic laboratories, including those prepared by the American Chemical Society (ACS),³ the National Research Council (NRC),⁴ and the Association of Public and Land-Grant Universities (APLU).⁵ Among what NRC calls a "broad range of responses" in academia is Stanford's comprehensive review and recommendation to create "a culture where our scientists don't think about safety as a compliance issue or a set of guidelines distinct from their research activities, but as a fundamental value embedded in everything they do.™ Stanford's strategic safety plan calls for moving "away from an era when safety was important but adjunct to missions, goals, or objectives and toward safety and environmental protection being integrated into all processes.™

A central theme of the cited reports (and the subject of a rapidly growing literature) is the need to establish a "safety culture," a term that has seen increasing use since it was introduced to the nuclear power industry after the Chernobyl disaster in 1986.7 The need for an effective "safety culture" in the nonnuclear, industrial context was identified by the U.S. Occupational Safety and Health Administration (OSHA) in 1989 and updated in 2015.58 In popular usage, the term "safety culture" has achieved buzzword status, resulting in vague interpretations. But more specifically, the U.S. Nuclear Regulatory Commission (USNRC) defines "safety culture" as "an organization's collective commitment, by leaders and individuals, to emphasize safety as an overriding priority to competing goals and other considerations to ensure protection of people and the environment."9 Sorenson7 and Hudson10 contend, however, that the word "culture" merely applies to

www.concreteinternational.com | Ci | FEBRUARY 2020 37

Safety in Educational and Research Laboratories: Seizing the Opportunity

Administrators, faculty, staff, and students must recognize that teaching and research laboratories are fundamentally construction sites

by Kenneth C. Hover and Michael J. Schneider

aboratory experiences are exciting and valuable components in the education of design and construction professionals, and they are essential for research that advances science and industry. Students look forward to lab work and well-planned projects, and experiments can be productive learning opportunities and great team-building exercises. But instructional and research labs in concrete materials and structural behavior present the same safety hazards as a typical construction site. Although lab work may be at a smaller scale, scale does not matter when there is a personal injury to an individual student or researcher.

Recognizing the industrial reality of safety hazards in our college and university labs focuses our responsibility to protect all persons working, observing, or just "passing through" those labs. Such recognition also provides a golden opportunity to use our lab experiences to teach professional, industrial-level safety philosophy and procedures with the goal of enabling our students to walk out of our labs and onto any construction site or fabrication shop prepared to identify hazards and able to protect themselves and others. Just as higher education prepares graduates for lifelong learning, our lab curricula can implant lifelong safety habits and a personal safety culture.

Nature of the Hazards

In almost all colleges and universities, well-established safety programs govern the use and disposal of hazardous materials in chemistry labs and safe operations in machine shops. However, few campus-safety guidelines truly embrace the full range of activities common in civil engineering labs, where the day-to-day activities can represent the full spectrum of safety challenges found on a typical construction site.

The challenges begin with the safe storage of cementitious

materials, admixtures, aggregates, form-release agents, and curing compounds (not all of which are clearly identified in campus chemical-safety procedures). During mixing of concrete, dust and fine particles may pose an inhalation hazard.2 Addition of water triggers formation of calcium hydroxide and with it an increase in pH that can cause "first. second, and third-degree chemical burns."3 The OSHA pocket manual for concrete manufacture3 (a valuable reference for faculty and staff) therefore recommends wearing alkaliresistant gloves, coveralls with long sleeves and full-length pants, waterproof boots, and eve protection when working with concrete, PCA's guidelines4 for working safely with concrete include recommendations to always wear hard hats, eye protection, waterproof gloves, and rubber boots high enough to prevent concrete from getting into them. (Given that students often equate lab wear with beach wear, complete with shorts, tank tops, and flip-flops or sandals, a strictly enforced laboratory dress code is essential to student safety, with the tone set by supervising faculty and staff.)

Most university policies stop short of requiring work boots, in favor of "closed-toe, substantial shoes." But even with commonly worm sneakers coupled with long pants, socks are required to protect exposed skin at the ankles. Work boots are the safest solution, and even expensive boots are cheaper than textbooks and way cheaper than a masshed toe. In setting policy, consider the fact that anything that can be lifted or carried can be dropped, and anything that can be dropped can hit a foot or toe.

Concrete and mortar mixers are common in college labs.

As with any mechanical equipment, the moving parts create
major hazards for users—even a small benchtop mixer with a
planetary paddle can sever a finger. Contact with fresh
concrete may cause skin or eye damage, and inhalation of the

www.concreteinternational.com | CI | OCTOBER 2019 35





Greater Miami Valley Chapter Program Flyer

INVITES YOU AND GUESTS TO ATTEND:

SCALING CONCRETE
WHY & WHO

Wednesday - October 31, 1979 Windiammer

> 11330 Chester Road near Sharon Rd. & I-75 Sharonville, Ohio (Sharon Rd Exit)

Reservations by phone:

Cincinnati 761-7806 (Reading Central Mixed Concrete, Inc.)

