

**Special City Council Meeting
Final Agenda
July 8, 2003**

A special meeting of the Fayetteville City Council called by the Mayor will be held on July 8, 2003 at 6:00 PM immediately following the Agenda Session in Room RCED 120 at the Sam Walton College of Business, University of Arkansas, Fayetteville, Arkansas.

- 1. Opening Remarks and Workshop Overview given by Mayor Dan Coody:**
Workshop presentations and discussions are centered on the means and methods by which the City of Fayetteville could use a design-build-operate project delivery method for its \$125 million wastewater improvement project. Discussions, case histories, comparative analyses and other aspects of project delivery alternatives will be discussed.
- 2. Introduction To The Design-Build-Operate Project Delivery And Methodology:**
Mr. James Binder, P.E. President of Alternative Resources will be speaking. A general description of the alternative project delivery system including: (A) definition of the alternative process, (B) comparison of design-build-operate (DBO) process to the conventional design-bid-build (DBB) process, (C) description of current alternative project delivery applications in the water and wastewater industry and (D) presentation of comparative advantages and disadvantage of each process.
- 3. Legal Perspectives:** Mr. Eric Peterson with Hawkins, Delafield & Wood will be speaking. A primer on the legal and contractual issues associated with different project delivery methods, including comparative risks, advantages and providers.
- 4. Alternative Project Delivery System Providers And Case Histories:** Mr. Don Evans, President of Operation Management International, Inc. Mr. Dave Butler, Former Mayor of Atchison, Kansas, and Mr. Bill Rosenbaum, Vice President of Municipal Design/Build Project Development will be speaking. Pat McManus, Former Mayor of Lynn, Massachusetts will describe the City of Massachusetts' experience using design-build and design-build-operate concepts to address various municipal projects over a period of 18-years. The presentation will include an overview of the challenges that were addressed relating to funding programs, sewer line construction and system repair issues.

5. Implementation Strategy Using A Design-Build-Operate Concept-Fayetteville, Arkansas: Mr. James Binder, P.E. President of Alternative Resources will be speaking. This discussion will be focused upon the Fayetteville Wastewater System Improvement Project with specific responses to: (A) issues associated with implementing a DBO procurement, (B) potentials for cost savings, (C) scheduling implications, (D) coordination with the Revolving Loan Fund, (E) perception of EPA perspectives towards DBO methodology, (F) description of a conceptual process for Fayetteville's project, (G) predicted schedule using alternative project delivery method and (H) future actions needed to evaluate alternative approach.

6. Question and Answer Period.

Meeting of July 8, 2003

Subject:	Roll - Design Build Operate					
Motion By:						
Seconded:						
Motion To:						
Lucas	✓					
Jordan	✓					
Reynolds	✓					
Thiel	✓					
Cook	✓					
Marr	Vote - by phone. Absent from meeting					
Rhoads	✓					
Davis	✓					
Mayor Coody	✓					

Eric Petersen > Copy of Slides from Hawkins, Delafield & Wood.

Subject:	Design ^{Bid} Build Design Build					
Motion By:		Lionel Jordan				
Seconded:		Swift Reynolds				Amend to continue discussion
Motion To:		Design/Bid Build				with long range operation of East, West Plants & Pump Stations.
Lucas	✓					
Jordan	✓					
Reynolds	✓					
Thiel	✓					
Cook	✓					
Marr	—					
Rhoads	✓					
Davis	✓					
Mayor Coody	—					

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Meeting of July 8, 2003

Subject: Motion to add to agenda						
Motion By: Seconded:	Previous	Contracts				
Motion To:		Thiel Jordan				
	Lucas	✓				
	Jordan	✓				
	Reynolds	✓				
	Thiel	✓				
	Cook	✓				
	Marr	—				
	Rhoads	✓				
	Davis	✓				
	Mayor Coody	—				

Subject:						
Motion By: Seconded:						
Motion To:						
	Lucas					
	Jordan					
	Reynolds					
	Thiel					
	Cook					
	Marr					
	Rhoads					
	Davis					
	Mayor Coody					

**MEETING AGENDA
DESIGN-BUILD-OPERATE WORKSHOP
(Special Called City Council Meeting)
Fayetteville, Arkansas
July 8, 2003**

WORKSHOP TIME AND DATE:

The Design-Build-Operate Workshop commences at 6:00 P.M. TUESDAY, July 8, 2003 (following an earlier City Council Agenda Session starting at 4:30 P.M.).

WORKSHOP LOCATION:

Sam M. Walton College of Business, University of Arkansas, Fayetteville, Arkansas-Auditorium-Room RCED 120.

WORKSHOP OBJECTIVE:

Workshop presentations and discussions are centered on the means and methods by which the City of Fayetteville could use a design-build-operate project delivery method for its \$125 million wastewater improvement project. Discussions, case histories, comparative analyses and other aspects of project delivery alternatives will be discussed.

ANTICIPATED AUDIENCE:

Mayor and City Council of Fayetteville, Arkansas; Fayetteville City Administration; Citizens of Fayetteville; State and Local Elected Officials; State and Local Organizations; Members of Media; Arkansas Soil and Water Conservation Commission; Arkansas Department of Environmental Quality; Arkansas Department of Health; Municipal Consultants and Advisors

WORKSHOP AGENDA:

1) OPENING REMARKS AND WORKSHOP OVERVIEW (6:00-6:10 PM)

Mayor Dan Coody
City of Fayetteville
113 W. Mountain St.
Fayetteville, AR 72701
479-575-8330
mayor@ci.fayetteville.ar.us

2) INTRODUCTION TO THE DESIGN-BUILD-OPERATE PROJECT DELIVERY AND METHODOLOGY (6:10-6:25 PM)

Mr. James Binder, P.E., President

Alternative Resources, Inc.
9 Pond Lane
Concord, MA 01742
978-371-2054
jbinder@alt-res.com

A general description of the alternative project delivery system including: (A) definition of the alternative process, (B) comparison of design-build-operate (DBO) process to the conventional design-bid-build (DBB) process, (C) description of current alternative project delivery applications in the water and wastewater industry and (D) presentation of comparative advantages and disadvantage of each process.

3) LEGAL PERSPECTIVES (6:25-6:40 PM)

Mr. Eric Peterson

Hawkins, Delafield & Wood
Attorneys and Counselors at Law
67 Wall Street
New York, NY 1005
epetersen@hdw.com ✓

Get copy of slides if possible.

A primer on the legal and contractual issues associated with different project delivery methods, including comparative risks, advantages and providers.

4) ALTERNATIVE PROJECT DELIVERY SYSTEM PROVIDERS AND CASE HISTORIES:

A.1 Operations Management International, Inc. (6:40-6:55 PM)

Don Evans, President

9193 South Jamaica Street, Suite 400
Englewood, CO 80112
Devans2@ch2m.com

A.2 (Operations Management International Project) (6:55-7:10 PM)

Dave Butler

Former Mayor of Atchison, Kansas

Copy of slides if possible.

Mr. Butler will describe the City of Atchison, Kansas' experience using an alternative project delivery method for the upgrading of the municipality's water supply system.

B.1 U.S. Filter Engineering and Construction (7:10-7:25 PM)

Bill Rosenbaum, P.E.

Vice President
Municipal Design/Build Project Development
US Filter Engineering and Construction
Airside Business Park
250 Airside Drive
Moon Township, PA 15108-2793
Direct: 412-809-6640
RosenbaumW@usfilter.com ✓

*Get
copies of
slides*

B.2 U S Filter Project Reference in LYNN, Massachusetts (7:25-7:40 PM)

Pat McManus

Former Mayor of Lynn, MS

Mr. McManus will describe the City of Lynn, Massachusetts' experience using design-build and design-build-operate concepts to address various municipal projects over a period of 18-years. The presentation will include an overview of the challenges that were addressed relating to funding programs, sewer line construction and system repair issues.

*Get copies
of the slides*

5) BREAK (7:40-7:55 PM)

6) IMPLEMENTATION STRATEGY USING A DESIGN-BUILD-OPERATE CONCEPT-FAYETTEVILLE, ARKANSAS (7:55-8:10 PM)

Mr. James Binder, P.E.

Alternative Resources, Inc.
9 Pond Lane
Concord, MA 01742
978-371-2054
jbinder@alt-res.com

This discussion will be focused upon the Fayetteville Wastewater System Improvement Project with specific responses to: (A) issues associated with implementing a DBO procurement, (B) potentials for cost savings, (C) scheduling implications, (D) coordination with the Revolving Loan Fund, (E) perception of EPA perspectives towards DBO methodology, (F) description of a conceptual process for Fayetteville's project, (G) predicted schedule using alternative project delivery method and (H) future actions needed to evaluate alternative approach.

7) QUESTION AND ANSWER PERIOD (8:10-9:00 PM)

Mayor Dan Coody

Moderator

*** WORKSHOP CONCLUDES AT 9:00 P.M. ***

Biography
James J. Binder, P.E.
Alternative Resources, Inc.
9 Pond Lane
Concord, Massachusetts 01742
(978) 371-2054
(978) 371-7269

Mr. Binder is President of Alternative Resources, Inc. He is a graduate of Northeastern University, Boston, Massachusetts where he received both BS and MS degrees in Mechanical Engineering. He is a member of the Water Environment Federation and the National Council for Public-Private Partnerships. Mr. Binder is a registered professional engineer in eight states and has some 29 years of consulting experience, the past 20 years of which he has specialized in implementing DBO procurements for the management of municipal solid waste, water, wastewater, and residuals. Examples of recent water and wastewater DBO projects Mr. Binder has managed and/or served as principal-in-charge include Stockton, California, Sioux City, Iowa, Taunton, Gardner, and Plymouth, Massachusetts, Westerly and Smithfield, Rhode Island, Naugatuck, Connecticut, and Chester Borough, New Jersey.

Eric S. Petersen
Law Partner
Hawkins, Delafield & Wood

Eric Petersen heads the ten-attorney Public Contracts Group at the municipal law firm of Hawkins, Delafield & Wood in New York. He has, on behalf of municipal government, been the lead negotiator in more than 100 public works contract procurements resulting in design, construction, operation and management contracts with private service providers nationally and internationally valued at several billion dollars. Mr. Petersen has represented New York, San Diego, Massachusetts Water Resources Authority (Boston), Charlotte, Los Angeles, Halifax, San Juan, St. Louis, Narragansett Bay Commission (Providence), Montreal and Fresno, among numerous other cities, countries, districts, authorities, states and sovereign governments in his 29-year legal practice, which has encompassed all forms of public-private arrangements under which public works facilities are owned, built, operated and financed. As special counsel, he was the chief architect of the groundbreaking Cranston, Rhode Island wastewater project privatization and related USEPA approvals in which a private company contracted for the design and construction of tertiary treatment upgrades and for the long-term operation, maintenance, repair and replacement of Cranston's plant and sewer system. In Seattle, Mr. Petersen authored the Tolt River design-build-operate water treatment plant contract as special counsel to the City, the first transaction of its kind in the water industry. He has also served as special counsel to Stockton (CA), Fulton County (GA), Laredo (TX), Puerto Rico Aqueduct and Sewer Authority (PRASA), Springfield (MA), Sacramento (CA), San Jose (CA), Lynn (MA), Naugatuck (CT), Waterbury (CT), Newport (RI) and several other municipalities in successfully completed water and wastewater project procurements. He currently represents Phoenix (AZ), Spokane County (WA), Lawrence (MA), San Diego County Water Authority (CA) and Holyoke (MA) as special contract counsel on active water and wastewater project procurements. Mr. Petersen is a co-founder of the U.S. Conference of Mayors' Urban Water Council. He makes regular presentations at conferences organized by the Council and by AWWA/WEF (Joint Management Conference), the Design/Build Institute of America, the National Council for Public-Private Partnerships, the International City Managers Association and other forums on legal, environmental, tax and financing topics critical to the water and wastewater industry, and has authored numerous articles in the field.

Don S. Evans

President and Chief Executive Officer,
Operations Management International Inc.



President, CH2M HILL Water Business Group

Profile

Don S. Evans has served as President and Chief Executive Officer of Operations Management International, Inc. (OMI) since 1986. He also is President of CH2M HILL's Water Business Group, having assumed that group's leadership in 1995.

Mr. Evans is a career employee at CH2M HILL, joining the firm in 1973. During his career, he has been an executive, project manager, process engineer, and construction services manager in the water, wastewater, and public works industry. He also has considerable expertise in the wastewater collection field, including infiltration/inflow, computer modeling, systems evaluation and rehabilitation, and capital improvements.

As president and chief executive officer of OMI, Mr. Evans manages 1,500 associates who operate, maintain and manage more than 180 water, wastewater, solid waste, and public works projects around the world. His dream has been to create an environment where people can't wait to get to work in the morning. He has fulfilled that dream by supporting OMI's unique commitment to quality and client service. OMI's operating creed, Quality as a Business Strategy, helped OMI earn the 2000 Malcolm Baldrige National Quality Award. OMI is one of only nine service companies to win the award, and is the only water services firm ever to win the award.

As president of the CH2M HILL Water Business group Mr. Evans works with more than 1,000 people worldwide delivering engineering and consulting services to water companies, utilities, governments and industries.

Mr. Evans holds bachelor's and master's degrees in civil engineering from Stanford University, and a master of business administration degree from Stanford.

USFilter Operating Services, Inc.

Company Profile

USFilter Operating Services, Inc. (USFOS) is a part of the United States Filter Corporation (USFilter), North America's largest water company providing the most comprehensive water services for commercial, industrial, municipal and residential customers. The company delivers cost-effective, reliable systems guaranteed for quality, safety and compliance—providing water services to approximately 13.9 million people in more than 600 communities, and hundreds of thousands of industries and businesses.

The *Engineering News Record* lists **USFilter as #1 among the Top 200 Environmental Firms** in the U.S.—a record that the company has held over the past three years.

Whether it's bottled water service for homes, sophisticated water treatment technologies for manufacturers, centralized treatment and resource recovery, or the design, construction, operation and financing of entire water and wastewater management systems, USFilter delivers cost-effective, reliable systems to meet our customers requirements for quality, safety and environmental compliance.

Through the design/build/operate (DBO) service delivery option, USFOS brings together these resources and capabilities to deliver municipal clients a comprehensive approach that includes:

- **Operations, Maintenance and Management (O&M).** USFOS has more than 50 years of experience in providing O&M services to governmental and industrial clients throughout North America. Our firm currently manages more than 550 municipal and industrial facilities, serving a client base of over 380 governmental and industrial clients. USFOS' wastewater experience includes wastewater plants similar in size the City of Fayetteville's Paul R. Noland Wastewater Treatment Facility. Examples of clients from surrounding states include Oklahoma City, OK, Bartlesville, OK, and New Orleans, LA.
- **Engineering and Construction.** USFilter Engineering and Construction (USFilter E&C) is the USFilter company that delivers comprehensive engineering, construction management and related services. They have over 90 years of experience in the design and construction of water and wastewater treatment facilities. In that time, USFilter E&C has provided services for literally hundreds of governmental and industrial client. They are also leaders in implementing design/build and DBO solutions for new water and wastewater treatment plants and the expansion of existing facilities.
- **Technologies and Equipment.** One of the greatest strengths of USFOS is our ability to improve the quality of life for the citizens of a community through application of a wide range of treatment technologies—from basic to cutting-edge—all while improving health protection and the environment. As the manufacturer of virtually every technology used to treat water and wastewater, USFilter company experts provide unmatched technical support and know-how.

Today, USFilter is North America's largest water company providing the most comprehensive water services and technology for commercial, industrial, municipal and residential water and wastewater treatment customers.

Projects

As highlighted above, the USFOS DBO project approach combines all the separate strengths of our company, focusing them on meeting the complete needs of our clients. Over the past few years our company has carried out a number of successful projects.



USFilter

USFilter Operating Services, Inc.

Some examples of projects include the following:

- Atlanta, GA – 20-year DBO project for the beneficial reuse and management and biosolids from the City's three wastewater treatment plants.
- Lynn, MA – Client since 1989 with multiple contracts for O&M and design/build projects for the City's water, wastewater and stormwater facilities and systems.
- Southern Water and Sewer District, Floyd County Southern Water, KY – 20-year contract including the DBO project for 21 miles of new water line, three water tanks and three water pump stations.
- Tampa Bay Water – DBO for new regional 66-MGD water treatment plant.
- Taunton, MA – DBO project renovations at the 8.34-MGD wastewater plant for tertiary treatment.
- Washington Borough, NJ – 15-year contract including DBO contract for new 1.2-MGD wastewater plant.
- Woonsocket, RI – 20-year contract including DBO project for the upgrade/expansion of a 16-MGD secondary wastewater treatment plant, including Biological Nutrient Removal.

Speakers***Bill Rosenbaum, P.E.***

Mr. Rosenbaum is Vice President of Municipal Design/Build Project Development with USFilter E&C. He has over 28 years experience in the development, design, construction and operation of water and wastewater projects. Mr. Rosenbaum has managed groups responsible for detailed design, development of remediation technologies, turnkey construction and operation. He currently manages the USFilter E&C group responsible for the delivery of design/build services, encompassing responsibility for concept development, teaming arrangements, proposal phase design and pricing and sales support for all USFilter municipal DBO proposals. This group also has process engineering responsibility from proposal phase through startup of the completed project. Among other projects, Mr. Rosenbaum has been responsible for the development of the Design/Build component of the following projects:

- Plymouth, MA - \$23 million DBO project for a greenfield wastewater treatment facility
- Woonsocket, RI – \$15 million DBO project for the upgrade and expansion of an existing wastewater treatment facility
- Tampa Bay, FL – \$88 million DBO project for a new regional surface water treatment facility
- Lynn, MA – \$65 million design/build project for sewer separation for the elimination of combined sewer overflows
- Atlanta, GA – \$52 million DBO project to provide for biosolids beneficial use at the City's three largest wastewater treatment plants
- Indianapolis, Indiana – \$1.5 billion project for management and operations of the City's water supply, including \$20 million in capital improvements annually to be completed using a design/build approach

Presentation Outline

Mr. Rosenbaum's presentation will provide an explanation of why many cities have used the DBO concept to carry out their projects. These reasons have typically included cost savings and the transfer of risk. The savings have come from the designer, contractor and operator working together and using the total life cycle cost to make decisions. The transfer of risk from a municipality to a private contractor has helped cities achieve stable rates through fixed prices and operational performance guarantees of the new

USFilter Operating Services, Inc.

facilities. The City of Fayetteville has discussed concerns about the use of State Revolving Loan funds, a tight time-frame and questions regarding procurement. Mr. Rosenbaum's presentation will discuss successful projects which have over come all of these issues.

