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Office of the Chief
of Engineers

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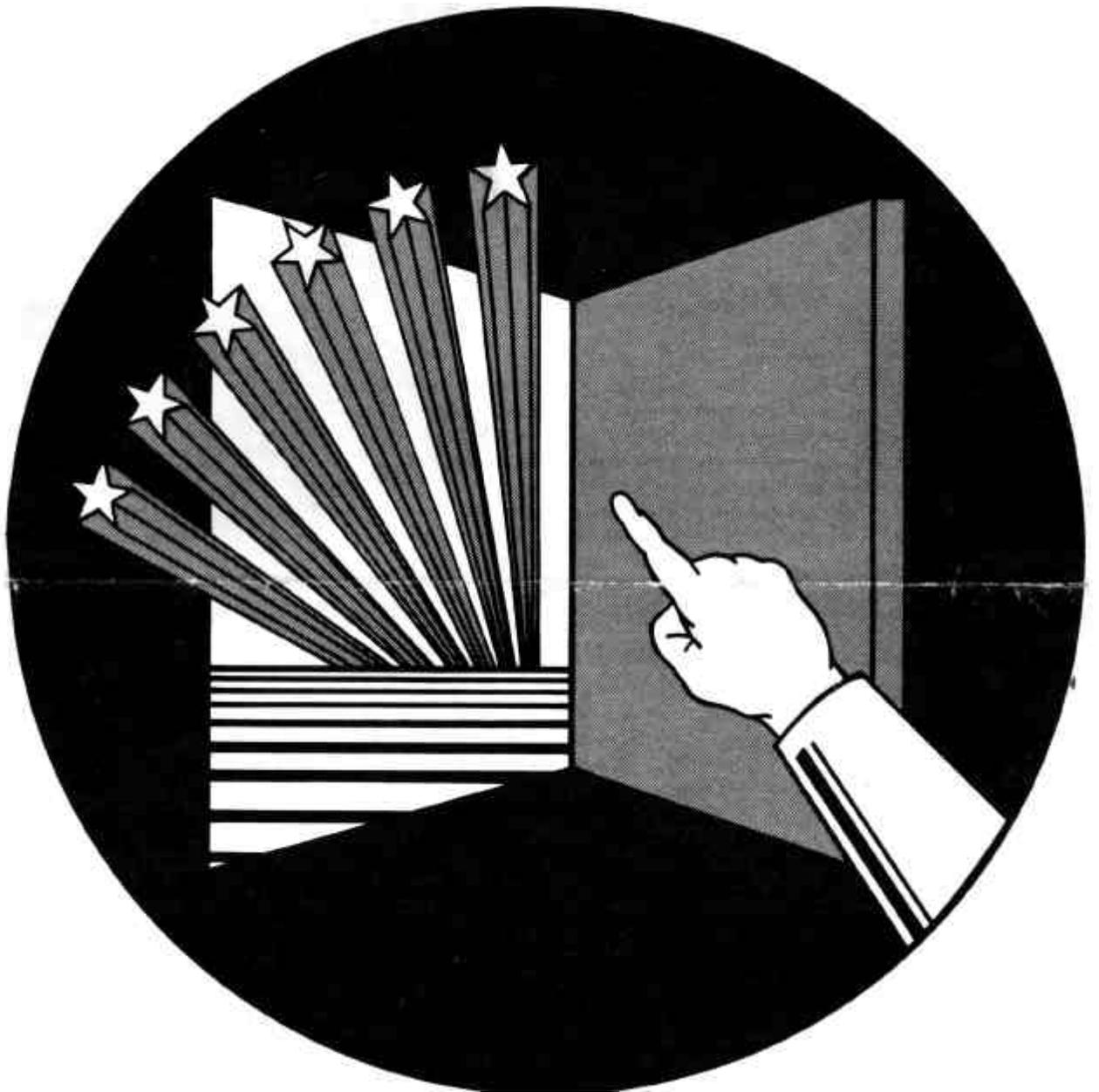
Number 2

February 1981

Engineers + Opportunity = Progress

NATIONAL ENGINEERS WEEK

FEBRUARY
22-28



SPONSORED BY:
NATIONAL SOCIETY OF
PROFESSIONAL ENGINEERS

Design, environmental awards announced

WASHINGTON, D.C. Twenty-eight Corps of Engineers projects were selected from 105 entries worldwide to receive Chief of Engineers Design and Environmental Awards in this year's competition.

Begun in 1965, the program recognizes excellence in the design of recently completed structures and area developments or environmental achievements by Corps districts and divisions and their consulting firms. The program provides an incentive for design and environmental profes-

sionals to develop projects which will exhibit excellence in function, economy, resource conservation, aesthetics and creativity, while being in harmony with the environment.

Recently completed civil works and military construction projects were eligible for entry in four competition categories: architecture, engineering, landscape architecture and environment. Entries judged worthy of national recognition by juries of outstanding design and environmental professionals receive one of three awards: an Honor

Award, Award of Merit or Honorable Mention.

An Honor Award recognizes exceptional accomplishment and may or may not be given at the discretion of each jury. An Award of Merit is given for outstanding design achievement. Honorable Mention awards were presented to recognize superior features or concepts of projects that overall do not otherwise qualify for a higher award.

To achieve equity in the judging process, each entry was judged on the fulfillment of the project requirements and the par-

ticular problems related to the project.

Architectural projects are defined as buildings or groups of buildings predominantly architectural in character and designed to provide a functional solution for the activity they house.

Entries in this category are judged on the basis of architectural concept, satisfactory solution to functional problems, appearance and harmony with the surrounding environment.

The project must have been completed within the past three

See DESIGN page 3

Engineers: 'America's problem solvers'

The National Society of Professional Engineers (NSPE), with a membership of 80,000 professional engineers from all disciplines of the profession, began sponsoring National Engineers Week in February 1951. The purpose of the week is to familiarize the public with the work of engineers and to honor outstanding members of the profession.

The week of George Washington's birthday is traditionally observed as National Engineers Week because our nation's first president was himself a land surveyor and a designer of roads, fortifications and other structures. He also had the educational background of a civil engineer in the 18th century.

In 31 years of NSPE sponsorship, the annual observance has grown from a few scattered proclamations, dinners and speeches to elaborate programs and week-long activities in urban and rural

areas throughout every state and territory. The activities involve thousands of professional engineers in industry, government, construction, private practice and education.

During the week, thousands of students in junior and senior high schools and colleges are introduced to the many facets of the engineering profession; tours and exhibits are staged in the nation's industrial and research facilities; scholarships are awarded to deserving and needy students; local newspapers publish special sections calling attention to challenging careers in engineering; and radio and television panels discuss outstanding engineering achievements and explain what it takes to become a professional engineer.

For the past 31 years, the presidents of the United States have sent Engineers Week messages to the engineering profession through the NSPE. Outstanding

American engineers are honored for their contributions to society during Engineers Week by various governmental agencies, technical professional organizations and by citizen groups.

Technological innovation has moved people across our frontiers from east to west and, in a historical instant, into outer space. In other words, engineers, scientists and technologists have made our society the envy of the world. While it is true that society is facing unparalleled problems today, it is worth noting that engineers have always approached problems as opportunities.

