



American Public Works Association

A Full Quiver – Beyond Design, Bid, Build

Alternative Project Delivery Methods

**Match the Tool With the Project:
Save Time, Money, & Resources**



Today's Presenters



Keith Reester
Public Works & Utilities Director
City of Littleton



Jamie Safulko, PE
Engineering Manager
South Platte Renew



Dan Hartman, PE
Public Works Director
City of Golden

More Tools in your Toolbox – Alternative Delivery

Jamie Safulko, P.E.

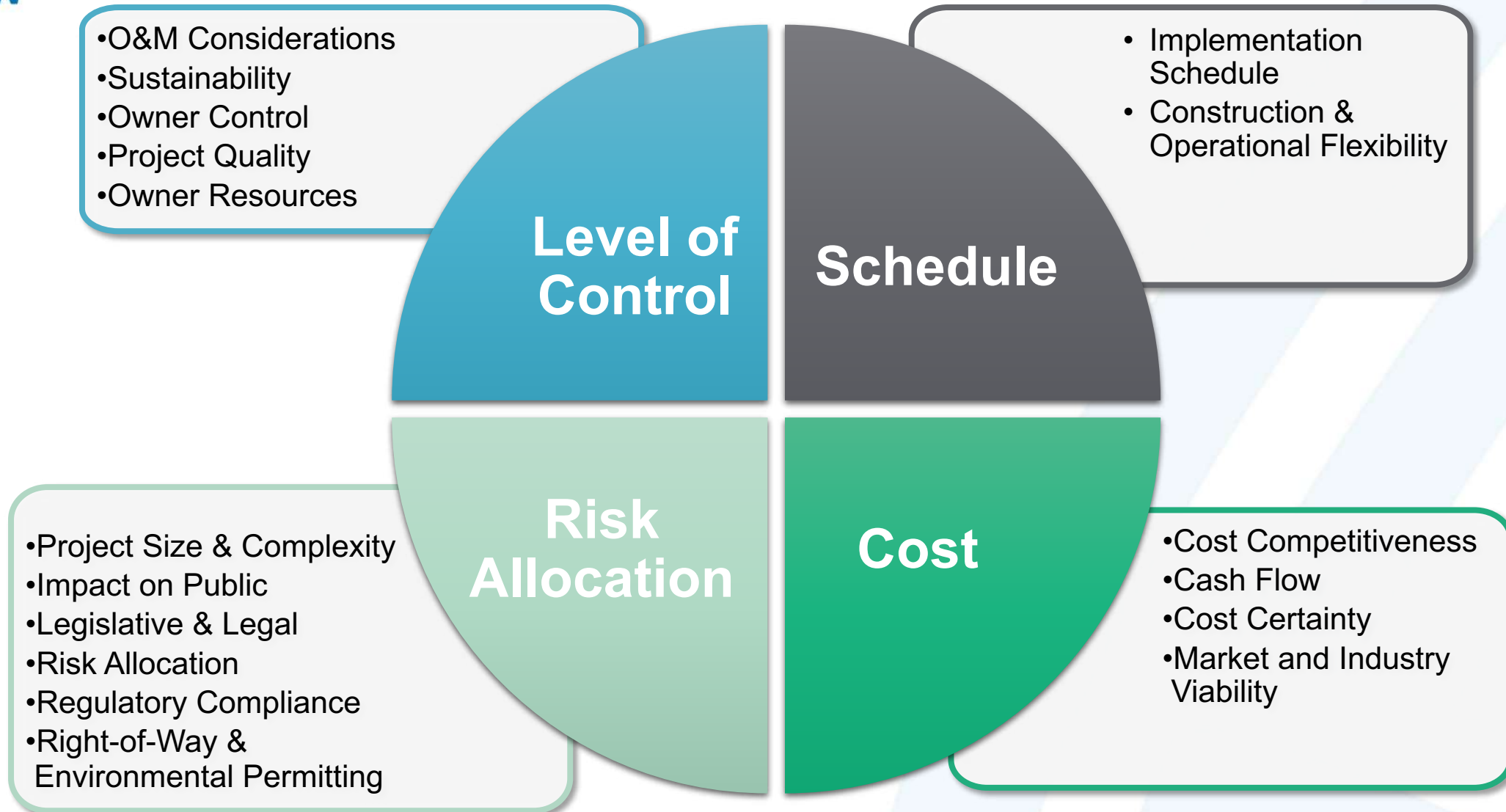


