

2015 School Facility Workshop

Streamlining the School Construction Process and Building the Budget

Friday, November 6, 2015



2015 CT School Facility Workshop:
Streamlining the School Construction
Process and Building the Budget

School Facility Workshop

November 6, 2015

Project Delivery Systems

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Executive Director

Associated General Contractors of Connecticut



2015 CT School Facility Workshop:

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Design-Bid-Build

- The owner procures a design and bid package from an independent designer, uses a competitive procurement process to get bid prices for all work required to build the project as specified, and then selects a general contractor to build the project on a low bid basis.
- Important feature: Intentionally tries to separate the design phase, the bidding phase, and the construction phase so that each is performed independently.



Design-Bid-Build (cont.)

- Sequential chain of events
 - Owner enters into a contract with a designer who prepares contract documents;
 - Owner selects a general contractor through low bid;
 - General contractor in turn selects subcontractors (usually through low bid) to perform parts of the work;
 - General contractors, subcontractors, and sub-subcontractors provide labor and purchase materials from suppliers;
 - Designer does not have a contract with the contractor but rather, acts as an agent of the owner for design services and may provide contract administration during construction.



Design-Bid-Build (cont.)

Most widely used project delivery method in this country and abroad.

- Often mandated for use in public sector
- Brings the forces of competition directly to bear upon the cost of construction by soliciting a price for all work required by the plans and specifications issued for bidding.
- Looked upon as an objective means of selecting constructors without the taint or suggestion of political influence or pressure.



Typical Design-Bid-Build Characteristics

- Functions well when a project has clear parameters, and when sufficient time exists to prepare good documents and execute construction.
- Not considered a fast-track method.
- Quality of documents and open communication are critical to the success of design-bid-build.



Typical Design-Bid-Build Characteristics

Some disadvantages:

- Can be a lengthy process;
- Can place the owner in the middle of disputes between the contractor and design professional;
- Cost of construction is unknown until bids are finalized;
- Intensifies the potential for change orders.



Construction Manager At Risk

- Relatively new project delivery system that combines the skills and services of two different types of construction firms: the agent construction manager (CM) and the traditional general contractor;
- Owner has separate contracts with the CM at Risk and Designer;
- Not to be confused with CM as an agent. The main difference is in *performance risk*.



CM At Risk (cont.)

- CM at Risk holds the trade contracts and takes responsibility for the performance of the work.
 - CM typically provides essential pre-construction services and guarantees the construction costs and schedule.
 - CM assumes the risk of the performance either by its own crews or by specialty contractors and suppliers.
- CM At Risk (like Design-Build) is considered a fast track method, i.e., it helps owners deliver projects faster than Design-Bid-Build.



Typical CM At Risk Characteristics

- CM is most useful on a large, complex project which requires a good deal of oversight and coordination.
- CM is helpful to owners who lack a sophisticated in-house construction team.
- When the contract does provide for a Guaranteed Maximum Price (GMP), it is usually provided before the completion of the construction documents



Typical CM At Risk Characteristics (cont.)

- CM is usually hired by Qualifications Based Selection (QBS) early in the design phase to provide input on budget, schedule, quality, and systems.
- While QBS is the most used method, selection can also be based on a combination of experience, staff, fees, general conditions, and a budget price for the project.
- CM's fee is generally a negotiated fee for services.



Typical CM At Risk Characteristics (cont.)

- CM operates on an open book basis. All accounts relating to the project are open to owner review at any time during the project and up to three years after substantial completion.
- CM's pre-construction skills are as important as its ability to provide construction phase services.



Typical CM At Risk Characteristics (cont.)

- Ability to perform on a fast track basis is a typical characteristic and is essential to the success of this method.
- CM's success depends on proven experience in creating and participating in team building.
- CM is responsible to make sure any specialty contractor or supplier requests for change orders are carefully reviewed to determine whether they are legitimate changes in project scope or caused by the owners actions.



CM At Risk – CT State Statute

Sec. 4b-103. Construction manager at-risk project delivery contracts. (a) In order to carry out any provision of this title for the construction, renovation or alteration of buildings or facilities, the Commissioner of Administrative Services may enter into a construction manager at-risk project delivery contract.