In fact, engineers have been called America's problem solvers. It is in recognition of the solutions of our common problems as well as the realization of the opportunities that led to the selection of Engineers + Opportunity = Progress as the theme for the 1981 celebration.



Value engineering: looking for a better Way

by Nikki Ressler

WASHINGTON, D.C. Engineers have proven their skill time and again by coming up with solutions to the nation's and the world's toughest construction problems. But few solutions are ever so good that they cannot be improved.

Or at least that's the theory behind value engineering. And the record seems to bear the theory out.

An organized effort to reduce the cost of construction projects without sacrificing quality, value engineering cut Corps of Engineers costs by almost \$78 million last fiscal year. Savings since the program began in fiscal 1965 total more than \$765 million.

According to Paul V. Dobrow, chief of value engineering at the Office of the Chief of Engineers, these figures include money-

saving proposals generated both in house and by construction contractors.

How can value engineering produce such phenomenal dollar savings? Corpwide, 25 full-time and 27 part-time value engineering officers are constantly on the lookout for projects just out of the design stage that they feel would benefit from a second look at design criteria. Final project selections are made by district or division-level committees, usually made up of the chiefs of design, construction, engineering and operations.

Then study teams composed, says Dobrow, of the best talent in each district or division submit the projects to an intensive cost/benefit analysis. The result last year was 289 approved in-house proposals for money-saving changes.

Another 202 approved propos-

als came from Corps construction contractors, who shared in the net dollar savings their changes produced.

But why is value engineering necessary in the first place? Why aren't all projects designed properly and economically the first time around?

The big reason, according to Dobrow, is time. Who ever has all the time they need to do a project? he asks. The most expedient way to do anything is just to follow precedent-do it the way it's been done before. Value engineering tries to change all that by brainstorming creative approaches to each project and coming up with an alternate way to perform the same function at a lower cost. Sometimes the function itself is im-

proved in the process.

A value engineering study may be able to make use of recent advances in the construction art, Dobrow points out. Contractors are in an especially good position to contribute the latest in construction techniques.

Then, of course, there's inflation. These days, any delay in a project is almost certain to result in additional costs. Value engineering techniques can frequently bring the project back in line with funding, Dobrow says.

Last year alone, projects in the Mobile, Memphis and Alaska districts and European division could not have been completed without supplemental funding or drastic cost reductions if the value engineering studies had not been conducted.

Seven nominated for star

WASHINGTON, D.C. The president has nominated 63 Army officers for promotion to brigadier general. Seven of the officers nominated are in the Corps of Engineers.

Col. John H. Moellering, executive to the Army's chief of staff and former Vicksburg district engineer, will be the first of the Corps officers promoted on approval of the list by the Senate.

Other nominees include:

Col. James W. Van Loben Sels, formerly deputy district engineer in Norfolk, now commander of the 18th Engineer Brigade in Europe.

Col. Jerome B. Hilmes, who has had various troop assignments in Germany since 1975 and is the facilities engineer,

Fort Bragg, N.C.

Col. Forrest T. Gay III, executive director on the chief of engineers staff and formerly St. Paul district engineer.

Col. George S. Robertson, deputy director of civil works and formerly Alaska district engineer.

Col. Thomas A. Sands, New Orleans district engineer.

Col. Anthony A. Smith, now on the immediate staff of the chairman of the joint chiefs of staff and formerly Tulsa district engineer.

Each of the new generals will be reassigned within the next year to general officer posts throughout the Army. The new assignments will be announced later.

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Design, environmental winners picked

Continued from page 1

years.

Thirty-nine entries were judged in the architectural competition; five winners were chosen. The Honor Award went to the Baltimore district for the Walter Reed General Hospital in Washington, D.C. The hospital was designed by the firm of Stone, Marraccini and Patterson, Architects, in collaboration with Milton T. Pfleuger, Architects. Awards of Merit went to the Japan district for the Camp Zama Dependent High School, designed by Onuma and Wood Associates, Inc.; to Kansas City district for the Harry S. Truman Visitor Center, designed by Linscott-Haylett and Associates; to the Philadelphia district for the restoration of Gruber Wagon Works, designed by John Milner Associates; and to Wilmington district for Crosswinds Comfort Station, designed by Ballard, McKim and Sawyer, Architects. No Honorable Mention awards were made in the architectural category.

Landscape architecture

A landscape architectural project is defined as an area or site development or redevelopment. Entries are judged on the basis of creativity and quality in a number of areas.

The planning and design of the site should suit the project requirements and blend with the physical environment. The grading and planting should fit the natural or improved site in a functional and pleasing manner,

with due consideration to economy in construction and maintenance. Consideration is also given to limiting construction intrusion on the landscape to minimize post-construction scars, thus causing the least practicable disturbance of the terrain, waterways and vegetation.

The entry must have been for a project in which the development, including planting, was completed within the past five years.

Sixteen entries were judged in the landscape architecture competition; five were chosen as winners. The Honor Award went to the Jacksonville district for the Brooker Creek Park project located at Lake Tarpon, Pinellas County, Fla. The project was designed by McElvy, Jennewein, Stefany and Howard. Three Awards of Merit were granted. The Los Angeles district won an Award of Merit for the Indian School Park located at Scottsdale, Ariz., designed by Cella, Barr, Evans and Associates. Another Award of Merit went to Rock Island district for the Waterloo Local Flood Protection Project at Waterloo, Iowa. The project was designed by the district. The final Award of Merit in the landscape architecture category went to the Detroit district for the Flint River Flood Control Beautification Project, Flint, Mich., designed by CHNMB Associates and Harza Engineering Company. An Honorable Mention award in this category went to the New England division for the Charles River Dam at Boston, Mass. The project was designed by C.E. Maguire, Inc.

An engineering project is defined as a structure or complex that is primarily engineering in character. Entries are judged on the basis of ingenuity and quality of engineering concepts, satisfactory solution to functional problems, economy of design and construction, customer satisfaction, attractive appearance and harmony with the surrounding environment.

Engineering

Twenty-seven entries were judged in the engineering competition. Of those 27, 10 winners were chosen. The Honor Award went to the Fort Worth district for the Wilford Hall Medical Center Total Energy Plant at Lackland Air Force Base, Texas. The plant was designed by the joint venture of Benham-Blair and Affiliates, Oklahoma City, Okla., and Page Southerland Page, Austin, Texas. Three Awards of Merit were given. One went to Alaska district for the Bar Point Harbor Expansion at Ketchikan, Alaska, by Tryck-Nyman and Hayes of Anchorage, Alaska. Another Award of Merit went to the Seattle district for the Floating Cofferdam at Chief Joseph Dam, Douglas County, Wash. The project was designed by Howard, Needles, Tammen and Bergendoff of Seattle, Wash. The other Award of Merit went to the Los Angeles District for the Indian School Park at Scottsdale, Ariz., designed by Cella, Barr, Evans and Associates of Tucson, Ariz. There were six Honorable Mention awards in this category. The New Orleans district received an Honorable Mention for the Orleans Marina Floodwall at Orleans Parish, La.