Example Project

The City of Lynn, Massachusetts, has contracted with USFilter companies under multiple contracts over the past 18 years. These contracts have involved providing O&M for the City's 15.3-MGD water treatment plant, as well as their 25.8-MGD wastewater treatment plant. In 1990, USFOS oversaw a \$53.8-million upgrade to the City's secondary treatment at the wastewater plant. Between 1996 and 1998, USFOS also oversaw \$10 million in capital improvements at this same facility. In addition, USFOS is currently implementing \$14 million in capital improvements for the wastewater facility under a three-year program, using a design/build approach. The current capital improvements program at the City's wastewater facilities are being implemented using State Revolving Fund funds for financing.

In December 2000, the City awarded USFilter E&C a contract to design/build a system to mitigate combined sewer overflows (CSOs) in the City's sewer system. Valued at \$48 million, this nine-year capital improvement project is believed to be the nation's first CSO design/build project and, according to City estimates, is expected to save in excess of approximately \$300 million.

Pat McManus

Mr. Pat McManus is the former Mayor of Lynn, Massachusetts. During his tenure the City carried out improvement projects to its water treatment plant, wastewater treatment plant and sewer collection system. Pat is an attorney and provides consulting to companies and cities involved in public private partnerships.

Presentation Outline

Mayor McManus' presentation will cover the City of Lynn's experience in using the design/build and DBO concepts for water and wastewater plants and sewer line projects. The City of Lynn overcame many of the challenges that the City of Fayetteville is now experiencing using State Revolving Loan funds, and dealt with sewer line construction and repair type of issues that now face your City.

NOTIFICATION LIST FOR DESIGN-BUILD-OPERATE WORKSHOP:

Mayor and City Council of Fayetteville, Arkansas
Fayetteville City Administration

Hugh Earnest
Steve Davis
Gary Dumas
Tim Conklin
Ray Boudreaux
Kit Williams
David Jurgens
Gary Coover
Peggy Vice
Coy Hurd

Chamber of Commerce-Mr. Bill Ramsey

Members of Media

Newspapers
Government Channel
City Web Site (?)

Engineering/Architectural Firms

U S Infrastructure
McClelland
Cromwell and Associates
Crafton Tull and Associates

Wastewater Project Consultants

Garver Engineers
McGoodwin, Williams and Yates
RJN Group
Black and Veatch
Burns and McDonnell
CH2M Hill
Environmental Consulting Operations

Financial Consultants

Dennis Hunt (Stephens, Inc.)

Arkansas Soil and Water Conservation Commission

Randy Young
Ron Hill
Scott Savoy
Mike Core

Arkansas Department of Environmental Quality

Mary Leath

Arkansas Department of Health

Robert Hart

Environmental Pollution Agency -- Region 6

Richard Greene

Arkansas Municipal League

Don Zimmerman
Representatives of Arkansas Municipalities
Mayor of Springdale
Mayor of Eureka Springs-Kathy Harrison
Mayor of Springdale
Mayor of Rogers
Mayor of Bentonville
City of Silom Springs
Mayor of Farmington
Mayor of Greenland
Mayor of Goshen
Mayor of Elkins
Mayor of Johnson
Kent Myers of Hot Springs
City of Conway-Tab Townsend
Springdale Utilities-Rene Langston
Northwest Arkansas Regional Planning Commission
Jeff Hawkins
Uvalde Lindsey (Ozark International Consultants)
Senator Sue Madison (DBO Bill)
Steven Stewart (Congressman Boozman's Office)
Senator Blanche Lincoln's Office
Senator Mark Pryor's Office
Washington County Judge
Jerry Hunton
John Gibson
Fayetteville Citizens on City Clerk's e-mail list
University of Arkansas
Leo Yanda
Findlay Edwards
Concerned Citizens
John Lewis
Curtis Shipley
Gary Head
Arkansas Highway and Transportation Department
Harold Beaver
Beaver Water District
Alan Fortenberry
Coleen Gaston

**MEETING AGENDA
DESIGN-BUILD-OPERATE WORKSHOP
(Special Called City Council Meeting)
Fayetteville, Arkansas
July 8, 2003**

WORKSHOP TIME AND DATE:

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Mayor Dan Coody
City of Fayetteville
113 W. Mountain St.
Fayetteville, AR 72701
479-575-8330
mayor@ci.fayetteville.ar.us

2) INTRODUCTION TO THE DESIGN-BUILD-OPERATE PROJECT DELIVERY AND METHODOLOGY (6:10-6:25 PM)

Mr. James Binder, P.E., President

Alternative Resources, Inc.
9 Pond Lane
Concord, MA 01742
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3) LEGAL PERSPECTIVES (6:25-6:40 PM)

Mr. Eric Peterson

Hawkins, Delafield & Wood
Attorneys and Counselors at Law
67 Wall Street
New York, NY 1005
epetersen@hdw.com

A primer on the legal and contractual issues associated with different project delivery methods, including comparative risks, advantages and providers.

4) ALTERNATIVE PROJECT DELIVERY SYSTEM PROVIDERS AND CASE HISTORIES:

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9193 South Jamaica Street, Suite 400
Englewood, CO 80112
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Former Mayor of Atchison, Kansas

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Bill Rosenbaum, P.E.

Vice President
Municipal Design/Build Project Development
US Filter Engineering and Construction
Airside Business Park
250 Airside Drive
Moon Township, PA 15108-2793
Direct: 412-809-6640
RosenbaumW@usfilter.com

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Pat McManus

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5) BREAK (7:40-7:55 PM)

6) IMPLEMENTATION STRATEGY USING A DESIGN-BUILD-OPERATE CONCEPT-FAYETTEVILLE, ARKANSAS (7:55-8:10 PM)

Mr. James Binder, P.E.

Alternative Resources, Inc.
9 Pond Lane
Concord, MA 01742
978-371-2054
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7) QUESTION AND ANSWER PERIOD (8:10-9:00 PM)

Mayor Dan Coody

Moderator

*** WORKSHOP CONCLUDES AT 9:00 P.M. ***

Biography
James J. Binder, P.E.
Alternative Resources, Inc.
9 Pond Lane
Concord, Massachusetts 01742
(978) 371-2054
(978) 371-7269

Mr. Binder is President of Alternative Resources, Inc. He is a graduate of Northeastern University, Boston, Massachusetts where he received both BS and MS degrees in Mechanical Engineering. He is a member of the Water Environment Federation and the National Council for Public-Private Partnerships. Mr. Binder is a registered professional engineer in eight states and has some 29 years of consulting experience, the past 20 years of which he has specialized in implementing DBO procurements for the management of municipal solid waste, water, wastewater, and residuals. Examples of recent water and wastewater DBO projects Mr. Binder has managed and/or served as principal-in-charge include Stockton, California, Sioux City, Iowa, Taunton, Gardner, and Plymouth, Massachusetts, Westerly and Smithfield, Rhode Island, Naugatuck, Connecticut, and Chester Borough, New Jersey.

Eric S. Petersen
Law Partner
Hawkins, Delafield & Wood

Eric Petersen heads the ten-attorney Public Contracts Group at the municipal law firm of Hawkins, Delafield & Wood in New York. He has, on behalf of municipal government, been the lead negotiator in more than 100 public works contract procurements resulting in design, construction, operation and management contracts with private service providers nationally and internationally valued at several billion dollars. Mr. Petersen has represented New York, San Diego, Massachusetts Water Resources Authority (Boston), Charlotte, Los Angeles, Halifax, San Juan, St. Louis, Narragansett Bay Commission (Providence), Montreal and Fresno, among numerous other cities, countries, districts, authorities, states and sovereign governments in his 29-year legal practice, which has encompassed all forms of public-private arrangements under which public works facilities are owned, built, operated and financed. As special counsel, he was the chief architect of the groundbreaking Cranston, Rhode Island wastewater project privatization and related USEPA approvals in which a private company contracted for the design and construction of tertiary treatment upgrades and for the long-term operation, maintenance, repair and replacement of Cranston's plant and sewer system. In Seattle, Mr. Petersen authored the Tolt River design-build-operate water treatment plant contract as special counsel to the City, the first transaction of its kind in the water industry. He has also served as special counsel to Stockton (CA), Fulton County (GA), Laredo (TX), Puerto Rico Aqueduct and Sewer Authority (PRASA), Springfield (MA), Sacramento (CA), San Jose (CA), Lynn (MA), Naugatuck (CT), Waterbury (CT), Newport (RI) and several other municipalities in successfully completed water and wastewater project procurements. He currently represents Phoenix (AZ), Spokane County (WA), Lawrence (MA), San Diego County Water Authority (CA) and Holyoke (MA) as special contract counsel on active water and wastewater project procurements. Mr. Petersen is a co-founder of the U.S. Conference of Mayors' Urban Water Council. He makes regular presentations at conferences organized by the Council and by AWWA/WEF (Joint Management Conference), the Design/Build Institute of America, the National Council for Public-Private Partnerships, the International City Managers Association and other forums on legal, environmental, tax and financing topics critical to the water and wastewater industry, and has authored numerous articles in the field.

Don S. Evans

President and Chief Executive Officer,
Operations Management International Inc.



President, CH2M HILL Water Business Group

Profile

Don S. Evans has served as President and Chief Executive Officer of Operations Management International, Inc. (OMI) since 1986. He also is President of CH2M HILL's Water Business Group, having assumed that group's leadership in 1995.

Mr. Evans is a career employee at CH2M HILL, joining the firm in 1973. During his career, he has been an executive, project manager, process engineer, and construction services manager in the water, wastewater and public works industry. He also has considerable expertise in the wastewater collection field, including infiltration/inflow, computer modeling, systems evaluation and rehabilitation, and capital improvements.

As president and chief executive officer of OMI, Mr. Evans manages 1,500 associates who operate, maintain and manage more than 180 water, wastewater, solid waste, and public works projects around the world. His dream has been to create an environment where people can't wait to get to work in the morning. He has fulfilled that dream by supporting OMI's unique commitment to quality and client service. OMI's operating creed, Quality as a Business Strategy, helped OMI earn the 2000 Malcolm Baldrige National Quality Award. OMI is one of only nine service companies to win the award, and is the only water services firm ever to win the award.

As president of the CH2M HILL Water Business group Mr. Evans works with more than 1,000 people worldwide delivering engineering and consulting services to water companies, utilities, governments and industries.

Mr. Evans holds bachelor's and master's degrees in civil engineering from Stanford University, and a master of business administration degree from Stanford.

USFilter Operating Services, Inc.

Company Profile

USFilter Operating Services, Inc. (USFOS) is a part of the United States Filter Corporation (USFilter), North America's largest water company providing the most comprehensive water services for commercial, industrial, municipal and residential customers. The company delivers cost-effective, reliable systems guaranteed for quality, safety and compliance—providing water services to approximately 13.9 million people in more than 600 communities, and hundreds of thousands of industries and businesses.

The *Engineering News Record* lists **USFilter as #1 among the Top 200 Environmental Firms** in the U.S.—a record that the company has held over the past three years.

Whether it's bottled water service for homes, sophisticated water treatment technologies for manufacturers, centralized treatment and resource recovery, or the design, construction, operation and financing of entire water and wastewater management systems, USFilter delivers cost-effective, reliable systems to meet our customers requirements for quality, safety and environmental compliance.

Through the design/build/operate (DBO) service delivery option, USFOS brings together these resources and capabilities to deliver municipal clients a comprehensive approach that includes:

- **Operations, Maintenance and Management (O&M).** USFOS has more than 50 years of experience in providing O&M services to governmental and industrial clients throughout North America. Our firm currently manages more than 550 municipal and industrial facilities, serving a client base of over 380 governmental and industrial clients. USFOS' wastewater experience includes wastewater plants similar in size the City of Fayetteville's Paul R. Noland Wastewater Treatment Facility. Examples of clients from surrounding states include Oklahoma City, OK, Bartlesville, OK, and New Orleans, LA.
- **Engineering and Construction.** USFilter Engineering and Construction (USFilter E&C) is the USFilter company that delivers comprehensive engineering, construction management and related services. They have over 90 years of experience in the design and construction of water and wastewater treatment facilities. In that time, USFilter E&C has provided services for literally hundreds of governmental and industrial client. They are also leaders in implementing design/build and DBO solutions for new water and wastewater treatment plants and the expansion of existing facilities.
- **Technologies and Equipment.** One of the greatest strengths of USFOS is our ability to improve the quality of life for the citizens of a community through application of a wide range of treatment technologies—from basic to cutting-edge—all while improving health protection and the environment. As the manufacturer of virtually every technology used to treat water and wastewater, USFilter company experts provide unmatched technical support and know-how.

Today, USFilter is North America's largest water company providing the most comprehensive water services and technology for commercial, industrial, municipal and residential water and wastewater treatment customers.

Projects

As highlighted above, the USFOS DBO project approach combines all the separate strengths of our company, focusing them on meeting the complete needs of our clients. Over the past few years our company has carried out a number of successful projects.



USFilter

USFilter Operating Services, Inc.

Some examples of projects include the following:

- Atlanta, GA – 20-year DBO project for the beneficial reuse and management and biosolids from the City's three wastewater treatment plants.
- Lynn, MA – Client since 1989 with multiple contracts for O&M and design/build projects for the City's water, wastewater and stormwater facilities and systems.
- Southern Water and Sewer District, Floyd County Southern Water, KY – 20-year contract including the DBO project for 21 miles of new water line, three water tanks and three water pump stations.
- Tampa Bay Water – DBO for new regional 66-MGD water treatment plant.
- Taunton, MA – DBO project renovations at the 8.34-MGD wastewater plant for tertiary treatment.
- Washington Borough, NJ – 15-year contract including DBO contract for new 1.2-MGD wastewater plant.
- Woonsocket, RI – 20-year contract including DBO project for the upgrade/expansion of a 16-MGD secondary wastewater treatment plant, including Biological Nutrient Removal.

Speakers***Bill Rosenbaum, P.E.***

Mr. Rosenbaum is Vice President of Municipal Design/Build Project Development with USFilter E&C. He has over 28 years experience in the development, design, construction and operation of water and wastewater projects. Mr. Rosenbaum has managed groups responsible for detailed design, development of remediation technologies, turnkey construction and operation. He currently manages the USFilter E&C group responsible for the delivery of design/build services, encompassing responsibility for concept development, teaming arrangements, proposal phase design and pricing and sales support for all USFilter municipal DBO proposals. This group also has process engineering responsibility from proposal phase through startup of the completed project. Among other projects, Mr. Rosenbaum has been responsible for the development of the Design/Build component of the following projects:

- Plymouth, MA - \$23 million DBO project for a greenfield wastewater treatment facility
- Woonsocket, RI – \$15 million DBO project for the upgrade and expansion of an existing wastewater treatment facility
- Tampa Bay, FL – \$88 million DBO project for a new regional surface water treatment facility
- Lynn, MA – \$65 million design/build project for sewer separation for the elimination of combined sewer overflows
- Atlanta, GA – \$52 million DBO project to provide for biosolids beneficial use at the City's three largest wastewater treatment plants
- Indianapolis, Indiana – \$1.5 billion project for management and operations of the City's water supply, including \$20 million in capital improvements annually to be completed using a design/build approach

Presentation Outline

Mr. Rosenbaum's presentation will provide an explanation of why many cities have used the DBO concept to carry out their projects. These reasons have typically included cost savings and the transfer of risk. The savings have come from the designer, contractor and operator working together and using the total life cycle cost to make decisions. The transfer of risk from a municipality to a private contractor has helped cities achieve stable rates through fixed prices and operational performance guarantees of the new

USFilter Operating Services, Inc.

facilities. The City of Fayetteville has discussed concerns about the use of State Revolving Loan funds, a tight time-frame and questions regarding procurement. Mr. Rosenbaum's presentation will discuss successful projects which have over come all of these issues.

Example Project

The City of Lynn, Massachusetts, has contracted with USFilter companies under multiple contracts over the past 18 years. These contracts have involved providing O&M for the City's 15.3-MGD water treatment plant, as well as their 25.8-MGD wastewater treatment plant. In 1990, USFOS oversaw a \$53.8-million upgrade to the City's secondary treatment at the wastewater plant. Between 1996 and 1998, USFOS also oversaw \$10 million in capital improvements at this same facility. In addition, USFOS is currently implementing \$14 million in capital improvements for the wastewater facility under a three-year program, using a design/build approach. The current capital improvements program at the City's wastewater facilities are being implemented using State Revolving Fund funds for financing.

In December 2000, the City awarded USFilter E&C a contract to design/build a system to mitigate combined sewer overflows (CSOs) in the City's sewer system. Valued at \$48 million, this nine-year capital improvement project is believed to be the nation's first CSO design/build project and, according to City estimates, is expected to save in excess of approximately \$300 million.

Pat McManus

Mr. Pat McManus is the former Mayor of Lynn, Massachusetts. During his tenure the City carried out improvement projects to its water treatment plant, wastewater treatment plant and sewer collection system. Pat is an attorney and provides consulting to companies and cities involved in public private partnerships.

Presentation Outline

Mayor McManus' presentation will cover the City of Lynn's experience in using the design/build and DBO concepts for water and wastewater plants and sewer line projects. The City of Lynn overcame many of the challenges that the City of Fayetteville is now experiencing using State Revolving Loan funds, and dealt with sewer line construction and repair type of issues that now face your City.

NOTIFICATION LIST FOR DESIGN-BUILD-OPERATE WORKSHOP:

Mayor and City Council of Fayetteville, Arkansas

Fayetteville City Administration

Hugh Earnest

Steve Davis

Gary Dumas

Tim Conklin

Ray Boudreaux

Kit Williams

David Jurgens

Gary Coover

Peggy Vice

Coy Hurd

Chamber of Commerce-Mr. Bill Ramsey

Members of Media

Newspapers

Government Channel

City Web Site (?)

Engineering/Architectural Firms

U S Infrastructure

McClelland

Cromwell and Associates

Crafton Tull and Associates

Wastewater Project Consultants

Garver Engineers

McGoodwin, Williams and Yates

RJN Group

Black and Veatch

Burns and McDonnell

CH2M Hill

Environmental Consulting Operations

Financial Consultants

Dennis Hunt (Stephens, Inc.)