- What's in your toolbox for projects?
- Navigating your options
- Case Studies
- Resources available

Options

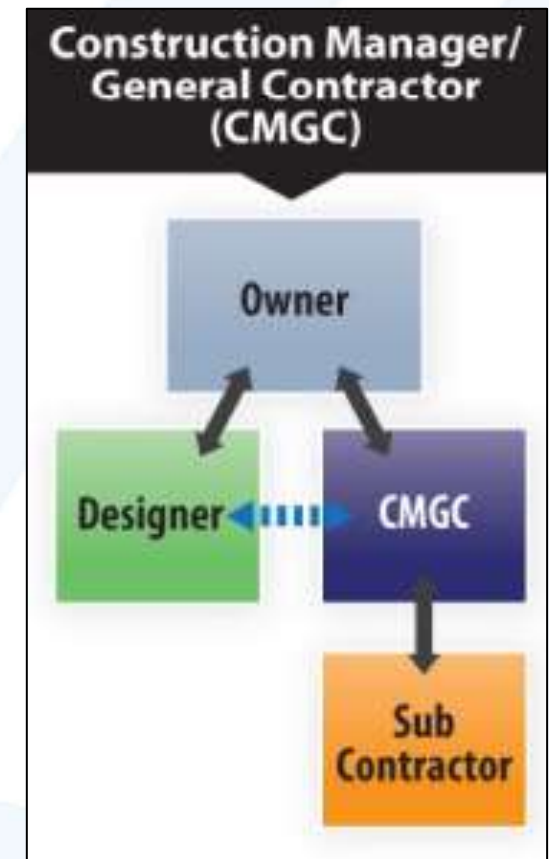
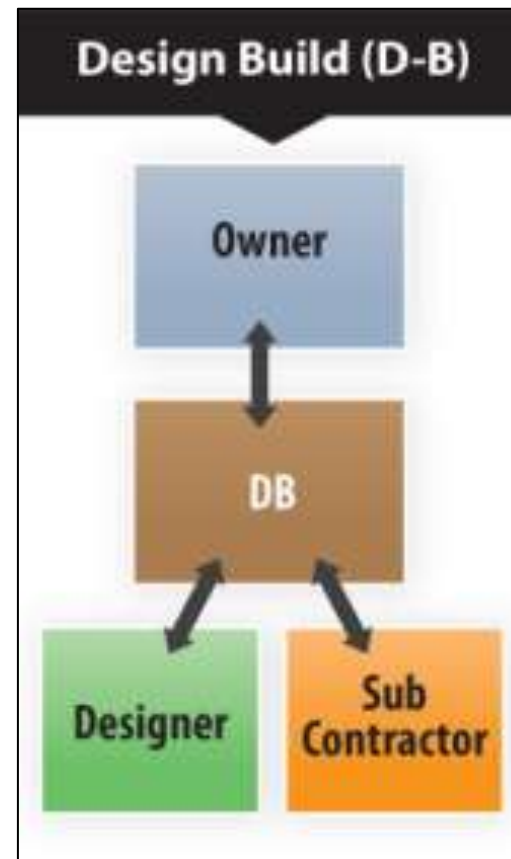


Project Drivers



Navigating Your Options

- Design Bid Build (DBB)
- Construction Manager General Contractor (CMGC)
- Design Build
- Progressive Design Build
- Prescriptive-Based Design Build
- Performance-Based Design Build
- Engineer-Procure-Construction (EPCM)
- Job Order Contracting (JOC)
- Design-Build-Operate (DBO)



