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COVER: THE BOSPORUS BRIDGE spans 4900 feet to link two continents. The triumph of connecting Europe with Asia is made all the more meaningful by the many construction innovations which set this one apart from the world's family of single span suspension bridges.

Picture Credits: pg. 8 B. B. Paul; pg. 12 top Ergun Cagatay; pg. 40 Gordon H. Schenck.

MATERIAL SHORTAGES: THE CASE AGAINST GOVERNMENT INTERFERENCE Uncle Sam's knack for writing unwise (if not absurd) regulations has contributed greatly to many material shortages suffered by general contractors.

BRIDGE ACROSS THE BOSPORUS Since the time of King Darius, 512 B.C., there's been a dream to link Asia with Europe with a bridge across the Bosphorus. Now the dream is a reality in the form of one of the world's longest single span suspension bridges.

AGC RATES CONGRESS Here's the "report card" of the 93rd Congress. How did your Senators and Representatives vote on the issues of vital concern to the construction industry?

S 2237 APPLYING ANTITRUST LAWS TO LABOR UNIONS Senator Strom Thurmond (R-SC) has authored a bill which would have many ramifications across the entire spectrum of business-unionized labor relations. In this exclusive interview he provides answers to nine crucial questions concerning the provisions of his bill and his reasons for proposing it.

A SCIENTIFIC APPROACH TO BIDDING RANGE ESTIMATING Making the best guess possible is the difference between winning a bid or being an also-ran. Between making a profit or losing your shirt. Through the magic of computer analysis there is a way to cope with the uncertainties of bidding.

AN INVERSE OF MURPHY'S LAW Only the doomsayers could be unhappy with the renovation of Idaho Falls' center city streets and the efforts put forth by the Kennaday Paving Co. Credit an outstanding community relations program as part of a job well done in the face of many potential problems.

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THE MANAGEMENT MAGAZINE FEBRUARY 1975 VOLUME LVII NUMBER 2

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COVER: HAWAII—THE ISLAND STATE—scene of the 56th Annual AGC convention and the inspiration for three feature articles in this issue. We trace the development of the state, highlight some of the present building and analyze the current construction markets.

Picture Credits: Pages 26-33: Bureau of Reclamation; U.S. Dept. of Interior; page 34: B. Paul

HAWAIIAN CONSTRUCTION THE PRESENT PERSPECTIVE Construction is the largest industry in the state and it is as varied as the population. 22

BUILDING MR. HOOVER'S DAM Six construction firms took on the challenge of building the dam that many people said couldn't or shouldn't be built. 26

CONSTRUCTION MANAGEMENT IN HIGH-RISE BUILDING TECHNIQUES By fulfilling the owner's needs, Construction Management benefits the contractor as well. 34

TINKERING WITH THE TIMETABLE Overlapping several major construction tasks in the building of the Los Angeles Veterans hospital is saving time and money. 40

HAWAIIAN CONSTRUCTION THE EARLY YEARS The modern thriving Island State was born in a series of volcanic eruptions and the erection of thatched huts. 43

HAWAIIAN CONSTRUCTION THE ECONOMIC GROWTH The construction industry in the Aloha State hit the \$1 billion mark in 1974. 45

CURBING INFLATION THROUGH ANTITRUST LEGISLATION A Federal Reserve Governor surveys the economy and recommends applying antitrust laws to union labor. 48

THE COST-SAVING CHALLENGE OF VALUE ENGINEERING The main objective of the Corps of Engineers VE program is to increase the worth of each dollar spent. 53

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COVER: JOHN N. MATICH. AGC's new President is a hard working, energetic man who has spent his life in the construction business. In this issue, we present a personality sketch and career recap of the new President. The cover photo is by George Mikitzki.

Picture Credits: Pgs. 30-32, Richard Bing; pg. 34 photo courtesy of Bureau of Public Roads, Dept. of Commerce.

METRO WASHINGTON'S BEDEVILED SUBWAY Phase I of the massive four-phase subway project in Washington, D.C., is scheduled for completion in August—4.6 miles of track and six stations will open three years behind schedule. Since ground was first broken, the project has been plagued with big problems.

ECONOMIC POLICY OPTIONS FOR 1975 Selecting the proper mix of government economic policy for the new year is unusually difficult. The effort last year was to stem inflation, now we find ourselves in the worst recession since World War II. An expert says that most of the "new economics" reflected in government policy so far is out of tune with the times. What's more, the much ballyhooed tax cut may be a cure that's worse than the disease.

