

Project Delivery Methods

CEFPI Saskatchewan Chapter - AGM



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SAA, AAA, MRAIC, LEED © AP
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introduction

- *Review methods of project delivery methods*
 - *Characteristics*
 - *Contractual relationships*
 - *Advantages and disadvantages*
 - *Risks*
- *Stipulated Sum Contract also known as Design-Bid-Build*
- *Design Build*
- *Construction Management*
- *Owner - builder*

- *Project Management*

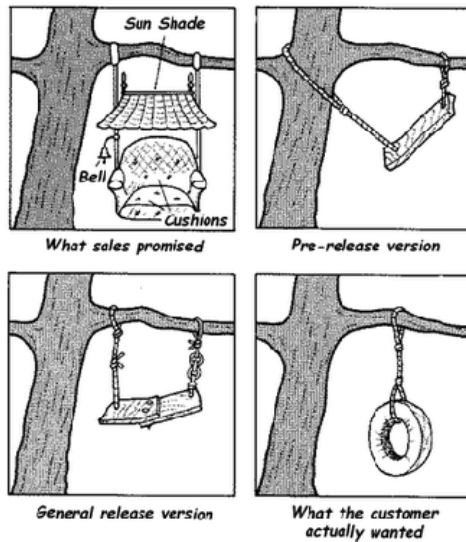


disclaimer

The intent of the presentation is to give you an overview of various construction methods. It is not intended to explore the specifics of construction contracts. These are basic concepts and processes. There are variations out there which reflect specific project needs. This presentation is based on a summary of industry provided information and the presenters' experience. At the start of your project OR in the early stages of the design phase the Owner should explore, with a consultant, the construction method which best suits your needs, quality expectations for the final product, and your level of participation and control of the process

definitions

- Owner
- Consultant
- Sub-Consultant
- Contractor
- Sub-Contractor



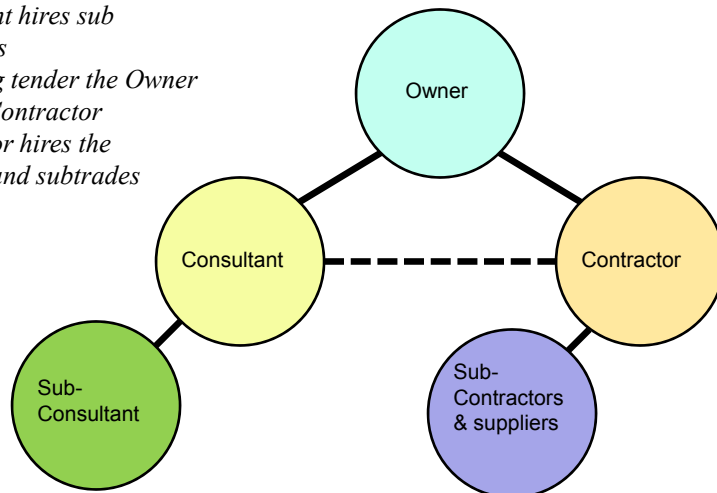
Stipulated sum / Design-Bid-Build
characteristics

- Traditional form of construction contracting
- Most common for publicly funded projects
- Simplified responsibilities and lines of communication
- Involves: Owner, Consultant, Contractor
- Tender is based on full set of contract documents
- Construction awarded based on lowest bid
- Construction Contract is based on CCDC2
- Consultant Contract is based on RAIC Document Six or Seven



Stipulated sum / Design-Bid-Build
relationships

- Owner hires consultant
- Consultant hires sub consultants
- Following tender the Owner hires the Contractor
- Contractor hires the suppliers and subtrades



Stipulated sum / Design-Bid-Build **benefits**

- *Most common form and therefore most familiar to most construction participants*
- *Owner has full control of design, finishes, and process*
- *Competitive tendering*
- *Lowest risk factor*
- *Cost is based on tender and is know at start of construction*
- *Construction safety is Contractors responsibility*



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Stipulated sum / Design-Bid-Build **some disadvantages**

- *Longest process compared to other methods*
- *Usually awarded based on lowest bid which may become adversarial between parties involved*
- *Changes after tender can be high for extras and low for credits*
- *Changes may have adverse affect on schedule*
- *Reduced flexibility to make cost effective changes*
- *Opinion of probable cost during design can be different at time of tender*

MCHUMOR.com by T. McCracken



"I see we went with the lowest bidder for an aerial photo contract."

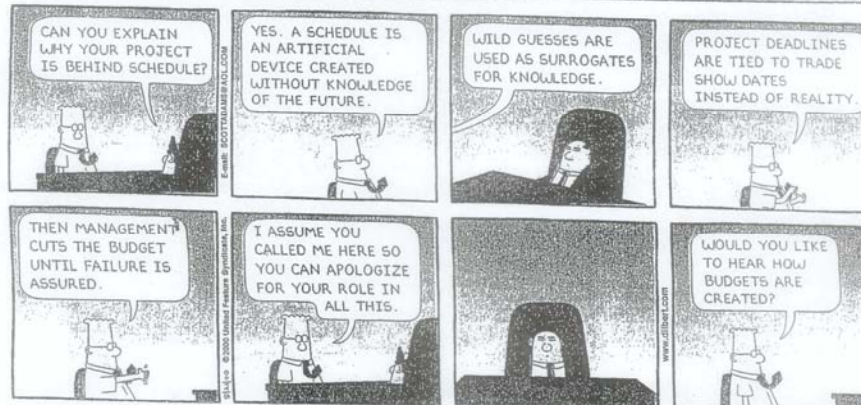
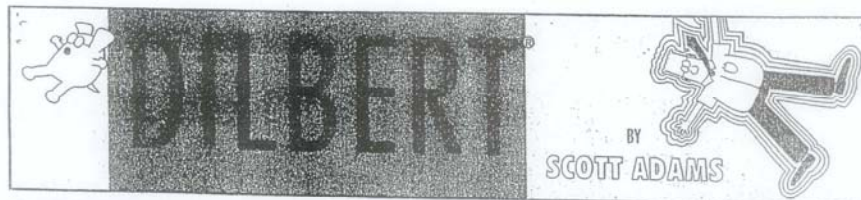
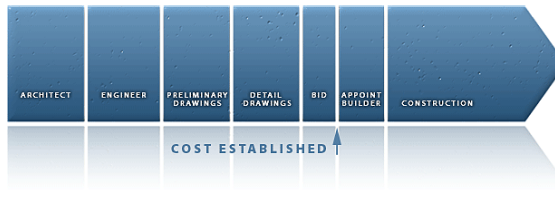
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Stipulated sum / Design-Bid-Build process