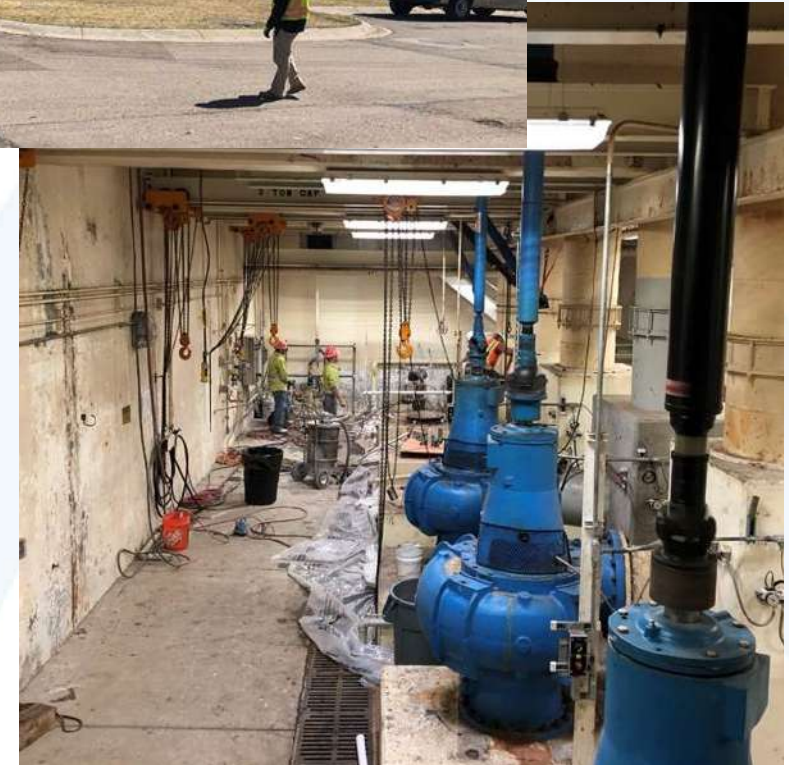
Case Study #1 – Water Resource Centralization Project (WRCP)

- **Project Drivers:** Schedule and Budget
- **Delivery Method:** Progressive Design Build
- **Story:**
 - 30% “Drunk on Scope”
 - 60% Cost Model - \$15M Over budget, excessive scope reduction
 - OFF RAMP
 - Selected new PDB team
 - Able to get more scope with less money
- **Lesson’s Learned:**



Case Study #2 – Civil/Electrical Improvements Project

- **Project Drivers:** Owner Control, Risk Allocation, and Budget
- **Delivery Method:** Construction Manager/General Contractor (CMGC)
- **Story:**
 - Started as a PDB, no agreement on contract
 - 30% Design – RFP for CMGC
 - Tough negotiations on markups
 - Finished under budget
- **Lesson's Learned:**



Resources – Alternative Delivery



University of Colorado
Boulder



WATER DESIGN-BUILD COUNCIL

AN ASSOCIATION OF LEADING DESIGN-BUILDERS



Other Owner's
and Owner's
Advisor



SOUTH PLATTE
RENEW

OWNED BY LITTLETON/ENGLEWOOD

Quality Based Selection (QBS)

Your key to

- Lower cost
- Innovation
- Public satisfaction
- Timely projects



Golden's QBS Story

- Don't miss the “Designable Moment”
- We treat every project as a special opportunity meet all community goals
- The chance to do something special will not come around again for a long time.
- Three examples of QBS raising the bar on a project while achieving all goals.