THE GREAT TRANSCONTINENTAL RAILROAD RACE When the golden spike was driven home at Promontory Point, contractors had done what no political force had ever accomplished—bound the nation together. Racing from Omaha and Sacramento, they beat the clock by five years despite the snows and the Indians!

THE NEW AGC OFFICERS President John N. Matich, Senior Vice President Ben M. Hogan, Vice President S. Peter Volpe and Treasurer Carl Erickson are the new team of executive officers for AGC.

HOW MANY BRICKS DOES A BRICKLAYER LAY? The question first arose when man took brick and mortar in hand. Now, thanks to a \$210,000 research project, there is an answer.

PAPERWORK MANAGEMENT Perhaps it's because of the way many construction firms have evolved over the years, but the sad truth is that the record keeping done by many firms is much less than adequate. Here's a presentation on procedures and forms which have been specifically designed to help construction companies do better.

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THE MANAGEMENT MAGAZINE

APRIL 1975

VOLUME LVII NUMBER 4

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COVER: THE WORLD OF MARINE construction is the theme of two articles this issue. The diver is wet welding an oil rig pipeline 168 feet deep in the Gulf of Mexico. Wet welding and the companion process of saturation diving were perfected by the Chicago Bridge & Iron Co (AGC). Cover photo is courtesy of Parker-Hannifan.

Picture Credits: Raymond International, Inc. Pg. 10. American Gas Assn., Pg. 12. Petroleum Today, Pg. 15. World Parts, Pg. 16. B. Paul, Pg. 23

LNG TERMINAL IMPORTING LAKES OF ENERGY Down on the shore of the Chesapeake Bay a joint venture of three AGC contractors is building one of the world's largest import facilities for liquified natural gas.

10

GIVING BERTH TO SUPERTANKERS The huge supertankers cruising the sealanes of the world have no American port to call "home." President Ford recently signed legislation which could provide docking facilities for the ocean's orphans. However, a vast number of hurdles must be cleared before the superport construction market meets reality.

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A CASE OF PREMEDIATED SAFETY Among the souvenirs that Nello L. Teer, Jr. took home from the AGC Honolulu convention was his third H.B. Alexander Award. Mr. Teer would be the first to give credit to Gene Warren for the firm's outstanding safety program.

20

YOUR BOARD—WHO SHALL SERVE? The number one occupation of a director of many family-held companies is "mother." Knowing who should not be on your board is as important as knowing who should be.

22

NEW MEXICO CONTRACTORS WIN FRIENDS (SOME WITH FOUR FEET) After a small zoo burned to the ground in Albuquerque, the local newspaper launched a fund drive to rebuild it. Finances fell short and that's when the local construction industry came to the rescue for an old-fashioned barn-raising.

25

PAPERWORK MANAGEMENT II Properly-kept records are only important when you need them—then you really need them. Here's some forms and procedures designed to help contractors do a better job of record keeping.

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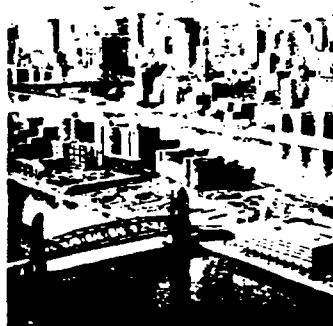
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COVER: IN CINDERELLA FASHION. New York's Welfare Island has become Roosevelt Island. The magic wand is in the hands of seven AGC firms engaged in a wondrous urban renewal project. The \$375 million question is whether 18,000 people will want to live happily ever after on a two-mile plot in the East River? Our cover photo was taken from a helicopter by John Dubas of Dravo Corp.

Picture Credits: pg. 16 B. Paul; pg. 19: Ken Jones, Las Vegas Sun.

A NEW DEAL FOR ROOSEVELT ISLAND Off the shore of Manhattan, 10 contractors are bringing the 21st century city to life on Roosevelt Island. It is a mystical place where visitors and residents arrive by air and garbage flows under ground. Rock is the construction problem, but political/financial problems run much deeper.

