Papers presented at the International Bridge Conference
June 10, 11 & 12, 1991

Monday, June 10, 1991

KEYNOTE SESSION
Victor Bertolina, Session Chairman, SAI Consulting Engineers, Pittsburgh, Pennsylvania

Anthony R. Kane, Associate Administrator for Program Development, Federal Highway Administration, Washington, DC (IBC-91-1)
(This paper not published in these Proceedings.)

M. Noyszewski, Chairman, Committee 15, Steel Structures, American Railway Engineering Association, Chicago, Illinois (IBC-91-2)
(This paper not published in these Proceedings.)

Samuel Schwartz, Hayden Wegman, Inc. & Director of the Infrastructure Institute at Cooper Union, New York, New York (IBC-91-3)
(This paper not published in these Proceedings.)

James E. Roberts, Chief, Division of Structures, California Department of Transportation, Sacramento, California (IBC-91-4)

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(This paper not published in these Proceedings.)

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Reidar Bjorhovde, Session Chairman, University of Pittsburgh, Pittsburgh, Pennsylvania

Jean Muller, President, J. Muller International (IBC-92-1) (This paper not published in these Proceedings.)

T. Peter Ruane, President/CEO, American Road and Transportation Builders Association (IBC-92-2)
(This paper not published in these Proceedings.)

James M. Cooper, Chief, Structures Division, Office of Research, Development and Technology, Federal Highway Administration (IBC-92-3) (This paper not published in these Proceedings.)

Robert M. Blair, Chief Executive Assistant to the Director, Ohio Department of Transportation (IBC-92-4)
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Monday, June 14

KEYNOTE SESSION

Session Chairman: Lisle E. Williams, Buchart Horn, Inc., Pittsburgh, Pennsylvania

Howard Yerusallm, Secretary of Transportation, Pennsylvania Department of Transportation, Harrisburg, Pennsylvania (IBC-93-1) (This paper not published in these Proceedings.)
Dr. Robert A. P. Sweeney, Asst. Chief Engineer, Structures, CN North America, Montreal, Quebec, Canada (IBC-93-2) (This paper not published in these Proceedings.)
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Session Chairman: Arthur W. Hedgren, Jr., HDR Engineering, Inc., Pittsburgh, Pennsylvania

BRIDGES AS A CUSTOMER SERVICE TO SOCIETY
Charles L. Miller, Secretary of Transportation, West Virginia Department of Transportation,
Division of Highways, Charleston, West Virginia

FUTURE DIRECTIONS FOR BRIDGE STEEL AND DESIGN
John W. Fisher, Ph.D., Lehigh University, Bethlehem, Pennsylvania

EUROPEAN DESIGN PHILOSOPHY
Michel P. Virlogeux, Ecole Nationale Des Ponts et Chaussees, France

STUDENT PAPER COMPETITION WINNER:
DEVELOPMENT OF A COMPOSITE STEEL FLOOR SYSTEM FOR DECK GIRDER BRIDGES
Francesco M. Russo, Iowa State University, Ames, Iowa

FEATURED STATE SESSION:
WEST VIRGINIA

Session Chairman: James E. Sothen, Director, Structures Division, West Virginia Department of Transportation,
Division of Highways, Charleston, West Virginia

THE MOUNTAIN STATE AND ITS BRIDGES
James E. Sothen, Structures Division, West Virginia Department of Transportation, Division of Highways,
Charleston, West Virginia (IBC-95-5) (Slide presentation - not published).

RESTORATION OF THE FIRE DAMAGED HISTORIC COVERED TIMBER BRIDGE AT PHILIPPI,
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Emory L. Kemp, Institute for the History of Technical and Industrial Archaeology, West Virginia University,
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WEST VIRGINIA'S BRIDGE INSPECTION AND SMALL BRIDGE REPLACEMENT PROGRAM
Gary R. Klavuhn, West Virginia Division of Highways, Burlington, West Virginia; Joe B. Hayes,
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Robert N. Amos, Jr., Melanie L. Neal, West Virginia Department of Transportation, Division of Highways,
Charleston, West Virginia (IWC-95-8)

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James D. Shook, West Virginia Department of Transportation, Division of Highways, Structures Division,
Charleston, West Virginia (IBC-95-9)

THE NEW RIVER GORGE BRIDGE - MORE THAN JUST STEEL AND CONCRETE
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IMPLEMENTATION OF A MULTIMEDIA INFORMATION SYSTEM FOR BRIDGE SAFETY

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BRIDGE SCOUR DURING THE 1994 GEORGIA AND TEXAS FLOODS

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Arun Asarawala, The Valspar Corporation, Baltimore, Maryland (IBC-95-15)