- Owner hires consultant to prepare design and contract documents
- Contract documents are bid on by contractors
- Bids are received and reviewed
- Construction contract is awarded – usually lowest bid
- Construction proceeds with consultant administering construction on behalf of Owner

COMPETITIVE BID



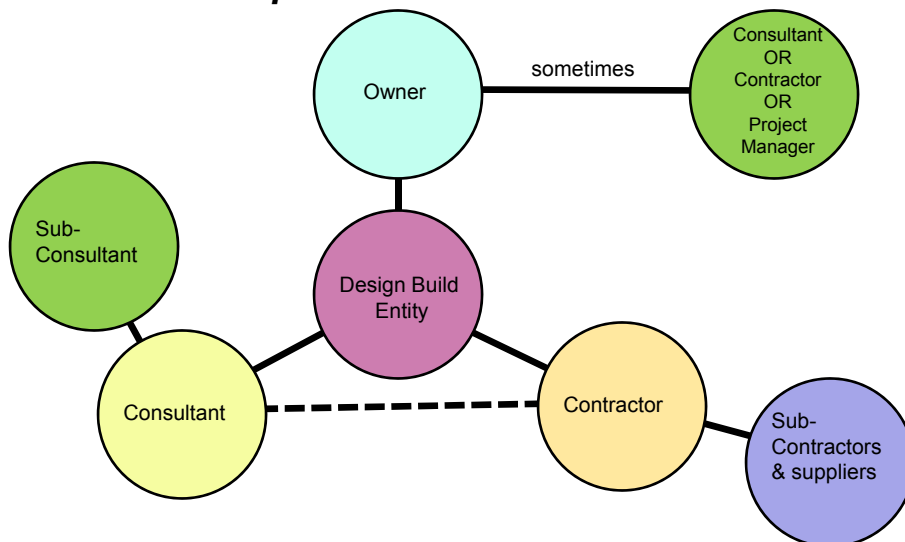
Design Build (DB)

characteristics

- *Owner contracts with single entity for design and construction*
- *Service is provided by a Contractor*
- *In some cases Owner retains Consultant advisor to prepare preliminary plans, or to represent the Owners interest during final design and construction*
- *Tender is based on Owners requirements OR preliminary plans*
- *Design Consultant's obligation is to the Design Build (DB) Contractor*
- *Communications between Owner and Design Consultant are through the designer builder.*

Design Build

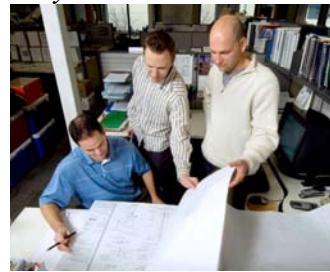
relationships



Design Build

benefits

- *Minimal contractual relationships*
- *Project cost and schedule known at onset of project*
- *DB team carries the risk*
- *Co-ordination change orders are not passed on to Owner*
- *“fast-track” method can be applied with the responsibility on Contractor*
- *Construction safety is Contractors responsibility*



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Design Build

some disadvantages

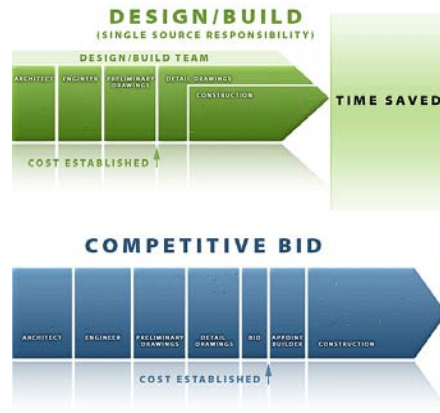
- *Owner is disconnected from design-build consultants*
- *Owner may require to hire their own consultant to oversee if owner is not experienced in construction*
- *Cost savings could be in conflict with building quality and maintenance costs*
- *Substandard quality of finishes and products may result due to wider range of interpretation of performance specifications*

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Design Build

process

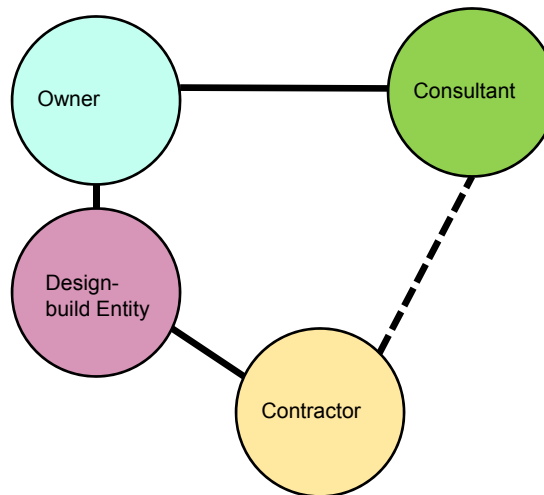
- Owner specifies detailed program for the building, describing needs and expectations
- Owner solicits expression of interest from DB teams
- DB teams develop design scheme along with cost and schedule
- Owner selects DB team based on best scheme for the best price and schedule.
- DB team executes the final design and construction
- Final inspections are completed by Owner