CONTRACTORS COME TO CAPITOL HILL "When doctors make mistakes, they bury them, when Congressmen make mistakes, they enact them." Finding more truth than humor in this Will Roger's observation, contractors are flocking to Capitol Hill to talk things over with their Senators and Congressmen. 15

CHOOSING YOUR ADVISORS Knowing whom to listen to is important for any businessman, especially one in charge of a family-held company. Here's practical advice on selecting the people you should seek. 16

NEW LIFE FOR OLD ASPHALT In an age when ecology and economy are often mutually exclusive, a new system of reprocessing old paving materials saves money as well. 18

N.Y. NOISE ARGUMENTS FALL ON DEAF EARS Noise has been added to the ever-growing list of pollutants injurious to the nation's health. In New York, the state environmental protection agency has come up with a cure which could kill the construction industry patient. 22

HEY LADY...YOU COULD GET HURT AROUND HERE! Little boys learn from female school teachers, but can grown construction workers be taught safety by a lady? Judith Case thinks so and she's on the job sites proving her point. 26

PAPERWORK MANAGEMENT PART III This is the concluding installment in a series of forms and procedures specifically designed to help construction firms do a better job of record keeping. 28

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THE MANAGEMENT MAGAZINE

JUNE 1975

VOLUME LVII NUMBER 6



COVER: CONSTRUCTION OVERSEAS is attracting an ever-growing number of American contractors. In this issue, we provide some insights on financing and insuring foreign projects. Also, we present two views on the British construction industry and our cover story tells the tale of the new Elbe Tunnel. Our cover photo is courtesy of Philipp Holtzmann Co.

Picture Credit pg 20 B. Paul

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NEW ELBE TUNNEL TO UNCORK HAMBURG TRAFFIC The Elbe River may be a bearer of cargo from all over the world, but the tunnel under it has been a barrier as far as Hamburg's motorists are concerned.

A BANK AS BIG AS THE WORLD Many of the overseas projects with which U.S. contractors are involved are financed, at least in part, by the Eximbank. Here's an inside look at the services the Bank provides.

A DAVIS-BACON PRIMER During the 1930s, construction workers were among the lowest-paid laborers; nowadays, just the opposite is true. AGC believes the law has outlived its purpose and is seeking repeal of Davis-Bacon. Here's a "nuts and bolts" background article.

MINIMIZING RISK IN THIRD WORLD COUNTRIES One of the big boom areas in the foreign construction market is found in the so-called "Third World" nations. While these developing nations offer much in the way of opportunities for American contractors, there can be substantial risks involved. Helping to relieve some of the worry is the Overseas Private Investment Corporation.

YOUR BLUEPRINT FOR THE FUTURE An organization chart of your company should be a clear-cut plan to keep your company going long after you're gone.

BRITISH CONSTRUCTION: THE DARK CLOUD There's a popular notion that what happens in England often foreshadows events in America. If that's true, we're in for a lot of trouble.

BRITISH CONSTRUCTION: THE SILVER LINING The Executive Director of the British equivalent of AGC says that for his contractors it is not the best of times, but it isn't the worst either.

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COVER: THE HOME OF THE PRESIDENT has special appeal to every American. Every school child has dreamed of being the occupant.

George Washington chose the site and took an active role in overseeing the initial construction.

For all of its beauty, the President's House is not without faults. Andy Jackson remarked that "Hell, itself" couldn't keep it warm and Mrs. Harrison had grand plans for changing the appearance.

In 1948, the White House was in such a sorry shape that the only logical thing to do was tear it down. Sentiment, however, won over practicality and an AGC contractor restored the mansion. Our cover is courtesy of the Smithsonian Institution.

directory 1975-1976



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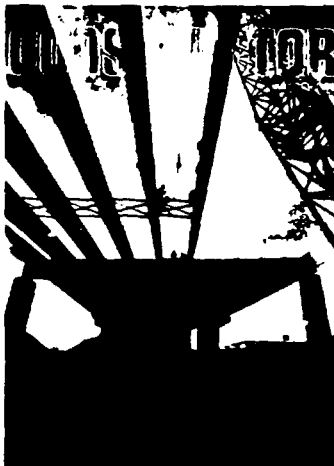
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COVER: THE HIGHWAY TRUST fund has tremendous influence on the economic well-being of the construction industry. Yet for all of its importance, it is far from being universally understood by friends or foes. In this issue, former Federal Highway Administrator Frank C. Turner pinpoints the true facts concerning the Fund and the legislation which created it.

Picture Credit: Cover photo by John Neubauer

IN TRIBUTE TO SAUL HOROWITZ He was a born leader; there is no other kind. He advocated with courage and spirit the things in which he believed. Saul Horowitz, Jr. was the kind of a man a man should be.

