

UPDATE

News from the School of Civil
and Environmental Engineering

Cornell University Hollister Hall Ithaca, New York 14853

Spring, 1983

R. N. White, *editor*

A LETTER FROM THE DIRECTOR

Each of our lives is marked by a mix of joyous events and sad occasions, and so it is in the life of the School of Civil and Environmental Engineering at Cornell. Since our last newsletter we have lost two men who were instrumental in shaping Cornell civil engineering into its position of national and international excellence--Solomon Cady Hollister and George Winter. We have also lost a number of distinguished and loyal alumni, including Joseph H. DeFrees (CE '29), and a staff member that many of you knew well--Wilfred Sawbridge, who worked in the geotechnical laboratories for nearly 15 years. As much as we miss these people in our personal and professional lives, we know that each of them would want us to look to the future and move ahead in our teaching, research, and service to the CEE profession.

And our future is bright and promising, indeed. Alumni, students, and faculty continue to bring credit to themselves and to Cornell through their achievements and the honors they receive. We were delighted to learn that the CEE School was rated sixth in the U.S. in a recent comprehensive study of graduate programs. Our students are doing yet another major community service project this year--the design and construction of a 180-foot-span suspension footbridge over Fall Creek in the Cornell Plantations. On the facilities side, we have installed a CEE computing facility on the third floor of Hollister Hall, and our students and faculty continue to be leaders in the use of the College of Engineering Computer-Aided Design Instructional Facility on the first floor of Hollister. This spring we are embarking on a major addition to Hollister Hall with the construction of the DeFrees Hydraulics Laboratory.

You will find more about these and other stories in this issue of *UPDATE*. We invite your comments and reactions, and your active participation in the life of the CEE School at Cornell. We hope you will attend our annual CEE Alumni Breakfast on June 11 and spend a few hours with us to get caught up on the many things either underway or being planned.

Richard N. White



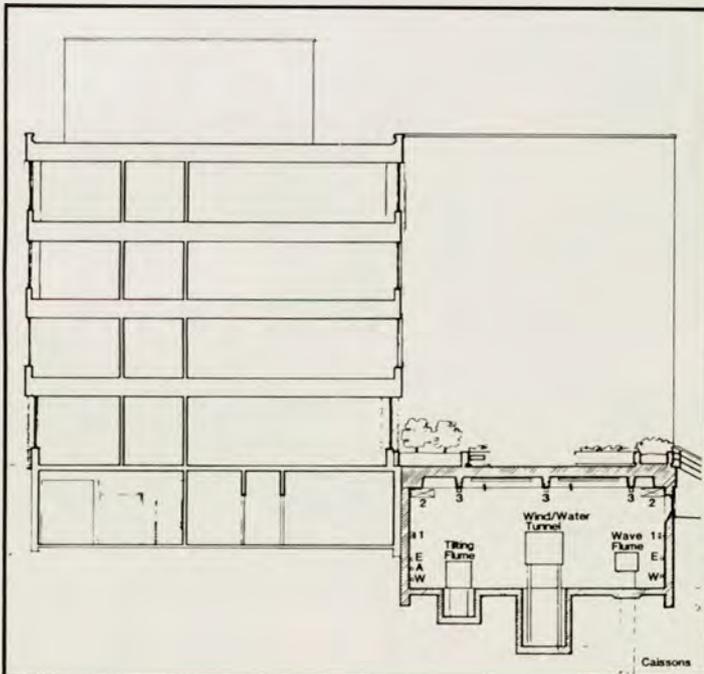
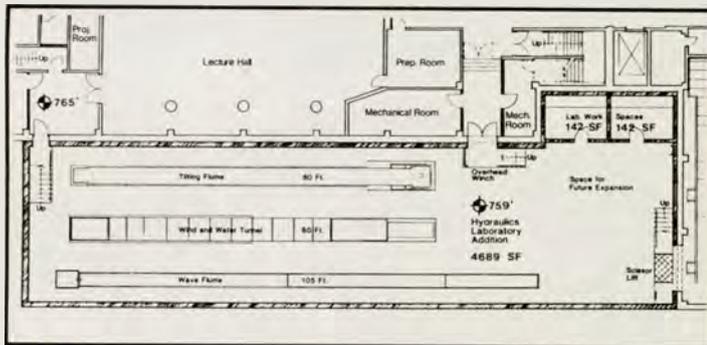
Gil and Peggy Lamb, both Class of '27, enjoy a hearty breakfast at their 55th reunion last June. Make your plans now to attend the 1983 Reunion Breakfast on Saturday morning, June 11, from 7:30 to 9:30 a.m., in the McManus Lounge in Hollister Hall.

