WASHOUGAL
WASHINGTON

Project Delivery Methods

32nd Street Underpass Project

THAXTON | PARKINSON PLLC

32nd Street Underpass Project

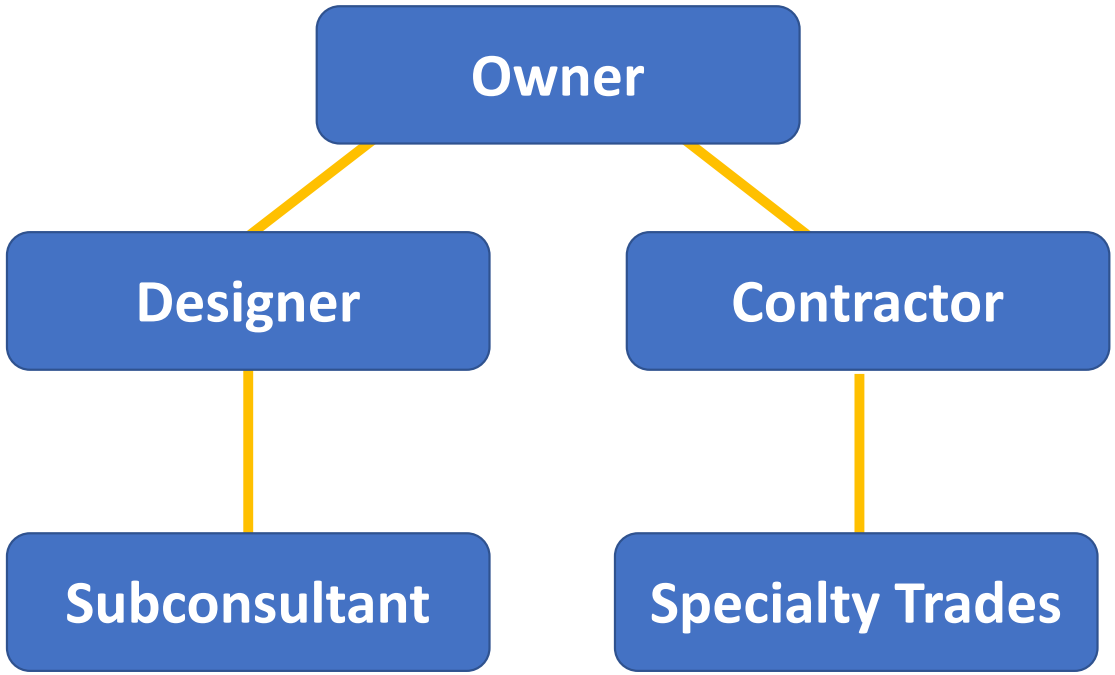
32ND Street Underpass Issues

- Federal Railroad Administration Grant
  - Federal funding requires compliance with specific accounting requirements
  - City must obtain approval before changes to statement of work, budget, or performance measures.
- NEPA/Environmental process has not been started
- BNSF will require approval of design
- Project requires acquisition of right of way

Delivery Methods Available to City

- Design-Bid-Build
- General Contractor/Construction Manager (GC/CM)
- Design-Build
  - Traditional design-build
  - Progressive design-build

Traditional Design-Bid-Build and CMAR




DBB/GCCM Liability Gap
Contractor builds what is in the plans
Designer provides imperfect plans
Owner warrants performance of the plans

Design-Bid-Build

Pros

- Owner has full control over design
- Permitting completed before lump sum price established
- Lump sum price known at the award of construction contract
- Full competition on price
- Easier audit requirements
- BNSF and industry experienced with delivery method

Cons

- Longest procurement schedule
- Must accept low responsive, responsible bid (limited pre-qualification opportunities)
- Full Spearin risk on Owner
- No opportunity to collaborate with constructor
- Lump sum price is not historically reliable
  - substantial risk of re-design
  - Price not known until design complete
  - No transparency on cost

