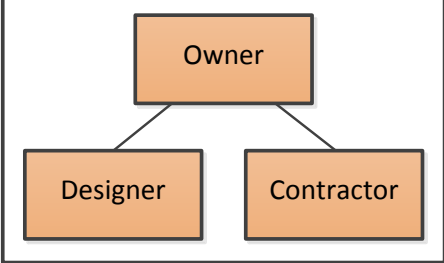
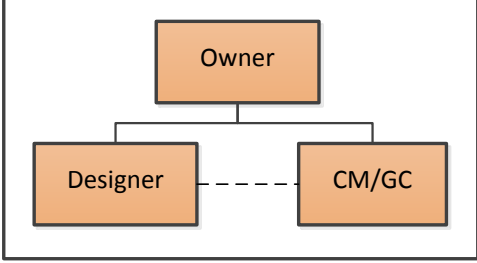
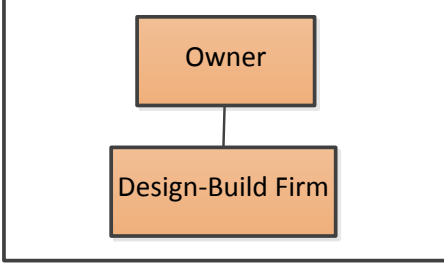
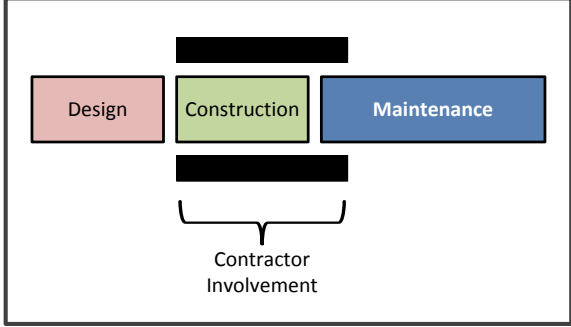
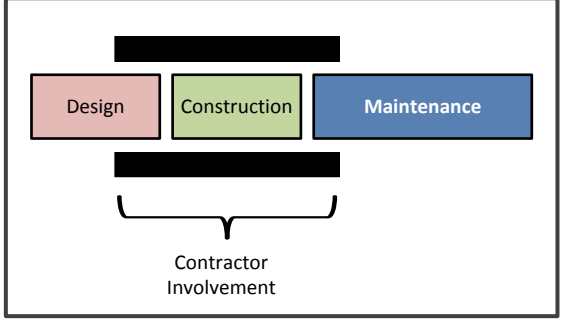
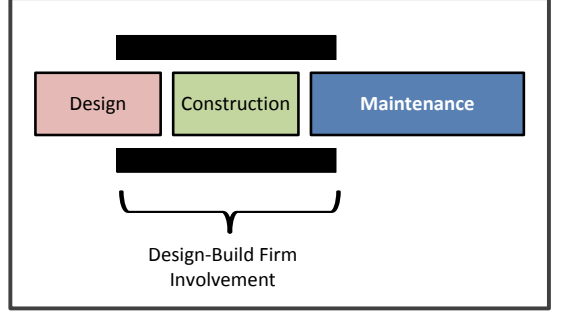




Project Delivery Methods

	Design-Bid-Build	Construction Manager/ General Contractor	Design-Build
Essential Elements	 <ul style="list-style-type: none"> • Traditional delivery system • Owner contracts separately for design and construction services • Bid based on complete (100%) plans and specifications • Owner retains high level of control and risk • Traditionally a unit priced contract 	 <ul style="list-style-type: none"> • Owner engages a construction manager (CM) to act as a construction advisor during the pre-construction phase and general contractor (GC) during construction • Selection criteria include qualifications, experience, strategic approach, and cost elements 	 <ul style="list-style-type: none"> • Combines design and construction under a single contract • Traditionally a lump sum contract • Two phase procurement <ol style="list-style-type: none"> 1. Qualifications 2. Technical/Price
Contractor Involvement			
Applicability	<ul style="list-style-type: none"> • Projects where the owner needs to completely define the scope • Project scope can be best defined using prescriptive specifications • Significant risks or third-party issues (ROW, utility, environmental) that can be best resolved or managed by the agency 	<ul style="list-style-type: none"> • Projects where owner requires control of scope during design • Project with multiple phases or contracts • Time or funding constraints • Complete or obtainable environmental documents and permits 	<ul style="list-style-type: none"> • Projects that benefit from innovation in design and/or construction • Well defined project scope • Projects that would benefit from expedited project delivery • Projects having minimal public controversy or third party issues
Advantages	<ul style="list-style-type: none"> • Applicable to a wide range of projects • Well established and easily understood • Owner retains design control • Provides the lowest initial price that responsible, competitive bidders can offer • No legal barriers in procurement and licensing 	<ul style="list-style-type: none"> • Allows for innovation and constructability during design through collaboration of CM • Reduces error, change orders, and materials overruns • Identifies and manages risk • Agency retains control over design • Early procurement and construction phases prior to completed design 	<ul style="list-style-type: none"> • Potential for innovation and quality enhancement • Accelerate delivery by fast-tracking design and construction • Single point responsibility for design and construction • Early contractor involvement to enhance constructability of plans • Earlier schedule and cost certainty • Reduces error, change orders, and materials overruns
Risks/Limitations	<ul style="list-style-type: none"> • Initial low bid might not result in ultimate lowest cost or final best value • Higher level of inspection/testing by the agency • Agency bears risk of design adequacy • Potential adversarial relationship among the contracting parties • Limited opportunity to incentivize contractors to provide enhanced performance (cost, time, quality) 	<ul style="list-style-type: none"> • Potential appearances of unfairness in sole source selection process • Potential for failure to agree on price and PS&E sent out for bid • Determining appropriate level of design to take advantage of innovations. • Additional CM fees and independent agent during pre-construction 	<ul style="list-style-type: none"> • Potential to reduce opportunities for small construction firms • Less owner control over design • Higher procurement costs for proposers • Potential to compromise quality • Considerable time and effort in RFQ/RFP selection process
Procurement Methods	<ul style="list-style-type: none"> • Qualified Low Bid • A+B Bidding • Alternate Bids • QA Specifications • Incentives/Disincentives for time and quality 	<ul style="list-style-type: none"> • Best Value Selection • Performance Specifications • Contingency pre-negotiated • Incentive/Disincentive for early completion 	<ul style="list-style-type: none"> • Best Value Selection • Performance Specifications • Incentive/Disincentive for time, quality, traffic, safety, etc.