REUNION: Mark your calendar now for the annual breakfast for CEE alumni and friends on Saturday, June 11, from 7:30 to 9:00 a.m. in Hollister Hall. Our breakfast is always one of the real highlights of Alumni Week, and we hope to see you there.

JOSEPH H. DeFREES HYDRAULICS LABORATORY

Joseph H. DeFrees CE '29 and his wife Barbara Baldwin DeFrees, of Warren, PA, have provided a half-million-dollar gift to the CEE School that is enabling us to construct a 6,000-square-foot hydraulics lab on the west side of Hollister Hall. The new DeFrees Hydraulics Laboratory is the first major expansion of the CEE physical plant since we moved into Hollister Hall in 1959, and it will give us a much-needed replacement for the obsolete laboratory at Beebe Lake, which has not been functional for many years.

The new lab will lead to many important and exciting research opportunities and to advanced applications in teaching. Three major experimental facilities will be installed: a 105-foot-long wave flume, an 80-foot-long tilting flume, and a large wind/water tunnel. The floor of the new lab will be some five feet below that of the present laboratory in the basement of Hollister. The structure, which was designed by Hoffman, O'Brien, Levatic & Taube, will be underground except for the exposed west wall which will face Central Avenue and the Law School. Construction is scheduled to be completed in the fall of 1983.



Floor plan and section of the soon-to-be-built DeFrees Hydraulics Laboratory

Joseph H. DeFrees (CE '29), working at his drafting table

While the news about the laboratory is very exciting, we are all saddened by the fact that Mr. DeFrees did not live to see the project completed. He died unexpectedly in July, 1982, only a week after coming to Cornell for Dean Hollister's funeral. Born in Warren, PA in 1905, Joe received his civil engineering degree from Cornell in 1929 and worked for the Reading Railroad, the Texas Company, and the Pennsylvania Furnace and Iron Company before founding the Allegheny Valve Company in 1952 and the Allegheny Coupling Company in 1955 (both in Warren, PA). His companies concentrated on designing and marketing an array of equipment for use on tank trucks and trailers. Over the years, he took out some 70 patents on products he designed, and his pioneering development of stamped and welded valves and accessories made a tremendous impact on the industry because they permitted savings in both initial cost and vehicle weight.

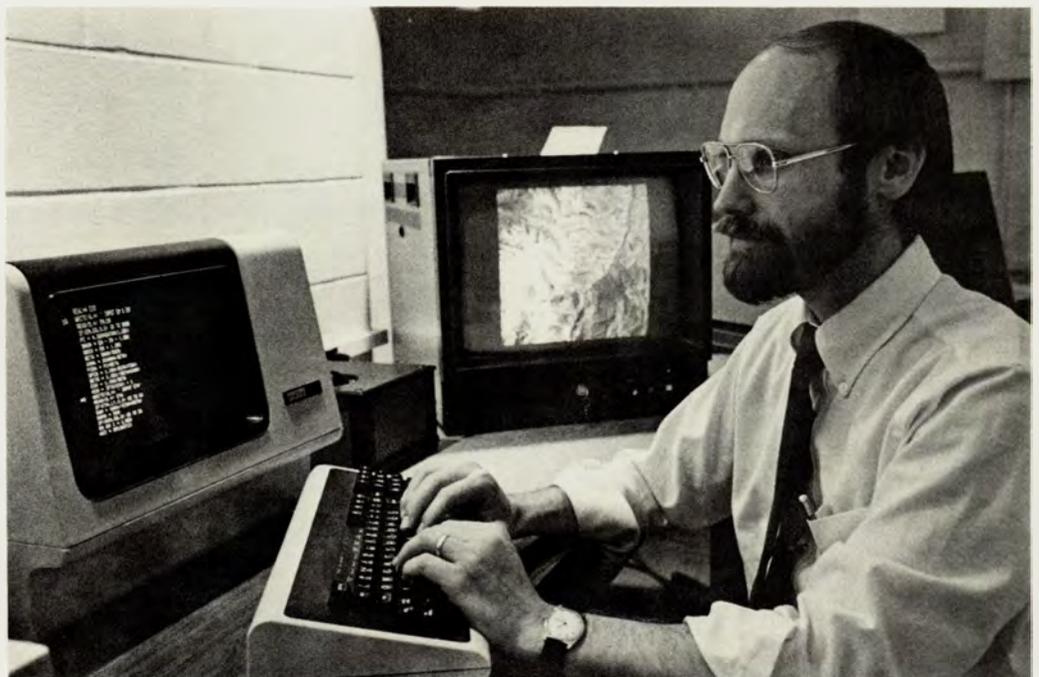
Joe DeFrees loved the Warren area and was deeply involved with Warren County government, industry, culture, and philanthropy. He was a loyal and enthusiastic Cornellian who had great admiration for the CEE School and for Dean Hollister in particular. Joe DeFrees' dream of having a new hydraulics laboratory adjacent to Hollister Hall will soon become a reality, thanks to his generosity and the continuing strong association of Mrs. DeFrees with the CEE School.

