

**American Water Works Association  
Annual Conference  
Atlanta, Georgia  
June 10, 2008**

**DO IT RIGHT –  
A STRUCTURED APPROACH  
TO SELECTING A  
PROJECT DELIVERY METHOD**

**Eric S. Petersen  
Partner  
Hawkins Delafield & Wood LLP  
New York, NY**

**Hawkins**  
Delafield & Wood LLP

# OVERVIEW

---

**Traditional v. Alternative Public Works Contracting**

**A Disciplined Delivery Method Selection Process**

**Industry Trendlines and Contractor Market Performance Guarantees and Reasonable Risk Transfer**

**Alternative Project Delivery in Practice  
Municipal retained rights and control**

# HAWKINS PERSPECTIVE

---

**Public/Private Partnership (P3) Transaction Attorneys**

**Leading Public Contracts and Procurement Firm**

**Top Tier Public Finance Firm**

**National Special Counsel Practice**

**Water and Wastewater Sector Concentration**

**Experience In All Infrastructure Sectors**

# **TRADITIONAL PUBLIC WORKS FINANCING AND CONTRACTING**

---

**Design-Bid-Build Contracting (DBB)**

**Public Operations**

**Governmental Obligation Municipal  
Bonds (Revenue or Tax Secured)**

**Projects are Publicly Owned**

**Design, Construction, Operation and  
Financing All Separate Functions**

# ALTERNATIVE PROJECT DELIVERY METHOD – P3

---

**Design-Build (DB)**

**Design-Build-Operate (DBO)**

**Design-Build-Finance-Operate (DBFO)**

# **A DISCIPLINED DELIVERY METHOD SELECTION PROCESS**

# **AN ORGANIZED WAY OF DECIDING HOW TO PROCEED**

---

**Internal Team and Multi-discipline Outside  
Consultants**

**Engage Stakeholders**

**Identify and Assess:**

- **Current Situation**
- **Project Definition**
- **Treatment Technologies**
- **Objectives and Expected Outcome**

**Structured, Multi-part Delivery Method Workshops**

**Making the Business Case For the Selected Method**

# PROJECT DELIVERY METHODS

---

**Identification**

**Description**

**Context**

**Legal authority**

**Owner's experience**

# COMPARATIVE ANALYSIS OF OPTIONS

---

**P3 Methods versus “Public Sector  
Comparator”**

**Multiple Criteria Analysis**

**Detailed Qualitative Assessment**

**Benefits and Impacts**

**Commercial Analysis and Market  
Soundings**

**Funding and Financing Analysis**

# **RISK CAN AND SHOULD BE QUANTIFIED**

---

**Project Life-cycle Cost Under Each Method**

**Quantify Risk for Each Method (Delay, Performance,  
Cost Overruns)**

**“Retained Risk” versus “Transferred Risk”**

**“Burden” Each Method With “Quantified Risk”**

**Calculate “Risk Adjusted NPV Price” for Each  
Method**

**Select Delivery Method Using Qualitative and  
Quantitative Determinations**

**Formal Report**

# **ALTERNATIVE DELIVERY (P3) IS OFTEN WELL SUITED TO:**

---

**Greenfield Projects**

**Projects Involving Proprietary Technology  
(Biosolids)**

**Technically New or Complex Projects (Desal)**

**No or Limited Existing Public Operational  
Workforce**

**Innovation is Possible and Desired**

**Even Suitable for Buried Infrastructure (CSO,  
Tunnels)**

# **OWNERS USING A STRUCTURED, FORMAL DECISION PROCESS**

---

## **Municipalities**

- **Phoenix, AZ**
- **San Antonio Water System, TX**
- **Pima County, AZ**

## **States**

- **California**
- **New Jersey**
- **British Columbia**

# THE P3 MARKET

# INDUSTRY TRENDLINES

---

**Extensive Use in Private Sector**

**Cooperation Among Participants Permissible  
and Desirable**

**Life-cycle Cost Perspective**

**Long Term Contracts**

**Substantial Risk Transfer**

**Striking Success of Projects Built Using  
Alternative Delivery**

**5-20% Savings Against “Benchmark”**

**“Faster, Better, Less Expensive”**

**Growing Acceptance Nationwide**

# UNIFIED PROJECT RESPONSIBILITY

---

**Traditional Design-Bid-Build (DBB) Trifurcates Responsibility**

**DB and DBO Unify Responsibility**

**Comprehensive Asset Development and Management Under a Single Contract**

**Single, Strong Parent Company Guaranty**

**One Contractor Deals With All Subs and Equipment Suppliers**

**Avoids the Cost and Risk of Disputes Between the Designer, Builder and Operator**

**Easier Administration**

# **DB CONTRACTORS**

---

**5-10 Large Integrated DB Firms**

**U.S. Based**

**DB Joint Ventures: Engineering Firms and  
Construction Firms**

**Excellent Performance Record**

**Industrial Water Sector Opportunities Also**

**Contractors Are Selective and Risk-Averse**

# **SURETIES' INFLUENCE**

---

**Sureties Consider Design-Build Projects  
High Risk**

**Projects Involving “Process Engineering  
Risk” Are More Difficult to Bond Today**

**Significant Surety Involvement in Business  
Terms**

**Concerns Reflect the “Design Liability” the  
Sureties are Bonding Against**

# **DB: INITIAL OPERATIONS**

---

**Firms Generally Will Not Accept Any  
Responsibility For Short Term  
Operations After Project Acceptance**

**Warranties Typically Cover Structures  
and Equipment, Not Operations or  
Performance**

**Only Long Term Operations Contracts Are  
Possible**

# **OPERATIONS CONTRACTORS**

---

**4-8 U.S. and International Operations  
Firms**

**Largely Investment Grade**

**Operate Hundreds of Plants**

**Excellent Performance Record**

**Active Commitment to Market**

**Will Guaranty Entire Operations Contract**

# EARLY PRICE CERTAINTY

---

## DBB

- | Owner Design Costs 8-10% of Construction Cost
- | Costs Unknown Until 100% Design
- | Bidder's Price May Exceed Engineer's Estimate
- | Project May Be Delayed or Re-designed