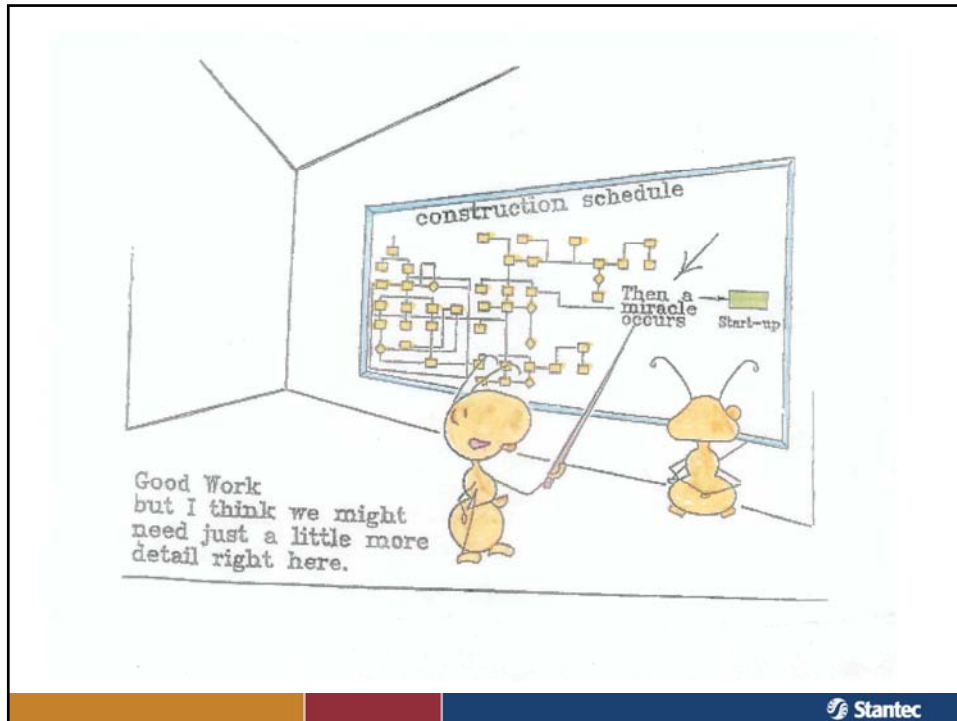
Design Build – modification 1

relationships

- Owner has consultant complete detailed program for the building, describing needs and expectations
- Owner has consultant complete design and working drawings for DB contractor
- Consultant continues to assist the Owner while working with Contractor



- Conflict of interest may occur between consultant and contractor



Construction Management (CM)

roles

- Pure form
 - *Construction Manager acts as advisor to Owner during design and construction and does not perform the actual construction.*
 - *The CM should not be an advisor and constructor; HOWEVER due to scope definitions and requirements associated with General Conditions some modifications may be required*

Construction Management (CM)

roles

- Modification 1
 - Construction Manager provides a superintendent, labour for miscellaneous carpentry, and provides general conditions services.*

- Modification 2
 - Construction Manager acts as advisor to Owner during design and then acts as constructor by guaranteeing the costs and taking the subcontractors under his contract thus becoming a General Contractor*

Construction Management (CM)

characteristics

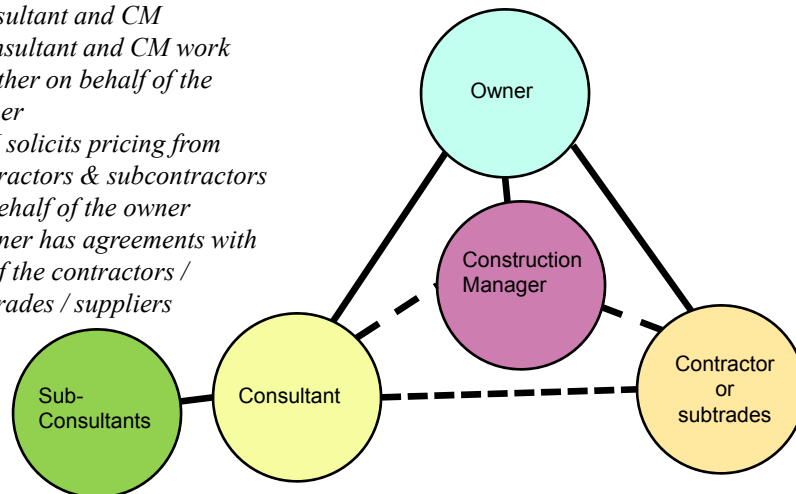
- Construction Manager acts as advisor to Owner by providing budgets during the design, insight into current and future market conditions, issuing and evaluating bids, preparing sub-contracts for clients signature, monitoring construction process.*
- Construction Manager works with consultants to oversee and administer project.*
- Owner has an agreement with a CM and consultants*
- Usually used for larger or complex projects*



Construction Management – as advisor

Relationships

- Owner has contract with Consultant and CM
- Consultant and CM work together on behalf of the Owner
- CM solicits pricing from contractors & subcontractors on behalf of the owner
- Owner has agreements with all of the contractors / subtrades / suppliers



Construction Management – as advisor

benefits

- Better value for money than other methods
- Used to construct project in multiple phases “fast-track” which may equate to project cost savings
- Having the contractor early on allows value engineering and constructability reviews to reflect current market conditions
- Materials can be pre-ordered and construction began earlier
- Team approach to meeting the budget and schedule
- If trade prices are not within budget, modifications can be made and prices re-tendered or negotiated.
- Construction budget is continually monitored, allowing the Owner to make decisions

Construction Management – as advisor **some disadvantages**

- *CM and consultant duties during the Construction period may be confusing, especially if CM becomes a constructor.*
- *CM and contractor / subcontractor roles and scope of work can be confusing.*
- *The Owner does not have a fixed or guaranteed cost commitment at beginning of construction*
- *Increased risk of unresolved design issues after construction has started, which may impact cost and schedule*
- *Administrative and project costs can be higher for the Owner*