FACULTY NEWS

We are delighted to announce that since our last issue of *UPDATE* James Gossett, Anthony Ingraffea, Thomas O'Rourke, and Mark Turnquist have been appointed to the tenured position of associate professor, and John Abel, Fred Kulhawy, and Neil Orloff have been made full professor. Also, William Philpot joined the remote sensing group in the fall of 1981; his specialties include the marine environment and digital image processing. He comes from the University of Delaware, where he received the E. Sam Fitz Award, given to the student "with the greatest aptitude for professional development in the field of Marine Studies."

The faculty continues to garner awards and bask in the international limelight. Professor Fred Kulhawy received the ASCE Walter L. Huber Research Prize in the fall of 1982 "for his research on the formulation of basic stress-deformation relationships for soil and rock and their application to problems of practical engineering significance."

William Philpot, of the Center for Remote Sensing, working with the new I²S Model 70 image-processing system at the CEE School Computing Facility in Hollister Hall.



NEED A GOOD ENGINEER? Just drop a line to one of the CEE faculty members and we will do our best to help you establish a link with the right person.

Associate Professor Gerhard Jirka won the John A. Freeman Hydraulics Prize, given by the Boston Society of Civil Engineers (a section of the ASCE) for his paper "Multiport Diffusers for Heat Disposal: A Summary."

Professor Richard White was named Engineer of the Year (1982) by the Ithaca Section of the ASCE. Professor Wilfried Brutsaert was elected Fellow of the American Geophysical Union, and Professor Raymond Loehr (joint appointment with Agricultural Engineering) was elected a Liberty Hyde Bailey Professor by the Board of Trustees of Cornell University. He was also elected to the National Academy of Engineering in March, 1983.

Professor Floyd Slate received the 1982 Arthur R. Anderson Award, given by the American Concrete Institute for "his outstanding leadership in organizing a multi-disciplinary study in low-cost housing." And Richard H. Gallagher, former chairman of structural engineering at Cornell and now dean of engineering at the University of Arizona, was elected to the National Academy of Engineering in March, 1983.

Associate Professor Warren Philipson was elected to the executive committee of the American Society of Photogrammetry. Associate Professor Tony Ingraffea was chosen Chi Epsilon Professor of the Year; Professor William McGuire was the Prince Visiting Scholar at Arizona State University; and Professor James Liggett was a Visiting Distinguished Scholar at the University of Adelaide, Australia.

Five of our faculty (Professors Gergely, Haith, Liu, Orloff, and Slate) were rated in the top 10% of the professors in the College of Engineering in the 1982 Tau Beta Pi excellence-in-teaching poll.

Associate Professor Richard Schuler has been on leave of absence as Commissioner and Deputy Chairman of the New York State Public Service Commission. Professor Walter Lynn was named chairman of the newly established Water Technologies Board of the National Research Council's Commission on Engineering and Technical Systems. This board has a vital role in focusing attention on critical water-resource issues in the federal establishment and we are delighted to see our former school director leading the board in its initial efforts.

Associate Professor Douglas A. Haith, who holds a joint appointment in agricultural engineering and in civil and environmental engineering, won the Walter L. Huber Civil Engineering Research Prize in the fall of 1981 for "his research on prediction and control of waterborne pollutants from non-point sources and the application of mathematical models to the design of land application systems."

