









### **Kiewit Corporation**

- More than 125 years of construction excellence
- · Operations throughout North America
- · Owned by active employees
- More than \$9 billion in 2009 revenue
- One of the largest privately owned equipment fleets in North America
  - 21,500 units
  - More than \$2 billion replacement value



History

### 1884-1940 Kiewit's beginnings

- Kiewit begins by building brick foundations for homes
- · Kiewit wins large building contracts.
- In 1924, young Peter takes on more responsibility
- Kiewit wins contracts for reservoirs and hydroelectric plants
- · Kiewit expands throughout the U.S.





History

### 1940-2000

- In the early 1940s, Kiewit builds more than \$500 million of work for the government
- Kiewit ventures into a new line of business – coal mining
- In the 1950s, Kiewit works on the country's early superhighways
- In the mid-1960s, Kiewit establishes a presence in eastern Canada
- Throughout the 80s and 90s, Kiewit undergoes significant changes and corporate restructuring





### 2000 and today

- In 2001, Kiewit took on billion dollarplus jobs such as the \$1.28 billion T-REX project in Denver
- Kiewit engineers now create concept models including 3-D computer-aided design
- Kiewit completes the first Goldcertified Leadership in Energy and Environmental Design (LEED®) project in Nebraska





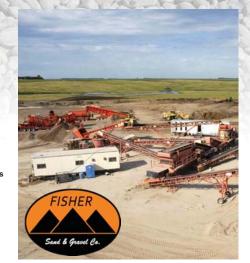
### Fisher Industries

- North Dakota Company
- Founded in 1952
- 700+ Employees
- 4,000+ Equipment Pieces
- Operate in 11 States

### **Annual Production:**

- Aggregates 30 Million tons
- Asphalt 2 Million tons
- Concrete 200,000 yards
   Dirt/Execution 10 Million
- Dirt/Excavation 10 Million yards
- Steel 7.5 Million pounds

Annual Sales - \$300 Million





### **Our History**

Gene Fisher founded our parent company, Fisher Sand & Gravel, on the vast prairies of southwest North Dakota in 1952.

What began as a small but enterprising aggregate processing company quickly emerged as a leader in portable crushing operations. Today Fisher Sand & Gravel Co. is ranked one of the top 25 U.S. sand and gravel producing companies.

In 1996, Tommy Fisher expanded the operations to Arizona and the southwestern United States. Today, Fisher Sand & Gravel operates as a general contractor to both the northern and southern tier of the United States.















### Traditional Program Delivery Method

### Design-Bid-Build

"Design-bid-build" means a project delivery method in which design and construction of the project are in sequential phases, and in which the first project phase involves design services, the second project phase involves securing a contractor through a bidding process, and the third project phase provides for construction of the project by a contractor awarded the project.

ND Century Code 48-01.2-01(12)





### Why Owners are Using Alternate Delivery Methods

- Single point of responsibility
- Engineering and construction on the same team
- · Errors are addressed; not used as claims
- Constructor involvement enhances constructability
- Provides an early cost commitment
- Fewer changes less litigation
- Faster, more cost-effective project delivery





## Schedule – Faster Delivery Typical Project Delivery Design Bid Build Design Build Delivery RFP/BID Design Build Delivery Time/Cost Savings





### Alternative Contract Delivery Methods

- Design-Build
- Design-Assist/CM @ Risk
- Cost Plus
- Public Private Partnerships or PPP (Development Agreements and Concession Agreements





### **Alternative Delivery Methods**

- Design Build
  - · Single-source project delivery
  - Lump-sum price
  - · Provides substantial time and cost savings
- Design-Assist (CM @ Risk)
  - · Qualification-based selection (QBS)
  - Partnership between contractor and designer under separate contracts
  - · Tiered development of price





### Alternative Delivery Methods (cont.)

- Cost Plus
  - Best applied to high-risk scopes of work (tunnels, emergency repairs)
  - Established rates, fees
  - · Minimal contractor contingencies
- PPP (development/concession)
  - · Contractor assumes substantial development risk
  - Owner contracts for front-end project development support, traditional D-B services, and back-end O&M
  - · Expanded team





### **Delivery Comparisons**

Metric	D-B vs. D-B-B	CM@R vs. D.B.B	D-B vs. CM@R
Unit Cost	6.1% lower	1.6% lower	4.5% lower
Const. Speed	12% faster	5.8% faster	7% faster
Delivery Speed	33.5% faster	13.3% faster	23.5% faster
Cost Growth	5.2% less	7.8% more	12.6% less
Schedule Growth	11.4% less	9.2% less	2.2% less





### **Not for Every Project**

One of a number of project delivery methods

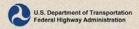
- · Design-Bid-Build
- Design-Build

Design-Build applicable to projects...