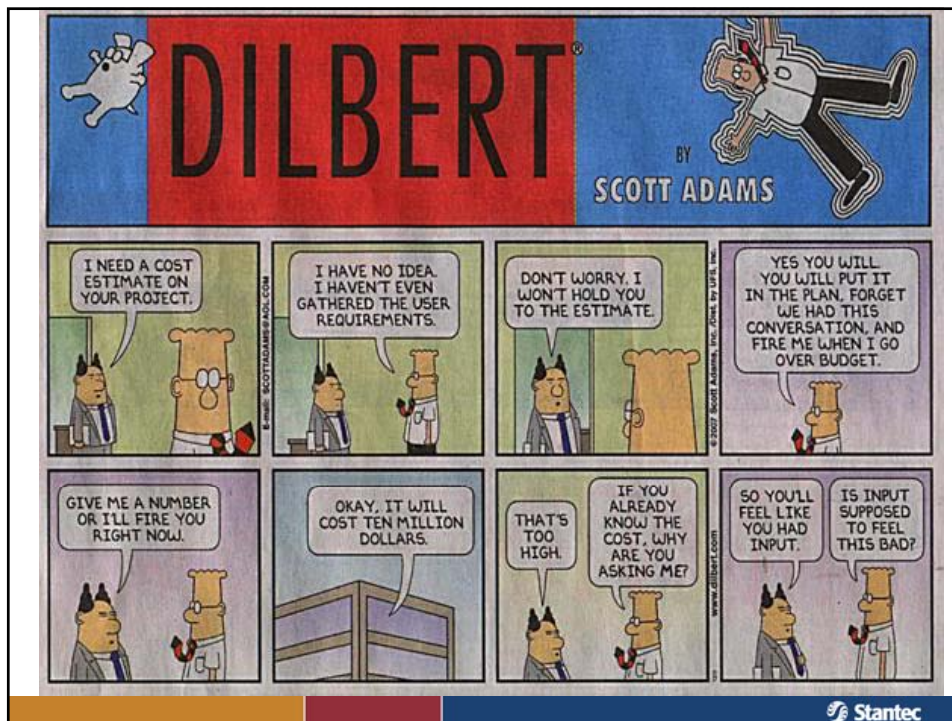
Construction Management – as advisor **process**

- *Owner chooses CM either by them selves or with the assistance of a consultant / Project Manager*
- *Selection is based on proposal, qualifications, experience, fees, expenses, project understanding, and interviews*
- *CM works with consultants providing budgets based on preliminary design through to working drawings*
- *Costs and scope of work are evaluated at the end of major phases in the design*



Construction Management – as constructor characteristics

- *Construction Manager acts as advisor to Owner until such point that a construction cost is guaranteed and the CM can become a constructor*
- *When the CM acts as constructor they:*
 - a) *Assign contracts, but may not perform actual construction work*
 - b) *providing only superintendent, miscellaneous carpentry and miscellaneous labour*
- *Role as constructor is sometimes expanded*



Owner - builder characteristics

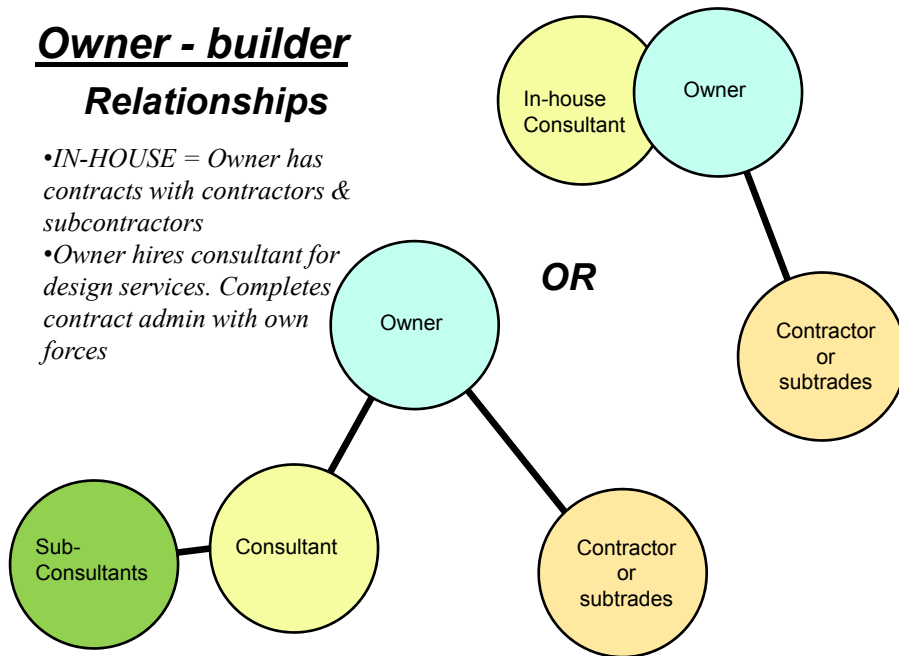
- *These are Owners who are their own Contractors*
- *Contract consultants design services OR have in-house staff*
- *If Owner has in-house staff, only contracts are with contractors and suppliers*



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Owner - builder Relationships

- *IN-HOUSE = Owner has contracts with contractors & subcontractors*
- *Owner hires consultant for design services. Completes contract admin with own forces*



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Owner - builder

benefits

- *Hands on approach to managing construction projects*
- *Owner can complete some if not all of the work with own forces OR hire local subtrades to complete work*
- *Less costly method of addressing changes which may arise during construction*
- *Consultants involvement during the construction is up to the Owner*
- *Owner manages number of contracts, and can negotiate costs*
- *Owner may have standing offer with sub-trades and suppliers*

Owner - builder

some disadvantages

- *Owner's representative may complete the work in contradiction to Building Codes*
- *May not require consultants input, however the "Local Authority having Jurisdiction" may request that a professional provide a letter confirming conformance to design and building codes*
- *May request consultants input for certain aspects of the project, not knowing that proposed construction may actually affect other aspects of the building*

Owner - builder

process

- *Owner develops program or listing of needs with internal or external consultants*
- *Owner completes construction drawings with either internal or external consultants*
- *Owner solicits bids, reviews, awards tender, completes some of the construction, coordinates subtrades as required*