From this brief, partial listing of faculty activities you can begin to sense the high degree of faculty involvement in local, regional, national, and international engineering and public service. The days of the "cloistered professor" with many leisurely hours are long gone!

NATIONAL RATINGS OF CEE SCHOOLS

Cornell's School of Civil and Environmental Engineering fared very well in a comprehensive survey of engineering schools released recently. Results of the survey, which was conducted by the Conference Board of Associated Research Councils, were reported in "An Assessment of Research-Doctorate Programs in the United States: Engineering," which appeared in November, 1982. We ranked sixth in terms of the scholarly quality of our faculty and the effectiveness of our program in educating researchers; and we ranked second in the top ten schools for degree of improvement in program quality during the last five years. Thus, we have an excellent chance of moving even higher in the overall ratings in the years ahead.

GRAD STUDENTS

The CEE School was one of ten civil engineering departments in the U.S. that received an Exxon Teaching Fellowship to support an outstanding PhD candidate who is interested in pursuing a teaching career. After a national search, we selected Kenneth C. Hover for this coveted fellowship. Ken, who is majoring in structural engineering, also received the Harry F. Thomson Scholarship of the American Concrete Institute. He came to us from a consulting firm in Cincinnati and holds BS and MS degrees from the University of Cincinnati.

Another ACI Thompson Scholarship winner, Donald White, began his graduate studies in structural engineering in the fall of 1982 after completing his BS degree at North Carolina State University. He has been awarded an AISC Fellowship for 1983-84.

A number of recent graduates have held Teagle and Post Scholarships in the Master of Engineering (Civil) program. In 1981-82, Richard C. Boggs BS '81 and Richard Zottola BS '81 were Teagle Scholars.

ASCE STUDENT CHAPTER COMMUNITY SERVICE PROJECTS

This year the Cornell Student Chapter of ASCE is designing and building a 180-foot-span suspension footbridge over Fall Creek, just upstream from the Flat Rocks area. The old bridge at this site was destroyed in the November, 1981 flood. The construction effort is a joint project involving CEE students and faculty, Cornell Plantations, and the University; our students are responsible for the design and much of the construction. The bridge is scheduled for completion in mid-May.

The bridge-building is the third major community-service project undertaken by the Student Chapter in the past three years. The first project, a large YMCA pavilion in Robert H. Treman State Park, was carried out under the leadership of ASCE Student Chapter President Marshall Case Haggard BS '81. Marshall died in a tragic accident in the summer after his graduation, while serving in the Peace Corps in Nepal. The pavilion was dedicated in his memory this past fall.

The Cornell Student Chapter finished near the top last year in the intense annual competition for recognition as the most outstanding ASCE Student Chapter in the U.S. Much of the

credit for this outstanding performance goes to Marshall Haggard and his successor in the 1981-82 academic year, Susan Wyler BS '82, MEng '83.



Four CEE seniors (Rick Crum, Mark Ehlen, Doug Neal, and Bryan Clark, President of the ASCE Student Chapter) are leading this year's community service project, the construction of a 180-foot-span suspension bridge over Fall Creek. A model of the bridge is in the foreground, and the students are sitting on a prefabricated timber deck section built in the Winter Lab. (Photo: Richard Marshall, Ithaca Journal)

IN MEMORIAM: SOLOMON CADY HOLLISTER AND GEORGE WINTER

Solomon Cady Hollister (August 4, 1891-July 6, 1982) and George Winter (April 1, 1907-November 3, 1982) had immeasurable influence on the lives of countless students and colleagues at Cornell, and both were giants in the national and international arenas of engineering and education. It is with a profound sense of loss, but with a great sense of gratitude, that we dedicate this 1983 issue of *UPDATE* to these two remarkable men.

Solomon Cady Hollister's contributions to engineering practice, to engineering education, and to national public service, over a career that spanned nearly 70 years, were so immense as to be nearly legendary in his own lifetime. Born in Michigan and educated at Washington State University and the University of Wisconsin, he rose to the top of his profession of civil engineering at a very early age. At 26 he was responsible for the U.S. Government program to develop concrete ships during World War I; he was president of the American Concrete Institute before coming to Cornell as Director of Civil Engineering in 1934. He did pioneering work in concrete arch bridges and in welded steel pressure vessels. He had that rare combination of talent and ambition that enabled him to continue these prodigious accomplishments through the 1940s and 1950s. During this time his efforts resulted in a greatly strengthened College of Engineering at Cornell, and a completely new engineering quadrangle was built. He served as Dean of Engineering from 1937 to 1959.