Other Honorable Mention awards went to: Rock Island district for the Clinton Local Flood Protection Project at Clinton, Iowa; Walla Walla district for the Lower Monumental Lock and Dam on the Snake River, Washington; the Middle East division for the Solar System for the Airborne and Physical Training School, Tabuk, Saudi Arabia, designed by Sverdrup and Parcel and Associates, Inc., St. Louis, MO; the Wilmington district for the U.S. Army Coastal Engineering Research Center Field Research Facility at Duck, N.C., designed by J.E. Greiner Co., Baltimore, Md; and Vicksburg district for the Joplin Bridge, Lake Oauchita, Montgomery County, Ark., designed by Garver and Garver, Inc., of Little Rock, Ark.

Environment

An environmental project is defined as an area plan or site development which preserves the

unique and important ecological, aesthetic and cultural values of our national heritage. Or, it conserves or wisely utilizes the natural resources of our nation for the benefit of present or future generations, or restores, maintains or enhances the natural and man-made spaciousness, beauty and other measures of quality. The project may also create new opportunities for people to use or enjoy their natural environment.

Factors considered in the selection of a project for an award are the significance of the contribution toward attaining the above conditions, the unique or innovative aspects of the effort, and the actual results in terms that clearly describe the manner in which the achievement contributes to or accomplishes one or more of these emphasized conditions.

Where possible, the justification is stated in terms that express the change by measurement, quantification or comparison with a previous condition. The award does not have to be for an entire project but may be for a portion or action associated with the project.

The achievement must have been completed within the past three years.

Projects judged

Twenty-three entries were judged in the environmental competition. Of these 23, eight awards were made. The Honor Award went to the New Orleans district for the Marsh Creation Along Southwest Pass on the Mississippi River in Plaquemines Parish, La. There were three Awards of Merit in this category. The Buffalo district received an Award of Merit for the Presque Isle Preservation project in Erie, Pa. Other Awards of Merit went to the Kansas City district for the Little Blue Channel, Jackson County, Mo., and to the Jacksonville district for Brooker Creek Park on Lake Tarpon, Fla. The latter project was designed by McElvy, Jennewein, Stefany and Howard, Architects and Planners, Inc. Honorable Mention awards in the environmental category went to the Philadelphia district for Blue Marsh Lake in Berks County, Pa.; to Memphis district for the Wappapello Lake Wildlife Management Plan, Wappapello, Mo; to St. Louis district for the Rend Lake Wildlife Management Program, Benton, Ill; and to the Los Angeles district and the city of Scottsdale, Ariz., for the Indian School Park, Indian Bend Wash, Scottsdale, Ariz., designed by Cella, Barr, Evans and Associates.

NSPE to give awards

WASHINGTON, D.C. In conjunction with the 31st annual National Engineers Week celebration, the second annual Federal Engineer of the Year awards program will be held by the National Society of Professional Engineers (NSPE) Feb. 25 at the Mayflower Hotel in Washington.

Secretary of Defense Caspar Weinberger has been invited to address those attending the event. NSPE President William A. Cox Jr. of Norfolk, Va., will be master of ceremonies.

The U.S. Army Corps of Engineers was among 14 government agencies submitting nominees for the title of Federal Engineer of the Year.

The NSPE judging panel, composed of distinguished individuals from the fields of government and engineering, will designate one nominee from each agency as that agency's Engineer of the Year. From among this select group, the panel will then name a Federal Engineer of the Year.

Both the Corps of Engineers and the Naval Facilities Engineering Command will also be using this event to announce each agency's annual design awards.

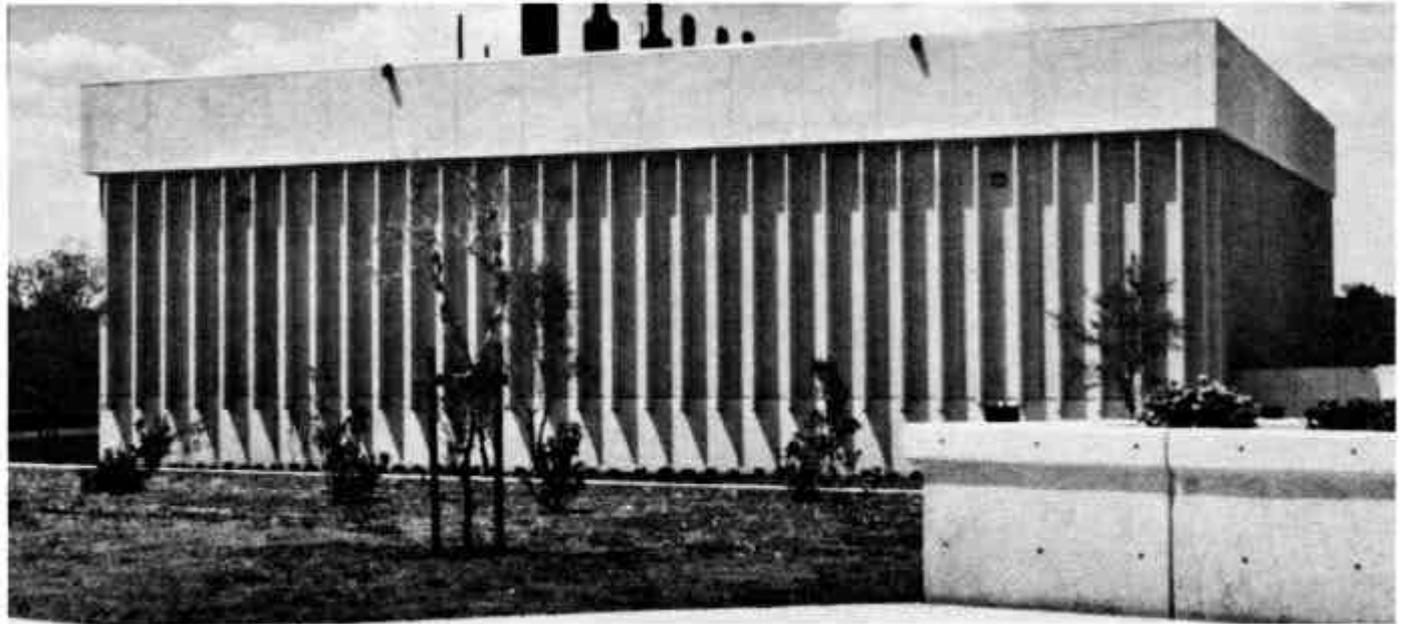
In addition to the participating agencies, attendees at the awards program will include a large number of prominent engineers from the Maryland, Virginia and District of Columbia NSPE.

Honor award: Wilford Hall Medical Center Total Energy Plant, Lackland AFB, Texas

Designed by: (Joint venture) Benham-Blair and Associates, Oklahoma City, Okla., and Page Southerland Page, Austin, Texas.

Supervised by: U.S. Army Engineer District, Fort Worth

Jurors' comments: "The recipient of the Honor Award for the engineering competition strikes the jury as a carefully and thoroughly engineered project. The designers utilized extensive engineering studies to determine the most cost effective means of meeting the total energy requirements for a major Air Force hospital. The key environmental and aesthetic problems were handled very well. Emergency requirements peculiar to a life saving institution had to be dealt with, and were different for various segments of the facility. The building architecture blends in very well with that of the hospital buildings sharing the same site, with all unsightly outside equipment kept at the rear of the building and out of sight from the hospital itself."