(b) The Commissioner of Administrative Services shall not enter into a construction manager at-risk project delivery contract that does not provide for a maximum guaranteed price for the cost of construction that shall be determined not later than the time of the receipt and approval by the commissioner of the trade contractor bids. Each construction manager at-risk shall invite bids and give notice of opportunities to bid on project elements, by advertising, at least once, in one or more newspapers having general circulation in the state. Each bid shall be kept sealed until opened publicly at the time and place as set forth in the notice soliciting such bid. The construction manager at-risk shall, after consultation with and approval by the commissioner, award any related contracts for project elements to the responsible qualified contractor submitting the lowest bid in compliance with the bid requirements, provided (1) the construction manager at-risk shall not be eligible to submit a bid for any such project element, and (2) construction shall not begin prior to the determination of the maximum guaranteed price, except for the project elements of site preparation and demolition that have been previously put out to bid and awarded.



CM At Risk – CT State Statute (cont.)

- (c) Construction may begin prior to the determination of the maximum guaranteed price for the project elements of site preparation, demolition, public utility installation and connections, and building envelope components, including the roof, doors, windows and exterior walls, provided (1) the project is the renovation of an existing building or facility; (2) the project element or elements involved in such early work have been previously put out to bid and awarded; and (3) the total cost of construction of the early work does not exceed twenty-five per cent of the estimated cost of construction for the entire project.
- (d) If such project involves the renovation of an existing building or facility that will be performed in multiple phases while such building or facility remains occupied, the Commissioner of Administrative Services may enter into a construction manager at-risk project delivery contract that provides for the maximum guaranteed price to be determined for each phase of the project, prior to beginning each such phase, provided all requirements of subsection (b) of this section other than the timing of the determination of the maximum guaranteed price are complied with.



QUESTIONS?



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Changes to the Plan Review Process

John Butkus, AIA
Arcadis



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Changes to the Plan Review Process



*Welcome to the
Office of
School Construction
Grants!*

School Construction - Grant Applications

[School Construction Grant Process Forms, Worksheets, and Instructions](#)
[School Construction Contact Information](#)
[SCG - 053 Site Analysis Form](#) (11/07/14)
[Applicability of SSIC Stds](#) (02/27/14)
[Priority List Location Viewer](#) (03/04/14)

School Construction - Technical/Plan Review

**New* [Plan Review Procedures & Forms](#)
[Supplements to the Plan Review Procedures](#)
[School Construction Resource Information](#)
[School Construction Contact Information](#)
[Site Analysis and Environmental Planning](#)



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Updated Plan Review Resources

Office of School Construction Grants

School Construction Plan Review Procedures and Forms

**** New ****

LEAs conducting school construction or renovation projects should review the procedural memorandum and forms below concerning school construction designs and plans in order to comply with the plan review procedures.

[Plan Review Procedures Memorandum](#)















School Construction Plan Review Procedures and Forms	Click Icon	Rev. Date
Form SCG-042, Request for Review of Final Plans		09/2015
Design Development Review (DDR) Checklist		09/2015
Code Conformity Certification Form		09/2015
Pre-Bid Conformance Review (PCR) Checklist		09/2015
Supplemental-Phase or Separate-Phase Checklists (submit with PCR Checklist as applicable):		
Asbestos/Hazardous Materials Abatement Phases or Projects		09/2015
PCB Abatement and Management Plan (Stand-Alone Project or Phase)		09/2015
Carbon Monoxide (CO) Detectors		09/2015
Radon Systems		09/2015
Fixtures, Furnishings and Equipment phases		09/2015
Technology Equipment phases		09/2015
Play Equipment Phases		09/2015
Stand-Alone Fuel Storage Tank Removal Project		09/2015
Stand-Alone Roof Replacement Project		09/2015
Stand-Alone Window Replacement Project		09/2015