BRIDGE DECKS MINUS TOP BARS ARE MORE DURABLE


Tuesday, June 20, 1995

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LONG SPAN BRIDGES

THE NORMANDY BRIDGE, THE STEEL MAIN SPAN

Lars T. Sorensen, Monberg & Thorsen A/S, Copenhagen, Denmark (IBC-95-17)

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Peter A. Irwin, Jiming Xie, Stoyan T. Stoyanoff, Gordon E. Dunn, Rowan Williams Davies & Irwin, Inc., Guelph, Ontario, Canada (IBC-95-18)

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THE GREAT BELT LINK DENMARK - THE EAST BRIDGE

Erik Skettrup, RH&H Consult, Copenhagen, Denmark (IBC-95-21) (This paper not published in these Proceedings.)

DESIGN AND ANALYSIS: INCLINED ARCH BRIDGE VERSUS PARALLEL ARCH BRIDGE

Chun S. Cai, Thomas Macioce, Morad G. Ghali, Michael Baker Jr., Inc., Coraopolis, Pennsylvania (IBC-95-22)

DESIGN REVIEW OF A POST-TENSIONED CABLE STAY TO EDGE GIRDER CONNECTION

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LOAD TESTING AND INSTRUMENTATION SYSTEMS

Session Chairman: Gerald J. Pitzer, GAI Consultants, Inc., Monroeville, Pennsylvania

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(Keynote Session presentations are not included in these Proceedings)

Session Chairman: Eric S. Kline, KTA-Tator, Inc., Pittsburgh, Pennsylvania

NATIONAL HIGHWAY SYSTEM FUNDING
J. Barry Stout, Pennsylvania State Senator, Harrisburg, Pennsylvania

EUROPEAN BRIDGE TECHNOLOGY - AN AMERICAN PERSPECTIVE
Ernst H. Petzold, Sverdrup Civil, Inc., Maryland Heights, Missouri

ADDRESSING COMMUNITY NEEDS WITH ENGINEERING
James N. Denn, Commissioner of Transportation, Minnesota Department of Transportation, Roseville, Minnesota

FEATURED STATE SESSION
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Session Chairman: Donald J. Flemming, State Bridge Engineer, Minnesota Dept. of Transportation, Roseville, Minnesota

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Miki Funahaski, Corrpro Companies, Inc., West Chester, Pennsylvania; Mike Tighe, Corrpro Companies, Inc., Medina, Ohio; Steve Daily, Corrpro Companies, Inc., Doylestown, Pennsylvania (IBC-96-13)
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NIGHTTIME RE-DECKING WITH PRE-CAST EXODERMIC BRIDGE DECK- CASE STUDIES
Robert A. Bettigole, Exodermic Bridge Deck Institute, Inc., Scarsdale, New York (IBC-96-14)

COMPUTERIZED APPROACH TO FOUNDATION INSPECTION

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NEW METHOD FOR THE MOUNTING OF PREFABRICATED DECK SECTIONS OF A SUSPENSION BRIDGE
Giorgio Zuccolo Arrigoni, Gabriele Zuccolo Arrigoni, Ingegneri Zuccolo Construzioni, Padova, Italy (IBC-96-18)

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Andrew W. Naylor, Bridon International Ltd., Doncaster, United Kingdom (IBC-96-19)
(This paper not printed in these Proceedings.)

CONTROLLED LOW STRENGTH MATERIAL FOR CONSTRUCTION AND REPLACEMENT OF SHORT SPAN BRIDGES
Robert A. Garbini, National Ready Mixed Concrete Association, Silver Springs, Maryland (IBC-96-20)
(This paper not printed in these Proceedings.)

HIGH PERFORMANCE IMMERSION COATINGS FOR BRIDGE PAINTING
Arun Asarawala, The Valspar Corporation, Baltimore, Maryland (IBC-96-21)
(This paper not printed in these Proceedings.)