A unique power plant that cuts energy costs more than half by recovering waste heat to produce all the heating, cooling, and electricity needs of about 1.28 million square feet of hospital area is operating reliably at Wilford Hall Medical Center, the largest medical facility in the Air Force. Located at Lackland Air Force Base, Texas, the one-of-a-kind energy plant is part of a \$71.7 million rehabilitation and expansion program at the Air Force's

largest teaching hospital, which continued to function without pause during construction.

The total energy plant is a combined power generating station and heating and cooling system fueled by six diesel-driven generators. Each engine has a heat recovery system that generates steam from its exhaust system. The water and oil cooling systems of the engines provide hot water at 185 F, and the air cooler furnishes 100°F to 140°F

water. The recovered steam is used to heat domestic hot water, humidify, and provide space heat for the hospital while cooling the engines. Two diesel engine-driven centrifugal chillers, two hot water-driven absorption machines, and one steam-driven absorption machine do the cooling. The hospital's existing standby heating and cooling system can be switched over immediately to other power sources if the total energy system fails.

Award of merit: Bar Point Harbor Expansion, Ketchikan, Alaska



Designed and supervised by: U.S. Army Engineer District, Alaska

This project consists of a precast concrete floating breakwater of two sections measuring 953 feet long and 122 feet long. Four rectangular precast concrete units are bolted together to form a 40-foot-long module. The modules are then post tensioned together with prestressing cable to form 240-foot-long sections. These sections are then connected with steel stressing to cables to form the two segments. The segments are anchored in a maximum of 130 feet of water with galvanized anchor chain connected to concrete anchors. The complete breakwater system protects the mooring floats and boats from waves up to four feet in height.

Jurors comments: The floating breakwater is unique in both design and construction tech-

nique. The final design permitted the many pieces to be cast at the point of facility location and

shipped to the site. Total concrete volume had to be controlled very carefully.

Award of merit: Floating Cofferdam, Chief Joseph Dam, Bridgeport, Wash.



Raising Chief Joseph Dam and reservoir 10 feet to increase energy production presented unique cofferdam design challenges. The primary challenge was the demolition mid-reconstruction of a 19-bay spillway. Spillway reconstruction entailed the succes-

sive cofferdamming of 20 outmoded piers without curtailing power production or impeding riverflow. A study after preliminary design resulted in changing the steel floating cofferdam to a reinforced concrete floating cofferdam weighing 5,200 tons.

The change resulted in a saving of \$1.5 million. Studies made to determine best after-construction usage of the floating cofferdams showed the optimal use to be as anchors for a debris boom with a saving of \$48,000.

Designed by: Howard, Needles, Tammen and Bergendoff, Seattle, Wash.

Supervised by: U.S. Army Engineer District, Seattle

Jurors' comments: "This project involved the rebuilding of a 19-bay spillway without curtailing power generation. Optimizing studies led to the use of a floating cofferdam. The design of the floating cofferdam called for the structure to be built horizontally, towed to the site and then to be rotated 90 degrees to form a cofferdam around four piers, consequently spanning three spillways at each setting. The structure was of reinforced concrete resulting in a savings of \$1.5 million compared with the cost of using steel."

Award of merit: Indian School Park, Scottsdale, Ariz.

Indian School Park is a 60-acre park that is part of the larger Indian Bend Wash Greenbelt Floodway. The greenbelt floodway and Indian School Park are designed to pass flows of up to 30,000 cubic feet per second. The park is an outstanding example of a multipurpose planning effort in which the engineering solution to the hydraulic requirements allowed the incorporation of recreation facilities in the final project design. The park features terraced recreation siting, which insures that the hydraulic capacity of the wash is maintained and insures protection from damaging flows for the expensive recreation facilities.

Jurors' comments: "This project turns what could have been a routine engineering approach to solving a flooding problem into a highly visible and valuable community asset. The traditional answer would have been a ditch to handle normal flow with a

flood plain, void of any use, to accommodate periodic peak flows. This flood plain area has been developed into an attractive community recreation project. Various flood levels are accommodated on specific portions of the land by design. Facilities

have been designed so as not to impede the flow of water. Environmental and aesthetic concerns have been well met through good engineering design."

Designed by: Cella, Barr, Evans and Associates, Tucson, Ariz.

Supervised by: U.S. Army Engineer District, Los Angeles and city of Scottsdale, Ariz.



Honorable mention: Clinton Local Flood Protection Project, Clinton, Iowa

The riverfront park reach of the flood protection project is located along the west bank of the Mississippi River for about 1½ miles. The project consists of earthen levees, concrete floodwalls, closure structures, and interior drainage facilities. The flood protection structures have been designed and landscaped to merge visibly with the existing setting while providing public access to the river by road ramps, steps and sidewalks. A commanding view of the river is provided.



Designed and supervised by:
U.S. Army Engineer District,
Little Rock

Jurors' comments: "The jury was particularly impressed with the general environmental enhancement provided by this engineering project, which also produced substantial public recreational facilities and a pleasant informal atmosphere consonant with the locale."

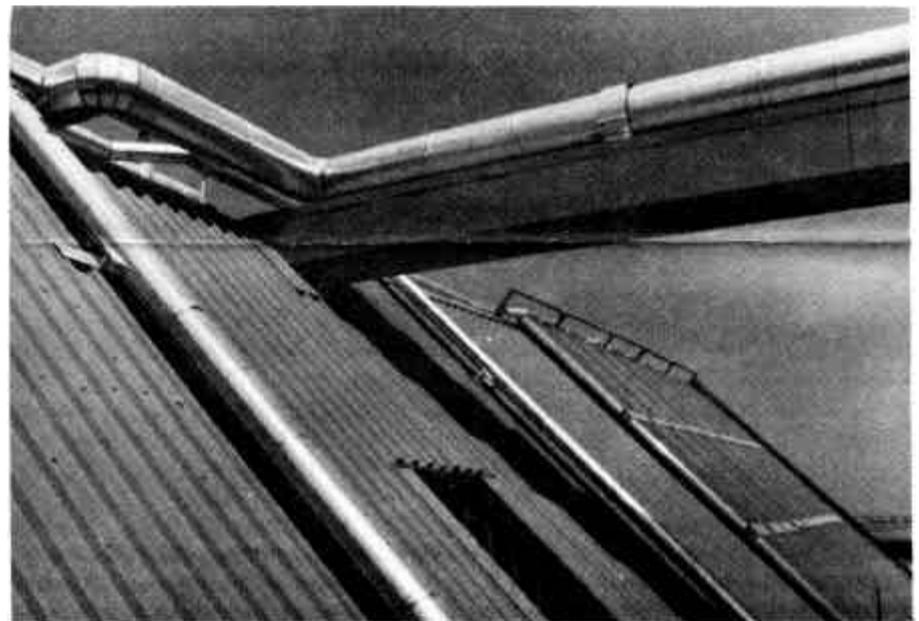
Honorable mention: Airborne and Physical Training School, Solar System, Tabuk, Saudi Arabia

Designed by: Sverdrup and Parcel and Associates, St. Louis, Mo.