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Supplemental Information

LETTERS AND FORMS		
Local Education Agency (LEA) Plan Review Process Letters	Format	Revision Date
Project Team List (required at PREP Meeting)		09/2015
Designated Accessible Schools Letter (Required at PREP Meeting)		09/2015
Natural Light/Wireless Connectivity Technology Letter (required at PREP Meeting)		09/2015
Plan Review Phasing Letter (Required to Schedule First PCT Meeting)		09/2015
Cost Estimate Certification		09/2015
Space Standards Letter		09/2015
Area of Refuge Acknowledgement Letter		09/2015
Granular Accessible Routes Maintenance Policy Letter		09/2015
Courtyard Occupancy Letter		09/2015
Toilet Room Availability		09/2015
Non-conforming Floors/Ramps Letter		09/2015
Fire Exit Drill Policy Letter (for Existing Non-Sprinklered Buildings Only)		09/2015
NEW School Safety Infrastructure Criteria Letter (required at PREP Meeting) SSIC Report NCEF School Safety Checklist		09/2015
DAS SCG PCB Letter (when completed, email this letter to jeffrey.bolton@ct.gov) PCB Checklist		



Prior Plan Review Practice

- PREP Meeting
- PCT – Plan Completion Test
 - Very detailed but for limited scope
 - Reviewers behaved as the AHJ
 - Too many required participants
 - Significant time in meeting
 - Significant time in review
- Authorization to Bid
- What do the Statutes say?



Governing Law

Sec. 10-292. Review of final plans by Commissioner of Administrative Services. Exceptions; role of local officials. (a) Upon receipt by the Commissioner of Administrative Services of the final plans for any phase of a school building project as provided in section 10-291, said commissioner shall promptly review such plans and check them to the extent appropriate for the phase of development or construction for which final plans have been submitted to determine whether they conform with the requirements of the Fire Safety Code, the Department of Public Health, the life-cycle cost analysis approved by the Commissioner of Administrative Services, the State Building Code and the state and federal standards for design and construction of public buildings to meet the needs of disabled persons, and if acceptable a final written approval of such phase shall be sent to the town or regional board of education and the school building committee. No phase of a school building project, subject to the provisions of subsection (c) or (d) of this section, shall go out for bidding purposes prior to such written approval.



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New Plan Review Process

- **PREP Meeting** (when necessary)
- **DDR – Design Development Review (Major Projects)**
 - Review Scope, Costs,
 - Provide Focused Eligibility Review
 - Discuss Major Code Issues
 - Verify Statutory Conformance (part 1)
- **PCR – Pre-Bid Conformance Review (All Projects or Phases)**
 - Verify Statutory Conformance (part 2)
 - Rely on Design Professional/Municipal Authorities for Code Conformity Confirmation
- **Authorization to Bid**



Major Projects

Priority list projects only

New Construction

Renovation as New

Extension over \$5 million

Alteration over \$5 million



Minor Projects

All non-priority list projects

Extension up to \$5 million

Alteration up to \$5 million

All other project types not considered Major

Phase of a Major Project other than building construction

Such as: Demolition

Abatement

FF&E

Technology

Play Equipment



DDR Checklist

Local Education Agency	State Project No.	Phase
School	Architect	Date

DAS - OFFICE OF SCHOOL CONSTRUCTION GRANTS PLAN REVIEW CHECKLIST

DESIGN DEVELOPMENT REVIEW (DDR) MAJOR BUILDING PROJECT

- A Major Building Project is a project type "New", "Renovation", "Extension", or "Alteration".
- Do not use Not Applicable (N/A). Use "None", "NPS" (Not in Project Scope), or explain condition.
- Submit completed applicable supplemental checklists with this completed form.

A. DOCUMENT SUBMISSION LIST			Accepted
	Document	Notes	
01.	PREP Meeting attendance by Local Education Agency (LEA)		
02.	PREP Meeting attendance by Design Team		
03.	Project Team List with contact information		
04.	Project Phasing Letter by LEA		
05.	Scope Letter by Architect including <ul style="list-style-type: none"> • overall project summary of all phases • description of ineligible and questionable-eligible work 		
06.	Completed Code Sheet(s) with design professional's signature and seal		



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PCR Checklist

Local Education Agency	State Project No.	Phase
School	Architect	Date

DAS - OFFICE OF SCHOOL CONSTRUCTION GRANTS PLAN REVIEW CHECKLIST

PRE-BID CONFORMANCE REVIEW (PCR)

- **Submission of Pre-Bid Conformance Review (PCR) Checklist is required for all projects/phases.**
- Do not use Not Applicable (N/A). Use "None", "NPS" (Not in Project Scope), or explain condition.
- Refer to Notes on pages 3 and 4 for additional information.