Arkansas Soil and Water Conservation Commission

Randy Young

Ron Hill

Scott Savoy

Mike Core

Arkansas Department of Environmental Quality

Mary Leath

Arkansas Department of Health

Robert Hart

Environmental Pollution Agency – Region 6

Richard Greene

Arkansas Municipal League

Don Zimmerman
Representatives of Arkansas Municipalities
Mayor of Springdale
Mayor of Eureka Springs-Kathy Harrison
Mayor of Springdale
Mayor of Rogers
Mayor of Bentonville
City of Silom Springs
Mayor of Farmington
Mayor of Greenland
Mayor of Goshen
Mayor of Elkins
Mayor of Johnson
Kent Myers of Hot Springs
City of Conway-Tab Townsend
Springdale Utilities-Rene Langston
Northwest Arkansas Regional Planning Commission
Jeff Hawkins
Uvalde Lindsey (Ozark International Consultants)
Senator Sue Madison (DBO Bill)
Steven Stewart (Congressman Boozman's Office)
Senator Blanche Lincoln's Office
Senator Mark Pryor's Office
Washington County Judge
Jerry Hunton
John Gibson
Fayetteville Citizens on City Clerk's e-mail list
University of Arkansas
Leo Yanda
Findlay Edwards
Concerned Citizens
John Lewis
Curtis Shipley
Gary Head
Arkansas Highway and Transportation Department
Harold Beaver
Beaver Water District
Alan Fortenberry
Coleen Gaston

A Classical Notion of Single Source Responsibility:

Design-build is a process that has been embraced by the world's great civilizations. In ancient Mesopotamia, the Code of Hammurabi (1800 BC) fixed absolute accountability upon master builders for both design and construction. In the succeeding millennia, cathedrals and cable-stayed bridges, cloisters and corporate headquarters, have been conceived and constructed using the paradigm of design-build.

RETURN TO THE TIME-HONORED APPROACH OF THE MASTER BUILDER, where a single source has absolute accountability for both design and construction.

When the efficiency of classical design-build construction is compared to the fragmented, multiple building source model, the design-build approach is clearly superior. It is the only approach that provides a single source of responsibility for both design and construction.

Master builders have always had full responsibility for both design and construction. In the past, the design-build approach has been used to build bridges, roads, and other infrastructure. The design-build approach has been used to build bridges, roads, and other infrastructure.

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WHAT ARE THE BENEFITS OF DESIGN-BUILD?

The benefits to be gained in establishing a well-designed and managed Design-Build process include the following:

Singular Responsibility

With both design and construction in the hands of a single entity, there is a single point of responsibility for quality, cost and schedule adherence. The design-builder is motivated to deliver a successful project by fulfilling multiple parallel objectives, including aesthetic and functional quality, budget, and schedule for timely completion. With design-build, the owner is able to focus on scope/needs definition and timely decision-making, rather than on coordination between designer and builder.

Quality The singularized responsibility inherent in design-build serves as a motivation for quality and proper project performance. The Owner's requirements and expectations are documented in performance terms and it is the design-build entity's responsibility to produce results accordingly. The Design-Builder warrants to the Owner that it will produce design documents that are complete and free from error. (By contrast, with "traditional" design-bid-build, the Owner warrants to the Contractor that the drawings and specifications are complete and free from error. Because it is the Owner's warranty for the design documents under design-bid-build, the traditional approach relies on restrictive contract language, audit and inspection and occasionally, the legal system, to ensure final project quality.)

Cost Savings Design and construction personnel, working and communicating as a team, evaluate alternative materials and methods efficiently and accurately. Value engineering and constructability are utilized continuously and more effectively when the designers and contractors work as one team during the entire design process.

Time Savings Because design and construction are overlapped, and because bidding periods and redesign are eliminated, total design and construction time can be significantly reduced. Design-build is ideal for the application of "Fast Track" construction techniques. With design-build, materials/equipment procurement and construction work can begin before the construction documents are fully completed. The resulting time savings translates into lower costs and earlier utilization of the completed facility.

Potential for Reduced Administrative Burden During procurement, the potential exists for design-build to reduce the Owner's administrative burden; however, preparing RFPs and conducting evaluations can be resource intensive during the early learning curve. During actual design and construction, the Owner is not required to invest time and money coordinating and arbitrating between separate design and construction contracts, but rather is able to focus on timely decision making.

Early Knowledge of Firm Costs Guaranteed construction costs are known far earlier than in other delivery systems. The entity responsible for design is simultaneously estimating construction costs and can accurately conceptualize the completed project. Staged contracting for design-build services affords the Owner one or more "go, no-go" decision points during design. The decision to proceed with the project is made before substantial design expenditure and with firm knowledge of the final cost.

Improved Risk Management Performance aspects of cost, schedule and quality are clearly defined and responsibilities/risks are appropriately balanced (individual risks are managed by the party best positioned to manage that risk). Change orders due to "errors and omissions" are virtually eliminated, because the design-builder has responsibility for developing drawings and specifications as well as constructing a fully-functioning facility.

DEFINING DESIGN-BUILD PROJECT DELIVERY

Design-Build is a method of project delivery in which one entity (design-builder) forges a single contract with the owner to provide for architectural/engineering design services and construction services. (Design-build is also known as design/construct and single source responsibility.)

By contrast, with the "traditional" design-bid-build approach, the Owner commissions an architect or engineer to prepare drawings and specifications under a design contract, and subsequently selects a construction contractor by competitive bidding (or negotiation) to build the facility under a construction contract.

When discussing the merits of project delivery methods, it is important to distinguish between true delivery systems and other contract-related activities, trends and philosophies. For example, design-build, design-bid-build and construction management are the three project delivery systems most commonly employed in North America. Partnering and total quality management (while they can be excellent tools when appropriately applied) are not project delivery systems.

During the past decade, the use of and interest in design-build in the United States has greatly accelerated, making this delivery method one of the most significant trends in the design and construction industry. According to the American Institute of Architects Practice Memo, "Design-Build is attracting a lot of attention, because owners, including government agencies, are finding it attractive [for] complex and unusual projects, because it...eliminates some of the major seams in getting a project built."

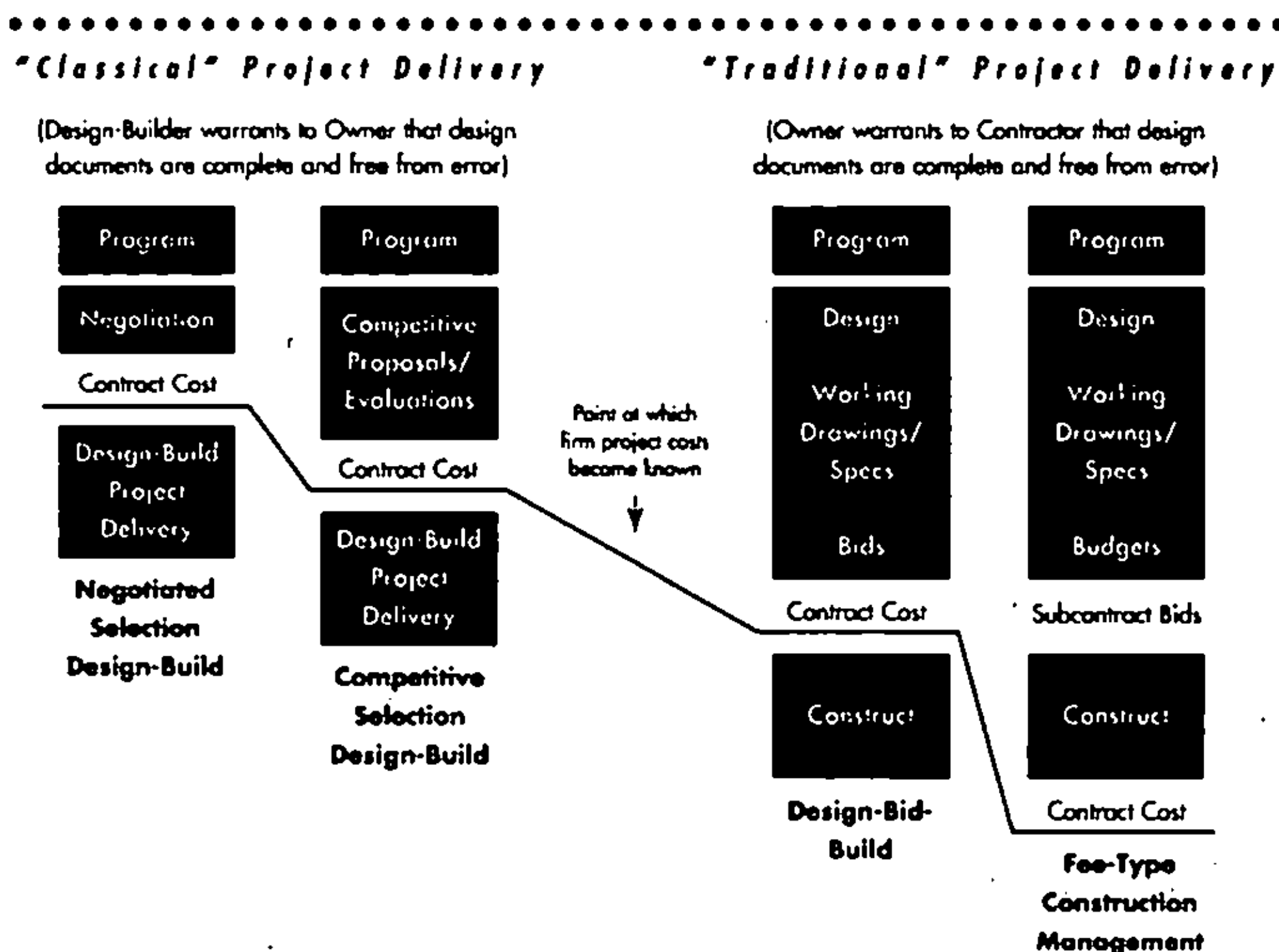
In its recent study on design-build, the American Society of Civil Engineers maintains that "Design-build has been used successfully on complex power plant and chemical process facilities and on simple straightforward office buildings and family housing. In fact," claims the ASCE report, "There is no reason that design-build cannot be used on most types of construction projects, including traditional civil infrastructure projects."

AIA, ASCE and others cite a number of reasons why owners and the A/E-construction community are considering design-build. Primary among these are:

- Owner-driven demands for better quality and continuous improvement in project delivery and in the final product;
- Interest in saving time and money, such as through a process wherein constructability is a key concern from the outset;
- Desire to avoid the legal entanglements of adversarial relationships;
- Need to realign the responsibilities and risks on a project, by dividing responsibilities/risks according to the party most capable of managing those risks;
- Response to the restructuring of American business and the increased influence of global markets/foreign competition.

AWESOMENESS

This introductory Design-Build Institute of America (DBIA) publication is designed to give the reader an overview of the process and some of the practical reasons behind design-build's increasing popularity.



CAVEATS: WHAT SHOULD THE OWNER WATCH OUT FOR?

Complexity of the Process

Design-build project delivery requires careful planning and professional execution to be successful. The Owner should choose a design-build process variation based on factors such as the project's complexity, funding, design intent, responsibility/risk allocation and other important issues. For owners who do not have in-house personnel with expertise in preparing and administering design-build requests for proposals (RFPs) and contracts, an owner's design-build consultant (sometimes called design criteria professionals) may be retained to prepare scope definition and RFP documents, and to provide additional consulting services as needed.

Challenge in Converting Owner Needs to Performance-Based Language

Preparing a statement of facility requirements (sometimes called the design criteria package) that is comprehensive enough to assure compliance by the offerors, but avoids overly restrictive requirements or details that would inhibit creative solutions, is the most challenging aspect of preparing a design-build RFP. When facility requirements are stated in performance terms and related to recognized industry standards, the approach not only provides flexibility to the offerors in meeting the desired objectives, but it fixes responsibility upon the design-builder in clearly understood performance terms.

Availability of Design Liability Insurance and/or Performance and Payment Bonds

Certain insurance carriers and bond sureties may not be familiar with design-build. This can lead to some hesitation about providing these services on design-build contracts. The parties to a design-build contract need to make sure that adequate coverage exists in both the professional liability and surety arenas.

WHO USES DESIGN-BUILD?

Design-build is the project delivery system of choice on more than 50 percent of the non-residential construction projects in the European Community and is used on more than 70 percent of the non-residential projects in Japan, according to recent industry publications.

In the United States, the private sector's use of design-build has been increasing in frequency and application during the past thirty years. Design-build is being used in a wide array of commercial and institutional applications including hospitals, educational facilities, office buildings, retail centers and hotels. Design-build has also been used for decades in the industrial and power sectors.

In the U.S. public sector, the federal government, many states and local governments employ design-build contracting for a significant percentage of their building programs. In the seven years from 1986 to 1992, total use of design-build in the public and private sectors grew 172%, from \$18 billion to \$49 billion (*Engineering News-Record 1993 Report*).

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HOW IS A DESIGN-BUILD ENTITY SELECTED?

The traditional method of selecting a Design-Builder has been direct selection. This technique permits the early involvement of the Design-Build entity with the Owner as critical initial decisions are made and preserves the full range of benefits that design-build can provide.

The public sector and some private owners may be prevented from utilizing direct selection. The methods most commonly utilized by public agencies (and by some private owners as well) have been negotiated selection, cost/design competitions and bidding.

A summary of these selection methods follows:

Direct Selection The Design-Builder is selected directly by the Owner on the basis of such factors as reputation, technical and managerial qualifications, past performance, and prior association. Direct selection is most commonly utilized by private sector owners.

Negotiated Selection

A number of Design-Builders are prequalified or interviewed, with selection based upon the same criteria noted in direct selection plus additional factors such as preliminary design solutions, fees to be charged, recent comparable costs, personnel to be assigned to the project, and scheduling commitments. As with direct selection, the negotiated source selection approach is most commonly utilized by private sector owners; however, major federal agencies (GSA, Corps of Engineers, U.S. Postal Service) are also adopting this method on certain projects.

Cost/Design

Competitions Proposers are shortlisted on a qualifications basis and requested to submit a qualitative proposal and firm price. The Owner establishes an evaluation system for qualitative features and for price. The technical proposals are received by the Owner with the price submitted simultaneously but separately. The Owner reviews each technical proposal, then price, and makes selection based upon previously stated selection criteria.

Cost Competitions This method of evaluation most closely resembles the design-bid-build process.

Typically, specific design concepts are issued as a part of the criteria package. The selected firm's role in design is more that of a detailer than conceptualizer. Frequently, proposals are solicited only from prequalified design-builders. The proposals are evaluated, deemed to meet the base criteria, and award is made to the low bidder. This process eliminates two of the most advantageous features of design-build competitions: multiple design solutions and innovations in materials/systems.

WHAT TYPES OF CONTRACTS ARE USED?

The traditional design-build contract format has been a two-part, lump sum arrangement. Part one authorizes preliminary design sufficient to determine the final cost and to conceptually describe the project. Part two completes the design and authorizes construction. Many variations of this method exist in the marketplace. The "two-part" approach can be expanded to allow for incremental release of additional design.

Single-part lump sum contracts are most commonly utilized with cost/design or cost competition selection methods. In some instances, however, a cost plus fee or guaranteed maximum price arrangement is used in lieu of a lump sum contract. Regardless of the type of design-build contract chosen, it must be tailored to the needs of the owner and the project.

SUMMARY

This document is intended as an introduction to the concept of Design-Build and the benefits it can provide. A more thorough discussion of the details of implementing a Design-Build project or program can be found in DBIA companion documents entitled:

- "The Design-Build Process Utilizing Competitive Selection"
- "The Design-Build Process Utilizing Negotiated Selection"
- "Design-Build Definitions"

DESIGN-BUILD DEFINITIONS

Note: The following definitions are arranged in alphabetical order. It is hoped that the small number of entries, used together with the DBIA family of process documents, will enable the user to readily locate and understand a specific definition in context.

Adjusted Low Bid: A form of best value selection in which qualitative aspects are scored on a 0 to 100 scale expressed as a decimal; bid price is then divided by qualitative score to yield an "adjusted bid" or "cost per quality point". Award is made to offeror with the lowest "adjusted bid".

Best Value: Also known as "Greatest Value", a selection process in which proposals contain both price and qualitative components, and award is based upon a combination of price and qualitative considerations. "Qualitative" can be further subdivided as to "technical design" and/or "management plan".

Deliverables: The sum of the drawings, specifications, commentary, models, etc., prepared by the offeror in response to a Request for Proposal. Deliverables are sometimes referred to as "submittal requirements" in some RFPs.

Design-Bid-Build: The project delivery approach where the Owner commissions an architect or engineer to prepare drawings and specifications under a design services contract, and separately contracts for at-risk construction, by engaging a contractor through competitive bidding or negotiation.

Design-Build: Also known as "design-construct" or "single responsibility", Design-Build is a system of contracting under which one entity performs both architecture/engineering and construction under one single contract.

Design-Builder: The entity contractually responsible for delivering the project design and construction. The Design-Builder can assume several organizational structures. Most common would be a firm possessing both design and construction resources in-house, a joint venture between designer and contractor, a contractor-led team with the designer in a subcontractor role, or a designer-led team with the contractor in a subcontractor role.

Design Criteria Professional: An individual (typically a registered professional Architect or Engineer) who develops the facility program, design criteria, outline performance specification and other project-specific material to provide to potential design-build offerors. The design criteria professional may be in-house or may be an outside consultant (see *Owner's Consultant*).

Design Proposal: That portion of a Design-Build proposal which contains design factors, usually including function, layout, materials, aesthetics and specifications. The Design Proposal falls under the general category of qualitative evaluation factors.

Direct Selection: Also known as "Qualifications-Based Selection", a form of selection based upon qualifications of the offeror for the project; followed by negotiation to determine contract cost.

Equivalent Design/Low Bid: A form of best value selection in which qualitative proposals are followed by a critique rather than scoring. Price envelopes remain sealed. Each offeror receives the critique of its proposal and responds with design changes and corresponding price amendment. Revised designs are evaluated for compliance and price envelopes, both base and amendments, are opened. Award is made on basis of lowest price because the proposal critique ensures relative equivalency of designs.

Fast Track Construction: A scheduling process in which design and construction activities overlap. Design documents and equipment and trade subcontracts are released incrementally or in phases.

Fixed Price/Best Design: A form of best value selection in which contract price is established by the Owner and stated in the RFP. Design proposals and management plan are evaluated and scored, with award going to the firm offering the best qualitative proposal for the established price.

Management Proposal: That portion of a Design-Build proposal which contains the management plan including project approach, personnel, organization, schedule, affirmative action plan, etc. The Management Proposal falls under the general category of qualitative evaluation factors.

Owner: The entity for which the project is being built and with whom the Design-Builder will be in privity of contract.

DESIGN-BUILD DEFINITIONS

Owner's Consultant: A consultant or consulting firm that may be employed by an Owner (e.g., an Owner who may not have sufficient in-house expertise to acquire design-builder services) to assist in organizing and administering the design-build selection process, and for other consulting services such as review of submissions for compliance with the RFP. Is often the "design criteria professional" who develops the facility program, performance specifications and other RFP components.

Performance Specification: A specification expressed in terms of an expected outcome or acceptable performance standard. Often used in Design-Build criteria to articulate the Owner requirements.

Prequalification: Similar to "shortlisting", the process in which an Owner requests preliminary technical proposals and/or qualification submissions from which it selects a certain number as the most qualified; these offerors then compete for the final selection.

Prescriptive Specification: The traditional method of specifying materials or techniques found in design-bid-build projects. The range of acceptable products, manufacturers, and techniques, etc., is stipulated in detail to be followed by the builder.