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MAKING THE MOST OF AN INSURANCE BUDGET Well-known insurance consultant Walter Derk provides some pointers on how to get the most value out of each dollar spent on insurance, regardless of how much money is involved.

18

THE HIGHWAY TRUST FUND—SOUND & SUCCESSFUL F. C. Turner sheds the light of truth on the many misconceptions surrounding the highway funding program.

22

THE 1975 TAX REDUCTION ACT The latest tax legislation has considerably more meaning than that rebate check which appeared in the mailbox this spring. For example, the new investment tax credit means that many public utilities will be pushing ahead with their construction plans.

26

WRAPUP INSURANCE: A KNOTTY PROBLEM FOR CONTRACTORS For over a decade, AGC has opposed wrapup insurance as it is sold to construction project owners. Unfortunately, the issue is very much alive today.

30

UNSCRAMBLING DAVIS-BACON ADMINISTRATION Labor Editor Arthur Hintze says there's lots of things a contractor can do for himself which make living with the Davis-Bacon requirements less of a hassle.

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CONSTRUCTOR

THE MANAGEMENT MAGAZINE

SEPTEMBER 1975

VOLUME LVII NUMBER 9

CONSTRUCTOR



COVER: CONSTRUCTION EQUIPMENT is the basis for three articles this month. We tell you how to save fuel costs, the whys and wherefores of routine maintenance, and why so much of what you see in equipment today comes from Europe. Our cover art is entitled "The Big Scoop" by Don Neske and is courtesy of Koehring Company

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COAL POLLUTION . . . A SYNTHETIC EARTH SOLUTION While we as a nation bemoan our problems with the oil producers, we are sitting on 3.2 trillion tons of coal. Our domestic coal is "dirty" and strict air pollution control laws have put a damper on its use. An AGC contractor has a unique solution to the problem. **10**

CONSTRUCTION EQUIPMENT: THE EUROPEAN CONNECTION More often than not, the contractor looking for real technological advances and significant innovations in construction equipment has (in recent years) had to look to Europe. **14**

CONSTRUCTION EQUIPMENT: PROPER MAINTENANCE "An ounce of prevention is worth a pound of cure" and never was that old saw more true than today when applied to construction equipment and the routine service it requires. **18**

CONSTRUCTION EQUIPMENT: FUEL CONSERVATION Given the ever-present threat of higher oil prices, a penny saved on fuel today may be worth several cents tomorrow. Here are proven ways of curbing equipment fuel consumption. **22**

STP—THE CONTRACTOR'S EDGE What's good for auto racers is good for contractors too. The difference is that our "STP" is engineered for better performance from supervisors and foremen. **29**

GO DOUBLE-BREADED . . . IF IT SUITS YOU Double-breasted sportcoats are not in fashion, but double-breasted construction firms are very much the rage among union contractors. Here, expert Homer Deakins outlines what a union contractor must take under consideration before forming a second, open shop operation. **32**

COLLECTIVE BARGAINING Multi-trade, multi-employer bargaining is the "in" thing when it comes to collective bargaining. Here's an in-depth discussion of the concept with illustrative comments from leaders on either side of the table. **34**

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Constructor

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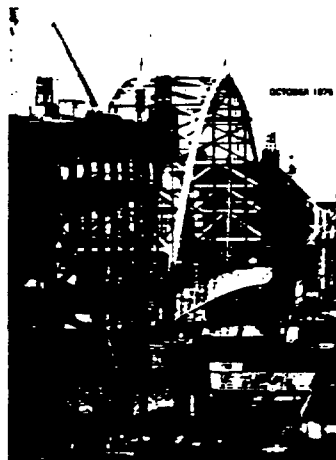
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COVER: THE FREMONT BRIDGE is the pride of Portland, Oregon — small wonder! The saga of the Fremont, one of five orthotropic designs and the largest tied arch bridge in the world is this month's cover story.

