

COMPARISON OF PROJECT DELIVERY METHODS

| Key Feature | CM at Risk | Design-Build | Collaborative Design-Build | CDB TO-CA | CM TO-CA | JOC |
|-------------------------------|---|---|--|--|---|---|
| Selection of AE and GC | Owner selects and contracts with AE and CM separately. AE selected on qualifications. CM selected on qualifications and fees. | AE and GC team up and propose together. Selection based on design competition and lump sum cost proposal. | AE/GC (DB) team up and propose together. Selection based on qualifications and fees. | AE/CM (DB) team up and propose together. DB selected on qualifications, using: staffing hourly rates and OH&P, <i>or</i> percentage fee rates. | Owner selects and contracts with AE and CM separately. AE selected on qualifications. CM selected on qualifications, using: staffing hourly rates and OH&P, <i>or</i> percentage fee rates. | CSU contracts with AE. GC is chosen based on low bid factor (markup) on Construction Task Catalog. |
| Contracts | AE: full service contract with CSU. CM: preconstruction and construction. | CSU design-build contract based on schematic design & cost proposal. CM holds AE agreement. | CSU contracts for schematic design with DB. CSU 2 nd DB contract with DB to complete design & construction. | Preconstruction contract for CDs with DB. 2nd contract with DB for construction. | AE: full service contract with Owner. CM: preconstruction and construction contracts | CSU contracts for JOC with Gordian for Construction Task Catalog, lump sum price determination only. Separate contract with GC. |
| Schematic Design | Schematic design is traditional with AE. CM provides constructability, estimating and scheduling. | Schematic design is completed by design competition and is part of the selection process. | Schematic design is collaborative with DB & CSU. GC provides constructability, estimating and scheduling. | Preconstruction contract for contract documents, constructability, estimating and scheduling with DB. | Done by AE under contract to CSU. CM provides constructability, estimating and scheduling. | Done by AE under contract to CSU. |
| DD, CDs, and CA | Traditional with AE. CM provides constructability, estimating, & warranty. | Included in DB contract. | Included in DB contract. | DD is included in CDB preconstruction contract. CDs & CA is included in construction contract. | Traditional with AE. CM provides constructability, estimating, & warranty. | Done by AE under contract to CSU. |
| Construction | Construction contract with CM. | DB contract. | Included in DB contract. | DB construction contract. | Construction contract with CM. | CSU contracts with GC for construction. |

COMPARISON OF PROJECT DELIVERY METHODS *(continued)*

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|---|---|---|--|--|--|--|
| GMP or Lump Sum | Established after bidding the CDs. | Lump Sum established at schematic design, selection by proposal. | GMP established at mid DD, when agreed by Campus and DB. | Lump Sum at mid DD, when agreed by Campus and DB. | GMP after bidding the CD. | Lump sum based on Gordian Construction Task Catalog. |
| Risk of Over Bidding | Owner's-AE and CM are required to value engineer and rebid. | Contractor's | Up to 5% overrun covered by contingency until it's exhausted, then overrun is contractor's risk. | Up to 5% overrun covered by contingency until it's exhausted, then overrun is contractor's risk. | Owner's - AE and CM are required to VE and rebid. | Owner assumes risk of high bids if unit prices or scope is poorly managed. |
| Benefit of Under Bidding | Owner's | Owner's | Owner's | Owner's | Owner's | Owner's |
| Builder contingency allowance over estimated cost. | 2% -Unused contingency accrues to owner. | None | 5% - Unused contingency is split – contractor gets 30%. | As negotiated on a project-by-project basis. See CDB. | As negotiated on a project-by-project basis. | None |
| Project Size | >\$1 Million+ | >\$1 Million+ | >\$1 Million+ | Multiple, \$0-\$7 Million | Multiple, \$0-\$7 Million | <Minor Capital limit |
| Best Use | For larger and/or more complex projects where the owner wants maximum control over the design and construction process. | For projects that are more easily described in criteria documents, where the owner is willing to trade design input for risk transfer and shorter schedule. | Projects that benefit from owner design input through completion of DD's, and benefit from risk transfer and a shorter schedule. | Groupings of multiple projects that benefit from ease of procurement, and a DB format. DB cost/risk transfer based on owner delegation of design control. As opposed to JOC, this is better for projects with items not in the Construction Task Catalog, and/or over the Minor Capital limit. | Groupings of multiple projects that benefit from ease of procurement. CM format allows more owner control over cost, design, and use of owner AE. As opposed to JOC, this is better for projects with items not in the Construction Task Catalog, and/or over the Minor Capital limit. | Projects are more easily procured than TO-CA, but have no benefit of CM/AE preconstruction services. Best for repetitive task projects that are more easily priced from the Construction Task Catalog. |