Qualifications Statement: A written submission by interested Design-Build offerors, more generic and limited than a proposal, used by an Owner for prequalification or shortlisting, i.e., selecting the firms that are most qualified.

Qualitative: The subjective and non-cost factors that characterize and qualify an offeror. Such factors would include both factors that characterize the Design-Build entity and the proposal they submit. Examples include the experience and management plan of the Design Builder and the aesthetic, functional and other aspects of a design that are not directly convertible to cost.

Request for Proposal (RFP): The document that initially describes the procurement process, forms the basis for proposals, and ultimately becomes a potential element in the contract.

Request for Qualifications (RFQ): The document issued by the Owner prior to an RFP that typically describes the project in enough detail to let potential proposers determine if they wish to compete, and forms the basis for requesting Qualifications Submissions in a "two phase" or prequalification process.

Shortlisting: Narrowing the field through the use of a Request for Qualification (RFQ) process. The number of short-listed design-build proposers invited to submit final proposals is frequently between three to five firms.

Stipend (or Honorarium): A stated amount sometimes paid to offerors in consideration for the cost of preparing a Design-Build proposal. The stipend or honorarium would be paid to unsuccessful offerors.

Turnkey: A variation of design-build project delivery in which one entity is responsible to the Owner for architecture/engineering and construction plus designated real estate services which may include project financing and site selection/purchase.

Two-Phase Selection Process: A procurement process in which the first phase consists of prequalification or shortlisting, and the second phase consists of preparation and submission of complete Design-Build proposals from the prequalified or shortlisted offerors. Also known as Two-Stage procurement.

Two-Step Proposal/Bid Evaluation: Also referred to as "two envelope", any selection process in which qualitative proposals are submitted separately from price proposals with price proposal remaining sealed until qualitative proposals are evaluated.

Weighted Criteria Process: A form of best value selection in which maximum point values are preestablished for qualitative criteria and price components, and award is based upon high total points earned by the proposers from both components.

DBIA



**DESIGN-BUILD
INSTITUTE OF AMERICA**

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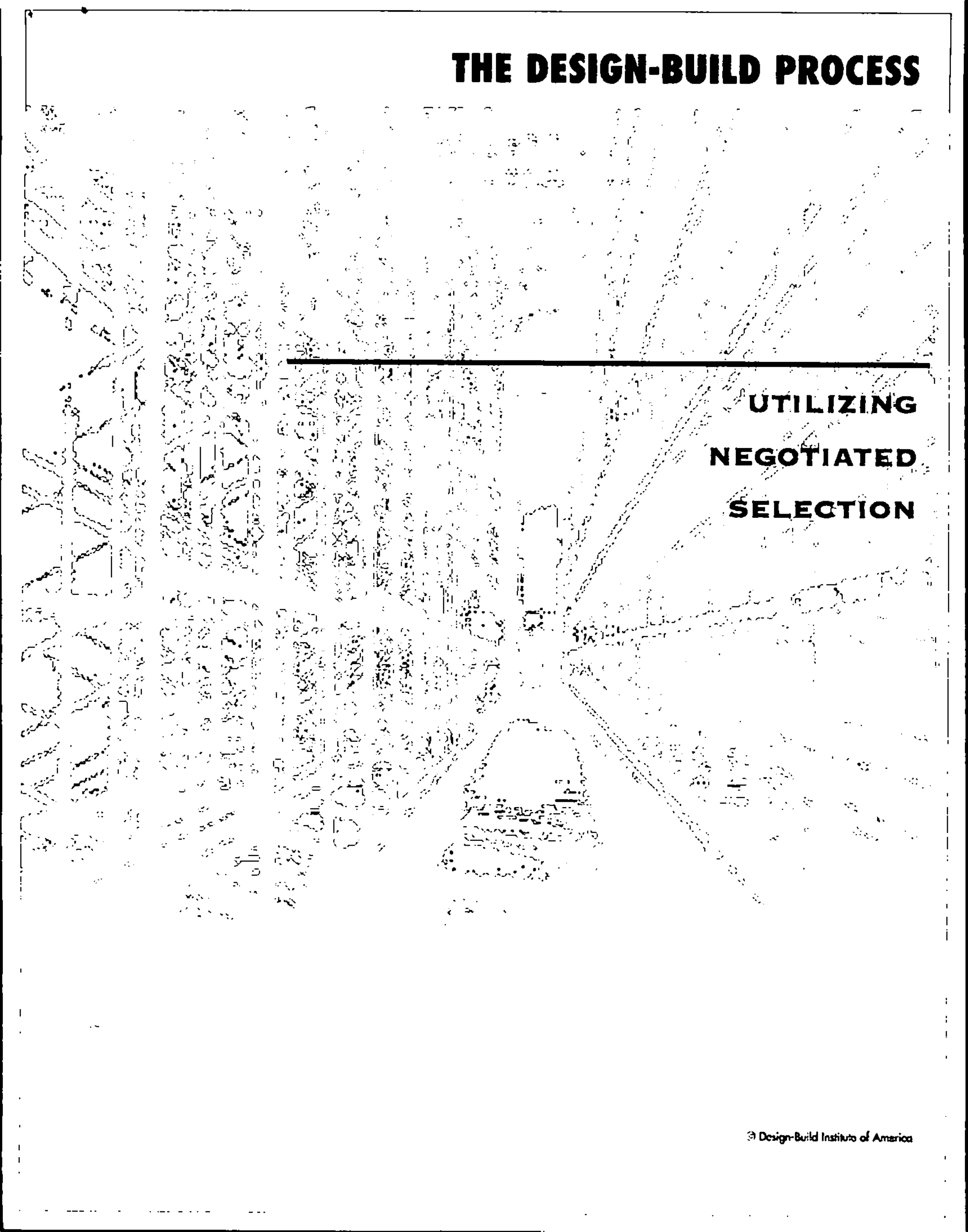
Designed by Martine Bernard Design

THE DESIGN-BUILD PROCESS



UTILIZING
NEGOTIATED
SELECTION

THE DESIGN-BUILD PROCESS



UTILIZING NEGOTIATED SELECTION

This document is intended for use by private industry, institutions, real estate developers and others interested in the use of the Design-Build delivery system where selection of the Design-Build entity will be made through a negotiated selection process.

It sets forth the principal characteristics of Design-Build, project situations to which it is applicable, its advantages and caveats, and procedures to be followed in implementing successful selection and administration processes.

<i>Benefits/Caveats in the Use of Design-Build</i>	<i>Page 1</i>
<i>Overview of the Process</i>	<i>2</i>
<i>Applicable Project Situations</i>	<i>3</i>
<i>Applicable Public Policy</i>	<i>4</i>
<i>Design-Build Selection Process</i>	<i>4</i>
<i>Keys To A Successful Negotiated Selection</i>	<i>5</i>

BENEFITS/CAVEATS IN THE USE OF DESIGN-BUILD

The benefits to be gained in establishing a well-designed and -managed Design-Build process include the following:

Singular Responsibility With both design and construction in the hands of a single entity, there is a single point of responsibility for quality, cost and schedule adherence. The design-builder is motivated to deliver a successful project by fulfilling multiple parallel objectives, including aesthetic and functional quality, budget and schedule for completion. With design-build, the owner is able to focus on scope/needs definition and timely decision-making, rather than on coordination between the designer and builder.

Quality The singularized responsibility inherent in Design-Build serves as a motivation for high quality and proper project performance. The Owner's requirements and expectations are documented in performance terms and it is the Design-Builder's responsibility to produce results accordingly. The Design-Builder "warrants" to the Owner that the design documents are complete and free from error. (By contrast, with "traditional" design-bid-build, the owner "warrants" to the contractor that the drawings and specifications are complete and free from error. Because of the owner's warranty under "traditional" design-bid-build, the approach relies on restrictive contract language, extensive audit and inspection and occasionally, the legal system, to ensure final project quality.)

Cost Savings Design and construction personnel, working and communicating as a team, evaluate alternative materials and methods efficiently and accurately. Value engineering and constructability are utilized more effectively when the designers and contractors work as one team during the design process.

Time Savings Because design and construction are overlapped, and because bidding periods and redesign time are eliminated, total design and construction time can be significantly reduced. Design-Build is ideal for the application of "Fast Track" con-

struction techniques. With Design-Build, procurement and construction work begin before the working drawings are fully completed. The resulting time savings translates into lower costs and earlier utilization of the completed facility.

Reduced Administrative Burden Because design-build is an integrated and streamlined process, the Owner's administrative burden can be reduced. The Owner is not required to invest time and money coordinating and arbitrating between separate design and construction contracts, but rather is able to focus on scope definition and timely decision making.

Early Knowledge of Firm Costs Guaranteed construction costs are known far earlier than in other delivery systems. The entity responsible for design is simultaneously estimating construction costs and can accurately conceptualize the completed project. Two-part contracting for Design-Build services affords the Owner a "go, no-go" decision point at the completion of preliminary design. The decision to proceed with the project is made before substantial design expenditure and with firm knowledge of the final cost.

Risk Management Quality, cost and schedule expectations are clearly defined and appropriately balanced (individual risks are managed by the party best positioned to manage that risk). Change orders due to drawing and specification errors are eliminated because the correction of such errors is the responsibility of the Design-Builder, not the Owner.

Minimized Planning Time and Expense When the Design-Builder is selected through a negotiated process, both time and money are saved. Negotiated Design-Build selection avoids the requirement for the Owner to unilaterally complete all programming, project criteria and definition in order to conduct a meaningful and fair competition. The beneficial input of the Design-Builder during the critical planning and conceptual stage is preserved. The time and cost of a proposal competition can be avoided.

Caveats to be considered in an effort to ensure a successful Design-Build process include the following:

Complexity of the Process

Design-build project delivery requires careful planning and professional execution to be successful. The Owner should choose a design-build process variation based on factors such as the project's complexity, funding, design intent, responsibility/risk allocation and other important issues. For owners who do not have in-house personnel with expertise in preparing and administering design-build RFPs and contracts, an owner's design-build consultant (sometimes called design criteria professionals) may be retained to prepare scope definition and RFP documents, and to provide additional consulting services as needed.

Availability of Design Liability Insurance and/or Performance and Payment Bonds

Certain insurance carriers and bond sureties may not be familiar with design-build. This can lead to some hesitation about providing these services on design-build contracts. The parties to a design-build contract need to make sure that adequate coverage exists in both the professional liability and surety areas.



OVERVIEW OF THE PROCESS

The delivery steps for a typical Design-Build project are described in broad terms below. Each project is unique and accordingly, alternatives and refinements would modify these steps.

Strategic Facility Planning

- The Owner identifies the prospective project in broad, business-like terms. In some cases, needs are established in terms of project area, population, technology content, performance criteria, etc. A site may have been identified.
- The Owner determines that Design-Build is the desirable delivery process for the project. This determination may be made at the very outset; it may be the result of exploration of alternative delivery systems; or the design process may be initiated before making a commitment to Design-Build.

Selection of Design-Builder

- Two or more potential Design-Builders are identified. A "short" list is developed based upon factors such as reputation, capacity, project personnel, etc.
- The short listed Design-Builders are interviewed and evaluated against criteria established by the Owner.
- A single Design-Builder is tentatively selected. Contract language and terms are negotiated and a contract is executed. It is common to execute the Design-Build contract in two parts. Part One authorizes design sufficient to define the project and fix the price. Part Two completes the design documents and the construction work. This split contract feature allows the Owner a convenient check point before committing to complete the project.

Program Definition

- The Design-Builder joins with the Owner in the establishment of overall project objectives, target budgets, site evaluation/selection, development of project program, and establishment of schedules and milestones dates. Programmatic and preliminary design begins.

- The Design-Builder's knowledge of construction costs, scheduling, constructability, availability of materials and equipment, and similar factors are combined with the design process. Design decisions proceed integrally with construction factors. Clear responsibility for budget, schedule, and performance of the finished product is now established.

Design-Build Contract Award

- Well before drawings are complete and typically as early as the concept phase, a Lump Sum price (or Guaranteed Maximum Cost) is established by the Design-Build entity, and contracts are executed.
- Construction begins and continues in the customary manner but is enhanced by the singularization of design and construction responsibility, by the continuity between early design decisions and the construction process, by the absence of claims for errors or omissions, and by the increased schedule momentum of Design-Build.
- The foregoing process is also applicable to the direct selection of a single Design-Build entity (sole source) without consideration of other competitors. In such cases, the procurement steps listed above would be combined and discussions held with a single Design-Build entity, instead of with multiple offerors.

APPLICABLE PROJECT SITUATIONS

Negotiated Design-Build is applicable to a broad range of building and facility development projects. In particular, office buildings, data centers, retail buildings, distribution centers, process plants, medical buildings, educational facilities, ecclesiastical buildings, sports and entertainment facilities and correctional facilities are being successfully delivered by Design-Build. In addition, negotiated design-build may be used for industrial, environmental and civil infrastructure projects.

APPLICABLE PUBLIC POLICY

The ability to utilize negotiated design-build procurement for private projects is essentially unrestricted, while public agencies wishing to utilize negotiated procurement may have legal hurdles to overcome. Such restrictions arise from the legal requirements (such as state procurement and licensing laws) that have not kept pace with changes in the market. Some states and federal agencies have recently made substantial progress in this area and are capable of making negotiated and qualifications-based selections for design-build services.

To promote the more widespread and consistent use of design-build by public agencies, the American College of Construction Lawyers (ACCL) and the Building Futures Council (BFC) have developed a Model Procurement Code for adoption by state and local governments. It provides excellent guidance in the areas of establishing criteria, soliciting proposals, and making awards. It is expected that many states will consider it for adoption, resulting in the uniform and consistent implementation of design-build procurements.



DESIGN-BUILDER SELECTION PROCESS

The process of selecting a Design-Build entity by qualitative means can range from very formal to quite simple. The method selected is a function of the requirements of the Owner organization, familiarity with design-build and previous relationship with design-build practitioners.

The overriding objective is to select the most qualified firm available. The following criteria may be considered when making this assessment, and can be used as a basis for a formal Request for Qualifications (RFQ):

- Depth of resources
- General reputation
- Management plan and project organization
- Current capacity relative to management, personnel and physical resources
- Financial capability and bonding capacity
- Previous experience of the Design-Build team for similar projects
- Previous experience of the Design-Build team members working together
- History of disputes/litigation
- Innovation and creative problem solving
- Special knowledge
- Project approach
- Key personnel committed to the project
- Ability to adhere to schedule
- Quality assurance and safety plan
- Location of design-builder(s) relative to site/owner

These considerations are applicable to virtually every project. The relative importance of the factors should be assessed by the Owner and can vary considerably.

In situations where the selection criteria may be numerous and partially subjective, it is helpful to apply an analytical methodology to the evaluation process. Such a methodology could take the following form:

1. Establish the set of criteria against which each firm being considered will be evaluated.
2. Place a value against each criterion which reflects its relative importance in the evaluation.
3. Consider each Design-Build firm against the criteria and rank each against a sliding scale.

An example utilizing this technique might yield the following evaluation matrix:

Design Build Team no.	Design Solution (Weight 10)	Financial Capability (Weight 6)	Project Approach (Weight 8)	Management Plan (Weight 10)	Total Points
A	4 40	5 30	4 32	3 30	132
B	5 50	5 30	2 16	5 50	146
C	4 40	4 24	2 16	3 30	110

Criteria Weight. Where: 5 = Excellent
 4 = Good
 3 = Fair
 2 = Poor

Key:

Factor Score	Subtotal Points
--------------	-----------------

It is recommended that the evaluation matrix format be augmented by the professional judgement of a selection panel, which should include a balance of design professionals, procurement specialists, owner/user representatives and other project-related experts.



KEYS TO A SUCCESSFUL NEGOTIATED SOURCE SELECTION

An Owner utilizing negotiated source selection in the design-build process should understand that it is dealing in unique concepts and contract formats, and a sensitivity to these differences will help assure a successful project.

1. Set Aside Traditional

Selection Processes Design-Build is a unique, distinctive project delivery process. The selection of a Design-Builder should combine the best features of qualifications based selection for design professionals and construction contractors. A well crafted evaluation matrix will contain elements of both, but yet recognize that, in combining design and construction, additional considerations arise.

For example, the criteria for rating the qualitative proposals should not simply be those which are used to evaluate a firm competing for an architectural or engineering engagement (although aspects of such criteria should certainly be employed), because additional attributes such as innovation, management systems, and past performance are key to successful selection.

2. *Develop a Clear Definition of Project Requirements* The statement of project requirements must set forth the Owner's needs with sufficient clarity to assure there is comprehensive understanding of programmatic requirements, completion schedules, and business contract requirements.

3. Define Facility

Requirements in

Performance Terms Facility requirements should be stated in performance terms wherever possible, for example: HVAC in terms of temperature to be maintained, structural capacity in terms of live load to be supported, lighting levels in terms of foot-candles or lumens to be maintained, etc. This approach provides flexibility to the Design-Builder in reaching the desired objective, and fixes

responsibility upon the Design-BUILDER in clearly understood performance terms.

4. Administer Selection Process Professionally

The selection process should be administered by professional staff or independent consultants who are the most knowledgeable of the qualitative and programmatic requirements of the project.