		Accepted
Document	Notes	
01.	Form SCG-042 with signatures signifying <ul style="list-style-type: none"> • Board of Education acceptance of documents and approval to bid, and • Building Committee acceptance of documents and approval to bid. 	
02.	Full set of Construction Documents (Drawings and Project Manual with Specifications) including	
	a. Cover sheet for both Drawings and Project Manual,	
	b. State project name and number on each page and sheet,	
	c. Date corresponding to SCG-042,	
	d. Seals and signatures of Design Team, members on applicable drawings,	
e. Not marked "Not For Construction", and		



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Plan Review Checklists

Supplemental Checklists are NEW or updated...

Local Education Agency	State Project No.	Phase
School	Architect	Date

DAS OFFICE OF SCHOOL CONSTRUCTION GRANTS PLAN REVIEW CHECK LIST

FIXTURES, FURNISHINGS, AND EQUIPMENT (FF&E) PHASE

- Fixtures, Furnishings, and Equipment are eligible for reimbursement only when part of a Major Building Project, a project type "New", "Renovation", "Extension", or "Alteration".
- Do not use Not Applicable (N/A). Use "None", "NPS" (Not in Project Scope), or explain condition.
- Submit completed **Pre-Bid Conformance Review (PCR) Checklist** with this completed form.

Document	Notes	Accepted
1. Documentation: Drawings and Specifications		
2. Location plans with items identified and quantified		
3. Code Compliance Notes and compliance verification shown on location plans		
4. Secure / seismic attachment note on plans for floor-mounted, ceiling-mounted, and wall-mounted items		
5. Product / Item Data Sheet of major items		
6. Room-by-room location list on drawings or as separate document		
7. Identification of extended warranties and service contracts (ineligible for reimbursement)		
8. Workstations, desks, appliances, etc. (including for persons with disabilities) for adults, both students and staff . Provide product data sheets with manufacturer's dimensions of knee/foot clearance (30" w, 27" h, 19" d) and height of tables, counters, and work surfaces (28" to 34" to top)		
9. Workstations, desks, appliances etc. for children (including children with disabilities). Provide product data sheets with manufacturer's dimensions for knee/foot clearance (30" w, 24" h, 19" d) and height of tables, counters, and work surfaces (25" to 30" to top)		

- Address specialized aspects or phases
- Are to be used only when applicable

Supplemental Checklists:

- Asbestos/Hazardous Materials
- PCB Abatement and Management Plan
- Carbon Monoxide (CO) Detectors
- Radon Systems
- Fuel Storage Tank Removal
- Roof Replacement
- Window Replacement
- Fixtures, Furnishings & Equipment
- Technology Equipment
- Play Equipment



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UNIFORMAT II Estimate Template

Project Descriptors and Costs by System

Excel spreadsheet showing the UNIFORMAT II Estimate Template. The spreadsheet is titled "das_osf_final_database (15) - Excel" and displays various project descriptors and cost breakdowns.

STATE PROJECT #	BUILD TYPE	COST/SQ FT	ELIGIBLES	INELIGIBLES
SCHOOL DISTRICT	CONSTRUCTION MANAGER NAME			
SCHOOL NAME	PROJECT LABOR AGREEMENT			
PROJECT TYPE	EEO PROGRAM			
BUILDING (ORIGINAL) SQUARE FEET				
PROJECT (CURRENT) SQUARE FEET				
GRADES				
ENROLLMENT PROJECTIONS				
REIMBURSEMENT RATE				
TOTAL COST				
CONSTRUCTION COST				
SOFT COST				
CONSTRUCTION COSTS		COSTS	ELIGIBLES	INELIGIBLES
A. SUBSTRUCTURE		\$ -	\$ -	\$ -
B. SHELL		\$ -	\$ -	\$ -
C. INTERIORS		\$ -	\$ -	\$ -
D. SERVICES		\$ -	\$ -	\$ -
E. EQUIPMENT & FURNISHINGS		\$ -	\$ -	\$ -
F. SPECIAL CONSTRUCTION AND DEMOLITION		\$ -	\$ -	\$ -
G. BUILDING SITEWORK		\$ -	\$ -	\$ -
X. GENERAL CONDITIONS, OFFICE OVERHEAD & PROFIT		\$ -	\$ -	\$ -
Z. ALLOWANCES		\$ -	\$ -	\$ -
SOFT COSTS			ELIGIBLES	INELIGIBLES
ACQUISITION COSTS	Land/Building Purchase	\$ -	\$ -	\$ -