## DB and DBO

- | Owner Design Costs 1-3% of Construction Cost
- | Proposers Design to Level Necessary to Guarantee Price
- | Owner Obtains Early Price Guarantee For Low Cost

# DISPUTES AND MONITORING

---

## DBB

- Bid Protests Can Be Common
- Construction Monitoring Is 6-8% of Cost
- Change Orders Are Prevalent
- Litigation Often Results (DBB-L)

## DB and DBO

- Bid Protests Are Uncommon
- Construction Monitoring Is 1-2% of Cost
- Change Orders Are Rare
- Litigation Is Rare

# PERFORMANCE GUARANTEES

---

**Water Treatment (Quality)**

**Enhanced Standards, Beyond Applicable  
Law**

**Water Delivery (Quantity)**

**Production Efficiency**

**Hydraulic Transients**

**Maximum Electricity Utilization**

**Price and Schedule Guarantees**

**Performance Incentives**

# RISKS RETAINED

---

## Owner's Risk Under Any Delivery Method

- Changes in Law
- Force Majeure
- Unusual Raw Water/Influent Parameters
- Pre-existing Environmental Conditions
- Buried Infrastructure Conditions
- General Price Inflation

# RISK TRANSFER (1)

---

## Design and Construction Risks

- Design Liability
- Completion Risk (Delay and Efficacy)
- Construction Cost Overruns
- Disputes Between Designer and Builder
- Securing Patents and Licenses

# RISK TRANSFER (2)

---

## Operation and Maintenance Risks

- | O&M Cost Overruns
- | Regulatory Compliance
- | Capital Maintenance
- | Technological Obsolescence
- | Excess Electricity Consumption
- | Labor Supply and Relations

# **P3 PROCUREMENT AUTHORITY NATIONALLY**

---

**PA, IA - Traditional Low Bid Contracting**

**MA, NY, NC - Special Legislation Needed**

**RI, CT, NJ, FL, WA, OR, NM, VA - Broad  
Authorization**

**AZ, GA – Omnibus Law**

**CA – Home Rule; Districts; 5956**

**TX – New DB Legislation**

# **DB/DBO SUCCESSES – WATER**

---

**Seattle, WA (Tolt and Cedar)**

**San Diego County Water Authority, CA  
(Twin Oaks)**

**Phoenix, AZ (Lake Pleasant)**

**Tampa Bay, FL (Surface Water)**

**San Juan Capistrano, CA (Desalination)**

**Santa Fe, NM (Buckman)**

# **DB/DBO SUCCESSES - WASTEWATER**

---

**Fulton County, GA**

**Newport, RI**

**Tacoma, WA**

**Fillmore, CA**

**Springfield, MA**

**Spokane County, WA**

# **ALTERNATIVE PROJECT DELIVERY (P3) IN PRACTICE**

# KEY CONTRACTOR CONCERNS

---

**DB/DBO Contract Should Have a Stated Dollar  
Limit on Liability**

**Reasonable Liquidated Damages**

**Performance Incentives**

**No Consequential Damages**

**Mutual Indemnification**

**Well-Defined Influent Parameters and Effluent  
Standards**

**Protection From Commodity Price Escalation**

**Clear Start-Up and Testing Criteria**

# **MUNICIPAL CONTROL**

---

**Comprehensive Asset Development and Management**

**Minimum Design Requirements and Quality Standards**

**Performance Guaranteed (Repairs, Fines, Damages)**

**Costs Guaranteed – No Overruns**

**Management By “Full-service Contract”**

**Vigorous, Broader Competition and Cooperation**

**Municipal “Convenience” Termination Rights**

# **MUNICIPAL RETAINED RIGHTS**

---

**Ownership of Assets**

**Ownership of System Revenues**

**Setting User Rates**

**Capital Planning**

**Bond Financing (Tax-exempt)**

**Securing Sites and Rights-of-Way**

**Obtaining Water Rights**

**Obtaining Grants and Subsidies**

# INGREDIENTS FOR SUCCESS

---

**Initial Strategic Planning and Development**  
**Use Discipline in Selecting a Delivery Method**

**Thoughtful, Well-developed RFQ/RFP**  
**Creative and Responsive Proposals**

**Clear, Comprehensive Contract**

**Full Proposer Due Diligence Opportunity**

**Fair and Balanced Risk Allocation**

**Outstanding leadership**

**“All this, my friend, is offered merely for your consideration and judgment, and without presuming to anticipate what you alone are qualified to decide for yourself.”**

**Thomas Jefferson**

# THANK YOU

---

**Eric S. Petersen**  
**Hawkins Delafield & Wood LLP**  
**One Chase Manhattan Plaza**  
**New York, NY 10005**  
**(212) 820-9401**

**[epetersen@hawkins.com](mailto:epetersen@hawkins.com)**

**[www.hawkins.com](http://www.hawkins.com)**