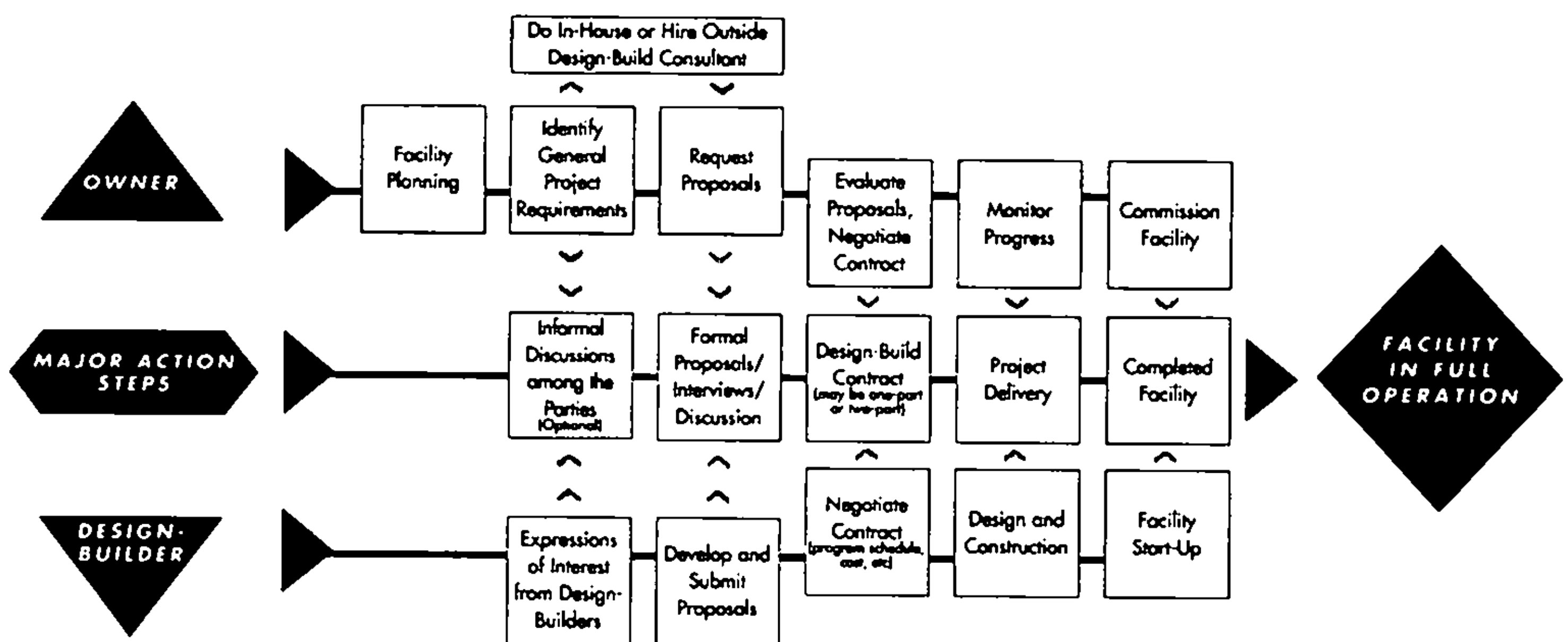
5. Use Balanced Contract Language

Design-Build imposes additional risk on the entity in privity with the project's Owner. Contract language should not needlessly exacerbate this situation by attempting to pass risk to the Design-BUILDER normally shouldered by the project's Owner. Examples of such unbalanced risk transfer may include making the Design-Build entity responsible (depending on the situation) for certain types of environmental permits, concealed conditions, differing site conditions, third party delays (over which it has no control), obtaining right-of-ways and other similar requirements.

6. *Ensure Early Involvement of the Design-BUILDER* The early involvement of the Design-Build entity is essential if the full value of the design-build process is to be realized. Decisions made during the programming and concept phases will impact cost and schedule more than any later design phase.

The success of the design-build process is greatly enhanced by observance of the foregoing recommendations. If the principles articulated in this brief guidance document are followed, owners can take advantage of an innovative process for designing and constructing facilities of high quality and competitive cost, while bringing projects on-line quickly and absent the usual disputes or change orders.

THE NEGOTIATED DESIGN-BUILD PROCESS



DBIA



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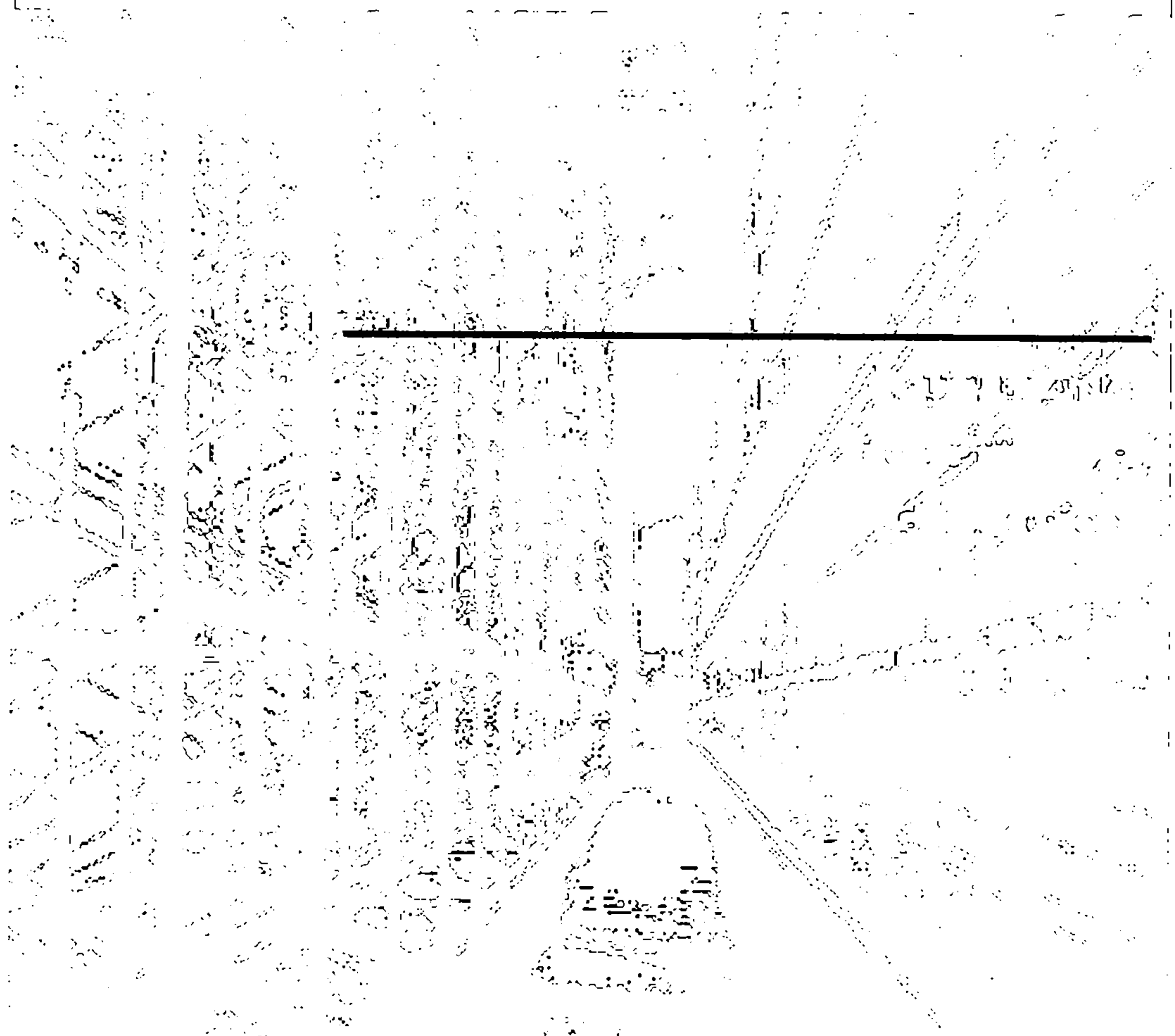
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Designed by Martine Bernard Design

THE DESIGN-BUILD PROCESS

UTILIZING
COMPETITIVE
SELECTION

THE DESIGN-BUILD PROCESS



This document is intended for use by private industry, institutions, public agencies and others interested in the use of the Design-Build delivery system where a competitive selection will be utilized.

It sets forth the principal characteristics of Design-Build, project situations to which it is applicable, its advantages and caveats, and procedures to be followed in implementing successful selection and administration processes.

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BENEFITS/CAVEATS IN THE USE OF DESIGN-BUILD

The benefits to be gained in establishing a well-designed and managed Design-Build process include the following:

Singular Responsibility With both design and construction in the hands of a single entity, there is a single point of responsibility for quality, cost and schedule adherence, which avoids "buck passing" and finger pointing. The Owner is able to focus on scope/needs definition and timely decision making, rather than on coordination between the designer and builder.

Quality The greater responsibility implicit in Design-Build serves as a motivation for high quality and the proper performance of building systems. Once the Owner's requirements and expectations are documented in performance terms, it is the Design-Builder's responsibility to produce results accordingly. The Design-Builder warrants to the owner that the design documents are complete and free from error. (By contrast, with "traditional" design-bid-build, the owner warrants to the contractor that the drawings and specifications are complete and free from error. Because it is the Owner's warranty for the design documents under "traditional" design-bid-build, the approach relies on restrictive contract language, extensive audit and inspection and occasionally, the legal system, to ensure final project quality.)

Cost Savings Design and construction personnel, working and communicating as a team, evaluate alternative materials and methods efficiently and accurately. Value engineering and constructability are utilized more effectively when the designers and contractors work as one team during the design process.

Time Savings Because design and construction are overlapped, and because bidding periods and redesign time are eliminated, total design/construction time can be significantly reduced. Design-Build is ideal for the application of "Fast Track" construction techniques. Under this method, construction work is allowed to begin in advance of the working drawings being fully completed. The time savings translates into lower costs and earlier utilization of the completed facility.

Potential for Reduced Administrative Burden Under a streamlined procurement process, the potential exists for design-build to reduce the Owner's administrative burden. Initially, preparing RFPs and conducting evaluations can be resource intensive; however, this effort should lessen after an early learning curve. After award of the design-build contract, the Owner will not have to invest his time and money coordinating and arbitrating between separate design and construction contracts.

Early Knowledge of Firm Costs Because the entity responsible for design is simultaneously estimating construction costs and can accurately conceptualize the completed project at an early stage, guaranteed construction costs are known far sooner than is otherwise possible. This permits early establishment of financing, reduces exposure to cost escalation, and avoids the possibility of committing substantial time and money for design, only to learn that the cost of the project is prohibitive.

Risk Management Project performance aspects of cost, schedule and quality can clearly be defined and appropriately balanced (individual risks are managed by the party best able to positioned to manage that risk). Change Orders due to drawing and specification errors are eliminated because the correction of such issues is the responsibility of the Design-Build, not the Owner. After the Owner outlines his needs in the RFP, he will receive different design/cost solutions representing the best thinking of several Design-Builders, enabling the owner to better manage the financial risk connected with the project.

Balanced Award Criteria leading to Best Value By giving credit in the award mechanism for design quality, functional efficiency, team experience and other factors in addition to price, an Owner can select a proposal that reflects the greatest value and not simply the lowest first cost.

Caveats to be considered in an effort to ensure a successful Design-Build process include the following:

Complexity of the Process

Design-build project delivery requires careful planning and professional execution to be successful. The Owner should choose a design-build process variation based on factors such as the project's complexity, funding, design intent, responsibility/risk allocation and other important issues. For owners who do not have in-house personnel with expertise in preparing and administering design-build RFPs and contracts, an owner's design-build consultant (sometimes called design criteria professionals) may be retained to prepare scope definition and RFP documents, and to provide additional consulting services as needed.

Challenge in Converting Owner Needs to Performance-Based Language Preparing a statement of facility requirements (sometimes called the design criteria package) that is comprehensive enough to assure compliance by the offerors, but avoids overly restrictive requirements or details that would inhibit the creative solutions, is the most challenging aspect of preparing a design-build RFP. When facility requirements are stated in performance terms and related to recognized industry standards, the approach not only provides flexibility to the offerors in meeting the desired objectives, but it fixes responsibility upon the design-builder in clearly understood performance terms.

Availability of Design Liability Insurance and/or Performance and Payment

Bonds Certain insurance carriers and bond sureties may not be familiar with design-build. This may lead to some hesitation about providing these services on design-build contracts. The parties to a design-build contract need to make sure that adequate coverage exists both in the professional liability and surety arenas.

OVERVIEW OF THE PROCESS

The delivery steps and time frames for a "typical" Design-Build project are described in broad terms below. Each project is unique and accordingly the time required for each step in the process can vary considerably.

1. *Strategic Facility Planning* Analysis of current and future facility requirements, to determine the appropriate facility development plan for the owner/user.

2. *Program Definition* The Owner establishes the project "needs" of facility size and performance, finish requirements, codes and regulatory standards, population/capacities, etc. These requirements are defined and articulated in a Request for Qualification (RFQ), either by in-house professional staff or by an outside consultant ("Owner's Design-Build Consultant").

3. *Request for Qualifications (RFQ)* Requirements for offerors are defined and articulated in an RFQ, either by in-house staff or by an outside consultant. Other particulars influencing team formations, such as minority participation goals, are established. These determinations are assembled into the RFQ document.

4. *Qualifications Statements* The project is advertised, qualification proposals are received (response to RFQ), and preferably three, and no more than five, of the most qualified firms are shortlisted.

5. *Request for Proposals (RFP)* Design and cost proposals are solicited from the shortlisted design-builders in a Request for Proposal (RFP). Among the items found in a typical RFP are project design criteria, site information, contract requirements, selection procedure and proposal (deliverables) requirements.

6. *Proposal Submission and Evaluation* Once received, proposals are evaluated on the basis of quality of design, price and other factors. Before making final award, the shortlisted design-builders may be called in to make presentations.

7. *Contract Award* The selected proposer enters into contract(s) with the Owner.

8. *Documents/Construction* Upon completion of the design documents for all elements (or for specific phases) of the project, construction commences. Some contracts, particularly those employing fast-track methods, require that construction proceed after logical phases of design are completed, but prior to completion of the entire body of construction documents. During design and construction, progress payments are made to the Design-Builder in a manner consistent with the contract requirements.

APPLICABLE PROJECT SITUATIONS

Competitively selected design-build is ideally suited to project types of a familiar nature, defined scope and those which have been previously constructed by the Owner. Office buildings, elementary and higher education facilities, dormitories, jails and prisons, parking structures, data centers, medical facilities, courthouses, administration buildings, convention centers, and certain environmental and transportation projects are being successfully delivered by design-build. Properly applied, design-build is also applicable to industrial and traditional civil infrastructure projects.

For projects of a unique or one-time character (which generally require more extensive project definition, programming or preliminary design), special considerations apply. In such cases, it may be more difficult to separate the preparation of the criteria packages from the development of detailed construction documents because project definition can continue well into the detailed design process. These are situations in which the multi-proposal competitive design-build delivery variation should be replaced by a negotiated design-build procurement variation.¹



APPLICABLE PUBLIC POLICY

The environment for design-build procurement by public agencies varies among federal, state and local jurisdictions. Many federal agencies and a growing number of states have, however, procurement laws and policies which encourage and provide guidance for competitively awarding or negotiating design-build contracts.

Among federal agencies, the United States Postal Service, the General Services Administration and the Corps of Engineers utilize design-build for portions of their construction procurement budgets, and anticipate utilization to increase in the future. Among the states, Florida, California, Massachusetts, New York, New Hampshire, Virginia, Idaho and Washington specifically authorize and/or encourage the use of design-build contracting methods. Many other states do not yet have specific design-build procurement laws in place, but nonetheless have some ability to award construction contracts on a competitive design-build basis.

To promote the more widespread and consistent use of design-build by public agencies, the American College of Construction Lawyers (ACCL) and the Building Futures Council (BFC) have developed a Design-Build Model Procurement Code for adoption by state and local governments. It provides an excellent first step toward establishing criteria, soliciting proposals, and making awards. It is expected that many states will consider the Model Code for adoption, resulting in the uniform and consistent implementation of design-build procurement procedures.



¹ For additional information refer to the DBIA document entitled
"The Design-Build Process Utilizing Negotiated Selection"

SELECTION/EVALUATION PROCESS

The purpose of the selection and evaluation process should be to determine which proposal provides the greatest value to the Owner. A variety of selection/evaluation processes are available to private and public sector Owners. Each has been successfully used and each has its merits. No single process is appropriate for every situation. The Owner must determine, therefore, which of the following available procedures are most appropriate to the project (and also if a public project, which procedures are permitted under applicable federal, state and local statutes):

1. Weighted Criteria Proposers are notified of their selection to the short list and given final requirements for the submittal of a qualitative proposal (e.g. management plan, experience, design solution and other qualitative issues) and firm price. The Owner establishes a point rating for qualitative factors and for price. (For example, qualitative and design factors may weigh 60 points, and price 40 points.) The qualitative proposals are received by the Owner. Price is simultaneously submitted in a separately sealed envelope. The Owner reviews each proposal. The Owner may then hear oral presentations from each proposer. The Owner assigns points on a scoring matrix for proposer's response to each of the evaluation factors.

After the design and qualitative criteria are evaluated, the price envelopes are opened. Maximum price points are assigned to the lowest dollar bid, and all others are scaled inversely proportional to that amount. High total points then determine the award. The following example illustrates this process:

Proposer	Qualitative Score (60 Maximum)	Price Proposal	Price Score (40 Maximum)	Total Score (100 Maximum)
Firm A	50	\$1,629,000	37	87
Firm B	58	1,546,000	39	97*
Firm C	48	1,510,000	40	88

*Award to proposer with highest total score.

2. Adjusted Low-Bid A variant of the weighted criteria process is the adjusted low bid. The process follows the same steps through receipt of qualitative proposals. Following the oral presentations, qualitative aspects are scored and totaled on a 0 to 100 scale expressed as a decimal (e.g., scores of 85 is written 0.85). After the scores have been calculated, each bidder's price envelope is opened. Price is then divided by score (expressed as a decimal) to yield an "adjusted bid".

The lowest adjusted bid is recommended for contract award. For example:

Proposer	Qualitative Score	Price Proposal	Adjusted Price
Firm A	0.85	\$1,000,000	\$1,176,471 Adjusted Low Bid
Firm B	0.95	1,300,000	1,368,421
Firm C	0.50	800,000	1,600,000

* Note: The adjustment to the bid is for selection only. The firm's price proposal is the actual contract amount.

3. Equivalent Design/Low-Bid This evaluation procedure parallels the two previous processes up to receipt of design proposals. All steps of qualifications, short listing, design and price submittal are the same. Design proposals, however, are followed by a critique and given a deadline to respond with specified design changes and corresponding price amendment (either add or deduct). Revised designs are evaluated by the Owner and price envelopes, both base and amendments, are opened. Award can be made with heavy or sole emphasis on price because the proposal critique should have created relatively equivalent designs.

4. Fixed Budget/Best Design Contract price is established by the Owner and is stated in the RFP. This process uses the initial qualification step and shortlisting. The shortlisted proposers submit their qualitative proposals. Oral presentations (optional) are made and the Owner uses its evaluation criteria to score the proposal.

Recommendation of award goes to the firm offering the best design solution for the given budget.

5. *Meets Criteria/Low-Bid* This method of evaluation most closely resembles the traditional bid process. Typically the RFP/criteria packages allows for very little creativity in the design. Very specific outline or conceptual designs are issued as a part of the design criteria package. Proposals are solicited from qualified firms. The proposals are evaluated, deemed to meet the base criteria, and award is made to the low bidder. The selected firm's role is more to complete construction documents than to develop a design for the project.

Note: The "Meets Criteria/Low-Bid" process eliminates two of the most advantageous features of Design-Build: multiple design solutions and the creativity/innovation of competing design-build teams.

6. *Emergency* As implied, when public safety or welfare is threatened, the Owner may authorize negotiations with the best qualified Design-Build firm available at the time; utilizing references and/or previous Owner experience with the firm as justification for the selection.

KEYS TO A SUCCESSFUL PROJECT

Design-build has historically been utilized in the private sector where negotiated, qualification based selection is the norm. The approach is often restricted by statute in the public sector and procedurally discouraged in certain corporate environments. Accordingly, design-build competitions have emerged in the public sector as a means of achieving the benefits of design-build while adhering to the need to award construction projects on a competitive basis.