Cost Categories as Planning Guide

SOFT COSTS		LEVEL II CATEGORY TOTAL	LEVEL II SUB TOTAL	INELIGIBLES
ACQUISITION COSTS	Land/Building Purchase	\$ -	\$ -	\$ -
	Swing Space/Portables	\$ -	\$ -	\$ -
	Site Remediation	\$ -	\$ -	\$ -
	Appraisals	\$ -	\$ -	\$ -
	Land Survey	\$ -	\$ -	\$ -
	Allowance	\$ -	\$ -	\$ -
CONSULTANTS	Architect/Engineering Fees	\$ -	\$ -	\$ -
	Environmental	\$ -	\$ -	\$ -
	Commissioning	\$ -	\$ -	\$ -
	Legal Consultants	\$ -	\$ -	\$ -
	FF&E Coordinator	\$ -	\$ -	\$ -
	Estimator	\$ -	\$ -	\$ -
	Project Management	\$ -	\$ -	\$ -
	Construction Manager Pre Construction	\$ -	\$ -	\$ -
	Other Consultants	\$ -	\$ -	\$ -
	Allowance	\$ -	\$ -	\$ -
FF&E	Furniture, Fixtures & Equipment	\$ -	\$ -	\$ -
	Technology	\$ -	\$ -	\$ -
	Moving	\$ -	\$ -	\$ -
	Allowance	\$ -	\$ -	\$ -
FEES	Bonding Fees	\$ -	\$ -	\$ -
	Insurance Costs	\$ -	\$ -	\$ -
	Town Staff Costs	\$ -	\$ -	\$ -
	Town Permit Fees	\$ -	\$ -	\$ -
	State Permit Fees	\$ -	\$ -	\$ -
	Testing/Inspection Fees	\$ -	\$ -	\$ -
	Overhead & Profit Costs	\$ -	\$ -	\$ -
	Printing & Mailing Costs	\$ -	\$ -	\$ -
	Other Costs	\$ -	\$ -	\$ -
	Allowance	\$ -	\$ -	\$ -
	CONTINGENCY	Construction Contingency	\$ -	\$ -
Owner's Contingency		\$ -	\$ -	\$ -
Design Contingency		\$ -	\$ -	\$ -
Allowance		\$ -	\$ -	\$ -
		\$ -	\$ -	\$ -



QUESTIONS?



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Building the Budget

Ron Van Winkle – Owner – Why? Where?

Amy Samuelson – Architect – Who? What?

Ty Tregellas – Construction Manager – When? How?



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Owner's Perspective

		Program Manager/ Owner's Rep	Architect	CM	General Contractor
Why	Owner				
Increasing / declining Enrollment	X				
Demographer	X				
All or part of the facility is beyond it useful life	X				
Curriculum specific/strand school	X				
Consolidation of district services	X				
Where					
New Site to be purchased	X				
Existing School Site	X				
Other Town property	X				



Architect's Perspective

- Renovation or New Building?
 - Hazardous materials abatement if reno or demolition; EPA and CT DEEP
 - Other Regulatory: OSTA?, Wetlands, P&Z, Historic Commission?, Design Review Board?, Town Council, BOE,
 - New athletic fields/playgrounds or existing to remain?



Architect's Perspective

- Pre-Referendum or Post-Referendum?
- Status of Educational Specifications, Programming and Planning
 - Benchmark against similar recent projects
 - Student enrollment and allowable area
 - Building utilization analysis
 - Net to Gross ratio