Dean Hollister was elected to the National Academy of Engineering and was the recipient of five prestigious awards, with the last award coming in the late spring of 1982, when he received Washington State University's Alumni Achievement Award for "brilliance and boldness in pioneering the field of reinforced concrete, and in bringing prominence to his profession." He was an honorary member of six professional societies and received honorary doctoral degrees from four institutions.

In the 1960s and '70s, after formal retirement from the deanship, he continued to be active in an amazing variety of projects: high-level consulting on many difficult problems, including large power plants; development of improved equipment for football players; research on high-strength concrete; advising faculty and graduate students; participating in civil engineering faculty meetings and curriculum development; and developing materials for his book on marine fossils--to cite but a few of his many interests and activities.

S. C. Hollister was an engineer's engineer and an educator's educator. He was a giant



S. C. Hollister and George Winter at the Hollister Colloquium on Perspectives on the History of Reinforced Concrete in the United States, 1904-1941, held at Princeton University in June, 1980.

among us who always "told it like it was," often with a dry sense of humor that could not be topped by anyone but his wife, Ada, who was his strong companion for nearly 62 years.

He is survived by Ada, three children, ten grandchildren, and six great-grandchildren.

George Winter was born and raised in Vienna. After studying engineering for a year in Vienna, he moved first to Stuttgart and then to Munich, where he received his engineering degree from the Technical University in 1930. In April, 1932 he journeyed to Russia with

his wife, Anne, where he secured a position in structural design and construction. In early 1938 the family left Russia and came to the U.S. and to Ithaca, where, with the help of Dean Hollister, George Winter enrolled at Cornell as a doctoral student in structural engineering. He received his PhD in 1940 and joined the faculty immediately, advancing to chairman of the Department of Structural Engineering in 1948. He brought international distinction to himself, to the department he built, and to Cornell University during his 22 years as chairman and the subsequent five years before his retirement in 1975. He was named Class of 1912 Professor of Engineering in 1963.

George Winter was unique in being able to excel in so many roles: first and foremost, as a teacher who nurtured critical thinking, but also as an adviser, lecturer, researcher, and colleague; author of a widely-used book and many outstanding papers; member of professional committees; consultant to industry; developer of building codes for reinforced concrete, structural steel, and cold-formed steel; and inspirational educational leader. He also played a central role in the intellectual life at Cornell, particularly in music and the arts. He was a member of the National Academy of Engineering, the American Academy of Arts and Sciences, and the American Archeological Institute; and he received numerous honors and awards from structural engineering societies, including the International Award of Merit from the International Association of Bridge and Structural Engineering in September, 1982.

George Winter greatly expanded the horizons of his students, colleagues, and friends, and we all rejoice in having been part of his remarkable life. The George Winter Fellowship Fund has been established by the Department of Structural Engineering.

He is survived by his wife, Anne; one son; and two grandchildren.

(As a closing note to these memorial statements, we are very happy to report that Ada Hollister celebrated her 90th birthday in March and Anne Winter celebrated her 75th birthday in January. Both continue to lead full lives, at their homes in Ithaca, and we are delighted to continue to have them in the CEE family at Cornell.)



The McManus Lounge is a nice place to study or chat with friends as well as a good place to hold special events.

McMANUS LOUNGE FUND CONTRIBUTORS

As we promised in our last issue of *UPDATE*, we are including a list of all contributors to the John F. McManus '36 Lounge renovation fund. The McManus Lounge is one of the finest and most comfortable lounges on the Cornell campus, and we have it only because of the generous support of many alumni and friends. Our sincere thanks goes out to each of you.