AN EVALUATION OF TWO DIFFERENT TYPES KEYWAY GROUTS IN PRECAST PRESTRESSED BRIDGE MEMBERS: LAB AND FIELD INVESTIGATION OF “NON-SHRINK” VS. MAGNESIUM AMMONIUM PHOSPHATE GROUTS
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LOW-MAINTENANCE, GRAFFITI-RESISTANT POLYURETHANE CLEARCOAT
Michael D. Brown, DuPont, Wilmington, Delaware (IBC-96-22A)
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Tuesday, June 4, 1996
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DESIGN OF THE NORTHUMBERLAND STRAIT BRIDGE MAIN SPANS
Joseph Showers, Gerard Sauvageot, Walter Eggers, J. Muller International, San Diego, California (IBC-96-23)

DESIGN AND CONSTRUCTION OF THE NORTHUMBERLAND STRAIT CROSSING APPROACHES

DESIGN AND CONSTRUCTION OF THE WILLIAMSTOWN-MARIETTA BRIDGE

BOSTON’S NEW NORTHERN AVENUE BRIDGE

Session Chairman: Eric S. Kline, KTA-Tator, Inc., Pittsburgh, Pennsylvania

Tuesday, June 4, 1996
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LONG SPAN BRIDGES

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Joseph Showers, Gerard Sauvageot, Walter Eggers, J. Muller International, San Diego, California (IBC-96-23)

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Session Chairman: Dr. Arthur W. Hedgren Jr., HDR Engineering, Inc., Pittsburgh, Pennsylvania

Tuesday, June 4, 1996
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LONG SPAN BRIDGES

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Joseph Showers, Gerard Sauvageot, Walter Eggers, J. Muller International, San Diego, California (IBC-96-23)

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DESIGN AND CONSTRUCTION OF THE WILLIAMSTOWN-MARIETTA BRIDGE

BOSTON’S NEW NORTHERN AVENUE BRIDGE
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Tuesday Morning - Session B
CONSTRUCTION

Session Chairman: Lisle E. Williams, Buckhart Horn, Inc., Pittsburgh, Pennsylvania

DESIGN OF ERECTION EQUIPMENT FOR THE BANGKOK MASS TRANSIT SYSTEM
Ken Price, Dan Borroughs, Yuriy Shapiro, J. Muller International, Chicago, Illinois (IBC-96-30)

STRATEGIC USE OF DESIGN-BUILD CONTRACTS TO SUPPLEMENT TRADITIONAL DESIGN-BID-BUILD
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S. R. Kulkarni, Michigan Dept. of Transportation, Lansing, Michigan (IBC-96-31)

DESIGN/BUILD FOR SIX BRIDGES IN NEW YORK CITY
Samia Abdou, Samuel Weissman, Ammann & Whitney, New York, New York (IBC-96-32)

REPLACEMENT OF SEPTA RAILROAD BRIDGE NO. 1.13

RECONSTRUCTION OF THE FOUNDERS BRIDGE, HARTFORD, CONNECTICUT

PAINT OR REPLACE? THE REHABILITATION AND WIDENING OF THE SAUGATUCK RIVER BRIDGE

DESIGN AND CONSTRUCTION OF THE CORAOPOLI-NEVILLE ISLAND BRIDGE REPLACEMENT
Kenneth J. Wright, Francis J. Diegelman, HDR Engineering, Inc., Pittsburgh, Pennsylvania (IBC-96-36)

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Session Chairman: Dr. Reidar Bjorhovde, University of Pittsburgh, Pittsburgh, Pennsylvania

PERFORMANCE EVALUATION OF THE IN-SERVICE CONCRETE FILLED STEEL GRID DECKS
Ravi Mumulla, Dr. V. S. GangaRao, Barry Dickson, Constructed Facilities Center, West Virginia University, Morgantown, West Virginia (IBC-96-37)

DESIGN OF FOUR-SPAN STEEL CURVED MULTI-GIRDER BRIDGE WITH TALL PIERS
Richard B. Kauffman, Ahmad Ahmadi, SAI Consulting Engineers, Inc., Pittsburgh, Pennsylvania (IBC-96-38)

EAST FORK WHITE RIVER CABLE-STAYED BRIDGE

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Marcos P. Loizias, HNTB Corporation, Fairfield, New Jersey (IBC-96-40)

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Christopher D. White, LoBuono, Armstrong & Associates, A Division of Frederic R. Harris, Inc., Tallahassee, Florida (IBC-96-41)

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AMERICAN ROAD AND TRANSPORTATION BUILDERS ASSOCIATION
Dr. Peter Ruane

FEATURE STATE REPRESENTATIVE
John J. Haley, Jr., New Jersey

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Eugene C. Figg, Jr., P.E.

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Mr. Anthony Kane, Executive Director, Federal Highway Administration

"The Art of Arches"
Mr. William X. Zhang, P.E., Vanasse Hangen Brustlin, Inc.

"Featured State Overview"
Mr. Kevin J. Sullivan, Commissioner, Massachusetts Highway Department

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KEYNOTE SPEAKERS:
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Secretary James C. Codell, III, Commonwealth of Kentucky, Transportation Cabinet

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