Architect's Perspective

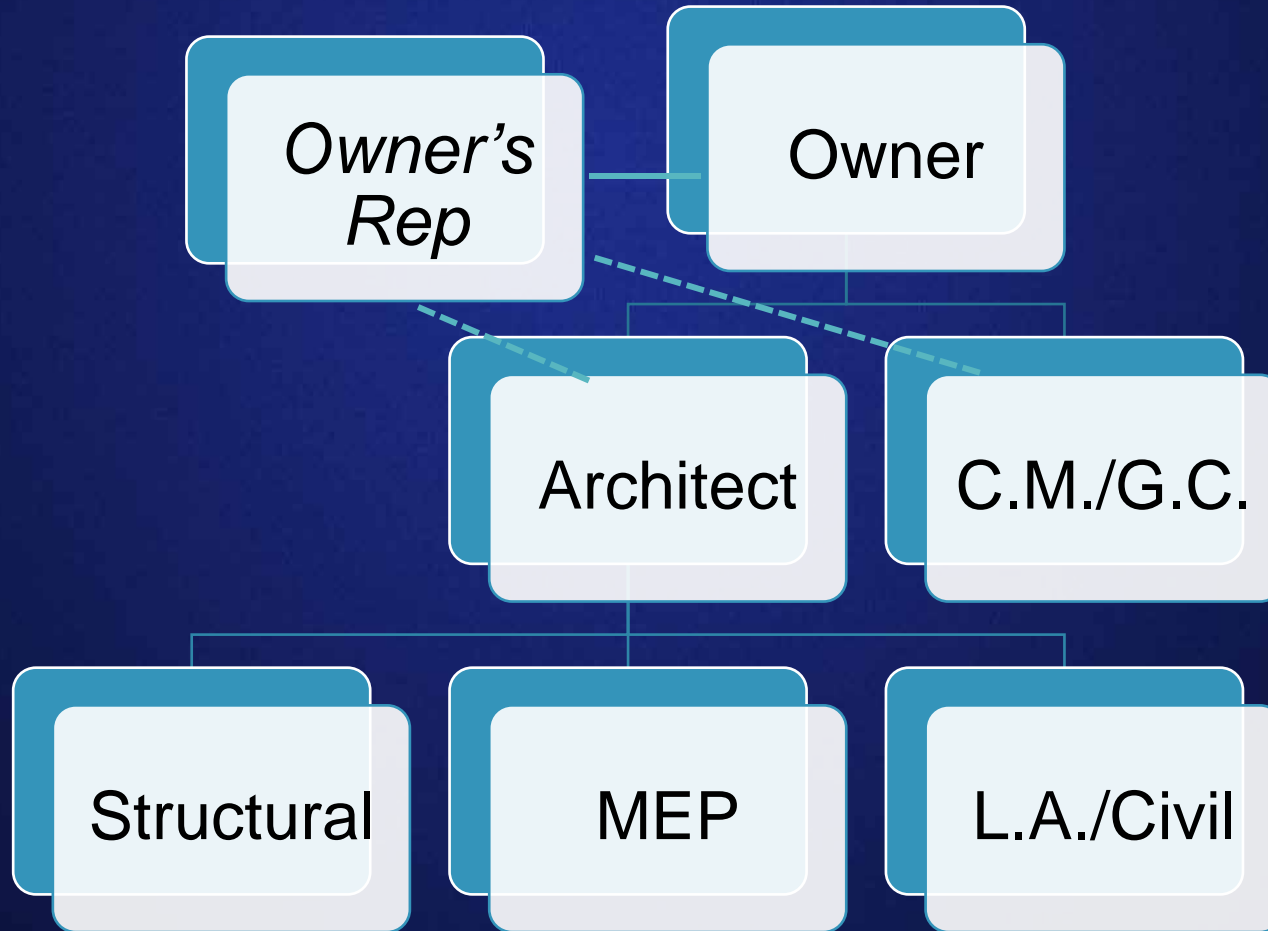
Who	Owner	Program Manager Owner's Rep	Architect	CM	General Contractor
Program Manager/ Owner's Rep	X				
Design Team	X	X			
Architect, Structural, Civil, MEP Eng.					
CM at Risk, CM as Agent, GC	X	X			
Phase I/II Site Evaluation - Env. Eng.	X	X	X		
Environmental Engineering - Testing	X	X	X		
Environmental Engineering - Monitoring	X	X	X		
Commissioning Agent	X	X			
Other Consultants		X	X		
Code Consultant			X		
Interior Design			X		
Acoustical Consultant			X		
Security			X		
Food Service			X		
Audio/Visual, Tel/Data			X		
FF&E - (IT Equipment)	X	X	X		
Traffic	X		X		
Geotechnical	X		X		
Peer Review	X	X	X		
Special Inspection	X	X	X		
Independent Plan Review (Redicheck)	X	X	X		
Site Survey	X	X	X		
Move Consultant	X	X			
Estimating Service	X	X	X		
3rd Party Code Review	X				



