

Project Changes

Citizen's Bond Oversight Committee

January 11, 2022



Key Topics

- Project Changes
- Impact of Project Delivery Method
- Mitigating and Managing Change *(including COVID-19)*



Project Changes



- All Projects Have Changes...Why?
 - Construction Projects Are Custom Work
 - Mass-Manufactured Car (*even with numerous options you may select*) versus fully Custom Car
 - Roll-Out of a New Car Make or Model



1979



1989



1999



2009



2019



Honda Accord 4-Door Sedan

- Occur Throughout the Project
 - Planning / Assessment
 - IPP / FPP (*for State-funded projects*)
 - Initial Ideas versus Ideas Following Assessment
 - Design
 - Stakeholder Reviews, Concept Options, Costs
 - Construction



- Needed When Contractual Changes Arise

- Amendments
- Change Orders

- Contract Documents *(differ for consultants and builders, and project delivery methods)*

- Contract/Agreement, Exhibits, Attachments
- Forms, including Bid Form
- Design and Construction Drawings
- Construction Technical Specifications
- General Conditions and Supplementary Conditions



■ Types of Changes

- Scope / Quality
- Schedule
- Budget
- Impacts of Changes (increase, decrease to costs / time or have no impact on one or more of these)



■ Tracking Changes

- Planning/Assessment and Design – not typically tracked, from a monetary perspective
- Construction – typically tracked, 8% - 14% common for monetary impact

- Bearing Costs of Project Changes
 - Based upon Agreement / Contract Language and Terms – who “owns” the contingencies and/or allowances
 - Borne by Responsible Party(ies) – not always one party bears the costs



- Risks, Exposures and Liabilities
 - Costs and Budget
 - Schedule / Project Timeline and Milestones
 - Performance (*failure to produce results consistent with specifications*)
 - Others – public trust, operational, market, legal, external hazards, project deferral



■ Sample Language

Construction Manager

Other Provisions (Article 26.1) - The **Construction Manager shall be responsible for the cost of construction change orders caused directly by the Construction Manager's willful misconduct or negligent acts, errors or omissions.** Without limiting Construction Manager's liability for indirect or consequential cost impacts, the direct costs for which the Construction Manager shall be liable shall equal its proportionate share of the difference between the cost of the change order and the reasonable cost of the work had such work been a part of the originally prepared construction documents.

Professional Services *(Architects, Engineers, etc.)*

Performance of Services – **Standard of Care** (Article 7.1) - Consultant represents that Consultant has the qualifications and ability to perform the Services in a professional manner, without the advice, control or supervision of District. Consultant's services will be performed, findings obtained, reports and recommendations prepared in accordance with generally and currently accepted principles and practices of its profession for services to California community college districts.

Consultant shall carefully study and compare all documents, findings, and other instructions and shall at once report to District, in writing, any error, inconsistency, or omission that Consultant or its employees may discover. **Consultant shall have responsibility for discovery of errors, inconsistencies, or omissions.**

■ Sample Language - Contractor

Force Majeure (Article 17) - The Contractor shall be excused from performance hereunder during the time and to the extent that it is prevented from obtaining delivery, or performing by act of God, fire, strike, loss, or shortage of transportation facilities, lock-out, commandeering of materials, product, plant, or facilities by the government, when satisfactory evidence thereof is presented to the District, provided that it is satisfactorily established that the non-performance is not due to the fault or neglect of the Contractor.

Change in Scope of Work (Article 22) - Any change in the scope of the Work, method of performance, nature of materials or price thereof, or any other matter materially affecting the performance or nature of the Work shall not be paid for or accepted unless such change, addition, or deletion is approved in advance and in writing by a valid change order executed by the District. Contractor specifically understands, acknowledges, and agrees that the District shall have the right to request any alterations, deviations, reductions, or additions to the Project or Work, and the cost thereof shall be added to or deducted from the amount of the Contract Price by fair and reasonable valuations. Contractor also agrees to provide the District with all information requested to substantiate the cost of the change order and to inform the District whether the Work will be done by the Contractor or a subcontractor. In addition to any other information requested, Contractor shall submit, prior to approval of the change order, its request for a time extension (if any), as well as all information necessary to substantiate its belief that such change will delay the completion of the Work. If Contractor fails to submit its request for a time extension or the necessary supporting information, it shall be deemed to have waived its right to request such extension.

