



Capital Project Management

An Overview From Beginning to End



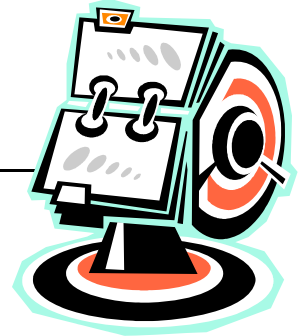
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Doug Nichols

- Current Director Construction Services Group (CSG), a program of Educational Service District 112 and the Washington State ESD network.
- Architectural degree / WSU (go Cougs)
- 20+ years as owner of architectural firm specializing in public work
- 20+ years as project/construction manager
 - Public works
 - Private development

Some Industry Nomenclature



- PM: program or project manager
- CM: construction manager
- CI: construction inspector
- Clerk of the Works: similar to construction manager
- Owner's representative: a PM and/or CM

Program/Project Manager

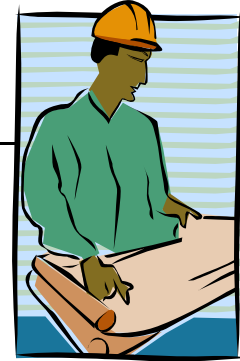


- Program manager responsible for overall management of multiple projects that make up a capital program
- Project manager responsible for overall management of a single or subset of projects making up part of a capital program



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Construction Manager/Clerk of the Works



- Focuses on the construction phase of one or more projects
- Often spends majority of time on the construction site
- Strong interface with design and construction team

Construction Inspector



- Quasi legal implications
- Implies detailed construction quality control activities (often required for federal work)
- “Special Inspector” has building code origins
 - Concrete
 - Masonry
 - Structure steel



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Phases of a Typical Construction Program/Project (Simplified)



1. Pre-Design
2. Design
3. Bidding/Pricing
4. Construction
5. Closeout/Occupancy
6. Post-Occupancy



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Some Typical Project/Construction Management Functions and Services

- Each firm/entity offers a different array of services
- Select managers that match your district's needs
 - Avoid duplication of district staff capability
 - Fill the skill voids in your lineup
- Decide if you want a “leader” or “presider” as your PM/CM



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1. Pre- Design



- Existing facility assessments
- Study and Survey (OSPI requirement)
- Facility master planning
- Master budgeting *
- Master scheduling
- Funding strategies
- Community surveys
- Voter informational campaigns



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2. Design



- Delivery methodology determination
- Design team selection/negotiations
- Schedule management
- Budget management
- OSPI D-process
- Permitting assistance
- Establishment of quality standards
- FF&E management
- Value analysis (management or direct delivery)
- Constructability review



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3. Bidding/Pricing



- Bidder solicitation and qualification
- Alternative delivery management (GC/CM)
- OSPI D-process
- Bid review and recommendations
- Construction contract development
- Public works compliance submittals



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4. Construction

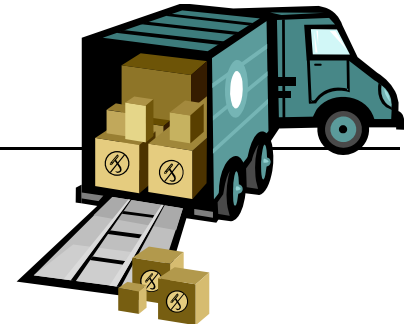


- Financial management
- Schedule management
- On site construction quality monitoring
- FF&E procurement & delivery management
- Management of separate owner contractors/vendors/consultants
- OSPI D-process



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5. Closeout & Occupancy



- Building commissioning (management or direct delivery)
- Punch list management
- Contractor retainage oversight
- Financial reconciliation
- Grand openings/celebrations



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6. Post-Occupancy

- Warranty management
- 1-year walk through





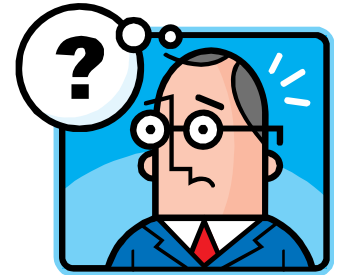
Some Common and Provocative Questions about Construction Project Management....



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Why does my project need a Project/Construction manager?

- Educators do some things very well, like educate students.
- OSPI requirements
- Construction has changed
 - Litigation
 - Increased regulatory constraints
 - Complex alternative delivery methods
- Separation of District administration from design/construction team



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How do I find and select a construction PM/CM?



- Peer networking
- Carefully-written solicitations and selection criteria
- Qualifications-based selection



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When should I bring a PM/CM on board?



- As early as practical
- Try to do it before bond/levy resolution
- One big decision is: “...pre or post architect selection...?”

Should I do PM/CM in-house or hire a consultant?



- Benefits of in-house PM/CM
 - Staff familiarity
 - Knowledge of district systems and policies
 - Allegiance/loyalty to district
 - Lower cost (if hired/fired promptly)
 - Other?



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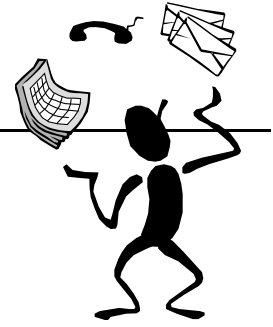


- Benefits of contracted PM/CM
 - Depth and breadth of experience
 - Ability to hire/fire at will
 - Ability to add/subtract staffing at will
 - Other?



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What qualifications should I look for in a construction PM/CM?



- Familiarity with K-12 school construction in the State of Washington
- Familiarity with OSPI requirements
- A range of in-house backgrounds (contracting, CM, architecture, engineering)
- Ancillary services (VE,CR, CX,FF&E)
- Other?



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How does a PM/CM help to improve project success?



- Allows educational staff to educate
- Applies her/his professional skills to:
 - Schedule control
 - Budget control
 - Quality control
- Tough love
- Other?



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Can't the architect do the PM/CM work?



- Architects need management too
- Conflicts can arise (change order responsibility etc.)
- Design liability is sufficient responsibility by itself
- PM/CM requires a broad understanding of all facets of a construction program/project...

What should the district expect from a construction PM/CM?



- Fill the gaps in district capabilities
- Leadership
- Firm but fair management of all team members
- Good generalist skills (finance, design, scheduling, construction techniques, public works, OSPI rules, educational issues)
- Other?



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How much does good construction PM/CM cost?

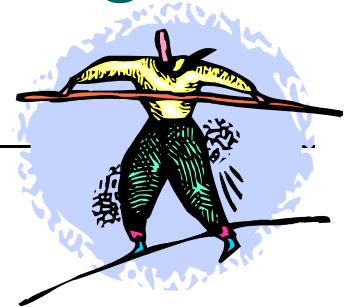


- The same as a poor one
- OSPI recognizes up to 2.5% of MACC (MACC = construction cost without tax, not “project cost”)
- Industry fees range from approximately 2.5% to 7% depending on project size and services included
- Expect higher % fees for smaller projects
- Scope PM/CM services carefully to determine if fee is appropriate



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What are the risks of not having a qualified PM/CM?



- Insufficient funds in bond/levy resolution
- Miscalculated OSPI funding
- Mismatch between design and budget
- Unachievable schedules
- Inaccurate financial monitoring
- Runaway change orders
- Disappointed school board/community



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Comments, Questions, Stories Etc...