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WHO



WHO

- Environmental Engineers
 - (can be contracted to either Owner or Arch)
 - **Phase I** - good practice to do with site assessment
 - **Phase II Site Evaluation** – more detailed assessment
 - **Environmental Testing** – asbestos, lead, PCBs
 - **Environmental Remediation Monitoring** – during demo/construction
- Commissioning Agent (required for CT HPB)
 - Oversight and testing of mechanical installation, system and controls set-up



WHO

Other Consultants

	Owner	Program Manager/ Owner's Rep	Architect
Code Consultant			X
Interior Design			X
Acoustical Consultant			X
Security			X
Food Service			X
Audio/Visual, Tel/Data			X
FF&E - (IT Equipment)	X	X	X
Traffic	X		X
Geotechnical	X		X
Peer Review	X	X	X
Special Inspection	X	X	X
Independent Plan Review (Redicheck)	X	X	X
Site Survey	X	X	X
Move Consultant	X	X	
Estimating Service	X	X	X
3rd Party Code Review	X		



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WHAT

What	Owner	Program Manager/ Owner's Rep	Architect	CM	General Contractor
Feasibility Studies	X				
Conceptual Design			X		
Programming and Planning			X		
Educational Specification	X	X	X		
Renderings / physical model			X		
Building Documentation:					
SD - drawings, narrative or outline spec			X		
DD - documents, code compliance			X		
CD - full documentation			X		
Bidding - RFI's, Addenda			X		
CA - oversight, submittals, docs, punch list			X		



WHAT

- Budget Estimating
 - 3rd Party Estimating Services – optional, recommended
 - Provide documentation for CM, and participate in meetings to discuss design intent
 - Reconcile with the CM at project milestones
 - Consider cost per student of FF&E + technology in addition to construction budget, if requested.



Construction Manager's Perspective

When	Owner	Program Manager/ Owner's Rep	Architect	CM	General Contractor
Project Schedule		If GC		X	
Staffing Costs		If GC		X	
Escalation		If GC		X	
Abatement - Breaks/ School in Session		If GC		X	
Winter /Summer Construction		If GC		X	



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WHEN

- Project Schedule
 - Define Construction Start - Precon Milestones
 - Design durations
 - Zoning Approvals
 - EPA/PCB Approvals
 - Code/Permit Review
 - New vs Renovation – Abatement Opportunities
 - Construction Duration – Time is Money
 - Schematic Estimate=Referendum=EDO 49



WHEN

- Staffing Costs
 - How Many & How Long
 - Change as the Plan Evolves
- Escalation
 - Adjusts with the Schedule/Duration
 - 4% per Year to Start or Midpoint



WHEN

- Abatement – Breaks or “School in Session”
 - Asbestos /Lead – Management Plan vs Reno Plan
 - PCB’s – Budget Buster
 - Hygienist - What to Test & When
 - CT DEEP – Caulks & Glazings
 - Paints, Adhesives, Etc?
 - DEEP vs EPA Approval Timelines



WHEN

- Winter / Summer Construction
 - Temporary Heat – Ground or Space Heater
 - Enclosure – Temporary or Permanent
 - Heating or Cooling Source – Temp or Permanent
 - Energy Cost – Project or Owner



Construction Manager's Perspective

How	Owner	Program Manager/ Owner's Rep	Architect	CM	General Contractor
Estimate - Concept/ SD/DD/CD - Unifomat II		If GC		X	
Phasing		If GC		X	
Temporary Walls/Temp Egress/ Logistics		If GC		X	
Temporary Classrooms		If GC		X	
Procurement		If GC		X	X
Project Labor Agreement	X	If GC		X	
15 - 25 Trade Contractors		If GC		X	X
P&P Bonds & Gen. Liability Insurance				X	GC Only
Soft costs					
Materials Testing		X		X	
Movers		X		X	
Building Permit		If GC		X	
Builder's Risk Insurance	X	X		X	
Legal Fees - Real Estate, Contracts, Claims	X	X		X	
Utility Co. Charges		X		X	
Printing Services		X		X	
Advertising		X		X	
Owner administrative	X				
Financing	X				
Owners Contingency		X		X	
CHRO Requirements		If GC		X	X
Misc.	X	X		X	