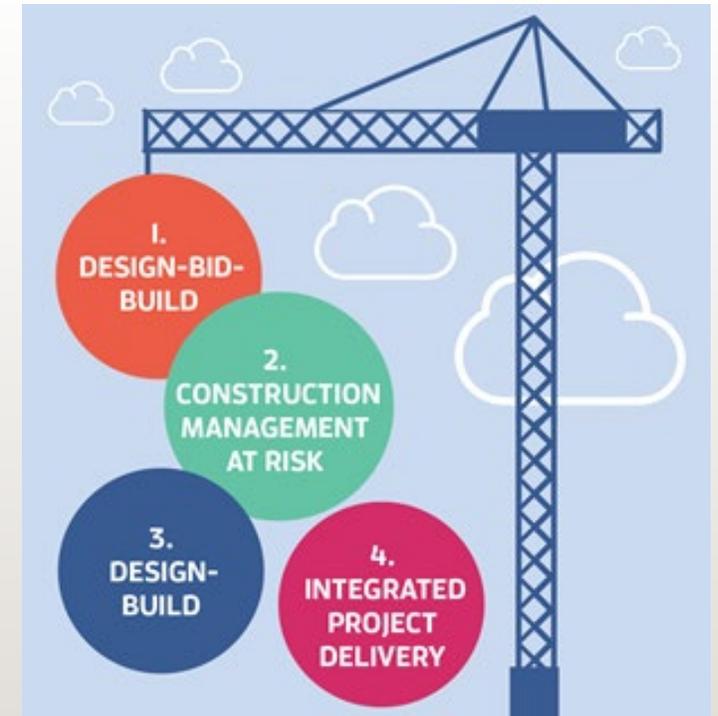
- Common Reasons for Changes During Construction
 - Unforeseen Conditions in Construction
 - District-requested Changes (*usually scope of work*)
 - Contractor-Requested Changes (*usually result in credits*)
 - Code / Inspector Requirements (*Regulatory Agency requirements*)
 - Architect / Engineer Errors or Omissions in Construction Documents
 - Time – changes Agreement terms for completion and / or milestone dates (*may or may not have an associated cost*)
 - Emergency Conditions Not Caused by Contractor
 - Other (*unavailability of specified products or supply chain disruptions, for example*)



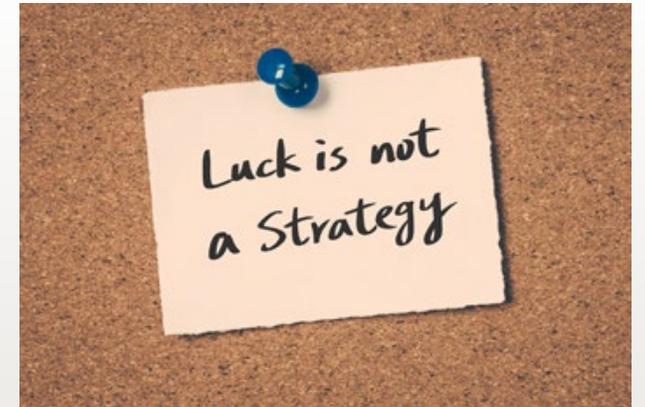
Impact of Project Delivery Method



- Project Delivery Method Matters
 - CM (Construction Manager) and CM at Risk
 - **Design-Bid-Build**
 - **Design-Build**
 - IPD (Integrated Project Delivery)
 - Multi-Prime
 - P3 (Public-Private Partnerships)



- Each Method Has and Deals with Project Changes
 - Contingencies (sometimes allowances also) in Project budgets
 - Construction
 - Owner's
 - Soft Costs
 - Where contingencies and allowances held depend upon delivery method and type of contract



- Design-Bid-Build

Performing Arts

Small Capital Projects

Library / Learning Resource Center



- Contractor Bid on Exactly and Only Work Described in Construction Documents
- Contingency Held by District (not in construction contract)
- Changes During Construction Require Board Approval – as they change scope / quality, schedule or budget (all or some of these)

- **Design-Build**

Science Building

Autotechnology Building

Biotechnology and Science Building

- Contractor and Architect on Same Team, Errors and Omissions Not an Issue
- Primarily District-requested Changes
- Contingency Within Design-Build Contract
- District also Holds Small Project Contingency Outside Design-Build contract