Supervised by: U.S. Army Engineer Division, Middle East

Jurors' comments: "The solar panel system included in this Saudi Arabian military school complex is extremely large and provides an impressive 70 percent of the entire domestic hot water and space heating requirements. Innovative design details helped produce a cost for the solar portion which was less than one-half of the budgeted amount."

This is the largest solar system ever built by the Corps of Engineers and is perhaps the largest system of its kind in the world. The system provides 70 percent of the heating requirements (100 percent of the domestic hot water and 40 percent of the building space heating) to 14 buildings totalling over 325,000 square feet. The hot water requirements alone would supply about 400 American homes. The massive array of solar collectors covers 47,000 square feet and is mounted on the field house, which is the size of two football fields. Water is solar heated, pumped to storage tanks, then distributed to various buildings.



Honorable mention: Joplin Bridge, Lake Oauchita, Ark.



Jurors comments: This bridge in a rural setting fits in beautifully with the background. The designer has done a good job of material selection and design to make an artificial object appear natural in the available setting. The bridge which was replaced was also of wood so the transition to the new was very subtle to users of the structure. The foundation design was unusual, in that rock-filled gabions were used instead of the conventional reinforced concrete.

Designed by: Garver and Garver, Inc., Little Rock, Ark.

Supervised by: U.S. Army Engineer District, Vicksburg

A new structure which replaced the old, misaligned, one-lane Joplin Bridge connects an island in Lake Oauchita to the mainland. The new two-lane, wooden bridge, supported by stone-filled gabion abutments, blends well with the existing rocky terrain.

Honorable mention: Lower Monumental Lock and Dam, Snake River, Wash.

Designed and supervised by:
U.S. Army Engineer District,
Walla Walla

Jurors' comments: "The engineering solution which provided a very economical resurfacing of this navigation lock also resulted in an even more impressive savings in operational use. Instead of being out of service for several years the completion of the resurfacing took less than three weeks."

The inside chamber walls of the Lower Monumental Lock had deteriorated to the point that three-inch size aggregate was exposed and falling on barges and pleasure boats 100 feet below. A conventional approach was estimated to cost \$26 million and would close the lock to traffic for a long period of time. The Walla Walla district evaluated several repair techniques and, based on test data, chose to apply a three-eighths-inch latex fiberglass spray-on coating. The project was successful and a great deal of time and money were saved.



Honorable mention: Coastal Engineering Field Research Facility, Duck, N.C.



The CERC field research facility is a concrete pier supported by steel piles, an approach ramp and platform on concrete piles and a laboratory building. The pier extends about 1,840 feet into the Atlantic Ocean, to a 20 foot water depth. The pier provides a stable platform for data collecting activities. The lab building functions as offices for research persons, a center for data collection equipment, and a shelter for a research vehicle. The facility is designed to function even during severe weather conditions.

Designed by: J.E. Greiner Co., Inc., Baltimore, Md.

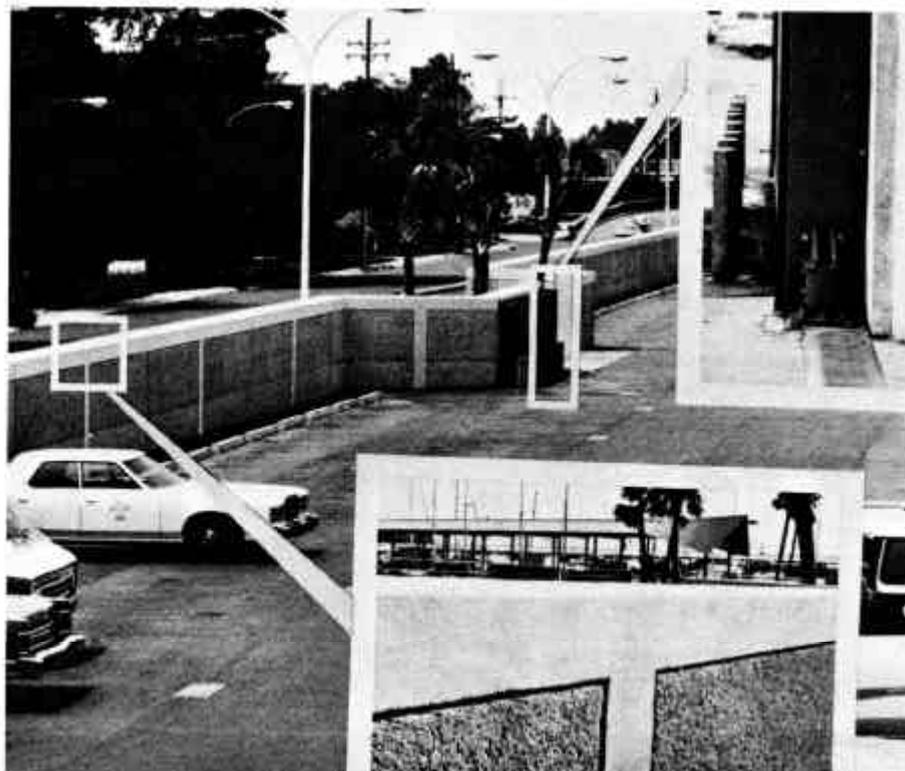
Supervised by: U.S. Army Engineer District, Wilmington

Jurors' comments: "The jury was gratified with the extra care given to the visual appearance, as well as the engineering simplicity, of this shoreline pier research facility. The residential character of the building portion seems to fit well into the natural and built-up environment of this storm ridden North Carolina coastal area."

Honorable mention: Orleans Marina Floodwall, New Orleans, La.

Designed and supervised by:
U.S. Army Engineer District,
New Orleans

The project consists of reinforced concrete floodwall with three swing-type gates through the wall for access to an adjacent marina. Conventional design and construction methods were used; however, special emphasis was placed on the aesthetic quality of the floodwall. An exposed aggregate finish, outlined by an ivory toned finish, was used to beautify the wall. The completed wall provides vital flood protection without jarring the atmosphere.



Jurors comments: This is a simple, straightforward floodwall design where the opportunity to fully explore an improvement in the usual utilization and unappealing appearance was taken. The results fully justify the extra attention given to aesthetic consideration.

Honor award: Walter Reed General Hospital, Washington, D.C.

Designed by: Stone, Marraccini and Patterson Architects and Planners; Milton T. Pfleuger Architects, San Francisco, Calif.

Supervised by: U.S. Army Engineer District, Baltimore

Jurors' comments: "The jury commends the well resolved relationship of the new hospital to existing buildings and the surrounding environment. Parking is recessed below the entry plaza within the classical geometry of the site plan. The complex functions of the program are resolved with discipline and consistency. The exterior facade successfully integrates maintenance and sun control requirements within the well scaled project. Structural and mechanical systems reinforce the architectural concept."



The hospital's square base consisting of four lower floors (housing diagnostic, treatment, and ancillary services) supports a larger three-floor component. The upper component accommodates clinics in a central core with nursing units in a double corridor peripheral structure separated from the core by landscaped and open courts starting at the fifth floor.