GC/CM

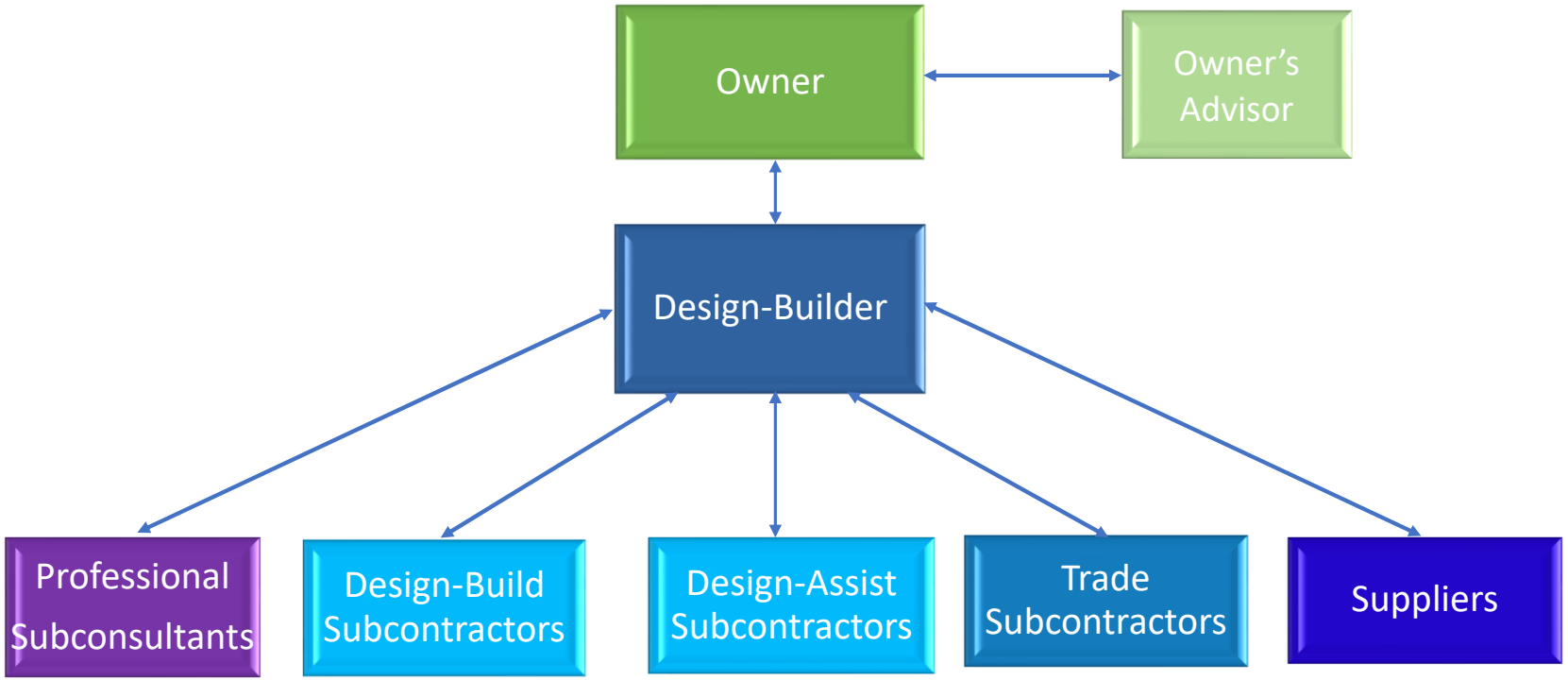
Pros:

- Alternative subcontractor selection process available for early subcontractor input (subcontract must exceed $3 million)
- GC/CM input on constructability during design
- Subcontractor selection is similar to industry standard
- Direct contract with designer
- City can immediately start work on design after selection of designer

Cons:

- Must obtain permission from CPARB PRC
- Must perform significant work prior to procuring GC/CM to provide information for proposal
- Must conduct public bidding on significant portion of subcontracts
- Cannot set Maximum Allowable Construction Cost (MACC) until construction docs are at least 90% complete (RCW 39.10.370(1))
- Self-performed work is limited to 50% of construction cost (not including negotiated support services)
- Spearin risk of performance is managed but primarily with City
- Cost reimbursable contracts must comply with Federal cost and audit requirements and are more difficult to administer

Design-Build Basic Structure



Design-Builder Liability to Owner

- One stop for liability.
- Design-Builder takes on more liability than any other delivery method.
- Contract consists of performance, not prescriptive, requirements.
- Owner no longer in the middle of conflict between designer and contractor.

Types of Design-Build

- Bridging:
  - Owner provides approx. 30% prescriptive design at procurement
  - Proposers complete design/price/schedule during procurement
- Design Competition:
  - Owner provides performance requirements at procurement
  - Proposers provide design/price/schedule during procurement
    Note: given the amount of design required for permitting, it is unlikely that a design competition will be appropriate for this type of contract.
- Progressive Design-Build:
  - Owner provides project requirements (can be before or after procurement)
  - Design-builder selected on qualifications, plan, plus pricing element
  - Design/price/schedule collaboratively developed after award
- **Note: for all Design-Build projects, must obtain permission from CPARB PRC**

Traditional Design-Build

Pros:

- Industry is experienced with traditional design-build
- WSDOT and Federal funding agencies are comfortable with traditional design-build
- Competitive lump sum price, set scope and schedule when the design-build team is selected
- City obtains multiple proposed solutions from shortlisted proposers.
  - Shortlisted finalists can provide alternative technical concepts
  - Collaboration occurs during one on one meetings
- Design-Builder provides significant constructability input during design, resulting in a more reliable price

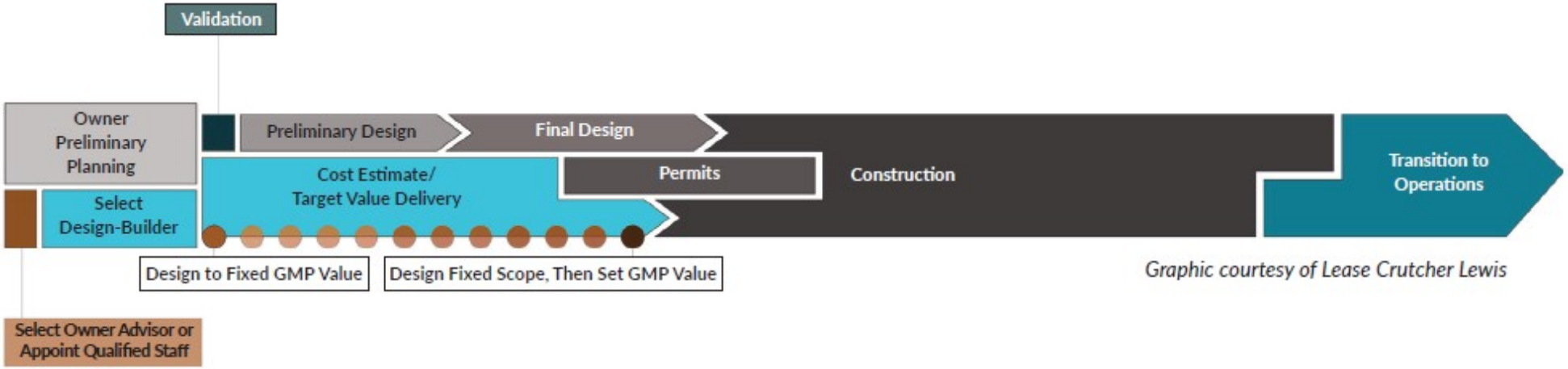
Cons:

- Owner must hire a designer to provide bridging/performance documents for the RFP, resulting in a longer time to market
- Must obtain approval from CPARB PRC
- There is a longer procurement time to allow for completion of design and pricing
- There is significant contingency in lump sum price
- Permitting and ROW would have to be largely completed prior to procurement of the design-build team
- City has limited input in design beyond the bridging documents and project requirements and is responsible for bridging documents
- City has limited decision making in procurement

Progressive Design-Build

- DB retained early in the project, prior to substantial design performed
- DB and Owner collaboratively develop the scope/schedule/price with DB taking the lead and the liability
- Project is performed in multiple phases:
  - Validation
  - Scope/Schedule/Price Development
  - Completion of Design and Construction/Closeout

PROGRESSIVE DESIGN-BUILD



Graphic courtesy of Lease Crutcher Lewis

When total contract value can be set:

- *Fixed Budget/Variable Quantity-Quality: Teams design to budget*
- *Fixed Quantity-Quality/Variable Budget: Teams design to need, then sets final value*

Progressive Design-Build

Pros:

- Highly collaborative
- The design-build team can assist with permitting and negotiations with BNSF
- The City has significant input into individual decisions on design, constructability, schedule, material and equipment, and sub tier selection
- Transparent pricing that provides insight into contingencies
- Spearin risk of performance of project sits with Design-Builder
- No limit on self-perform work
- Flexible procurement of sub tier
- Risk of constructability issues mitigated through early contractor input
- Industry is highly interested in PDB

Cons:

- City must hire an owner's consultant to assist with the project
- City must obtain approval from CPARB PRC
- Industry does not have significant experience in transportation market
- Cost reimbursable contract is not industry norm
- Cost reimbursable contract is more difficult to administer and can be problematic for federal contracts
- Price/Scope/Schedule not determined when contract entered into
- There is a risk of not agreeing to commercial terms and taking the "off ramp"

Cost Reimbursable v. Lump Sum

Cost Reimbursable

- GC/CM
- Progressive Design-Buld

Lump Sum

- Design-Bid-Build
- Traditional Design-Build

Project Risk Mitigation

Early Collaboration Between All Parties	• GC/CM • Progressive Design-Build
Early Collaboration Between Engineer and Constructor	• Traditional Design-Build
Early Collaboration Between Owner and Engineer	• Design-Bid-Build