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Project Manager

characteristics

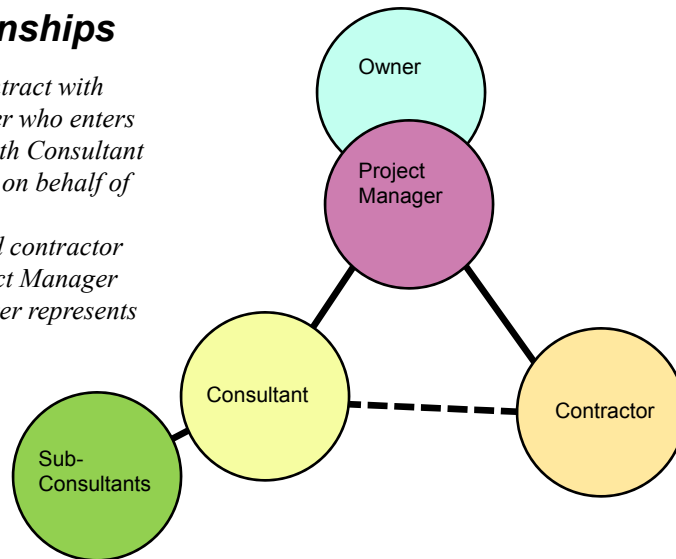
- *Key responsibilities include creating clear and attainable project objectives, building the project requirements, and managing the triple constraint for projects, which are cost, time, and quality (also known as scope).*
- *A project manager is often a client representative and has to determine and implement the exact needs of the client, based on knowledge of the firm they are representing.*
- *The term and title 'project manager' has come to be used generically to describe anyone given responsibility to complete a project. However, it is more properly used to describe a person with full responsibility and the same level of authority required to complete a project.*

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Project Manager

Relationships

- *Owner has contract with Project Manager who enters into contract with Consultant and Contractor on behalf of the client*
- *Consultant and contractor deal with Project Manager*
- *Project Manager represents the client*



Project Manager

benefits

- *Provides expertise which a client group may not have*
- *A well-informed owner / owner's representative is better able to make decisions on cost-versus-quality issues;*
- *the quality of the design may improve when the consultant can draw on the PM's experience.*



Project Manager
disadvantage

- *unless the consultant can maintain a direct link with the owner, the owner's ability to control construction quality is reduced because efficiencies or cost reductions implemented by the PM that affect quality may not be discussed directly with the owner.*



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Questions



Thank you



Project Delivery Methods

1.0 Introduction

1.1 There are several different types of project delivery systems:

- .1 Stipulated Sum Contract
- .2 Multiple Prime Contract
- .3 Construction Management
- .4 Design-Build
- .5 Owner-Builder

1.2 Definition of a Project Delivery System

The process a construction project follows from design through construction to occupancy.

1.3 Our presentation today will attempt to provide the following relative to each of the different delivery options.

- Who are the participants and what are their roles, responsibility, & relationships?
- What are the procedures followed by the participants especially during the bidding and construction phases of the project? How do these change depending on the project delivery system that is used?
- How the construction project will be performed and how the participants interrelate to each other during the construction phase depends upon the type of project delivery system used.

2.0 Stipulated Sum Contract

2.1 Characteristics.

- .1 The traditional form of construction contracting involves competitive Bidding or direct negotiation with a Contractor for a single construction Contract.
- .2 This is usually based on a full set of contract documents.
- .3 With the centralization of responsibility, one Owner, one Contractor, and one construction Contract, the roles and responsibilities of the participants are simplified.
- .4 Even though the Contractor may sub-divide the Work into sub-contracts, the Contractor remains responsible for all of the Work required to fulfill the Contract.
- .5 Lines of responsibility as well as lines of communication are all clearly defined and simplified.

2.2 Uses and Benefits.

- .1 This is the most common form of delivery system used in North America and is therefore the most familiar to most construction industry participants.
- .2 It is used on projects where the Owner does not want to assume the responsibility for the co-ordination of the Work between multiple Contractors or be burdened with the potential problems of handling multiple Contractors.
- .3 Some of the advantages are:
 - .1 Cost is known.

Project Delivery Methods

- .2 Responsibility is complete/total.
- .3 Contractor has responsibility for safety.
- .4 Can be the lowest cost.
- .4 It is used on projects where the contractor is Bidding or negotiating directly with the Owner or where the Contractor is selected without competition.
- .5 Some of the disadvantages are:
 - .1 Takes time to prepare and complete the Contract Documents.

2.3 The Process

- .1 Preparing documents: Bidding documents are prepared by the Consultant for the Owner and are made available to the Bidders.
- .2 Preparing Bids: Bidders must determine a price for which the project can be built.
- .3 Receiving Bids: Bids are submitted to the Owner. The Owner will receive multiple Bids if the project is not negotiated with one Contractor or awarded to one Contractor without competition.
- .4 Analyzing Bids: The Owner analyzes the Bids and selects a Contractor. Usually the lowest responsible Bid is selected to construct the project.
- .5 Awarding Contracts: The selected Bidder and the Owner enter into an Agreement formalizing their relationship. The Bidder then becomes the Contractor. The Contractor constructs the project in accordance with the Contract Documents.
- .6 Construction Contract Administration: The Consultant administers the construction Contract on behalf of the Owner.

2.4 Relationships

- .1 The Owner has separate Agreements with both the Consultant and the Contractor.
- .2 The Consultant has contractual Agreements with sub-consultants.
- .3 The Contractor has contractual Agreements with sub-contractors.
- .4 The Consultant and the Contractor have no Agreement.
- .5 The Consultant serves as the Owner's representative in the administration of the construction Contract.
- .6 Sub-consultants communicate with the Owner and the Contractor through the Consultant.
- .7 Neither the Owner nor the Consultant have contractual relationships with the suppliers, manufacturers or sub-contractors, and all communication with these entities is done through the Contractor.

2.5 Affect on Construction Contract Administration:

Since this is the traditional, simplest and most common method of project delivery, the commonly recognized roles and responsibilities of the construction participants are covered in the following documents:

- .1 CCDC2 – Stipulated Price Contract.
- .2 RAIC Document Six and Seven – Canadian Standard Form of Agreement Between Client and Architect.
- .3 ACEC Document 31 – Prime Agreement Between Engineer and Client.