Picture Credits: pg. 15 courtesy of Parsons, Brinkerhoff, Quade & Douglas; pg. 33 courtesy of Santa Maria Times

PORTLAND'S TRIUMPHANT ARCH Spanning the Willamette River for 2151 feet, the Fremont Bridge is a fantastic design constructed by ingenious methods. 14

HOW TO STRUCTURE YOUR FINANCIAL DATA When presenting financial information about your firm to potential creditors, it's not what you say nearly as much as how you say it. Here's how to put your best "financial foot" forward. 20

THE COLONIAL CONTRACTOR—EDMUND WOOLLEY On July 4, 1776, delegates from the 13 American colonies put pen to the Declaration of Independence at the Pennsylvania State House. The building which came to be called Independence Hall was brought to life by the little-noted "general contractor" Edmund Woolley. 24

SAVINGS THROUGH INSURANCE MANAGEMENT Insurance is like taxes. A good tax manager pays less than a poor one. There is room for negotiation when buying insurance and here are 19 tips to save money without giving up adequate coverage. 29

DOWNTOWN REDEVELOPMENT—HASTE MAKES FRIENDS With the Christmas shopping season approaching, the renovation of a nine-block commercial area worried the local merchants. Since merchants are advertisers, the local paper was duly alarmed. Here's how a contractor saved the day and won praise from the press. 32

THE FBI VS. EQUIPMENT THIEVES In this exclusive interview, FBI Director Clarence M. Kelley explains the workings of the National Crime Information Center and how it helps track down stolen property. 34

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NOVEMBER 1975



COVER. IN CONTRAST TO COSTLY stick-built concrete forming systems used by many contractors, the M.M. Sundt Construction Co. of Tucson, Arizona has been highly successful with the use of prefabricated forming systems. The Sundt firm has reduced carpentry cost to levels less than what they were 20 years ago.

Picture Credit: Pg. 28, courtesy of Creative Arts Studio from the film "Basic Principles Used in Transfer of Grade."

"NEW APPROACHES" TO CONCRETE FORMING In a concentrated effort to strike a balance between rising wages and falling productivity, the M.M. Sundt Construction Co. developed a prefabricated concrete forming system.

18

WAGE SETTLEMENTS '75: MORE THAN MEETS THE EYE Wage increases this year were moderate, or so it first appears. What's more, there are significant trends afoot for the coming bargaining year.

23

EXPLOSIVES — COMPETENCE AVOIDS FATAL MISTAKES Blasters rarely get to learn from their mistakes. Complete product knowledge and a thorough understanding of explosives techniques are the keys to a safe blasting operation.

24

THE AGC EDUCATION AND RESEARCH FOUNDATION Since its inception in 1969, the AGC Education and Research Foundation has come a long way. In brief, here's what it has done so far and what it plans to do in the future.

27

TRAINING OF CONSTRUCTION LABORERS In a rare and rewarding partnership between labor and management, the Laborers' International Union of North America and AGC cooperate in a training program for prospective and experienced laborers.

28

FINANCIAL DATA USE IN COST CONTROL To await the completion of the job to determine gross profit is to miss an opportunity to influence the actual gross profit.

31

HOW TO COMPLY WITH DAVIS-BACON RULES Here's what contractors must do to be sure they are in fact in compliance with all stipulations of Davis-Bacon.

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COVER: THE MEDIEVAL GUILDS of Western Europe completely dominated life in their times. In construction, the guilds performed many of the functions of modern day labor unions and trade associations. In this issue, we trace the 500 years of the guild system with an emphasis on the construction craftsmen. Our cover art is courtesy of Österreichische Nationalbibliothek Vienna MS FR COD 2549 Fol 164 R.

THE MEDIEVAL GUILDS Wealthy and powerful bodies, the guilds were united in a sense of self-interest. Monopolistic by nature, they had the capacity to totally dominate the economy of Western Europe. In construction, the guilds supervised apprentice training, established wage rates, set working conditions and insured quality of work.

20

JOB SITE THEFT "THANKS FOR MAKING IT EASY" Joe Williams used to earn an unrespectable living "boosting" construction sites. Having time to think things over while in San Quentin, Joe is now a consultant to contractors in need of security advice. Perhaps it does take a thief to think like one.

28

INSURANCE—RISK MANAGEMENT There are three fundamentals to any risk-handling program: commercial insurance, self-insurance and risk assumption. The latter is often unintentional. Some contractors fail to appreciate the losses they may incur and their insurance is incomplete.

31

PERSPECTIVES ON EQUIPMENT VALUE RECOVERY A piece of construction equipment not only has to earn its keep, but generate sufficient revenues to pay for its own replacement. Most contractors employ some form of equipment value recovery. In this round table discussion, five experts shed light on the theories and practices.

34

AMERICA'S BUILDERS Walter Nashert is a man with a mission—to tell the tale of general contractors in construction history. His new book serves that purpose in admirable fashion.

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