Compliance with Environmental Requirements (NEPA)

Substantial Design Required Before Selection of Constructor

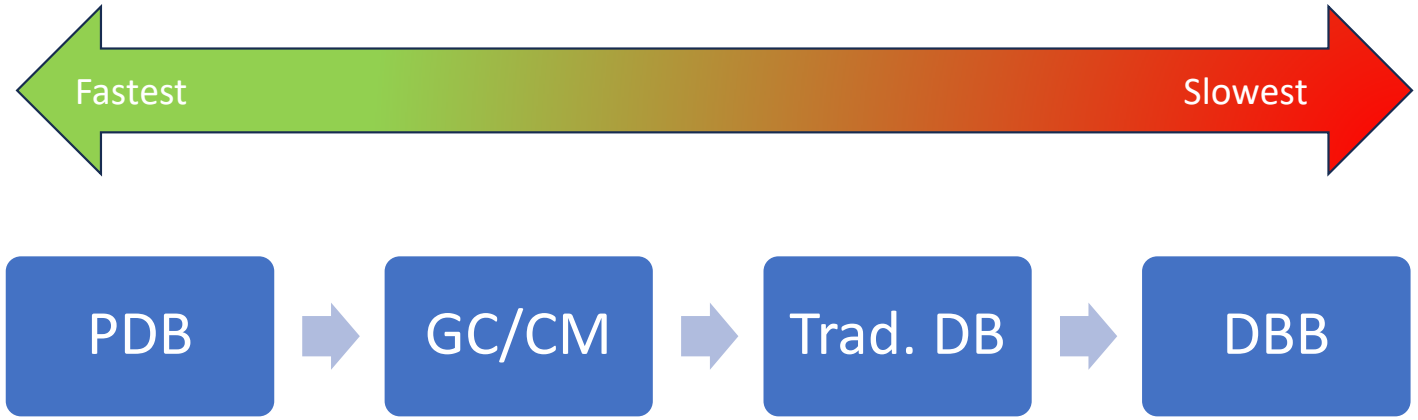
- Design-Bid-Build
- Traditional Design-Build

Select the Constructor Prior to Finalizing Requirements

- GC/CM
- Progressive Design-Build

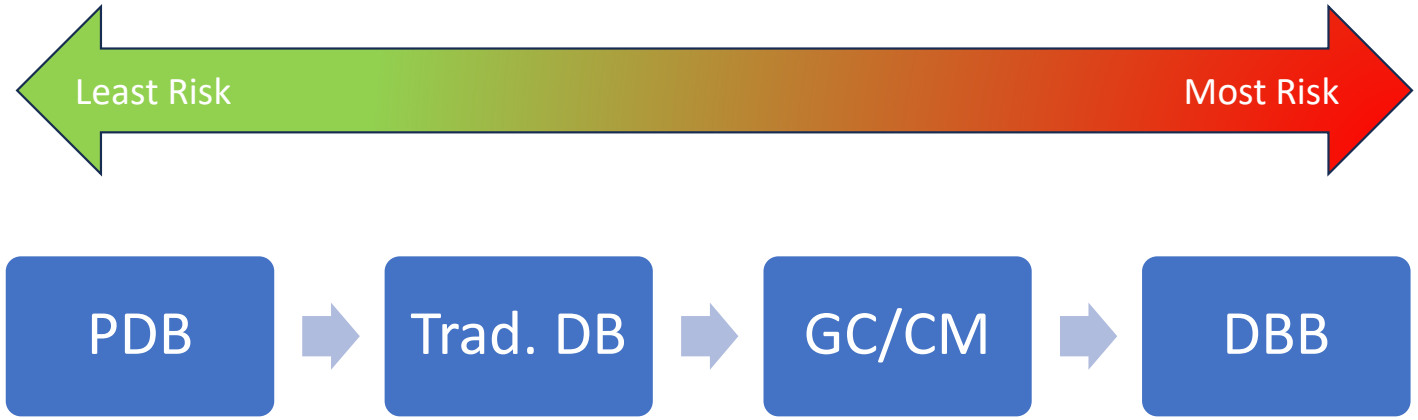
Schedule

The delivery methods below from fastest to slowest:



City Risk for Performance Requirements

The delivery methods below from least risk to most risk:



Recommendation and Next Steps

- Recommendation
  - Reviewed pros and cons with City staff
  - Alternative Procurement with early constructor input is preferred
    - **Progressive Design-Build**
    - **GC/CM**
- Next Steps
  - Procure Owner's Advisor to assist with final determination and procurement
  - Request permission from Project Review Committee
  - Procure either Design-Build Team or GC/CM