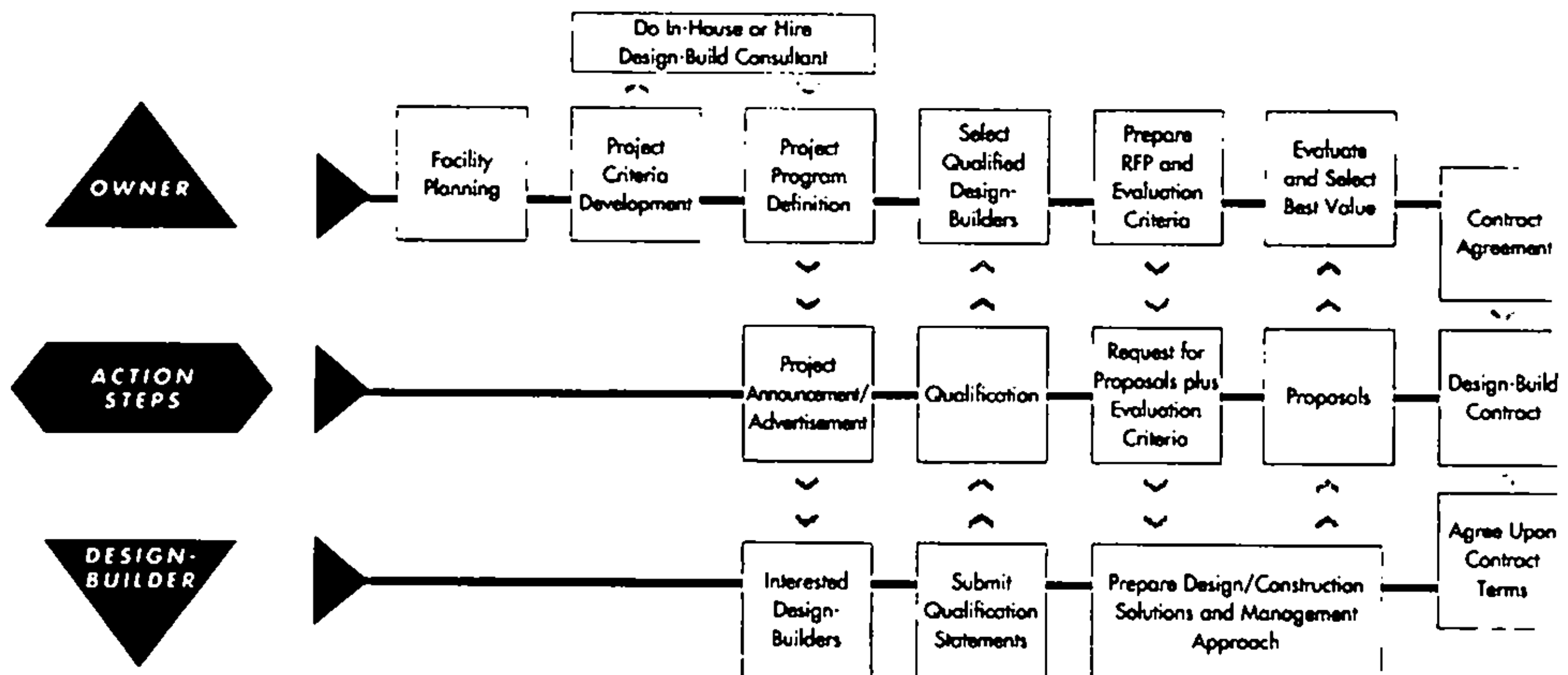
This document identifies the DBIA's position relative to policy issues frequently encountered in design-build competitions. The recommended practices are intended to maintain the active interest of quality design-build firms while providing the highest value to Owners, agencies and the public.

1. Set Aside Traditional

Processes/Relationships

Design-build is a unique, distinctive project delivery process. It combines the best features of both professional design selection and competitive selection. Thus, the Owner should not merely modify existing documents designed for other procurement processes. Documents should be tailored to design-build.

THE COMPETITIVE DESIGN-BUILD PROCESS



2. Frequently Offerors /

3. Conduct a Balanced

4. Ask for Reasonable

Submission Requirements

S. Develop Succinct Criteria

```

graph LR
    subgraph Design_Construction [Design/Construction Documents Construction]
        A[Design Review and Permitting] --> B[Project Delivery]
        C[Revisions and Approvals] --> B
    end
    B --> D[Completed Project]
    D --> E[Facility Start-Up]
    E --> F{FACILITY IN FULL OPERATION}
    B --> G[Monitor]
    G --> H[Commission Facility]
    H --> D
  
```

The flowchart illustrates the Facility Start-Up Process. It begins with a box labeled "Design Review and Permitting" and another labeled "Revisions and Approvals", both of which lead to a box labeled "Project Delivery". This box is part of a larger section labeled "Design/Construction Documents Construction". From "Project Delivery", the process moves to a box labeled "Completed Project". This box is part of a larger section labeled "Facility Start-Up". From "Completed Project", the process moves to a diamond-shaped box labeled "FACILITY IN FULL OPERATION". There is also a feedback loop: from "Project Delivery", the process moves to a box labeled "Monitor", which leads to a box labeled "Commission Facility", which then leads back to "Completed Project".

6. Consider the Need for an Owner's Design-Build Consultant

For Owners who do not have in-house experience with defining, procuring or administering design-build projects (such as an in-house design criteria professional), an outside firm may be employed to assist in preparing scope definition and RFP documents, and for related consulting services. It is critical that the consultant have design-build experience and expertise, as opposed to "traditional" design (or construction) knowledge and experience.

7. Consider the Applicability of a Stipend or Honorarium

In the event that the quantity of documents required for submission of a proposal and/or the number of final-stage competitors is relatively high, the Owner should consider paying a stipend or honorarium to the unsuccessful proposers. While many firms may compete in the absence of such payments, excessive submittal requirements without some compensation is abusive to the industry and discourages quality teams from participating. The stipend or honorarium is an indication that the Owner is serious about awarding and receiving a quality project.

Awarding of a stipend or honorarium should not be viewed as a justification for making excessive demands upon the proposers. Most offerors would regard meaningful shortlisting, performance-oriented criteria, a realistic level of proposal deliverables, and a clear selection process, as more important practices than the offering of a stipend or honorarium.

8. Limit Early Design in RFP

Occasionally, an owner may over-prescribe design solutions to the proposers as the required basis for their design proposals. This effort should be minimized. Typically, 90 percent of the quality and value impact (financial and other) that a design-build entity can make occurs in the first 10 percent of the design effort. Taking project criteria too far into design lessens the potential that design-build teams have to bring innovative solutions to project's challenges. The Owner may never know "what might have been" and the full opportunity for the teams to compete on the basis of their creativity and experience will be lost.

Efforts by the Owner (or owner's consultant) to "define the problem", rather than to suggest a solution, will produce better results than rigid design "parameters" in the owner's design-build RFP package.

9. Balance Responsibility / Risk in Contract Language

Design-build inherently imposes additional risk and responsibility upon the Design-Build entity. Contract language should not needlessly exacerbate this situation by attempting to pass risk rightfully shouldered by the Owner. Examples of such unbalanced risk transfer may include making the Design-Build entity responsible (depending on the situation) for certain types of environmental permits, concealed conditions, differing site conditions, third party delays (over which it has no control), obtaining right-of-ways and other similar clauses.

10. Conduct Separate Evaluation of Cost and Qualitative Issues

The evaluation of qualitative issues is best conducted separately from price considerations. This prevents the tendency of allowing knowledge of price to short circuit a thorough review of qualitative issues. Some Owners, acknowledging this issue, request that qualitative and cost sections of a proposal be submitted in separate sealed envelopes with the price envelope opened only after the qualitative evaluation has been concluded.

11. Create Knowledgeable

Judging Panels The panel of judges responsible for evaluating the design-build proposals should include individuals knowledgeable about the design and construction process and specifically the particular technical issues applicable to the project. The panel should consist of members considered to be independent of political and financial considerations.

12. Consider the Necessity for "Blind" Submissions This refers to a procedure wherein the identity of the proposers is concealed from the judging panel. This practice arose from concerns that the selection process could become politicized. Although potential politics may be a concern, it is also true that concealing the identity of the proposer prevents consideration of their experience, management approach and personnel as a basis for selection. A better approach would be to have only the technical design submitted judged on a blind basis with other qualitative factors fully disclosed for the judging panel.

13. Promptly Award the Contract

The project should be awarded to the competitor chosen by the Owner in a prompt and straightforward manner without adjustment to a proposer's submission. Review meetings with the Owner for the purpose of design modification should be conducted following selection and prior to award and not while proposers are still in a competitive posture. This principal also applies to price, which should not be subject to negotiation or modification between formal submission and selection.

14. Identify Selection Criteria and Weighting to Potential Offers

The basis for judging the design-build proposal should be clearly spelled out. Specific judging rules, or a fully defined point award system, allows the Design-Build team to provide a submission that maximizes solutions to the Owner's facility needs.

15. Use Stipulated Sum Contracts When Selection is Competitive The contract for Design-Build services obtained competitively should be made on the basis of a stipulated sum contract. This format is both appropriate and typical for multi-competitor competitions. The use of Guaranteed Maximum or Cost Plus contracts when price was a factor in the initial award is inappropriate and fails to recognize the special risk position imposed on the Design-Build team.

16. Use of Documents / Design Concepts from Unsuccessful Proposers is Unethical The winning design submitted in response to a competitive Design-Build competition is the design which should ultimately be built. Use of the design concepts from unsuccessful proposers without compensation is inappropriate and undermines the ethicality of the process.

17. Include Requirement for Financial Guarantee The use of bid bonds or other form of financial guarantee should be mandatory for proposing design-build entities. This provision assures the owner that the selected proposer is financially capable of performing the work and reduces the possibility that unrealistic designs or "trial balloons" inappropriate for the budget are submitted without financial risk for later withdrawing. ■

APPENDIX I

FRAMEWORK FOR A DESIGN-BUILD RFQ

The following outline provides a suggested framework for the contents of a Request for Qualifications (RFQ) for potential proposers on a typical building project. This outline should be expanded/reduced, modified or detailed as required for each project situation. (Note: some owners elect not to use the RFQ process, instead folding the requirement for a qualification statement into the first stage of the RFP process).

1. *Design-Build Project Overview/Selection Process Overview*

- a. Description of Project (size and function of facility, approximate budget, anticipated schedule)
- b. How selection process will be conducted

2. *Mandatory Criteria for Prospective Proposers*

- a. Appropriate experience (design-build and related projects)
- b. Licensing requirements
- c. Financial strength (bonding capacity)
- d. Organizational resources and depth
- e. Minority/Disadvantaged Business compliance
- f. Lack of litigation/disputes history
- g. Bonding capacity

3. *Project-Specific Qualifications for Proposers*

- a. Team experience with facility/building type
- b. Team performance record (quality, schedule and cost)
- c. Proposed team composition/past experience working together
- d. Current capacity to manage the project
- e. Proposed key project personnel
- f. Project references

4. *Qualifications Statement Evaluation*

- a. Pre-established rating system
- b. Pre-Submission briefing session/formal question and answer process
- c. Analyze qualifications submissions and select the 3 to 5 most qualified teams

APPENDIX II

FRAMEWORK FOR

A DESIGN-BUILD RFP

The following outline provides a suggested framework for the contents of a Request for Proposal (RFP) for a typical building project. This outline should be expanded/reduced, modified or detailed as required for each project situation.

1. General Information **(business terms)**

- a. Introduction
- b. RFP Schedule
- c. Selection Procedure
- d. Selection Criteria (and weighting)
- e. Budget (or Cost Limitations)
- f. Project Schedule

2. Site Information **(qualitative data relating to existing site conditions)**

- a. Site Description
- b. Topographical and Boundary Survey
- c. Soil Investigation Data
- d. Utility Information
- e. Covenants and Restrictions on Property

3. Project Requirements **(design criteria)**

- a. Program Summary
- b. Functional Requirements (goals and objectives)
- c. General Physical Characteristics/Building Systems Requirements
- d. Performance Specifications, Including Warranties.
- e. Codes and Standards.
- f. Functional Relationship Diagrams or Conceptual Building Layout

4. Design-Build Contract **Requirements (may be a summary of contract terms or a copy of actual contract)**

- a. Design Responsibilities
- b. Construction Responsibilities
- c. Responsibilities of the Owner
- d. General Conditions
- e. Minority Participation

5. Requirements for **Proposal (the material to be provided by** **proposers; "deliverables")**

- a. Drawings
- b. Specifications
- c. Design-Build Organization
- d. Project Personnel
- e. Quality Control Program
- f. Schedule
- g. Price Proposal

DBIA



**DESIGN-BUILD
INSTITUTE OF AMERICA**

1010 Massachusetts Avenue, NW
Washington, D.C. 20001
202.682.0110

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Designed by Martine Bernard Design

NOTIFICATION LIST FOR DESIGN-BUILD-OPERATE WORKSHOP:

Mayor and City Council of Fayetteville, Arkansas

Fayetteville City Administration

Hugh Earnest

Steve Davis

Gary Dumas

Tim Conklin

Ray Boudreaux

Kit Williams

David Jurgens

Gary Coover

Peggy Vice

Coy Hurd

Chamber of Commerce-Mr. Bill Ramsey

Members of Media

Newspapers

Government Channel

City Web Site (?)

Engineering/Architectural Firms

U S Infrastructure

McClelland

Cromwell and Associates

Crafton Tull and Associates

Wastewater Project Consultants

Garver Engineers

McGoodwin, Williams and Yates

RJN Group

Black and Veatch

Burns and McDonnell

CH2M Hill

Environmental Consulting Operations

Financial Consultants

Dennis Hunt (Stephens, Inc.)

Arkansas Soil and Water Conservation Commission

Randy Young

Ron Hill

Scott Savoy

Mike Core

Arkansas Department of Environmental Quality

Mary Leath

Arkansas Department of Health

Robert Hart

Environmental Pollution Agency – Region 6

Richard Greene

Arkansas Municipal League

Don Zimmerman
Representatives of Arkansas Municipalities
Mayor of Springdale
Mayor of Eureka Springs-Kathy Harrison
Mayor of Springdale
Mayor of Rogers
Mayor of Bentonville
City of Silom Springs
Mayor of Farmington
Mayor of Greenland
Mayor of Goshen
Mayor of Elkins
Mayor of Johnson
Kent Myers of Hot Springs
City of Conway-Tab Townsend
Springdale Utilities-Rene Langston
Northwest Arkansas Regional Planning Commission
Jeff Hawkins
Uvalde Lindsey (Ozark International Consultants)
Senator Sue Madison (DBO Bill)
Steven Stewart (Congressman Boozman's Office)
Senator Blanche Lincoln's Office
Senator Mark Pryor's Office
Washington County Judge
Jerry Hunton
John Gibson
Fayetteville Citizens on City Clerk's e-mail list
University of Arkansas
Leo Yanda
Findlay Edwards
Concerned Citizens
John Lewis
Curtis Shipley
Gary Head
Arkansas Highway and Transportation Department
Harold Beaver
Beaver Water District
Alan Fortenberry
Coleen Gaston

**MEETING AGENDA
DESIGN-BUILD-OPERATE WORKSHOP
(Special Called City Council Meeting)
Fayetteville, Arkansas
July 8, 2003**

WORKSHOP TIME AND DATE:

The Design-Build-Operate Workshop commences at **6:00 P.M. TUESDAY, July 8, 2003** (following an earlier City Council Agenda Session starting at 4:30 P.M.).

WORKSHOP LOCATION:

Sam M. Walton College of Business, University of Arkansas, Fayetteville, Arkansas-Auditorium-Room RCED 120.

WORKSHOP OBJECTIVE:

Workshop presentations and discussions are centered on the means and methods by which the City of Fayetteville could use a design-build-operate project delivery method for its \$125 million wastewater improvement project. Discussions, case histories, comparative analyses and other aspects of project delivery alternatives will be discussed.

ANTICIPATED AUDIENCE:

Mayor and City Council of Fayetteville, Arkansas; Fayetteville City Administration; Citizens of Fayetteville; State and Local Elected Officials; State and Local Organizations; Members of Media; Arkansas Soil and Water Conservation Commission; Arkansas Department of Environmental Quality; Arkansas Department of Health; Municipal Consultants and Advisors

WORKSHOP AGENDA:

1) OPENING REMARKS AND WORKSHOP OVERVIEW (6:00-6:10 PM)

Mayor Dan Coody
City of Fayetteville
113 W. Mountain St.
Fayetteville, AR 72701
479-575-8330
mayor@ci.fayetteville.ar.us

2) INTRODUCTION TO THE DESIGN-BUILD-OPERATE PROJECT DELIVERY AND METHODOLOGY (6:10-6:25 PM)

Mr. James Binder, P.E., President

Alternative Resources, Inc.
9 Pond Lane
Concord, MA 01742
978-371-2054
jbinder@alt-res.com

A general description of the alternative project delivery system including: (A) definition of the alternative process, (B) comparison of design-build-operate (DBO) process to the conventional design-bid-build (DBB) process, (C) description of current alternative project delivery applications in the water and wastewater industry and (D) presentation of comparative advantages and disadvantage of each process.

3) LEGAL PERSPECTIVES (6:25-6:40 PM)

Mr. Eric Peterson

Hawkins, Delafield & Wood
Attorneys and Counselors at Law
67 Wall Street
New York, NY 1005
epetersen@hdw.com

A primer on the legal and contractual issues associated with different project delivery methods, including comparative risks, advantages and providers.

4) ALTERNATIVE PROJECT DELIVERY SYSTEM PROVIDERS AND CASE HISTORIES:

A.1 Operations Management International, Inc. (6:40-6:55 PM)

Don Evans, President

9193 South Jamaica Street, Suite 400
Englewood, CO 80112
Devans2@ch2m.com

A.2 (Operations Management International Project) (6:55-7:10 PM)

Dave Butler

Former Mayor of Atchison, Kansas

Mr. Butler will describe the City of Atchison, Kansas' experience using an alternative project delivery method for the upgrading of the municipality's water supply system.

B.1 U.S. Filter Engineering and Construction (7:10-7:25 PM)

Bill Rosenbaum, P.E.

Vice President
Municipal Design/Build Project Development
US Filter Engineering and Construction
Airside Business Park
250 Airside Drive
Moon Township, PA 15108-2793
Direct: 412-809-6640
RosenbaumW@usfilter.com

B.2 U S Filter Project Reference in LYNN, Massachusetts (7:25-7:40 PM)

Pat McManus

Former Mayor of Lynn, MS

Mr. McManus will describe the City of Lynn, Massachusetts' experience using design-build and design-build-operate concepts to address various municipal projects over a period of 18-years. The presentation will include an overview of the challenges that were addressed relating to funding programs, sewer line construction and system repair issues.