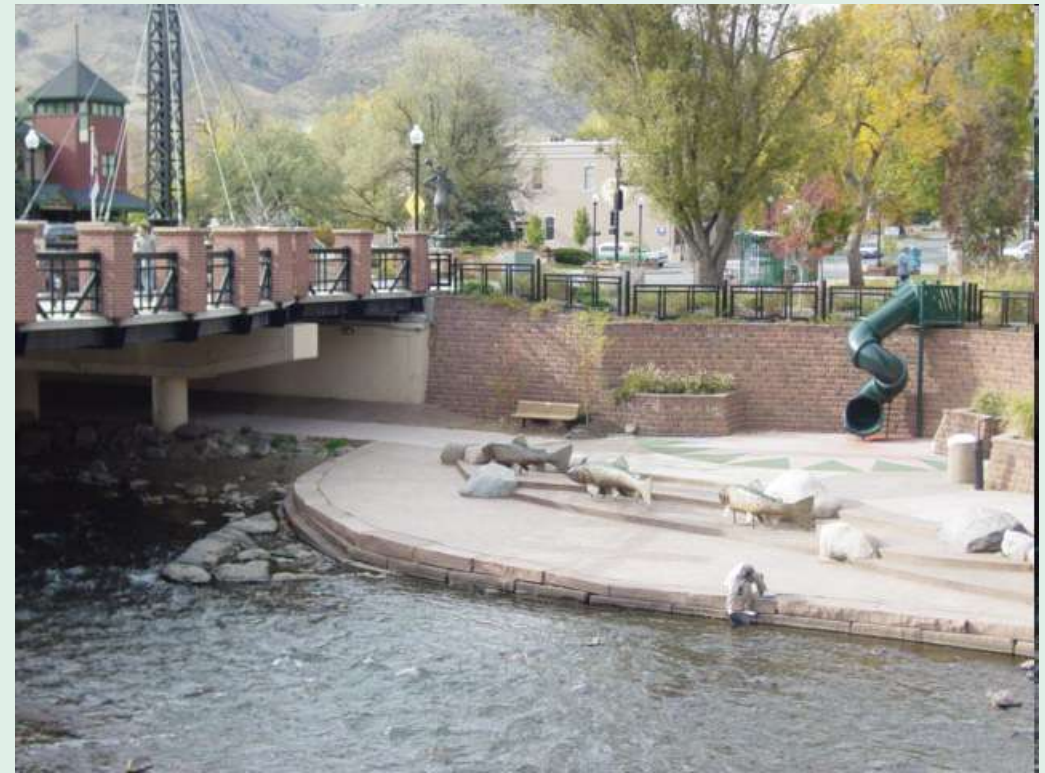
Washington Avenue Clear Creek Bridge

- Old bridge could not pass 100-year flood, and was causing significant additional areas to be included in the floodplain
- There were additional community goals which included trails, river front parks and downtown entry aesthetics.
- Original bridge planning was limited to solving the floodplain issues.
- Consultant selection included looking for qualifications in trails, parks and urban planning.





New Washington Avenue Clear Creek Bridge





Guanelia Reservoir

- This was an active gravel mining operation.
- City had the rights to the site when mining was done and had long planned reservoirs at this site.
- We had allowed mining to continue after the date when we had the right to take possession.
- The drought of 2002 caused city council to advance the reservoir construction schedule.
- We decided to use CM/GC construction and bank storage for additional storage yield.
- Engineer needed to work with contractor under changing conditions.

Guanella Gravel Pit





Subject Site







U.S. 6 & 19 Interchange

- Long been a community goal
- Colorado School of Mines housing on one side and campus on the other so hundreds of pedestrians.
- Lookout Mountain a popular bike ride, over 1,000 bikes in 4 hours on a Saturday.
- Neighborhood cut off from the community.
- Regional desire to improve US 6 and add increasing regional traffic making the road an increasing barrier.















Why was QBS Important?

- In each project the community had specific goals and desired outcomes.
- Each project had specific challenges and complications
- Each project presented a specific opportunity to complete a project with added value for the community for years to come.

Discussion