Project Delivery Methods

3.0 Multiple Prime Contracts

3.1 Characteristics.

- .1 The Owner divides the Work among several Contractors and enters into a separate contractual Agreement with each.
- .2 No single Contractor is responsible for the entire project.
- .3 Communication and co-ordination among the Contractors is critical and is the Owner's responsibility, unless the task is delegated to one of the Contractors.
- .4 The Consultant may prepare separate sets of documents for each Contract.
- .5 The Contract Documents must clearly show the division of work.

3.2 Uses and Benefits.

- .1 This system of delivery system used in North America on larger projects to potentially reduce the cost.
- .2 It is used for phased or "fast-track" construction to expedite a project, which often cost more.
- .3 It is used on projects where the Owner has co-ordination expertise or has contracted with a construction manager.
- .4 This system can be used to reduce the amount of the Contractor's capacity to provide a Performance Bonds and a Labour and Materials Bond. This increases the number of qualified Bidders.
- .5 It can also be used to help curtail bid shopping and allow for better selection on sub-contractors.
- .6 Some disadvantages are:
 - .1 Requires more coordination.
 - .2 Responsibility is split.
 - .3 The Owner assumes responsibility for safety.
 - .4 Owner requires a dedicated full time Project Manager.

3.3 The Process.

- .1 Preparing documents: Bidding documents are prepared by the Consultant for the Owner and are made available to multiple categories of Bidders who are preparing Bids for an individual Contract. Documents can be formed into specially prepared sets designed for individual groups of Bidders, or they can be common set of documents, which clearly delineate where one Contract ends and the other begins.
- .2 Preparing Bids: Bidders must determine a price only for the portion of the project on which they are Bidding.
- .3 Receiving Bids: Bids are submitted to the Owner. Bids for various portions of the Work can be submitted at the same time or at different times.
- .4 Analyzing Bids: The Owner analyzes the Bids and selects a Contractor for each portion of the Work as defined by the Contract Documents. Usually the lowest responsible Bid for each portion is selected to construct the project.

Project Delivery Methods

- .5 Awarding Contracts: The Owner enters into a separate Agreement with each of the selected Bidders formalizing their relationship. Each Bidder then becomes a Contractor. The Owner may award some Contracts before all of the Contracts have been issued for Bidding purposes, or the Owner may decide to receive Bids for all of the Contracts before awarding any. Various Contractors construct their portion of the project in accordance with the Contract Documents and an established construction schedule.
- .6 Construction Contract Administration: The Consultant administers the construction Contract on behalf of the Owner.

3.4 Relationships.

- .1 The Owner has contractual relationship with the Consultant.
- .2 The Consultant has contractual Agreements with sub-consultants.
- .3 The Owner has separate contractual Agreements with multiple Contractors.
- .4 The Owner assumes responsibility for the co-ordination between the Contractors. Responsibility for scheduling and co-ordination is often delegated contractually to one of the Contractors.
- .5 Each Contractor has contractual Agreements with sub-contractors.
- .6 The Consultant and the Contractors have no Agreements.
- .7 The Consultant serves as the Owner's representative in the administration of the construction Contract.
- .8 Sub-consultants communicate with the Owner and the Contractor through the Consultant.
- .9 Neither the Owner nor the Consultant have contractual relationships with the suppliers, manufacturers or sub-contractors, and all communication with these entities is done through the Contractor.

3.5 Affect on Construction Contract Administration:

The roles and responsibilities of the parties during the construction phase of a project with a Multi-Prime Contract is not very different than under a single Prime Contract, except for the following:

- .1 Fast-Track construction:
Under fast-track construction, the project is typically broken into multiple bidding packages and construction commences before all the Work is Bid, before the design phase is completed or before the Construction Documents are finalized. The Consultant may find that the design and construction overlap and there may be a need to co-ordinate design work with the construction that is taking place at a specific point in time. Not all projects that are Bid with multi-prime Contracts are Bid as fast-track construction projects.
- .2 Construction progress schedule:
Since the Owner has entered into Contracts with a number of different Contractors, there is no single Contractor that has a complete responsibility or control over the project. Under a single prime Contract, the Contractor is responsible for establishing a construction progress schedule. With multiple Contracts, the Owner becomes responsible for providing the co-ordination of the activities of each separate

Project Delivery Methods

contractor, or makes arrangements for such co-ordination to be provided by others on the Owner's behalf. It is not unusual to find that one of the Contractors has been assigned the responsibility for the construction progress schedule.

.3 Communications construction co-ordination and co-operation among Contractors:

The Conditions of the Contract stipulate that the Owner is responsible for the co-ordination of the activities among the separate Contracts. The Owner may contract with a construction manager or delegate the responsibility to one of the Contractors to provide co-ordination services.

.4 Communications and documentation:

Typically the amount of paperwork will be greatly increased on this type of project delivery system. The need for quality documentation becomes more necessary due to the increase in opportunities for problems to occur among the parties. It is essential that the Consultant or the Contract Administrator maintains a high level of communication with all of the parties. Small separate contracts require companies who are normally Sub-contractors to act as Prime Contractors. In this capacity they are not often knowledgeable in this role. This requires more education and coordination by the Construction Contract Administrator.

.5 Pricing contract modifications:

Pricing modifications to the Contract Documents when a modification affects more than one Contract can be a complicated task and requires a great deal of care and thought.

4.0 Construction Management

4.1 The Role of the Construction Manager.

- .1 The Construction Manager may act as an advisor to the Owner during the construction, in which case the Construction Manager does not perform the construction.
- .2 The Construction Manager may act as an advisor to the Owner during the design, and then act as the constructor during construction by guaranteeing the cost of the construction and signing Contracts with those who supply the labour and materials.
- .3 The Construction Manager cannot be both an advisor and a constructor during the construction of a project.

4.2 Characteristics.

- .1 A Construction Management project may have either single or multiple Contracts and the Construction Manager who is either an advisor or a constructor.
- .2 The Construction Manager as an advisor becomes an extra participant in the construction process who is retained by the Owner to oversee the project and shares the responsibility with the Consultant to administer the project. The Owner either signs the construction Contract with a single Contractor or signs multiple Contracts with separate Contractors.
- .3 The Construction Manager advisor acts as the Owner's representative in receiving Bids, evaluating Bids and suggesting the award of Contracts for the various parts of the project.