5) BREAK (7:40-7:55 PM)

6) IMPLEMENTATION STRATEGY USING A DESIGN-BUILD-OPERATE CONCEPT-FAYETTEVILLE, ARKANSAS (7:55-8:10 PM)

Mr. James Binder, P.E.

Alternative Resources, Inc.
9 Pond Lane
Concord, MA 01742
978-371-2054
jbinder@alt-rcs.com

This discussion will be focused upon the Fayetteville Wastewater System Improvement Project with specific responses to: (A) issues associated with implementing a DBO procurement, (B) potentials for cost savings, (C) scheduling implications, (D) coordination with the Revolving Loan Fund, (E) perception of EPA perspectives towards DBO methodology, (F) description of a conceptual process for Fayetteville's project, (G) predicted schedule using alternative project delivery method and (H) future actions needed to evaluate alternative approach.

7) QUESTION AND ANSWER PERIOD (8:10-9:00 PM)

Mayor Dan Coody

Moderator

*** WORKSHOP CONCLUDES AT 9:00 P.M. ***



Workshop on DBO Option

Workshop to Discuss DBO Option for Design, Construction and Operation of Improvements and New Facilities for Wastewater Treatment

PART II

Presented to

City Council

Fayetteville, Arkansas

July 8, 2003

Presented by

Jim Binder, P.E.

Alternative Resources, Inc.



ARI



Workshop on DBO Option

Issues Raised in Fayetteville

- Act 1297
Qualifications Based Approach. Is there opportunity for cost competition?
- Savings
What can be expected? (experience elsewhere, 10% to 50%)
- Schedule
Potential for delay: No Delay – See Figure 1
- RLF Funding
Schedule, other impacts: ASWCC to be consulted



Workshop on DBO Option

Issues Raised (continued)

- Project Integrity,
 - Work monitored/inspected by owner's rep (engineer selected/retained by City) during construction quality design review, construction monitoring, acceptance testing.
 - DBO contractor responsible for meeting long-term (20 year) operations performance guarantee. If not, company fixes at its expense. Incentive to do it right.



Workshop on DBO Option

Issues Raised (continued)

- Project Integrity, - During contract term, DBO contractor has construction Asset Management responsibility, including quality (continued) capital repair and replacement as part of fixed operating fee. Not dependent on annual appropriation. Also has responsibility to return facilities at end of contract in comparable condition as received. Independent verification.



Workshop on DBO Option

Issues Raised (continued)

- Conflict of Interest
 - City protected by owners rep for design (with designer and builder on same team)
Also City can retain operations monitor.
- Control
 - Thru contracts. No "finger pointing" between designer-builder-operator. City maintains ownership of the facilities.
- Project Complexity
 - Often the reason a city chooses DBO – transfer performance risk to DBO contractor.



Workshop on DBO Option

Qualification Eligibility Requirements

Act 1297

- Previous performance on projects of comparable nature and magnitude for past 5 years
- Environmental Compliance Record for past 5 years



Workshop on DBO Option

Qualification Eligibility Requirements **(continued)**

If possible, expand to include:

- Financial resources of Guarantor as evidenced by ability to meet minimum thresholds for bonding, letter of credit, liability limits of Guarantor
- Satisfactory safety record
- Satisfactory labor relations record
- Ability to meet specified insurance requirements
- Ability to comply with City contract requirements and equal opportunity requirements



Workshop on DBO Option

FAYETTEVILLE PROJECT SCHEDULE

Task	'03	2004	2005	2006
Pause: Assess Alternatives, DBB, DBO				
<u>DBB</u> - Design, Bid, Build				
<u>DBO</u> – Compare to Goal				
1. Prepare RFP (Qualifications Based)				
2. City Prepares Performance Spec and Scope of Services				
3. Companies Prepare Proposals				
4. Review Proposals/Select Preferred Proposer				
5. City Prepares Draft Contract				
6. Companies Prepare Technical and Price Submittals				
7. Negotiate/Award Contract				
8. Design/Construction/Start Up/ Acceptance				



Workshop on DBO Option

Recent ARI DBO Projects – 20-Year Term

Location	Size (MGD)	Savings (Millions%)		Effluent Limits				
		DBO (over term)	DB	TSS (mg/l) Avg. Monthly	BODs (mg/l) Avg. Monthly	NH ₃ (mg/l) Avg. Monthly	P (mg/l) Avg. Monthly	Fecal Coliform Count MPN/100 ml avg. 30 days
1. Taunton, MA 1998	10	\$62	\$10 (50%)	20	15	1.0 Summer	N/A	200
2. Plymouth, MA 2000	3	\$17 (21%)	Operations	30	30	10 (Total N) (All Year)	N/A	200
3. Naugatuck, CT 2001	10	N/A – zero cost option Years 1-5: ½ debt service Years 6-20		30	25/30 Jun-Oct/ Nov-May	4 (July-Sept)	N/A	200 (5/1-9/30); 400
4. Stockton, CA 2003	48	\$175 (22%)	\$49 (44%)	30	10	2 (All Year)	N/A	2.2 (total coliform – weekly average); 200 (fecal river limit)
5. Sioux City, IA	30	(Proposals Being Evaluated)	(Proposals Being Evaluated)	30	25	35 (All Year)	N/A	200
Fayetteville								
1. Noland (East)	11.2	TBD	TBD	5*/15**	5*/11**	1.8*/5.0**	1	200
2. West Plant	10	TBD	TBD	3	3	1.8	1	200
3. Pipes/Pump Stations	N/A	TBD	TBD	N/A	N/A	N/A	N/A	N/A

* April – November

** December - March



Workshop on DBO Option

Record of Change Orders ARI DBO Projects

	Number of Change Orders	Total Value/ %of Project Cost	Reason
Taunton, MA	2	\$150,000/1%	Additional Work Scope
Plymouth, MA	1	\$350,000/1.5%	Permit Delay
Naugatuck, CT	1	Credit - \$250,000/1%	Reduced Scope



Workshop on DBO Option

Next Steps

1. “Pause” to address:

- Legal framework/issues for DBO Procurement with Act 1297
 - Can a cost competition be done?
- Discussions with ASWCC regarding DBO approach, schedule for funding
- Discussions with DEQ, Dept of Health regarding DBO approach, project schedule, permitting
- Discussions with EPA regarding DBO approach, project schedule, funding
 - Can project approach/schedule satisfy EPA to prevent construction moratorium



Workshop on DBO Option

Next Steps continued

1. “Pause” to address (continued):

- Conduct further investigation to address City Council, public questions raised
- Develop plan for DBO procurement
 - Approach
 - Schedule
 - Advisors
 - Cost
- Compare DBB and DBO plans
- Presentation to City Council for consideration

2. Implement DBB or DBO Plan



ARLI

ORDER OF THE SPEAKERS-

**GREG BOETTCHER
JERRY SONDEREGGER
EARL JENKINS
BROCK HOSKINS
DUYEN TRAN
JIM ULMER
HUGH KELSO
JERRY SONDEREGGER**

PRESENTATION INTRODUCTION-GREG BOETTCHER

The Fayetteville Water and Sewer Committee held a publicized, open, televised meeting on June 5, 2003 to discuss the professional services contracts associated with the design and bidding phases of the wastewater improvement project, said contracts representing a total financial commitment of \$13,740,592.00.

Representatives of these firms provided brief overviews of their areas of responsibility, the scope of each contract's services and the compensation negotiated for said services. Following the presentations, a question and answer session followed. At the conclusion of said meeting, the Water and Sewer Committee members endorsed the submission of the contracts to the Fayetteville City Council for approval. Detailed project and cost information has been provided to the City Council in a "Design Contracts Manual" that included an overview, cost breakdown, contract summary and copy of each contract.

Representatives of each of the firms are present tonight and will make some brief introductory remarks. First will be Mr. Jerry Sonderegger:

PROGRAM MANAGER-JERRY SONDEREGGER:

I am Jerry Sonderegger with Burns and McDonnell of Kansas City, Missouri. Our firm will be providing Program Management Services and the Value Engineering Services component of this capital improvement program. Program management forms a partnership between the multiple players and centralizes project activities, enabling constant reporting of the total picture. In addition to the coordination, collaboration and reporting functions, Burns and McDonnell will enlist the services of its construction group to review constructability and team with the designers to achieve maximum construction value at the least cost. Within the next four weeks, we will begin the first of six Value Engineering Workshops in which Burns & McDonnell will provide an independent outside specialty panel of experts to examine the preliminary designs and identify potential means to save money and reduce City risks. Soliciting, receiving, and evaluating operations input from OMI will be ongoing throughout the project. Burns and McDonnell is an extension of the city administration, tracking the overall progress and finances of the project using the inputs from the multiple consultants. I would like to introduce the first of these consultants, Earl Jenkins of Black and Veatch:

NOLAND WASTEWATER PLANT UPGRADE-EARL JENKINS:

I am Earl Jenkins with Black and Veatch Engineers of Kansas City, Missouri. Our firm will be providing the engineering design and bidding services for the upgrading of the existing Noland Wastewater Treatment Plant. This work includes new biosolids handling facilities, improved odor control, expanded wet

weather pumping capacity and associated plant improvements identified by the engineering study. Project construction cost is predicted at \$17.1 million with the design capacity being 11.21 million gallons per day. Black and Veatch will be coordinating equipment selections to create uniformity between the treatment plants as well as to select manufacturers that have the optimal first cost/operating cost ratios. I would like to introduce Brock Hoskins of Garver Engineers:

EAST PIPELINES AND PUMP STATIONS-BROCK HOSKINS

I am Brock Hoskins with Garver Engineers of Fayetteville, Arkansas. Our firm will be providing the engineering and bidding services for the East Pipelines and Pump Stations. This work will include approximately 9 miles of pipelines varying from 6" force mains to 48" gravity interceptors, along with the improvement of 7 wastewater pumping stations. Garver Engineers will be segmenting this work into 4 different bidding packages to allow the expedited and sequential construction of this component of the improvement program. The first contract is scheduled to be ready for bidding by June 2004, said contract involving the first three pump stations and associated force mains. I would like to introduce Ms. Duyen Tran of OMI:

OPERABILITY AND ECONOMY OVERSIGHT-GREG HIGGINS:

I am Duyen Tran, representing Operations Management International (OMI), the company providing the contract wastewater treatment operating services for the City of Fayetteville. Our firm has and will continue to participate in the planning, design, construction and operational aspects of the Wastewater System Improvement Project. OMI's role in this capital improvement program will

include such activities as operability considerations, operational cost considerations, experience with various brands/types of equipment, knowledge of SCADA systems including automation/monitoring concepts, coordination of equipment designations, input regarding initial and long-term cost factors, and other participation as necessary. OMI has and will continue to be an active partner in the development and implementation of this wastewater system improvement project. I would like to introduce Mr. Jim Ulmer of McGoodwin, Williams and Yates.

WEST SIDE TREATMENT PLANT-JIM ULMER:

I am Jim Ulmer with McGoodwin, Williams and Yates in Fayetteville, Arkansas. Our firm will be providing the engineering and bidding services for the West Side Wastewater Treatment Plant. This work includes a new advanced waste treatment plant; associated improvements to Broyles Road from the south property line north along the east edge of the property to Persimmon Street; wetland mitigation activities for the entire project on the West Side treatment plant property; and an effluent outfall line, if necessary, which will take the plant discharge to Goose Creek.

The four consultants in the Design Team have been acutely aware of the need for cost controls, while maximizing the value of the project. In December 2000, when the team gathered to report on their cost predictions for their part of the project, the projected construction costs were in excess of \$150 million, which is far beyond the resources of the sewer system. The team went back to the design

process and collaborated on innovation, prioritization, and cost-benefit analysis to reduce the project budget to its current budget benchmark of \$125 million.

I can speak for the entire Project Team and confirm to you that every effort will be made to sustain a balanced financial program for the citizens of Fayetteville. There will be several opportunities of continued Value Engineering which will evaluate costs of various aspects of the project to determine ways to reduce the total project cost without compromising the integrity of the project.

One of McGoodwin, Williams and Yates' recent engineering projects was the expansion of the Rogers Wastewater Treatment Plant. The project bid was \$9,146,000. During the construction of that project, there were two change orders—one was for an add of \$14,020, and one was a deduct of \$5,534, for a total change order cost of \$8,486. This is less than one-tenth of one percent of the total project bid.

I would like to introduce Mr. Hugh Kelso of the RJN Group.

WEST PIPELINES AND PUMP STATIONS-HUGH KELSO:

I am Hugh Kelso with RJN Group of Dallas, Texas. Our firm will be providing the engineering and design services for the West Pipelines and Pump Stations. This work will entail approximately 16 miles of pipelines varying from 15" to 48" diameter, along with the improvement of 3 wastewater pumping stations. RJN Group will be segmenting this

work into eight different bidding packages to allow the expedited and seamless construction of this component of the improvement program. It is predicted that the first contract may be ready for bidding by May 2004, said contract involving the Old Wire Road to Greg Street Interceptor. RJN Group recently completed a similar pipeline improvement project in Dallas, Texas. This project's base bid price was approximately \$11 million, and was completed on schedule with no increase cost change orders. I believe that Jerry Sonderegger would like to make a few closing remarks and chair any questions regarding the project.

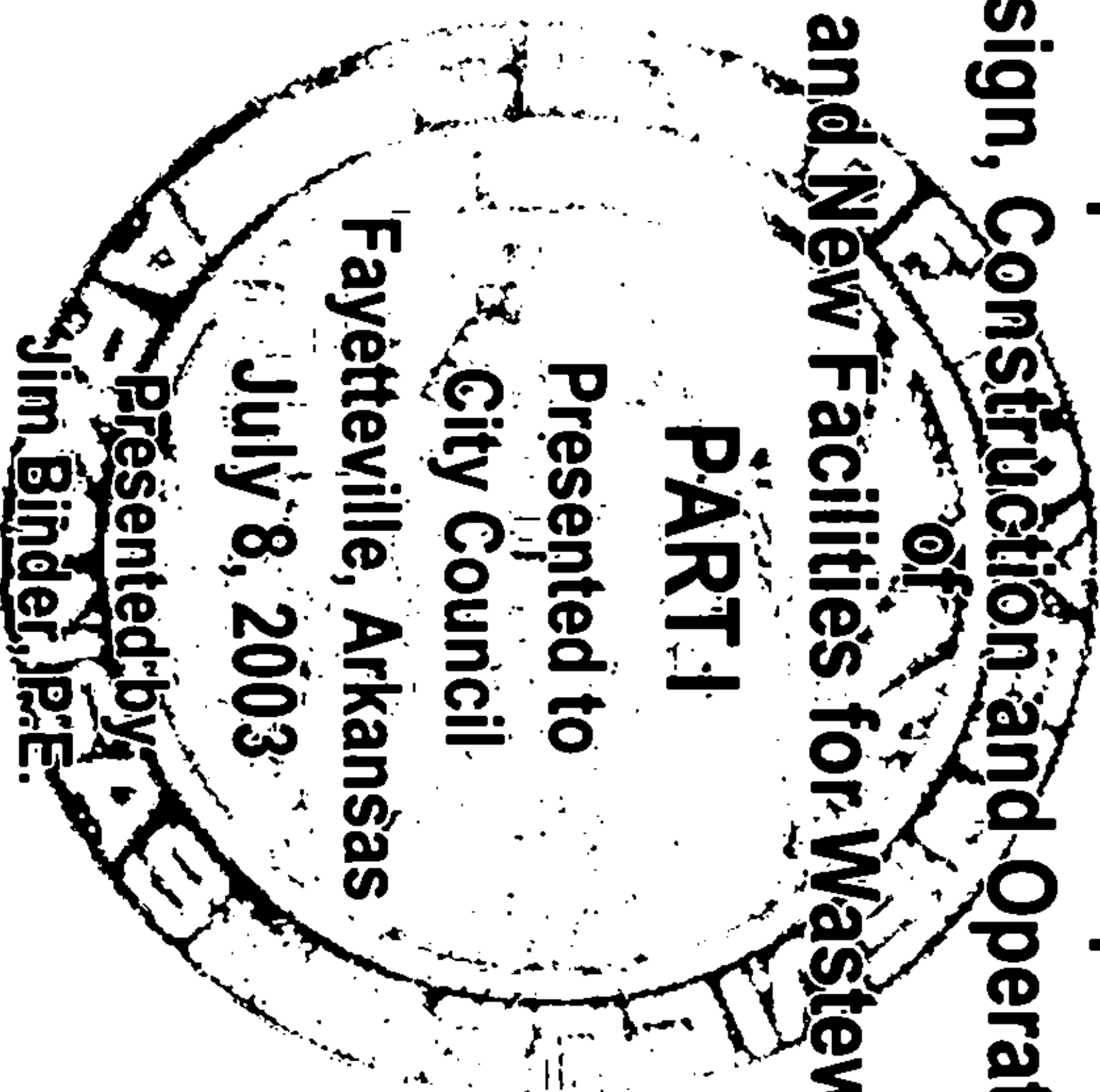
CLOSING REMARKS/QUESTIONS-JERRY SONDEREGGER:

We have provided a snapshot of the resources that are available to the City of Fayetteville should it approve the contracts currently on the agenda. As highlighted in these cameo statements, this is a group of seasoned professionals with documented success stories. It is our desire that the City Council of Fayetteville grant us an opportunity to proceed with the design and bidding phases of its wastewater system improvement project so we can each add this project to our record of successful municipal projects. Please be assured that this team will be committed to the budget and schedule, will provide updated reports on a monthly basis and will maintain open communication channels with all stakeholders (elected officials, city administration and citizens). Should there be any questions for myself or other team members we are at your disposal.



Workshop on DBO Option

**Workshop to Discuss DBO Option for
Design, Construction and Operation
of
Improvements and New Facilities for Wastewater Treatment**



Alternative Resources, Inc.



Workshop on DBO Option

Project Description and Issues

- **Project Description: wastewater system improvement project (\$125 Million)**
 - Improvements to Noland Plant (11.2 MGD)
 - Construct new West Plant (10 MGD)
 - Connecting pipes, pump stations
- **Project Issues**
 - Stringent effluent requirements
 - Preserve RLF - \$100 Million
 - Tight schedule – need capacity, avoid construction moratorium



Workshop on DBO Option

Federal Support of Public-Private Partnerships (DBO Major Trend)

• President Bush (Directed removal of regulatory obstacles, allowed accelerated depreciation of Federal Government interest and allowed local recovery prior to Feds)	Executive Order #12803 1992
• President Clinton	Reaffirmed Executive Order #12803
• IRS Tax Rule Change allowing long-term contracts (20 Years)	IRS Rule 97-13, 1997



Workshop on DBO Option

Federal Support of Public-Private Partnerships (DBO Major Trend) continued

• EPA guidance regarding privatization of wastewater treatment facilities	1998
• Fully staffed office EPA Washington, DC to address public-private partnerships	



Workshop on DBO Option

Design-Build-Operate (DBO) Option

- Concept
- Advantages and concerns, disadvantages
- Experience elsewhere, current trends



Workshop on DBO Option

What Is DBO?