- Urgently required (need, support, and commitment)
- At 30% or less design (less is better)
- Balance RFQ-RFP requirements with interest-job









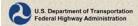
### FHWA Expectations and More

Lindsey L. Handel, P.E. Federal Highway Administration

2011 NDDOT Construction Conference March 2-3, 2011 - Grand Forks March 7-8, 2011 - Mandan

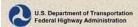
### Items of Discussion

- · Full Involvement Projects
- Change Orders
- Review Findings
- · Performance Based Specifications
- Latest Technologies
- Alternative Contracting



### **Alternative Contracting**

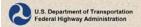
- Design-Build Project Delivery
- Public-Private Partnerships (P3s)
- Construction Manager General Contract (CMGC)



### Design/Build Project Delivery

A system of contracting whereby one entity performs both architectural/engineering work and construction under a single contract.

Source: Design-Build Institute of America (DBIA)



# States with Transportation Design/Build Authority 2005 Design-Build State Laws for Transportation Procurement 100 Design-Build Authority 10

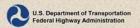
### How is DB different from DBB?

### Owner

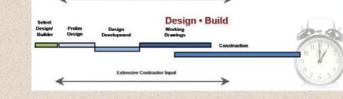
- Design compliance review.
- Need dedicated design assets available to the field.
- · Performance-based.
- Higher level of trust required.

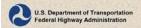
### Design-Builder

- · Owns details of design.
- Designer-of-Record (DoR)
   Must design to budget
   and schedule.
- Responsive to owner needs-preferences.
- Internal contracts different.
- DoR's client is the designbuilder NOT the owner.



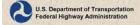
### Design-Build Time Savings Design Bid \* Build Contractor Bids Construction Minimal Confractor Inquil





### P3 Project Delivery

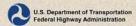
Public-private partnerships (P3s) are contractual agreements formed between a public agency and a private sector entity that allow for greater private sector participation in the delivery and financing of transportation projects.



### **CMGC Project Delivery**

CMGC is a Project Team consisting of three components:

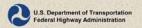
- · An Owner
- · A Contract with a Designer
- A Two Phase Contract with a General Contractor
  - Phase one A "Construction Management" consulting contract to help with design.
  - Phase two A "General Contracting" contract to build the project.



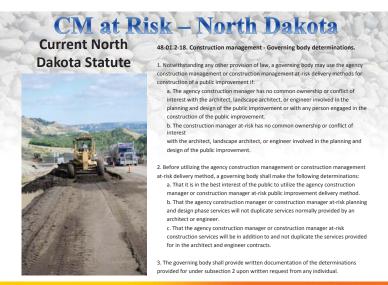
### FHWA's Long Term Project Delivery Goals

All contracting agencies should have a project delivery "toolbox" including:

- Design-bid-build
- · Design-build
- Construction Manager General Contractor (Construction Manager at-Risk)
- Alliance Contracting
- Performance Contracting
- ID/IQ contracting
- · Other







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The below map shows which states permit Construction Management At-Risk under state law for horizontal construction projects.