The design accomplishes the separation of vehicular and pedestrian traffic by providing convenient access to a two-level garage below the entrance plaza, and by providing three service elevators at each quadrant of the building for inpatients and staff and six elevators at the main entrance lobby for outpatients and visitors. A symmetrical overall plan achieves optimal circula-

tion while maintaining functional relationships.

Inter-floor space above each occupied floor houses the mechanical, electrical and conveying systems. This feature provides walkway decks over the entire area for maintenance personnel. This feature will minimize operational and maintenance costs and optimize future functional changes.

Award of merit for restoration: Gruber Wagon Works, Berks County, Pa.



Designed by: John Milner Associates, West Chester, Pa.

Supervised by: U.S. Army Engineer District, Philadelphia

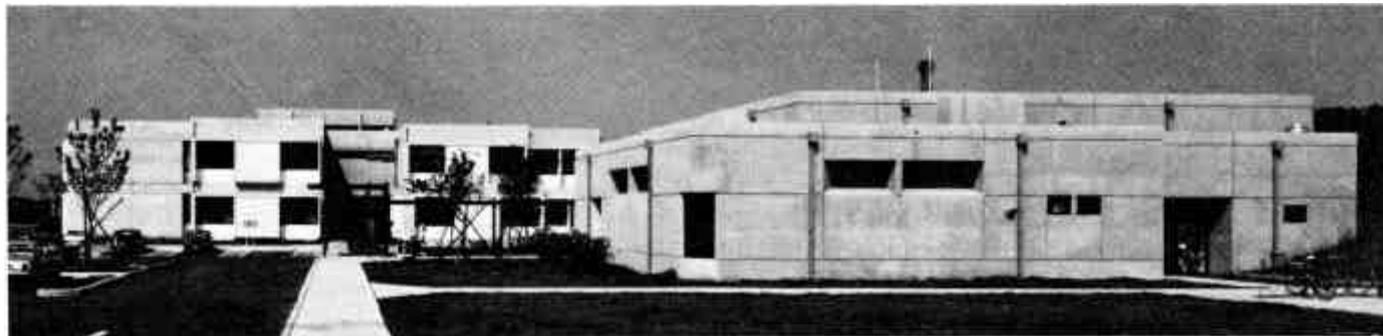
The restored Gruber Wagon Works—now a National Landmark Structure—is believed to be the only remaining example of the wagon-making industry in the United States. It offers an unparalleled opportunity for historical and educational activities.

Jurors' comments: "The jury commends the preservation and sensitive restoration of a unique example of American technology representing the 1883-1910 era. The building and its authentic contents straightforwardly record an irreplaceable chapter in American architecture and industry."

Award of merit: Dependent High School, Camp Zama, Japan

Designed by: Onuma and Wood Associates, Inc., Tokyo, Japan

Supervised by: U.S. Army Engineer District, Japan



Jurors' comments: "The jury commends the appropriateness of scale and consistent expression of materials of this educational facility. The reinforced concrete exterior is sensitively composed and handsomely finished. Exterior louvers respond to changing solar requirements. The project is well planned and responds sensitively to its geographical region."

This project was developed to provide a highly coordinated facility incorporating up-to-date educational concepts for use by dependent families in Japan. The school consists of 14 general classrooms, special classrooms, science laboratories, kitchen and dining area, resource center and administration offices in a 2-story building, as well

as a 1-story building housing an auditorium and music classrooms. Classrooms are grouped in common-functional clusters of 3 or 4 with a teacher planning center for each cluster. A central forum, 2 stories high, provides the focus for interior spaces and for both formal and informal student gatherings. The auditorium and music

classrooms are accessible by covered walkways. An elevator has been provided for both handicapped persons and for delivery of large items to second floor spaces. The complex has been sited to create a visual and physical link between the new buildings, an existing athletic field and the adjacent family housing complex.

Award of merit: Harry S. Truman Visitor Center, Benton County, Mo.



The concrete structure, with a broken rib concrete exterior, was designed and situated to blend harmoniously with the surrounding environment. This multilevel structure houses exhibits and audio-

visual programs which introduce the visitor to the project and Corps history, as well as to the pre-history and development of the area. The project provides an inspiring panoramic view of the dam

and powerhouse, lower reaches of the lake, and the downstream area from the inclosed cantilevered observation deck.

Designed by: Linscott-Haylett and Associates, Kansas City, MO.

Supervised by: U.S. Army Engineer District, Kansas City

Jurors' comments: "The jury commends the sureness of siting and consistent use of materials that characterize this design. Rough textured concrete is used appropriately on both the exterior and the interior. The main entry is inviting and well scaled. An interior ramp interconnects varying levels of the well organized plan."

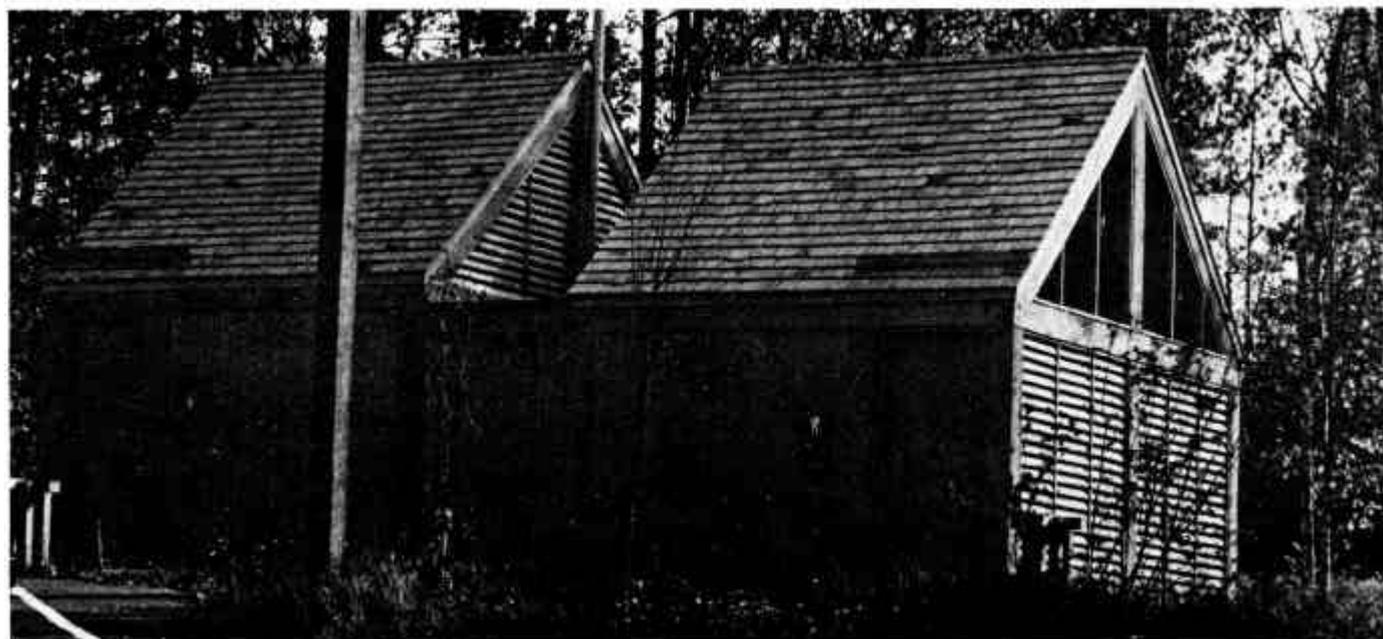
Award of merit: Comfort Station, B. Everett Jordan Lake and Dam, Wilmington, N.C.