Andrew B. Abramson	Roland R. Graham, Jr.	Joseph Rady
Arthur H. Adams	Miles J. Haber	Charles M. Reppert, Jr.
J. Brian Ainsworth	Christopher S. Haynes	Robert D. Reynolds
James W. Allen	Robert C. Hazlett	Edward K. Rhodes
Jeffrey B. Allen	Donald E. Henn	Peter V. Roberts
Robert D. Anderson	Jacob A. Herrmann	Jonathan Rook
Franklin Baker, III	Kenneth H. Hershey	James A. Root
John J. Barton	Raymond J. Hodge	Carl J. Rossow
Lowell P. Bassett	Philip E. Hogin	Charlotte L. Rubin
Robert W. Baunach	Stephen Holland	Robert A. Rubin
Paul F. Beaver	Solomon C. Hollister	Carl H. Scheman, Jr.
James W. Becker	William M. Hoyt	Donna M. Scher
Henry J. Benisch	Ying-Choi Hu	Henry L. Schmeckpeper
Edgar L. Bishop	Kohn P. Jaso	Margaret V. Schmidt
Newton A. Blickman	Thomas W. Jones	Andrew Schultz, Jr.
Eddie K. Borjesson	Mark H. Jordan, Jr.	Ricky G. Schwartz
Harry E. Bovay, Jr.	Frederick S. Keith, II	Frederick W. Scott, Jr.
John D. Braun	Markoe O. Kellogg	Richard A. Shigekane
George Brayman	Wendel F. Kent	Charles C. Simpson
George J. Brewer	Michael C. Kreinsen	Richard P. Spiro
William A. Bruno	Charles W. Lake, Jr.	Edward A. Steinglass
Arthur M. Bueche	Thomas D. Landale	James P. Stewart, Jr.
James B. Burke	Richard C. Lanigan	Etienne Tadjigoue
George F. Carrier	Warner Lansing	David S. Taylor
Tsiang-Chih Chang	Clifford Y. Lau	Mordelo L. Vincent, Jr.
Dr. and Mrs. Dale R. Corson	John R. Lutz	Samuel Wakeman
Lawrence A. Christensen	Lawrence B. McAfoos, Jr.	J. Carlton Ward, Jr.
Edmund T. Cranch	Robert B. McCalley, Jr.	John A. Watson, Jr.
Scott G. Damesek	Paul L. McKeegan	James R. Watson
Olin K. Dart, Jr.	John W. McManus	Edward J. Williams
Joseph H. DeFrees	Douglas H. Merkle	Frederic C. Wood
Joseph C. Delibert	Edward A. Miller	James E. Zaccaria
Donald Diamond	Thomas G. Miller	Margaret A. Zentner
Robert A. Dunbar	Alan B. Mills, Jr.	
Douglas J. Eng	Monte H. Morgan	Armco Foundation
Harold R. Evensky	Michael D. Nadler	Armstrong Cork Company
William B. Farrington	Mr. and Mrs. Robert H. Nagel	Consolidated Coal Company
L. Neal FitzSimons	James A. Norris	Emwood Lumber Company
Jacob Fruchtbaum	Herbert P. Orland	General Electric Company
Fred L. Gault	Paul P. Ozarowski	IBM Corporation
John C. Gebhard	David A. Paolino	Kennecott Copper Corporation
Robert F. Gilkeson	John D. Payne	Minnesota Mining & Mfg.
Arthur F. Glasser	Fred A. Pease	New York Telephone Company
John P. Gnaedinger	Paul E. Peloquin	Western Electric Company
Grandin A. Godley	David W. Punzelt	Wheelabrator-Frye

NEW EQUIPMENT AND LABS

We are involved in several ongoing and planned projects for strengthening our analytical and experimental capabilities. We opened our new CEE Computing Facility several months ago. Based on a DEC VAX 11/750 32-bit super minicomputer, the system has three megabytes of virtual memory, three disk drives, one tape drive, six terminals, a Tektronix graphics terminal, and an I²S Model 70 image-processing system with a video digitizer. The facility, which is directed by Professor Mark Turnquist, will be used primarily for research by students from all areas within the CEE School. This system, which we hope to expand as funds become available, will complement the exciting new instructional software we have already implemented in the Computer-Assisted Design Instructional Facility (CADIF) located on the first floor of Hollister Hall, and the first-rate graphics research facility housed in Rand Hall.

Modern, well-equipped labs are of critical importance to our continued excellence in teaching and research, but little physical upgrading has been done since we moved into Hollister Hall nearly twenty-five years ago. So we are planning extensive laboratory renovations and additions in several areas, including hydraulics, geotechnical engineering, and environmental engineering (sanitary engineering, to you "old-timers").