- A single entity is responsible for designing, building and operating an improvement or new facility and is accountable for results. Single source guarantor.
- City does not separately retain and manage design engineer, general contractor for construction and an operations company. Performance and business risk transferred.



Workshop on DBO Option

Advantages

- Potential for lower cost (10-50%)
- Ability to select on criteria other than low cost
- Predictable future costs specified by contract (Fixed Price Guarantee for construction, Fixed Operations Fee for operation)
- Guaranteed schedule to complete construction
- Guaranteed performance



Workshop on DBO Option

Advantages (continued)

- **Assumption of technical/environmental/business risks**
 - **Technical:** Achieve design/performance limits; it if breaks company fixes it
 - **Environmental:** If exceed Permit limits – company fixes and pay fines
 - **Business:** Company assumes risk of construction costs, schedule delays, labor costs, utility costs, chemical costs
- **Single source provider and guarantor**
- **Reduction in potential for change orders**
- **Fewer public management requirements – day to day management with company**
- **National and international resource base to tap into – research, planning, trouble-shooting, training, optimization, regulatory review**



Workshop on DBO Option

Water Privatization Scorecard* Communities with Long-Term Water Partnerships

Location	Description (system type)	Plant Size (mgd)	Contract Term (years)	Estimated Cost Savings
Cranston, RI	DBO Wastewater	23	25	\$35 million
Moncton, NB	DBO Water	25	20	Cdn \$12 million
Plymouth, MA	DBO Wastewater	3	20	Present Value, \$7.4 million (19.7%)
Seattle, WA	DBO Water	120	25	\$70 million (40%)
Stockton, CA	DBO W/WW/SW	48	20	\$175 million
Tampa Bay, FL	DBO Water	66	15+5	\$85 million (21%)
Tampa Bay, FL	DBO Desalination	25	30	50%
Taunton, MA	DBO Wastewater	8.3	20	\$62 million
Washington Boro, NJ	DBO Wastewater	1.2	15+5	\$2.2 million (11%)
Woonsocket, RI	DBO Wastewater	16	20	\$45 million

* Public Works Finance, May 2003



Workshop on DBO Option

Often Expressed Concerns, Disadvantages

- Loss of control - not "Doer" - Performance based design and construction specs; City review/ approval – owner's rep, but not 100% design by City. Control operations via monitoring and contract enforcement.
- Potential for reduction in integrity of construction, maintenance/upkeep of facilities
- Potential for reduction in level of service
- Won't jobs be lost or wages/benefits be reduced?
- Potential to reduce competition for future improvements/modifications



Workshop on DBO Option

Current Trends

- **Contract operations with design/construction of improvements to existing facilities**
- **Design/build and design/build operate contracts for new facilities**
- **Long term contracts (e.g. 15-20 years)**
- **Asset management by private contractor, repair and replacement risk with contractor**
- **Full worker protection- jobs, wages, benefits**
- **Shift of technical, environmental and business risk to private contractor**



Workshop on DBO Option

Traditional Approach

- **Description**
 - City contracts separately with engineer to design project and contractor to construct project (decision on construction based on lowest cost bid from responsive, responsible bidder)
 - City or private company operates and maintains facilities



Workshop on DBO Option

Traditional Approach (continued)

- **Advantages**
 - Traditional, well used approach (comfort level exists; procurement procedures in place)
 - City sets/controls 100% design and construction specs



Workshop on DBO Option

Traditional Approach (continued)

• Disadvantages

- Issue of quality associated with low-bid for construction
- Potential for higher cost of construction and for change orders to increase costs (no guarantee of fixed price for completion, no guarantee of completion date)
- City, not private company, responsible and at risk for performance
- No security for long-term performance- no parent company guarantee or letter of credit, no bonding for operations
- Increased potential for claims, litigation (since no single party responsible for design, construction and operations)



ARI



Workshop on DBO Option

What delivery method makes sense for Fayetteville? Why?

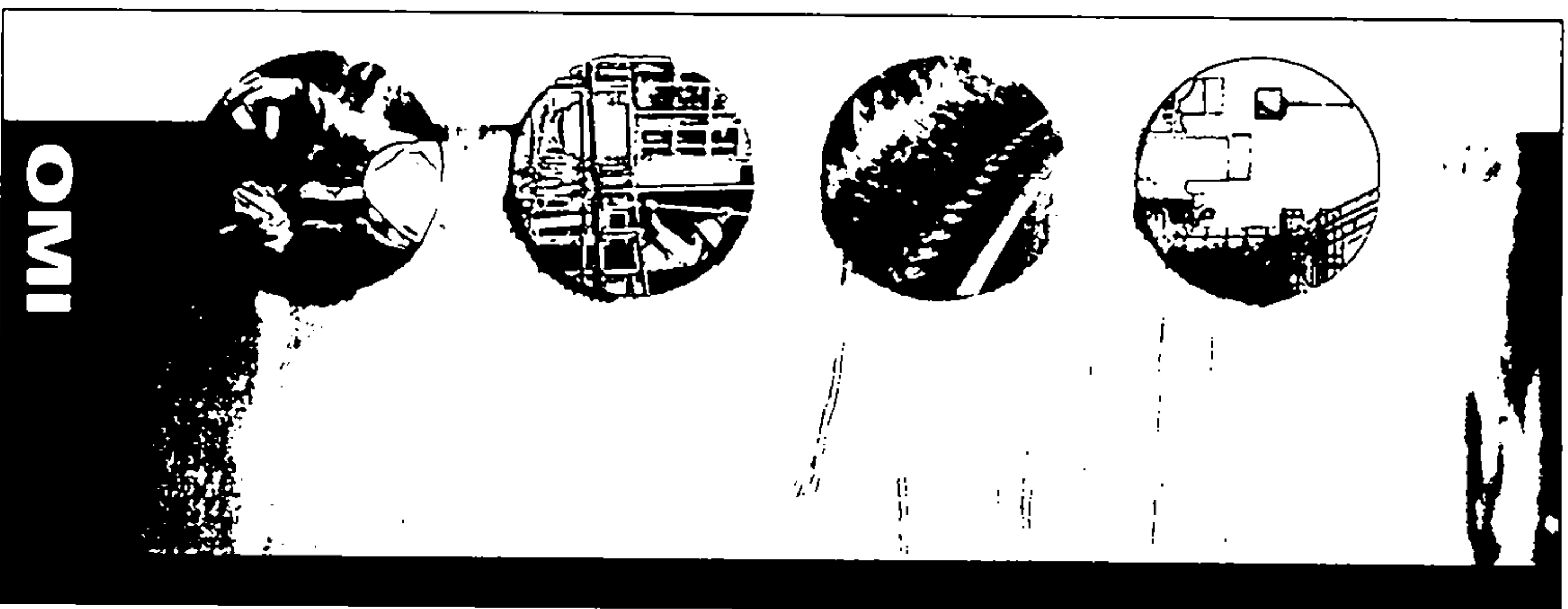
Continued in Part II

Design • Build • Operate as a Service Delivery Option

City of Fayetteville City Council

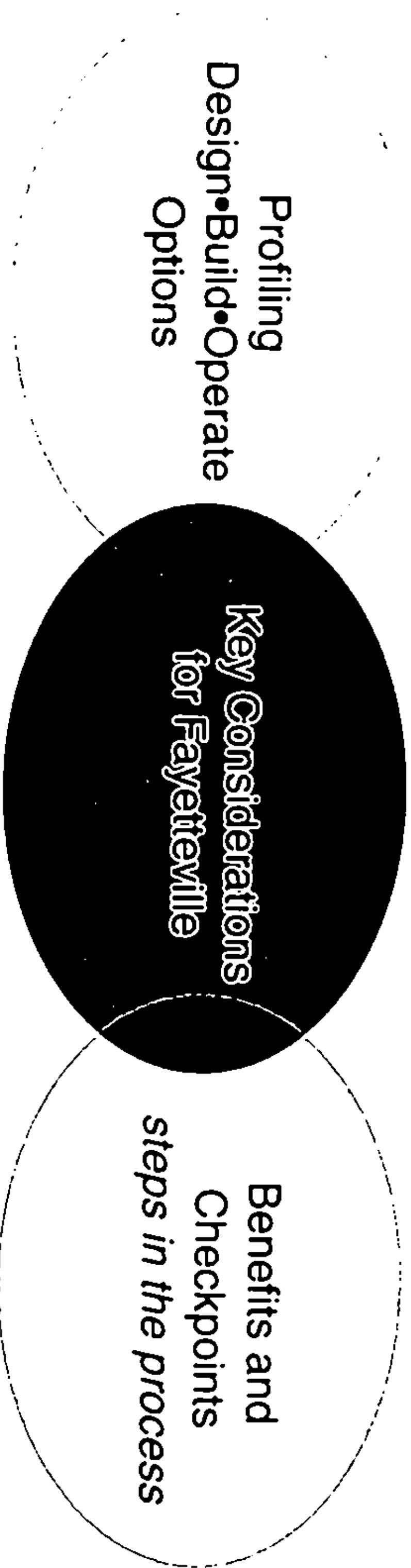
July 8, 2003

Presented by
Don S. Evans, P.E.
President and CEO



OMI

Presentation topics



Design • Build • Operate as a service delivery strategy is growing at an accelerated pace in the U.S.

OMI

Driving forces behind strategic change for municipal governments

Forces

- Doing more with less
- Regulatory changes – stricter enforcement
- Changing legislation
- Public interest

Response by municipal leaders

- ☐ New strategies to deliver faster, more efficient and cost-effective service
- ☐ Acquire and access broader resources, technology and experience
- ☐ More cities and states passing enabling legislation for DBO; Arkansas passes S.B. 724; a sea change opportunity for leaders
- ☐ Ratepayers desire input on substantial government expenditures (including capital and environmental projects); hearings/workshops are positive

Decision and question checklist for Fayetteville

- ☐ Can Fayetteville legally implement and use a DBO approach?
- ☐ Will there be substantial benefits to using DBO?
- ☐ Can Fayetteville maintain access to low-cost funding (e.g. state revolving funds and tax-exempt financing)?
- ☐ What are the specific approval steps needed by the City (e.g. Arkansas Soil and Water Conservation Commission)?
- ☐ What are the next steps and actions following the workshop?

DBO can reduce risk on municipal government and encourage innovation

Risk Profile

- City maintains most cost, schedule, and long-term performance risks
- Multiple parties
- No single guarantor



Risk Profile

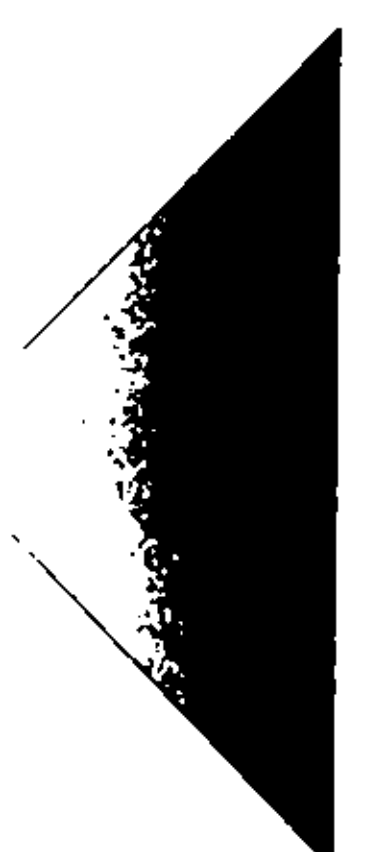
- Private sector assumes majority of risks
 - Guaranteed cost
 - Schedule guarantee
 - Performance and process guarantees
- Same risk transfer to private sector
- City maintains option to contract O&M separately
- Scheduled design/build time shortened



Traditional Delivery
Design•bid•build



DB



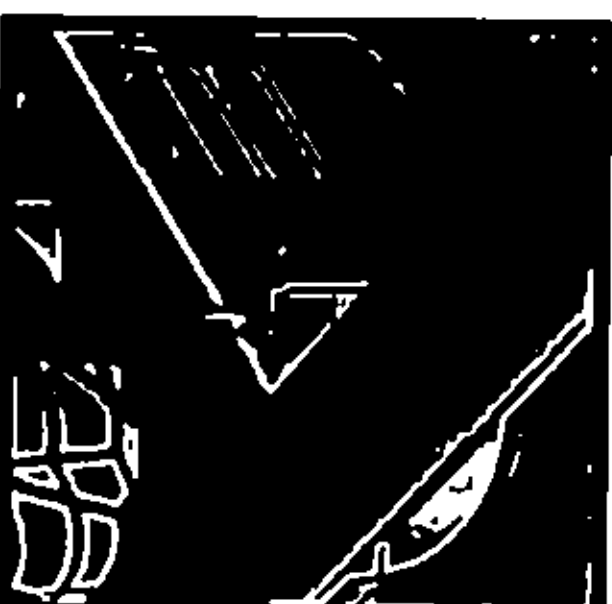
Alternative Delivery
Design•build•operate

OMI

Recent design•build•operate experiences in the U.S.



Seattle, WA
(water)



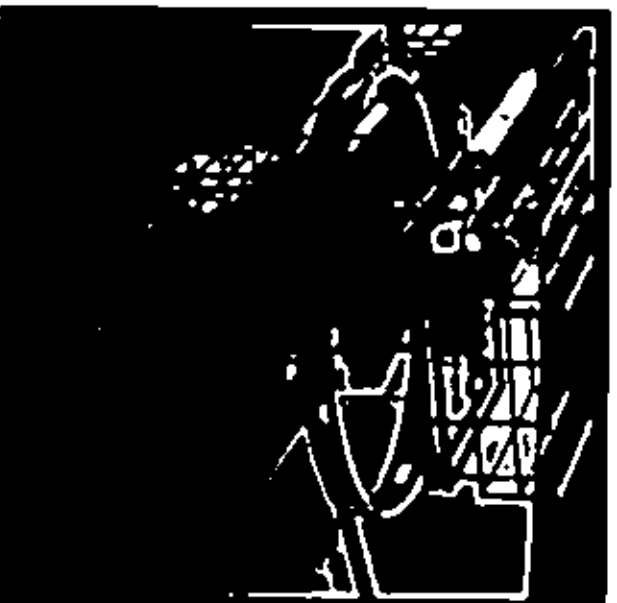
Phoenix, AZ
(water)



Atchison, KS
(water)



Stockton
(water/wastewater)



Seattle, WA
(wastewater)



Augusta, GA
(wastewater)

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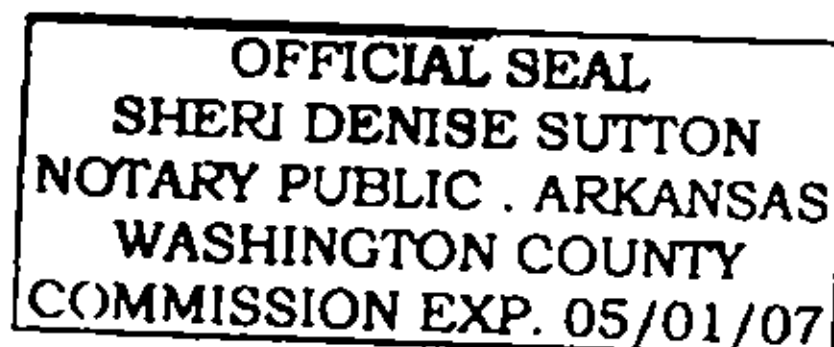
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10th day of July, 2003.

Sheri Denise Sutton
Notary Public

My Commission Expires: 5-1-07

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JUL 11 2003

CITY OF FAYETTEVILLE
CITY CLERK'S OFFICE

**SPECIAL CITY COUNCIL MEETING
FINAL AGENDA
JULY 8, 2003**



City of Fayetteville

A special meeting of the Fayetteville City Council called by the Mayor will be held on July 8, 2003 at 6:00 PM immediately following the Agenda Session in Room RCED 120 at the Sam Walton College of Business, University of Arkansas, Fayetteville, Arkansas.

1. Opening Remarks and Workshop Overview given by Mayor Dan Coody: Workshop presentations and discussions are centered on the means and methods by which the City of Fayetteville could use a design-build-operate project delivery method for its \$125 million wastewater improvement project. Discussions, case histories, comparative analyses and other aspects of project delivery alternatives will be discussed.
2. Introduction To The Design-Build-Operate Project Delivery And Methodology: Mr. James Binder, P.E. President of Alternative Resources will be speaking. A general description of the alternative project delivery system including (A) definition of the alternative process, (B) comparison of design-build-operate (DBO) process to the conventional design-bid-build (DBB) process, (C) description of current alternative project delivery applications in the water and wastewater industry and (D) presentation of comparative advantages and disadvantages of each process.
3. Legal Perspectives: Mr. Eric Peterson with Hawkins, Delafield & Wood will be speaking. A primer on the legal and contractual issues associated with different project delivery methods, including comparative risks, advantages and providers.
4. Alternative Project Delivery System Providers And Case Histories: Mr. Don Evans, President of Operation Management International, Inc. Mr. Dave Butler, Former Mayor of Atchison, Kansas, and Mr. Bill Rosenbaum, Vice President of Municipal Design/Build Project Development will be speaking. Pat McManus, Former Mayor of Lynn, Massachusetts will describe the City of Massachusetts' experience using design-build and design-build-operate concepts to address various municipal projects over a period of 18 years. The presentation will include an overview of the challenges that were addressed relating to funding programs, sewer line construction and system repair issues.
5. Implementation Strategy Using A Design-Build-Operate Concept-Fayetteville, Arkansas: Mr. James Binder, P.E. President of Alternative Resources will be speaking. This discussion will be focused upon the Fayetteville Wastewater System Improvement Project with specific responses to: (A) issues associated with implementing a DBO procurement, (B) potentials for cost savings, (C) scheduling implications, (D) coordination with the Revolving Loan Fund, (E) perception of EPA perspectives towards DBO methodology, (F) description of a conceptual process for Fayetteville's project, (G) predicted schedule using alternative project delivery method and (H) future actions needed to evaluate alternative approach.
6. Question and Answer Period.



AN INTRODUCTION TO DESIGN-BUILD

RETURN TO THE TIME-
HONORED APPROACH
OF THE MASTER BUILDER,
*where a single source has absolute
accountability for both design and
construction*

When the owner of a project wants a streamlined, fast-track delivery of a building, the design-build approach is the way to go. Design-build is a single source for both design and construction services.

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DESIGN-BUILD



POSSIBLE ORGANIZATIONAL FORMATS

- Integrated Design-Build Firm
(In-house A/E/C professionals)
- Contractor Prime with A/E Subcontractor, or
A/E Prime with Contractor as Subcontractor
- Design-Build Joint Venture
(A/E and Contractor)

DESIGN-BID-BUILD



A Classical Notion of Single Source