Designed by: Ballard, McKim and Sawyer, Architects, Wilmington, N.C.

Supervised by: U.S. Army Engineer District, Wilmington

The design is characteristic of rural farm buildings in the area, having a simple block form carefully punctured for natural light and ventilation.

Jurors' comments: "The jury commends the simplicity and directness of this design for a humble project. Wood siding, louvers, exposed structural frame and shingle roof are straightforwardly and clearly expressed. This project qualifies for architectural design excellence."



Landscape architecture

Honor award: Brooker Creek Park, Lake Tarpon, Fla.

Designed by: McElvy, Jennewein, Stefany and Howard, Tampa, Fla.

Supervised by: U.S. Army Engineer District, Jacksonville

The park preserves the rustic beauty and natural resources of the area while enhancing available opportunities for public access and enjoyment. Structure areas were sited and landscaping designed to blend with the natural vista while providing necessary amenities. Clearing, paving and grading were kept to a minimum; existing drainage ditches were converted to canoe trails; and a section of shore along Lake Tarpon was developed into a sandy beach. Almost two miles of scenic boardwalk were routed through the park wetlands without loss of trees or vegetation. A repetition of stone and wood throughout the park facilities provides continuity.



Jurors' comments: "Nice use of materials compatible with the project image. Exhibits a respect and sensitivity for the site. Provides special opportunities for the user to experience nature with minimal detrimental impact on the site. A straightforward solution."

Award of merit: Waterloo Local Flood Protection Project, Waterloo, Iowa



Designed and supervised by:
U. S. Army Engineer District,
Rock Island

The downtown reach of the project extends approximately one-half mile along both banks of the Cedar River. The project consists of earthen levees, concrete floodwalls, closure structures and interior drainage facilities. Flood protection facilities have been designed and landscaped to merge visibly with the existing urban setting while providing public access to the river by steps and sidewalks. A commanding view of the river is also provided.

Jurors' comments: "Well thought-out solution. Nice sculptural grading contrasts with the rigidity of the structural walls. Access to the water is accommodated in a pleasant yet functional manner."

Landscape architecture

Award of merit: Flint River Flood Control Beautification Project, Flint, Mich.

Designed by: CHNMB Associates, San Francisco, Calif., and HARZA Engineering Company, Chicago, Ill.

Supervised by: U.S. Army Engineer District, Detroit

The project runs through the downtown business districts of the city of Flint. In addition to providing flood protection for a 67-year flood flow, a major objective of this project was to beautify the riverfront and help revitalize the downtown area. Beautification features include an inflatable dam, an amphitheater and a landscaped island. The project has been successful in transforming a rundown section of the city into an attractive riverfront center which is drawing people and development to the downtown.



Jurors' comments: "A major waterfront improvement in an urban area. Sensitive design, providing the user with the op-

portunity to have access to the water's edge in a unique and attractive way. The project accommodates the functional needs

of flood control and upgrades the urban landscape, creating opportunities for quality urban development."

Award of merit: Indian School Park, Scottsdale, Ariz.

Designed by: Cella, Barr, Evans and Associates, Tucson, Ariz.

Supervised by: U.S. Army Engineer District, Los Angeles

Jurors' comments: "Provides for a well designed recreational facility, recognizing the need to accommodate flooding. Attractive and functional project, an asset to the community. Nice marriage of landscape architecture and engineering design."



The go-acre park is part of the large Indian Bend Wash project, which collects and safely transports flood flows of up to 30,000 cubic feet per second. Careful grading and

seeding of the wash with Bermuda grass has transformed the site into a greenbelt, offering extensive active and passive recreation areas. Providing open space and recrea-

tional opportunities, as well as flood protection for the city of Scottsdale, the park is an excellent example of effective multipurpose planning.

Honorable mention: Charles River Dam, Boston, Mass.



Designed by: C.E. Maguire, Inc., Waltham, Mass.

Supervised by: U.S. Army Engineer Division, New England

The facility includes a river pump station, three navigation locks, a fishway, sluiceways, a police harbor patrol building and a landscaped park.

Jurors' comments: "Good landscape treatment of a major architectural/engineering project in an industrial urban environment. A refreshing treatment of a functional facility."

Honor award: Marsh Creation Along Southwest Pass, Plaquemines Parish, La.

Designed and supervised by:
U.S. Army Engineer District,
New Orleans

Jurors' comments: "By carefully planned low-elevation disposal of dredge spoils on peripheral areas along the Southwest Pass, extensive new marshland habitat was created. The transformation of otherwise objectionable spoil dumps into ecologically -productive wildlife habitat represents uncommon environmental enhancement that should be a deliberately sought objective at other Corps projects."



The Louisiana coastal zone contains some 3,800 square miles of marshy wetlands the product of sediments brought down by the Mississippi River. But in recent years, there has been a decline in the area of coastal wetlands. At the same time, some 6 million cubic yards of sedi-

ment are dredged annually from the Southwest Pass to maintain deep-draft access to the ports of New Orleans and Baton Rouge. Before 1975, the material was deposited in confined disposal areas and made little contribution to new wetlands. The new disposal process consists of depositing

dredged material in such a way as to create marshes that provide diverse habitat for wildlife. Since the program began, about 1,500 acres of new land have been created along the Southwest Pass of the Mississippi River.

Award of merit: Brooker Creek Park, Lake Tarpon, Fla.



Designed by: McElvy, Jennewein, Stefany & Howard, Architects/Planners, Incorporated, Tampa, Fla.

Supervised by: U.S. Army Engineer District, Jacksonville

A unique legacy of natural wilderness, Brooker Creek Park is located in a highly populated area of Florida. The wetland boardwalks, built without destroying trees or major vegetation, allow visitors to view wildlife and plants without disturbance. Natural materials and forms existing on the site were used for construction, providing continuity. Recreation facilities include picnic areas, boat ramps, bathhouses and an observation tower.

Jurors' comments: "A superior blending of natural features and materials with man-made facilities to enable urbanites to observe and enjoy natural surroundings. Innovative approaches to design and construction that are particularly laudable include energy demonstrations, grassy parking areas and conscious reduction of maintenance costs."

Award of merit: Little Blue Channel, Jackson County, MO.

Designed and supervised by:
U.S. Army Engineer District,
Kansas City

The Little Blue Channel modification is an urban flood control project. By alternating excavation from bank to bank along the old channel, the design reduces the impact on vegetative cover and tree growth in comparison to more traditional flood control channel designs. Segments of natural channel were left undisturbed to provide flow-through habitat for fish and other aquatic life.

Jurors' comments: "While primarily providing for flood control, the project advances channel treatment practices by alternating treatment from bank to bank to preserve one stream-side in natural vegetation."



Award of merit: Presque Isle Preservation, Erie, Pa.