Dayton 435-3194 (Ash Management)

Please call before October 26th. We must guarantee buffet.

If you wish to pay for dinner reservations by check, make checks payable to: AMERICAN CONCRETE INSTITUTE.

PROGRAM

 Board Meeting
 4:30 pm

 Social Hour
 5:30 pm

 Drinks
 cash bar

 Banquet Dinner..\$12.00 with reservations

 Presentation
 7:00 pm

Mr. James Stremanos Chief Investigator, Ohio Attorney General's Office, Consumer Fraud

Dr. Donald Campbell Senior Research Analyst Portland Cement Assoc., Skokie, Ill.

Mr. Daniel Baker President, Baker Cement Contr, Inc.

Mr. Michael Schneider Operation Manager, Baker Cement Contractors, Inc.

Mr. Richard Hird, P.E.
A.M. Kinney, Architects and Engineers
Cincinnati, Ohio

Mr. Ken Hover, P.E.
Tallarico, Hoefel & Partners
Cincinnati, Ohio

Scaling concrete is everyone's problem. It has to be understood and corrected. The Ohio Attorney General's Office has received an alarming amount of complaints and therefore is investigating the problem. Mr. James Stremanos will update us on action taken by the Ohio Attorney General's Office since his last visit in April, 1978.

There are about five qualified testing laboratories in the United States equipped to perform total petrographic analysis of hardened concrete specimens. The PCA laboratory in Skokie, Illinois is one of these laboratories. Dr. Donald Campbell

will show us what is required to analysis concrete specimens and inform us about the mechanics or causes of scaling concrete. Unacceptable finishing practices, low quality concrete, compressive strength, air entrainment system and materials used can be detected in the analysis.

Mr. Daniel Baker and Mr. Michael Schnieder will discuss the problems a finisher incounters placing and finishing different concrete mixes. Some specifications can induce finishing problems that relate to scaling concrete! Dan and Mike will present problems they have encountered and suggest to designers and specifiers improved methods.

A. M. Kinney is involved with concrete construction all over the United States. Mr. Richard Hird will talk about inspection & specifications designed to reduce problems associated with scaling.

T.H.P. has been involved in many scaling problems and deterioration of parking garage slabs and other concrete structures. Ken will briefly indicate their findings and provide insights to this scaling problem, such as inspection and quality.

"SPECIAL FEATURE"

Each attendee will have the opportunity to microscopically examine hardened concrete specimens and see the air entrained in the concrete, - etc - - -

be there!



Ken Hover Fellowship

HELP BUILD THE FUTURE

DONATE TO THE KENNETH C. HOVER
HONORARY FELLOWSHIP



Honor Ken Hover and make an impact on the industry by contributing to the newly created Kenneth C. Hover Fellowship. By donating, you will help deserving students studying for a concrete-related degree complete their concrete education and put them on the path to leadership and engagement in the concrete industry.

Ken's educational, communication, research, and consulting activities have positively influenced several thousands of individuals in the concrete industry community and enhanced our knowledge about concrete. With \$50,000 in seed funding from two generous donors, the ACI Foundation created the Kenneth C. Hover Fellowship. The ACI Foundation is seeking additional donations to extend this fellowship indefinitely to award students annually for years to come.

Make a difference in the lives of the students and in the future of our industry. Student awardees will receive a \$10,000 educational stipend, expenses to attend three ACI conventions, an opportunity for an industry mentor, and recognition in Concrete International and on social media.



CONTRIBUTE TODAY



Building the Future

aci

TELEPHONE: \$13-532-2600

american concrete institute

BOX 19150 22400 WEST SEVEN MILE ROAD DETROIT, MICHIGAN 48219

February 11, 1982

Mr. Kenneth C. Hover 125 Muriel Street Ithaca NY 14850

Dear Mr. Hover:

It is my pleasure to advise that the American Concrete Institute is awarding you the Harry F. Thomson scholarship for your Civil and Environmental Engineering Ph.D. program during the 1982-1983 academic year at Cornell University.

From the applications received, your qualifications have been judged as those which indicate the highest potential for making the most significant contributions to the concrete profession.

A \$2000 check will be issued by American Concrete Institute to the business office at Cornell University. To ensure that your account with the University is properly credited, the check will require both your endorsement and the endorsement of the appropriate university official.

It is also my pleasure to announce that you have been awarded a complimentary membership commencing in September 1982 until December 1983.

The American Concrete Institute congratulates you for this and your other accomplishments and looks forward to a continuing association throughout your professional career.

Yours truly,

George F. Leyh Executive Director

GFL:jj

Copy to Faculty Advisors

progress through knowledge

Enclosure: Complimentary Membership



THE WORLD'S GATHERING PLACE FOR ADVANCING CONCRETE