On the equipment side of the ledger, we are delighted to announce that the structural shake table, donated to the Department of Structural Engineering by the Structural Dynamics Research Corporation, is finally operational with capabilities for certain types of induced motion. It will be utilized for a wide variety of teaching and research applications.

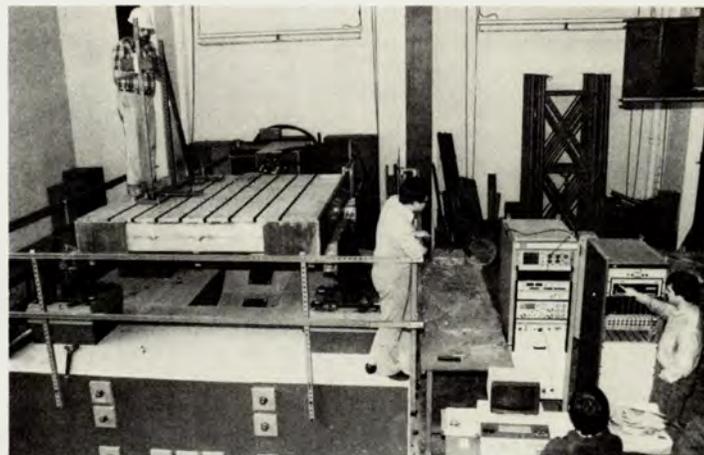
A gift received from Hewlett-Packard Corporation in late 1982 was a graphic printer/plotter for use in data acquisition and reduction. The CEE School labs have pioneered in using H-P equipment for data acquisition and control of experiments.



Mark Turnquist, director of the CEE School Computing Facility, consulting with students



Students working at the Computer-Assisted Design Instructional Facility (CADIF)



The new shake table in the George Winter Laboratory was donated by the Structural Dynamics Research Corporation.

A new 50-foot-long wave tank in the hydraulics lab became operational last fall. It was designed and built through the combined efforts of Professor Philip Liu, Grad Student Ed Clukey, and Paul Jones, John Yost, and Glenn Darling in the CEE Shop.

A high-pressure triaxial loading system for research on rocks and concrete is a new joint venture with the Department of Geological Sciences--which, incidentally, will be housed just south of Hollister Hall in a new \$10-million building now under construction. A Beckman LS 9800 liquid scintillation counter has been installed in the environmental laboratory for quantifying radioisotopes used in experiments.

We hope that you will stop in to see our new facilities (which include more than we can mention here) the next time you are in Ithaca. We would be delighted to show you our current capabilities and explain our plans for the future.

NEEDS IN THE CEE SCHOOL

As explained in the companion article on this page, we are planning the renovation and re-equipping of several laboratories. This critically needed work can be accomplished only if we are successful in raising sufficient funds from alumni, corporations, foundations, and government agencies. In addition to laboratory improvements, we want to broaden our financial support base for graduate students, particularly in the Master of Engineering area, where a new cooperative program will soon be announced. We also want to complete the funding needed to endow the George Winter Graduate Fellowship, which has been established in memory of Professor Winter.

Critical needs for the CEE School, and their approximate budgets, are listed below (order does not imply priority). We would greatly appreciate your help in one or more of these areas that are so important to our future. Some items may be appealing as projects for CEE reunion classes. If you have any questions or can suggest potential sources of support, please call Professor Richard White at 607/256-3690.

1. Equipment for the new DeFrees Hydraulics Lab (\$400,000)
2. Renovation of the geotechnical engineering lab, and new equipment (\$350,000)
3. Renovation of the environmental engineering lab, and new equipment (\$300,000)
4. Additional instrumentation for the structural shake table in the Winter Laboratory (\$75,000)
5. Scholarships for the Master of Engineering (Civil) cooperative program (\$50,000 per year)
6. George Winter Graduate Fellowship Fund for students in structural engineering (\$100,000)



A new home for Geological Sciences is rising beside Hollister Hall.

HOMECOMING: The School will hold its sixth annual coffee-and-danish hour from 9:00 to 11:00 a.m. in the John F. McManus CE '36 Lounge on Saturday, November 5, just before the Homecoming Game. Bring your family for a morning of refreshments and talk with old friends and faculty.