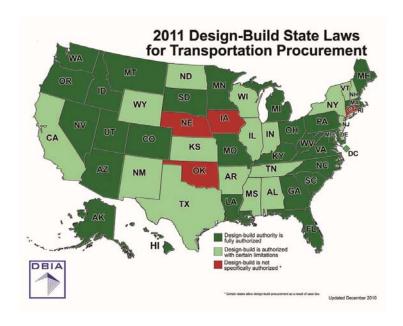


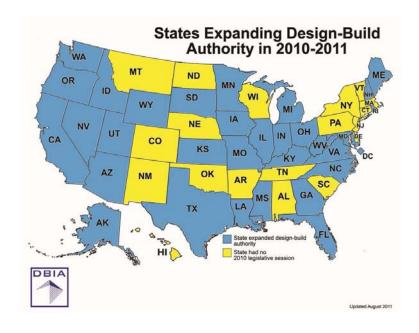
### North Dakota Design-Build Statutes

- The DOT is authorized to use design-build on one signal light and one box culvert project (NDCC 24-02-47)
- The state water commission is authorized to use design-build for construction of the Devils Lake Outlet (NDCC 61-02-23.2)
- Municipalities and political subdivisions are authorized to combine price and technical evaluation selection process. They must choose the lowest and best bid. (NDCC 44-08-01.1)









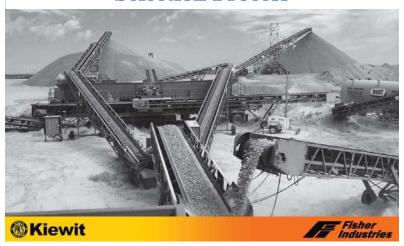
The map below identifies the 23 U.S. States and one U.S. territory that have enacted statutes that enable the use of various P3 approaches for the development of transportation infrastructure.







### **Typical Design Build Selection Process**



Selection Process

### **Owner's Preliminary Activities**

- Complete preliminary design
- Execute intergovernmental and utility agreements
- Acquire permanent right-of-way
- Environmental permitting





### **Industry Reviews of Draft RFP**

- Conduct individual meetings with shortlisted teams
- Consider issues that may have impacts on pricing
- Finalize industry review prior to issuing RFP
- Key benefit: proposals that meet both parties' expectations





Selection Process

### Final RFP Should Clearly Communicate:

- Project-specific goals
  - Schedule
  - Budget
  - Quality
  - · Others...
- Responsibility matrix
- Evaluation criteria
- Confidential ATC approval process





### Risk Management Approach

- What's best for project?
- Who's best able to control risk?





### Owner's Risks Owner Design-Builder Hazardous waste Changes in law Force majeure events Differing site conditions

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## Owner's Risks Owner Design-Builder Cost of design Constructability of design Quantity growth Changes in subcontractor prices Changes in materials prices

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Shared Risks						
	Owner	Design-Builder				
Design liability	•	•				
Schedule	•	•				
Permits	•	•				
Right-of-way	•	•				
Utility relocations	•	•				
Unusual escalators	•	•				
Maint. During construction	•	•				
Commitments to third parties	•	•				





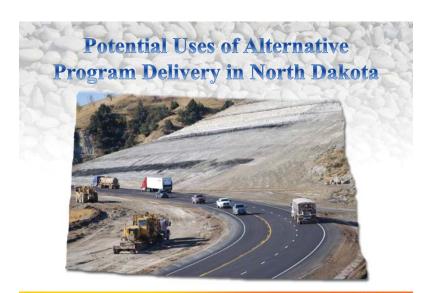
### Shared Risks by Delivery Method

Risk	Design- Build	CMR	DBB	Cost Reimb.
Design cost	С	0	0	0
Constructability of design	С	S	0	0
Quantity growth	С	0	0	0
Changes in sub pricing	С	0	С	0
Changes in material pricing	С	0	С	0
Design liability	С	0	0	0
Scheduling	С	С	С	0
Permits	s	0	0	0
ROW	s	0	0	0
Utility relocates	s	0	0	0
Third party agreements	0	0	0	0

C = Contractor, O = Owner, S = Shared



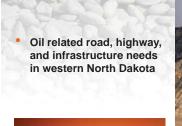






Potential Uses











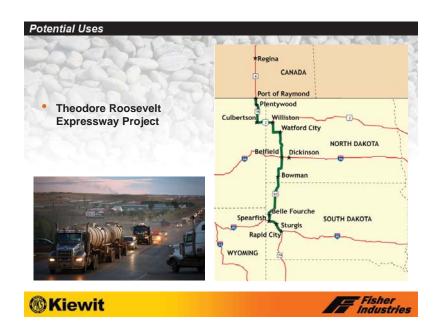












### Additional Tool

- Design Build and other alternative delivery methods do not require State/local officials to adopt a specific method.
- They are additional tools that State and local government entities may use on projects for which they are appropriate.