Designed and supervised by:
U.S. Army Engineer District,
Buffalo

Presque Isle Preservation project protects several beaches along a peninsula near one of the finest natural harbors on the Great Lakes. In addition to unique ecological characteristics, the peninsula is a popular state park with many recreation opportunities, including sand beaches. Unfortunately, the peninsula and its beaches have a history of serious erosion. To solve the problem of erosion, three experimental prototype stone breakwaters were constructed offshore from an area of severe erosion. Rubblemound construction was chosen because of its natural appearance, wave absorbing qualities, and ability to enhance fish habitat.

Jurors' comments: "This project features a successful innovative approach to beach erosion control and restoration that works with the forces of nature rather than against them. At modest expense, new opportunities for swimming and fishing have been erected while restoring a badly eroded beach area in an environmentally sensitive manner."



Honorable mention: Indian School Park, Scottsdale, Ariz.

Designed by: Cella, Barr, Evans and Associates, Tucson, Ariz.

Supervised by: U.S. Army Engineer District, Los Angeles, and the city of Scottsdale, Ariz.

Indian School Park is a 60-acre park that is a part of the larger Indian Bend Wash Greenbelt Floodway. The park is an example of a multipurpose project. This solution to the problem of flood control incorporated recreation facilities into the final design. Indian School Park features terraced recreation siting. This insures that the hydraulic capacity of the wash is maintained and the recreation facilities are protected.

Jurors' comments: "In an extremely difficult area, the solution provides needed recreational open space. Thoughtful design considerations combine efficient, unobstructed passage of flood waters with a variety of recreational facilities in a naturalistic setting. Creating the equivalent of a giant 'grass waterway' minimizes flood damage while enhancing the community's environmental quality."



Honorable mention: Rend Lake Wildlife Management Program, Benton, Ill.



Designed and supervised by: U.S. Army Engineer District, St. Louis

Rend Lake is an 18,900-acre lake, surrounded by 21,000 acres of public land. The lake, formed by the impoundment of the Big Muddy River, is the winter home for more than 90,000 Canadian geese.

By enhancing wildlife populations, the Rend-Lake program offers opportunities for Americans to enjoy their wildlife heritage. Hunting, fishing and other outdoor recreation opportunities abound.

Jurors' comments: "An outstanding example of intensive land-use management, at modest cost, to maintain and enhance wildlife populations, especially waterfowl."

Environment

Honorable mention: Blue Marsh Lake, Berks County, Pa.

Designed and supervised by :
U.S. Army Engineer District,
Philadelphia

The integrated features of this project provide for flood control, water supply and recreation. The lake is surrounded by 4,000 acres of government-owned land devoted to recreation, crop management and wildlife habitat. Visitors can enjoy hunting, fishing and camping as well as historic and archeological programs. Blue Marsh Lake is an example of the Corps ability to harmonize a multipurpose project with the environment.



Jurors' comments: "The project incorporates numerous small but noteworthy environmental features that in the aggregate provide a harmonious development. The emphasis on inter-agency cooperation to achieve a comprehensive solution is especially commendable."

Honorable mention: Wappapello Lake Wildlife Management Plan, Mo.



Designed and supervised by:
U.S. Army Engineer District,
Memphis

The intent of the program was to fully use the natural resources available at the lake and to provide optimum habitat for a variety of game and non-game wildlife. The changes included planting fruit and cover trees, providing nesting boxes for geese and the reclaiming of old fields. The Corps and the Missouri Department of Conservation also shared in the establishment, maintenance and protection of two wildlife refuges. A wildlife observation trail was completed in 1979.



Jurors' comments: "An excellent example of blending natural resources with scientific wildlife management. This effort was done in cooperation with state agencies, to achieve restoration of productivity and enhanced multiple use of the area."

Distinguished jurors for 1980 program

Engineering

President of the American Society of Civil Engineers, Irvan F. Menderhall is chairman of the board of Daniel, Mann, Johnson & Mendenhall in Los Angeles, an international architecture and engineering firm, of which he is a founder. Established in 1946, the firm is now one of the largest American consulting firms of its type with some 1,200 employees and 40 offices.



William Marshall Jr. has been a principal with McGaughy, Marshall & McMillan, Architects, Consulting Engineers and Planners since 1955. The firm, which has its home office in Norfolk, Va., and five other offices in the U.S. and abroad, has recently completed such projects as design of the Saudi Arabian Military Academy and the Smithsonian Rehabilitation Program.



Everett S. Thompson is president of Williams & Works, Inc., a civil/sanitary engineering firm headquartered in Grand Rapids, Mich. Prior to joining that firm in 1956, he was assistant city manager and engineer in Mt. Pleasant, Mich., and then city manager in St. Johns, Mich. He is registered as a professional engineer in nine states.



Architecture

Robert B. Marquis firm, Marquis Associates, Architecture, Planning, Interior Design of San Francisco, has been recognized for its achievements in the fields of low-cost housing, university and college buildings, and private residences. The firm has received more than 40 awards for design. Marquis has been in private architectural practice in San Francisco since 1953.



R. Randall Vosbeck is a principal of VVKR Incorporated, an architectural, engineering and planning firm, with offices in Virginia, Maryland and West Virginia. In addition to traditional architectural services, the firm is engaged in all aspects of planning, engineering, interior design and construction management. He is president of the American Institute of Architects.



William N. Morgan's firm is William Morgan Architects of Jacksonville, Fla. He is presently conducting design research under the auspices of the Graham Foundation for Advanced Studies in the Fine Arts, and acting as advisor to the Archaeological Conservancy and the National Endowment for the Arts. Morgan has received a number of design awards.



Landscape architecture

President of Wirth and Associates, Billings, Mont., since 1961, Theodore J. Wirth is a private consultant specializing in natural resources, land use and recreation planning. He is presently in charge of park planning and design administration for Asir National Park, Saudi Arabia. Wirth was formerly a planner for Grand Teton National Park and project supervisor and planner for Yellowstone.



William A. Behnke is president of William A. Behnke Associates, Inc., Landscape Architects, a firm he founded in Cleveland, Ohio, in 1970. In addition, he is a partner in the firm of Behnke, Dickson Tkach, Landscape Architects, Architects and Engineers. Behnke is president of the American Society of Landscape Architects.



Sally Schauman has been an associate professor and chairwoman of the Department of Landscape Architecture at the University of Washington in Seattle since 1979. Prior to that time, she was chief landscape architect for the Soil Conservation Service, U.S. Department of Agriculture. Schauman has also practiced in the private sector with Lewis Clarke Associates.



Environment

Professor and head of the Department of Recreation and Parks at Texas A&M University, Leslie M. Reid established the department in 1965. Since 1973 he has been active in park and environmental studies in Central and South Africa, Mexico, Guatemala and Europe, and in park development in Central and South America.



Richard H. Stroud has been executive vice president of the Sport Fishing Institute, Washington, D.C., since 1955. A member of several American and British scientific societies concerned with aquatic resources, he has published extensively on fish biology and game fish management. He has also organized or helped plan more than 30 scientific symposia on fisheries.



Hester A. Davis is professor of anthropology at the University of Arkansas, Fayetteville, and state archaeologist with the Arkansas Archeological Survey. Prior to becoming state archaeologist in 1967, she served as assistant director of the University of Arkansas Museum. She has participated in archeological research in several states.