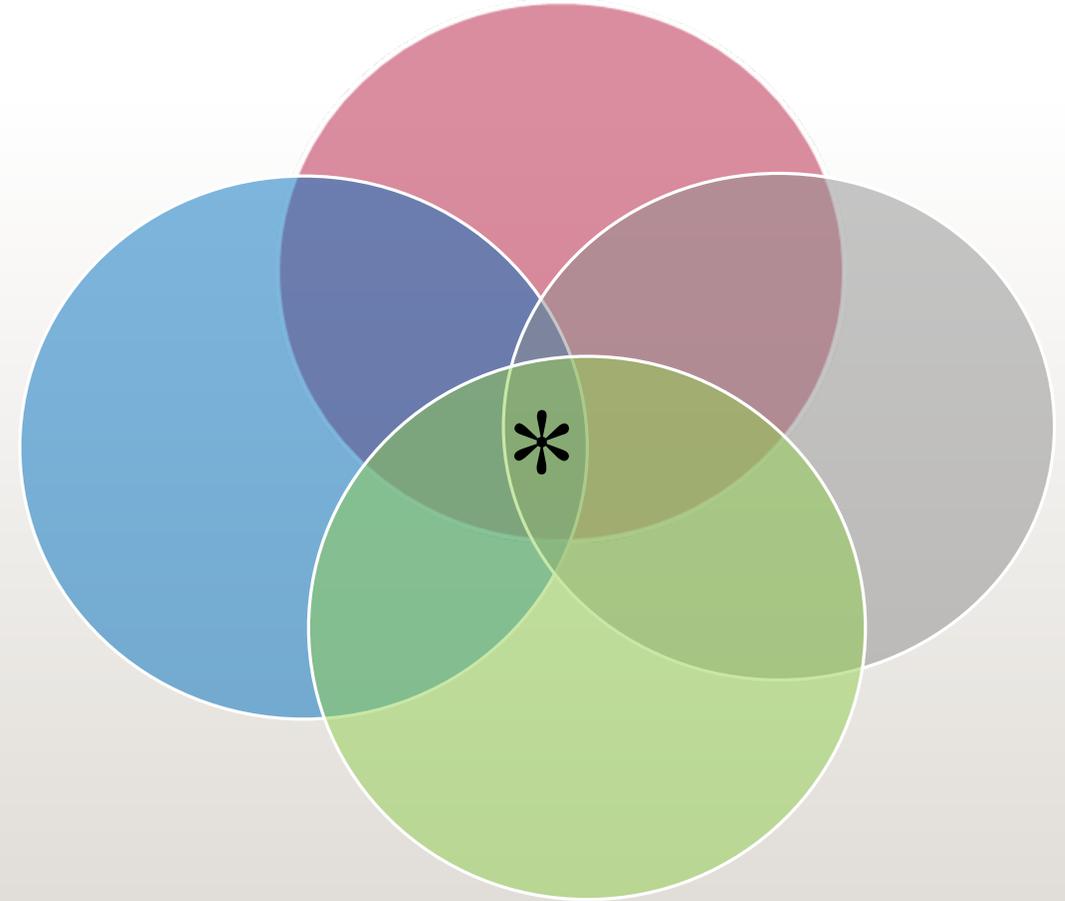


Mitigating and Managing Change



■ Four P's of Change Mitigation and Management

- Prevention
- Precision
- Participation
- Pro-Action



- What Can The District Do – Some Key Steps
 - Studies / Assessments and Design Thoroughness
 - Selection of Project Delivery Method
 - Understanding Balancing Risks with Costs
 - Implementing Lessons Learned (successes to replicate / improvements to make)



■ Strategies

- **Due Diligence of Existing Conditions in Pre-Design**
 - Accurate assessment of existing conditions; as-built drawings and specifications
 - Confirmation of existing underground utilities
 - Site geotechnical investigation
 - Hazardous materials study and testing
- **Complete and Well-coordinated Construction Documents**
 - Review of design documents at regular intervals prior to issuing for bid
 - Compliance with budgeted scope of work and Owner requirements
 - Constructability, coordination of disciplines, completeness
- **Involve All Stakeholders Throughout Design** – different owner perspectives/requirements taken into account



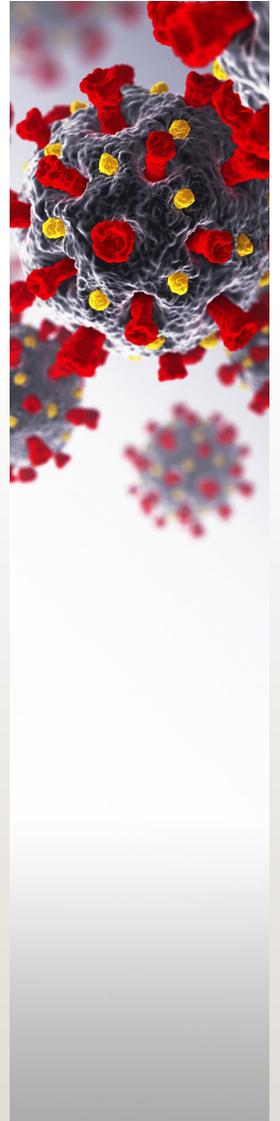
■ Strategies *(continued)*

- Manage / Minimize Scope Creep During Design and District Changes After Bid
- Be Clear with Stakeholders about Scope of Work Budgeted and Approved, and When Comment Period Ends During Design
- Engage Team Members in Prioritizing Scope Objectives to Facilitate Decisions
- Look Ahead During Construction
 - Project Manager and / or Construction Manager consistently look ahead to identify potential issues and pre-empt them, or resolve them with contractor prior to the need for a **costly** fix (and potential Change Order)



■ COVID-19 Impacts

- Many unknowns – not only implementing traditional strategies; also expanding/ exploring new ones
- Measure Q projects were deemed “essential” (public works projects)
- Changes in team interactions (social distancing, remote partners and team members, altering schedules / shifts)
- Monitoring material supply chains (international products, shipping delays, etc.) and material shortages (steel, concrete, lumber, etc.)
- Watching labor markets
- Incorporating new technologies (inspectors doing work via FaceTime versus in person, conducting pre-bid conferences via Zoom for example)
- Working with industry groups and outside agencies to understand trends
- Expanded / Enhanced sharing of information across Measure Q bond program team partners
- **Design and Construction may be changed forever – difficult challenges lead to innovation**



Thank you!