CEE ALUMNI SURVEY, 1982

Your response to our 1982 survey of CEE alumni was most gratifying, with nearly half of you completing the survey form and returning it to us. This wealth of data is enabling us to get to know you better, to analyze trends in employment and how career paths shift with time, and to better prepare for our future in terms of programs and curricula. The summary of results given here focuses on alumni who received bachelor's degrees between 1935 and 1981, and results are given in terms of five-year segments ('35-'39, '40-'44, etc.). In the next issue of *UPDATE* we will present a similar survey of graduate-degree holders.

An analysis of current employment shows the largest percentage of post-1960 alumni (over 35%) working for consulting firms, with construction in second place (about 25%). Government agencies and manufacturing companies employ about equal numbers--around 15% for most segments. Construction firms are most popular with those who graduated between 1945 and 1959, peaking at 46% for the '50-'54 segment.

With regard to the employer's size, we found that about equal numbers of post-1955 grads have positions in large and small organizations (> or < 500 employees). The segment with the highest proportion of grads in large organizations is the '75-'79 group (50%), and the post-1940 segment with the lowest fraction in small organizations consists of the most recent graduates ('80-'81), at 31%. The percentage of self-employed CEs increases steadily with age, as would be expected, and peaks at 31% for the '40-'44 segment.

Relatively few of the respondents work in higher education, manufacturing, service industries, sales and marketing, or research and development. Twenty-three percent of the '55-'59 segment work in fields such as finance, real estate, utilities, defense, transportation, and merchandising; while only 10% to 15% of the other segments are in these areas.

The most commonly reported current work activities are design, construction management, and planning (in that order), with fractions around 35%, 35%, and 15% for post-1940 alumni. Construction management peaks at 43% for the '45-'49 segment, and is lowest, at 20%, for the '80-'81 segment. Design peaks at 50% for the '75-'79 segment, and is lowest (27%) for the '60-'64 segment. Research and development shows a steady increase through time, from 8% for '35-'39 grads to 20% for the '80-'81 segment. Sales, teaching, and manufacturing each draw about 5% of the total, while law and medicine are the lowest categories.

More than 35% of the post-1950 grads belong to ASCE; 45% of the '80-'81 segment are members. While 65% of the '35-'39 grads are active in community leadership, this high percentage drops off almost linearly with decreasing age of graduates to a level of only 5% for '80-'81 grads.

Among Cornell CE BS-degree holders who have gone on for advanced degrees, the most popular area is civil engineering; 37% of the '65-'69 segment and 25% of the '75-'79 segment hold graduate degrees in this field. For pre-'65 segments, the figures are lower: 10% for the '50-'54 group, and 20% for the '40-'49 group. The MBA degree increased in popularity from only 5% for the '50-'54 segment to 28% for the '60-'64 segment, and then decreased to 16% for '75-'79 grads. About 5% of the post-1950 grads have law degrees--the largest fraction is 9% for the '65-'69 segment. About 1/3 of all post-1965 respondents have pursued advanced study in other fields such as architecture, aeronautics and astronautics, economics, aquatic ecology, chemistry, geology, computer science, mechanical engineering, geophysics, and public administration.

We hope you have enjoyed this look at yourselves, and again we thank all of you who took the time to supply us with this valuable information.

This year, for the first time, contributions to the Cornell Fund can be designated for the College of Engineering or a specific unit, such as the CEE School. If you want to support a particular part of the University, you only have to say so on the pledge card.

McGUIRE HONORED

Professor William McGuire, BSCE '42, MCE '47, received the Special Citation Award from the American Institute of Steel Construction at the AISC Regional Seminar in Syracuse on April 20. This award, which is given only rarely, was presented to McGuire "for his outstanding contribution to the art of building with prefabricated structural steel, and in recognition of his consistent interest in improving the techniques and skill associated with steel construction." Professor McGuire, who has been a member of our faculty for 32 years, is the author of *Steel Structures* and the co-author of *Matrix Structural Analysis*. In recent years his research has been focused on the application of computer graphics to the design of steel frames and other structures.



Professor McGuire received the AISC Special Citation Award from Bob Moore, President of Vermont Structural Steel Corporation.



Civil engineering faculty members in 1956. How good is your memory? We are having a contest to see who can identify the most professors in this picture. Send us your entry. We will award a special prize and announce the winner(s) in the next issue of UPDATE.