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HOW

- Precon Estimates –
 - 75% of Project Cost
 - Information Improves Accuracy
 - Design Contingency – Concept, SD, DD, CD
 - Art vs Science – BIM
 - SCG -Uniformat II & Ineligible Worksheet
 - SCG Reimbursement
 - New Construction vs Renovation / Alteration
 - Renovation Cap vs Special Legislation
 - HOW = DOLLARS \$\$\$



HOW

- Phasing
 - How Many & How Connected
 - Maintain 2 MEP Systems
 - Shift Work / Overtime / Summer Crunch
 - Temp Construction / Temp Use
 - Identify Time & Money



HOW

- Temporary Walls / Egress / Logistics
 - Cost to Install & Remove
 - Temp Egress – Review with Fire Marshal
 - Stairs, Corridors, Sidewalk Bridge, Etc.
 - Logistics
 - Temp Roads
 - Parking – on site or remote
 - Public or Construction Use



HOW

- Temporary Classrooms
 - Portables or Swing Space
 - How Many & How Long
 - Lease or Buy
- Project Labor Agreement – PLA
 - Owner Decision
 - Labor Premium – Sooner than Later



HOW

- Procurement
 - CM vs GC
 - 1 vs 15-25 Bid Packages
 - Plans & Specs +
 - Schedule, Phasing, Logistics, Temp Construction
 - Scopes of Work – Lack of Clarity = Cost
 - Timing in the Market
 - Other Projects
 - Lead Time to Construction



HOW

- P&P Bonds /Gen Liability Insurance
 - CM at Risk – CM & Subcontractors
 - CM as Agent – Trade Contractors
 - 2% Savings vs Performance Risk
 - General Contractor
 - P&P Bonds – GC Only, Subs Optional
 - Gen Liability – GC and Subs Coverage Limits



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HOW

- **SOFT COSTS**
 - **Materials Testing**
 - New Construction vs Renovation
 - **Moving Costs**
 - Phasing / How Many
 - Move Consultant
 - Custodians/ OT or Movers



HOW

- SOFT COSTS
 - Building Permit
 - Local Fees ?
 - State Education Fee
 - Builders Risk Insurance
 - Renovation or New Construction
 - Town Wrap Up or Stand Alone
 - By Owner, CM, or GC



HOW

- SOFT COSTS

- Legal Fees

- Real Estate – New Property or Easement
 - Contracts – PM/OR, A/E, CM, GC
 - Claims – CMR, CMA, GC

- Utility Charges

- Gas/Elec/Water/Storm/ Sewer
 - Connection Fees or Length of Service
 - Ineligible Cost to the Property Line



HOW

- SOFT COSTS

- Printing Services

- Blueprints, Specifications, Referendum
 - Paper vs Electronic

- Advertising

- Public Bid
 - How Many: Consultants, Construction, FF&F, IT, Playgrounds



HOW

- SOFT COSTS

- Owner's Administrative

- Recording Secretary
 - Custodian Overtime – weekends or moving

- Reimbursables

- PM/OR, A/E, Consultants, CM
 - At Cost or Mark Up
 - Not-to-Exceed or Un-capped



HOW

- Financing – Town vs Project
 - Bond Anticipation Notes (BANs)
 - Bond Issuance
 - Interest Expense
- Owner's/ Project Contingency
 - CMR / CMA / GC
 - New Construction : 3 – 5% +
 - Renovation : 5 – 10 % +



HOW

- CHRO – Set Aside
 - Starts 10/1/2015
 - 25% SBE / 6.25% MBE, WBE, DBE of State Funds
 - Plan Approval – Set Aside Packages or Subs/Vendors
 - Risk / Bondability
 - Retainage / Enforcement
 - Prequalified List
 - Additional Cost



QUESTIONS?



2015 CT School Facility Workshop:
**Streamlining the School Construction
Process and Building the Budget**

School Facility Workshop

November 6, 2015

Office of School Facilities Update

Pasquale (Bud) J. Salemi
Deputy Commissioner
Department of Administrative Services
State of Connecticut



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