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- .4 When the Construction Manager is acting as the constructor, the Construction Manager will have the responsibility of assigning and awarding Contracts. In effect the Construction Manager as the constructor plays the role of the Contractor but may not perform any of the actual construction Work.

4.3 Uses and Benefits

- .1 This system is used when it is desired to construct a project in multiple phases or to “fast-track” construction to meet a demanding construction schedule.
- .2 Faster delivery of the completed project may reduce ultimate project cost due to savings in interim financing charges and increased income resulting from early use and occupancy.
- .3 This system can be used when the Owner wishes to obtain value engineering and constructability reviews early in the design stage. This helps to:
 - .1 Determine the best methods of construction.
 - .2 Optimize budget decisions to get the most value for dollars spent.
- .4 Allow materials to be ordered and construction begun earlier than in the conventional design-bid method.

4.4 The Process.

- .1 The Consultant may recommend, the Owner decides if there is a need to use a Construction Manager and whether that Construction Manager should be as an advisor or a constructor.
- .2 The Owner selects both a Consultant and a Construction Manager by reviewing submitted qualifications, proposals and by interviews.
- .3 The Owner develops a project program description with the assistance of the Consultant and on occasion the Construction Manager.
- .4 As the Consultant develops the design, the Construction manager has input on budget, materials and systems selection, value engineering, constructability, market analysis and project scheduling.
- .5 At the completion of the design development stage of the project, the Construction Manager prepares a detailed cost estimate and schedule for the project. It may be necessary at this time for the design and scope of the project to be altered to meet budget and time constraints.
- .6 While the Consultant prepares the Construction Documents, the Consultant and the Construction Manager develop Bid packages and issue them on a scheduled basis. Each Bid package includes bidding categories as necessary, “Fast-track” construction allows construction to begin on some portions of the project before the final design and Construction Documents are completed for other portions of the project.
- .7 Construction Manager advisor.
 - .1 The Construction Manager constructor issues the Construction Documents for Bidding, receives and analyzes Bids and awards the Contracts for each Bid package.
- .8 Construction Manager constructor.
 - .1 The Construction Manager constructor issues the Construction Documents for Bidding, receives and analyzes Bids and awards the Contracts for each Bid package.

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- .2 The Construction Manager constructor operates in a similar manner as a Contractor during construction but is not allowed to perform any of the actual work. Generally, provide a superintendent and miscellaneous carpentry and labour.

4.5 Relationships.

- .1 It is essential to know if the Construction Management Agreement is to advise or construct since the role of the Contract Administrator in a construction management project depends on the form of the Construction Management Contract.
- .2 The Owner has contractual relationship with the Consultant.
- .3 The Consultant had contractual Agreements with sub-consultants.
- .4 The Owner has a contractual Agreement with the Construction Manager.
- .5 Construction Manager advisor.
 - .1 The Owner enters into Agreement with the General Contractor or several specialty Contractors.
 - .2 The Construction Manager advisor represents the Owner, along with the Consultant and co-ordinates activities with the Consultant.
- .6 Construction Manager constructor.
 - .1 The Construction Manager constructor enters into Agreements with separate Contractors.
 - .2 The Contractors have Agreements with sub-contractors.
- .7 The Consultant represents the Owner and determines the Contractor's compliance with the Contract Documents.

4.6 Affect on Construction Contract Administration.

- 4.7 Unless clearly defined in the Construction Management an agreement and the Contract Documents, construction contract administration can be confusing. The duties of both the Construction Manager and the Consultant will vary during the construction phase of the project depending on whether the Construction Manager is an advisor or a constructor.

4.8 Responsibilities assumed by the Construction Manager advisor during construction:

- .1 Shares the administration of the Contract and acts as the Owner's representative along with the Consultant.
- .2 Advises and consults with the Owner.
- .3 Determines in general terms if the Work conforms with the Contracts Documents.
- .4 Endeavors to guard the Owner against defects and deficiencies.
- .5 Schedules and co-ordinates activities of the Owner's work forces and separate Contractors.
- .6 Directs communications between the Owner and the Contractor and provides communication of the same information with the Consultant.
- .7 Reviews and recommends payment applications and assembles separate payment applications into a single application and transmits it to the Consultant.
- .8 Rejects non-conforming Work after it has been reviewed by the Consultant.
- .9 Recommends Change Orders and Change Directives.

Project Delivery Methods

- .10 Maintains documents at the site.
- .11 Assists the Consultant in conducting inspections for substantial and final completion.
- .12 Receives and forwards warranties and close-out documents to the Consultant.
- 4.9 The roles and responsibilities for Construction Management are outlined in:
 - .1 CCA5 – Canadian Standard Construction Management Contract Form.
- 4.10 The Construction Manager advisor and the Consultant have shared responsibilities for:
 - .1 On-site observation.
 - .2 Submittal review and approval.
 - .3 Determining if the Work meets the requirements of the Contract Documents.
 - .4 Reviewing and approving applications for payment.
 - .5 Acting as the Owner's representative.
 - .6 Advising and consulting with the Owner.
 - .7 Conducting inspections for substantial and final payment.

5.0 Design – Build

- 5.1 Characteristics.
 - .1 The Owner contracts with a single entity not only for the design of the project but for the construction as well.
 - .2 This type of service is typically provided by a Contractor who is associated with a Consultant.
 - .1 The most common form of Design-Build is when a Contractor has a contractual Agreement with the Consultant for design services.
 - .2 The Design-Builder may be a full service group where the consulting and contracting entities are part of the same organization.
 - .3 In some cases the Owner will retain the services of a Consultant advisor to prepare a preliminary design package for the Design-Build team to Bid, and the Consultant represents the Owner during the bidding and construction services. It should be noted that this is not the same Consultant that is part of the Design-Build team. In this situation it is possible that traditional Contract Administration services could be provided by the Owner's Consultant.
 - .4 Other variations can occur including the separation of architectural and engineering services, where the Contractor could enter into separate Agreements with separate architectural and engineering organizations for consultant design and administration services.
 - .3 If the Design-Build concept is extended to include the selection, procurement and installation of furnishings, furniture and equipment, is referred to as a "turnkey" project.
 - .4 Professional obligations of the Design Consultant are performed in the interest of the Design-Builder and do not represent the Owner when the Design Consultant is directly associated with the Design-Builder.
 - .5 Communications between the Owner and the Design Consultant are through the design-builder.

Project Delivery Methods

5.2 Uses and Benefits.

- .1 This project delivery system is used by Owner who seek minimal contractual relationships and who identify with the benefits of a close working relationship between the designer and the builder.
- .2 The Owner also has the advantage of knowing project cost and completion date at the onset of a proposed project.
- .3 Advantages are: This is a “fast-track” method of construction and has a single responsibility.

5.3 The Process.

- .1 The Owner prepares a detailed program for a proposed project describing the Owner’s needs and expectations. The completeness of this description is critical. Owners often seek professional assistance in developing the description or statement of requirements.
- .2 The Owner Solicits expressions of interest from Design-Build entities, and after evaluating qualifications of the respondents, invites proposals from the selected Design-Builders based on the Owner’s requirements.
- .3 The Owner will award a Contract to the Design-Builder that best serves the Owner’s needs based on submitted designs, proposed materials and systems, time schedules and lump sum cost. The Owner will also vase the decision on the capabilities, experience and past history of the Design-Build proponents.
- .4 After the Contract has been awarded, the Design-Builder will develop and finalize the design and prepare the Construction Documents. During this project the project is continually being estimated and evaluated to ensure that it is on budget. The Owner already has a fixed cost and those budgets are evaluated to ensure that they are within that fixed cost.
- .5 At the completion of the Construction Documents the project is Bid to Design-Build. The Design-Builder enters into Contracts with multiple sub-contractors and suppliers to construct the facility.
- .6 The Design Consultant does not serve as the Owner’s representative and therefore the Owner may Contract with another Consultant to oversee the Owner’s interests.
- .7 Upon completion of the project, the final inspections are carried out by the Owner and upon acceptance by the Owner, the Owner takes over the facility.

5.4 Relationships.

- .1 The Owner contracts with a single Design-Build entity which may consist of a Contractor who retains a Design Consultant, a Contractor and a Design Consultant who have come together in a joint venture or where the Consultant and the Contractor are part of the same organization.
- .2 The Design Consultant has a contractual relationship with the builder.
- .3 The Contractor has contractual Agreements with sub-contractors.
- .4 The Owner may contract with a Consultant advisor who is independent from the Design-Builder to represent the Owner during the construction phase. This Consultant could be an architectural or engineering firm, a Contractor, a Construction Manager or other entity possessing the necessary qualifications to look after the Owner’s interests.

5.5 Affect on Construction Contract Administration.

- .1 Construction Contract Administration is typically handled in the following ways:

Project Delivery Methods

- .1 The Design Consultant is assigned by the Design-Builder to assist in certain responsibilities under construction contract administration and is responsible to the Design-Builder. The Design Consultant's responsibilities may be modified significantly and limited in scope compared to the Consultant's traditional role in construction contract administration. The responsibilities of the Design Consultant may be limited to include:
 - .1 Interpretation of the Contract Documents.
 - .2 Preparing supplemental and revision documents.
 - .3 Observing the Work for compliance with the Contract Documents.
 - .4 Reviewing submittals.
 - .5 Attending meetings when requested.
 - .6 Legal responsibilities as required by the building code and by municipal authorities for "site review during construction" and letter of compliance during construction. This must be done by the Consultant who has "stamped", or designed that portion of the facility (i.e. structural engineer, architect, mechanical and electrical engineer).
- .2 The Owner may retain an independent Consultant advisor to represent the Owner and perform construction contract administration services on behalf of the Owner. The role and responsibilities of the Owner's Consultant may include:
 - .1 Reviewing submittals.
 - .2 Observing the Work.
 - .3 Reviewing applications for payment.
 - .4 Ensuring compliance with the Construction Documents.
- .3 The role of the Design Consultant as a member of the Design-Builder team may be limited to the interpretation of the Construction Documents and the preparation of supplemental documents and revisions.

6.0 Owner – Builder

6.1 Characteristics.

- .1 Owner-Builders are Owners who serve as their own Contractors.
- .2 Many large developers are in the Owner-Builder category.
- .3 The Owner-Builder may contract for architectural and engineering design services with a Consultant or may have their own architectural and engineering design staff.
- .4 Since the Owner, the Contractor and quite often the Consultant are all the same entity, the only construction contracts are between the Owner and the various specially sub-contractors, suppliers and manufacturers.

6.2 Uses and Benefits

- .1 This type of project delivery system is used by Owners who are familiar with the design and construction process and who wish to serve as their own Contractor. To be able to do this the Owner has to have adequately qualified staff to Bid and administer the construction.

6.3 The Process

Project Delivery Methods

- .1 The Owner must develop a detailed program for the project that outlines the needs and requirements.
- .2 The Owner can either contract with a Consultant or use in-house staff for developing the Contract Documents and providing construction contract administration services.
- .3 The Owner divides the project into multiple Bid categories and contracts with separate sub-contractors for individual portions or specialty portions of the Work.

6.4 Relationships.

- .1 If the Owner does not have in-house design staff then the Owner will have a contractual Agreement with a Consultant. Contracts for design services may be with a Prime Consultant who in turn would have sub-consultants, or, the Owner may decide to have separate Agreements with specialty Consultants including architectural and engineering as needed.
- .2 The Owner will enter into various contractual Agreements with, manufacturers, suppliers, and sub-contractors who do the work on behalf of the Owner.

6.5 Affect on Construction Contract Administration.

- .1 The Construction Contract Administration services provided by the Consultant would be in accordance with the Owner's (who is the Contractor) instructions.
- .2 The Consultant's responsibilities may be extensive and similar to the traditional role played by the Consultant under a multiple prime contract project delivery system, or the Consultant may have little or no responsibilities other than what is required by governing authorities and licensing laws.